



**THE CITY OF NEW YORK
DEPARTMENT OF DESIGN AND CONSTRUCTION
DIVISION OF INFRASTRUCTURE**

30-30 THOMSON AVENUE
LONG ISLAND CITY, NEW YORK 11101-3045
TELEPHONE (718) 391-1000
WEBSITE www.nyc.gov/buildnyc

LAW

VOLUME 1 OF 3

BID BOOKLET

FOR FURNISHING ALL LABOR AND MATERIALS NECESSARY AND REQUIRED FOR:

PROJECT ID: HWXRCPLZ

**RECONSTRUCTION OF
ROBERTO CLEMENTE PLAZA**

**INCLUDING SEWER, WATER MAIN, STREET LIGHTING,
AND TRAFFIC SIGNAL WORK**

**Together With All Work Incidental Thereto
BOROUGH OF THE BRONX
CITY OF NEW YORK**

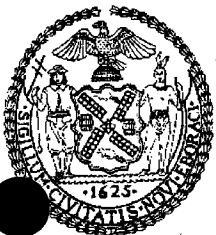
FOR THE DEPARTMENT OF TRANSPORTATION
PREPARED BY

*WEIDLINGER ASSOCIATES
GARRISON ARCHITECTS*

JULY 30, 2012

NYS DOT PIN X550.49
Fed. Aid Project No. _____

Bid Opening 11:00 A.M. on
Location 1st Floor Bid Room, 30-30 Thomson Ave., Long Island City, N.Y. 11101



12-153



Bid Tab

REVISED

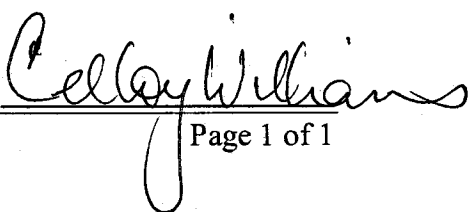
Description

RECONSTRUCTION OF ROBERTO CLEMENTE PLAZA
INCLUDING SEWER, WATER MAIN, STREET
LIGHTING AND TRAFFIC SIGNAL WORK - BOROUGH
OF THE BRONX

Bid Date	3/5/2013	FMS ID	HWXRCPLZ
Estimated Cost	\$12,669,224	DEP Supervised	No
Bid Security	2% of Total Bid Price	PLA	No
Time Allowed	540 CCD	Contract Manager	Vicky Ayo-Vaughan
Addendum	8	Project Manager	Nieves, Anthony
PIN	8502012HW0007C	E-PIN	85013B0044
Selective Bidding	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Consultant	Weidlinger Associates

Bid Rank	Vendor	Bid Amount	Security Type
1	TROCOM CONSTRUCTION CORP	\$10,765,042.24	Bond
2	MFM CONTRACTING CORP.	\$11,186,882.39	Bond
3	TRIUMPH CONSTRUCTION CORP.	\$11,529,398.30	Bond
4	RESTANI CONSTRUCTION CORP.	\$11,925,661.40	Bond
5	JLJ IV ENTERPRISES INC.	\$12,721,368.90	Bond
6	PERFETTO CONTRACTING CO. INC.	\$13,293,522.81	Bond
7	GAZEBO CONTRACTING INC	\$13,827,000.00	Bond

Recorder: Phyllis Lopez - ext. 1283

Approver: 

Bid Tab

Pin: 8502012HW0007C





NEW YORK CITY DEPARTMENT OF
DESIGN + CONSTRUCTION

DAVID J. BURNEY, FAIA
Commissioner

CAROL DIAGOSTINO
Agency Chief
Contracting Officer

June 10, 2013

CERTIFIED MAIL - RETURN RECEIPT REQUEST

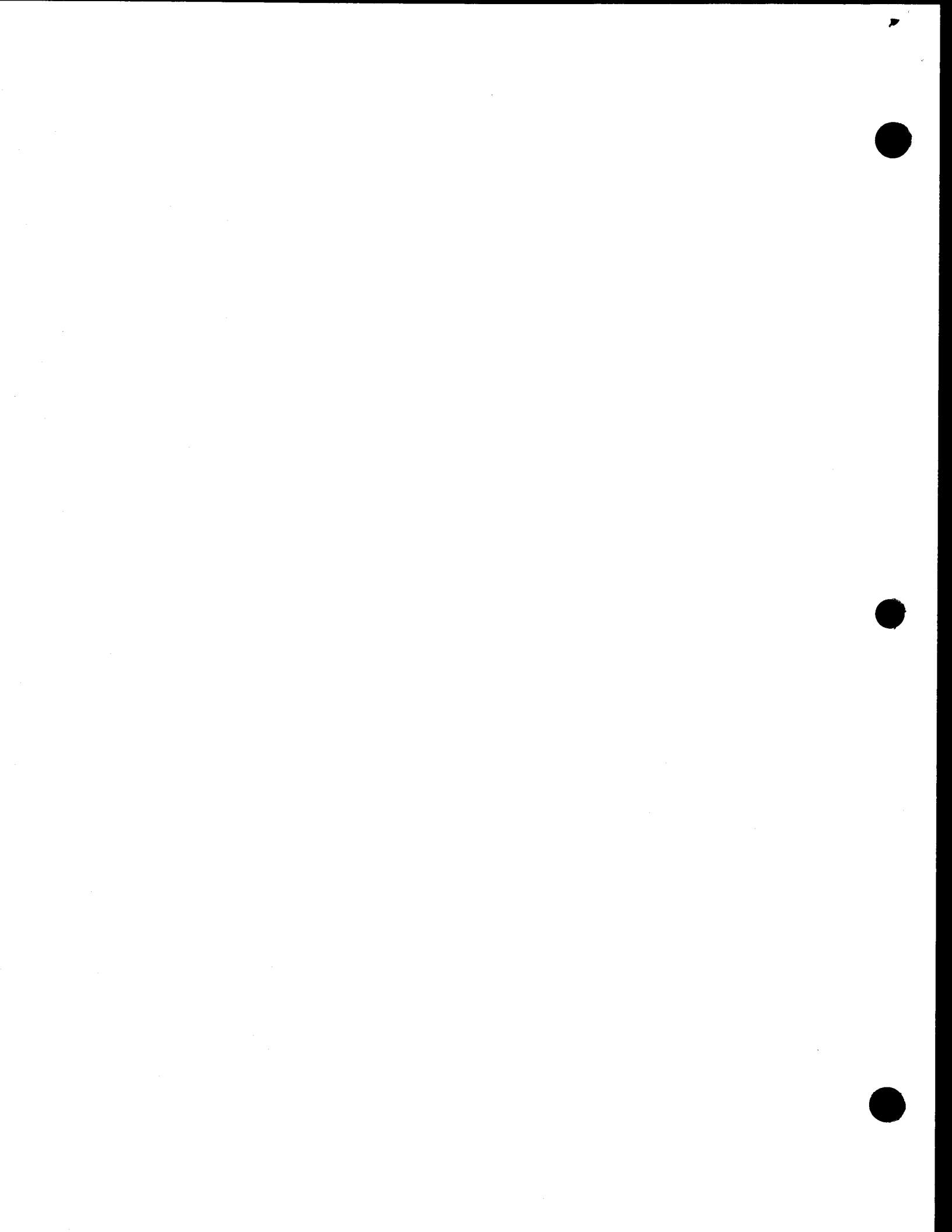
Trocom Construction Corp.
46-27 54th Road
Maspeth, NY 11378

RE: FMS ID: HWXRCPLZ
E-PIN: 85013B0044001
DDC PIN: 8502012HW0007C
Reconstruction of Roberto Clemente Plaza
Including Sewer, Water Main, Street
Lighting and Traffic Signal Work - Borough
of the Bronx
NOTICE OF AWARD

Dear Contractor:

You are hereby awarded the above referenced contract based upon your bid in the amount of \$10,765,042.24 submitted at the bid opening on March 05, 2013. Within three (3) days of your receipt of this notice of award, you are required to take the actions set forth in Paragraphs (1) through (3) below. For your convenience, attached please find a copy of Schedule A of the General Conditions to the Contract, which sets forth the types and amounts of insurance coverage required for this contract.

- (1) Execute four copies of the Agreement in the Contracts Unit, 30-30 Thomson Avenue, 1st Floor, Long Island City, New York (IDCNY Building). A Commissioner of Deeds will be available to witness and notarize your signature. The Agreement must be signed by an officer of the corporation or a partner of the firm.
- (2) Submit to the Contracts Unit four properly executed performance and payment bonds. If required for this contract, copies of performance and payment bonds are attached.
- (3) Submit to the Contracts Unit the following insurance documentation: (a) original certificate of insurance for general liability in the amount required by Schedule A, and (b) original certificates of insurance or other proof of coverage for workers' compensation and disability benefits, as required by New York State Law. The insurance documentation specified in this paragraph is required for registration of the contract with the Comptroller's Office.



SPECIAL NOTICE TO BIDDERS

The New York City Department of Small Business Services (SBS), in conjunction with the New York Business Development Corporation (NYBDC), have established a **NYC Construction Loan** pilot program to provide prime contractors and subcontractors financing for mobilization costs on certain City construction projects.

Under this initiative, loans are available for early stage mobilization needs such as insurance, labor, supplies and equipment. Bidders are strongly encouraged to visit "Growing Your Business" at www.nyc.gov/nycbusiness to learn more about the loan or contact constructionloan@sbs.nyc.gov / (212) 513-6444 to obtain details and to determine preliminary eligibility.

A successful loan applicant will be required to make an assignment of its contract (or subcontract) payments to the lender NYBDC until the loan is repaid. If the loan is to a subcontractor, a prime contractor must honor the terms of such an assignment.

A prime contractor may not discriminate against a subcontractor or potential subcontractor by reason of the subcontractor's participation, or nonparticipation, in the NYC Construction Loan program.

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CITY OF NEW YORK

**DEPARTMENT OF
DESIGN AND CONSTRUCTION
DIVISION OF INFRASTRUCTURE**

BID BOOKLET

FOR FURNISHING ALL LABOR AND MATERIALS NECESSARY
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PROJECT ID: HWXRCPLZ

**RECONSTRUCTION OF
ROBERTO CLEMENTE PLAZA**

**INCLUDING SEWER, WATER MAIN, STREET LIGHTING,
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BOROUGH OF THE BRONX
CITY OF NEW YORK**

(NO TEXT ON THIS PAGE)

PROJECT ID: HWXRCPLZ

**CITY OF NEW YORK
DEPARTMENT OF DESIGN AND CONSTRUCTION
DIVISION OF INFRASTRUCTURE**

BID BOOKLET

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**CITY OF NEW YORK
DEPARTMENT OF DESIGN AND CONSTRUCTION
DIVISION OF INFRASTRUCTURE**

SPECIAL NOTICE TO BIDDERS

BID SUBMISSION REQUIREMENTS

THE FOLLOWING DOCUMENTS ARE TO BE COMPLETED AND SUBMITTED WITH THE BID:

1. Bid Schedule and Bid Form, including Affirmation
2. Bid Security (if required, see Attachment 1 on Page A-1)
3. M/WBE Subcontractor Utilization Plan (if participation goals have been established)

**FAILURE TO SUBMIT ITEMS (1), (2) AND (3)
WILL RESULT IN THE DISQUALIFICATION OF THE BID.**

4. Safety Questionnaire
5. Construction Employment Report (if bid is \$1,000,000 or more)
6. Contract Certificate (if bid is less than \$1,000,000)
7. Confirmation of Vendex Compliance
8. Bidder's Certification of Compliance with Iran Divestment Act
9. Special Experience Requirements (if applicable)
10. Apprenticeship Program Questionnaire (if applicable)

**FAILURE TO SUBMIT ITEMS (4) THROUGH (10)
MAY RESULT IN THE DISQUALIFICATION OF THE BID.**

NOTES:

- (1) All of the above referred to blank forms to be completed and submitted with the bid are included in the BID BOOKLET.
- (2) If additional information is required, please contact the Department of Design and Construction at 718-391- 2601.
- (3) **VENDEX QUESTIONNAIRES:** The Bidder is advised that Vendex Questionnaires and procedures have been changed. Vendex Questionnaires, as well as detailed instructions, may be obtained at www.nyc.gov/vendex. The bidder may also obtain Vendex forms and instructions by contacting the Agency Chief Contracting Officer or the contact person for this contract.
- (4) **SPECIAL EXPERIENCE REQUIREMENTS:** The Bidder is advised that Special Experience Requirements may apply to this contract. Such requirements are set forth on pages 3 and 4 of this Bid Booklet.

SPECIAL NOTICE TO BIDDERS
SPECIAL EXPERIENCE REQUIREMENTS (Revised 02/2007)

- (A) **EXPERIENCE REQUIREMENTS FOR THE BIDDER:** The bidder must, within the last seven (7) consecutive years prior to the bid opening, have successfully completed in a timely fashion at least one (1) project similar in scope and type to the required work. Such prior project may have been performed as a prime contractor, subcontractor or sub-subcontractor.

The requirements set forth below under Article (B) apply to this contract where indicated by a blackened box (■) or by X in a □ to left.

- (B) **EXPERIENCE REQUIREMENTS FOR INSTALLER OF TRUNK WATER MAIN:** The special experience requirements set forth below apply to the contractor who will install the Trunk Water Main. If the bidder intends to perform such work itself, it must demonstrate compliance with the special experience requirements. If the bidder intends to subcontract this work, the proposed subcontractor must demonstrate compliance with the special experience requirements. Once approved, no substitution will be permitted, unless the qualifications of the proposed replacement have been approved in writing in advance by the City.

- (1) The contractor who will install the Trunk Water Main must, within the last seven (7) consecutive years prior to the bid opening, have successfully completed in a timely fashion at least one (1) project similar in scope and type to the required work. Such prior project may have been performed as a prime contractor, subcontractor or sub-subcontractor.

- (C) **SUBMISSION REQUIREMENTS:** For each project submitted to meet the experience requirements set forth above, the bidder must complete and submit the Qualification Form set forth in the Bid Booklet. Separate Qualification Forms shall be provided for bidder and the contractor who will install the Trunk Water Main.

- (D) **CONDITIONS:** In determining compliance with the special experience requirements for the bidder set forth above, the City may consider prior projects completed by principal(s) or other employees of the bidder while affiliated with another entity, subject to the conditions set forth below.

- (1) Any principal or other employee on whose prior experience the bidder is relying to demonstrate compliance with this special experience requirement must have held the following: (a) a significant management role in the prior entity with which he/she was affiliated, and (b) a significant management role in the entity submitting the bid for a period of six months or more from the inception of the bidding entity.

- (2) The bidder may not rely on the experience of its principals or other employees to demonstrate compliance with any other requirements, including without limitation, financial requirements or requirements for a specified minimum amount of annual gross revenues.

- (E) **JOINT VENTURES:** In the event the bidder is a joint venture, at least one firm in the joint venture must meet the above described experience requirements.

- (F) **COMPLIANCE:** Compliance with the experience requirements set forth herein will be determined solely by the City, prior to an award of contract. The bidder is advised that failure to meet the above described experience will result in the rejection of the bid as non-responsive.

Qualification Form

List previous projects completed to meet the special experience requirements for this contract.
Please photocopy this form for submission of all required projects.

Name of Contractor: _____

Name of Project: _____

Location of Project: _____

Owner or Owner's representative (Architect or Engineer) who is familiar with the work performed:

Name: _____

Title: _____ Phone Number: _____

Brief description of the Project completed or the Project in progress: _____

Was the Project performed as a prime, a subcontractor or a sub-subcontractor: _____

Amount of Contract, Subcontract or Sub-subcontract: _____

Start Date and Completion Date: _____

Name of Contractor: _____

Name of Project: _____

Location of Project: _____

Owner or Owner's representative (Architect or Engineer) who is familiar with the work performed:

Name: _____

Title: _____ Phone Number: _____

Brief description of the Project completed or the Project in progress: _____

Was the Project performed as a prime, a subcontractor or a sub-subcontractor: _____

Amount of Contract, Subcontract or Sub-subcontract: _____

Start Date and Completion Date: _____

(NO TEXT ON THIS PAGE)

ATTACHMENT 1 - BID INFORMATION

**PROJECT ID: HWXRCPLZ
PIN: 8502012HW0007C**

Description and Location of Work:

**RECONSTRUCTION OF
ROBERTO CLEMENTE PLAZA
INCLUDING SEWER, WATERMAIN, STREET LIGHTING,
AND TRAFFIC SIGNAL WORK**

**Together With All Work Incidental Thereto
BOROUGH OF BRONX
CITY OF NEW YORK**

Documents Available At: 30-30 Thomson Avenue
First Floor Bid Procurement Room
Long Island City, New York 11101
8:30 A.M. to 4:00 P.M. – Monday through Friday

Submission of Bids To: 30-30 Thomson Avenue
First Floor Bid Procurement Room
Long Island City, New York 11101
Before 11:00 A.M. on **TUESDAY, MARCH 5TH, 2013**

Bid Opening: 30-30 Thomson Avenue
First Floor Bid Procurement Room
Long Island City, New York 11101
Time and Date: 11:00 A.M. on **TUESDAY, MARCH 5TH, 2013**

Pre-Bid Conference: Yes _____ No X
If Yes, Mandatory _____ Optional: _____
Time and Date: _____
Location: _____

Bid Security: Bid Security is required in the amount set forth below; provided, however, bid security is not required if the TOTAL BID PRICE set forth on the Bid Form is less than \$ 1,000,000.00.

- (1) Bond in an amount not less than 10% of the TOTAL BID PRICE set forth on the Bid Form, OR
- (2) Certified Check in an amount not less than 5% of the TOTAL BID PRICE set forth on the Bid Form.

Performance and Payment Security: Required for contracts in the amount of \$1,000,000 or more. Performance Security and Payment Security shall each be in an amount equal to 100% of the Contract Price.

Agency Contact Person: Lorraine Holley
718-391-2601 FA: 718-391-2615

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BID SCHEDULE

NOTICE TO BIDDERS

Items listed in this Bid Schedule which have one (1) digit followed by a decimal (e.g. 4.02 AG) shall comply with the requirements of the corresponding numerical Sections of the NYCDOT Standard Highway Specifications, dated November 1, 2010, as amended by Addendum No. 1, herein Volume 3 of 3, except for items beginning with the number 8.01.

Items listed in this Bid Schedule beginning with the number 8.01 followed by a letter (e.g. 8.01 C2) shall comply with the requirements of the corresponding numerical Sections of the DDC Specifications for Handling, Transportation and Disposal of Nonhazardous and Potentially Hazardous Contaminated Materials contained in Addendum No. 6, herein Volume 3 of 3.

Items listed in this Bid Schedule which have two (2) digits beginning with the number "5" followed by a decimal (e.g. 52.11D12) shall comply with the requirements of the New York City Department of Environmental Protection (NYCDEP) Standard Sewer Specifications, dated August 1, 2009, as amended by Addendum No. 4, herein Volume 3 of 3.

Items listed in this Bid Schedule which have two (2) digits beginning with the number "6" followed by a decimal (e.g. 60.12D06) shall comply with the requirements of the New York City Department of Environmental Protection (NYCDEP) Standard Water Main Specifications, dated August 1, 2009, and as amended by Addendum No. 4, herein Volume 3 of 3.

Items listed in this Bid Schedule which have two (2) digits beginning with the number "7" followed by a decimal (e.g. 70.31FN) shall comply with the requirements of the New York City Department of Environmental Protection (NYCDEP) Standard Sewer Specifications, dated August 1, 2009, or the NYCDEP Standard Water Main Specifications dated August 1, 2009, and as amended by Addendum No. 4, herein Volume 3 of 3.

Items listed in this Bid Schedule beginning with letter "E" (e.g. E 16.01-RCP) shall comply with the corresponding Section incorporated in Addendum No. 5, herein Volume 3 of 3.

Item NYC-683.940111 listed in this Bid Schedule is a modified version of a New York State Department of Transportation (NYSDOT) Specification and shall comply with the corresponding Section incorporated in Addendum No. 1, herein Volume 3 of 3. However, all references therein to the "Department", "Materials Bureau", "Regional Engineer", etc., shall be deemed to mean the "Engineer". Where any

reference is made on the plans or specifications to the "State" or any of its officials, the Contractor shall substitute the City of New York, Department of Design and Construction, or any of its appropriate officials. The NYSDOT Specifications described above neither imply the State's involvement in any testing and approval of materials, nor in the supervision of construction.

Items listed in this Bid Schedule with the prefix "PK-" (e.g. PK-12D, PK-143, etc.) are modified or new versions of NYCDPR Items and shall comply with the requirements of the corresponding alphanumeric Sections incorporated in Addendum No. 1, herein Volume 3 of 3.

Items listed in this Bid Schedule beginning with the prefix "RCP" (e.g. RCP-AL1, RCP-PL1, RCP-RB, etc.) shall comply with the corresponding alphanumeric Sections incorporated in either Addendum No. 1 or Addendum No. 5, herein Volume 3 of 3.

Items listed in this Bid Schedule beginning with the prefix "SL-" (e.g. SL-20.02.02) are Street Lighting Items less the prefix, which shall be done in accordance with the requirements of Sub-Section 1.06.23.(D) and Section 1.06.49 in the Standard Highway Specifications.

Items listed in this Bid Schedule beginning with the prefix "T-" (e.g. T-8.10) are Traffic Items less the prefix, which shall be done in accordance with the requirements of Sub-Section 1.06.23.(D) and Section 1.06.49 in the Standard Highway Specifications, except for Item No. "T-60000B" and Item No. "T-93000" which shall comply with the requirements of Section T-60000B and Section T-93000, respectively, in Addendum No. 1, herein Volume 3 of 3.

Items listed in this Bid Schedule beginning with the prefix "UTL-" (e.g. UTL-6.07) are for Gas Cost Sharing (EP-7) work and shall comply with the requirements of Addendum No. 3, herein Volume 3 of 3.

BID FORM
THE CITY OF NEW YORK
DEPARTMENT OF DESIGN AND CONSTRUCTION
DIVISION OF INFRASTRUCTURE

BID FOR FURNISHING ALL LABOR AND
MATERIAL NECESSARY AND REQUIRED FOR:

PROJECT ID: HWXRCPLZ

RECONSTRUCTION OF
ROBERTO CLEMENTE PLAZA

INCLUDING SEWER, WATER MAIN, STREET LIGHTING,
AND TRAFFIC SIGNAL WORK

Together With All Work Incidental Thereto
BOROUGH OF THE BRONX
CITY OF NEW YORK

Name of Bidder: Trocom Construction Corp

Date of Bid Opening: 3-5-13

Bidder is: (Check one, whichever applies) Individual () Partnership () Corporation ()

Place of Business of Bidder: 46-27 54 Road, Maspeth NY 11378

Bidder's Telephone Number: 7189372000 Fax Number: 7187842824

Bidder's E-Mail Address: ASANTORO@TROCOMCONSTRUCTION.COM

Residence of Bidder (If Individual): _____

If Bidder is a Partnership, fill in the following blanks:

Names of Partners

Residence of Partners

If Bidder is a Corporation, fill in the following blanks:

Organized under the laws of the State of New York

Name and Home Address of President: Joseph Trovato

333 Carnation Ave, Farmingdale NY 11735

Name and Home Address of Secretary: same

Name and Home Address of Treasurer: same

BID FORM

Trucom Construction Corp

The above-named Bidder affirms and declares:

1. The said bidder is of lawful age and the only one interested in this bid; and no person, firm or corporation other than hereinbefore named has any interest in this bid, or in the Contract proposed to be taken.
2. By submission of this bid, each bidder and each person signing on behalf of any bidder certifies, and in the case of a joint bid each party thereto certifies as to its own organization, under penalty of perjury, that to the best of its knowledge and belief: (1) the prices in this bid have been arrived at independently without collusion, consultation, communication or agreement, for the purpose of restricting competition, as to any matter relating to such prices with any other bidder or with any competitor; (2) unless otherwise required by law, the prices quoted in this bid have not been knowingly disclosed by the bidder and will not knowingly be disclosed by the bidder prior to opening, directly or indirectly, to any other bidder or to any competitor; and (3) No attempt has been made or will be made by the bidder to induce any other person, partnership or corporation to submit or not to submit a bid for the purpose of restricting competition.
3. No councilman or other officer or employee or person whose salary is payable in whole or in part from the City Treasury is directly or indirectly interested in this bid, or in the supplies, materials, equipment, work or labor to which it relates, or in any of the profits thereof.
4. The bidder is not in arrears to the City of New York upon debt or contract or taxes, and is not a defaulter, as surety or otherwise, upon any obligation of the City of New York, and has not been declared not responsible, or disqualified, by any agency of the City of New York or State of New York, nor is there any proceeding pending relating to the responsibility or qualification of the bidder to receive public contracts except as set forth on the Affirmation included as page C-6 of this Bid Booklet.

The bidder hereby affirms that it has paid all applicable City income, excise and other taxes for all years it has conducted business activities in New York City.

5. The bidder, as an individual, or as a member, partner, director or officer of the bidder, if the same be a firm, partnership or corporation, executes this document expressly warranting and representing that should this bid be accepted by the City and the Contract awarded to him, he and his subcontractors engaged in the performance: (1) will comply with the provisions of Section 6-108 of the Administrative Code of the City of New York and the non-discrimination provisions of Section 220a of the New York State Labor Law, as more expressly and in detail set forth in the Agreement; (2) will comply with Section 6-109 of the Administrative Code of the City of New York in relation to minimum wages and other stipulations as more expressly and in detail set forth in the Agreement; (3) have complied with the provisions of the aforesaid laws since their respective effective dates, and (4) will post notices to be furnished by the City, setting forth the requirements of the aforesaid laws in prominent and conspicuous places in each and every plant, factory, building and structure where employees engaged in the performance of the Contract can readily view it, and will continue to keep such notices posted until the supplies, materials and equipment, or work labor and services required to be furnished or rendered by the

Qualification Form

List previous projects completed to meet the special experience requirements for this contract.
Please photocopy this form for submission of all required projects.

Name of Contractor: Trocom Construction Corp.

Name of Project: Reconstruction of Beekman Street (HMMWTCA6E)

Location of Project: Manhattan

Owner or Owner's representative (Architect or Engineer) who is familiar with the work performed:

Name: Eric MacFarlane, P. E.

Title: Deputy Commissioner Phone Number: 718-391-1000

Brief description of the Project completed or the Project in progress: Water, Sewer, Drainage, utility relocation and replacement, concrete sidewalk, roadway paving, lighting and traffic.

Was the Project performed as a prime, a subcontractor or a sub-subcontractor: Prime

Amount of Contract, Subcontract or Sub-subcontract: \$14,200,000.00

Start Date and Completion Date: 9/2/7 to 5/18/10

Name of Contractor: Trocom Construction Corp.

Name of Project: Reconstruction of Liberty Street & Nevelson Plaza (HMMWTCA6C)

Location of Project: Manhattan

Owner or Owner's representative (Architect or Engineer) who is familiar with the work performed:

Name: Eric MacFarlane, P. E.

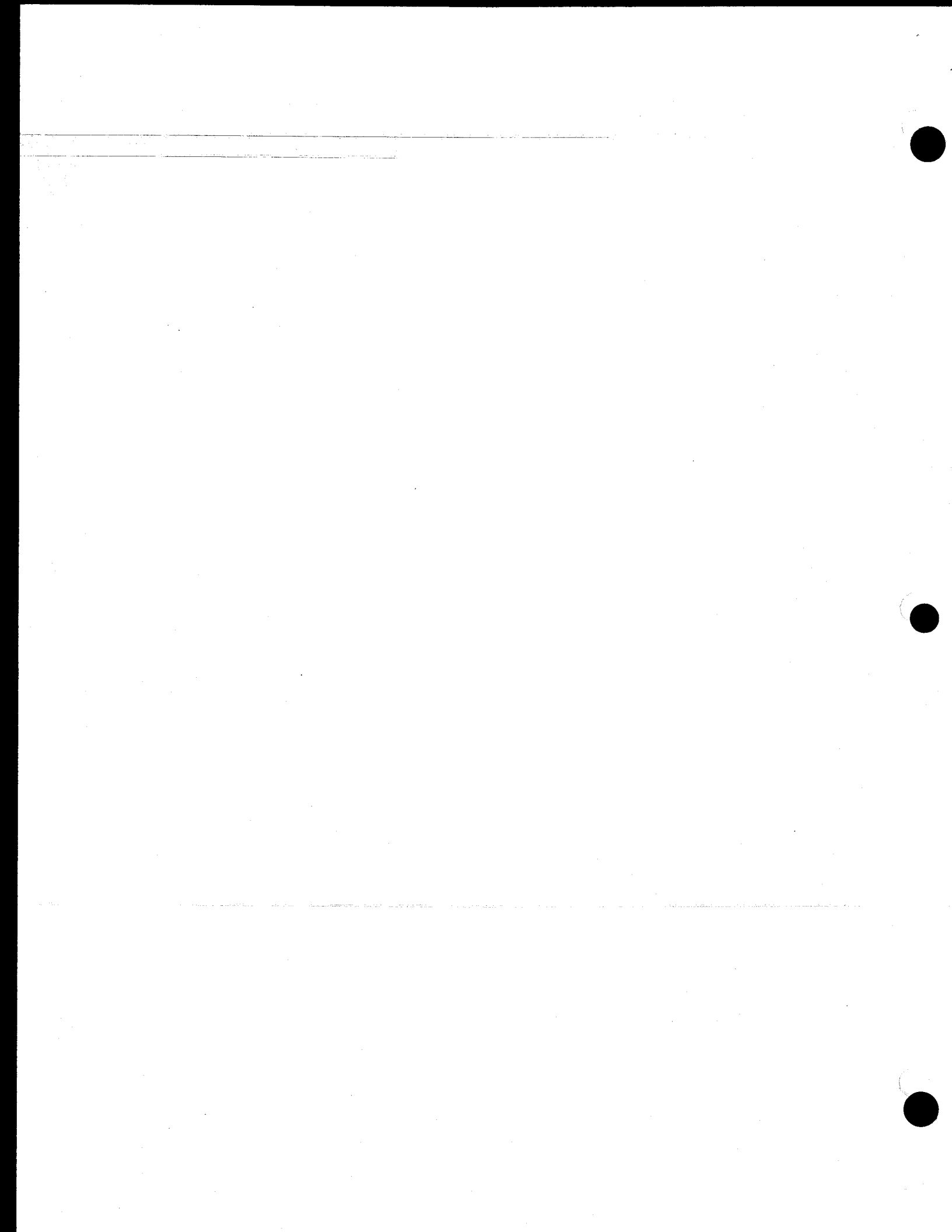
Title: Deputy Commissioner Phone Number: 718-391-1000

Brief description of the Project completed or the Project in progress: Watermain, sewer, utility relocation and replacement, paving, sidewalk, roadway, sculpture restoration, drilling and grouting, void remediation, guardbooth, benches

Was the Project performed as a prime, a subcontractor or a sub-subcontractor: Prime

Amount of Contract, Subcontract or Sub-subcontract: \$17,000,000.00

Start Date and Completion Date: 8/1/08 to 12/9/10



Qualification Form

List previous projects completed to meet the special experience requirements for this contract.
Please photocopy this form for submission of all required projects.

Name of Contractor: Trocom Construction Corp.

Name of Project: Construction of Imagination Playground (MG41100-107MA)

Location of Project: Burling Slip, Manhattan

Owner or Owner's representative (Architect or Engineer) who is familiar with the work performed:

Name: John Natoli, P. E.

Title: Chief Engineer Phone Number: 718-760-6725

Brief description of the Project completed or the Project in progress: Relocate existing 48" box sewer on pile chamber, new park construction, water features, lighting, play equipment, fencing.

Was the Project performed as a prime, a subcontractor or a sub-subcontractor: Prime

Amount of Contract, Subcontract or Sub-subcontract: \$8,500,000.00

Start Date and Completion Date: 5/4/09 to 7/27/10

Name of Contractor: Trocom Construction Corp.

Name of Project: Structural Reconstruction of Subway Tunnel (C33812)

Location of Project: Whitehall to Canal Streets, BMT Line

Owner or Owner's representative (Architect or Engineer) who is familiar with the work performed:

Name: Gange Balagangayan

Title: Project Manager Phone Number: 917-335-7345

Brief description of the Project completed or the Project in progress: Rehab of tunnel, steel replacements, structural concrete, waterproofing, vent reconstruction, tunnel lighting grouting.

Was the Project performed as a prime, a subcontractor or a sub-subcontractor: Prime

Amount of Contract, Subcontract or Sub-subcontract: \$19,710,000.00

Start Date and Completion Date: 2/1/07 to 11/1/09



Qualification Form

List previous projects completed to meet the special experience requirements for this contract.
Please photocopy this form for submission of all required projects.

Name of Contractor: Trocom Construction Corp.

Name of Project: Emergency Retaining Wall Stabilization (HWCRWALLC)

Location of Project: Various Locations, Citywide

Owner or Owner's representative (Architect or Engineer) who is familiar with the work performed:

Name: Eric MacFarlane

Title: Deputy Commissioner Phone Number: 718-391-1000

Brief description of the Project completed or the Project in progress: Stabilization and reconstruction of retaining walls including piles, steel sheeting, structural concrete.

Was the Project performed as a prime, a subcontractor or a sub-subcontractor: Prime

Amount of Contract, Subcontract or Sub-subcontract: \$3,000,000.00

Start Date and Completion Date: 5/207 to 5/2010

Name of Contractor: Trocom Construction Corp.

Name of Project: Reconstruction Route 9A - Bikeway. (D259562)

Location of Project: Gainsvort Street to West 59th Street, Manhattan

Owner or Owner's representative (Architect or Engineer) who is familiar with the work performed:

Name: Robert Collucci, P. E. NYSDOT

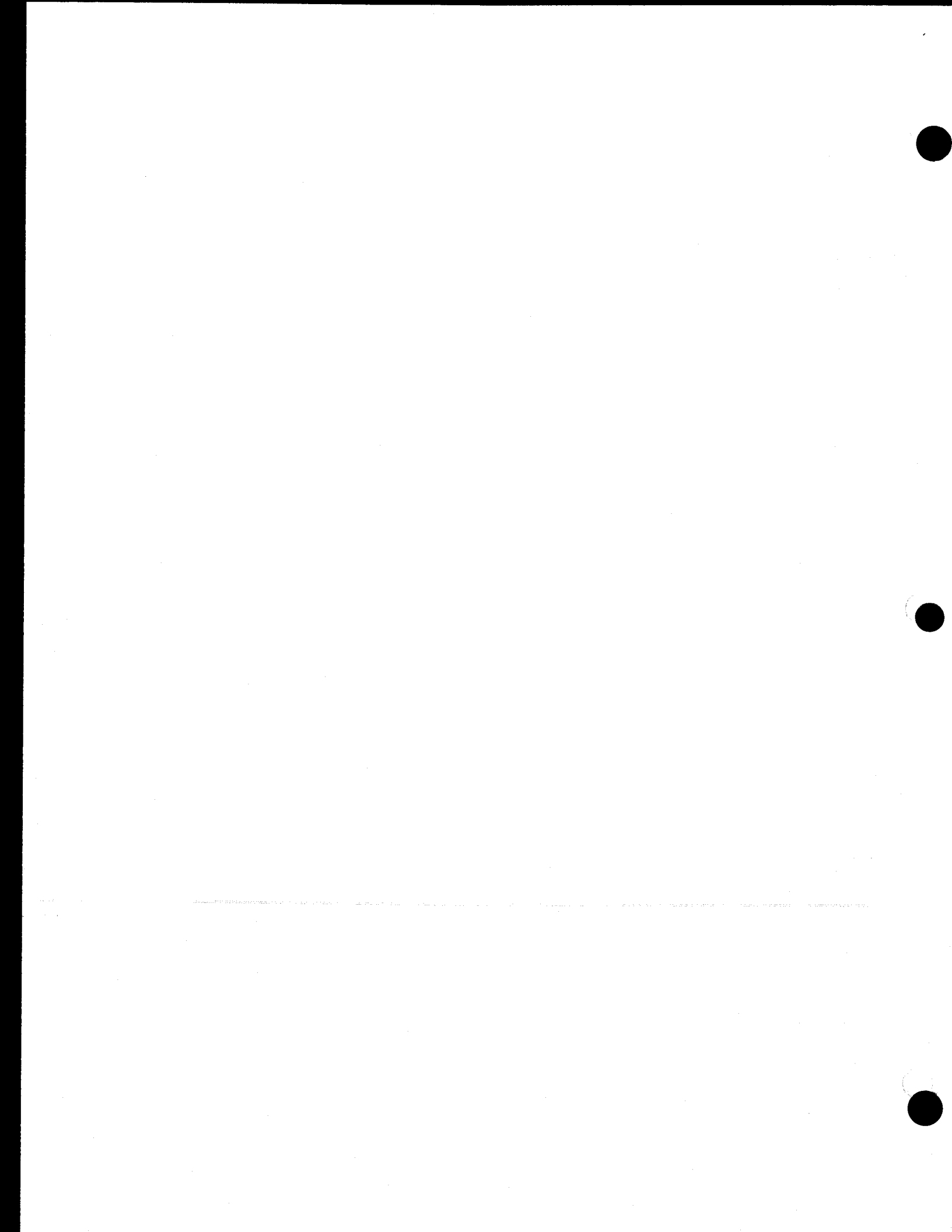
Title: Resident Engineer Phone Number: _____

Brief description of the Project completed or the Project in progress: Paving, asphalt, curb, lighting, signage, fencing, hazmat removals, road barriers, precast walls, landscaping.

Was the Project performed as a prime, a subcontractor or a sub-subcontractor: Prime

Amount of Contract, Subcontract or Sub-subcontract: \$7,800,000.00

Start Date and Completion Date: 6/06 to 6/07



Qualification Form

List previous projects completed to meet the special experience requirements for this contract.
Please photocopy this form for submission of all required projects.

Name of Contractor: Trocom Construction Corp.

Name of Project: Reconstruction of Watermains - Various Locations (HWQP181)

Location of Project: Vernon Blvd. and Liberty Avenue, Queens

Owner or Owner's representative (Architect or Engineer) who is familiar with the work performed:

Name: Evans Doleyres

Title: Assistant Commissioner Phone Number: 718-391-1901

Brief description of the Project completed or the Project in progress: Watermains, curbs, sidewalk trench restoration, hazmat removal, pipe jacking at LIRR.

Was the Project performed as a prime, a subcontractor or a sub-subcontractor: Prime

Amount of Contract, Subcontract or Sub-subcontract: \$4,800,000.00

Start Date and Completion Date: 4/06

Name of Contractor: Trocom Construction Corp.

Name of Project: Reconstruction of Old Slip- Manhattan (HMMWTCA6D)

Location of Project: Old Slip between South and Water Streets

Owner or Owner's representative (Architect or Engineer) who is familiar with the work performed:

Name: Evans Doleyres

Title: Assistant Commissioner Phone Number: 718-391-1901

Brief description of the Project completed or the Project in progress: Granite work, utility interference, water drainage, unit pavers, lighting, paving, curb, sidewalk, landscaping.

Was the Project performed as a prime, a subcontractor or a sub-subcontractor: Prime

Amount of Contract, Subcontract or Sub-subcontract: \$1,400,000.00

Start Date and Completion Date: 5/05



Qualification Form

List previous projects completed to meet the special experience requirements for this contract.
Please photocopy this form for submission of all required projects.

Name of Contractor: Trocom Construction Corp.

Name of Project: Reconstruction of Parks - Various Locatons (9) (MG-703M)

Location of Project: Lower Manhattan

Owner or Owner's representative (Architect or Engineer) who is familiar with the work performed:

Name: David Goldstone

Title: Deputy Director Construction Phone Number: 718-760-8725

Brief description of the Project completed or the Project in progress: Sitework, granite, curb, pavings, fountains, fencing, sculptures, landscaping, drainage, water, lighting, structural concrete.

Was the Project performed as a prime, a subcontractor or a sub-subcontractor: Prime

Amount of Contract, Subcontract or Sub-subcontract: \$13,800,000.00

Start Date and Completion Date: 11/05

Name of Contractor: Trocom Construction Corp.

Name of Project: Emergency Rock Wall Stabilization

Location of Project: Highbridge Park, Manhattan

Owner or Owner's representative (Architect or Engineer) who is familiar with the work performed:

Name: David Goldstone

Title: Deputy Director Construction Phone Number: 718-760-8725

Brief description of the Project completed or the Project in progress: Rock scaling, netting, dental concrete.

Was the Project performed as a prime, a subcontractor or a sub-subcontractor: Prime

Amount of Contract, Subcontract or Sub-subcontract: \$3,000,000.00

Start Date and Completion Date: 03/07



Qualification Form

List previous projects completed to meet the special experience requirements for this contract.
Please photocopy this form for submission of all required projects.

Name of Contractor: Trocom Construction Corp.

Name of Project: Reconstruction of 44th and 45th Avenue

Location of Project: Queens

Owner or Owner's representative (Architect or Engineer) who is familiar with the work performed:

Name: Evans Doleyres
Title: Assistant Commissioner Phone Number: 718-391-1901

Brief description of the Project completed or the Project in progress: watermain, sewer, drainage, curb, sidewalk, paving, lighting.

Was the Project performed as a prime, a subcontractor or a sub-subcontractor: Prime

Amount of Contract, Subcontract or Sub-subcontract: \$5,100,000.00

Start Date and Completion Date: 10/06

Name of Contractor: _____

Name of Project: _____

Location of Project: _____

Owner or Owner's representative (Architect or Engineer) who is familiar with the work performed:

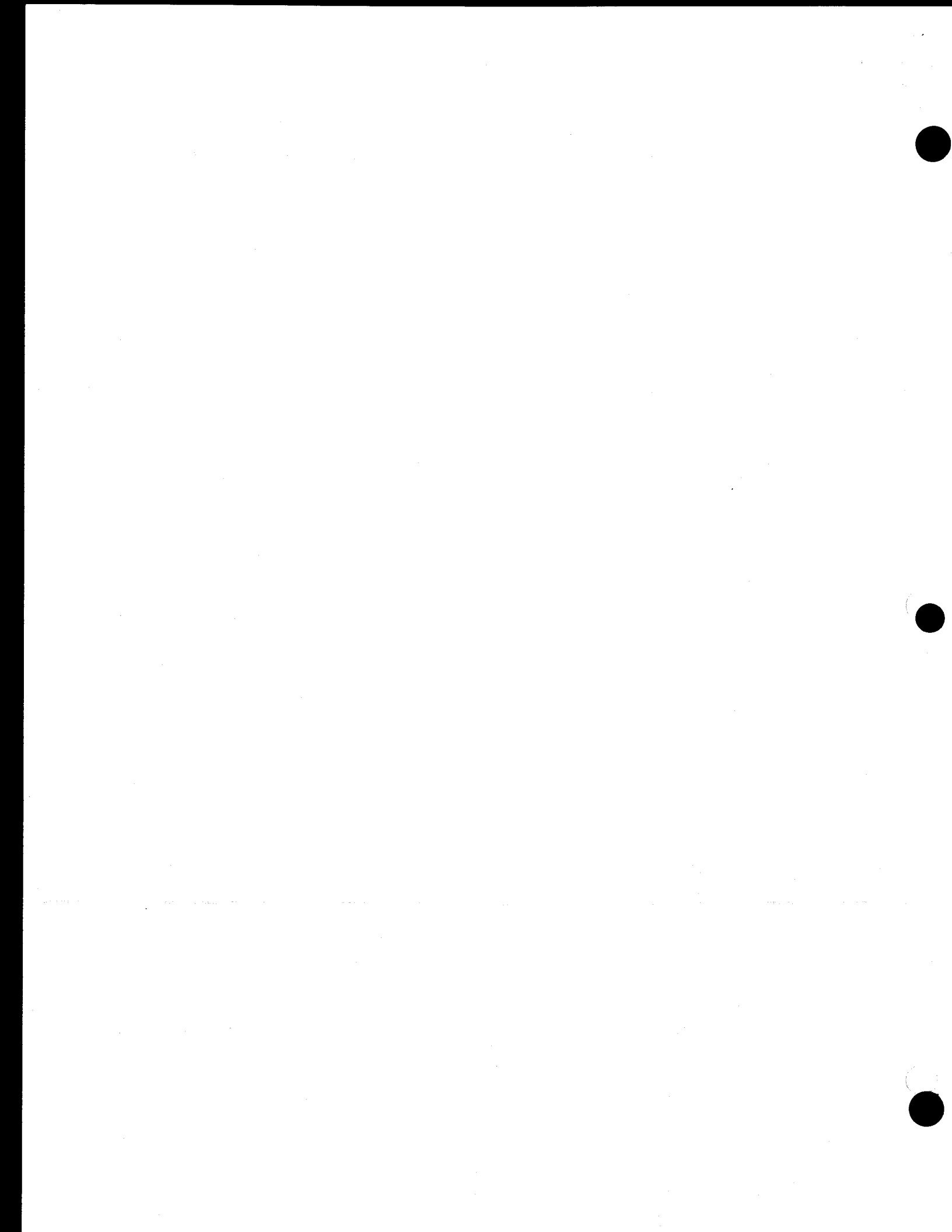
Name: _____
Title: _____ Phone Number: _____

Brief description of the Project completed or the Project in progress: _____

Was the Project performed as a prime, a subcontractor or a sub-subcontractor: _____

Amount of Contract, Subcontract or Sub-subcontract: _____

Start Date and Completion Date: _____



AFFIRMATION

The undersigned bidder affirms and declares that said bidder is not in arrears to the City of New York upon debt, contract or taxes and is not a defaulter, as surety or otherwise, upon obligation to the City of New York, and has not been declared not responsible, or disqualified, by any agency of the City of New York, nor is there any proceeding pending relating to the responsibility or qualification of the bidder to receive public contracts except: none

(If none, the bidder shall insert the word "None" in the space provided above.)

Trocom Construction Corp.
46-27 54th Rd.
Maspeth, NY 11378

Full Name of Bidder: _____
Address: _____
City _____ State _____ Zip Code _____

CHECK ONE BOX AND INCLUDE APPROPRIATE NUMBER:

A - Individual or Sole Proprietorship*
SOCIAL SECURITY NUMBER

B - Partnership, Joint Venture or other unincorporated organization
EMPLOYER IDENTIFICATION NUMBER

C - Corporation
EMPLOYER IDENTIFICATION NUMBER
112203562

By: _____
Signature

Title: Vice President

If a corporation, place seal here

This affirmation must be signed by an officer or duly authorized representative.

*Under the Federal Privacy Act the furnishing of Social Security Numbers by bidders on City contracts is voluntary. Failure to provide a Social Security Number will not result in a bidder's disqualification. Social Security Numbers will be used to identify bidders, proposers or vendors to ensure their compliance with laws, to assist the City in enforcement of laws, as well as to provide the City a means of identifying of businesses which seek City contracts.

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Ver 5.00.01

Contract PIN 8502012HW0007C
Project ID HWXRCPLZ

NEW YORK CITY DEPARTMENT OF DESIGN AND CONSTRUCTION
DIVISION OF INFRASTRUCTURE - BUREAU OF DESIGN

BID SCHEDULE

NOTE: (1)

The Agency may reject a bid if it contains unbalanced bid prices. An unbalanced bid is considered to be one containing lump sum or unit items which do not reflect reasonable actual costs plus a reasonable proportionate share of the Bidder's anticipated profit, overhead costs, and other indirect costs, anticipated for the performance of the items in question.

(2)

The following bid prices on Unit Price Contracts are to be paid for the actual quantities of the several classes of work in the completed work or structure, and they cover the cost of all work, labor, material, tools, plant and appliances of every description necessary to complete the entire work, as specified, and the removal of all debris, temporary work and appliances.

(3)

PLEASE BE SURE A LEGIBLE BID IS ENTERED, IN INK, FOR EACH ITEM. Alterations must be initialed in ink by the bidder.

(4)

The Extended Amount entered in Column 5 shall be the product of the Estimated Quantity in Column 2 times the Unit Price Bid in Column 4.

(5)

Prospective bidders must examine the Bid Schedule carefully and, before bidding, must advise the Commissioner, in writing, if any pages are missing, and must request that such missing pages be furnished them. The pages of this Bid Schedule are numbered consecutively, as follows: B - 3 through B - 81



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BID PAGES

NEW YORK CITY DEPARTMENT OF DESIGN AND CONSTRUCTION
DIVISION OF INFRASTRUCTURE - BUREAU OF DESIGN

Contract PIN 8502012HW0007C
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COL. 1 ITEM NUMBER (SEQUENCE NO.)	COL. 2 ENGINEER'S ESTIMATE OF QUANTITIES	COL. 3 CLASSIFICATIONS	COL. 4 UNIT PRICES (IN FIGURES)		COL. 5 EXTENDED AMOUNTS (IN FIGURES)	
			DOLLARS	CTS	DOLLARS	CTS
16.02 LN-05 (001)	275.0 L.F.	RIGID GALVANIZED STEEL CONDUIT- 1" NOM. DIA	17 25		4743 25	
4.02 AB-R (002)	876.0 S.Y.	ASPHALTIC CONCRETE WEARING COURSE, 1-1/2" THICK	17 50		15,330	
4.02 AG (003)	4,848.0 S.Y.	ASPHALTIC CONCRETE WEARING COURSE, 3" THICK	33		159,984	
4.02 CB (004)	837.0 TONS	ASPHALTIC CONCRETE MIXTURE	190		159,030	



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COL. 1 ITEM NUMBER (SEQUENCE NO.)	COL. 2 ENGINEER'S ESTIMATE OF QUANTITIES	COL. 3 CLASSIFICATIONS	COL. 4 UNIT PRICES (IN FIGURES)		COL. 5 EXTENDED AMOUNTS (IN FIGURES)	
			DOLLARS	CTS	DOLLARS	CTS
4.04 BP (005)	282.0 C.Y.	CONCRETE BASE FOR PAVERS, 4" AND 7" THICK, CLASS B-32	250-	-	\$ 70,500-	-
4.04 H (006)	171.0 C.Y.	CONCRETE BASE FOR PAVEMENT, VARIABLE THICKNESS FOR TRENCH RESTORATION, (HIGH-EARLY STRENGTH)	275-	-	\$ 47,025-	-
4.04 HB (007)	338.0 C.Y.	CONCRETE BASE FOR PAVEMENT, 7" THICK (HIGH-EARLY STRENGTH)	275-	-	\$ 92,950-	-
4.04 HC (008)	521.0 C.Y.	CONCRETE BASE FOR PAVEMENT, 8" THICK (HIGH-EARLY STRENGTH)	275-	-	\$ 143,275-	-



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COL. 1 ITEM NUMBER (SEQUENCE NO.)	COL. 2 ENGINEER'S ESTIMATE OF QUANTITIES	COL. 3 CLASSIFICATIONS	COL. 4 UNIT PRICES (IN FIGURES)		COL. 5 EXTENDED AMOUNTS (IN FIGURES)	
			DOLLARS	CTS	DOLLARS	CTS
4.05 AX (009)	80.0 C.Y.	HIGH-EARLY STRENGTH REINFORCED CONCRETE PAVEMENT (BUS STOPS)	\$ 325	—	\$ 26,000	—
4.05 AXP (010)	63.0 C.Y.	HIGH-EARLY STRENGTH REINFORCED CONCRETE PAVEMENT (BUS STOPS) (PIGMENTED)	\$ 350	—	\$ 22,050	—
4.05 BX (011)	394.0 C.Y.	HIGH-EARLY STRENGTH REINFORCED CONCRETE PAVEMENT (FULL WIDTH PAVEMENT)	\$ 425	—	\$ 167,450	—
4.06 (012)	149.0 C.Y.	CONCRETE IN STRUCTURES, CLASS A-40	\$ 325	—	\$ 48,425	—

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COL. 1 ITEM NUMBER (SEQUENCE NO.)	COL. 2 ENGINEER'S ESTIMATE OF QUANTITIES	COL. 3 CLASSIFICATIONS	COL. 4 UNIT PRICES (IN FIGURES)		COL. 5 EXTENDED AMOUNTS (IN FIGURES)	
			DOLLARS	CTS	DOLLARS	CTS
4.09 ADA (013)	1,094.0 L.F.	STRAIGHT STEEL FACED CONCRETE CURB (19" DEEP)	46		\$ 50,324	
4.09 AE (014)	1,104.0 L.F.	STRAIGHT STEEL FACED CONCRETE CURB (21" DEEP)	46		\$ 50,784	
4.09 AF (015)	370.0 L.F.	STRAIGHT STEEL FACED CONCRETE CURB (27" DEEP)	48		\$ 17,760	
4.09 CDA (016)	825.0 L.F.	CORNER STEEL FACED CONCRETE CURB (19" DEEP)	60		\$ 49,500	



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COL. 1 ITEM NUMBER (SEQUENCE NO.)	COL. 2 ENGINEER'S ESTIMATE OF QUANTITIES	COL. 3 CLASSIFICATIONS	COL. 4 UNIT PRICES (IN FIGURES)		COL. 5 EXTENDED AMOUNTS (IN FIGURES)	
			DOLLARS	CTS	DOLLARS	CTS
4.09 CE (017)	94.0 L.F.	CORNER STEEL FACED CONCRETE CURB (21" DEEP)	\$ 65 -	-	\$ 6110 -	-
4.11 AA (018)	47.0 C.Y.	ROCK EXCAVATION IN STREETS, TRENCHES AND STRUCTURES	\$ 500 -	-	\$ 23,500 -	-
4.11 AS (019)	709.0 C.Y.	EARTH EXCAVATION FOR STRUCTURES	\$ 75 -	-	\$ 53,175 -	-
4.11 CA (020)	2,945.0 C.Y.	FILL, PLACE MEASUREMENT	\$ 28 -	-	\$ 82,460 -	-

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COL. 1 ITEM NUMBER (SEQUENCE NO.)	COL. 2 ENGINEER'S ESTIMATE OF QUANTITIES	COL. 3 CLASSIFICATIONS	COL. 4 UNIT PRICES (IN FIGURES)		COL. 5 EXTENDED AMOUNTS (IN FIGURES)	
			DOLLARS	CTS	DOLLARS	CTS
4.13 AAS (021)	2,254.0 S.F.	4" CONCRETE SIDEWALK (UNPIGMENTED)	6	25	\$ 15,214	75
4.13 BAS (022)	2,529.0 S.F.	7" CONCRETE SIDEWALK (UNPIGMENTED)	7	50	\$ 18,967	70
4.13 CABS (023)	14,959.0 S.F.	4" CONCRETE SIDEWALK (PIGMENTED) (SAW CUT TYPE JOINTS)	7	25	\$ 108,452	25
4.13 CBBS (024)	16,473.0 S.F.	7" CONCRETE SIDEWALK (PIGMENTED) (SAW CUT TYPE JOINTS)	8	25	\$ 135,902	25



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COL. 1 ITEM NUMBER (SEQUENCE NO.)	COL. 2 ENGINEER'S ESTIMATE OF QUANTITIES	COL. 3 CLASSIFICATIONS	COL. 4 UNIT PRICES (IN FIGURES)		COL. 5 EXTENDED AMOUNTS (IN FIGURES)	
			DOLLARS	CTS	DOLLARS	CTS
4.13 DE (025)	330.0 S.F.	EMBEDDED PREFORMED DETECTABLE WARNING UNITS	\$ 28 -	-	\$ 9240 -	-
4.13 DSBS (026)	1,694.0 S.F.	EMBEDDED PRECAST CONCRETE DETECTABLE WARNING PAVERS FOR SBS STATIONS	\$ 28 -	-	\$ 47,432 -	-
4.14 (027)	11,439.0 LBS.	STEEL REINFORCEMENT BARS	\$ 4 -	-	\$ 45,756 -	-
4.14 W (028)	4,945.0 LBS.	WELDED STEEL WIRE FABRIC	\$ 3 -	-	\$ 14,835 -	-



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COL. 1 ITEM NUMBER (SEQUENCE NO.)	COL. 2 ENGINEER'S ESTIMATE OF QUANTITIES	COL. 3 CLASSIFICATIONS	COL. 4 UNIT PRICES (IN FIGURES)		COL. 5 EXTENDED AMOUNTS (IN FIGURES)	
			DOLLARS	CTS	DOLLARS	CTS
4.15 (029)	10.0 C.Y.	TOPSOIL	\$ 100	-	\$ 1000	-
4.15 SS (030)	106.0 C.Y.	STRUCTURAL SOIL FOUNDATION MATERIAL	\$ 145	-	\$ 15,370	-
4.16 BAT (031)	2.0 EACH	TREES TRANSPLANTED, 2" TO 3" CALIPER, ALL TYPES	\$ 850	-	\$ 1700	-
4.16 DA510 (032)	8.0 EACH	TREES PLANTED, 3-1/2" TO 4" CALIPER, ALL TYPES, IN 5' X 10' TREE PITS	\$ 1000	-	\$ 8000	-



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COL. 1 ITEM NUMBER (SEQUENCE NO.)	COL. 2 ENGINEER'S ESTIMATE OF QUANTITIES	COL. 3 CLASSIFICATIONS	COL. 4 UNIT PRICES (IN FIGURES)		COL. 5 EXTENDED AMOUNTS (IN FIGURES)	
			DOLLARS	CTS	DOLLARS	CTS
4.16 DAB (033)	6.0 EACH	TREES PLANTED, 3-1/2" TO 4" CALIPER, NORTHERN RED OAK	1250	-	7500	-
4.16 DWSO (034)	4.0 EACH	TREES PLANTED, 3" TO 4" CALIPER, WHITE SWAMP OAK	1000	-	4000	-
4.17 AR (035)	10.0 EACH	SHRUBS PLANTED, 48" TO 60" HIGH, AMELANCHIER CANADENSIS	175	-	1750	-
4.17 CRP (036)	924.0 EACH	ORNAMENTAL GRASS PLANTED. 2 GALLON. CAREX PENNSYLVANICA	35	-	32,340	-



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COL. 1 ITEM NUMBER (SEQUENCE NO.)	COL. 2 ENGINEER'S ESTIMATE OF QUANTITIES	COL. 3 CLASSIFICATIONS	COL. 4 UNIT PRICES (IN FIGURES)		COL. 5 EXTENDED AMOUNTS (IN FIGURES)	
			DOLLARS	CTS	DOLLARS	CTS
4.17 HA (037)	659.0 EACH	ORNAMENTAL GRASS PLANTED. 2 GALLON. HAKONECHLOA AUREOLA	\$ 35 --	--	\$ 23,065 --	--
4.18 A (038)	13.0 EACH	MAINTENANCE TREE PRUNING (UNDER 12" CAL.)	\$ 275 --	--	\$ 3,575 --	--
4.18 C (039)	2.0 EACH	MAINTENANCE TREE PRUNING (18" TO UNDER 24" CAL.)	\$ 375 --	--	\$ 750 --	--
4.18 RB (040)	26.0 S.Y.	ROOT BARRIER FABRIC	\$ 50 --	--	\$ 1,300 --	--



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COL. 1 ITEM NUMBER (SEQUENCE NO.)	COL. 2 ENGINEER'S ESTIMATE OF QUANTITIES	COL. 3 CLASSIFICATIONS	COL. 4 UNIT PRICES (IN FIGURES)		COL. 5 EXTENDED AMOUNTS (IN FIGURES)	
			DOLLARS	CTS	DOLLARS	CTS
4.20 (041)	9.0 S.Y.	SEEDING	\$ 100	—	\$ 900	—
4.21 (042)	101.0 P/HR	TREE CONSULTANT	\$ 90	—	\$ 9090	—
50.31CC15 (043)	17.0 L.F.	15" E.S.V.P. COMBINED SEWER, ON CONCRETE CRADLE	\$ 500	—	\$ 8500	—
50.41C6C16 (044)	17.0 L.F.	16" D.I.P. CLASS 56 COMBINED SEWER, ON CONCRETE CRADLE	\$ 500	—	\$ 8500	—



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COL. 1 ITEM NUMBER (SEQUENCE NO.)	COL. 2 ENGINEER'S ESTIMATE OF QUANTITIES	COL. 3 CLASSIFICATIONS	COL. 4 UNIT PRICES (IN FIGURES)		COL. 5 EXTENDED AMOUNTS (IN FIGURES)	
			DOLLARS	CTS	DOLLARS	CTS
51.21S0A1000V (045)	2.0 EACH	STANDARD MANHOLE TYPE A-1	\$ 8500	—	\$ 17000	—
51.23RF (046)	8.0 EACH	REPLACEMENT OF EXISTING MANHOLE FRAME AND COVER	\$ 1000	—	\$ 8000	—
51.41S001 (047)	10.0 EACH	STANDARD CATCH BASIN, TYPE 1	\$ 3500	—	\$ 35000	—
51.42B1W (048)	2.0 EACH	INCREMENTAL COST OF TYPE 3 CATCH BASIN WITH CURB PIECE IN LIEU OF TYPE 1 CATCH BASIN	\$ 850	—	\$ 1700	—



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COL. 1 ITEM NUMBER (SEQUENCE NO.)	COL. 2 ENGINEER'S ESTIMATE OF QUANTITIES	COL. 3 CLASSIFICATIONS	COL. 4 UNIT PRICES (IN FIGURES)		COL. 5 EXTENDED AMOUNTS (IN FIGURES)	
			DOLLARS	CTS	DOLLARS	CTS
52.11D12 (049)	444.0 L.F.	12" DUCTILE IRON PIPE BASIN CONNECTION	\$ 220	—	\$ 97,680	—
52.21D08 (050)	6.0 V.F.	8" DUCTILE IRON PIPE RISER FOR HOUSE CONNECTION	\$ 250	—	\$ 1,500	—
52.21V08 (051)	13.0 V.F.	8" E.S.V.P. RISER FOR HOUSE CONNECTION	\$ 275	—	\$ 3,575	—
55.11AB (052)	10.0 EACH	ABANDONING BASINS AND INLETS	\$ 500	—	\$ 5,000	—

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COL. 1 ITEM NUMBER (SEQUENCE NO.)	COL. 2 ENGINEER'S ESTIMATE OF QUANTITIES	COL. 3 CLASSIFICATIONS	COL. 4 UNIT PRICES (IN FIGURES)		COL. 5 EXTENDED AMOUNTS (IN FIGURES)	
			DOLLARS	CTS	DOLLARS	CTS
6.02 AAN (053)	3,970.0 C.Y.	UNCLASSIFIED EXCAVATION	60 62	—	238,200 246,140	—
6.02 PA (054)	58.0 C.Y.	PNEUMATIC EXCAVATION AROUND TREES	65	—	3770	—
6.02 XHEC (055)	634.0 C.Y.	INCREMENTAL COST FOR MODIFYING WORK METHODS NEAR (WITHIN 3 FEET OF) TRANSIT FACILITIES AND BUILDING VAULTS	35	—	22,190	—
6.02 XSCW (056)	648.0 C.Y.	INCREMENTAL COST FOR USING SPECIAL CARE WORK METHODS NEAR (FROM 3 FEET TO 50 FEET) TRANSIT FACILITIES	30	—	19,440	—



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COL. 1 ITEM NUMBER (SEQUENCE NO.)	COL. 2 ENGINEER'S ESTIMATE OF QUANTITIES	COL. 3 CLASSIFICATIONS	COL. 4 UNIT PRICES (IN FIGURES)		COL. 5 EXTENDED AMOUNTS (IN FIGURES)	
			DOLLARS	CTS	DOLLARS	CTS
6.09 (057)	75.0 L.F.	CONCRETE HEADER	45	-	3375	-
6.18 A (058)	277.0 L.F.	STEEL BAR PICKET FENCE	215	-	59,500	-
6.22 F (059)	2,943.0 LBS.	ADDITIONAL HARDWARE	3	-	8829	-
6.25 RS (060)	1,208.0 S.F.	TEMPORARY SIGNS	6	-	7248	-



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			DOLLARS	CTS	DOLLARS	CTS
6.26 (061)	495.0 L.F.	TIMBER CURB	\$ 10	—	\$ 4950	—
6.27 (062)	1.0 L.S.	DEMOLITION OF STRUCTURES	\$ 50,000	—	\$ 50,000	—
6.27 DBI (063)	5.0 EACH	DEMOLITION, REMOVAL AND DISPOSAL OF BICYCLE RACK	\$ 600	—	\$ 3000	—
6.27 DP (064)	43.0 EACH	DEMOLITION, REMOVAL AND DISPOSAL OF PLANTERS	\$ 600	—	\$ 25,800	—



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COL. 1 ITEM NUMBER (SEQUENCE NO.)	COL. 2 ENGINEER'S ESTIMATE OF QUANTITIES	COL. 3 CLASSIFICATIONS	COL. 4 UNIT PRICES (IN FIGURES)		COL. 5 EXTENDED AMOUNTS (IN FIGURES)	
			DOLLARS	CTS	DOLLARS	CTS
6.28 BA (065)	1,023.0 L.F.	LIGHTED TYPE III BREAKAWAY BARRICADES	\$ 10	-	\$ 10,230	-
6.34 ACTP (066)	308.0 L.F.	TEMPORARY CHAIN LINK FENCE, 6'-0" HIGH (WITH TOP AND BOTTOM RAILS AND POSTS MOUNTED ON STEEL PLATES)	\$ 40	-	\$ 12,320	-
6.40 D (067)	24.0 MONTH	ENGINEER'S FIELD OFFICE (TYPE D)	\$ 6,500	-	\$ 156,000	-
6.43 (068)	2,475.0 SETS	PHOTOGRAPHS	\$ 28	-	\$ 69,300	-

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COL. 1 ITEM NUMBER (SEQUENCE NO.)	COL. 2 ENGINEER'S ESTIMATE OF QUANTITIES	COL. 3 CLASSIFICATIONS	COL. 4 UNIT PRICES (IN FIGURES)		COL. 5 EXTENDED AMOUNTS (IN FIGURES)	
			DOLLARS	CTS	DOLLARS	CTS
6.44 (069)	32,452.0 L.F.	THERMOPLASTIC REFLECTORIZED PAVEMENT MARKINGS (4" WIDE)	127		40,565	
6.47 RCP (070)	10,952.0 S.F.	NON-INTERLOCKING PRECAST CONCRETE PAVERS	20		219,040	
6.49 (071)	3,300.0 L.F.	TEMPORARY PAVEMENT MARKINGS (4" WIDE)	0	70	160	
6.50 (072)	10.0 EACH	CLEANING OF DRAINAGE STRUCTURES	500		5000	



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COL. 1 ITEM NUMBER (SEQUENCE NO.)	COL. 2 ENGINEER'S ESTIMATE OF QUANTITIES	COL. 3 CLASSIFICATIONS	COL. 4 UNIT PRICES (IN FIGURES)		COL. 5 EXTENDED AMOUNTS (IN FIGURES)	
			DOLLARS	CTS	DOLLARS	CTS
6.52 (073)	7,093.0 P/HR	UNIFORMED FULL-TIME FLAGPERSON	45		\$ 319,185	
6.53 (074)	1,517.0 L.F.	REMOVE EXISTING LANE MARKINGS (4" WIDE)	0.50		\$ 758.50	
6.55 (075)	1,438.0 L.F.	SAWCUTTING EXISTING PAVEMENT	5		\$ 7190	
6.67 (076)	27.0 C.Y.	SUBBASE COURSE, SELECT GRANULAR MATERIAL	45		\$ 1215	



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			DOLLARS	CTS	DOLLARS	CTS
6.74 RCP (077)	37.0 I.F.	STEEL PLANTER EDGING	\$ 100	--	\$ 3700	--
6.75 (078)	104.0 C.Y.	GRINDING EXISTING ASPHALTIC CONCRETE WEARING COURSE	\$ 125	--	\$ 13,000	--
6.77 R-RCP (079)	7.0 EACH	METAL TRASH RECEPACLES	\$ 1400	--	\$ 9800	--
6.79 AA (080)	28.0 I.F.	6" DUCTILE IRON PIPE CONNECTION	\$ 100	--	\$ 2800	--



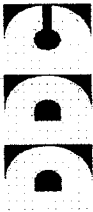
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			DOLLARS	CTS	DOLLARS	CTS
6.82 A (081)	471.0 S.F.	REMOVING EXISTING TRAFFIC AND STREET NAME SIGNS	1	-	471	-
6.82 B (082)	198.0 L.F.	REMOVING EXISTING TRAFFIC AND STREET NAME SIGN POSTS	1	-	198	-
6.83 AA (083)	26.0 S.F.	FURNISHING NEW NON-REFLECTORIZED TRAFFIC SIGNS	25	-	650	-
6.83 AB (084)	198.0 L.F.	FURNISHING NEW TRAFFIC SIGN POSTS	15	-	2970	-

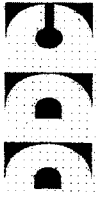
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			DOLLARS	CTS	DOLLARS	CTS
6.83 AR (085)	421.0 S.F.	FURNISHING NEW REFLECTORIZED TRAFFIC SIGNS	30		12630	
6.83 BA (086)	447.0 S.F.	INSTALLING TRAFFIC SIGNS	15		6705	
6.83 BB (087)	198.0 L.F.	INSTALLING TRAFFIC SIGN POSTS	15		2970	
6.84 B (088)	1.0 F.S.	LOLLIPOP TYPE BUS STOP SIGNS PRICE BID SHALL BE FOR THE FIXED SUM OF \$ 19,500.00	19,500.00		19,500.00	



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			DOLLARS	CTS	DOLLARS	CTS
6.85 A (089)	1.0 F.S.	TRAFFIC ENFORCEMENT AGENTS PRICE BID SHALL BE FOR THE FIXED SUM OF \$ 2,805,007.00	\$ 2,805,007.00		\$ 2,805,007.00	
6.86 AA (090)	50.0 S.F.	FURNISHING NEW STREET NAME SIGNS	\$ 50.00		\$ 2500.00	
6.86 AB (091)	154.0 L.F.	FURNISHING NEW STREET NAME SIGN POSTS	\$ 20.00		\$ 3080.00	
6.86 BA (092)	50.0 S.F.	INSTALLING STREET NAME SIGNS	\$ 15.00		\$ 750.00	

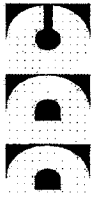


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			DOLLARS	CTS	DOLLARS	CTS
6.86 BB (093)	154.0 L.F.	INSTALLING STREET NAME SIGN POSTS	\$ 15	-	\$ 2310	-
6.87 (094)	1,699.0 EACH	PLASTIC BARRELS	\$ 7	-	\$ 11893	-
6.91 (095)	2,248.0 L.F.	REFLECTIVE CRACKING MEMBRANE (18" WIDE)	\$ 3	-	\$ 6744	-
6.99 (096)	1.0 L.S.	AUDIO AND VIDEO DOCUMENTATION SURVEY	\$ 6000	-	\$ 6000	-



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			DOLLARS	CTS	DOLLARS	CTS
60.11R520 (097)	672.0 L.F.	FURNISHING AND DELIVERING 20-INCH DUCTILE IRON RESTRAINED JOINT PIPE (CLASS 55)	\$ 173	—	\$ 116,276	—
60.11R606 (098)	352.0 L.F.	FURNISHING AND DELIVERING 6-INCH DUCTILE IRON RESTRAINED JOINT PIPE (CLASS 56)	\$ 43	—	\$ 15,136	—
60.11R608 (099)	66.0 L.F.	FURNISHING AND DELIVERING 8-INCH DUCTILE IRON RESTRAINED JOINT PIPE (CLASS 56)	\$ 50	—	\$ 3,300	—
60.11R612 (100)	2,141.0 L.F.	FURNISHING AND DELIVERING 12-INCH DUCTILE IRON RESTRAINED JOINT PIPE (CLASS 56)	\$ 93	—	\$ 199,133	—

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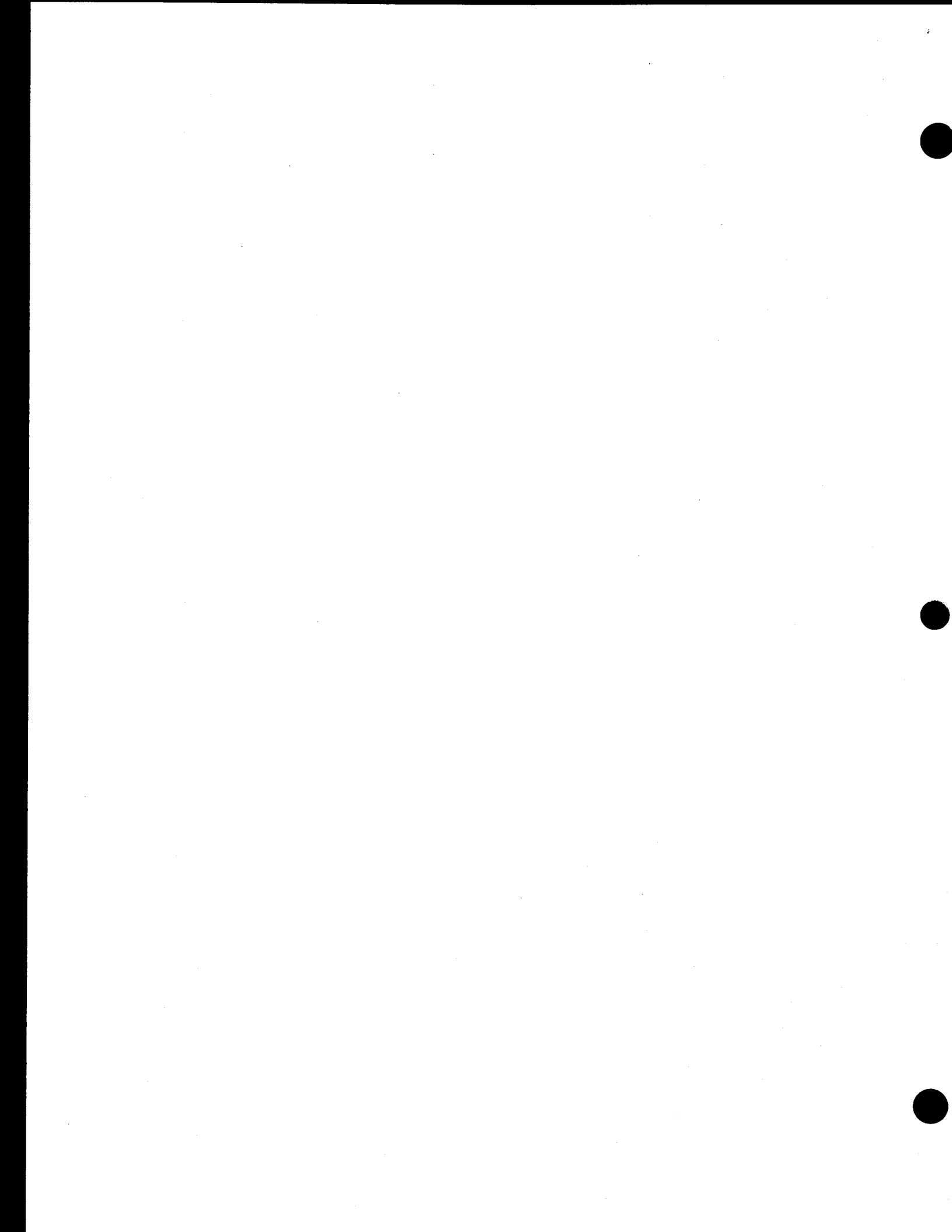


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			DOLLARS	CTS	DOLLARS	CTS
60.11R520 (097)	672.0 L.F.	FURNISHING AND DELIVERING 20-INCH DUCTILE IRON RESTRAINED JOINT PIPE (CLASS 55)	173	-	\$ 116,210	-
60.11R606 (098)	352.0 L.F.	FURNISHING AND DELIVERING 6-INCH DUCTILE IRON RESTRAINED JOINT PIPE (CLASS 56)	43	-	\$ 15136	-
60.11R608 (099)	66.0 L.F.	FURNISHING AND DELIVERING 8-INCH DUCTILE IRON RESTRAINED JOINT PIPE (CLASS 56)	50	-	\$ 3300	-
60.11R612 (100)	2,141.0 L.F.	FURNISHING AND DELIVERING 12-INCH DUCTILE IRON RESTRAINED JOINT PIPE (CLASS 56)	93	-	\$ 199,113	-

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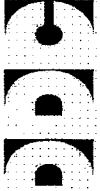
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			DOLLARS	CTS	DOLLARS	CTS
60.12D06 (101)	356.0 L.F.	LAYING 6-INCH DUCTILE IRON PIPE AND FITTINGS	60	-	\$ 21,360	-
60.12D08 (102)	77.0 L.F.	LAYING 8-INCH DUCTILE IRON PIPE AND FITTINGS	75	-	\$ 5,775	-
60.12D12 (103)	2,253.0 L.F.	LAYING 12-INCH DUCTILE IRON PIPE AND FITTINGS	75	-	\$ 168,975	-
60.12D20 (104)	712.0 L.F.	LAYING 20-INCH DUCTILE IRON PIPE AND FITTINGS	100	-	\$ 71,200	-



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			DOLLARS	CTS	DOLLARS	CTS
60.13MOA24 (105)	14.0 TONS	FURNISHING AND DELIVERING DUCTILE IRON MECHANICAL JOINT 24-INCH DIAMETER AND SMALLER FITTINGS, INCLUDING WEDGE TYPE RETAINER GLANDS	7520	—	105,000	—
61.11DM06 (106)	15.0 EACH	FURNISHING AND DELIVERING 6-INCH MECHANICAL JOINT DUCTILE IRON GATE VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	1062	—	15,930	—
61.11DM08 (107)	1.0 EACH	FURNISHING AND DELIVERING 8-INCH MECHANICAL JOINT DUCTILE IRON GATE VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	1620	—	1620	—
61.11DM12 (108)	10.0 EACH	FURNISHING AND DELIVERING 12-INCH MECHANICAL JOINT DUCTILE IRON GATE VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	3190	—	31,900	—

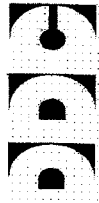


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			DOLLARS	CTS	DOLLARS	CTS
61.11DM20 (109)	1.0 EACH	FURNISHING AND DELIVERING 20-INCH MECHANICAL JOINT DUCTILE IRON GATE VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$ 18301	-	\$ 18301	-
61.11TWC03 (110)	1.0 EACH	FURNISHING AND DELIVERING 3-INCH WET CONNECTION TAPPING VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$ 1	-	\$ 1	-
61.11TWC04 (111)	1.0 EACH	FURNISHING AND DELIVERING 4-INCH WET CONNECTION TAPPING VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$ 1	-	\$ 1	-
61.11TWC06 (112)	1.0 EACH	FURNISHING AND DELIVERING 6-INCH WET CONNECTION TAPPING VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$ 1	-	\$ 1	-



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			DOLLARS	CTS.	DOLLARS	CTS.
61.11TWC08 (113)	1.0 EACH	FURNISHING AND DELIVERING 8-INCH WET CONNECTION TAPPING VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$ 1	—	\$ 1	—
61.11TWC10 (114)	1.0 EACH	FURNISHING AND DELIVERING 10-INCH WET CONNECTION TAPPING VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$ 1	—	\$ 1	—
61.11TWC12 (115)	1.0 EACH	FURNISHING AND DELIVERING 12-INCH WET CONNECTION TAPPING VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$ 1	—	\$ 1	—
61.12DMM06 (116)	15.0 EACH	SETTING 6-INCH MECHANICAL JOINT DUCTILE IRON GATE VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$ 90	—	\$ 1350	—



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			DOLLARS	CTS	DOLLARS	CTS
61.12DMM08 (117)	1.0 EACH	SETTING 8-INCH MECHANICAL JOINT DUCTILE IRON GATE VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	135	-	135	-
61.12DMM12 (118)	10.0 EACH	SETTING 12-INCH MECHANICAL JOINT DUCTILE IRON GATE VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	268	-	2680	-
61.12DMM20 (119)	1.0 EACH	SETTING 20-INCH MECHANICAL JOINT DUCTILE IRON GATE VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	1525	-	1525	-
61.12TWC03 (120)	1.0 EACH	SETTING 3-INCH WET CONNECTION TAPPING VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	60	-	60	-



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			DOLLARS	CTS	DOLLARS	CTS
61.12TWC04 (121)	1.0 EACH	SETTING 4-INCH WET CONNECTION TAPPING VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$ 60	-	\$ 60	-
61.12TWC06 (122)	1.0 EACH	SETTING 6-INCH WET CONNECTION TAPPING VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$ 1	-	\$ 1	-
61.12TWC08 (123)	1.0 EACH	SETTING 8-INCH WET CONNECTION TAPPING VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$ 1	-	\$ 1	-
61.12TWC10 (124)	1.0 EACH	SETTING 10-INCH WET CONNECTION TAPPING VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$ 1	-	\$ 1	-



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			DOLLARS	CTS	DOLLARS	CTS
61.12TWC12 (125)	1.0 EACH	SETTING 12-INCH WET CONNECTION TAPPING VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	1	-	1	-
62.11SD (126)	14.0 EACH	FURNISHING AND DELIVERING HYDRANTS	2841	-	39,774	-
62.12SG (127)	14.0 EACH	SETTING HYDRANTS COMPLETE WITH WEDGE TYPE RETAINER GLANDS	500	-	7,000	-
62.13RH (128)	8.0 EACH	REMOVING HYDRANTS	100	-	800	-

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			DOLLARS	CTS	DOLLARS	CTS
62.14FS (129)	28.0 EACH	FURNISHING, DELIVERING AND INSTALLING HYDRANT FENDERS	\$ 200	—	\$ 5600	—
63.11VC (130)	22.0 TONS	FURNISHING AND DELIVERING VARIOUS CASTINGS	\$ 1500	—	\$ 33,000	—
64.11EL (131)	2.0 EACH	WITHDRAWING AND REPLACING HOUSE SERVICES USING 1-1/2-INCH OR LARGER SCREW TAPS	\$ 425	—	\$ 850	—
64.11ST (132)	33.0 EACH	WITHDRAWING AND REPLACING HOUSE SERVICES USING SMALLER THAN 1-1/2-INCH SCREW TAPS	\$ 375	—	\$ 12,375	—



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			DOLLARS	CTS	DOLLARS	CTS
64.12COEG (133)	11.0 L.F.	CUTTING AND OFFSETTING HOUSE SERVICE WATER CONNECTIONS (EQUAL TO OR GREATER THAN 3-INCH DIAMETER)	\$ 65	—	\$ 715	—
64.12COLT (134)	11.0 L.F.	CUTTING AND OFFSETTING HOUSE SERVICE WATER CONNECTIONS (LESS THAN 3-INCH DIAMETER)	\$ 55	—	\$ 605	—
64.12ESEG (135)	29.0 L.F.	EXTENDING HOUSE SERVICE WATER CONNECTIONS (EQUAL TO OR GREATER THAN 3-INCH DIAMETER)	\$ 65	—	\$ 1885	—
64.12ESLT (136)	8.0 L.F.	EXTENDING HOUSE SERVICE WATER CONNECTIONS (LESS THAN 3-INCH DIAMETER)	\$ 65	—	\$ 520	—



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			DOLLARS	CTS	DOLLARS	CTS
64.13WC08 (137)	1.0 EACH	FURNISHING, DELIVERING AND INSTALLING WET CONNECTION SLEEVE ON 8-INCH WATER MAIN PIPE WITH VARIOUS OUTLETS	500	-	500	-
64.13WC12 (138)	4.0 EACH	FURNISHING, DELIVERING AND INSTALLING WET CONNECTION SLEEVE ON 12-INCH WATER MAIN PIPE WITH VARIOUS OUTLETS	500	-	2000	-
64.13WC20 (139)	1.0 EACH	FURNISHING, DELIVERING AND INSTALLING WET CONNECTION SLEEVE ON 20-INCH WATER MAIN PIPE WITH VARIOUS OUTLETS	500	-	500	-
65.11BR (140)	8,336.0 LBS.	FURNISHING, DELIVERING AND INSTALLING BANDS, RODS, WASHERS, ETC., COMPLETE, FOR RESTRAINING JOINTS	2	-	16,672	-

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			DOLLARS	CTS	DOLLARS	CTS
65.21PS (141)	3,231.0 I.F.	FURNISHING AND PLACING POLYETHYLENE SLEEVE Unit price bid shall not be less than: \$ 1.00	1		\$ 3231	
65.31FF (142)	82,484.0 S.F.	FURNISHING, DELIVERING AND PLACING FILTER FABRIC Unit price bid shall not be less than: \$ 0.10	1		\$ 82,484	
65.71SG (143)	229.0 C.Y.	FURNISHING, DELIVERING AND PLACING SCREENED GRAVEL OR SCREENED BROKEN STONE BEDDING	50		\$ 11,450	
7.13 B (144)	18.0 MONTH	MAINTENANCE OF SITE	12,000		\$ 216,000	



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			DOLLARS	CTS	DOLLARS	CTS
7.16 D (145)	71.0 C.Y.	TEST PITS	\$ 75	—	\$ 5325	—
7.19 (146)	1,690.0 L.F.	LOAD TRANSFER JOINT	\$ 10	—	\$ 16,900	—
7.30 A (147)	726.0 C.Y.	REMOVAL OF TRACK	\$ 65	—	\$ 47,190	—
7.31 B (148)	39.0 C.Y.	DEMOLITION OF TROLLEY TRACK TRUSS BLOCKS	\$ 100	—	\$ 3900	—



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			DOLLARS	CTS	DOLLARS	CTS
7.36 (149)	7,421.0 L.F.	PEDESTRIAN STEEL BARRICADES	\$ 7	—	\$ 51,947	—
7.50 RCP-A (150)	65.0 EACH	CUSTOM MODULAR BENCH (WITH BACK AND ARMS)	\$ 2,000	—	\$ 130,000	—
7.50 RCP-B (151)	21.0 EACH	CUSTOM MODULAR BENCH (WITHOUT BACK AND WITH ARMS)	\$ 1,200	—	\$ 25,200	—
7.88 AA (152)	1.0 L.S.	RODENT INFESTATION SURVEY AND MONITORING Unit price bid shall not be less than: \$ 1,500.00	\$ 10,000	—	\$ 10,000	—



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			DOLLARS	CTS	
7.88 AB (153)	432.0 EACH	RODENT BAIT STATIONS Unit price bid shall not be less than: \$ 60.00	\$ 60	—	\$ 25,920
7.88 AC (154)	432.0 EACH	BAITING OF RODENT BAIT STATIONS Unit price bid shall not be less than: \$ 9.00	\$ 9	—	\$ 3,888
7.88 AD (155)	119.0 BLOCK	WATERBUG BAIT APPLICATIONS Unit price bid shall not be less than: \$ 65.00	\$ 65	—	\$ 7,735
70.31FN (156)	6,461.0 L.F.	FENCING Unit price bid shall not be less than: \$ 2.00	\$ 2	—	\$ 12,922

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			DOLLARS	CTS	DOLLARS	CTS
70.51EO (157)	55.0 C.Y.	EXCAVATION OF BOULDERS IN OPEN CUT Unit price bid shall not be less than: \$ 75.00	75	-	4125	-
70.61RE (158)	55.0 C.Y.	ROCK EXCAVATION	700	-	38500	-
70.61RR (159)	44.0 C.Y.	ROCK EXCAVATION WITHIN RAILROAD INFLUENCE AS PER RAILROAD GUIDELINES	870	-	37,900	-
70.81CB (160)	144.0 C.Y.	CLEAN BACKFILL Unit price bid shall not be less than: \$ 15.00	15	-	2160	-



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			DOLLARS	CTS	DOLLARS	CTS
70.91SW12 (161)	2,141.0 S.F.	FURNISHING AND PLACING SHEETING AND BRACING IN TRENCH FOR WATER MAIN PIPE 12-INCH IN DIAMETER AND LESS	1	-	2141	-
70.91SW20 (162)	6,721.0 S.F.	FURNISHING AND PLACING SHEETING AND BRACING IN TRENCH FOR WATER MAIN PIPE 20-INCH IN DIAMETER	1	-	6721	-
73.11AB (163)	4.0 C.Y.	ADDITIONAL BRICK MASONRY Unit price bid shall not be less than: \$ 125.00	125	-	500	-
73.21AC (164)	11.0 C.Y.	ADDITIONAL CONCRETE Unit price bid shall not be less than: \$ 125.00	125	-	1375	-

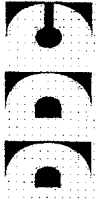


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			DOLLARS	CTS	DOLLARS	CTS
73.31AE0 (165)	57.0 C.Y.	ADDITIONAL EARTH EXCAVATION INCLUDING TEST PITS (ALL DEPTHS) Unit price bid shall not be less than: \$ 20.00	\$ 20	—	\$ 1140	—
73.41AG (166)	176.0 C.Y.	ADDITIONAL SELECT GRANULAR BACKFILL Unit price bid shall not be less than: \$ 15.00	\$ 15	—	\$ 2640	—
73.51AS (167)	550.0 LBS.	ADDITIONAL STEEL REINFORCING BARS Unit price bid shall not be less than: \$ 1.00	\$ 1	—	\$ 550	—
8.01 C1 (168)	1,980.0 TONS	HANDLING, TRANSPORTING AND DISPOSAL OF NON-HAZARDOUS CONTAMINATED SOIL	\$ 50	—	\$ 99,000	—



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			DOLLARS	CTS.	DOLLARS	CTS.
8.01 C2 (169)	6.0 SETS	SAMPLING AND TESTING OF CONTAMINATED/POTENTIALLY HAZARDOUS SOIL FOR DISPOSAL PURPOSES	\$ 2500	—	\$ 15,000	—
8.01 H (170)	1.0 TONS	HANDLING, TRANSPORTING AND DISPOSAL OF HAZARDOUS SOIL	\$ 300	—	\$ 300	—
8.01 S (171)	1.0 L.S.	HEALTH AND SAFETY	\$ 17500	—	\$ 17500	—
8.01 W1 (172)	7.0 DAY	REMOVAL, TREATMENT, AND DISCHARGE/DISPOSAL OF CONTAMINATED WATER	\$ 1	—	\$ 7000	—

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			DOLLARS	CTS.	DOLLARS	CTS.
8.01 C2 (169)	6.0 SETS	SAMPLING AND TESTING OF CONTAMINATED/POTENTIALLY HAZARDOUS SOIL FOR DISPOSAL PURPOSES	\$ 2500	—	\$ 15,000	—
8.01 H (170)	1.0 TONS	HANDLING, TRANSPORTING AND DISPOSAL OF HAZARDOUS SOIL	\$ 300	—	\$ 300	—
8.01 S (171)	1.0 L.S.	HEALTH AND SAFETY	\$ 17500	—	\$ 17500	—
8.01 W1 (172)	7.0 DAY	REMOVAL, TREATMENT, AND DISCHARGE/DISPOSAL OF CONTAMINATED WATER	\$ 1	—	\$ 7	—



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			DOLLARS	CTS	DOLLARS	CTS
8.01 W2 (173)	1.0 SETS	SAMPLING AND TESTING OF WATER	\$ 1000	—	\$ 1000	—
8.02 A (174)	2,216.0 S. F.	SPECIAL CARE EXCAVATION AND RESTORATION FOR SIDEWALK WORK	\$ 2	—	\$ 4432	—
8.02 B (175)	228.0 L. F.	SPECIAL CARE EXCAVATION AND RESTORATION FOR CURB WORK	\$ 8	—	\$ 1824	—
8.07 (176)	2.0 EACH	TEMPORARY ALUMINUM PEDESTRIAN BRIDGE	\$ 4500	—	\$ 9000	—



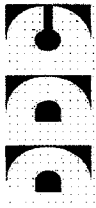
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			DOLLARS	CTS	DOLLARS	CTS
8.08 (177)	3.0 EACH	VARIABLE MESSAGE BOARD	\$ 10,000		\$ 30,000	
8.22 D (178)	6,692.0 S.F.	THREE PLY MEMBRANE WATERPROOFING	\$ 12		\$ 80,304	
8.32 (179)	86.0 S.Y.	BARK CHIP MULCH	\$ 10		\$ 860	
9.00 C (180)	119.0 C.F.	EXPLORATORY TEST PITS	\$ 25		\$ 2,975	

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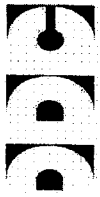


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			DOLLARS	CTS	DOLLARS	CTS
9.04 HW (181)	1.0 F.S.	ALLOWANCE FOR ANTI-FREEZE ADDITIVE IN CONCRETE PRICE BID SHALL BE FOR THE FIXED SUM OF \$ 30,000.00	\$ 30,000.00		\$ 30,000.00	
9.07 (182)	132.0 S.Y.	NON-WOVEN GEOTEXTILE (FOR BACKFILL AND UNDERDRAINS)	\$ 22		\$ 2904	
9.13 HD (183)	77.0 L.F.	6" HIGH-DENSITY POLYETHYLENE DRAINAGE PIPE	\$ 75		\$ 5775	
9.13 HD8 (184)	132.0 L.F.	8" HIGH-DENSITY POLYETHYLENE DRAINAGE PIPE	\$ 75		\$ 9900	

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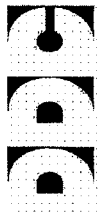


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			DOLLARS	CTS	DOLLARS	CTS
9.15 (185)	165.0 L.F.	FILTER FABRIC SILT FENCE	15	-	2475	-
9.95 RCP-BB (186)	428.0 L.F.	BLACK GRANITE PLANTER BENCH BLOCKS	900	-	385,200	-
9.95 RCP-FB (187)	33.0 S.F.	BLACK GRANITE FOUNTAIN BLOCKS	1800	-	59,400	-
9.95 RCP-PP (188)	440.0 S.F.	BLACK GRANITE PASS-THROUGH SLOPING PAVERS	200	-	88,000	-

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			DOLLARS	CTS	DOLLARS	CTS
9.95 RCP-SGP (189)	550.0 S.F.	FURNISH AND INSTALL SPECIAL GRANITE PAVERS	\$ 200		\$ 110,000	
9.99 M (190)	18.0 MONTH	FLASHING ARROW BOARD	\$ 2500		\$ 45,000	
E 16.01-RCP (191)	1.0 L.S.	FURNISH AND INSTALL ELECTRIC METER, CABINET, PANEL BOARD, DISTRIBUTION, AND RECEPTACLES	\$ 60,000		\$ 60,000	
E 260519 E (192)	484.0 L.F.	LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES (NO. 8 AWG WIRE)	\$ 310		\$ 150,000	

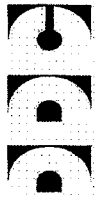


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			DOLLARS	CTS	DOLLARS	CTS
E 260519 G (193)	341.0 L.F.	LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES (NO. 10 AWG WIRE)	\$ 2	00	\$ 852	00
NYC-683.940111 (194)	1.0 EACH	SERVICE BOX	\$ 3200	—	\$ 3200	—
PK-124C7 (195)	7.0 EACH	CATCH BASIN (DPR TYPE C-7)	\$ 4000	—	\$ 28000	—
PK-12D (196)	1.0 EACH	WATER TAP, 2" DIAMETER	\$ 4000	—	\$ 4000	—

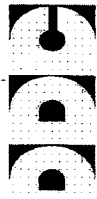


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			DOLLARS	CTS	DOLLARS	CTS
PK-13D (197)	233.0 L.F.	TYPE K COPPER TUBING, 1" DIAMETER	\$ 38	—	\$ 8874	—
PK-13F (198)	110.0 L.F.	TYPE K COPPER TUBING, 2" DIAMETER	\$ 48	—	\$ 5280	—
PK-143 RCP (199)	1.0 SETS	TWO REDUCED PRESSURE ZONE DEVICES & ONE WATER METER WITH REMOTE & STRUCTURE - 2" DIA.	\$ 32,000	—	\$ 32,000	—
PK-14D (200)	1.0 EACH	CURB GATE VALVE, 2" DIAMETER	\$ 850	—	\$ 850	—



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			DOLLARS	CTS	DOLLARS	CTS
PK-17 (201)	1.0 EACH	CAST IRON VALVE BOX, 5-1/4" DIAMETER	\$ 850	—	\$ 850	—
PK-184-GH1 (202)	4.0 EACH	GROUND HYDRANT - 1" DIAMETER	\$ 1800	—	\$ 7200	—
RCP-AL1 (203)	1.0 L.S.	FURNISH AND INSTALL EXTERIOR ARCHITECTURAL LIGHTING	\$ 235,000	—	\$ 235,000	—
RCP-AL2 (204)	10.0 EACH	FURNISH AND INSTALL 70W STAD/CITEA LUMINAIRES	\$ 1850	—	\$ 18,500	—

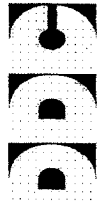


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			DOLLARS	CTS	DOLLARS	CTS
RCP-DG1 (205)	6.0 EACH	CUSTOM DRAIN GRATING AND FRAME, PLAZA	\$ 1500		\$ 9000	
RCP-DG2 (206)	2.0 EACH	CUSTOM DRAIN GRATING AND FRAME, WATER FEATURE	\$ 9000		\$ 18,000	
RCP-PL1 (207)	1.0 L.S.	FURNISH AND INSTALL VALVES, SUPPORTS, HEAT TRACING, AND IDENTIFICATION FOR PLAZA PLUMBING	\$ 12,000		\$ 12,000	
RCP-RB (208)	1.0 L.S.	FURNISH AND INSTALL RETENTION BASIN	\$ 38,000		\$ 38,000	



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			DOLLARS	CTS	DOLLARS	CTS
RCP-SD1 (209)	6.0 EACH	CUSTOM SKATEBOARD DETERRENT, TYPE 1	\$ 570	—	\$ 3,300	—
RCP-SD2 (210)	18.0 EACH	CUSTOM SKATEBOARD DETERRENT, TYPE 2	\$ 600	—	\$ 10,800	—
RCP-WF1 (211)	1.0 I.S.	EXTERIOR WATER FEATURE	\$ 465,000	—	\$ 465,000	—
SL-20.01.03 (212)	10.0 EACH	FURNISH AND INSTALL FOUNDATION FOR TYPE "BB" LAMPPOST, AS PER DRAWING E-5239	\$ 800	—	\$ 8,000	—

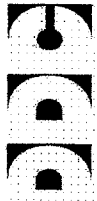
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			DOLLARS	CTS	DOLLARS	CTS
SL-20.02.10 (213)	3.0 EACH	FURNISH AND INSTALL STANDARD TYPE ANCHOR BOLT FOUNDATION AS PER DWG J-5253 FOR INSTALLING TYPE "BC", "M", LYRE AND "5TH AVENUE", "GCPW", LAMPOST.	\$ 1200	—	\$ 3600	—
SL-20.08.01 (214)	5.0 EACH	REMOVE STANDARD TYPE ANCHOR BOLT CONCRETE FOUNDATION	\$ 750	—	\$ 3750	—
SL-21.01.05 (215)	10.0 EACH	FURNISH AND INSTALL TYPE "BB" OR OTHER PEDESTRIAN LAMPOST WITH 20" TRANSFORMER BASE, AS PER DRAWINGS H-5239 AND H-5235.	\$ 2100	—	\$ 21000	—
SL-21.04.14 (216)	3.0 EACH	FURNISH AND INSTALL TYPE "M" LAMPOST WITH P.E.C. RECEPTACLE, AS PER DRAWING H-5260.	\$ 10500	—	\$ 31500	—



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			DOLLARS	CTS	DOLLARS	CTS
SL-21.09.06 (217)	5.0 EACH	REMOVE ORNAMENTAL LAMPPOST (TYPE "BC", "M", "F", "5TH AVENUE", "LYRE" GRAND CENTRAL) ON FOUNDATION, WITH ALL ATTACHMENTS, IF ANY. REMOVE PORTION OF FOUNDATION.	725	-	3625	-
SL-21.09.08 (218)	2.0 EACH	REMOVE ALL STREET LIGHTING EQUIPMENT FROM TYPE "M-2" TRAFFIC POST (ARM(S), PHOTOELECTRIC CONTROLLER, LUMINAIRE(S), SHAFT EXTENSION, WIRING, ETC.)	495	-	990	-
SL-22.03.18 (219)	2.0 EACH	FURNISH AND INSTALL TYPE COBRA HEAD LUMINAIRE WITH 150 WATT HPS WITH SOLID STATE BALLAST AND STRAY VOLTAGE INDICATOR FOR 100 VOLT LAMP.	375	-	750	-
SL-22.05.20 (220)	7.0 EACH	FURNISH AND INSTALL 250 WATT HIGH PRESSURE SODIUM "2651 TEAR DROP" LUMINAIRE FOR 100 VOLT LAMP.	950	-	6650	-

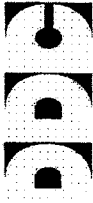


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			DOLLARS	CTS	DOLLARS	CTS
SL-24.02.02 (221)	2.0 EACH	FURNISH AND INSTALL FABRICATED STEEL 8 FT. ARM ON LAMPOST OR "M-2" TRAFFIC POLE SHAFT EXTENSION.	\$ 390		\$ 780	
SL-24.02.16 (222)	2.0 EACH	FURNISH AND INSTALL FABRICATED STEEL 6 FT. SHAFT EXTENSION (SINGLE ARM) FOR "M-2" TRAFFIC POST AS PER DWGs H-5159 OR H-5255.	\$ 975		\$ 1950	
SL-24.04.02 (223)	4.0 EACH	FURNISH AND INSTALL TYPE "M" SHAFT EXTENSION AND ARM ASSEMBLY WITH PHOTOELECTRIC CONTROL RECEPTACLE FOR "M-2" TRAFFIC POST, AS PER DRAWING H-5268. M-2 ORNAMENTAL CASTINGS FURNISHED AND INSTALLED BY OTHERS.	\$ 4500		\$ 18000	
SL-24.04.16 (224)	3.0 EACH	REMOVE ORNAMENTAL SHAFT EXTENSION AND ARM(S) ASSEMBLY, LUMINAIRE(S), ETC. FROM "M-2" TRAFFIC LAMPOST	\$ 390		\$ 1170	



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			DOLLARS	CTS	DOLLARS	CTS
SL-26.01.01 (225)	9.0 EACH	FURNISH AND INSTALL, OR FURNISH AND REPLACE A PLUG-IN SOLID STATE PHOTOELECTRIC CONTROL	\$ 49	—	\$ 441	—
SL-27.01.01 (226)	11.0 EACH	FURNISH AND INSTALL ALUMINUM TAG ON A LAMPPOST, AS PER DRAWING D-2861	\$ 165	—	\$ 1815	—
SL-28.01.02 (227)	2.0 EACH	FURNISH AND INSTALL COPPER WELD GROUND ROD AND CLAMP IN DIRT AREA, BURIED BOX, SIDEWALK OR ROADWAY BOX, AS PER DRAWING H-5019.	\$ 400	—	\$ 800	—
SL-29.01.03 (228)	4.0 EACH	FURNISH, INSTALL, MAINTAIN AND REMOVE EQUIPMENT FOR TEMPORARY LIGHTING, AS PER DRAWING J-5226	\$ 865	—	\$ 3460	—

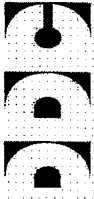


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COL. 1 ITEM NUMBER (SEQUENCE NO.)	COL. 2 ENGINEER'S ESTIMATE OF QUANTITIES	COL. 3 CLASSIFICATIONS	COL. 4 UNIT PRICES (IN FIGURES)		COL. 5 EXTENDED AMOUNTS (IN FIGURES)	
			DOLLARS	CTS	DOLLARS	CTS
SL-31.01.03 (229)	4.0 EACH	PAINT "M-2" TRAFFIC POST INCLUDING SHAFT EXTENSION AND ARM	800	—	\$ 3200	—
SL-33.01.02 (230)	561.0 L.F.	FURNISH AND INSTALL NO. 6 AWG XLP COPPER CABLE OR EQUAL IN CONDUIT	4	—	\$ 2244	—
SL-35.01.06 (231)	110.0 L.F.	FURNISH AND INSTALL 4" HOT DIPPED GALVANIZED STEEL CONDUIT IN PAVED AREA.	38	—	\$ 4180	—
SL-35.03.04 (232)	561.0 L.F.	FURNISH AND INSTALL 2" HOT DIPPED GALVANIZED STEEL CONDUIT IN UNPAVED AREA	30	—	\$ 16830	—

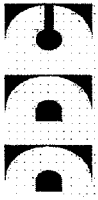


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			DOLLARS	CTS	DOLLARS	CTS
SL-37.05.04 (233)	2.0 EACH	FURNISH AND INSTALL TYPE 2418 SIDEWALK CONCRETE BOX WITH CAST IRON FRAME AND COVER WITH TAMPER PROOF BOLTS AS PER DWG J-3179A.	2600		5200	
SL-37.05.08 (234)	5.0 EACH	FURNISH AND INSTALL TYPE 1812 ROADWAY CONCRETE BOX WITH CAST IRON FRAME AND COVER WITH TAMPER PROOF BOLTS AS PER DWG J-3179B.	2000		10000	
SL-37.05.11 (235)	1.0 EACH	FURNISH AND INSTALL TYPE 3624 ROADWAY CONCRETE BOX WITH CAST IRON FRAME AND COVER WITH TAMPER PROOF BOLTS AS PER DWG J-3179B.	3850		3850	
T-1.1 (236)	7.0 EACH	INSTALL TYPE "S" OR "T" FOUNDATION	1800		12600	



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			DOLLARS	CTS	DOLLARS	CTS
T-1.18 (237)	5.0 EACH	REMOVE TYPE "A", "B", "S" OR "T" SERIES FOUNDATION	\$ 600		\$ 3000	
T-1.2 (238)	1.0 EACH	INSTALL TYPE "F-1" FOUNDATION	\$ 1800		\$ 1800	
T-1.20 (239)	5.0 EACH	REMOVE TYPE "M" SERIES FOUNDATION	\$ 800		\$ 4000	
T-1.3 (240)	5.0 EACH	INSTALL TYPE "M2-5S" FOUNDATION	\$ 2200		\$ 11000	

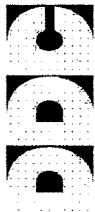


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			DOLLARS	CTS	DOLLARS	CTS
T-1.6 (241)	1.0 EACH	INSTALL TYPE "M2-5T" FOUNDATION	\$ 2200	—	\$ 2200	—
T-2.1 (242)	7.0 EACH	INSTALL TYPE "S-1" OR "T-1" SERIES POST	\$ 420	—	\$ 2940	—
T-2.16 (243)	4.0 EACH	FURNISH, INSTALL, MAINTAIN AND REMOVE TEMPORARY POST OR PYLON WITH SIGNALS	\$ 1250	—	\$ 5000	—
T-2.18 (244)	1.0 EACH	FURNISH, INSTALL, MAINTAIN AND REMOVE TEMPORARY POST OR PYLON WITH CONTROLLER AND SIGNALS	\$ 1450	—	\$ 1450	—



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			DOLLARS	CTS	DOLLARS	CTS
T-2.2 (245)	1.0 EACH	INSTALL TYPE "S-14" POST	\$ 570	—	\$ 570	—
T-2.22 (246)	5.0 EACH	REMOVE TYPE "S-1" OR "T-1" SERIES POST	\$ 265	—	\$ 1325	—
T-2.24 (247)	5.0 EACH	REMOVE TYPE "M" SERIES POST	\$ 1150	—	\$ 5750	—
T-2.28 (248)	6.0 EACH	REMOVE MAST ARM FROM ANY POST	\$ 675	—	\$ 4050	—



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			DOLLARS	CTS	DOLLARS	CTS
T-2.32 (249)	5.0 EACH	INSTALL STREET LIGHT LUMINAIRE SUPPORT ARM ON "M-2" POST	225		1125	
T-2.4 (250)	6.0 EACH	INSTALL TYPE "M-2" POST	1600		9600	
T-20000 (251)	7.0 EACH	FURNISH TEN FOOT ALUMINUM SIGNAL POST TYPE "S-1"	720		5040	
T-20020 (252)	21.0 EACH	a) FURNISH 3/4" ANCHOR BOLT ASSEMBLIES FOR S-1 (EACH) (3 REQUIRED PER POST)	30		630	

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			DOLLARS	CTS	DOLLARS	CTS
T-20021 (253)	4.0 EACH	b) FURNISH 1" ANCHOR BOLT ASSEMBLIES FOR F-1 (EACH) (4 REQUIRED PER POST)	35	—	\$ 140	—
T-20160 (254)	6.0 EACH	FURNISH 20 FOOT SIGNAL MAST ARM POLE ASSEMBLY TYPE "M-2"	3500	—	\$ 21,000	—
T-20184 (255)	3.0 EACH	a) FURNISH 5' EXTENSION ARM ASSEMBLY WITH FITTINGS	740	—	\$ 2,220	—
T-20220 (256)	24.0 EACH	c) FURNISH 1-1/4" ANCHOR BOLT ASSEMBLIES FOR M-2 (EACH) (4 REQUIRED PER POST)	85	—	\$ 2,040	—



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			DOLLARS	CTS	DOLLARS	CTS
T-20640 (257)	1.0 EACH	FURNISH ALUMINUM TRAFFIC SIGNAL POST TYPE "S-14"	\$ 1050		\$ 1050	
T-3.1 (258)	14.0 EACH	INSTALL "ONE-WAY" SIGNAL UNIT ON MAST ARM OR TOP OF TRAFFIC POST	\$ 425		\$ 5950	
T-3.12 (259)	1.0 EACH	FURNISH AND INSTALL LOUVERS ON SIGNAL UNIT	\$ 375		\$ 375	
T-3.18 (260)	8.0 EACH	REMOVE SIGNAL HEAD FROM ANY TYPE POST	\$ 345		\$ 2760	

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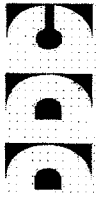
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			DOLLARS	CTS	DOLLARS	CTS
T-3.2 (261)	6.0 EACH	INSTALL "ONE-WAY" SIGNAL UNIT ON THE SHAFT OF ANY POST	460	—	2760	—
T-3.21 (262)	22.0 EACH	REMOVE PEDESTRIAN SIGNAL OR SIGN UNIT OR OTHER ILLUMINATED SIGNS FROM ANY POST	230	—	5060	—
T-3.26 (263)	5.0 EACH	REMOVE STREET LIGHT LUMINAIRE AND PHOTO ELECTRIC CONTROL FROM STREET LIGHT ARM	96	—	480	—
T-3.27 (264)	5.0 EACH	INSTALL STREET LIGHT LUMINAIRE AND PHOTO ELECTRIC CONTROL ON STREET LIGHT MAST	155	—	775	—

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			DOLLARS	CTS	DOLLARS	CTS
T-3.6 (265)	25.0 EACH	INSTALL PEDESTRIAN SIGNAL ON ANY TYPE POST	\$ 380 -	-	\$ 9500 -	-
T-30013L (266)	20.0 EACH	FURNISH ADJUST 3 SCTN 1-WAY TRAFFIC SIGNAL, 8" - W/LED LENS	\$ 375 -	-	\$ 7500 -	-
T-31150 (267)	1.0 EACH	FURNISH "1SA" ALUMINUM DIE CASTINGS AND ASSEMBLY FOR POST SIGNAL MOUNTING	\$ 85 -	-	\$ 85 -	-
T-31200 (268)	6.0 EACH	e) "VB" ASSEMBLY *ASSEMBLY IS EQUAL TO ONE PAIR	\$ 60 -	-	\$ 360 -	-

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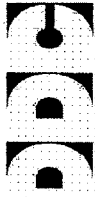
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			DOLLARS	CTS	DOLLARS	CTS
T-31205 (269)	1.0 EACH	FURNISH MAST ARM SIGNAL MOUNTING ASSEMBLY - a) "1MS"	30	-	30	-
T-31210 (270)	19.0 EACH	h) "HUB" ASSEMBLY *ASSEMBLY IS EQUAL TO ONE PAIR	31	-	589	-
T-31215 (271)	3.0 EACH	b) "2MS"	200	-	600	-
T-31235 (272)	1.0 EACH	d) "4MS"	215	-	215	-



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			DOLLARS	CTS	DOLLARS	CTS
T-31340 (273)	5.0 EACH	f) "VB-P" ASSEMBLY *ASSEMBLY IS EQUAL TO ONE PAIR	\$ 85	—	\$ 425	—
T-31351 (274)	9.0 EACH	g) "VB-2P" ASSEMBLY *ASSEMBLY IS EQUAL TO ONE PAIR	\$ 215	—	\$ 1935	—
T-31500GL (275)	7.0 EACH	FURNISH 12" LENS & SIGNAL SECTION (LED GREEN ARROWS)	\$ 200	—	\$ 1400	—
T-33000L (276)	27.0 EACH	FURNISH POLYCARBONATE INCANDESCENT PED SIGNAL W/LED LENS	\$ 275	—	\$ 7425	—



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			DOLLARS	CTS	DOLLARS	CTS
T-4.1 (277)	2.0 EACH	INSTALL ONE CONTROL BOX AND CONTROLLER ON ANY POST OR SUPPORT	1500		3000	
T-4.8 (278)	2.0 EACH	REMOVE ONE CONTROL BOX AND CONTROLLER FROM ANY POST OR SUPPORT	700		1400	
T-5.1 (279)	935.0 L.F.	FURNISH AND INSTALL 2" RIGID UNDERGROUND CONDUIT IN UNPAVED ROADWAY	28		26,180	
T-5.2 (280)	110.0 L.F.	FURNISH AND INSTALL 2" RIGID UNDERGROUND CONDUIT IN PAVED ROADWAY	35		3810	



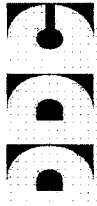
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			DOLLARS	CTS	DOLLARS	CTS
T-5.32 (281)	110.0 L.F.	RESTORING PERMANENT ROADWAY (INCLUDING SAWCUT)	25		2750	
T-6.1 (282)	660.0 L.F.	INSTALL CABLE (INCLUDES OVERHEAD)	575		3795	
T-6.10 (283)	3,300.0 L.F.	REMOVE CABLE (INCLUDES OVERHEAD)	4		13,200	
T-6.2 (284)	3,300.0 L.F.	INSTALL MULTIPLE CABLE (INCLUDES OVERHEAD)	7		23,100	

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			DOLLARS	CTS	DOLLARS	CTS
T-6000B (285)	3,000.0 L.F.	FURNISH 2 c # 10B (BREAKDOWN = 2#10 WITH 3RD WIRE FOR GROUNDING).	2	30	\$ 7000	
T-60040 (286)	2,000.0 L.F.	c) 7 CONDUCTOR, 14 A.W.G.	2		\$ 4000	
T-60190 (287)	4,000.0 L.F.	e) 13 CONDUCTOR, 14 A.W.G.	3		\$ 12,000	
T-7.45 (288)	4.0 EACH	REMOVE PEDESTRIAN PUSHBUTTON AND PUSHBUTTON SIGN	300		\$ 1200	

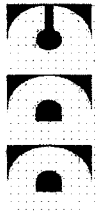


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			DOLLARS	CTS	DOLLARS	CTS
T-7.50 (289)	1.0 EACH	REMOVE (1812) HAND BOX OR PULL BOX IN PAVED SIDEWALK	\$ 300	—	\$ 300	—
T-7.53 (290)	1.0 EACH	REMOVE (2418) HAND BOX OR PULL BOX IN PAVED SIDEWALK	\$ 300	—	\$ 300	—
T-8.10 (291)	6.0 EACH	RELOCATE CONCRETE PYLON WITH POST	\$ 720	—	\$ 4320	—
T-8.8 (292)	6.0 EACH	INSTALL CONCRETE PYLON	\$ 825	—	\$ 4950	—



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			DOLLARS	CTS	DOLLARS	CTS
T-8.9 (293)	6.0 EACH	REMOVE CONCRETE PYLON	\$ 360	—	\$ 2160	—
T-81000 (294)	6.0 EACH	FURNISH CONCRETE PYLON	\$ 575	—	\$ 3450	—
T-93000 (295)	1.0 EACH	FURNISH AND INSTALL COMPLETE DOME CCTV CAMERA SYSTEM ON CITY-OWNED UTILITY POLE.	\$ 18000	—	\$ 18,000	—
UTL-6.01.8 (296)	5.0 EACH	GAS SERVICES CROSSING TRENCHES AND/OR EXCAVATIONS (\$6.01) Unit price bid shall not be less than: \$ 465.00	\$ 465	—	\$ 2325	—



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			DOLLARS	CTS	DOLLARS	CTS
UTL-6.01.9 (297)	13.0 EACH	GAS MAIN CROSSING WATER MAIN UP TO 20" IN DIAMETER (\$6.01) Unit price bid shall not be less than: \$ 485.00	\$ 485	-	\$ 6305	-
UTL-6.02 (298)	10.0 EACH	EXTRA EXCAVATION FOR THE INSTALLATION OF CATCH BASIN SEWER DRAIN PIPES WITH GAS INTERFERENCES (\$6.02) Unit price bid shall not be less than: \$ 715.00	\$ 715	-	\$ 7150	-
UTL-6.03 (299)	300.0 L.F.	REMOVAL OF ABANDONED GAS FACILITIES. ALL SIZES. (\$6.03) Unit price bid shall not be less than: \$ 15.00	\$ 15	-	\$ 4500	-
UTL-6.03.1A (300)	100.0 L.F.	REMOVAL OF ABANDONED GAS FACILITIES WITH POSSIBLE COAL TAR WRAP. ALL SIZES. (\$6.03) Unit price bid shall not be less than: \$ 25.00	\$ 25	-	\$ 2500	-



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			DOLLARS	CTS	DOLLARS	CTS
UTL-6.04 (301)	20.0 EACH	ADJUST HARDWARE TO GRADE USING SPACER RINGS/ADAPTORS. (STREET REPAVING.) (S6.04) Unit price bid shall not be less than: \$ 35.00	\$ 35	—	\$ 700	—
UTL-6.05 (302)	10.0 EACH	ADJUST HARDWARE TO GRADE BY RESETTING. (ROAD RECONSTRUCTION.) (S6.05) Unit price bid shall not be less than: \$ 65.00	\$ 65	—	\$ 650	—
UTL-6.06 (303)	200.0 C.Y.	SPECIAL CARE EXCAVATION AND BACKFILLING (S6.06) Unit price bid shall not be less than: \$ 180.00	\$ 180	—	\$ 36,000	—
UTL-6.07 (304)	30.0 C.Y.	TEST PITS FOR GAS FACILITIES (S6.07) Unit price bid shall not be less than: \$ 100.00	\$ 100	—	\$ 3,000	—

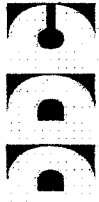


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			DOLLARS	CTS	DOLLARS	CTS
UTL-GCS-2WS (305)	1.0 F.S.	GAS INTERFERENCES AND ACCOMMODATIONS PRICE BID SHALL BE FOR THE FIXED SUM OF \$ 50,000.00	\$ 50,000.00		\$ 50,000.00	



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			DOLLARS	CTS	DOLLARS	CTS
SUB-TOTAL:					\$ 10,357,935	12
6.39 A (306)	1.0 LUMP SUM	MOBILIZATION PRICE BID SHALL NOT EXCEED 4% OF THE ABOVE SUB-TOTAL PRICE.			\$ 414,317	54
TOTAL BID PRICE:					\$ 10,772,252	58

PLEASE BE SURE A LEGIBLE BID IS ENTERED FOR EACH ITEM.

THE BIDDER SHALL INSERT THE TOTAL BID PRICE IN
THE BID FORM ON PAGE C-4 OF THIS BID BOOKLET.

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			DOLLARS	CTS	DOLLARS	CTS
6.39 A (306)	1.0 LUMP SUM	MOBILIZATION PRICE BID SHALL NOT EXCEED 4% OF THE ABOVE SUB-TOTAL PRICE.	SUB-TOTAL: 3/14/13		414,040	09
			TOTAL BID PRICE: 3/14/13		10,765,042	24

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~~10,357,931~~
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PLEASE BE SURE A LEGIBLE BID IS ENTERED FOR EACH ITEM.

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THE BID FORM ON PAGE C-4 OF THIS BID BOOKLET.



BID FORM
Trocom Construction Corp

PROJECT ID: HWXRCPLZ

TOTAL BID PRICE: In the space provided below, the Bidder shall indicate its Total Bid Price in figures. Such Total Bid Price is set forth on the final page of the Bid Schedule.

TOTAL BID PRICE:
(a/k/a BID PROPOSAL)

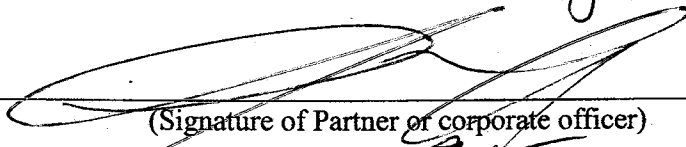
\$ 10,772,252⁵⁶

2/5/17
P.S

BIDDER'S SIGNATURE AND AFFIDAVIT

WARNING!!! If M/WBE goals have been established for this Contract, you **MUST** complete and submit the Affirmations on the 2nd page of the Subcontractor Utilization Plan (or a pre-approved waiver) at the time you submit your bid. Failure to comply will result in the rejection of your bid.

Bidder: Trocom Construction Corp

By: 
(Signature of Partner or corporate officer)

Attest: _____
(Corporate Seal) Secretary of Corporate Bidder

Affidavit on the following page should be subscribed
and sworn to before a Notary Public

BID FORM (TO BE NOTARIZED)

AFFIDAVIT WHERE BIDDER IS AN INDIVIDUAL

STATE OF NEW YORK, COUNTY OF _____ ss:

_____ being duly sworn says:
I am the person described in and who executed the foregoing bid, and the several matters therein stated are in all respects true.

(Signature of the person who signed the Bid)

Subscribed and sworn to before me this
_____ day of _____,

Notary Public

AFFIDAVIT WHERE BIDDER IS A PARTNERSHIP

STATE OF NEW YORK, COUNTY OF _____ ss:

_____ being duly sworn says:
I am a member of _____ the firm described in and which executed the foregoing bid. I subscribed the name of the firm thereto on behalf of the firm, and the several matters therein stated are in all respects true.

(Signature of Partner who signed the Bid)

Subscribed and sworn to before me this
_____ day of _____,

Notary Public

AFFIDAVIT WHERE BIDDER IS A CORPORATION

STATE OF NEW YORK, COUNTY OF Queens ss:

ANTHONY J. SANTORO being duly sworn says:
I am the Vice President of the above named corporation whose name is subscribed to and which executed the foregoing bid. I reside at Staten Island.
I have knowledge of the several matters therein stated, and they are in all respects true.

(Signature of Corporate Officer who signed the Bid)

Subscribed and sworn to before me this
7 day of March, 2013

~~_____
Notary Public~~
LINDA BARRATI
Notary Public - STATE OF NEW YORK
No. 01BA6181795
Qualified in Nassau County
My Commission Expires February 11, 2014

PROJECT ID: HWXRCPLZ

TOTAL BID PRICE: In the space provided below, the Bidder shall indicate its Total Bid Price in figures. Such Total Bid Price is set forth on the final page of the Bid Schedule.

TOTAL BID PRICE:
(a/k/a BID PROPOSAL)

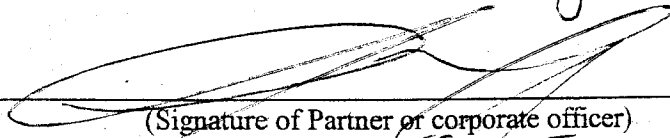
3/14/13

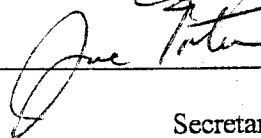
10,765,042²⁴
10,772,252⁵⁶
2/5/13
P.S

BIDDER'S SIGNATURE AND AFFIDAVIT

WARNING!!! If M/WBE goals have been established for this Contract, you **MUST** complete and submit the Affirmations on the 2nd page of the Subcontractor Utilization Plan (or a pre-approved waiver) at the time you submit your bid. Failure to comply will result in the rejection of your bid.

Bidder: *Trocom Construction Corp*

By: 
(Signature of Partner or corporate officer)



Attest:
(Corporate Seal)

Secretary of Corporate Bidder

Affidavit on the following page should be subscribed
and sworn to before a Notary Public



BID FORM (TO BE NOTARIZED)

AFFIDAVIT WHERE BIDDER IS AN INDIVIDUAL

STATE OF NEW YORK, COUNTY OF _____ ss:

_____ being duly sworn says:
I am the person described in and who executed the foregoing bid, and the several matters therein stated are in all respects true.

(Signature of the person who signed the Bid)

Subscribed and sworn to before me this
_____ day of _____, _____

Notary Public

AFFIDAVIT WHERE BIDDER IS A PARTNERSHIP

STATE OF NEW YORK, COUNTY OF _____ ss:

_____ being duly sworn says:
I am a member of _____ the firm described in and which executed the foregoing bid. I subscribed the name of the firm thereto on behalf of the firm, and the several matters therein stated are in all respects true.

(Signature of Partner who signed the Bid)

Subscribed and sworn to before me this
_____ day of _____, _____

Notary Public

AFFIDAVIT WHERE BIDDER IS A CORPORATION

STATE OF NEW YORK, COUNTY OF Queens ss:

ANTHONY J. SANTORO being duly sworn says:
I am the Vice President of the above named corporation whose name is subscribed to and which executed the foregoing bid. I reside at Staten Island.
I have knowledge of the several matters therein stated, and they are in all respects true.

(Signature of Corporate Officer who signed the Bid)

Subscribed and sworn to before me this
7 day of March, 2013

~~LINDA BARBATI~~
Notary Public-STATE OF NEW YORK
No. 01BA6181795
Qualified in Nassau County
My Commission Expires February 11, 2014

BID FORM
Trocom Construction Corp

PROJECT ID: HWXRCPLZ

TOTAL BID PRICE: In the space provided below, the Bidder shall indicate its Total Bid Price in figures. Such Total Bid Price is set forth on the final page of the Bid Schedule.

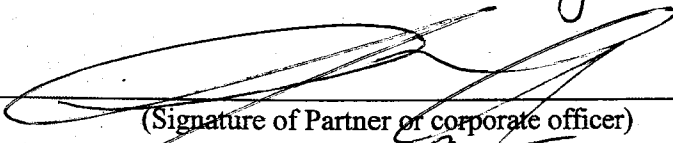
TOTAL BID PRICE:
(a/k/a BID PROPOSAL)

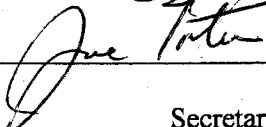
\$ 10,772,252⁵⁶
2/5/17
P.S

BIDDER'S SIGNATURE AND AFFIDAVIT

WARNING!!! If M/WBE goals have been established for this Contract, you **MUST** complete and submit the Affirmations on the 2nd page of the Subcontractor Utilization Plan (or a pre-approved waiver) at the time you submit your bid. Failure to comply will result in the rejection of your bid.

Bidder: *Trocom Construction Corp*

By: 
(Signature of Partner or corporate officer)


Secretary of Corporate Bidder

Attest:
(Corporate Seal)

Affidavit on the following page should be subscribed
and sworn to before a Notary Public

BID BOND 1
FORM OF BID BOND

KNOW ALL MEN BY THESE PRESENTS. That we, Trocom Construction Corp.
46-27 54th Road, Maspeth, NY 11378

hereinafter referred to as the "Principal", and Liberty Mutual Insurance Company
1200 MacArthur Blvd., Mahwah, NJ 07043

hereinafter referred to as the "Surety" are held and firmly bound to THE CITY OF NEW YORK,
hereinafter referred to as the "CITY", or to its successors and assigns in the penal sum of _____

TEN PERCENT OF AMOUNT BID

(10% Amt Bid), Dollars lawful money of the United States, for the payment of which said sum of
money well and truly to be made, we, and each of us, bind ourselves, our heirs, executors, administrators,
successors and assigns, jointly and severally, firmly by these presents.

Whereas, the Principal is about to submit (or has submitted) to the City the accompanying
proposal, hereby made a part hereof, to enter into a contract in writing for _____

**Cont. #HWXRCPLZ - Reconstruction of Roberto Clemente Plaza, Including Sewer, Watermain, Street Lighting and
Traffic Work - Boro of the Bronx**

NOW, THEREFORE, the conditions of this obligation are such that if the Principal shall not
withdraw said Proposal without the consent of the City for a period of forty-five (45) days after the
opening of bids and in the event of acceptance of the Principal's Proposal by the City, if the Principal
shall:

(a) Within ten (10) days after notification by the City, execute in quadruplicate and deliver
to the City all the executed counterparts of the Contract in the form set forth in the Contract Documents,
in accordance with the proposal as accepted, and

(b) Furnish a performance bond and separate payment bond, as may be required by the City,
for the faithful performance and proper fulfillment of such Contract, which bonds shall be satisfactory in
all respects to the City and shall be executed by good and sufficient sureties, and

(c) In all respects perform the agreement created by the acceptance of said Proposal as
provided in the Information for Bidders, bound herewith and made a part hereof, or if the City shall reject
the aforesaid Proposal, then this obligation shall be null and void; otherwise to remain in full force and
effect.



BID BOND 2

In the event that the Proposal of the Principal shall be accepted and the Contract be awarded to him the Surety hereunder agrees subject only to the payment by the Principal of the premium therefore, if requested by the City, to write the aforementioned performance and payment bonds in the form set forth in the Contract Documents.

It is expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall in no event exceed the penal amount of this obligation as herein stated.

There shall be no liability under this bond if, in the event of the acceptance of the Principal's Proposal by the City, either a performance bond or payment bond, or both, shall not be required by the City on or before the 30th day after the date on which the City signs the Contract.

The surety, for the value received, hereby stipulates and agrees that the obligations of the Surety and its bond shall in no way be impaired or affected by any postponements of the date upon which the City will receive or open bids, or by any extensions of the time within which the City may accept the Principal's Proposal, or by any waiver by the City of any of the requirements of the Information for Bidders, and the Surety hereby waives notice of any such postponements, extensions, or waivers.

IN WITNESS WHEREOF, the Principal and the Surety have hereunto set their hands and seals and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers the 27th day of February, 2013.

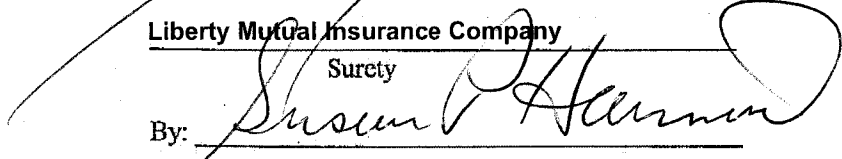
(Seal)

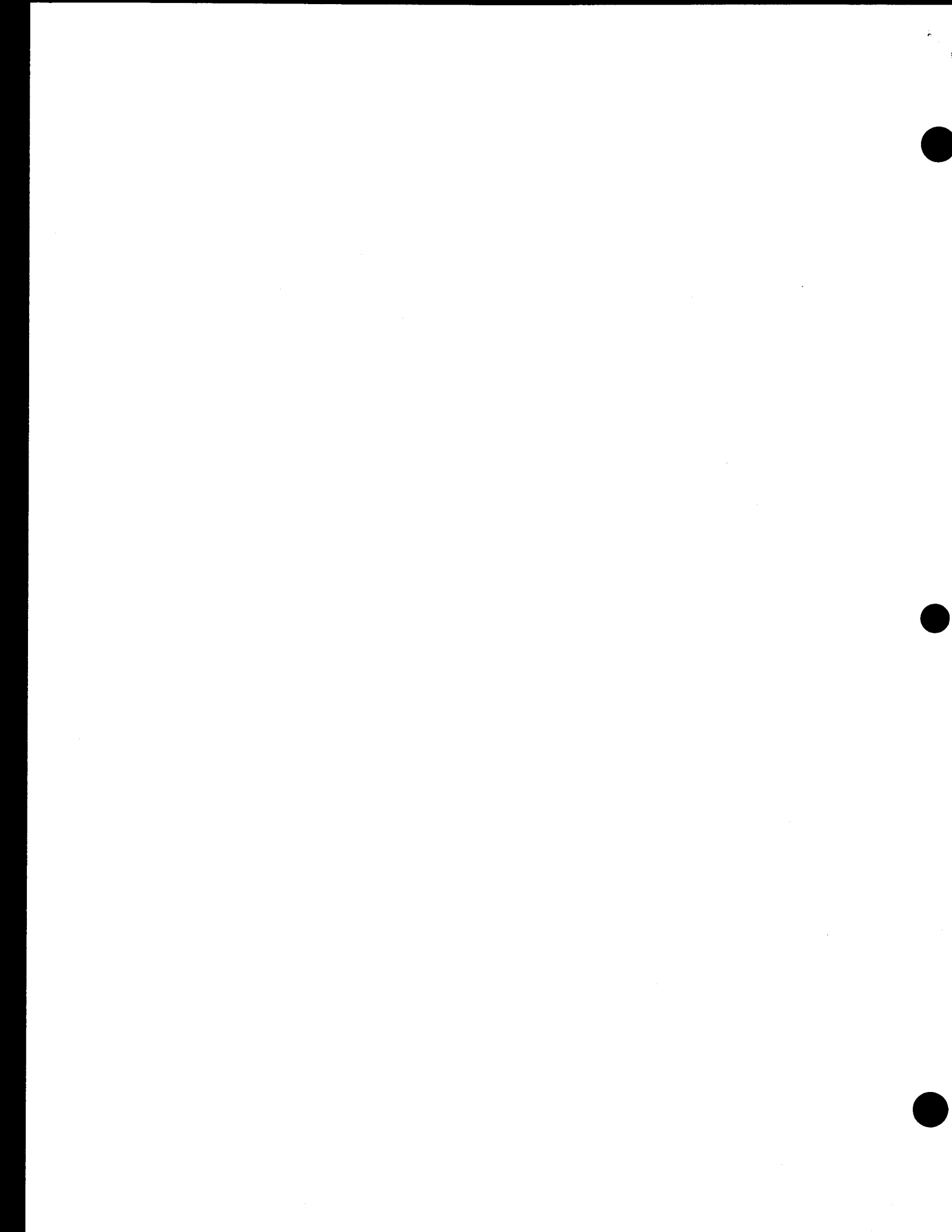
Trocom Construction Corp. _____ (L.S.)
Principal

By: _____


(Seal)

Liberty Mutual Insurance Company _____
Surety

By: _____

Susan P. Hammel, Attorney-in-Fact



BID BOND 3

ACKNOWLEDGMENT OF PRINCIPAL, IF A CORPORATION

State of New York County of Queens ss:
On this 4 day of March, 2013, before me personally came
ANTHONY J. SANTORO to me known, who, being by me duly sworn, did depose and say
that he resides at Staten Island
that he is the Vice President of Tecora Construction Corp.
the corporation described in and which executed the foregoing instrument; that he knows the seal of said
corporation; that one of the seals affixed to said instrument is such seal; that it was so affixed by order of
the directors of said corporation, and that he signed his name thereto by like order.

~~LINDA BARBATI
NOTARY PUBLIC-STATE OF NEW YORK
Notary Public No. 03180181795
Qualified in Nassau County
My Commission Expires February 11, 2016~~

ACKNOWLEDGMENT OF PRINCIPAL, IF A PARTNERSHIP

State of _____ County of _____ ss:
On this _____ day of _____, _____, before me personally appeared
_____ to me known and known to me to be one of the members of the
firm of _____ described in and who executed the foregoing
instrument, and he acknowledged to me that he executed the same as and for the act and deed of said
firm.

Notary Public

ACKNOWLEDGMENT OF PRINCIPAL, IF AN INDIVIDUAL

State of _____ County of _____ ss:
On this _____ day of _____, _____, before me personally appeared
_____ to me known and known to me to be the person described in
and who executed the foregoing instrument and acknowledged that he executed the same.

Notary Public

AFFIX ACKNOWLEDGMENTS AND JUSTIFICATION OF SURETIES



ACKNOWLEDGEMENT OF PRINCIPAL, OF A CORPORATION

STATE OF New York

COUNTY OF Queens

SS:

On this 4 day of March, 2013 before me personally came ANTHONY J. SANTORO to me known, who, being by me duly sworn did depose and say that he resides at Staten Island that he is the Vice President of Theron Construction Corp. the corporation described in and which executed the foregoing instrument; that he knows the seal of said corporation; that one of the seals affixed to the foregoing instrument is such seal; that it was an affixed by order of the board of directors of said corporation; and that he signed his name thereto by like order.

~~LINDA BARBATI
NOTARY PUBLIC STATE OF NEW YORK
Notary Public
Qualified in Nassau County
My Commission Expires February 11, 2016~~

ACKNOWLEDGEMENT OF SURETY

STATE OF New York

COUNTY OF Nassau

SS:

On this 27th day of February, 2013, before me personally came Susan P. Hammel to me known, who, being by me duly sworn, did depose and say that he is an Attorney-In-Fact of Liberty Mutual Insurance Company the corporation described in and which executed the within instrument; that he knows the corporate seal of said corporation; that the seal affixed to the within instrument is such corporate seal, and that he signed and said instrument and affixed the said seal as Attorney-In-Fact by authority of the Board of Directors of said corporation and by authority of this office under the Standing Resolutions thereof.

LYNN ANN INFANTI
Notary Public, State of New York
No. 011N6004351
Qualified in Suffolk County, 2014
Commission Expires March 23, 2014



My commission expires _____

Notary Public



American Fire and Casualty Company
The Ohio Casualty Insurance Company

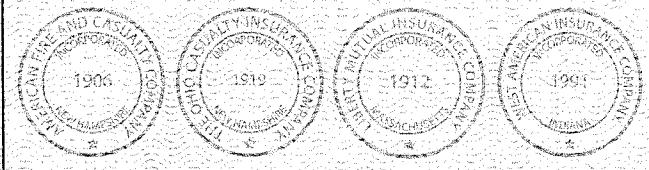
Liberty Mutual Insurance Company
West American Insurance Company

POWER OF ATTORNEY

KNOWN ALL PERSONS BY THESE PRESENTS: That American Fire & Casualty Company and The Ohio Casualty Insurance Company are corporations duly organized under the laws of the State of New Hampshire; that Liberty Mutual Insurance Company is a corporation duly organized under the laws of the State of Massachusetts, and West American Insurance Company is a corporation duly organized under the laws of the State of Indiana (herein collectively called the "Companies"), pursuant to and by authority herein set forth, does hereby name, constitute and appoint, Joseph Sforzo; Lori Fay; Robert Kempner; Robert W. O'Kane; Susan P. Hammel

all of the city of Plainview, state of NY each individually if there be more than one named, its true and lawful attorney-in-fact to make, execute, seal, acknowledge and deliver, for and on its behalf as surety and as its act and deed, any and all undertakings, bonds, recognizances and other surety obligations, in pursuance of these presents and shall be as binding upon the Companies as if they have been duly signed by the president and attested by the secretary of the Companies in their own proper persons.

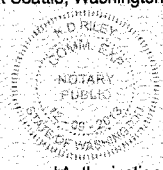
IN WITNESS WHEREOF, this Power of Attorney has been subscribed by an authorized officer or official of the Companies and the corporate seals of the Companies have been affixed thereto this 11th day of January, 2013.



STATE OF WASHINGTON ss
COUNTY OF KING

On this 11th day of January, 2013 before me personally appeared Gregory W. Davenport, who acknowledged himself to be the Assistant Secretary of American Fire and Casualty Company, Liberty Mutual Insurance Company, The Ohio Casualty Company, and West American Insurance Company, and that he, as such, being authorized so to do, execute the foregoing instrument for the purposes therein contained by signing on behalf of the corporations by himself as a duly authorized officer.

IN WITNESS WHEREOF, I have hereunto subscribed my name and affixed my notarial seal at Seattle, Washington, on the day and year first above written.



American Fire and Casualty Company
The Ohio Casualty Insurance Company
Liberty Mutual Insurance Company
West American Insurance Company

By: Gregory W. Davenport
Gregory W. Davenport, Assistant Secretary

By: KD Riley
KD Riley, Notary Public

This Power of Attorney is made and executed pursuant to and by authority of the following By-laws and Authorizations of American Fire and Casualty Company, The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company which resolutions are now in full force and effect reading as follows:

ARTICLE IV – OFFICERS – Section 12. Power of Attorney. Any officer or other official of the Corporation authorized for that purpose in writing by the Chairman or the President, and subject to such limitation as the Chairman or the President may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Corporation to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact, subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Corporation by their signature and execution of any such instruments and to attach thereto the seal of the Corporation. When so executed, such instruments shall be as binding as if signed by the President and attested to by the Secretary. Any power or authority granted to any representative or attorney-in-fact under the provisions of this article may be revoked at any time by the Board, the Chairman, the President or by the officer or officers granting such power or authority.

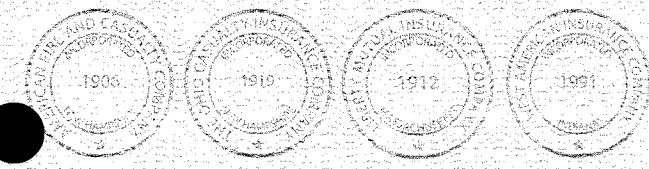
ARTICLE XIII – Execution of Contracts – SECTION 5. Surety Bonds and Undertakings. Any officer of the Company authorized for that purpose in writing by the chairman or the president, and subject to such limitations as the chairman or the president may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Company by their signature and execution of any such instruments and to attach thereto the seal of the Company. When so executed such instruments shall be as binding as if signed by the president and attested by the secretary.

Certificate of Designation – The President of the Company, acting pursuant to the Bylaws of the Company, authorizes Gregory W. Davenport, Assistant Secretary to appoint such attorneys-in-fact as may be necessary to act on behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations.

Authorization – By unanimous consent of the Company's Board of Directors, the Company consents that facsimile or mechanically reproduced signature of any assistant secretary of the Company, wherever appearing upon a certified copy of any power of attorney issued by the Company in connection with surety bonds, shall be valid and binding upon the Company with the same force and effect as though manually affixed.

I, David M. Carey, the undersigned, Assistant Secretary, of American Fire and Casualty Company, The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company do hereby certify that the original power of attorney of which the foregoing is a full, true and correct copy of the Power of Attorney executed by said Companies, is in full force and effect and has not been revoked.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the seals of said Companies this 27th day of February 2013.



By: David M. Carey
David M. Carey, Assistant Secretary

Not valid for mortgage, note, loan, letter of credit, bank deposit, currency rate, interest rate or residual value guarantees.

To confirm the validity of this Power of Attorney call 1-610-832-8240 between 9:00 am and 4:30 pm EST on any business day.





LIBERTY MUTUAL INSURANCE COMPANY
 FINANCIAL STATEMENT — DECEMBER 31, 2011

Assets		Liabilities	
Cash and Bank Deposits	\$ 696,606,839	Unearned Premiums	\$3,762,485,913
*Bonds — U.S Government	910,151,865	Reserve for Claims and Claims Expense	15,817,904,502
*Other Bonds	11,794,792,561	Funds Held Under Reinsurance Treaties	1,249,980,610
*Stocks	8,216,137,875	Reserve for Dividends to Policyholders	4,656,284
Real Estate	268,420,606	Additional Statutory Reserve	77,791,575
Agents' Balances or Uncollected Premiums	3,191,269,641	Reserve for Commissions, Taxes and	
Accrued Interest and Rents	151,164,670	Other Liabilities	2,885,589,205
Other Admitted Assets	<u>12,166,299,092</u>	Total	\$23,798,408,089
Total Admitted Assets	<u>\$37,394,843,149</u>	Special Surplus Funds	\$1,036,917,657
		Capital Stock	10,000,000
		Paid in Surplus	7,732,061,653
		Unassigned Surplus	4,817,455,750
		Surplus to Policyholders	13,596,435,060
		Total Liabilities and Surplus	<u>\$37,394,843,149</u>



* Bonds are stated at amortized or investment value; Stocks at Association Market Values.
 The foregoing financial information is taken from Liberty Mutual Insurance Company's financial statement filed with the state of Massachusetts Department of Insurance.

I, TIM MIKOLAJEWSKI, Assistant Secretary of Liberty Mutual Insurance Company, do hereby certify that the foregoing is a true, and correct statement of the Assets and Liabilities of said Corporation, as of December 31, 2011, to the best of my knowledge and belief.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of said Corporation at Seattle, Washington, this 5th day of April, 2012.

T. Mikolajewski

Assistant Secretary



M/WBE PROGRAM

SUBCONTRACTOR UTILIZATION PLAN – SCHEDULE B

Subcontractor Utilization Plan (Schedule B): The Subcontractor Utilization Plan (Schedule B) for this Contract is set forth on the following pages of this Bid Booklet. The Subcontractor Utilization Plan (Part I) indicates whether participation goals have been established for this Contract. If participation goals have been established for this Contract, the bidder must submit a Subcontractor Utilization Plan (Part II) with its bid.

Contract Provisions: Contract provisions regarding the participation of MWBE firms are set forth in Article 77 of the Contract. The bidder is advised to review these contract provisions.

Waiver: The bidder may seek a full or partial pre-award waiver of the Target Subcontracting Percentage in accordance with Article 77 of the Contract (See Part A, Section 10). The bidder's request for a waiver must be submitted at least seven (7) calendar days prior to the bid date. Waiver requests submitted after the deadline will not be considered. The form for requesting a waiver of the Target Subcontracting Percentage is set forth in the Subcontractor Utilization Plan (Part III).

Rejection of the Bid: The bidder must complete the Subcontractor Utilization Plan (Part II) set forth on the following pages. Subcontractor Utilization Plans which do not include the required affirmations will be deemed to be non-responsive, unless a full waiver of the Target Subcontracting Percentage is granted (Subcontractor Utilization Plan, Part III). In the event that the City determines that the bidder has submitted a Subcontractor Utilization Plan where the required affirmations are completed but other aspects of the Plan are not complete, or contain a copy or computation error that is at odds with the affirmation, the bidder will be notified by the Agency and will be given four (4) calendar days from receipt of notification to cure the specified deficiencies and return a completed plan to the Agency. Failure to do so will result in a determination that the Bid is non-responsive. Receipt of notification is defined as the date notice is emailed or faxed (if the bidder has provided an email address or fax number), or no later than five (5) days from the date of mailing or upon delivery, if delivered.

Impact on LBE Requirements: If goals have been established for the participation of M/WBEs, the contractor is not required to comply with the Locally Based Enterprise Program ("LBE"). The LBE Program is set forth in Article 67 of the Contract.



THE CITY OF NEW YORK

SCHEDULE B - Subcontractor Utilization Plan - Part I: Agency's Target

This page to be completed by contracting agency

Contract Overview

Pin # 8502012HW0007C FMS Project ID#: HWXRCPLZ
 Project Title RECONSTRUCTION OF ROBERTO CLEMENTE PLAZA
 Contracting Agency Department of Design and Construction
 Agency Address 30-30 Thomson Ave City Long Island City State NY Zip Code 11101
 Contact Person Patricia Funches Title MWBE Liaison & Compliance Analyst
 Telephone # (718) 391- 1373 Email funchesp@ddc.nyc.gov

Project Description (attach additional pages if necessary)

RECONSTRUCTION OF ROBERTO CLEMENTE PLAZA

**INCLUDING SEWER, WATER MAIN, STREET LIGHTING,
 AND TRAFFIC SIGNAL WORK**

Together With All Work Incidental Thereto

BOROUGH OF THE BRONX

CITY OF NEW YORK

(1) **Target Subcontracting Percentage**
 Percentage of total contract dollar value that agency estimates will be awarded to subcontractors in amounts under \$1 million for construction and professional services. EXEMPT %

Subcontractor Participation Goals*

Complete and enter total for each Construction or Professional Services, or both (if applicable)

Group	Construction	Professional Services
Black American	UNSPECIFIED %	0 %
Hispanic American	UNSPECIFIED %	0 %
Asian American	UNSPECIFIED %	NO GOAL%
Caucasian Female	NO GOAL %	0 %
Total Participation Goals	(2) 0 %	(3) 0 %

*Note: For this procurement, individual ethnicity and gender goals are not specified. The Total Participation Goals for construction subcontracts may be met by using Black American, Hispanic American or Asian American firms or any combination of such firms.

SCHEDULE B - Subcontractor Utilization Plan – Part II: Bidder/Proposer Subcontracting Plan

This page and the next (Part II herein) are to be completed by the bidder/proposer. **AFFIRMATIONS:** Bidder/proposer must check the applicable boxes below, affirming compliance with M/WBE requirements.

Bidder/proposer **AFFIRMS** or **DOES NOT AFFIRM** [statement below]

It is a material term of the contract to be awarded that, with respect to the total amount of the contract to be awarded, bidder/proposer will award one or more subcontracts for amounts under one million dollars, sufficient to meet or exceed the Target Subcontracting Percentage (as set forth in Part I) unless it obtains a full or partial waiver thereof, and it will award subcontracts sufficient to meet or exceed the Total Participation Goals (as set forth in Part I) unless such goals are modified by the Agency.

- Bidder/proposer **AFFIRMS** that it intends to meet or exceed the Target Subcontracting Percentage (as set forth in Part I); or
- AFFIRMS** that it has obtained a full/partial pre-award waiver of the Target Subcontracting Percentage (as set forth in Part I) and intends to award the modified Target Subcontracting Percentage, if any; or
- DOES NOT AFFIRM**

Section I: Prime Contractor Contact Information

Tax ID # _____ FMS Vendor ID # _____

Business Name _____ Contact Person _____

Address _____

Telephone # _____ Email _____

Section II: General Contract Information

1. Define the industry in which work is to be performed.

- **Construction** includes all contracts for the construction, rehabilitation, and/or renovation of physical structures. This category does include CM Build as well as other construction related services such as: demolition, asbestos and lead abatement, and painting services, carpentry services, carpet installation and removal, where related to new construction and not maintenance. This category does not include standard services which may be associated with construction projects but which do not constitute construction, such as trucking, site protection, site security, site surveying, soil testing, extermination, and maintenance/operations.
- **Professional Services** are a class of services that typically require the provider to have some specialized field or advanced degree. Services of this type include: legal, management consulting, information technology, accounting, auditing, actuarial, advertising, health services, pure construction management, environmental analysis, scientific testing, architecture and engineering, and traffic studies, and similar services.

a. Type of work on Prime Contract (Check one): b. Type of work on Subcontract (Check all that apply):

- Construction Professional Services Construction Professional Services Other

2. What is the expected percentage of the total contract dollar value that you expect to award to all subcontracts? _____ %

3. Will you award subcontract(s) in amounts below \$ 1 million for construction and/or professional services contracts within the first 12 months of the notice to proceed on the contract? Yes No

Section III: Subcontractor Utilization Summary

IMPORTANT: If you do not anticipate that you will subcontract at the target level the agency has specified, because you will perform more of the work yourself, you must seek a waiver of the Target Subcontracting Percentage by completing p.9).

Step 1: Calculate the percentage (of your total bid) that will go towards subcontracts under \$ 1M for construction and/or professional services	Subcontracts under \$1M (4) (construction/professional services)	Total Bid/Proposal Value	Calculated Target Subcontracting Percentage
	\$ _____	÷ \$ _____	X 100 = _____ %

- **Subcontracts under \$1M (construction/professional services):** Enter the value you expect to award to subcontractors in dollars for amounts under \$1 million for construction and/or professional services. This value defines the amount that participation goals apply to, and will be entered into the first line of Step 2.
- **Total Bid/Proposal Value:** Provide the dollar amount of the bid/proposal.
- **Calculated Target Subcontracting Percentage:** The percentage of the total contract dollar value that will be awarded to one or more subcontractors for amounts under \$1 million for construction and/or professional services. **This percentage must equal or exceed the percentage listed by the agency on page 6, at line (1).**

NOTE: The "Calculated Target Subcontracting Percentage" MUST equal or exceed the Target Subcontracting Percentage listed by the agency on Page 6, Line (1).

SCHEDULE B - Subcontractor Utilization Plan – Part II: Bidder/Proposer Subcontracting Plan – cont.

Step 2:

Calculate value of subcontractor participation goals

		Subcontracts under \$1M (construction/professional services)	
a.	Copy value from Step 1, line (4) – the total value of all expected subcontracts Under \$1M for construction and/or professional services	\$	_____
		↓	↓
		Construction	Professional Services
b.	<ul style="list-style-type: none"> • From line a. above, allocate the dollar value of "Subcontracts under \$1M" by Construction and Professional Services. • If all subcontracts under \$1M are in one industry, enter "0" for the industry with no subcontracts. • Amounts listed on these lines should add up to the value from line a. 		
		Subcontracts under \$1M by industry	
	<ul style="list-style-type: none"> • For Construction enter percentage from line (2) from Page 6. • For Professional Services enter percentage from line (3) from Page 6. 	\$	\$
c.	<ul style="list-style-type: none"> • Total Participation Goals Percentages must be copied from Part I, lines (2) and (3). 		
		Total Participation Goals	
		x _____ %	x _____ %
d.	Value of Total Participation Goals	\$	\$

Step 3:

Enter brief description of type(s) of subcontracts in amounts under \$1M anticipated, by Type of work, not by name of subcontractor

Subcontracts in Amounts Under \$1 M Scope of Work – Construction

Enter brief description of type(s) of subcontracts in amounts under \$1M anticipated, by Type of work, not by name of subcontractor

Subcontracts in Amounts Under \$1 M Scope of Work – Professional Services

Section IV: Vendor Certification and Required Affirmations

I hereby 1) acknowledge my understanding of the M/WBE requirements as set forth herein and the pertinent provisions of Local Law 129 of 2005, and the rules promulgated thereunder; 2) affirm that the information supplied in support of this subcontractor utilization plan is true and correct; 3) agree, if awarded this Contract, to comply with the M/WBE requirements of this Contract and the pertinent provisions of Local Law 129 of 2005, and the rules promulgated thereunder, all of which shall be deemed to be material terms of this contract; 4) agree and affirm that it is a material term of this contract that the Vendor will award subcontract(s) sufficient to meet the Target Subcontracting Percentage, unless a waiver is obtained, and the Vendor will award subcontract(s) sufficient to meet the Total Participation Goals unless such goals are modified by the Agency; and 5) agree and affirm, if awarded this contract the Vendor intends to make all reasonable, good faith efforts to meet the Target Subcontracting Percentage, or If the Vendor has obtained a waiver, the Vendor intends to meet the modified Target Subcontracting Percentage, if any, and the Vendor intends to solicit and obtain the participation of M/WBEs so as to meet the Total Participation Goals unless modified by the Agency.

Signature _____ Date _____

Print Name _____ Title _____

SCHEDULE B - PART III - REQUEST FOR WAIVER OF TARGET SUBCONTRACTING PERCENTAGE

Contract Overview

Tax ID # _____ FMS Vendor ID # _____
 Business Name _____
 Contact Name _____ Telephone # _____ Email _____
 Type of Procurement Competitive Sealed Bids Other Bid/Response Due Date _____
 PIN # (for this procurement) _____ Type of work on Prime Contract _____ Type of work on Subcontract (Check all that apply):
 (Check one):
 Construction Construction Other
 Professional Services Professional Services

SUBCONTRACTING as described in bid/solicitation documents (Copy this % figure from the solicitation)
 _____ % of the total contract value anticipated by the agency to be subcontracted for construction/professional services subcontracts valued below \$1 million (each)

ACTUAL SUBCONTRACTING as anticipated by vendor seeking waiver
 _____ % of the total contract value anticipated in good faith by the bidder/proposer to be subcontracted for construction/professional services subcontracts valued below \$1 million (each)

Basis for Waiver Request: Check appropriate box & explain in detail below (attach additional pages if needed)

- Vendor does not subcontract construction/professional services, and has the capacity and good faith intention to perform all such work itself.
- Vendor subcontracts some of this type of work but at lower % than bid/solicitation describes, and has the capacity and good faith intention to do so on this contract.
- Other _____

References

List 3 most recent contracts/subcontracts performed for NYC agencies (if any)

CONTRACT NO. _____ AGENCY _____ DATE COMPLETED _____
 CONTRACT NO. _____ AGENCY _____ DATE COMPLETED _____
 CONTRACT NO. _____ AGENCY _____ DATE COMPLETED _____

List 3 most recent contracts/subcontracts performed for other agencies/entities (complete ONLY if vendor has performed fewer than 3 NYC contracts)

TYPE OF WORK _____ AGENCY/ENTITY _____ DATE COMPLETED _____
 Manager at agency/entity that hired vendor (Name/Phone No.) _____
 TYPE OF WORK _____ AGENCY/ENTITY _____ DATE COMPLETED _____
 Manager at agency/entity that hired vendor (Name/Phone No.) _____
 TYPE OF WORK _____ AGENCY/ENTITY _____ DATE COMPLETED _____
 Manager at agency/entity that hired vendor (Name/Phone No.) _____

VENDOR CERTIFICATION: I hereby affirm that the information supplied in support of this waiver request is true and correct, and that this request is made in good faith.

Signature: _____ Date: _____
 Print Name: _____ Title: _____

Shaded area below is for agency completion only

AGENCY CHIEF CONTRACTING OFFICER APPROVAL

Signature: _____ Date: _____

CITY CHIEF PROCUREMENT OFFICER APPROVAL

Signature: _____ Date: _____

(NO TEXT ON THIS PAGE)

SAFETY QUESTIONNAIRE

The bidder must include, with its bid, all information requested on this Safety Questionnaire. Failure to provide a completed and signed Safety Questionnaire at the time of bid opening may result in disqualification of the bid as non-responsive.

1. Bidder Information:

Company Name: Trocom Construction Corp

DDC Project Number: HWXRCLZ

Company Size: Ten (10) employees or less
 Greater than ten (10) employees

Company has previously worked for DDC

2. Type(s) of Construction Work

TYPE OF WORK	LAST 3 YEARS	THIS PROJECT
General Building Construction	_____	_____
Residential Building Construction	_____	_____
Nonresidential Building Construction	_____	_____
Heavy Construction, except building	_____	_____
Highway and Street Construction	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Heavy Construction, except highways	_____	_____
Plumbing, Heating, HVAC	_____	_____
Painting and Paper Hanging	_____	_____
Electrical Work	_____	_____
Masonry, Stonework and Plastering	_____	_____
Carpentry and Floor Work	_____	_____
Roofing, Siding, and Sheet Metal	_____	_____
Concrete Work	_____	_____
Specialty Trade Contracting	_____	_____
Asbestos Abatement	_____	_____
Other (specify)	_____	_____

3. Experience Modification Rate:

The Experience Modification Rate (EMR) is a rating generated by the National Council of Compensation Insurance (NCCI). This rating is used to determine the contractor's premium for worker's compensation insurance. The contractor may obtain its EMR by contacting its insurance broker or the NCCI. If the contractor cannot obtain its EMR, it must submit a written explanation as to why.

Project ID: HWXRCPZ

The Contractor must indicate its Intrastate and Interstate EMR for the past three years. [Note: For contractors with less than three years of experience, the EMR will be considered to be 1.00].

YEAR	INTRASTATE RATE	INTERSTATE RATE
<u>2012</u>	<u>1.07</u>	_____
<u>2011</u>	<u>.93</u>	_____
<u>2010</u>	<u>88</u>	_____

If the Intrastate and/or Interstate EMR for any of the past three years is greater than 1.00, the contractor must attach, to this questionnaire, a written explanation for the rating and identify what corrective action was taken to correct the situation resulting in that rating.

4. OSHA Information:

No

Contractor has received a willful violation issued by OSHA or New York City Department of Buildings (NYCDOB) within the last three years.

No

Contractor has had an incident requiring OSHA notification within 8 hours (i.e., fatality, or hospitalization of three or more employees).

The Occupational Safety and Health Act (OSHA) of 1970 requires employers with ten or more employees, on a yearly basis to complete and maintain on file the form entitled "Log of Work-related Injuries and Illnesses". This form is commonly referred to as the OSHA 300 Log (OSHA 200 Log for 2001 and earlier).

The OSHA 300 Log must be submitted for the last three years for contractors with more than ten employees.

The Contractor must indicate the total number of hours worked by its employees, as reflected in payroll records for the past three years.

The contractor must submit the Incident Rate for Lost Time Injuries (the Incident Rate) for the past three years. The Incident Rate is calculated in accordance with the formula set forth below. For each given year, the total number of incidents is the total number of non-fatal injuries and illnesses reported on the OSHA 300 Log. The 200,000 hours represents the equivalent of 100 employees working forty hours a week, fifty weeks per year.

Incident Rate =
$$\frac{\text{Total Number of Incidents X 200,000}}{\text{Total Number of Hours Worked by Employees}}$$

YEAR	TOTAL NUMBERS OF HOURS WORKED BY EMPLOYEES	INCIDENT RATE
<u>2012</u>	<u>236,784</u>	<u>0.845</u>
<u>2011</u>	<u>206,422</u>	<u>0</u>
<u>2010</u>	<u>329,340</u>	<u>3.03</u>

If the contractor's Incident Rate for any of the past three years is one point higher than the Incident Rate for the type of construction it performs (listed below), the contractor must attach, to this questionnaire, a written explanation for the relatively high rate.

General Building Construction	8.5
Residential Building Construction	7.0
Nonresidential Building Construction	10.2
Heavy Construction, except building	8.7
Highway and Street Construction	9.7
Heavy Construction, except highways	8.3
Plumbing, Heating, HVAC	11.3
Painting and Paper Hanging	6.9
Electrical Work	9.5
Masonry, Stonework and Plastering	10.5
Carpentry and Floor Work	12.2
Roofing, Siding, and Sheet Metal	10.3
Concrete Work	8.6
Specialty Trade Contracting	8.6

5. Safety Performance on Previous DDC Project(s)

Yes Contractor previously audited by the DDC Office of Site Safety.
 DDC Project Number(s): HWCSCH2

HW MW TC A8B

Yes Accident on previous DDC Project(s).

No Fatality or Life-altering Injury on DDC Project(s) within the last three years.
 [Examples of a life-altering injury include loss of limb, loss of a sense (e.g., sight, hearing), or loss of neurological function].

Date: 3/4/13

By: [Signature]
 (Signature of Owner, Partner, Corporate Officer)

Title: Vice President

(NO TEXT ON THIS PAGE)

OSHA's Form 300 (Rev. 01/2004)

Log of Work-Related Injuries and Illnesses

Attention: This form contains information relating to employee health and must be used in a manner that protects the confidentiality of employees to the extent possible while the information is being used for occupational safety and health purposes.

You must record information about every work-related injury or illness that involves loss of consciousness, restricted work activity or job transfer, days away from work, or medical treatment beyond first aid. You must also record significant work-related injuries and illnesses that are diagnosed by a physician or licensed health care professional. You must also record work-related injuries and illnesses that meet any of the specific recording criteria listed in 29 CFR 1904.2 through 1904.12. Feel free to use two lines for a single case if you need to. You must complete an injury and illness incident report (OSHA Form 301) or equivalent form for each injury or illness recorded on this form. If you're not sure whether a case is recordable, call your local OSHA office for help.



Year 2012

U.S. Department of Labor
Occupational Safety and Health Administration

Form approved OMB no. 1218-0176

Establishment name
TROCOM CONSTRUCTION CORP.

City **MASPETH** State **NY**

Identify the person

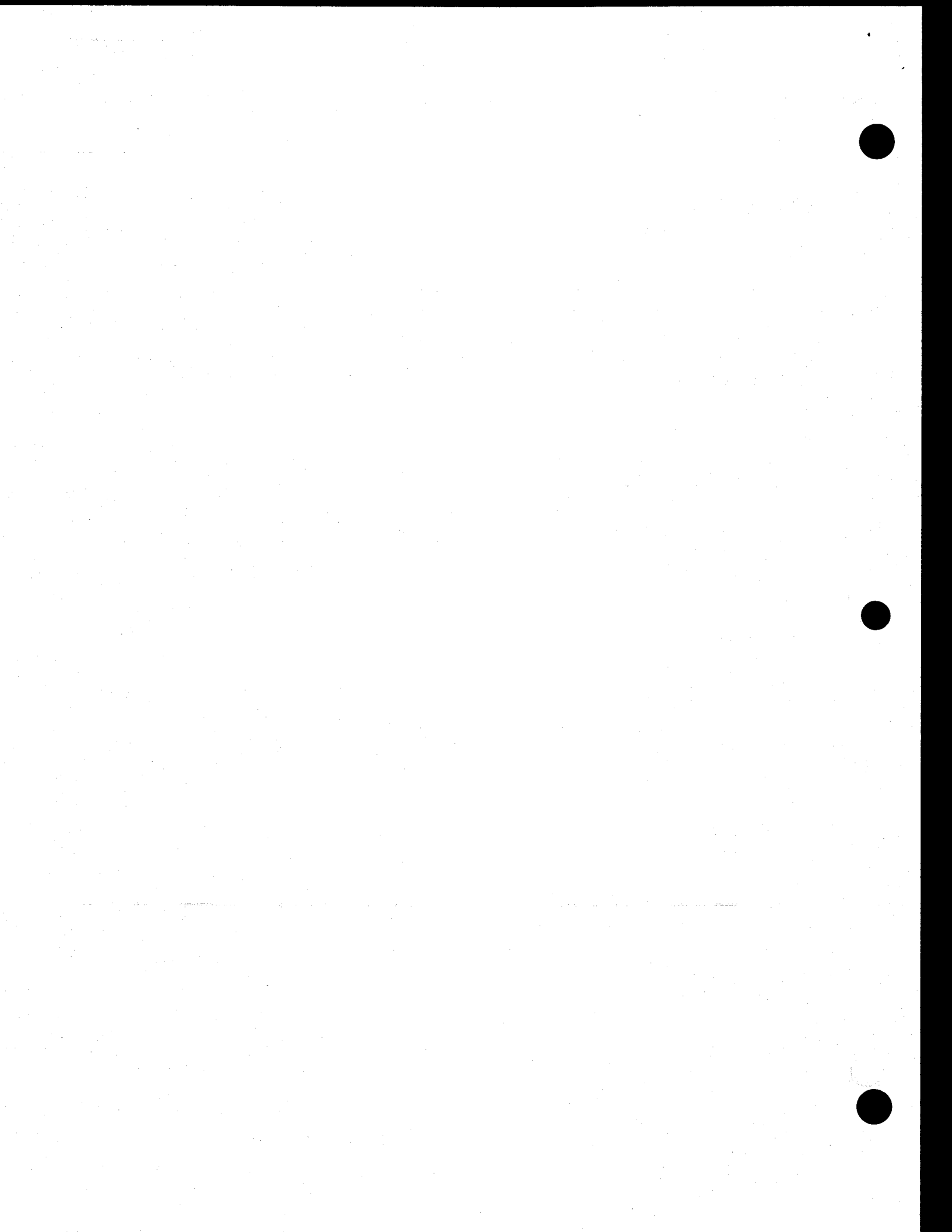
Describe the case

Classify the case

(A) Case No.	(B) Employee's Name	(C) Job Title (e.g., Welder)	(D) Date of injury or onset of illness (mo./day)	(E) Where the event occurred (e.g. Loading dock north end)	(F) Describe injury or illness, parts of body affected, and object/substance that directly injured or made person ill (e.g. Second degree burns on right forearm from acetylene torch)	CHECK ONLY ONE box for each case based on the most serious outcome for that case:				Enter the number of days the injured or ill worker was:		Check the "injury" column or choose one type of illness:												
						(G) Death	(H) Days away from work	(I) Job transfer or restriction	(J) Remained at work	(K) Other recordable cases	(L) On job transfer or restriction (days)	(1) Injury	(2) Skin Disorder	(3) Respiratory Condition	(4) Poisoning	(5) Hearing Loss	(6) All other illnesses							
1	CHARLES, ANDREW		03/28		CHEST							0	0	0	0	0	0	0	0	0	0	0	0	
2	DIGREGORIO, JOSEPH		05/14		FOOT, LEFT		X																	
3	GONZALEZ, AUDREY		12/28		FACE																			
Page totals						0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Be sure to transfer these totals to the Summary page (Form 300A) before you post it.

Public reporting burden for this collection of information is estimated to average 14 minutes per response, including time to review the instruction, search and gather the data needed, and complete and review the collection of information. Persons are not required to respond to the collection of information unless it displays a currently valid OMB control number. If you have any comments about these estimates or any aspects of this data collection, contact: US Department of Labor, OSHA Office of Statistics, Room N-3644, 200 Constitution Ave, NW, Washington, DC 20210. Do not send the completed forms to this office.



OSHA's Form 300A (Rev. 01/2004)

Summary of Work-Related Injuries and Illnesses

Establishments covered by Part 1904 must complete this Summary page, even if no injuries or illnesses occurred during the year. Remember to review the Log to verify that the entries are complete and that the Log, count the individual entries you made for each category. Then write the totals below, being sure you've added the entries from every page of the log. If you had no cases write "0."

Employees former employees, and their representatives have the right to review the OSHA Form 300 in entirety. They also have limited access to the OSHA Form 301 or its equivalent. See 29 CFR 1904.435, in OSHA's Recordkeeping rule, for further details on the access provisions for these forms.

Number of Cases

Total number of cases with days away from work	Total number of cases with job transfer or restriction	Total number of other recordable cases
0 (G)	0 (I)	0 (J)

Number of Days

Total number of days away from work
0 (K)

Injury and Illness Types

Total number of...	(4) Poisoning	(5) Hearing Loss	(6) All Other illnesses
Injury	0	0	0
Skin Disorder	0	0	0
Respiratory condition	0	0	0

Post this Summary page from February 1 to April 30 of the year following the year covered by the form

Public reporting burden for this collection of information is estimated to average 50 minutes per response, including time to review the instruction, search and gather the data needed, and complete and review the collection of information. Persons are not required to respond to the collection of information unless it displays a currently valid OMB control number. If you have any comments about these estimates or any aspects of this data collection, contact: US Department of Commerce, Office of Statistics, Room N-3644, 200 Constitution Ave. NW, Washington, DC 20210. Do not send the completed forms to this office.

Establishment Information

Your establishment name TROCOM CONSTRUCTION CORP.
 Street 46-27-54TH ROAD
 City MASPETH State NY Zip 11378
 Industry description (e.g., Manufacture of motor truck trailers)
 Standard Industrial Classification (SIC), if known (e.g., SIC 3715)
 OR North American Industrial Classification (NAICS), if known (e.g., 336212)

Employment Information

Annual average number of employees 1026
 Total hours worked by all employees last year 236,784.5

Sign here

Knowingly falsifying this document may result in a fine.

I certify that I have examined this document and that to the best of my knowledge the entries are true, accurate, and complete.

[Signature]
 Company representative
718.937.2600 Phone
2-19-2013 Date
Raymond Moya Title



Log of Work-Related Injuries and Illnesses

Year 2011

U.S. Department of Labor

Occupational Safety and Health Administration

Form approved OMB no. 1218-0176

This form contains information relating to employee health and must be used in a manner that protects the confidentiality of employees to the extent possible while the information is being used for occupational safety and health purposes.

You must record information about every work-related injury or illness that involves loss of consciousness, restricted work activity or job transfer, days away from work, or medical treatment beyond first aid. You must also record significant work-related injuries and illnesses that are diagnosed by a physician or licensed health care professional. You must also record work-related injuries and illnesses that meet any of the specific recording criteria listed in 29 CFR 1904.8 through 1904.12. Feel free to use two lines for a single case if you need to. You must complete an injury and illness incident report (OSHA Form 301) or equivalent form for each injury or illness recorded on this form. If you're not sure whether a case is recordable, call your local OSHA office for help.

Establishment name
TROCOM CONSTRUCTION CORP.

City **MASPETH** State **NY**

Classify the case

Enter the number of days the injured or ill worker was:

CHECK ONLY ONE box for each case based on the most serious outcome for that case:	Job transfer or restriction		On job transfer or restriction (days)	Away From Work (days)	Skin Disorder	Respiratory Condition	Poisoning	Hearing Loss	All other illnesses
	(G) Days away from work	(H) Job transfer or restriction							

Check the "injury" column or choose one type of illness:

Injury	(1)	(2)	(3)	(4)	(5)	(6)
0	0	0	0	0	0	0

Describe the case

(A) Case No.	(B) Employee's Name	(C) Job Title (e.g., Welder)	(D) Date of injury or onset of illness (mo./day)	(E) Where the event occurred (e.g., Loading dock north end)	(F) Describe injury or illness, parts of body affected, and object/substance that directly injured or made person ill (e.g., Second degree burns on right forearm from acetylene torch)
1	SILVA, MARIO	SPRAYER	01/12	MASPETH, NY	MULTIPLE INJURIES, MULTIPLE
2	COLONNA, SILVESTRO	SUPERVISOR	04/22	METROPOLITAN AVE - ALBANY	LACERATION, THUMB, RIGHT

Page Totals

Be sure to transfer these totals to the Summary page (Form 300A) before you post it.

0	0	0	0	0	0	0	0	0	0
---	---	---	---	---	---	---	---	---	---

Public reporting burden for this collection of information is estimated to average 14 minutes per response, including time to review the instruction, search and gather the data needed, and complete and review the collection of information. Persons are not required to respond to the collection of information unless it displays a currently valid OMB control number. If you have any comments about these estimates or any aspects of this data collection, contact: US Department of Labor, OSHA Office of Statistics, Room N-3644, 200 Constitution Ave, NW, Washington, DC 20210. Do not send the completed forms to this office.



OSHA's Form 300A (Rev. 01/2004)

Summary of Work-Related Injuries and Illnesses

Year 2011

U.S. Department of Labor
Occupational Safety and Health Administration

Form approved OMB no. 1218-0176

All establishments covered by Part 1904 must complete this Summary page, even if no injuries or illnesses occurred during the year. Remember to review the Log to verify that the entries are complete. Using the Log, count the individual entries you made for each category. Then write the totals below, making sure you've added the entries from every page of the log. If you had no cases write "0."

Employees former employees, and their representatives have the right to review the OSHA Form 300 in its entirety. They also have limited access to the OSHA Form 301 or its equivalent. See 29 CFR 1904.35, in OSHA's Recordkeeping rule, for further details on the access provisions for these forms.

Number of Cases			
Total number of deaths	Total number of cases with days away from work	Total number of cases with job transfer or restriction	Total number of other recordable cases
(G)	(H)	(I)	(J)
0	0	0	0

Number of Days	
Total number of days away from work	Total number of days of job transfer or restriction
(K)	(L)
0	0

Injury and Illness Types						
Total number of...	(1) Injury	(2) Skin Disorder	(3) Respiratory Condition	(4) Poisoning	(5) Hearing Loss	(6) All Other illnesses
(M)	(N)	(O)	(P)	(Q)	(R)	(S)
0	0	0	0	0	0	0

Post this Summary page from February 1 to April 30 of the year following the year covered by the form

Public reporting burden for this collection of information is estimated to average 50 minutes per response, including time to review the instruction, search and gather the data needed, and complete and review the collection of information. Persons are not required to respond to the collection of information unless it displays a currently valid OMB control number. If you have any comments about these estimates or any aspect of this data collection, contact: US Department of Labor, OSHA Office of Statistics, Room N-3844, 200 Constitution Ave, NW, Washington, DC 20210. Do not send the completed forms to this office.

Establishment Information

Your establishment name TROCOM CONSTRUCTION CORP.

Street 46-27 - 64TH ROAD

City MASPETH State NY Zip _____

Industry description (e.g., Manufacture of motor truck trailers) _____

Standard Industrial Classification (SIC), if known (e.g., SIC 3715) _____

OR North American Industrial Classification (NAICS), if known (e.g., 336212) _____

Employment Information

Annual average number of employees 175

Total hours worked by all employees last year 294,621

Sign here

Knowingly falsifying this document may result in a fine.

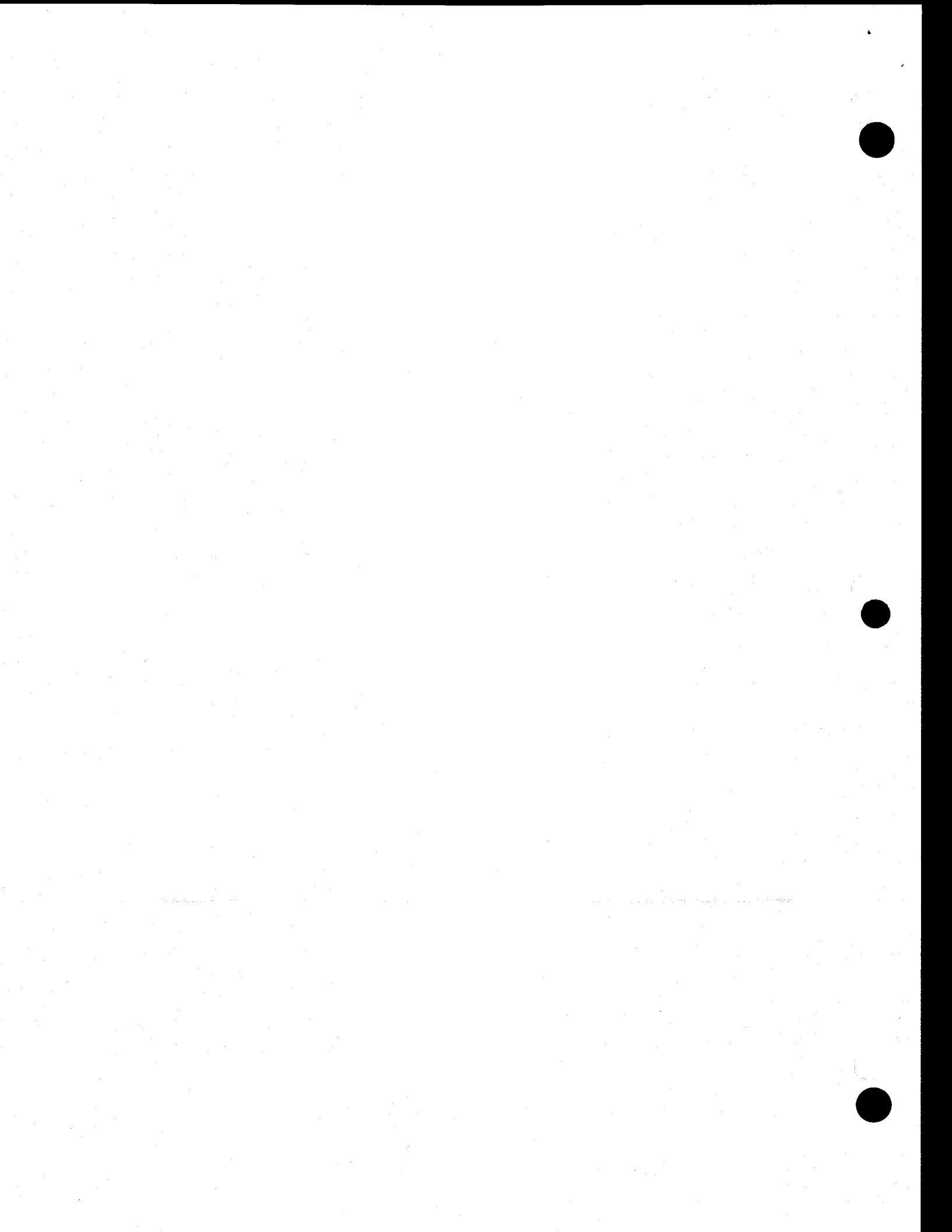
I certify that I have examined this document and that to the best of my knowledge the entries are true, accurate, and complete.

[Signature]
Company executive

718-937-2000
Phone

6-6-2012
Date

Vice President
Title



Log of Work-Related Injuries and Illnesses

You must record information about every work-related injury or illness that involves loss of consciousness, restricted work activity or job transfer, days away from work, or medical treatment beyond first aid. You must also record significant work-related injuries and illnesses that are diagnosed by a physician or licensed health care professional. You must also record work-related injuries and illnesses that meet any of the specific recording criteria listed in 29 CFR 1904.8 through 1904.12. Feel free to use two lines for a single case if you need to. You must complete an injury and illness incident report (OSHA Form 301) or equivalent form for each injury or illness recorded on this form. If you're not sure whether a case is recordable, call your local OSHA office for help.

Attention: This form contains information relating to employee health and must be used in a manner that protects the confidentiality of employees to the extent possible while the information is being used for occupational safety and health purposes.

Year 2010

U.S. Department of Labor
Occupational Safety and Health Administration

Form approved OMB no. 1218-0176

Establishment name

TROCOM CONSTRUCTION CORP.

City MASPETH

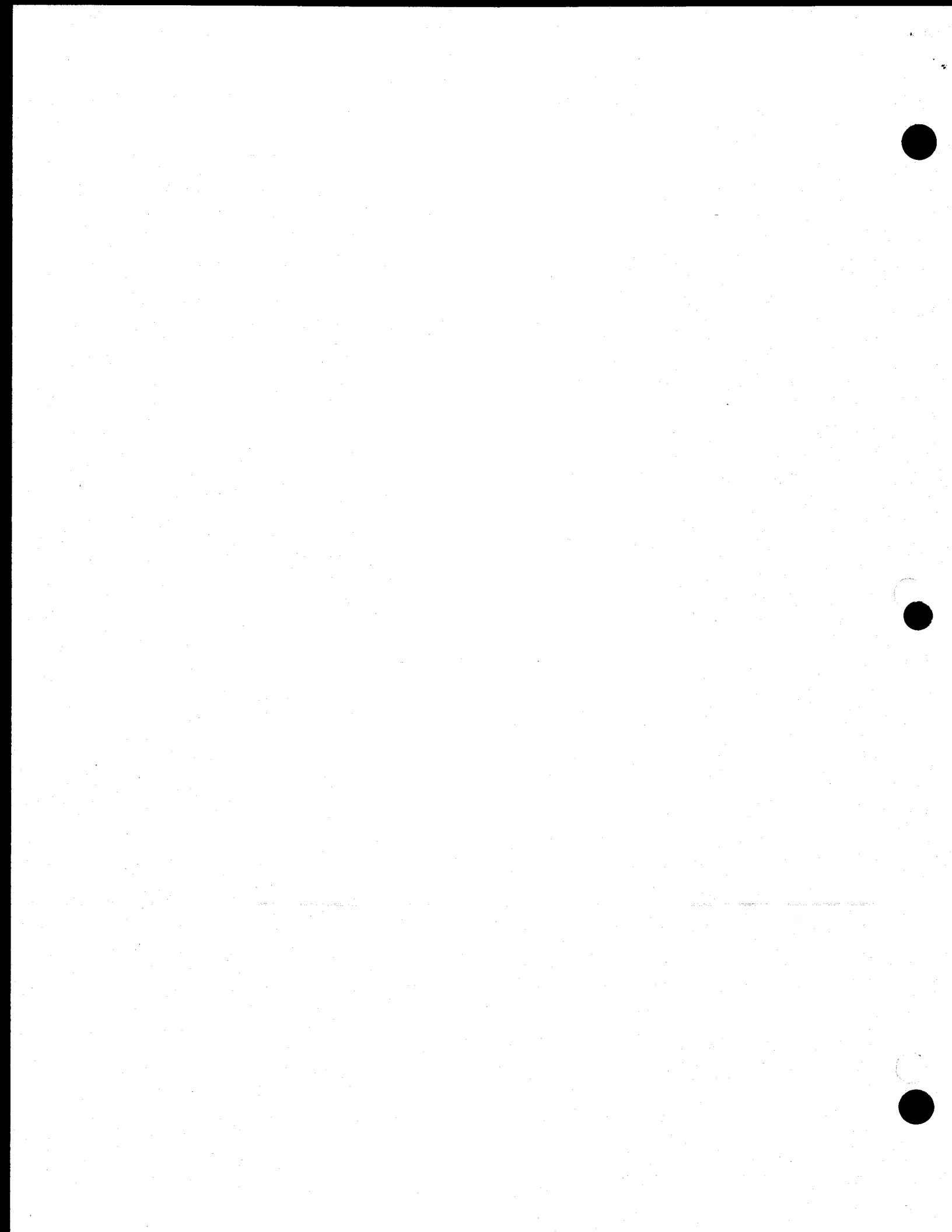
State NY

(A) Case No.	(B) Employee's Name	(C) Job Title (e.g., Welder)	(D) Date of injury or onset of illness (mo./day)	(E) Where the event occurred (e.g. Loading dock north end)	(F) Describe injury or illness, parts of body affected, and object/substance that directly injured or made person ill (e.g. Second degree burns on right forearm from acetylene torch)	CHECK ONLY ONE box for each case based on the most serious outcome for that case:				Enter the number of days the injured or ill worker was:		Check the "injury" column or choose one type of illness:														
						(G)	(H)	(I)	(J)	Away From Work (days) (K)	On job transfer or restriction (days) (L)	(1)	(2)	(3)	(4)	(5)	(6)									
1	CORREIA, JORGE		02/09		FOOT, LEFT	X																				
2	TERRA, RUI		04/12		FRACTURE, FOOT, RIGHT	X																				
3	MIDDLETON, HERMAN		04/15		BACK	X				17																
4	DIAS, JOHN		05/21		FOREIGN BODY, EYE, RIGHT	X																				
5	COMBS, LURLINE		07/19		TOE	X																				
6	BROWN, KEVIN		07/22		KNEE, RIGHT	X																				
7	RIVERA, FELIX		08/27		AMPUTATION, FINGER, RIGHT	X																				
8	SCOTT, RONALD		09/14		BACK	X																				
9	GREPO, STEPHEN		09/25																							
						0	5	0	0	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Page totals

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Summary of Work-Related Injuries and Illnesses

All establishments covered by Part 1904 must complete this Summary page, even if no injuries or illnesses occurred during the year. Remember to review the Log to verify that the entries are complete.

Using the Log, count the individual entries you made for each category. Then write the totals below, making sure you've added the entries from every page of the log. If you had no cases write "0."

Employees former employees, and their representatives have the right to review the OSHA Form 300 in its entirety. They also have limited access to the OSHA Form 301 or its equivalent. See 29 CFR 1904.35, in OSHA's Recordkeeping rule, for further details on the access provisions for these forms.

Total number of deaths	Total number of cases away from work	Total number of cases with job transfer or restriction	Total number of other recordable cases
0	5	0	0
(G)	(H)	(I)	(J)

Total number of days away from work	Total number of days of job transfer or restriction
17	0
(K)	(L)

Total number of... (M)	(1) Injury	(4) Poisoning	(2) Skin Disorder	(5) Hearing Loss	(3) Respiratory Condition	(6) All Other Illnesses
	0	0	0	0	0	0

Post this Summary page from February 1 to April 30 of the year following the year covered by the form

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Establishment information

Your establishment name TROCOM CONSTRUCTION CORP.
 Street 46-27 - 54TH ROAD
 City MASPETH State NY Zip _____
 Industry description (e.g., Manufacture of motor truck trailers) _____
 Standard Industrial Classification (SIC), if known (e.g., SIC 3715) _____
 OR North American Industrial Classification (NAICS), if known (e.g., 336212) _____

Employment information

Annual average number of employees _____
 Total hours worked by all employees last year _____

Sign here

Knowingly falsifying this document may result in a fine.

I certify that I have examined this document and that to the best of my knowledge the entries are true, accurate, and complete.

 Company executive

 Title

 Phone

 Date



Pre-Award Process

The bidder is advised that as part of the pre-award review of its bid, it may be required to submit the information described in Sections (A) through (D) below. If required, such information must be submitted by the bidder within five (5) business days following receipt of notification from DDC that it is among the low bidders. Such notification from DDC will be by facsimile or in writing and will specify the types of information must be submitted. The types of information the bidder may be required to submit are described below. In the event the bidder fails to submit the required information within the specified time frame, its bid may be rejected as nonresponsive.

- (A) **Project Reference Form:** If required, the bidder must complete and submit the Project Reference Form set forth on pages 17 through 19 of this Bid Booklet. The Project Reference Form consists of 3 parts: (1) Similar Contracts Completed by the Bidder, (2) Contracts Currently Under Construction by the Bidder, and (3) Pending Contracts Not Yet Started by the Bidder.
- (B) **Copy of License:** If required, the bidder must submit a copy of the license under which the bidder will be performing the work. Such license must clearly show the following: (1) Name of the Licensee, (2) License Number, and (3) Expiration date of the License. A copy of the license will be required from bidders for the following contracts: Plumbing Work, Electrical Work and Asbestos Abatement.
- (C) **Financial Information:** If required, the bidder must submit the financial information described below:
- (1) **Audited Financial Statements:** Financial statements (Balance Sheet and Income Statement) of the entity submitting the bid, as audited by an independent auditor licensed to practice as a certified public accountant (CPA). Audited financial statements for the three most recent fiscal years must be submitted. Each such financial statement must include the auditor's standard report.
- If the bidder does not have audited financial statements, it must submit an affidavit attesting to the fact that the bidder does not have such statements. In addition, the bidder must submit the following documentation covering the three most recent fiscal years: signed federal tax returns, unaudited financial statements, and a "certified review letter" from a certified public accountant (CPA) verifying the unaudited financial statements.
- Unless the most recent audited or unaudited financial statement was issued within ninety (90) days, the bidder must submit interim financial information that includes data on financial position and results of operation (income data) for the current fiscal year. Such information may be summarized on a monthly or quarterly basis or at other intervals.
- (2) **Schedule of Aged Accounts Receivable,** including portion due within ninety (90) days.

(D) **Project Specific Information:** If required, the bidder must submit the project specific information described below:

- (1) Statement indicating the number of years of experience the bidder has had and in what type of construction.
- (2) Resumes of all key personnel to be involved in the project, including the proposed project superintendent.
- (3) List of significant pieces of equipment expected to be used for the contract, and whether such equipment is owned or leased.
- (4) Description of work expected to be subcontracted, and to what firms, if known.
- (5) List of key material suppliers.
- (6) Preliminary bar chart time schedule
- (7) Contractor's expected means of financing the project. This should be based on the assumption that the contractor is required to finance 2X average monthly billings throughout the contract period.
- (8) Any other issues the contractor sees as impacting his ability to complete the project according to the contract.

In addition to the information described in Sections (A) through (D) above, the bidder shall submit such additional information as the Commissioner may require, including without limitation, an explanation or justification for specific unit price items.

The bidder is further advised that it may be required to attend a pre-award meeting with DDC representatives. If such a meeting is convened, the bidder will be advised as to any additional material to be provided.

A. PROJECT REFERENCES – SIMILAR CONTRACTS COMPLETED BY THE BIDDER

List all contracts substantially completed within the last 4 years similar to the contract being awarded, up to a maximum of 10, in descending order of date of substantial completion.

Project & Location	Contract Type	Contract Amount (\$000)	Date Completed	Owner Reference & Tel. No.	Architect/Engineer Reference & Tel. No. if different from owner

B. PROJECT REFERENCES – CONTRACTS CURRENTLY UNDER CONSTRUCTION BY THE BIDDER

List all contracts currently under construction even if they are not similar to the contract being awarded.

Project & Location	Contract Type	Contract Amount (\$000)	Subcontracted to Others (\$000)	Uncompleted Portion (\$000)	Date Scheduled to Complete	Owner Reference & Tel. No.	Architect/Engineer Reference & Tel. No. if different from owner

C. PROJECT REFERENCES – PENDING CONTRACTS NOT YET STARTED BY THE BIDDER

List all contracts awarded to or won by the bidder but not yet started.

Project & Location	Contract Type	Contract Amount (\$000)	Date Scheduled to Start	Owner Reference & Tel. No.	Architect/Engineer Reference & Tel. No. if different from owner

(NO TEXT ON THIS PAGE)

**OFFICE OF THE MAYOR
BUREAU OF LABOR SERVICES
CONTRACT CERTIFICATE**

To be completed if the contract is less than \$1,000,000

Contractor: _____

Address: _____

Telephone Number: _____

Name and Title of Signatory: _____

Contracting Agency or Owner: _____

Project Number: _____

Proposed Contract Amount: _____

Description and Address of Proposed Contract: _____

Names of Subcontractors in the amount of 750,000 or more on this contract (if not known at this time, so state indicating that trades will be subcontracted):

I, (fill in name of person signing) _____ ,
hereby affirm that I am authorized by the above-named contractor to certify that said contractor's
proposed contract with the above-named owner or city agency is less than \$1,000,000. This affirmation
is made in accordance with Executive Order No. 50 (1980) as amended and its implementing regulations.

Date

Signature

**WILLFUL OR FRAUDULENT FALSIFICATION OF ANY DATA OR INFORMATION
SUBMITTED HEREWITH MAY RESULT IN THE TERMINATION OF ANY CONTRACT BETWEEN
THE CITY AND THE BIDDER OR CONTRACTOR AND BAR THE BIDDER OR CONTRACTOR FROM
PARTICIPATION IN ANY CITY CONTRACT FOR A PERIOD OF UP TO THREE YEARS. FURTHER,
SUCH FALSIFICATION MAY RESULT IN CRIMINAL PROSECUTION.**

(NO TEXT ON THIS PAGE)

Certificate of No Change Form



- Please submit two completed forms. Copies will not be accepted.
- Please send both copies to the agency that requested it, unless you are advised to send it directly to the Mayor's Office of Contract Services (MOCS).
- A materially false statement willfully or fraudulently made in connection with this certification, and/or the failure to conduct appropriate due diligence in verifying the information that is the subject of this certification, may result in rendering the submitting entity non-responsible for the purpose of contract award.
- A materially false statement willfully or fraudulently made in connection with this certification may subject the person making the false statement to criminal charges.

I, Anthony J. Santoro, being duly sworn, state that I have read
Enter Your Name

and understand all the items contained in the vendor questionnaire and any submission of change as identified on page one of this form and certify that as of this date, these items have not changed. I further certify that, to the best of my knowledge, information and belief, those answers are full, complete, and accurate, and that, to the best of my knowledge, information, and belief, those answers continue to be full, complete, and accurate.

In addition, I further certify on behalf of the submitting vendor that the information contained in the principal questionnaire(s) and any submission of change identified on page two of this form have not changed and have been verified and continue, to the best of my knowledge, to be full, complete and accurate.

I understand that the City of New York will rely on the information supplied in this certification as additional inducement to enter into a contract with the submitting entity.

Vendor Questionnaire *This section is required.*

This refers to the vendor questionnaire(s) submitted for the vendor doing business with the City.

Name of Submitting Entity: Trocom Construction Corp.

Vendor's Address: 46-27 54th Road, Maspeth NY 11378

Vendor's EIN or TIN: 112203562

Requesting Agency: _____

Are you submitting this Certification as a parent? (Please circle one) Yes No

Signature date on the last full vendor questionnaire signed for the submitting vendor: 7-17-12

Signature date on change submission for the submitting vendor: _____



Principal Questionnaire

This section refers to the most recent principal questionnaire submissions.



	Principal Name	Date of signature on last full Principal Questionnaire	Date(s) of signature on submission of change
1	Joseph Trovato	3-30-12	
2	Anthony J. Santoro	8-3-10	
3	Antoinette Trovato	7-17-12	
4			
5			
6			

Check if additional changes were submitted and attach a document with the date of additional submissions.

Notarization This section is required.

This form must be signed and notarized. Please complete this twice. Copies will not be accepted.

Certified By:

Anthony J. Santoro

Name (Print)

Vice President

Title

Trocom Construction Corp.

Name of Submitting Entity

Signature

3/4/13
Date

Notarized By:

LINDA BARBATI
NOTARY PUBLIC-STATE OF NEW YORK
NO. 01BA6181795

Notary Public

Qualified in Nassau County
Expires February 11, 2016
County License Issued

01BA6181795
License Number

Sworn to before me on:

3/4/13
Date



Certificate of No Change Form



- Please submit two completed forms. Copies will not be accepted.
- Please send both copies to the agency that requested it, unless you are advised to send it directly to the Mayor's Office of Contract Services (MOCS).
- A materially false statement willfully or fraudulently made in connection with this certification, and/or the failure to conduct appropriate due diligence in verifying the information that is the subject of this certification, may result in rendering the submitting entity non-responsible for the purpose of contract award.
- A materially false statement willfully or fraudulently made in connection with this certification may subject the person making the false statement to criminal charges.

I, Anthony J. Santoro, being duly sworn, state that I have read
Enter Your Name

and understand all the items contained in the vendor questionnaire and any submission of change as identified on page one of this form and certify that as of this date, these items have not changed. I further certify that, to the best of my knowledge, information and belief, those answers are full, complete, and accurate, and that, to the best of my knowledge, information, and belief, those answers continue to be full, complete, and accurate.

In addition, I further certify on behalf of the submitting vendor that the information contained in the principal questionnaire(s) and any submission of change identified on page two of this form have not changed and have been verified and continue, to the best of my knowledge, to be full, complete and accurate.

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2 Anthony J. Santoro	8-3-10	
3 Antoinette Trovato	7-17-12	
4		
5		
6		

Check if additional changes were submitted and attach a document with the date of additional submissions.

Verification This section is required.

This form must be signed and notarized. Please complete this twice. Copies will not be accepted.

Certified By:

Anthony J. Santoro

Name (Print)

Vice President

Title

Trocom Construction Corp.

Name of Submitting Entity

Signature

Date

3/4/13

Notarized By:

LINDA BARBATT
NOTARY PUBLIC STATE OF NEW YORK
No. 01BA6181795
Qualified in Nassau County

Notary Public

My Commission Expires February 11, 2012
Queens County License Issued

License Number

01BA6181795

Sworn to before me on:

Date

3/4/13



IRAN DIVESTMENT ACT COMPLIANCE RIDER

FOR NEW YORK CITY CONTRACTORS

The Iran Divestment Act of 2012, effective as of April 12, 2012, is codified at State Finance Law (“SFL”) §165-a and General Municipal Law (“GML”) §103-g. The Iran Divestment Act, with certain exceptions, prohibits municipalities, including the City, from entering into contracts with persons engaged in investment activities in the energy sector of Iran. Pursuant to the terms set forth in SFL §165-a and GML §103-g, a person engages in investment activities in the energy sector of Iran if:

- (a) The person provides goods or services of twenty million dollars or more in the energy sector of Iran, including a person that provides oil or liquefied natural gas tankers, or products used to construct or maintain pipelines used to transport oil or liquefied natural gas, for the energy sector of Iran; or
- (b) The person is a financial institution that extends twenty million dollars or more in credit to another person, for forty-five days or more, if that person will use the credit to provide goods or services in the energy sector in Iran and is identified on a list created pursuant to paragraph (b) of subdivision three of Section 165-a of the State Finance Law and maintained by the Commissioner of the Office of General Services.

A bid or proposal shall not be considered for award nor shall any award be made where the bidder or proposer fails to submit a signed and verified bidder’s certification.

Each bidder or proposer must certify that it is not on the list of entities engaged in investment activities in Iran created pursuant to paragraph (b) of subdivision 3 of Section 165-a of the State Finance Law. In any case where the bidder or proposer cannot certify that they are not on such list, the bidder or proposer shall so state and shall furnish with the bid or proposal a signed statement which sets forth in detail the reasons why such statement cannot be made. The City of New York may award a bid to a bidder who cannot make the certification on a case by case basis if:

- (1) The investment activities in Iran were made before the effective date of this section (i.e., April 12, 2012), the investment activities in Iran have not been expanded or renewed after the effective date of this section and the person has adopted, publicized and is implementing a formal plan to cease the investment activities in Iran and to refrain from engaging in any new investments in Iran: or
- (3) The City makes a determination that the goods or services are necessary for the City to perform its functions and that, absent such an exemption, the City would be unable to obtain the goods or services for which the contract is offered. Such determination shall be made in writing and shall be a public document.

**BIDDER'S CERTIFICATION OF COMPLIANCE WITH
IRAN DIVESTMENT ACT**

Pursuant to General Municipal Law §103-g, which generally prohibits the City from entering into contracts with persons engaged in investment activities in the energy sector of Iran, the bidder/proposer submits the following certification:

[Please Check One]

BIDDER'S CERTIFICATION

- By submission of this bid or proposal, each bidder/proposer and each person signing on behalf of any bidder/proposer certifies, and in the case of a joint bid each party thereto certifies as to its own organization, under penalty of perjury, that to the best of its knowledge and belief, that each bidder/proposer is not on the list created pursuant to paragraph (b) of subdivision 3 of Section 165-a of the State Finance Law.

- I am unable to certify that my name and the name of the bidder/proposer does not appear on the list created pursuant to paragraph (b) of subdivision 3 of Section 165-a of the State Finance Law. I have attached a signed statement setting forth in detail why I cannot so certify.

Dated: _____, New York
_____, 20__

SIGNATURE

PRINTED NAME

TITLE

Sworn to before me this
____ day of _____, 20__

Notary Public

Dated:

**THE CITY OF NEW YORK
DEPARTMENT OF SMALL BUSINESS SERVICES
DIVISION OF LABOR SERVICES
CONTRACT COMPLIANCE UNIT
110 WILLIAMS STREET
NEW YORK, NEW YORK 10038
PHONE: (212) 513-6323
FAX: (212) 618-8879**

CONSTRUCTION

EMPLOYMENT

REPORT

(NO TEXT ON THIS PAGE)



Division of Labor Services

CONSTRUCTION EMPLOYMENT REPORT

GENERAL INFORMATION

- 1. Your contractual relationship in this contract is: Prime Contractor _____ Subcontractor _____
1a. Are M/WBE goals attached to this project? Yes _____ No _____
2. Would your company like information on how to certify with the City of New York as a:
Minority Owned Business Enterprise _____ Locally based Business Enterprise _____
Women Owned Business Enterprise _____ Emerging Business Enterprise _____
Disadvantaged _____
3. Please indicate if you would like assistance from SBS in identify certified M/WBEs for contracting opportunities: Yes _____ No _____
4. Is this project subject to a Project labor Agreement? Yes _____ No _____

PART I: CONTRACTOR/SUBCONTRACTOR INFORMATION

- 5. _____
Employer Identification Number or Federal Tax I.D.
6. _____
Company Name
7. _____
Street Address City State Zip Code
8. _____
(Chief Operating Officer) First Name Last Name Telephone Number Fax Number
9. _____
Designated Equal Opportunity Compliance Officer (if same as Item #8, write "Same") Telephone Number
10. _____
Name of Prime Contractor and Contact Person (if same as item #6, write "Same")
11. Number of employees in your company: _____
12. Contract information:
(a) _____ Contracting Agency (City Agency) (b) _____ Contract Amount
(c) _____ Procurement Identification Number (PIN) (d) _____ Contract Registration Number (CT#)
(e) _____ Project Commence Date (f) _____ Projected Completion Date

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Revised 11/09

(g) Description and location of proposed contract:

13. Has your firm been reviewed by the Division of Labor Services (DLS) within the past 36 months and issued a Certificate of Approval? Yes _____ No _____

If Yes, attach a copy of the certificate.

14. Has DLS within the past month reviewed an Employment Report submission for your company and issued a Conditional Certificate of Approval? Yes _____ No _____

If Yes, attach a copy of the certificate.

NOTE: DLS WILL NOT ISSUE A CONTINUED CERTIFICATE OF APPROVAL IN CONNECTION WITH THIS CONTRACT UNLESS THE REQUIRED CORRECTIVE ACTIONS IN PRIOR CONDITIONAL CERTIFICATES OF APPROVAL HAVE BEEN TAKEN

15. Has an Employment Report already been submitted for a different contract (not covered by this Employment Report) for which you have not yet received compliance certificate? Yes _____ No _____

If Yes,

Date submitted: _____ Agency to which submitted: _____

Name of Agency Person: First Name _____ Last Name _____

Contract No. : _____ Telephone: _____

16. Has your company in the past 36 months been audited by the United States Department of Labor, Office of Federal Contract Compliance Programs (OFCCP)? Yes _____ No _____

If Yes,

(a) Name and address of OFCCP office: _____

(b) Was a Certificate of Equal Employment Compliance issued within the past 24 months? Yes _____ No _____

If Yes, attach a copy of such certificate.

(c) Were any corrective actions required or agreed to? Yes _____ No _____

If Yes, attach a copy of such requirements or agreements.

(d) Were any deficiencies found? Yes _____ No _____

If Yes, attach a copy of such findings.

17. Is your company or its affiliates a member or members of an employers' trade association which is responsible for negotiating collective bargaining agreements (CBA) which affect construction site hiring? Yes _____ No _____

If Yes, attach a list of such associations and all applicable CBA's.

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Revised 11/03

PART II: DOCUMENTS REQUIRED

18. For the following policies or practices, attach the relevant documents (e.g., printed booklets, brochures, manuals, memoranda, etc.) If the policy(ies) are unwritten, attach a full explanation of the practices. See instructions.

- ___ (a) Health benefit coverage/description(s) for all management, nonunion and union employees (whether company or union administered)
- ___ (b) Disability, life, other insurance coverage/description
- ___ (c) Employee Policy/Handbook
- ___ (d) Personnel Policy/Manual
- ___ (e) Supervisor's Policy/Manual
- ___ (f) Pension plan or 401k coverage/description for all management, nonunion and union employees, whether company or union administered.
- ___ (g) Collective bargaining agreement(s)
- ___ (h) Employment Application(s)
- ___ (i) Employee evaluation policy/form(s)
- ___ (j) Does your firm have medical and/or non-medical (i.e. education, military, personal, pregnancy, child care) leave policy?

19. To comply with the Immigration Reform and Control Act of 1986 when and of whom does your firm require the completion of an I-9 form?

- | | | |
|--|---------|--------|
| (a) Prior to job offer | Yes ___ | No ___ |
| (b) After a conditional job offer | Yes ___ | No ___ |
| (c) After a job offer | Yes ___ | No ___ |
| (d) Within the first three days on the job | Yes ___ | No ___ |
| (e) To some applicants | Yes ___ | No ___ |
| (f) To all applicants | Yes ___ | No ___ |
| (g) To some employees | Yes ___ | No ___ |
| (h) To all employees | Yes ___ | No ___ |

20. Explain where and how completed I-9 Forms, with their supportive documentation are maintained and made accessible.

21. Does your firm or any of its collective bargaining agreements require job applicants to take a medical examination?

Yes ___ No ___

If Yes, is the medical examination given:

FOR OFFICIAL USE ONLY: File No. _____

Revised 11/09

- (a) Prior to the job offer Yes _____ No _____
- (b) After a conditional job offer Yes _____ No _____
- (c) After a job offer Yes _____ No _____
- (d) To all applicants Yes _____ No _____
- (e) Only to some applicants Yes _____ No _____

If Yes, list for which applicants below and attach copies of all medical examination or questionnaire forms and instructions utilized for these examinations.

22. Do you have a written equal opportunity (EEO) policy? Yes _____ No _____

If Yes, list the document(s) and page number(s) where these written policies are located.

23. Does the company have a current affirmative action plan(s) (AAP)

- _____ Minorities and Women
 - _____ Individuals with handicaps
 - _____ Other. Please specify _____
-

24. Does your firm or collective bargaining agreement(s) have an internal grievance procedure with respect to EEO complaints? Yes _____ No _____

If Yes, please attach a copy of this policy.

If No, attach a report detailing your firm's unwritten procedure for handling EEO complaints.

25. Has any employee, within the past three years, filed a complaint pursuant to an internal grievance procedure or with any official of your firm with respect to equal employment opportunity? Yes _____ No _____

If Yes, attach an internal complaint log. See instructions.

26. Has your firm, within the past three years, been named as a defendant (or respondent) in any administrative or judicial action where the complainant (plaintiff) alleged violation of any anti-discrimination or affirmative action laws? Yes _____ No _____

If Yes, attach a log. See instructions.

27. Are there any jobs for which there are physical qualification? Yes _____ No _____

If Yes, list the job(s), submit a job description and state the reason(s) for the qualification(s).

28. Are there any jobs for which there are age, race, color, national origin, sex, creed, disability, marital status, sexual orientation, or citizenship qualifications? Yes _____ No _____

If Yes, list the job(s), submit a job description and state the reason(s) for the qualification(s).



**Division of
Labor Services**

FORM A. CONTRACT BID INFORMATION: USE OF SUBCONTRACTORS/TRADES

1. Do you plan to subcontractor work on this contract? Yes ___ No ___
2. If yes, complete the chart below.

NOTE: All proposed subcontractors with a subcontract in excess of \$1,000,000 must complete an Employment Report for review and approval before the contract may be awarded and work commences.

SUBCONTRACTOR'S NAME*	OWNERSHIP (ENTER APPROPRIATE CODE LETTERS BELOW)	WORK TO BE PERFORMED BY SUBCONTRACTOR	TRADE PROJECTED FOR USE BY SUBCONTRACTOR	PROJECTED DOLLAR VALUE OF SUBCONTRACT

*if subcontractor is presently unknown, please enter the trade (craft name).

Ownership codes: **W:** White **A:** Asian **B:** Black **N:** Native American **H:** Hispanic **F:** Female

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Revised 1/10/08

**FORM B: PROJECTED WORKFORCE
TRADE CLASSIFICATION CODES**

(J) Journey level Workers (A) Apprentice
(H) Helper (TRN) Trainee
(TOT) Total by Column

For each trade to be engaged by your company for this project, enter the projected workforce for **Males** and **Females** by trade classification on the charts below.

Trade: _____

Union Affiliation, if applicable: _____

Total (Col. #1-10): _____

Total Minority, Male & Female (Col. #2, 3, 4, 5, 7, 8, 9 & 10) _____

Total Female (Col. #6 - 10): _____

			Males					Females				
			(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
			White Non Hisp.	Black Non Hisp.	Hisp.	Asian	Native Amer.	White Non Hisp.	Black Non Hisp.	Hisp.	Asian	Native Amer.
J												
H												
A												
TRN												
TOT												

What are the recruitment sources for you projected hires (i.e., unions, government employment office, job tap center, community outreach)? _____

**FORM B: PROJECTED WORKFORCE
TRADE CLASSIFICATION CODES**

(J) Journey level Workers
(H) Helper
(TOT) Total by Column

For each trade to be engaged by your company for this project, enter the projected workforce for **Males** and **Females** by trade classification on the charts below.

Trade: _____	<u>Males</u>					<u>Females</u>				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	White Non Hisp.	Black Non Hisp.	Hisp.	Asian	Native Amer.	White Non Hisp.	Black Non Hisp.	Hisp.	Asian	Native Amer.
Total (Col. #1-10): _____										
Total Minority, Male & Female (Col. #2, 3, 4, 5, 7, 8, 9 & 10)										
Total Female (Col. #6 - 10): _____										

What are the recruitment sources for you projected hires (i.e., unions, government employment office, job tap center, community outreach)? _____

NYC Small Business Services

Division of Labor Services

FORM C: CURRENT WORKFORCE TRADE CLASSIFICATION CODES

(J) Journey level Workers
(H) Helper
(TOT) Total by Column

(A) Apprentice
(TRN) Trainee

For each trade to be engaged by your company for this project, enter the projected workforce for **Males** and **Females** by trade classification on the charts below.

Trade: _____	Males						Females							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)				
	White Non Hisp.	Black Non Hisp.	Hisp.	Asian	Native Amer.	White Non Hisp.	Black Non Hisp.	Hisp.	Asian	Native Amer.				
Union Affiliation, if applicable: _____														
Total (Col. #1-10): _____														
Total Minority, Male & Female (Col. #2, 3, 4, 5, 7, 8, 9 & 10) _____														
Total Female (Col. #6 - 10): _____														
TOT														

What are the recruitment sources for you projected hires (i.e., unions, government employment office, job tap center, community outreach)? _____

FOR OFFICIAL USE ONLY: File No. _____

Revised 11/99



Division of Labor Services

FORM C: CURRENT WORKFORCE TRADE CLASSIFICATION CODES

(J) Journey level Workers
(H) Helper
(TOT) Total by Column

(A) Apprentice
(TRN) Trainee

For each trade to be engaged by your company for this project, enter the projected workforce for **Males and Females** by trade classification on the charts below.

Trade: _____	Males						Females													
	(1)		(2)		(3)		(4)		(5)		(6)		(7)		(8)		(9)		(10)	
	White Non Hisp.	Black Non Hisp.	White Non Hisp.	Black Non Hisp.	White Non Hisp.	Black Non Hisp.	White Non Hisp.	Black Non Hisp.	White Non Hisp.	Black Non Hisp.	White Non Hisp.	Black Non Hisp.	White Non Hisp.	Black Non Hisp.	White Non Hisp.	Black Non Hisp.	White Non Hisp.	Black Non Hisp.	White Non Hisp.	Black Non Hisp.
Total (Col. #1-10):	J																			
Total Minority, Male & Female (Col. #2, 3, 4, 5, 7, 8, 9 & 10)	H																			
Total Female (Col. #6 - 10):	A																			
Total Female	TRN																			
(Col. #6 - 10):	TOT																			

What are the recruitment sources for you projected hires (i.e., unions, government employment office, job tap center, community outreach)? _____

FOR OFFICIAL USE ONLY: File No. _____

Revised 1/00



Division of Labor Services

Date _____

File Number _____

LESS THAN \$750,000 SUBCONTRACT CERTIFICATE

Are you currently certified as one of the following? Please check yes or no:

M/WBE	Yes ___	No ___	MBE	Yes ___	No ___
WBE	Yes ___	No ___	LBE	Yes ___	No ___

If you are certified as an **M/WBE, MBE, WBE,** or **LBE,** what city/state agency are you certified with? _____

Please check one of the following if your firm would like information on how to certify with the City of New York as a:

Minority Owned Business Enterprise **Locally based Business Enterprise**
 Women Owned Business Enterprise

Company Name *Employer Identification Number or Federal Tax I.D.*

Company Address and Zip Code

Contact Person (First Name, Last Name) *Telephone Number*

Fax Number *E-mail Address*

Contracting Agency

Description and location of proposed subcontract:

_____ <i>Borough</i>	_____ <i>Project Number</i>	_____ <i>Pin Number</i>	_____ <i>Contract Amount</i>
-------------------------	--------------------------------	----------------------------	---------------------------------

I, (print name of authorized official signing) _____ hereby certify that I am authorized by the above-named subcontractor to certify that said subcontractor's proposed contract with the above named owner or City agency is less than \$750,000.

Willful or fraudulent falsifications of any data or information submitted herewith may result in the termination of the contract between the City and the bidder or contractor and in disapproval of future contracts for a period of up to five years. Further, such falsification may result in civil and/or criminal prosecution.

Signature of authorized official Date

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SIGNATURE PAGE

(print name of authorized official signing) _____ hereby certify that the information submitted herewith is true and complete to the best of my knowledge and belief and submitted with the understanding that compliance with New York City's equal employment requirements, as contained in Chapter 56 of the City Charter, Executive Order No. 50 (1980), as amended, and the implementing Rules and Regulations, is a requirement for the contractors and subcontractors working on this construction project. I also agree on behalf of the company to submit a certified copy of payroll records to the Division of Labor Services on a monthly basis.

Contractor's Name

Name of person who prepared this Employment Report *Title*

Name of official authorized to sign on behalf of the contractor *Title*

Telephone Number

Signature of authorized official *Date*

If contractors are found to be underutilizing minorities and females in any given trade based on Chapter 56 Section 3H, the Division of Labor Services reserves the right to request the contractor's workforce data and to implement an employment program.

Contractors who fail to comply with the above mentioned requirements or are found to be in noncompliance may be subject to the withholding of final payment.

Willful or fraudulent falsifications of any data or information submitted herewith may result in the termination of the contract between the City and the bidder or contractor and in disapproval of future contracts for a period of up to five years. Further, such falsification may result in civil and/or criminal prosecution.

To the extent permitted by law and consistent with the proper discharge of DLS' responsibilities under Charter Chapter 56 of the City Charter and Executive Order No. 50 (1980) and the implementing Rules and Regulations, all information provided by a contractor to DLS shall be confidential.

Please attach your M/WBE Compliance Report.

Only original signatures accepted.

Sworn to before me this _____ day of _____ 20 _____

Authorized Signature

Notary Public

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Revised 1/1/09



Division of Labor Services

WHO MUST FILE AN EMPLOYMENT REPORT

An Employment Report (ER) must be filed if you meet the following conditions:

CONTRACTOR	CONTRACT VALUE	Submission Requirement
Prime Contractor	\$1,000,000 or greater (<i>city, state</i>)	Construction Employment Report
	\$10,000 or greater (<i>federally and/or federally assisted</i>)	
Subcontractor	\$750,000 or greater	Construction Employment Report
	Less than \$750,000	Less than \$750,000 Certificate
	\$10,000 or greater (<i>federally and/or federally assisted</i>)	Construction Employment Report

WHERE TO FILE

ERs must be filed directly with the Division of Labor Services (DLS).

DLS REVIEW PROCESS

In accordance with Executive Order 50 (EO 50), upon receipt by DLS of a completed ER, DLS conducts a review of the contractor's current employment policies, practices and procedures, as well as perform a statistical analysis of the contractor's workforce, if necessary. The process is as follows:

1. Within five (5) business days, DLS will review the ER for completeness and accuracy. If any information is omitted or incorrect, or if necessary documents are not submitted, the submission shall be deemed incomplete and DLS will inform the contractor. The substantive compliance review does not commence until the submission is complete. **An incomplete submission will delay the review process and may preclude or interrupt the contract approval.**
 - 1a. If the City is allocating funds to this project, you must provide the name of the contracting agency.
2. If the ER submission is complete, the compliance review will proceed, resulting in one of the following:

Certificate of Approval

The contractor is found to be in compliance with all applicable laws and regulations. The approval is valid for 36 months.

Continued Approval Certificate

The contractor has been issued a Certificate of Approval in the previous 36 months which is good for the applicable contract.

Conditional Certificate of Compliance

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The contractor is required to take corrective actions in order to be in compliance with EO 50. The contractor must meet the conditions within three months of the issue of the Conditional Certificate.

Determination of Nonperformance

The contractor has failed to take the required corrective actions stipulated in the Conditional Certificate. A determination of nonperformance may prevent a contractor from receiving an DLS Approval.

3. Please indicate if you would like assistance from SBS in identifying certified M/WBEs for contracting opportunities.
- 3a. Please provide a copy of your project labor agreement which is negotiated through an employer trade association.

HOW TO COMPLETE THE EMPLOYMENT REPORT

Contents

General Information

Part I: Company/Contract Information

Part II: Employment Policies and Practices

Part III: Contract Bid Information and Projected and Current Workforce Forms

Signature Page

PART I: CONTRACTOR/SUBCONTRACTOR INFORMATION

- Question 5: Please provide the Employer Identification Number or Federal Tax I.D.
- Questions 6 – 9: Please provide the requested company information. All contracts must have a designated Equal Employment Officer.
- Question 10: If you are a subcontractor, you must state the name of the contractor for whom you are providing the construction services.
- Question 11: Please indicate how many employees are in your company.
- Question 12 (a-f): Please provide all relevant information requested in 12 (a) to (f).
- Question 12(g): Provide a description of the trade work you will perform on this project and the address where the work will be performed. Subcontractors can obtain this information from the contract they have with their contractor.
- Questions 13 – 15: If your company has received a valid Certificate of Approval within the past 36 months, been audited by the United States Department of Labor, Office of Federal Contract Compliance Programs (OFCCP), or if your company has submitted an ER for a different contract for which you have not yet received a compliance certificate, then you only need to complete and submit the following:
- General Information section
 - Part I - Contractor/Subcontractor Information
 - Form B - Projected Workforce
 - Signature Page
- If your company is currently waiting for an approval on another contract previously submitted, be certain to identify the date on which you submitted the completed Employment Report, the name of the City contracting agency with which the contract was made, and the name and telephone number of the person to whom the Employment Report was submitted.
- If your company was issued a Conditional Certificate of Approval, all required corrective actions must have been taken or DLS will not issue a Continued Certificate.
- Question 16: If the company was audited by the OFCCP, also provide the following:
- Identify the reviewing OFCCP office by its name and address
 - If an unconditional certificate of compliance was issued by the OFCCP, attach a copy of the certificate in lieu of completing Parts II and III;

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Revised 11/09

- Include copies of all corrective actions and documentation of OFCCP's performance; and
- Provide a copy of all stated OFCCP findings.

Question 17: Please provide a copy of any Collective Bargaining Agreement(s) which is negotiated through an employer trade association on behalf of your organization or any of its affiliates.

PART II: EMPLOYMENT POLICIES AND PRACTICES

Remember to label all documents with the question number for which they are submitted.

Questions 18a – j: You must respond to the questions as to whether or not your firm has documents reflecting written policies, benefits and procedures. If so, then you must identify by name each document in which the policy(ies), procedure(s) and benefit(s) is located and submit copies of all of the document(s). If your firm follows unwritten practices or procedures, include an explanation of how they operate. Please submit the most current document(s), including all applicable amendments. Label each document and/or unwritten practice according to the question to which it corresponds (e.g. 18a, 18b, etc.)

Questions 19a – h: Inquires about the manner/methods by which you comply with the requirements of the Immigration Reform and Control Act of 1986 (IRCA).

Question 20: Inquires into where and how I-9 forms are maintained and stored.

Questions 21a – e: Inquires into whether or not there is a requirement that an applicant or employee be subjected to a medical examination at any given time. Copies of the medical information questionnaire and instructions must be submitted with the Employment Report.

Question 22: Indicate the existence and location of all statements of your firm's Equal Employment Opportunity policy and attach a copy of each statement.

Question 23: Submit any current Affirmative Action Plan(s) created pursuant to Executive Order 11246.

Question 24: If your firm or collective bargaining agreement has an internal grievance procedure, indicate this and submit a copy of the policy and procedure. If unwritten, explain its nature and operation. Explain how your firm's procedure addresses EEO complaints.

Question 25: If your employees have used the procedure in the last three (3) years, please submit an explanation in the format indicated below:

1. Number of complaint(s)	2. Nature of the complaint(s)	3. Position(s) of the complainant(s)	4. Was an investigation conducted? Y/N	5. Current status of the disposition
---------------------------	-------------------------------	--------------------------------------	---	--------------------------------------

Question 26: Indicate whether in the past three (3) years complaints have been filed with a court of law or administrative agency, naming your company as a defendant (or respondent) in a complaint alleging violation of any anti-discrimination or affirmative action laws. If yes, develop and submit a log to show, for each administrative/and or judicial action filed, the following information:

1. Name(s) of complainant(s)	2. Administrative agency or court in which action was filed	3. Nature of the complaint(s)	4. Current status	5. If not pending, the complaint's disposition
------------------------------	---	-------------------------------	-------------------	--

Question 27: Identify each job for which a physical qualification exists. Identify and explain the physical qualification(s) for each stated job. Submit job descriptions for each job and the reasons for the qualifications.

Question 28: Identify each job for which there exists any qualification related to age, race, color, national origin, sex, creed, disability, marital status, sexual orientation or citizenship status. Identify and explain the specific related qualification for each job stated. Submit job descriptions for each job and the reasons for the qualifications.

PART III: CONTRACT BID INFORMATION AND PROJECTED AND CURRENT WORKFORCE FORMS

FORM A: CONTRACT BID INFORMATION – USE OF SUBCONTRACTORS/TRADES

Your projections for the utilization of subcontractors on the proposed contract are to be provided in this section. A chart has been provided for the identification of subcontractors. Information is to be provided to the extent known at the time the ER is filed for review by DLS. If the subcontractor's name is unknown, then write "unknown". Under "ownership", enter the appropriate race/ethnic and gender code. If the contract is federally funded or assisted and the subcontractor is being utilized in accordance with applicable federal requirements with respect to Minority Business Enterprise or Woman Business Enterprise requirements, enter the appropriate code. This will also apply to state funded contracts with similar requirements for minority and female owned businesses.

FORM B: PROJECTED WORKFORCE FOR WORK TO BE PERFORMED ON THIS PROJECT

For each trade to be engaged by your company for this project, enter the projected workforce for Males and Females by trade classification in the charts provided.

FORM C: CURRENT WORKFORCE FOR WORK TO BE PERFORMED ON THIS PROJECT

For each trade *currently* engaged by your company for all work performed in NYC, enter the current workforce for Males and Females by trade classification in the charts provided.

SIGNATURE PAGE

The signatory of this Employment Report and all other documents submitted to DLS must be an official authorized to enter into a binding legal agreement. The signature page must be completed in its entirety and notarized. Only original signatures will be accepted.

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Revised 11/09

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NEW YORK CITY DEPARTMENT OF
DESIGN + CONSTRUCTION

**INFRASTRUCTURE DIVISION
BUREAU OF DESIGN**

VOLUME 1 OF 3

PROJECT ID: HWXRCLZ

RECONSTRUCTION OF
ROBERTO CLEMENTE PLAZA

INCLUDING SEWER, WATER MAIN, STREET LIGHTING,
AND TRAFFIC SIGNAL WORK

Together With All Work Incidental Thereto
BOROUGH OF THE BRONX
CITY OF NEW YORK

Contractor.

Dated _____, 20____





**THE CITY OF NEW YORK
DEPARTMENT OF DESIGN AND CONSTRUCTION
DIVISION OF INFRASTRUCTURE**

30-30 THOMSON AVENUE
LONG ISLAND CITY, NEW YORK 11101-3045
TELEPHONE (718) 391-1000
WEBSITE www.nyc.gov/buildnyc

VOLUME 2 OF 3

**INFORMATION FOR BIDDERS
CONTRACT
PERFORMANCE AND PAYMENT BONDS
PREVAILING WAGE SCHEDULE**

FOR FURNISHING ALL LABOR AND MATERIALS NECESSARY AND REQUIRED FOR:

PROJECT ID: HWXRCPLZ

**RECONSTRUCTION OF
ROBERTO CLEMENTE PLAZA**

**INCLUDING SEWER, WATER MAIN, STREET LIGHTING,
AND TRAFFIC SIGNAL WORK**

**Together With All Work Incidental Thereto
BOROUGH OF THE BRONX
CITY OF NEW YORK**

FOR THE DEPARTMENT OF TRANSPORTATION
PREPARED BY

*WEIDLINGER ASSOCIATES
GARRISON ARCHITECTS*

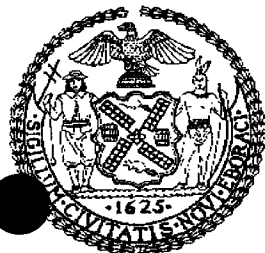
JULY 30, 2012

NYS DOT PIN X550.49

Fed. Aid Project No. _____

Bid Opening 11:00 A.M. on

Location 1st Floor Bid Room, 30-30 Thomson Ave., Long Island City, N.Y. 11101



12-159





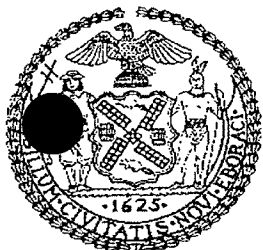
**THE CITY OF NEW YORK
DEPARTMENT OF DESIGN AND CONSTRUCTION
DIVISION OF INFRASTRUCTURE**

30-30 THOMSON AVENUE
LONG ISLAND CITY, NEW YORK 11101-3045
TELEPHONE (718) 391-1000
WEBSITE www.nyc.gov/buildnyc

VOLUME 2 OF 3

**INFORMATION FOR BIDDERS
CONTRACT
PERFORMANCE AND PAYMENT BONDS
PREVAILING WAGE SCHEDULE**

FOR FURNISHING ALL LABOR AND MATERIALS NECESSARY AND REQUIRED
FOR:



FOR THE DEPARTMENT OF TRANSPORTATION
PREPARED BY
IN-HOUSE DESIGN

MARCH 3, 2010



NOTICE TO BIDDERS, PROPOSERS, CONTRACTORS, AND RENEWAL CONTRACTORS

This contract includes a provision concerning the protection of employees for whistleblowing activity, pursuant to New York City Local Law Nos. 30-2012 and 33-2012, effective October 18, 2012 and September 18, 2012, respectively. The provisions apply to contracts with a value in excess of \$100,000.

Local Law No. 33-2012, the Whistleblower Protection Expansion Act (“WPEA”), prohibits a contractor or its subcontractor from taking an adverse personnel action against an employee or officer for whistleblower activity in connection with a City contract; requires that certain City contracts include a provision to that effect; and provides that a contractor or subcontractor may be subject to penalties and injunctive relief if a court finds that it retaliated in violation of the WPEA. The WPEA is codified at Section 12-113 of the New York City Administrative Code.

Local Law No. 30-2012 requires a contractor to prominently post information explaining how its employees can report allegations of fraud, false claims, criminality, or corruption in connection with a City contract to City officials and the rights and remedies afforded to employees for whistleblowing activity. Local Law No. 30-2012 is codified at Section 6-132 of the New York City Administrative Code.

WHISTLEBLOWER PROTECTION EXPANSION ACT RIDER

1. In accordance with Local Law Nos. 30-2012 and 33-2012, codified at sections 6-132 and 12-113 of the New York City Administrative Code, respectively,
 - (a) Contractor shall not take an adverse personnel action with respect to an officer or employee in retaliation for such officer or employee making a report of information concerning conduct which such officer or employee knows or reasonably believes to involve corruption, criminal activity, conflict of interest, gross mismanagement or abuse of authority by any officer or employee relating to this Contract to (i) the Commissioner of the Department of Investigation, (ii) a member of the New York City Council, the Public Advocate, or the Comptroller, or (iii) the City Chief Procurement Officer, ACCO, Agency head, or Commissioner.
 - (b) If any of Contractor's officers or employees believes that he or she has been the subject of an adverse personnel action in violation of subparagraph (a) of paragraph 1 of this rider, he or she shall be entitled to bring a cause of action against Contractor to recover all relief necessary to make him or her whole. Such relief may include but is not limited to: (i) an injunction to restrain continued retaliation, (ii) reinstatement to the position such employee would have had but for the retaliation or to an equivalent position, (iii) reinstatement of full fringe benefits and seniority rights, (iv) payment of two times back pay, plus interest, and (v) compensation for any special damages sustained as a result of the retaliation, including litigation costs and reasonable attorney's fees.
 - (c) Contractor shall post a notice provided by the City in a prominent and accessible place on any site where work pursuant to the Contract is performed that contains information about:
 - (i) how its employees can report to the New York City Department of Investigation allegations of fraud, false claims, criminality or corruption arising out of or in connection with the Contract; and
 - (ii) the rights and remedies afforded to its employees under New York City Administrative Code sections 7-805 (the New York City False Claims Act) and 12-113 (the Whistleblower Protection Expansion Act) for lawful acts taken in connection with the reporting of allegations of fraud, false claims, criminality or corruption in connection with the Contract.
 - (d) For the purposes of this rider, "adverse personnel action" includes dismissal, demotion, suspension, disciplinary action, negative performance evaluation, any action resulting in loss of staff, office space, equipment or other benefit, failure to appoint, failure to promote, or any transfer or assignment or failure to transfer or assign against the wishes of the affected officer or employee.
 - (e) This rider is applicable to all of Contractor's subcontractors having subcontracts with a value in excess of \$100,000; accordingly, Contractor shall include this rider in all subcontracts with a value in excess of \$100,000.
2. Paragraph 1 is not applicable to this Contract if it is valued at \$100,000 or less. Subparagraphs (a), (b), (d), and (e) of paragraph 1 are not applicable to this Contract if it was solicited pursuant to a finding of an emergency. Subparagraph (c) of paragraph 1 is neither applicable to this Contract if it was solicited prior to October 18, 2012 nor if it is a renewal of a contract executed prior to October 18, 2012.

NOTICE TO BIDDERS

Please be advised that the City of New York has revised the form of the performance bond that is required for City construction contracts that exceed \$5 million. The form of bond required for contracts that do not exceed \$5 million has not changed. The City's payment bond remains unchanged.

The bond form for contracts that do not exceed \$5 million has been approved by the U.S. Small Business Administration ("SBA") for participation in their Bond Guarantee Program. The SBA's Bond Guarantee Program enables eligible small businesses to obtain or increase bonding by having the SBA act as a partial guarantor of the contractor to the surety. For information concerning the SBA program, including current limits on what size contracts are eligible for participation in the program, go to www.sba.gov/osg. If you are interested in participating in this program, we suggest that you contact your broker or the SBA.

In order to maximize participation by small businesses in the SBA Guarantee Program, the City also encourages prime contractors who are awarded contracts greater than \$5 million to allow their subcontractors to use the SBA-approved form, particularly on contracts that are subject to Local Law 129 (the M/WBE program), if the prime contractor requires subcontractors to obtain performance bonds.

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CITY OF NEW YORK

**DEPARTMENT OF
DESIGN AND CONSTRUCTION
DIVISION OF INFRASTRUCTURES**

INFORMATION FOR BIDDERS

SEPTEMBER 2008

(NO TEXT ON THIS PAGE)

*CITY OF NEW YORK CITY
DEPARTMENT OF DESIGN AND CONSTRUCTION
INFORMATION FOR BIDDERS*

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INFORMATION FOR BIDDERS

1. Description and Location of Work

The description and location of the work for which bids are requested are specified in Attachment 1, "Bid Information". Attachment 1 is included as page A-1 of the Bid Booklet.

2. Time and Place for Receipt of Bids

Sealed bids shall be received on or before the date and hour specified in Attachment 1, at which time they will be publicly opened and read aloud in the presence of the Commissioner or his or her representative, and any bidders who may desire to be present.

3. Definitions

The definitions set forth in the Procurement Policy Board Rules shall apply to this Invitation For Bids.

4. Invitation For Bids and Contract Documents

(A) Except for titles, sub-titles, headings, running headlines, tables of contents and indices (all of which are printed herein merely for convenience) the following, except for such portions thereof as may be specifically excluded, shall be deemed to be part of the Contract and the Invitation for Bids.

- (1) All provisions required by law to be inserted in this Contract, whether actually inserted or not
- (2) The Contract Drawings and Specifications
- (3) The General Conditions, the General Requirements and the Special Conditions, if any
- (4) The Contract
- (5) The Information for Bidders; Request for Proposals; Notice of Solicitation and Proposal For Bids; Bid or Proposal, and, if used, the Bid Booklet
- (6) The Budget Director's Certificate; all Addenda issued prior to the receipt of the bids; the Notice of Award; Performance and Payment Bonds, if required; and the Notice to Proceed with the Work.

(B) For particulars as to this procurement, including quantity and quality of the purchase, extent of the work or labor to be performed, delivery and performance schedule, and any other special instructions, prospective bidders are referred to the Invitation For Bids Documents. A copy of such documents can be obtained at the location set forth in Attachment 1.

(C) Deposit for Copy of Invitation For Bids Documents: Prospective bidders may obtain a copy of the Invitation For Bids Documents by complying with the conditions set forth in the Notice of Solicitation. The deposit must be in the form of a check or money order made payable to the City of New York, and drawn upon a state or national bank or trust company, or a check of such bank or trust company signed by a duly authorized officer thereof.

(D) Return of Invitation For Bids Documents: All Invitation For Bids Documents must be returned to the Department upon request. If the bidder elects not to submit a bid thereunder, the

Invitation For Bids Documents shall be returned to the Department, along with a statement that no bid will be submitted.

(E) Return of Deposit: Such deposit will be returned within 30 days after the award of the contract or the rejection of all bids as set forth in the advertisement, provided the Invitation For Bids Documents are returned to the location specified in Attachment 1, in physical condition satisfactory to the Commissioner.

(F) Additional Copies: Additional copies of the Invitation For Bids Documents may be obtained, subject to the conditions set forth in the advertisement for bids.

5. Pre-Bid Conference

A pre-bid conference shall be held as set forth in Attachment 1. Nothing stated at the pre-bid conference shall change the terms or conditions of the Invitation For Bids Documents, unless a change is made by written amendment as provided in Section 9 below. Failure to attend a mandatory pre-bid conference shall constitute grounds for the rejection of the bid.

6. Agency Contact

Any questions or correspondence relating to this bid solicitation shall be addressed to the Agency Contact person specified in Attachment 1.

7. Bidder's Oath

(A) The bid shall be properly signed by an authorized representative of the bidder and the bid shall be verified by the written oath of the authorized representative who signed the bid, that the several matters stated and information furnished therein are in all aspects true.

(B) A materially false statement willfully or fraudulently made in connection with the bid or any of the forms completed and submitted with the bid may result in the termination of any Contract between the City and the Bidder. As a result, the Bidder may be barred from participating in future City contracts as well as be subject to possible criminal prosecution.

8. Examination and Viewing of Site, Consideration of Other Sources of Information and Changed Conditions

(A) Pre-Bidding (Investigation) Viewing of Site -Bidders must carefully view and examine the site of the proposed work, as well as its adjacent area, and seek other usual sources of information, for they will be conclusively presumed to have full knowledge of any and all conditions on, about or above the site relating to or affecting in any way the performance of the work to be done under the Contract which were or should have been indicated to a reasonably prudent bidder. To arrange a date for visiting the work site, bidders are to contact the Agency Contact person specified in Attachment 1.

(B) Should the contractor encounter during the progress of the work subsurface conditions at the site materially differing from any shown on the Contract Drawings or indicated in the Specifications or such subsurface conditions as could not reasonably have been anticipated by the contractor and were not anticipated by the City, which conditions will materially affect the cost of the work to be done under the

Contract, the attention of the Commissioner must be called immediately to such conditions before they are disturbed. The Commissioner shall thereupon promptly investigate the conditions. If he finds that they do so materially differ, or that they could not have been reasonably anticipated by the contractor and were not anticipated by the City, the Contract may be modified with his written approval.

9. Examination of Proposed Contract

(A) Request for Interpretation or Correction: Prospective bidders must examine the Contract Documents carefully and before bidding must request the Commissioner in writing for an interpretation or correction of every patent ambiguity, inconsistency or error therein which should have been discovered by a reasonably prudent bidder. Such interpretation or correction, as well as any additional contract provisions the Commissioner may decide to include, will be issued in writing by the Commissioner as an addendum to the Contract, which will be transmitted to each person recorded as having received a copy of the Contract Documents from the Department. Transmission of such addendum will be by mail, e-mail, facsimile or hand delivery. Such addendum will also be posted at the place where the Contract Documents are available for the inspection of prospective bidders. Upon transmission as provided for herein, such addendum shall become a part of the Contract Documents, and binding on all bidders, whether or not actual notice of such addendum is shown.

(B) Only Commissioner's Interpretation or Correction Binding: Only the written interpretation or correction so given by the Commissioner shall be binding, and prospective bidders are warned that no other officer, agent or employee of the City is authorized to give information concerning, or to explain or interpret, the Contract.

(C) Documents given to a subcontractor for the purpose of soliciting the subcontractor's bid shall include either a copy of the bid cover sheet or a separate information sheet setting forth the project name, the Contract number (if available), the contracting agency and the Project's location.

10. Form of Bid

Each bid must be submitted upon the prescribed form and must contain: a) the name, residence and place of business of the person or persons making the same; b) the names of all persons interested therein, and if no other person is so interested, such fact must be distinctly stated; c) a statement to the effect that it is made without any connection with any other person making a bid for the same purpose and that it is in all respects fair and without collusion or fraud; d) a statement that no Council member or other officer or employee or person whose salary is payable in whole or part from the City Treasury is directly or indirectly interested therein or in the supplies, materials or equipment and work or labor to which it relates, or in any portion of the profits thereof; e) a statement that the bidder is not in arrears to the City or to any agency upon a debt or contract or taxes, and is not a defaulter as surety or otherwise upon any obligation to the City to any agency thereof, except as set forth in the bid.

THE BID SHALL BE TYPEWRITTEN OR WRITTEN LEGIBLY IN INK. THE BID SHALL BE SIGNED IN INK. ERASURES OR ALTERATIONS SHALL BE INITIALED BY THE SIGNER IN INK. FAILURE TO CONFORM TO THE REQUIREMENTS OF THIS SECTION 10 SHALL RESULT IN THE REJECTION OF THE BID.

11. Irrevocability of Bid

The prices set forth in the bid cannot be revoked and shall be effective until the award of the Contract, unless the bid is withdrawn as provided for in Sections 15 and 18 below.

12. Acknowledgment of Amendments

The receipt of any amendment to the Contract Documents shall be acknowledged by the bidder in its bid submission.

13. Bid Samples and Descriptive Literature

Bid samples and descriptive literature shall not be submitted by the bidder, unless expressly requested elsewhere in the Contract or Contract Documents. Any unsolicited bid samples or descriptive literature which are submitted shall not be examined or tested and shall not be deemed to vary any of the provisions of this Contract.

14. Proprietary Information/Trade Secrets

(A) The bidder shall identify those portions of the bid which it deems to be confidential, proprietary information or trade secrets, and provide justification why such materials shall not be disclosed by the City. All such materials shall be clearly indicated by stamping the pages on which such information appears, at the top and bottom thereof with the word "Confidential". Such materials stamped "Confidential" must be easily separable from the non-confidential sections of the bid.

(B) All such materials so indicated shall be reviewed by the Agency and any decision not to honor a request for confidentiality shall be communicated in writing to the bidder. For those bids which are unsuccessful, all such confidential materials shall be returned to the bidder. Prices, makes and model or catalog numbers of the items offered, deliveries, and terms of payment shall be publicly available after bid opening, regardless of any designation of confidentiality made by the bidder.

15. Pre-Opening Modification or Withdrawal of Bids

Bids may be modified or withdrawn by written notice received in the office designated in Attachment 1, before the time and date set for the bid opening. If a bid is withdrawn in accordance with this Section, the bid security, if any, shall be returned to the bidder.

16. Bid Evaluation and Award

In accordance with the New York City Charter, the Procurement Policy Board Rules and the terms and conditions of this Invitation For Bids, this Contract shall be awarded, if at all, to the responsible bidder whose bid meets the requirements and evaluation criteria set forth in the Invitation For Bids, and whose bid price is either the most favorable bid price or, if the Invitation For Bids so states, the most favorable evaluated bid price. A bid may not be evaluated for any requirement or criterion that is not disclosed in the Invitation For Bids.

Restriction: No negotiations with any bidder shall be allowed to take place except under the circumstances and in the manner set forth in Section 21. Nothing in this Section shall be deemed to permit a contract award to a bidder submitting a higher quality item than that designated in the Invitation For Bids, if that bid is not also the most favorable bid.

17. Late Bids, Late Withdrawals and Late Modifications

Any bid received at the place designated in the solicitation after the time and date set for receipt of bids is late and shall not be considered. Any request for withdrawal or modification received at the place designated in the solicitation after the time and date set for receipt of bids is late and shall not be considered. The exception to this provision is that a late modification of a successful bid that makes the bid terms more favorable to the City shall be considered at any time it is received.

18. Withdrawal of Bids.

Except as provided for in Section 15, above, a bidder may not withdraw its bid before the expiration of forty-five (45) days after the date of the opening of bids; thereafter, a bidder may withdraw its bid only in writing and in advance of an actual award. If within sixty (60) days after the execution of the Contract, the Commissioner fails to fix the date for commencement of work by written notice to the bidder, the bidder, at his option, may ask to be relieved of his obligation to perform the work called for by written notice to the Commissioner. If such notice is given to the Commissioner, and the request to withdraw is granted, the bidder waives all claims in connection with this Contract.

19. Mistake in Bids

(A) Mistake Discovered Before Bid Opening: A bidder may correct mistakes discovered before the time and date set for bid opening by withdrawing or correcting the bid as provided in Section 15 above.

(B) Mistakes Discovered Before Award

(1) In accordance with General Municipal Law (Section 103, subdivision 11), where a unilateral error or mistake is discovered in a bid, such bid may be withdrawn upon written approval of the Agency Chief Contracting Officer if the following conditions are met:

- (a) The mistake is known or made known to the agency prior to the awarding of the Contract or within 3 days after the opening of the bid, whichever period is shorter; and
- (b) The price bid was based upon an error of such magnitude that enforcement would be unconscionable; and
- (c) The bid was submitted in good faith and the bidder submits credible evidence that the mistake was a clerical error as opposed to a judgment error; and
- (d) The error in the bid is actually due to an unintentional and substantial arithmetic error or an unintentional omission of a substantial quantity of work, labor, material or services made directly in the compilation of the bid, which unintentional arithmetic error or unintentional omission can be clearly shown by objective evidence drawn from inspection of the original work paper, documents, or materials used in the preparation of the bid sought to be withdrawn; and
- (e) It is possible to place the agency in the same position as existed prior to the bid.

(2) Unless otherwise required by law, the sole remedy for a bid mistake in accordance with this Article shall be withdrawal of the bid, and the return of the bid bond, or other security, if any, to the bidder. Thereafter, the agency may, in its discretion, award the Contract to the next lowest bidder or rebid the Contract. Any amendment to or reformation of a bid or a Contract to rectify such an error or mistake

therein is strictly prohibited.

(3) If the mistake and the intended correct bid are clearly evident on the face of the bid document, the bid shall be corrected to the intended correct bid and may not be withdrawn. Examples of mistakes that may be corrected are typographical errors, errors in extending unit prices, transposition errors and arithmetical errors.

20. Low Tie Bids

(A) When two or more low responsive bids from responsible bidders are identical in price, meeting all the requirements and criteria set forth in the Invitation For Bids, the Agency Chief Contracting Officer will break the tie in the following manner and order of priority:

- (1) Award to a certified New York City small, minority or woman-owned business entity bidder;
- (2) Award to a New York City bidder;
- (3) Award to a certified New York State small, minority or woman-owned business bidder;
- (4) Award to a New York State bidder.

(B) If two or more bidders still remain equally eligible after application of paragraph (A) above, award shall be made by a drawing by lot limited to those bidders. The bidders involved shall be invited to attend the drawing. A witness shall be present to verify the drawing and shall certify the results on the bid tabulation sheet.

21. Rejection of Bids

(A) Rejection of Individual Bids: The Agency may reject a bid if:

- (1) The bidder fails to furnish any of the information required pursuant to Section 24 or 28 hereof; or if
- (2) The bidder is determined to be not responsible pursuant to the Procurement Policy Board Rules; or if
- (3) The bid is determined to be non-responsive pursuant to the Procurement Policy Board Rules; or if
- (4) The bid, in the opinion of the Agency Chief Contracting Officer, contains unbalanced bid prices and is thus non-responsive, unless the bidder can show that the prices are not unbalanced for the probable required quantity of items, or if the imbalance is corrected pursuant to Section 15.

(B) Rejection of All Bids: The Agency, upon written approval by the Agency Chief Contracting Officer, may reject all bids and may elect to resolicit bids if in its sole opinion it shall deem it in the best interest of the City so to do.

(C) Rejection of All Bids and Negotiation With All Responsible Bidders: The Agency Head may determine that it is appropriate to cancel the Invitation For Bids after bid opening and before award and to complete the acquisition by negotiation. This determination shall be based on one of the following reasons:

- (1) All otherwise acceptable bids received are at unreasonable prices, or only one bid is received and the Agency Chief Contracting Officer cannot determine the reasonableness of the bid price, or no responsive bid has been received from a responsible bidder; or
- (2) In the judgment of the Agency Chief Contracting Officer, the bids were not independently arrived at in open competition, were collusive, or were submitted in bad faith.

(D) When the Agency has determined that the Invitation for Bids is to be canceled and that use of negotiation is appropriate to complete the acquisition, the contracting officer may negotiate and award the Contract without issuing a new solicitation, subject to the following conditions:

- (1) prior notice of the intention to negotiate and a reasonable opportunity to negotiate have been given by the contracting officer to each responsible bidder that submitted a bid in response to the Invitation for Bids;
- (2) the negotiated price is the lowest negotiated price offered by a responsible bidder; and
- (3) the negotiated price is lower than the lowest rejected bid price of a responsible bidder that submitted a bid in response to the Invitation for Bids.

22. Right to Appeal Determinations of Non-Responsiveness or Non-Responsibility and Right to Protest Solicitations and Award

The bidder has the right to appeal a determination of non-responsiveness or non-responsibility and has the right to protest a solicitation and award. For further information concerning these rights, the bidder is directed to the Procurement Policy Board Rules.

23. Affirmative Action and Equal Employment Opportunity

This Invitation For Bids is subject to applicable provisions of Federal, State and Local Laws and executive orders requiring affirmative action and equal employment opportunity.

24. VENDEX Questionnaires

(A) Requirement: Pursuant to Administrative Code Section 6-116.2 and the PPB Rules, bidders may be obligated to complete and submit VENDEX Questionnaires. Generally, if this bid is \$100,000 or more, or if this bid when added to the sum total of all contracts, concessions and franchises the bidder has received from the City and any subcontracts received from City contractors over the past twelve months, equals or exceeds \$100,000, Vendex Questionnaires must be completed. If required, Vendex Questionnaires must be completed and submitted before any award of contract may be made or before approval is given for a proposed subcontractor. Non-compliance with these submission requirements may result in the disqualification of the bid, disapproval of a subcontractor, subsequent withdrawal of approval for the use of an approved subcontractor, or the cancellation of the contract after its award.

(B) Submission: Vendex Questionnaires must be submitted directly to the Mayor's Office of Contract Services, ATTN: Vendex, 253 Broadway, 9th Floor, New York, New York 10007. In addition, the bidder must submit a Confirmation of Vendex Compliance to the agency. A form for this confirmation is set forth in the Bid Booklet.

(C) Obtaining Forms: Vendex Questionnaires, as well as detailed instructions, may be obtained at www.nyc.gov/vendex. The bidder may also obtain Vendex forms and instructions by contacting the

Agency Chief Contracting Office or the contract person for this contract.

25. Complaints About the Bid Process

The New York City Comptroller is charged with the audit of contracts in New York City. Any vendor who believes that there has been unfairness, favoritism or impropriety in the bid process should inform the Comptroller, Office of Contract Administration, One Centre Street, Room 835, New York, New York; telephone number (212)669-2797.

26. Bid, Performance and Payment Security

(A) Bid Security: Each bid must be accompanied by bid security in an amount and type specified in Attachment 1 (page A-1 of the Bid Booklet). The bid security shall assure the City of New York of the adherence of the bidder to its proposal, the execution of the Contract, and the furnishing of Performance and Payment Bonds by the bidder, if required in Attachment 1. Bid security shall be returned to the bidder as follows:

- (1) Within ten (10) days after the bid opening, the Comptroller will be notified to return the deposits of all but the three (3) lowest bidders. Within five (5) days after the award, the Comptroller will be notified to return the deposits of the remaining two unsuccessful bidders.
- (2) Within five (5) days after the execution of the Contract and acceptance of the Contractor's bonds, the Comptroller will be notified to return the bid security of the successful bidder or, if performance and payment bonds are not required, only after the sum retained under Article 21 of the Contract equals the amount of the bid security.
- (3) Where all bids are rejected, the Comptroller will be notified to return the deposit of the three (3) lowest bidders at the time of rejection.

(B) Performance and Payment Security: Performance and Payment Security must be provided in an amount and type specified in Attachment 1 (page A-1 of the Bid Booklet). The performance and payment security shall be delivered by the contractor prior to or at the time of execution of the Contract. If a contractor fails to deliver the required performance and payment security, its bid security shall be enforced, and an award of Contract may be made to the next lowest responsible and responsive bidder, or the contract may be rebid.

(C) Acceptable Types of Security: Acceptable types of security for bids, performance, and payment shall be limited to the following:

- (1) a one-time bond in a form satisfactory to the City;
- (2) a bank certified check or money order;
- (3) obligations of the City of New York; or
- (4) other financial instruments as determined by the Office of Construction in consultation with the Comptroller.

Whenever the successful bidder deposits obligations of the City of New York as performance and payment security, the Comptroller may sell and use the proceeds thereof for any purpose for which the principal or surety on such bond would be liable under the terms of the Contract. If the money is deposited with the Comptroller, the successful bidder shall not be entitled to receive interest on such money from the City.

(D) Form of Bonds: Security provided in the form of bonds must be prepared on the form of bonds authorized by the City of New York. Forms for bid, performance, and payment bonds are included in the Invitation for Bids Documents. Such bonds must have as surety thereunder such surety company or companies as are: (1) approved by the City of New York; (2) authorized to do business in the State of New York, and (3) approved by the Department of the Treasury of the United States. Premiums for any required bonds must be included in the base bid.

The bidder is advised that submission of a bid bond where the surety on such bond fails to meet the criteria set forth herein, shall result in the rejection of the bid as non-responsive.

The Department of the Treasury of the United States advises that information concerning approved surety companies may be obtained as follows: (1) from the Government Printing Office at 202-512-1800; (2) through the Internet at <http://www.fms.treas.gov/c570/index.html>, and (3) through a computerized public bulletin board, which can be accessed by using your computer modem and dialing 202-874-6887.

(E) Power of Attorney: Attorneys in fact who sign bid, performance, or payment bonds must file with each bond a certified copy of their power of attorney to sign said bonds.

27. Failure to Execute Contract

In the event of failure of the successful bidder to execute the Contract and furnish the required security within ten (10) days after notice of the award of the Contract, the deposit of the successful bidder or so much thereof as shall be applicable to the amount of the award made shall be retained by the City, and the successful bidder shall be liable for and hereby agrees to pay on demand the difference between the price bid and the price for which such Contract shall be subsequently awarded, including the cost of any required reletting and less the amount of such deposit. No plea of mistake in such accepted bid shall be available to the bidder for the recovery of the deposit or as a defense to any action based upon such accepted bid. Further, should the bidder's failure to comply with this Section cause any funding agency, body or group (Federal, State, City, Public, Private, etc.) to terminate, cancel or reduce the funding on this project, the bidder in such event shall be liable also to the City for the amount of actual funding withdrawn by such agency on this project, less the amount of the forfeited deposit.

28. Bidder Responsibilities and Qualifications

(A) Bidders must include with their bids all information necessary for a determination of bidder responsibility, as set forth in the Specifications.

(B) The Agency may require any bidder or prospective bidder to furnish all books of account, records, vouchers, statements or other information concerning the bidder's financial status for examination as may be required by the Agency to ascertain the bidder's responsibility and capability to perform the Contract. If required, a bidder must also submit a sworn statement setting forth such information as the Agency may require concerning present and proposed plant and equipment, the personnel and qualifications of his working organizations, prior experience and performance record.

(C) Oral Examination on Qualifications: In addition thereto, and when directed by the Agency, the bidder, or a responsible officer, agent or employee of the bidder, must submit to an oral examination to be conducted by the Agency in relation to his proposed tentative plan and schedule of

operations, and such other matters as the Agency may deem necessary in order to determine the bidder's ability and responsibility to perform the work in accordance with the Contract. Each person so examined must sign and verify a stenographic transcript of such examination noting thereon such corrections as such person may desire to make.

(D) If the bidder fails or refuses to supply any of the documents or information set forth in paragraph (B) hereof or fails to comply with any of the requirements thereof, the Agency may reject the bid.

29. Employment Report

In accordance with Executive Order No. 50 (1980) as modified by Executive Order 108 (1986), the filing of a completed Employment Report (ER) is a requirement of doing business with the City of New York for construction contractors with contracts of \$1,000,000 or more and subcontractors with construction subcontracts of \$750,000 or more. The required forms and information are included in the Bid Booklet.

30. Labor Law Requirements

(A) General: The successful bidder will be required to comply strictly with all Federal, State and local labor laws and regulations.

(B) New York State Labor Law: This Contract is subject to New York State Labor Law Section 220, which requires that construction workers on the site be paid prevailing wages and supplements. The Contractor is reminded that all wage provisions of this Contract will be enforced strictly and failure to comply will be considered when evaluating performance. Noncompliance may result in the contractor being debarred by the City from future contracts. Complaints filed with the Comptroller may result in decisions which may debar a contractor from bidding contracts with any state governmental entity and other political subdivisions.

(C) Records: The Contractor is expected to submit accurate payroll reports and other required documents and verify attendance and job classifications being utilized in compliance with the law, Contract provisions and agency procedures.

31. Insurance

(A) Bidders are advised that the insurance requirements contained herein are regarded as material terms of the Contract. As required by Article 22 of the Contract, the contractor must effect and maintain with companies licensed and authorized to do business in the State of New York, the types of insurance set forth therein, when required by and in the amounts set forth in Schedule A of the General Conditions. Such required insurance must be provided from the date the contractor is ordered to commence work and up to the date of final acceptance of all required work.

(B) The contractor must, within ten days of receipt of the notice of award, submit the following insurance documentation: (a) original certificate of insurance for general liability in the amount required by Schedule A of the General Conditions, and (b) original certificates of insurance or other proof of coverage for workers' compensation and disability benefits, as required by Section 57 of the New York State Workers' Compensation Law and Section 220 of the Disability Benefits Law.

32. Lump Sum Contracts

(A) Comparison of Bids: Bids on Lump Sum Contracts will be compared on the basis of the lump sum price bid, adjusted for alternate prices bid, if any.

(B) Lump Sum Bids for "General Construction Work" which include excavation shall include all necessary excavation work defined in the Specifications as being included in the lump sum bid. The bidder shall also bid a unit price for the additional cost of excavating material which is defined in the Specifications as excavation for which additional payment will be made. The total estimated additional cost of removing such material will be taken as the quantity set forth in the Engineer's Estimate multiplied by the unit price bid. This total estimated cost of additional excavation shall be added to the lump sum bid for the General Construction Work for the purpose of comparing bids to determine the low bidder.

(C) Variations from Engineer's Estimate: The Engineer's Estimate of the quantity of excavation for which additional payment will be made is approximate only and is given solely to be used as a uniform basis for the comparison of bids and such estimate is not to be considered as part of this contract. The quantities actually required to complete the contract work may be more or less than the quantities in the Engineer's Estimate and, if so, no action for damages or for loss of profits shall accrue to the contractor by reason thereof.

33. Unit Price Contracts

(A) Comparison of Bids: Bids on Unit Price Contracts will be compared on the basis of a total estimated price, arrived at by taking the sum of the estimated quantities of such items, in accordance with the Engineer's Estimate of Quantities set forth in the Bid Schedule, multiplied by the corresponding unit prices, and including any lump sum bids on individual items.

(B) Variations from Engineer's Estimate: Bidders are warned that the Engineer's Estimate of Quantities on the various items of work and materials is approximate only, given solely to be used as a uniform basis for the comparison of bids, and is not be considered part of this contract. The quantities actually required to complete the contract work may be less or more than so estimated, and if so, no action for damages or for loss of profits shall accrue to the contractor by reason thereof.

(C) Overruns: The terms and conditions applicable to overruns of unit price items are set forth in Article 26 of the Contract.

34. Excise Tax

Bidders are referred to the Specifications for information on Federal Excise Tax exemptions.

35. Licenses and Permits

The successful bidder will be required to obtain all necessary licenses and permits necessary to perform the work.

36. Multiple Prime Contractors

If more than one prime contractor will be involved on this project, all contractors are required to examine the Invitation for Bid packages for all other parts of the project.

37. Locally Based Enterprise Requirements (LBE)

This Contract is subject to the requirements of Administrative Code, Section 6-108.1, and the regulations promulgated thereunder. No construction contract will be awarded unless and until these requirements have been complied with in their entirety. The bidder is advised of the provisions set forth below, as well as the provisions with respect to the Locally Based Enterprise Program contained in Article 67 of the Contract. The contractor is advised that:

(A) If any portion of the Contract is subcontracted, not less than ten percent of the total dollar amount of the contract shall be awarded to locally based enterprises ("LBEs"); except, where less than ten percent of the total dollar amount of the Contract is subcontracted, such lesser percentage shall be so awarded.

(B) No contractor shall require performance and payment bonds from LBE subcontractors.

(C) No Contract shall be awarded unless the contractor first identifies in its bid:

(1) the percentage, dollar amount and type of work to be subcontracted; and

(2) the percentage, dollar amount and type of work to be subcontracted to LBEs.

(D) Within ten calendar days after notification of low bid, the apparent low bidder shall submit an "LBE Participation Schedule" to the contracting agency. If such schedule does not identify sufficient LBE subcontractors to meet the requirements of Administrative Code Section 6-108.1, the apparent low bidder shall submit documentation of its good faith efforts to meet such requirements.

(1) The "LBE Participation Schedule" shall include:

(a) the name and address of each LBE that will be given a subcontract,

(b) the percentage, dollar amount and type of work to be subcontracted to the LBE, and

(c) the dates when the LBE subcontract work will commence and end.

(2) The following documents shall be attached to the "LBE Participation Schedule":

(a) verification letters from each subcontractor listed in the "LBE Participation Schedule" stating that the LBE will enter into a formal agreement for work,

(b) certification documents of any proposed LBE subcontractor which is not on the LBE certified list, and

(c) copies of the certification letter of any proposed subcontractor which is an LBE.

(3) Documentation of good faith efforts to achieve the required LBE percentage shall include as appropriate but not limited to the following:

(a) attendance at prebid meetings, when scheduled by the agency, to advise bidders of contract requirements;

- (b) advertisement where appropriate in general circulation media, trade association publications and small business media of the specific subcontracts that would be at least equal to the percentage goal for LBE utilization specified by the contractor;
- (c) written notification to association of small, minority and women contractors soliciting specific subcontractors;
- (d) written notification by certified mail to LBE firms that their interest in the contract is solicited for specific work items and their estimated values;
- (e) demonstration of efforts made to select portions of the work for performance by LBE firms in order to increase the likelihood of achieving the stated goal;
- (f) documented efforts to negotiate with LBE firms for specific subcontracts, including at a minimum:
 - (i) The names, address and telephone numbers of LBE firms that are contacted;
 - (ii) A description of the information provided to LBE firms regarding the plans and specifications for portions of the work to be performed;
 - (iii) Documentation showing that no reasonable price can be obtained from LBE firms;
 - (iv) A statement of why agreements with LBE firms were not reached;
- (g) a statement of the reason for rejecting any LBE firm which the contractor deemed to be unqualified; and
- (h) documentation of efforts made to assist the LBE firms contacted that needed assistance in obtaining required insurance.

(E) Unless otherwise waived by the Commissioner with the approval of the Office of Economic and Financial Opportunity, failure of a proposed contractor to provide the information required by paragraphs (C) and (D) above may render the bid non-responsive and the Contract may not be awarded to the bidder. If the contractor states that it will subcontract a specific portion of the work, but can demonstrate despite good faith efforts it cannot achieve its required LBE percentage for subcontracted work until after award of Contract, the Contract may be awarded, subject to a letter of compliance from the contractor stating that it will comply with Administrative Code Section 6-108.1 and subject to approval by the Commissioner. If the contractor has not met its required LBE percentage prior to award, the contractor shall demonstrate that a good faith effort has been made subsequent to award to obtain LBEs on each subcontract until it meets the required percentage.

(F) When a bidder indicates prior to award that no work will be subcontracted, no work may be subcontracted without the prior written approval of the Commissioner, which shall be granted only if the contractor in good faith seeks LBE subcontractors at least six weeks prior to the start of work.

(G) The contractor may not substitute or change any LBE which was identified prior to award of the contract without the written permission of the Commissioner. The contractor shall make a written application to the Commissioner for permission to make such substitution or change, explaining why the contractor needs to change its LBE subcontractor and how the contractor will meet its LBE subcontracting requirement. Copies of such application must be served on the originally identified LBE by certified mail return receipt requested, as well as the proposed substitute LBE. The Commissioner shall determine whether or not to grant the contractor's request for substitution.

38. Bid Submission Requirements

The following forms, all of which are contained in the Bid Booklet, are to be completed and submitted with the bid:

- (1) Bid Schedule and Bid Form, including Affirmation
- (2) Bid Security (if required, see Attachment 1 on Page A-1)
- (3) M/WBE Subcontractor Utilization Plan (if participation goals have been established)

**FAILURE TO SUBMIT ITEMS (1), (2) AND (3)
WILL RESULT IN THE DISQUALIFICATION OF THE BID.**

- (4) Safety Questionnaire
- (5) Construction Employment Report (if bid is \$1,000,000 or more)
- (6) Contract Certificate (if bid is less than \$1,000,000)
- (7) Confirmation of Vendex Compliance
- (8) Bidder's Certification of Compliance with Iran Divestment Act
- (9) Special Experience Requirements (if applicable)
- (10) Apprenticeship Program Questionnaire (if applicable)

**FAILURE TO SUBMIT ITEMS (4) THROUGH (10)
MAY RESULT IN THE DISQUALIFICATION OF THE BID.**

39. Comptroller's Certificate

This Contract shall not be binding or of any force unless it is registered by the Comptroller in accordance with Section 328 of the City Charter and the Procurement Policy Board Rules. This Contract shall continue in force only after annual appropriation of funds by the City of New York and certification as hereinabove set forth.

40. Procurement Policy Board Rules

This Invitation For Bids is subject to the Rules of the Procurement Policy Board of the City of New York. In the event of a conflict between said Rules and a provision of this Invitation For Bids, the Rules shall take precedence.

41. DDC Safety Requirements

The DDC Safety Requirements apply to the work to be performed pursuant to the Contract. The DDC Safety Requirements are set forth on the following pages.

CITY OF NEW YORK
DEPARTMENT OF DESIGN AND CONSTRUCTION
SAFETY REQUIREMENTS

THE DDC SAFETY REQUIREMENTS INCLUDE THE FOLLOWING SECTIONS:

- I. POLICY ON SITE SAFETY.....
- II. PURPOSE
- III. DEFINITIONS.....
- IV. RESPONSIBILITIES.....
- V. SAFETY QUESTIONNAIRE
- VI. SAFETY PROGRAM AND SITE SAFETY PLAN
- VII. KICK-OFF/PRE-CONSTRUCTION MEETINGS AND SAFETY REVIEW
- VIII. EVALUATION DURING WORK IN PROGRESS
- IX. SAFETY PERFORMANCE EVALUATION.....

I. POLICY ON SITE SAFETY

The City of New York Department of Design and Construction (DDC) is committed to a policy of injury and illness prevention and risk management for construction work that will ensure the safety and health of the workers engaged in the projects and the protection of the general public. Therefore, it is DDC's policy that work carried out by Contractors on DDC jobsites must, at a minimum, comply with applicable federal, state and city laws, rules and regulations, including without limitation:

- ❑ U. S. Department of Labor 29 Code of Federal Regulations (CFR) Part 1926 and applicable Sub-parts of Part 1910 – U.S. Occupational Safety and Health Administration (OSHA) including, but not limited to “Respiratory Protection” (29 CFR 1910.134), “Permit-Required Confined Spaces” (29 CFR 1910.146), and “Hazard Communication” (29 CFR 1910.1200);
- ❑ New York State Department of Labor Industrial Code Rule 23 – Protection in Construction, Demolition and Excavation;
- ❑ New York City Construction Codes, Title 28
- ❑ NYC Department of Transportation Title 34 Chapter 2 – Highway Rules
- ❑ New York State Department of Labor Industrial Code Rule 753
- ❑ NYC Local Law No. 113 (2005) Noise Control Code

In addition, all regulations promulgated by the NYC Department of Transportation, including requirements for Maintenance and Protection of Traffic (MPT), are applicable when contained in contract specifications. While MPT is a significant component of work in our Infrastructure Division, it does not supersede or exempt Contractors from complying with other applicable health and safety standards (for example, excavating and trenching standards, operation of heavy equipment and compliance with City environmental and noise regulations).

II. PURPOSE

The purpose of this policy is to ensure that Contractors perform their work and supervise their employees in accordance with all applicable federal, state and city rules and regulations. Further, Contractors will be expected to minimize or eliminate jobsite and public hazard, through a planning, inspection, auditing and corrective action process. The goal is to control risks so that injuries, illnesses and accidents to contractors' employees, DDC employees and the general public, as well as damage to city-owned and private property, are reduced to the lowest level feasible.

III. DEFINITIONS

Agency Chief Contracting Officer (ACCO): The ACCO shall mean the person delegated authority by the Commissioner to organize and supervise the procurement activity of subordinate Agency staff in conjunction with the CCPO.

Competent Person: As defined by OSHA, an individual who is capable of identifying existing and predictable hazards in the surroundings or working conditions that are unsanitary, hazardous, or dangerous to employees or the general public, and who has authorization to take prompt corrective measures to eliminate them.

Construction Safety Auditor: A representative of the QACS Construction Safety Unit who provides inspection and assessment services to enhance health and safety on all DDC construction projects. The activities of the Construction Safety Auditor include performing site surveys, reviewing health and safety plans, reviewing construction permits, and rendering technical advice and assistance to DDC Resident Engineers and Project Managers.

City of New York Department of Design and Construction: Safety Requirements
Technical Support Division – Bureau of Quality Assurance and Construction Safety

Construction Safety Unit: A part of QACS within the Division of Technical Support that assesses contractor safety on DDC jobsites and advises responsible parties of needed corrective actions.

Construction Superintendent: A representative of the contractor responsible for overseeing performance of the required construction work. This individual must engage in sound construction practices, and is responsible to maintain a safe work site. In the case of a project involving the demolition, alteration or new construction of buildings, the Construction Superintendent must be licensed by the NYC Department of Buildings.

Contractor: For purposes of these Safety Requirements, the term “Contractor” shall mean any person or entity that enters into a contract for the performance of construction work on a DDC project. The term “Contractor” shall include any person or entity which enters into any of the following types of contracts: (1) a prime construction contract for a specific project, (2) a prime construction contract using the Job Order Contracting System (“JOCS Contract”), and (3) a subcontract with a CM/Builder (“First Tier Subcontract”).

Director - Quality Assurance and Construction Safety (QACS): Responsible for the operations of the QACS Construction Safety Unit and the DDC Site Safety management programs.

Job Hazard Assessment (JHA): A process of identifying site-specific hazards that may be present during construction and establishing the means and methods to reduce or eliminate those hazards.

Jobsite Safety Coordinator: A person designated by the Contractor to be onsite during all activities. This individual shall have received, at a minimum, the OSHA 10-hour construction safety program. Other examples of acceptable training are the 30-hour OSHA Safety and Health Standards for the Construction Industry training program (OSHA 510) or a degree/certificate in a safety and health from a college-level curriculum. This person does not necessarily have to be dedicated full-time to site safety, but must have sufficient experience and authority to undertake corrective action and must qualify to be a competent person. For certain projects, as defined in NYC Construction Codes – Title 28, this person may be required to have a Site Safety Manager’s License issued by the NYC DOB.

Qualified Person: As defined by OSHA, an individual who, by possession of a recognized degree, certificate, license or professional standing, or who by extensive knowledge, training, and experience, has successfully demonstrated his or her ability to solve problems relating to the subject matter, the work, or the project. Qualified Persons are required under regulation to address issues pertaining, but without limit, to fall protection, scaffold design and trenching and shoring, among others.

Resident Engineer (RE) / Construction Project Manager (CPM): Representative of the Commissioner duly designated by the Commissioner to be his/her representative at the site of the work. (The RE/CPM may be a third-party consultant, including a CM, retained by DDC.)

Safety Program: Established by the Contractor that covers all operations of that Contractor and establishes the Contractor’s overall safety policy, regulatory compliance plan and minimum safety standards. The Safety Program must be submitted prior to the commencement of work at the site and is subject to review and acceptance by the Construction Safety Unit.

Safety Questionnaire: Used by DDC to evaluate Contractor’s current and past safety performance. It is required to be completed by all Contractors initially when submitting bids for Construction work, or when being pre-qualified and updated annually or as requested by the DDC.

Site Safety Plan: A site-specific safety plan developed by the Contractor for a specific project. The Site Safety Plan must identify hazards associated with the project, and include specific safety precautions and training appropriate and necessary to complete the work. The Site Safety Plan must be submitted prior to the commencement of work at the site and is subject to review and acceptance by the Construction Safety Unit.

Unsafe or Unhealthy Condition: A condition that could be potentially hazardous to the health and safety of personnel or the public, and/or damaging to equipment, machinery, property or the environment.

Weekly Safety Meetings: Weekly documented jobsite safety meetings, given to all jobsite personnel by contractor, with the purpose of discussing general safety topics and job specific requirements encountered at the DDC work site.

IV. RESPONSIBILITIES

All persons who manage, perform, and provide support for construction projects shall conduct operations in compliance with the requirements identified in this Policy and all applicable governing regulatory agency requirements and guidelines pertaining to safety in construction.

A. Resident Engineer / Construction Project Manager / Construction Manager

- Monitors the issuance of safety- related permits, approvals and drawings and maintains copies on site.
- Monitors construction-related work activities to confirm that they are conducted in accordance with DDC policies and all applicable regulations that pertain to construction safety.
- Maintains documentation and periodically attends weekly safety meeting.
- Notifies the Construction Safety Unit and the ACCO's Insurance and Risk Management Unit of project- related accidents and emergencies, as per DDC's Construction Safety Emergency Protocol.
- Gathers facts related to all accidents and prepares DDC Accident Reports.
- Notifies the Construction Safety Unit of outside regulatory agency inspections and forwards a copy of the inspection report within three days of its receipt.
- Monitors the conditions at the site for conformance with the Site Safety Plan and DDC construction documents.
- Notifies the contractor and DDC in the event that any condition or activity exists that is not in compliance with the Site Safety Plan, applicable federal, state or local codes or any condition that presents a potential risk of injury to the public or workers or possible damage to property.
- Notifies DDC of any emergency condition and directs the contractor to provide such labor, materials, equipment and supervision to abate such conditions.
- Reports gross safety violations to the Construction Safety Unit immediately.

B. Contractors

- Complete a Safety Questionnaire and submit with its bid or as part of a pre-qualification package.
- Provide a Written Job Hazard Assessment (JHA) that identifies expected safety issues of the work to be performed. JHA shall be included with the Site Safety Plan submitted by the contractor.
- Submit a Site Safety Plan and Safety Program within 15 days of issuance of the Notice to Proceed, or as otherwise directed. The Site Safety Plan and Safety Program are subject to review and acceptance by the Construction Safety Unit prior to the commencement of work at the site. The Site Safety Plan shall be revised and updated as necessary.
- Ensure that all employees are aware of the hazards associated with the project through formal and informal training and/or other communications. Conduct and document weekly safety meetings for the duration of the project. Documentation to be provided to the RE/CPM/CM on a monthly basis.
- Name a Construction Superintendent, if required.
- Name a Job Site Safety Coordinator. The Contractor will be required to identify the Job Site Safety Coordinator in the Site Safety Plan.
- Comply with all mandated federal, state and local safety and health rules and regulations.
- Comply with all provisions of the Site Safety Plan.
- As part of the Site Safety Plan, prepare a site specific MPT (if not otherwise provided in the contract documents) and comply with all of its provisions.

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- Conduct and document site-specific safety orientation for Contractor personnel to review the hazards associated with the project as identified in the Site Safety Plan and the specific safety procedures and controls that will be used to protect workers, the general public and property. The Job Site Safety Coordinator will conduct this training prior to mobilization and provide documentation to the RE/CPM/CM.
- Provide, replace and adequately maintain at or around the project site, suitable and sufficient signage, lights, barricades and enclosures (fences, sidewalk sheds, netting, bracing, etc.).
- Report unsafe conditions or hazards to the DDC RE/CPM/CM as soon as practical, but no more than 24 hours after discovery, and take action to remove or abate such conditions.
- Report any accident involving injuries to workers or the general public, as well as property damage, to the DDC RE/CPM/CM within two (2) hours.
- Notify the DDC RE/CPM/CM within two (2) hours of the start of an inspection by any regulatory agency personnel, including OSHA.
- Maintain all records pertaining to all required compliance documents and accident and injury reports.
- Respond to DDC recommendations on safety, which shall in no way relieve the Contractor of its responsibilities for safety on the project. The Contractor has sole responsibility for safety.

V. SAFETY QUESTIONNAIRE

DDC requires that all Contractors provide information regarding their current and past safety and environmental performance and programs. This will be accomplished by the use of the DDC Safety Questionnaire. As a part of the bid submittal package, the contractor must submit a completed DDC Safety Questionnaire listing their workers' compensation experience modification rating and OSHA Incidence Rates for the three (3) years prior to the date of the bid opening. DDC may request a Contractor to update its Questionnaire at any time or to provide more detailed information. The Contractor must provide the requested update within 30 days.

The following criteria will be used by DDC in reviewing the Contractor's responsibility, which will be based on the information provided on the questionnaire:

- Criteria 1: OSHA Injury and Illness Rates (I&IR) are no greater than the average for the industry (based on the most current Bureau of Labor Statistics data for the Contractors SIC code); and
- Criteria 2: Insurance workers compensation Experience Modification Rate (EMR) equal to or less than 1.0; and
- Criteria 3: Any willful violations issued by OSHA or NYC DOB within the last three years; and
- Criteria 4: A fatality (worker or member of public) experienced on or near Contractor's worksite within the last three (3) years; and
- Criteria 5: An unacceptable rating by QACS based on past performance on DDC projects; and
- Criteria 6: Contractor has in place an acceptable corporate safety program and its employees shall have completed all documented relative safety training; and
- Criteria 7: Contractor shall provide OSHA Injury Records (currently OSHA 300 Log) for the last three (3) years.

If the Contractor fails to meet the basic criteria listed above, the Construction Safety Unit may request, through the ACCO, more detail concerning the Contractor's safety experience. DDC may request the Contractor to provide copies of, among other things, OSHA records, OSHA and DOB citations, EPA citations and written Safety Programs.

VI. SAFETY PROGRAM AND SITE SAFETY PLAN

Within fifteen (15) days of issuance of the Notice to Proceed, or as otherwise directed, the Contractor shall submit the following: (1) Safety Program, and (2) Site Safety Plan. The Safety Program shall set forth the Contractor's overall safety policy, regulatory compliance plan and minimum safety standard, and the Site Safety Plan shall identify hazards associated with the project, and include specific safety precautions and training appropriate and necessary to complete the work. The Safety Program and the Site Safety Plan are subject to review and acceptance by the Construction Safety Unit prior to the commencement of work at the site. Failure by the contractor to submit an acceptable Site Safety Plan and Safety Program shall be grounds for default.

The Site Safety Plan shall apply to all Contractor and subcontractor operations, and shall have at a minimum, the following elements. Each element shall be described in a separate section in the written document. It may be necessary to modify the basic format for certain unique or high-risk projects (such as tunnels or high-rise construction). The basic elements are as follows:

1. **Responsibility and Organization:** Identify the person or persons with authority and responsibility for implementing the Site Safety Plan. Provide an organization chart and define levels of authority and responsibility. Identify the Competent Person, the Construction Superintendent (if required), the Job Safety Coordinator and the Qualified Person required for this project.
2. **Communication:** Establish a system for communicating with employees and subcontractors on matters relating to worker and public safety and health and environmental protection, including provisions designed to encourage employees to inform the employer of hazards at the worksite without fear of reprisal. An emergency response notification protocol is to be established that also includes after hours contact numbers. The plan must also include provisions for weekly safety meetings held by the Job Site Safety Coordinator.
3. **Job Hazard Assessment:** A written document submitted by the contractor, used to identify expected job hazards and public safety risks and state the specific means and methods to reduce, control or eliminate those hazards. This part of the Site Safety Plan must also include how on-going evaluations of those risks and hazards will be carried out, including plans for periodic inspections to identify unsafe conditions, work practices and public safety hazards.
4. **Accident/Exposure Investigation:** Establish a procedure to investigate and report occupational and public injury or illness, property damage, vehicle accidents or other mishaps.
5. **Hazard Correction:** Establish means, methods and/or procedures for correcting unsafe or unhealthy conditions that might be exposing both the public and workers to hazards. Corrective actions must be taken immediately when observed or discovered. Should an imminent hazard exist which cannot be immediately abated without endangering employees, the public and/or property, remove or restrict all exposed persons from the area except those necessary to correct the existing condition. Employees necessary to correct the hazardous condition shall be provided the necessary safeguards. When corrective actions cannot be taken immediately, temporary measures should be taken until such time permanent measures are taken to eliminate the potential risks or hazards.
6. **Training:** Describe site-specific hazard training programs. In addition to the required safety orientation, additional site specific training, in the form of required weekly safety meetings, will be required. Contractors must also initiate training when: a) new employees are hired; b) employees are given new job assignments for which training has not been previously received; c) new substances, processes, procedures or equipment are introduced that might represent a new public or worker hazard; d) the employee is made aware of a new or previously unrecognized hazard; e) new supervisors are assigned to familiarize themselves with the safety and health hazards to which employees under their immediate direction and control may be exposed; and f) after a jobsite incident or accident has occurred.

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7. Recordkeeping: Establish procedures to maintain records of scheduled and periodic inspections, weekly safety meetings, and training records. Updated records shall be maintained at the jobsite, accessible to the Construction Safety Auditors and/or Quality Assurance Auditors/RE/CPM, and retained in accordance with DDC policy.

The most critical component of the Site Safety Plan is the Job Hazard Assessment section. This section must address specific hazards that are anticipated throughout the project. Each Site Safety Plan must address, at a minimum:

- Public and pedestrian safety
- Fall protection
- Electrical hazards
- Scaffolding
- Fire protection
- Emergency notification & response
- Housekeeping / debris removal
- Dust control
- Maintenance and protection of traffic
- Trenching and excavating
- Heavy equipment operations
- Material / equipment storage
- Environmental contamination
- Sheeting and shoring
- Alcohol and Drug Abuse Policy

The following additional hazards must be addressed, if applicable, based on the contract safety specifications and/or the results of the JHA (the list is not all-inclusive):

- Basic Personal Protective Equipment
- Compressed Air
- Compressed Gas Cylinders
- Cranes, Derricks and Hoists
- Demolition
- Electrical safety
- Excavations and Trenching
- Fall Protection – Floor openings/Stairways
- Fall Protection – Guardrails Toe boards etc
- Fall Protection – Leading Edge
- Fall Protection – Personal Fall Protection Devices
- Fire Protection and Fire Prevention
- Hazard Communication (RIGHT TO KNOW)
- Hazardous Energy & Lock Out / Tag Out
- Housekeeping/ Sanitation
- Maintenance and Protection of Traffic (MPT)
- Man Lifts /Aerial Lifts
- Marine Operations
- Motor Vehicle Safety
- Overhead Power lines
- Permit Required Confined Space
- Portable Ladders
- Powered Actuated Tools
- Powered Material Handling Equipment
- Scaffolds – Mobile
- Scaffolds – Stationary
- Scaffolds – Suspended
- Slings
- Steel Erection

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- Welding and Cutting (Hot Work)
- Airborne Contaminants – Particulates – General
- Asbestos
- Blood borne Pathogens
- Hearing Protection
- Lead in Construction
- Mercury in Construction
- PCB's
- Respiratory Protection
- Silica
- Thermal Stress
- West Nile Virus
- Rodents and Vermin
- Noise Mitigation Plan

Certain DDC programs, such as Job Order Contracting System (JOCS), may not necessarily require Site Safety Plans. The JOCS contractor will be required to submit a Safety Program. In addition, certain DDC Operating Units may establish program or client-specific safety requirements. The contractor's Site Safety Plan must address such program or client specific safety requirements.

VII. KICK-OFF MEETINGS/PRE-CONSTRUCTION AND SAFETY REVIEW

As part of the construction kick-off meeting, a Site Safety Plan review will be part of the agenda. A QACS representative will participate in this meeting with the contractor prior to the start of the project for the purpose of:

- A. Reviewing the safety issues detailed in the contract.
- B. Reviewing the Site Safety Plan.
- C. Reviewing any new issues or information that was not previously addressed.
- D. Discussing planned inspections and audits of the site by DDC personnel.

VIII. EVALUATION DURING WORK IN PROGRESS

The Contractor's adherence to these Safety Requirements will be monitored throughout the project. This will be accomplished by the following:

- A. Use of a safety checklist by a representative of the Construction Safety Unit or other designated DDC representative or Consultant during regular, unannounced inspections of the job site. Field Exit Conferences will be held with the RE/CPM, Contractor Superintendents or Safety Representatives.
- B. The RE/CPM will continually monitor the safety and environmental performance of the contractor's employees and work methods. Deficiencies shall be brought to the attention of the contractor's representative on site for immediate correction. The DDC representative will maintain a written record of these deficiencies and forward them to the Construction Safety Unit on a weekly basis. Any critical deficiencies shall be immediately reported to QACS phone# (718) 391-1624 or (718) 391-1911.
- C. If the Contractor's safety performance during the project is not up to DDC standards (safety performance measure, accident/incident rate, etc.) the Director- QACS, or designee will meet with the Contractor's safety representative, the DDC project manager, the RE/CPM, or the DDC Environmental Specialist (if environmental issues are involved). The purpose of this meeting is to 1) determine the level of non-compliance; 2) explain and clarify the safety/environmental provisions; 3) agree on a future course of action to correct the deficiencies.

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- D. If the deficiencies continue to occur with inadequate attention by the contractor, this shall, among other remedies available, be grounds for default.
- E. The contractor shall inform the Construction Safety Unit and ACCO Insurance and Risk Management Unit of all medical injuries or illnesses that require doctors' treatment resulting from an on-the-job incident within 24 hours of the occurrence. The Construction Safety Unit shall also be immediately informed of all fatalities, catastrophic accidents with more than one employee hospitalized, any injuries to members of the general public and major equipment damage (e.g., property damage, equipment rollovers, loads dropped from crane). QACS shall maintain a record of all contractor injuries and illnesses during the project and provide regular reports to the Agency.
- F. The Construction Safety Unit shall be immediately notified at the start of any NYS-DOL/ NYC-COSH/ OSHA/ EPA inspections. The Director of Quality Assurance & Construction Safety shall maintain a log of all contractor OSHA/EPA inspections and citations during the project.

IX. SAFETY PERFORMANCE EVALUATION

The contractor's safety record, including all DDC inspection results, will be considered as part of the Contractor's performance evaluation at the conclusion of the project. Poor safety performance during the course of the project shall be a reason to rate a Contractor unsatisfactory which will be reflected in the City's Vendex system and will be considered for future procurement actions as set forth in the City's Procurement Policy Board Rules.

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CITY OF NEW YORK
STANDARD CONSTRUCTION CONTRACT

SEPTEMBER 2008

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WITNESSETH:

The parties in consideration of the mutual agreements contained herein, agree as follows:

**CHAPTER I
THE CONTRACT AND DEFINITIONS**

ARTICLE 1. THE CONTRACT

1.1 Except for titles, subtitles, headings, running headlines, tables of content and indices (all of which are printed herein merely for convenience), the following, except for such portions thereof as may be specifically excluded, shall be deemed to be part of this Contract:

1.1.1 All provisions required by law to be inserted in this Contract, whether actually inserted or not;

1.1.2 The Contract Drawings and Specifications;

1.1.3 The General Conditions and Special Conditions, if any;

1.1.4 The Contract;

1.1.5 The Information for Bidders; Request for Proposals; Notice of Solicitation and Proposal For Bids; Bid or Proposal, and, if used, the Bid Booklet;

1.1.6 The Budget Director's Certificate; all Addenda issued prior to the receipt of the bids; the Notice of Award; Performance and Payment Bonds, if required; and the Notice to Proceed with the Work.

1.2 Should any conflict occur in or between the Drawings and Specifications, the Contractor shall be deemed to have estimated the most expensive way of doing the Work, unless the Contractor shall have asked for and obtained a decision in writing from the Commissioner, of the Agency that is entering into this Contract, before the submission of its bid as to what shall govern.

ARTICLE 2. DEFINITIONS

2.1 The following words and expressions, or pronouns used in their stead, shall, wherever they appear in this Contract, be construed as follows, unless a different meaning is clear from the context:

2.1.1 "**Addendum**" or "**Addenda**" shall mean the additional Contract provisions issued in writing by the Commissioner prior to the receipt of bids.

2.1.2 "**Agency**" shall mean a city, county, borough or other office, position, department, division, bureau, board or commission, or a corporation, institution or agency of government, the expenses of which are paid in whole or in part from the City treasury.

2.1.3 "**Agency Chief Contracting Officer**" (**ACCO**) shall mean a person delegated authority by the Commissioner to organize and supervise the procurement activity of subordinate Agency staff in conjunction with the CCPO.

2.1.4 "**City**" shall mean the City of New York.

2.1.5 "**City Chief Procurement Officer**" (CCPO) shall mean a person delegated authority by the Mayor to coordinate and oversee the procurement activity of Mayoral agency staff, including the ACCO and any offices which have oversight responsibility for the procurement of construction.

2.1.6 "**Commissioner**" shall mean the head of the Agency that has entered into this Contract, or his/her duly authorized representative.

2.1.7 "**Comptroller**" shall mean the Comptroller of the City of New York.

2.1.8 "**Contract**" or "**Contract Documents**" shall mean each of the various parts of the contract referred to in Article 1 hereof, both as a whole and severally.

2.1.9 "**Contract Drawings**" shall mean only those drawings specifically entitled as such and listed in the Specifications or in any Addendum, or any drawings furnished by the Commissioner, pertaining or supplemental thereto.

2.1.10 "**Contract Work**" shall mean everything required to be furnished and done by the Contractor by any one or more of the parts of the Contract referred to in Article 1, except Extra Work as hereinafter defined:

2.1.11 "**Contractor**" shall mean the entity which executed this Contract, whether a corporation, firm, partnership, joint venture, individual, or any combination thereof, and it(s), their, his/ her successors, personal representatives, executors, administrators and assigns, and any person, firm, partnership, joint venture, individual, or corporation which shall at any time be substituted in the place of the Contractor under this Contract.

2.1.12 "**Days**" shall mean calendar days, except where otherwise specified.

2.1.13 "**Engineer**" or "**Architect**" or "**Project Manager**" shall mean the person so designated in writing by the Commissioner to act as such in relation to this Contract, including a private Architect or Engineer or Project Manager, as the case may be.

2.1.14 "**Engineering Audit Officer**" (EAO) shall mean the person so designated by the Commissioner to perform responsible auditing functions hereunder.

2.1.15 "**Extra Work**" shall mean Work other than that required by the Contract at the time of award which is authorized by the Commissioner pursuant to Chapter VI of this Contract.

2.1.16 "**Federal-Aid Contract**" shall mean a contract in which the United States (federal) Government provides financial funding as so designated in the Information for Bidders.

2.1.17 "**Final Acceptance**" shall mean final written acceptance of all the Work by the Commissioner, a copy of which shall be sent to the Contractor.

2.1.18 "**Final Approved Punch List**" shall mean a list, approved in writing by the Engineer, specifying those items of Work to be completed by the Contractor after Substantial Completion and dates for the completion of each item of Work.

2.1.19 "**Law**" or "**Laws**" shall mean the Constitution of the State of New York, the New York City Charter, the New York City Administrative Code, a Statute of the United States or

of the State of New York, a local law of the City of New York, any ordinance, rule or regulation having the force of law, or common law.

2.1.20 "**Materialman**" shall mean any corporation, firm, partnership, joint venture, or individual, other than employees of the Contractor, who or which contracts with the Contractor or any Subcontractor, to fabricate or deliver, or who actually fabricates or delivers, plant, materials or equipment to be incorporated in the Work.

2.1.21 "**Means and Methods of Construction**" shall mean the labor, materials, temporary structures, tools, plant, and construction equipment, and the manner and time of their use, necessary to accomplish the result intended by this Contract.

2.1.22 "**Other Contractor(s)**" shall mean any Contractor (other than the entity which executed this Contract or its Subcontractors) who has a contract with the City for work on or adjacent to the building or site of the Work.

2.1.23 "**Payroll Taxes**" shall mean State Unemployment Insurance ("SUI"), Federal Unemployment Insurance (FUI) and payments pursuant to the Federal Insurance Contributions Act ("FICA").

2.1.24 "**Project**" shall mean the public improvement to which this Contract relates.

2.1.25 "**Procurement Policy Board**" (PPB) shall mean the Agency of the City of New York whose function is to establish comprehensive and consistent procurement policies and rules which shall have broad application throughout the City.

2.1.26 "**Required Quantity**" in a unit price Contract shall mean the actual quantity of any item of Work or materials which is required to be performed or furnished in order to comply with the Contract.

2.1.27 "**Resident Engineer**" shall mean the representative of the Commissioner duly designated by the Commissioner to be his/her representative at the site of the Work.

2.1.28 "**Site**" shall mean the area upon or in which the Contractor's operations are carried on, and such other areas adjacent thereto as may be designated as such by the Engineer.

2.1.29 "**Specifications**" shall mean all of the directions, requirements and standards of performance applying to the Work as hereinafter detailed and designated under the Specifications.

2.1.30 "**Subcontractor**" shall mean any person, firm or corporation, other than employees of the Contractor, who or which contracts with the Contractor or with its Subcontractors to furnish, or actually furnishes labor, or labor and materials, or labor and equipment, at the site. Wherever the word Subcontractor appears, it shall also mean Sub-Subcontractor.

2.1.31 "**Substantial Completion**" shall mean the written determination by the Commissioner that the Work required under this Contract is substantially, but not entirely, complete.

2.1.32 "**Treasurer**" shall mean the Commissioner of the Department of Finance of the City of New York.

2.1.33 "**Work**" shall mean all services required to complete the Project in accordance with the Contract Documents, including without limitation, labor, material, superintendence, management, administration, equipment, and incidentals, and shall include both Contract Work and Extra Work.

CHAPTER II THE WORK AND ITS PERFORMANCE

ARTICLE 3. CHARACTER OF THE WORK

3.1 Unless otherwise expressly provided in the **Contract Drawings, Specifications and Addenda**, the **Work** shall be performed in accordance with the best modern practice, utilizing, unless otherwise specified in writing, new and unused materials of standard first grade quality and workmanship and design of the highest quality, to the satisfaction of the **Commissioner**.

ARTICLE 4. MEANS AND METHODS OF CONSTRUCTION

4.1 Unless otherwise expressly provided in the **Contract Drawings, Specifications and Addenda**, the **Means and Methods of Construction** shall be such as the **Contractor** may choose; subject, however, to the **Engineer's** right to reject the **Means and Methods of Construction** proposed by the **Contractor** which in the opinion of the **Engineer**:

4.1.1 Will constitute or create a hazard to the **Work**, or to persons or property; or

4.1.2 Will not produce finished **Work** in accordance with the terms of the **Contract**; or

4.1.3 Will be detrimental to the overall progress of the **Project**.

4.2 The **Engineer's** approval of the **Contractor's Means and Methods of Construction**, or his/her failure to exercise his/her right to reject such means or methods, shall not relieve the **Contractor** of its obligation to complete the **Work** as provided in this **Contract**; nor shall the exercise of such right to reject create a cause of action for damages.

ARTICLE 5. COMPLIANCE WITH LAWS

5.1 The **Contractor** shall comply with all **Laws** applicable to this **Contract** and to the **Work** to be done hereunder.

5.2 Procurement Policy Board Rules: This **Contract** is subject to the Rules of the **PPB** ("**PPB Rules**") in effect at the time of the bid opening for this **Contract**. In the event of a conflict between the **PPB Rules** and a provision of this **Contract**, the **PPB Rules** shall take precedence.

5.3 Noise control code provisions.

5.3.1 In accordance with the provisions of Section 24-216(b) of the Administrative Code of the **City** ("**Administrative Code**"), Noise Abatement Contract Compliance, devices and activities which will be operated, conducted, constructed or manufactured pursuant to this **Contract** and which are subject to the provisions of the **City Noise Control Code** shall be operated, conducted, constructed, or manufactured without causing a violation of the **Administrative Code**. Such devices and activities shall incorporate advances in the art of noise control development for the kind and level of noise

emitted or produced by such devices and activities, in accordance with regulations issued by the **Commissioner** of the Department of Environmental Protection.

5.3.2 The Contractor agrees to comply with Section 24-219 of the Administrative Code of the City ("Administrative Code") and implementing rules codified at 15 Rules of the City of New York ("RCNY") Section 28-100 et. seq. In accordance with such provisions, the **Contractor**, if the Contractor is the responsible party under such regulations, shall prepare and post a Construction Noise Mitigation Plan at each work site, in which the **Contractor** shall certify that all construction tools and equipment have been maintained so that they operate at normal manufacturers operating specifications. If the **Contractor** cannot make this certification, it must have in place an Alternative Noise Mitigation Plan approved by the New York City Department of Environmental Protection. In addition, the Contractor's certified Construction Noise Mitigation Plan is subject inspection by the Department of Environmental Protection in accordance with 15 RCNY §28-101. No Contract work may take place at a worksite unless there is a Construction Noise Mitigation Plan or approved Alternative Noise Mitigation Plan in place. In addition, the **Contractor** shall create and implement a noise mitigation training program. Failure to comply with these requirements may result in fines and other penalties pursuant to the applicable provisions of the Administrative Code and RCNY.

5.4 Ultra Low Sulfur Diesel Fuel: In accordance with the provisions of Section 24-163.3 of the Administrative Code, the Contractor specifically agrees as follows:

5.4.1 Definitions. For purposes of this Article 5.4, the following definitions apply:

5.4.1(a) "Contractor" means any person or entity that enters into a Public Works Contract with a City agency, or any person or entity that enters into an agreement with such person or entity, to perform work or provide labor or services related to such Public Works Contract

5.4.1(b) "Motor Vehicle" means any self-propelled vehicle designed for transporting persons or property on a street or highway.

5.4.1(c) "Nonroad Engine" means an internal combustion engine (including the fuel system) that is not used in a Motor Vehicle or a vehicle used solely for competition, or that is not subject to standards promulgated under section 7411 or section 7521 of title 42 of the United States Code, except that this term shall apply to internal combustion engines used to power generators, compressors or similar equipment used in any construction program or project.

5.4.1(d) "Nonroad Vehicle" means a vehicle that is powered by a Nonroad Engine, fifty horsepower and greater, and that is not a Motor Vehicle or a vehicle used solely for competition, which shall include, but not be limited to, excavators, backhoes, cranes, compressors, generators, bulldozers and similar equipment, except that this term shall not apply to horticultural maintenance vehicles used for landscaping purposes that are powered by a Nonroad Engine of sixty-five horsepower or less and that are not used in any construction program or project.

5.4.1(e) "Public Works Contract" means a contract with a City agency for a construction program or project involving the construction, demolition, restoration, rehabilitation, repair, renovation, or abatement of any building, structure, tunnel, excavation, roadway, park or bridge; a contract with a City agency for the preparation for any construction program or project involving the construction, demolition, restoration, rehabilitation, repair, renovation, or abatement of any building, structure, tunnel, excavation, roadway, park or bridge; or a contract with a City agency for any final work involved in the completion of any construction program or project involving the construction, demolition, restoration, rehabilitation, repair, renovation, or abatement of any building, structure, tunnel, excavation, roadway, park or bridge.

5.4.1(f) "Ultra Low Sulfur Diesel Fuel" means diesel fuel that has a sulfur content of no more than fifteen parts per million.

5.4.2 Ultra Low Sulfur Diesel Fuel

5.4.2(a) All Contractors shall use Ultra Low Sulfur Diesel Fuel in diesel-powered Nonroad Vehicles in the performance of this **Contract**.

5.4.2(b) Notwithstanding the requirements of Article 5.4.2(a), Contractors may use diesel fuel that has a sulfur content of no more than thirty parts per million to fulfill the requirements of this Article 5.4.2, where the Commissioner of the New York City Department of Environmental Protection ("DEP Commissioner") has issued a determination that a sufficient quantity of Ultra Low Sulfur Diesel Fuel is not available to meet the needs of City agencies and Contractors. Any such determination shall expire after six months unless renewed.

5.4.2(c) Contractors shall not be required to comply with this Article 5.4.2 where the agency letting this contract makes a written finding, which is approved, in writing, by the DEP Commissioner, that a sufficient quantity of Ultra Low Sulfur Diesel Fuel, or diesel fuel that has a sulfur content of no more than thirty parts per million is not available to meet the requirements of Section 24-163.3 of the Administrative Code, provided that such Contractor in its fulfillment of the requirements of this **Contract**, to the extent practicable, shall use whatever quantity of Ultra Low Sulfur Diesel Fuel or diesel fuel that has a sulfur content of no more than thirty parts per million is available. Any finding made pursuant to this subdivision shall expire after sixty days, at which time the requirements of this Article 5.4.2 shall be in full force and effect unless the Agency renews the finding in writing and such renewal is approved by the DEP Commissioner.

5.4.2(d) Contractors may check on determinations and approvals issued by the DEP Commissioner pursuant to Section 24-163.3 of the Administrative Code, if any, at www.dep.nyc.gov or by contacting the Agency issuing this solicitation.

5.4.2(e) The requirements of this Article 5.4.2 do not apply where they are precluded by federal or State funding requirements or where the **Contract** is an emergency procurement.

5.4.3 Best Available Technology

5.4.3(a) All Contractors shall utilize the best available technology for reducing the emission of pollutants for diesel-powered Nonroad Vehicles in the performance of this **Contract**. For determinations of best available technology for each type of diesel-powered Nonroad Vehicle, Contractors shall comply with the regulations of the City Department of Environmental Protection, as and when adopted, Chapter 14 of Title 15 of the Rules of the City of New York (RCNY). The Contractor shall fully document all steps in the best available technology selection process and shall furnish such documentation to the Agency or the DEP Commissioner upon request. The Contractor shall retain all documentation generated in the best available technology selection process for as long as the selected best available technology is in use.

5.4.3(b) No Contractor shall be required to replace best available technology for reducing the emission of pollutants or other authorized technology utilized for a diesel-powered Nonroad Vehicle in accordance with the provisions of this Article 5.4.3 within three years of having first utilized such technology for such vehicle.

5.4.3(c) This Article 5.4.3 shall not apply to any vehicle used to satisfy the requirements of a specific Public Works Contract for fewer than twenty calendar days.

5.4.3(d) The Contractor shall not be required to comply with this Article 5.4.3 with respect to a diesel-powered Nonroad Vehicle under the following circumstances:

5.4.3(d)(1) Where the agency makes a written finding, which is approved, in writing, by the DEP Commissioner, that the best available technology for reducing the emission of pollutants as required by those paragraphs is unavailable for such vehicle, Contractor shall use whatever technology for reducing the emission of pollutants, if any, is available and appropriate for such vehicle.

5.4.3(d)(2) Where the DEP Commissioner has issued a written waiver based upon the Contractor having demonstrated to the DEP Commissioner that the use of the best available technology for reducing the emission of pollutants might endanger the operator of such vehicle or those working near such vehicle, due to engine malfunction, Contractor shall use whatever technology for reducing the emission of pollutants, if any, is available and appropriate for such vehicle, which would not endanger the operator of such vehicle or those working near such vehicle.

5.4.3(d)(3) In determining which technology to use for the purposes of Articles 5.4.3(d)(1) and 5.4.3(d)(2) above, Contractor shall primarily consider the reduction in emissions of particulate matter and secondarily consider the reduction in emissions of nitrogen oxides associated with the use of such technology, which shall in no event result in an increase in the emissions of either such pollutant.

5.4.3(d)(4) Contractors shall submit requests for a finding or a waiver pursuant to this Article 5.4.3(d) in writing to the DEP Commissioner, with a copy to the ACCO of the Agency issuing the solicitation. Any finding or waiver made or issued pursuant to Articles 5.4.3(d)(1) and 5.4.3(d)(2) above shall expire after one hundred eighty days, at which time the requirements of Article 5.4.3(a) shall be in full force and effect unless the Agency renews the finding, in writing, and the DEP Commissioner approves such finding, in writing, or the DEP Commissioner renews the waiver, in writing.

5.4.3(e) The requirements of this Article 5.4.3 do not apply where they are precluded by federal or State funding requirements or where the contract is an emergency procurement.

5.4.4 Section 24-163 of the Administrative Code. Contractors shall comply with Section 24-163 of the Administrative Code related to the idling of the engines of motor vehicles while parking.

5.4.5 Compliance

5.4.5(a) Contractor's compliance with Article 5.4 may be independently monitored. If it is determined that the Contractor has failed to comply with any provision of Article 5.4, any costs associated with any independent monitoring incurred by the City shall be reimbursed by the Contractor.

5.4.5(b) Any Contractor who violates any provision of Article 5.4, except as provided in Article 5.4.5(c) below, shall be liable for a civil penalty between the amounts of one thousand and ten thousand dollars, in addition to twice the amount of money saved by such Contractor for failure to comply with Article 5.4.

5.4.5(c) No Contractor shall make a false claim with respect to the provisions of Article 5.4 to a City agency. Where a Contractor has been found to have done so, such Contractor shall be liable for a civil penalty of twenty thousand dollars, in addition to twice the amount of money saved by such Contractor in association with having made such false claim.

5.4.6 Reporting

5.4.6(a) For all Public Works Contracts covered by this Article 5.4, the Contractor shall report to the Department the following information:

5.4.6(1) The total number of diesel-powered Nonroad Vehicles used to fulfill the requirements of this Public Works Contract;

5.4.6(2) The number of such Nonroad Vehicles that were powered by Ultra Low Sulfur Diesel Fuel;

5.4.6(3) The number of such Nonroad Vehicles that utilized the best available technology for reducing the emission of pollutants, including a breakdown by vehicle model and the type of technology;

5.4.6(4) The number of such Nonroad Vehicles that utilized such other authorized technology in accordance with Article 5.4.3, including a breakdown by vehicle model and the type of technology used for each such vehicle;

5.4.6(5) The locations where such Nonroad Vehicles were used; and

5.4.6(6) Where a determination is in effect pursuant to Article 5.4.2(b) or 5.4.2(c), detailed information concerning the Contractor's efforts to obtain Ultra Low Sulfur Diesel Fuel or diesel fuel that has a sulfur content of no more than thirty parts per million.

5.4.6(b) The Contractor shall submit the information required by Article 5.4.6(a) at the completion of work under the Public Works Contract and on a yearly basis no later than August 1 throughout the term of the Public Works Contract. The yearly report shall cover work performed the preceding fiscal year (July 1 - June 30).

5.5 Ultra Low Sulfur Diesel Fuel. In accordance with the Coordinated Construction Act for Lower Manhattan, as amended:

5.5.1 Definitions. For purposes of this Article 5.5, the following definitions apply:

5.5.1(a) "Lower Manhattan" means the area to the south of and within the following lines: a line beginning at a point where the United States pierhead line in the Hudson river as it exists now or may be extended would intersect with the southerly line of West Houston street in the borough of Manhattan extended, thence easterly along the southerly side of West Houston street to the southerly side of Houston street, thence easterly along the southerly side of Houston street to the southerly side of East Houston street, thence northeasterly along the southerly side of East Houston street to the point where it would intersect with the United States pierhead line in the East river as it exists now or may be extended, including tax lots within or immediately adjacent thereto.

5.5.1(b) "Lower Manhattan Redevelopment Project" means any project in Lower Manhattan that is funded in whole or in part with federal or State funding, or any project intended to improve transportation between Lower Manhattan and the two air terminals in the City of New York known as LaGuardia Airport and John F. Kennedy International Airport, or between Lower Manhattan and the air terminal in Newark known as Newark Liberty International Airport, and that is funded in whole or in part with federal funding.

5.5.1(c) "Nonroad Engine" means an internal combustion engine (including the fuel system) that is not used in a Motor Vehicle or a vehicle used solely for competition, or that is not subject to standards promulgated under section 7411 or section 7521 of title 42 of the United States Code, except that this term shall apply to internal combustion engines used to power generators, compressors or similar equipment used in any construction program or project.

5.5.1(d) "Nonroad Vehicle" means a vehicle that is powered by a Nonroad Engine, fifty horsepower and greater, and that is not a Motor Vehicle or a vehicle used solely for competition, which shall include, but not be limited to, excavators, backhoes, cranes, compressors, generators, bulldozers and similar equipment, except that this terms shall not apply to horticultural maintenance vehicles used for landscaping purposes that are powered by a Nonroad Engine of sixty-five horsepower or less and that are not used in any construction program or project.

5.5.1(e) "Ultra Low Sulfur Diesel Fuel" means diesel fuel that has a sulfur content of no more than fifteen parts per million.

5.5.2 Requirements. **Contractors** and **Subcontractors** are required to use only Ultra Low Sulfur Diesel Fuel to power the diesel-powered Nonroad Vehicles with engine horsepower (HP) rating of 50 HP and above used on a Lower Manhattan Redevelopment Project and, where practicable, to reduce the emission of pollutants by retrofitting such Nonroad Vehicles with oxidation catalysts, particulate filters, or technology that achieves lowest particulate matter emissions.

5.6 Pesticides. In accordance with Section 17-1209 of the Administrative Code, to the extent that the **Contractor** or any **Subcontractor** applies pesticides to any property owned or leased by the **City**, the **Contractor** and any **Subcontractor** shall comply with chapter 12 of the Administrative Code.

ARTICLE 6. INSPECTION

6.1 During the progress of the **Work** and up to the date of **Final Acceptance**, the **Contractor** shall at all times afford the representatives of the **City** every reasonable, safe and proper facility for inspecting all **Work** done or being done at the **Site** and also for inspecting the manufacture or preparation of materials and equipment at the place of such manufacture or preparation.

6.2 The **Contractor's** obligation hereunder shall include the uncovering or taking down of finished **Work** and its restoration thereafter; provided, however, that the order to uncover, take down and restore shall be in writing, and further provided that if **Work** thus exposed proves satisfactory, and if the **Contractor** has complied with Article 6.1, such uncovering or taking down and restoration shall be considered an item of **Extra Work** to be paid for in accordance with the provisions of Article 26. If the **Work** thus exposed proves unsatisfactory, the **City** has no obligation to compensate the **Contractor** for the uncovering, taking down or restoration.

6.3 Inspection and approval by the **Commissioner**, the **Engineer**, **Project Manager**, or **Resident Engineer**, of finished **Work** or of **Work** being performed, or of materials and equipment at the place of manufacture or preparation, shall not relieve the **Contractor** of its obligation to perform the **Work** in strict accordance with the **Contract**. Finished or unfinished **Work** not found to be in strict accordance with the **Contract** shall be replaced as directed by the **Engineer**, even though such **Work** may have been previously approved and paid for. Such corrective work is **Contract Work** and shall not be deemed **Extra Work**.

6.4 Rejected **Work** and materials shall be promptly taken down and removed from the **Site**, which must at all times be kept in a reasonably clean and neat condition.

**ARTICLE 7. PROTECTION OF WORK AND OF PERSONS
AND PROPERTY; NOTICES AND INDEMNIFICATION**

7.1 During the performance of the **Work** and up to the date of **Final Acceptance**, the **Contractor** shall be under an absolute obligation to protect the finished and unfinished **Work** against any damage, loss, injury, theft and/or vandalism and in the event of such damage, loss, injury, theft and/or vandalism, it shall promptly replace and/or repair such **Work** at the **Contractor's** sole cost and expense, as directed by the **Resident Engineer**. The obligation to deliver finished **Work** in strict accordance with the **Contract** prior to **Final Acceptance** shall be absolute and shall not be affected by the **Resident Engineer's** approval of, or failure to prohibit, the **Means and Methods of Construction** used by the **Contractor**.

7.2 During the performance of the **Work** and up to the date of **Final Acceptance**, the **Contractor** shall take all reasonable precautions to protect the persons and property of the **City** and of others from damage, loss or injury resulting from the **Contractor's**, and/or its **Subcontractors'** operations under this **Contract**. The **Contractor's** obligation to protect shall include the duty to provide, place or replace and adequately maintain at or about the **Site** suitable and sufficient protection such as lights, barricades, and enclosures.

7.3 The **Contractor** shall comply with the notification requirements set forth below in the event of any loss, damage or injury to **Work**, persons or property, or any accidents arising out of the operations of the **Contractor** and/or its **Subcontractors** under this **Contract**.

7.3.1 The **Contractor** shall make a full and complete report in writing to the **Resident Engineer** within three (3) **Days** after the occurrence.

7.3.2 The **Contractor** shall notify in writing the commercial general liability insurance carrier, and, where applicable, the worker's compensation and/or other insurance carrier, of any such loss, damage, injury, or accident, and any claim or suit arising therefrom, immediately, but not later than 20 days after such event. The **Contractor's** notice to the commercial general liability insurance carrier must expressly specify that "this notice is being given on behalf of the City of New York as Additional Insured as well as [the Contractor] as Named Insured." The **Contractor's** notice to the insurance carrier shall contain the following information: the name of the **Contractor**, the number of the **Contract**, the date of the occurrence, the location (street address and borough) of the occurrence, and the identity of the persons or things injured, damaged or lost.

7.3.2(a) At the time notice is provided to the insurance carrier(s), the **Contractor** shall provide copies of such notice to the **Comptroller** and the **Commissioner**. Notice to the **Comptroller** shall be sent to the Insurance Unit, NYC Comptroller's Office, 1 Centre Street – Room 1222, New York, New York, 10007. Notice to the **Commissioner** shall be sent to the address set forth in Schedule A of the General Conditions.

7.3.2(b) If the **Contractor** fails to provide any of the foregoing notices to any appropriate insurance carrier(s) in a timely and complete manner, the **Contractor** shall indemnify the **City** for all losses, judgments, settlements and expenses, including reasonable attorneys' fees, arising from an insurer's disclaimer of coverage citing late notice by or on behalf of the **City**.

7.4 To the fullest extent permitted by law, the **Contractor** shall indemnify, defend and hold the **City**, its employees and agents (the "Indemnitees") harmless against any and all claims (including but not limited to claims asserted by any employee of the **Contractor** and/or its **Subcontractors**) and costs and expenses of whatever kind (including but not limited to payment or reimbursement of attorneys' fees and disbursements) allegedly arising out of or in any way related to the operations of the **Contractor** and/or its **Subcontractors** in the performance of this **Contract** or from the **Contractor's** and/or its **Subcontractors'** failure to comply with any of the provisions of this **Contract** or of the **Law**. Such costs and expenses shall include all those incurred in defending the underlying claim and those incurred in connection with the enforcement of this Article 7.4 by way of cross-claim, third-party

claim, declaratory action or otherwise. The parties expressly agree that the indemnification obligation hereunder contemplates (1) full indemnity in the event of liability imposed against the Indemnitees without negligence and solely by reason of statute, operation of law or otherwise; and (2) partial indemnity in the event of any actual negligence on the part of the Indemnitees either causing or contributing to the underlying claim (in which case, indemnification will be limited to any liability imposed over and above that percentage attributable to actual fault whether by statute, by operation of law, or otherwise). Where partial indemnity is provided hereunder, all costs and expenses shall be indemnified on a pro rata basis.

7.4.1 Indemnification under Article 7.4 or any other provision of the **Contract** shall operate whether or not **Contractor** or its **Subcontractors** have placed and maintained the insurance specified under Article 22.

7.5 The **Contractor** waives all rights against the **City** for any damages or losses for which either is covered under any insurance required under Article 22 (whether or not such insurance is actually procured) or any other insurance applicable to the operations of the **Contractor** and/or its **Subcontractors** in the performance of this **Contract**.

7.6 The provisions of this Article shall not be deemed to create any new right of action in favor of third parties against the **Contractor** or the **City**.

CHAPTER III TIME PROVISIONS

ARTICLE 8. COMMENCEMENT AND PROSECUTION OF THE WORK

8.1 The **Contractor** shall commence **Work** on the date specified in a written notice signed by the **Commissioner**. The time for performance of the **Work** under the **Contract** shall be computed from the date specified in such written notice. **TIME BEING OF THE ESSENCE** to the **City**, the **Contractor** shall thereafter prosecute the **Work** diligently, using such **Means and Methods of Construction** as are in accord with Article 4 herein and as will assure its completion not later than the date specified herein, or on the date to which the time for completion may be extended.

ARTICLE 9. PROGRESS SCHEDULES

9.1 To enable the **Work** to be performed in an orderly and expeditious manner, the **Contractor**, within fifteen (15) **Days** after the Notice to Proceed with this **Contract**, unless otherwise directed by the **Engineer**, shall submit to the **Engineer** a proposed progress schedule in the form of a bar graph or in such other form as specified by the **Engineer**, and monthly cash flow requirements, showing:

9.1.1 The anticipated time of commencement and completion of each of the various operations to be performed under this **Contract**; and

9.1.2 The sequence and interrelation of each of these operations with the others and with those of other related **Contracts**; and

9.1.3 The estimated time required for fabrication or delivery, or both, of all materials and equipment required for the **Work**; and

9.1.4 The estimated amount in dollars the **Contractor** will claim on a monthly basis.

9.2 The proposed schedule shall be revised as directed by the **Engineer**, until finally approved by the **Engineer**, and after such approval, subject to the provisions of Article 11, shall be strictly adhered to by the **Contractor**.

9.3 If the **Contractor** shall fail to adhere to the approved progress schedule, or to the schedule as revised pursuant to Article 11, it shall promptly adopt such other or additional **Means and Methods of Construction** as will make up for the time lost and will assure completion in accordance with the approved progress schedule. The approval by the City of a progress schedule which is shorter than the time allotted under the **Contract** shall not create any liability for the **City** if the approved progress schedule is not met.

9.4 The **Contractor** will not receive any payments until the proposed progress schedule is submitted.

ARTICLE 10. REQUESTS FOR INFORMATION OR APPROVAL

10.1 From time to time as the **Work** progresses and in the sequence indicated by the approved progress schedule, the **Contractor** shall submit to the **Engineer** a specific request in writing for each item of information or approval required by the **Contractor**. These requests shall state the latest date upon which the information or approval is actually required by the **Contractor**, and shall be submitted in a reasonable time in advance thereof to enable the **Engineer** a sufficient time to act upon such submissions, or any necessary re-submissions thereof.

10.2 The **Contractor** shall not have any right to an extension of time on account of delays due to the **Contractor's** failure to submit requests for the required information or the required approval in accordance with the above requirements.

ARTICLE 11. NOTICE OF CONDITIONS CAUSING DELAY AND DOCUMENTATION OF DAMAGES CAUSED BY DELAY

11.1 After the commencement of any condition which is causing or may cause a delay in completion of the **Work**, including conditions for which the **Contractor** may be entitled to an extension of time, the following notifications and submittals are required:

11.1.1 Within seven (7) **Days** after the commencement of such condition, the **Contractor** must notify the **Engineer** in writing of the existence, nature and effect of such condition upon the approved progress schedule and the **Work**, and must state why and in what respects, if any, the condition is causing or may cause a delay.

11.1.2 If the **Contractor** shall claim to be sustaining damages for delay, by reason of any act or omission of the **City** or its agents, it shall submit to the **Commissioner** within forty-five (45) **Days** from the time such damages are first incurred, and every thirty (30) **Days** thereafter for as long as such damages are incurred, verified statements of the details and the amounts of such damages, together with documentary evidence of such damages. The **Contractor** may submit any of the above statements within such additional time as may be granted by the **Commissioner** in writing upon written request therefor. Failure of the **Commissioner** to respond in writing to a written request for additional time within thirty (30) **Days** shall be deemed a denial of the request. On failure of the **Contractor** to fully comply with the foregoing provisions, such claims shall be deemed waived and no right to recover on such claims shall exist. Damages that the **Contractor** may claim in any action arising under or by reason of this **Contract** shall not be different from or in excess of the statements made and documentation provided pursuant to this article.

11.2 Failure of the **Contractor** to strictly comply with the requirements of Article 11.1.1 may, in the discretion of the **Commissioner**, be deemed sufficient cause to deny any extension of time on account of delay arising out of such condition. Failure of the **Contractor** to strictly comply with the requirements of Articles 11.1.1 and 11.1.2 shall be deemed a conclusive waiver by the **Contractor** of any and all claims for damages for delay arising from such condition and no right to recover on such claims shall exist.

11.3 When appropriate and directed by the **Engineer**, the progress schedule shall be revised by the **Contractor** until finally approved by the **Engineer**. The revised progress schedule must be strictly adhered to by the **Contractor**.

ARTICLE 12. COORDINATION WITH OTHER CONTRACTORS

12.1 During the progress of the **Work**, **Other Contractors** may be engaged in performing other work or may be awarded other contracts for additional work on this **Project**. In that event, the **Contractor** shall coordinate the **Work** to be done hereunder with the work of such **Other Contractors** and the **Contractor** shall fully cooperate with such **Other Contractors** and carefully fit its own **Work** to that provided under other contracts as may be directed by the **Engineer**. The **Contractor** shall not commit or permit any act which will interfere with the performance of work by any **Other Contractors**.

12.2 If the **Engineer** shall determine that the **Contractor** is failing to coordinate its **Work** with the work of **Other Contractors** as the **Engineer** has directed, then the **Commissioner** shall have the right to withhold any payments otherwise due hereunder until the **Contractor** completely complies with the **Engineer's** directions.

12.3 The **Contractor** shall notify the **Engineer** in writing if any **Other Contractor** on this **Project** is failing to coordinate its work with the **Work** of this **Contract**. If the **Engineer** finds such charges to be true, the **Engineer** shall promptly issue such directions to the **Other Contractor** with respect thereto as the situation may require. The **City** shall not, however, be liable for any damages suffered by any **Other Contractor's** failure to coordinate its work with the **Work** of this **Contract** or by reason of the **Other Contractor's** failure to promptly comply with the directions so issued by the **Engineer**, or by reason of any **Other Contractor's** default in performance, it being understood that the **City** does not guarantee the responsibility or continued efficiency of any contractor. The **Contractor** agrees to make no claim against the **City** for any damages relating to or arising out of any directions issued by the **Engineer** pursuant to this article (including but not limited to the failure of any **Other Contractor** to comply or promptly comply with such directions), or the failure of the **Engineer** to issue any directions, or the failure of any **Other Contractor** to coordinate its work, or the default in performance of any **Other Contractor**.

12.4 The **Contractor** shall indemnify and hold the **City** harmless from any and all claims or judgments for damages and from costs and expenses to which the **City** may be subjected or which it may suffer or incur by reason of the **Contractor's** failure to comply with the **Engineer's** directions promptly; and the **Comptroller** shall have the right to exercise the powers reserved in Article 23 with respect to any claims which may be made for damages due to this **Contractor's** failure to comply with the **Engineer's** direction promptly. Insofar as the facts and **Law** relating to any claim would preclude the **City** from being completely indemnified by the **Contractor**, the **City** shall be partially indemnified by the **Contractor** to the fullest extent provided by **Law**.

12.5 Should the **Contractor** sustain any damage through any act or omission of any **Other Contractor** having a contract with the **City** for the performance of work upon the **Site** or of work which may be necessary to be performed for the proper prosecution of the **Work** to be performed hereunder, or through any act or omission of a **Subcontractor** of such **Contractor**, the **Contractor** shall have no claim against the **City** for such damage, but shall have a right to recover such damage from the **Other Contractor** under the provision similar to the following provisions which apply to this **Contract** and have been or will be inserted in the contracts with such **Other Contractors**:

12.5.1 Should any **Other Contractor** having or who shall hereafter have a contract with the **City** for the performance of work upon the **Site** sustain any damage through any act or omission of the **Contractor** hereunder or through any act or omission of any **Subcontractor** of the **Contractor**, the **Contractor** agrees to reimburse such **Other Contractor** for all such damages and to defend at its own expense any suit based upon such claim and if any judgment or claims (even if the allegations of the suit are without merit) against the **City** shall be allowed the **Contractor** shall pay or satisfy such judgment or claim and pay all costs and expenses in connection therewith and agrees to indemnify and hold the **City** harmless from all such claims. Insofar as the facts and **Law** relating to any claim would preclude the **City** from being completely indemnified by the **Contractor**, the **City** shall be partially indemnified by the **Contractor** to the fullest extent provided by **Law**.

12.6 The **City's** right to indemnification hereunder shall in no way be diminished, waived or discharged, by its recourse to assessment of liquidated damages as provided in Article 15, or by the exercise of any other remedy provided for by **Contract** or by **Law**.

ARTICLE 13. EXTENSION OF TIME FOR PERFORMANCE

13.1 If performance by the **Contractor** is delayed for a reason set forth in Article 13.3, the **Contractor** may be allowed a reasonable extension of time in conformance with this article and the **PPB** Rules.

13.2 Any extension of time may be granted only by the **Commissioner** or by the Board for the Extension of Time (hereafter "Board") (as set forth below) upon written application by the **Contractor**.

13.3 Grounds for Extension: If such application is made, the **Contractor** shall be entitled to an extension of time for delay in completion of the **Work** caused solely:

13.3.1 By the acts or omissions of the **City**, its officers, agents or employees; or

13.3.2 By the act or omissions of **Other Contractors** on this **Project**; or

13.3.3 By supervening conditions entirely beyond the control of either party hereto (such as, but not limited to, acts of God or the public enemy, excessive inclement weather, war or other national emergency making performance temporarily impossible or illegal, or strikes or labor disputes not brought about by any act or omission of the **Contractor**).

13.3.4 The **Contractor** shall, however, be entitled to an extension of time for such causes only for the number of **Days** of delay which the **Commissioner** or the Board may determine to be due solely to such causes, and then only if the **Contractor** shall have strictly complied with all of the requirements of Articles 9 and 10.

13.4 The **Contractor** shall not be entitled to receive a separate extension of time for each of several causes of delay operating concurrently, but, if at all, only for the actual period of delay in completion of the **Work** as determined by the **Commissioner** or the Board, irrespective of the number of causes contributing to produce such delay. If one of several causes of delay operating concurrently results from any act, fault or omission of the **Contractor** or of its **Subcontractors** or **Materialmen**, and would of itself (irrespective of the concurrent causes) have delayed the **Work**, no extension of time will be allowed for the period of delay resulting from such act, fault or omission.

13.5 The determination made by the **Commissioner** or the Board on an application for an extension of time shall be binding and conclusive on the **Contractor**.

13.6 The granting of an application for an extension of time for causes of delay other than those herein referred to shall be entirely within the discretion of the **Commissioner** or the Board.

13.7 Permitting the **Contractor** to continue with the **Work** after the time fixed for its completion has expired, or after the time to which such completion may have been extended has expired, or the making of any payment to the **Contractor** after such time, shall in no way operate as a waiver on the part of the **City** of any of its rights under this **Contract**.

13.8 Application for Extension of Time:

13.8.1 Before the **Contractor's** time extension request will be considered, the **Contractor** shall notify the **Commissioner** of the condition which allegedly has caused or is causing the delay, and shall submit a written application to the **Commissioner** identifying:

13.8.1(a) The **Contractor**; the registration number; and **Project** description;

13.8.1(b) Liquidated damage assessment rate, as specified in the **Contract**;

13.8.1(c) Original bid amount;

13.8.1(d) The original **Contract** start date and completion date;

13.8.1(e) Any previous time extensions granted (number and duration); and

13.8.1(f) The extension of time requested.

13.8.2 In addition, the application for extension of time shall set forth in detail:

13.8.2(a) The nature of each alleged cause of delay in completing the **Work**;

13.8.2(b) The date upon which each such cause of delay began and ended and the number of **Days** attributable to each such cause;

13.8.2(c) A statement that the **Contractor** waives all claims except for those delineated in the application, and the particulars of any claims which the **Contractor** does not agree to waive. For time extensions for **Substantial Completion** and final completion payments, the application shall include a detailed statement of the dollar amounts of each element of claim item reserved; and

13.8.2(d) A statement indicating the **Contractor's** understanding that the time extension is granted only for purposes of permitting continuation of **Contract** performance and payment for **Work** performed and that the **City** retains its right to conduct an investigation and assess liquidated damages as appropriate in the future.

13.9 Analysis and Approval of Time Extensions:

13.9.1 For time extensions for partial payments, a written determination shall be made by the **Commissioner** who may, for good and sufficient cause, extend the time for the performance of the **Contract** as follows:

13.9.1(a) If the **Work** is to be completed within six (6) months, the time for performance may be extended for sixty (60) **Days**;

13.9.1(b) If the **Work** is to be completed within less than one (1) year but more than six (6) months, an extension of ninety (90) **Days** may be granted;

13.9.1(c) If the **Contract** period exceeds one (1) year, besides the extension granted in Article 13.9.1(b), an additional thirty (30) **Days** may be granted for each multiple of six (6) months involved beyond the one (1) year period; or

13.9.1(d) If exceptional circumstances exist, the **Commissioner** may extend the time for performance beyond the extensions in Articles 13.9.1(a), 13.9.1(b), and 13.9.1(c). In that event, the **Commissioner** shall file with the Mayor's Office of Contract Services a written explanation of the exceptional circumstances.

13.9.2 For extensions of time for **Substantial Completion** and final completion payments, the **Engineer**, in consultation with the **Commissioner**, shall prepare a written analysis of the delay (including a preliminary determination of the causes of delay, the beginning and end dates for each such cause of delay, and whether the delays are excusable under the terms of this **Contract**). The report shall be subject to review by and approval of the Board, which shall have authority to question its analysis and determinations and request additional facts or documentation. The report as reviewed and made final by the Board shall be made a part of the **Agency Contract** file. Neither the report itself nor anything contained therein shall operate as a waiver or release of any claim the **City** may have against the **Contractor** for either actual or liquidated damages.

13.9.3 Approval Mechanism for Time Extensions for **Substantial Completion** or Final Completion Payments: An extension shall be granted only with the approval of the Board which is comprised of the **ACCO** of the **Agency**, the Corporation Counsel and the **Comptroller**, or their authorized representatives.

13.9.4 Neither the granting of any application for an extension of time to the **Contractor** or any other **Contractor** on this **Project** nor the papers, records or reports related to any application for or grant of an extension of time or determination related thereto shall be referred to or offered in evidence by the **Contractor** or its attorneys in any action or proceeding.

13.10 No Damage for Delay: The **Contractor** agrees to make no claim for damages for delay in the performance of this **Contract** occasioned by any act or omission to act of the **City** or any of its representatives, and agrees that all it may be entitled to on account of any such delay is an extension of time to complete performance of the **Work** as provided herein.

ARTICLE 14. COMPLETION AND FINAL ACCEPTANCE OF THE WORK

14.1 Date for **Substantial Completion**: The **Contractor** shall substantially complete the **Work** within the time fixed in Schedule A of the General Conditions, or within the time to which such **Substantial Completion** may be extended.

14.2 Determining the Date of **Substantial Completion**: The **Work** will be deemed to be substantially complete when the two conditions set forth in Articles 14.2.1 and 14.2.2 have been met. The **Commissioner** will then issue a Certificate of **Substantial Completion**.

14.2.1 Inspection: The **Engineer** has inspected the **Work** and has made a written determination that it is substantially complete.

14.2.2 Approval of Final Punch List and Date for **Final Acceptance**: Following inspection of the **Work**, the **Engineer** shall furnish the **Contractor** a final punch list, specifying all items of **Work** to be completed. The **Contractor** shall then submit to the **Engineer** dates for the completion of each specified item of **Work**. Within a reasonable time after receipt, the **Engineer**, in a written notification to the **Contractor**, shall approve the **Contractor's** completion dates or, if they are unable to agree, shall establish dates for the completion of each item of **Work**. The latest completion date specified shall be the date for **Final Acceptance** of the **Work**.

14.3 Determining the Date of **Final Acceptance**: The **Work** will be accepted as final and complete as of the date of the **Engineer's** inspection if, upon such inspection, the **Engineer** finds that all items on the **Final Approved Punch List** are complete and no further **Work** remains to be done. The **Commissioner** will then issue a written determination of **Final Acceptance**.

14.4 Request for Inspection: Inspection of the **Work** by the **Engineer** for the purpose of **Substantial Completion** or **Final Acceptance** shall be made within ten (10) **Days** after receipt of the **Contractor's** written request therefor.

14.5 Request for Re-inspection: If upon inspection for the purpose of **Substantial Completion** or **Final Acceptance**, the **Engineer** determines that there are items of **Work** still to be performed, the **Contractor** shall promptly perform them and then request a re-inspection. If upon re-inspection, the **Engineer** determines that the **Work** is substantially complete or finally accepted, the date of such re-inspection shall be the date of **Substantial Completion** or **Final Acceptance**. Re-inspection by the **Engineer** shall be made within ten (10) **Days** after receipt of the **Contractor's** written request therefor.

14.6 Initiation of Inspection by the **Engineer**: If the **Contractor** does not request inspection or re-inspection of the **Work** for the purpose of **Substantial Completion** or **Final Acceptance**, the **Engineer** may initiate such inspection or re-inspection.

ARTICLE 15. LIQUIDATED DAMAGES

15.1 In the event the **Contractor** fails to complete the **Work** within the time fixed for such completion in Schedule A of the General Conditions, plus authorized time extensions, or if the **Contractor**, in the sole determination of the **Commissioner**, has abandoned the **Work**, the **Contractor** shall pay to the **City** the sum fixed in Schedule A of the General Conditions, for each and every **Day** that the time consumed in completing the **Work** exceeds the time allowed therefor; which said sum, in view of the difficulty of accurately ascertaining the loss which the **City** will suffer by reason of delay in the completion of the **Work** hereunder, is hereby fixed and agreed as the liquidated damages that the **City** will suffer by reason of such delay, and not as a penalty. This article shall apply to the **Contractor** if it is defaulted pursuant to Chapter X of this **Contract**. Neither the failure to assess liquidated damages nor the granting of any time extension shall operate as a waiver or release of any claim the **City** may have against the **Contractor** for either actual or liquidated damages.

15.2 Liquidated damages received hereunder are not intended to be nor shall they be treated as either a partial or full waiver or discharge of the **City's** right to indemnification, or the **Contractor's** obligation to indemnify the **City**, or to any other remedy provided for in this **Contract** or by **Law**.

15.3 The **Commissioner** may deduct and retain out of the monies which may become due hereunder, the amount of any such liquidated damages; and in case the amount which may become due hereunder shall be less than the amount of liquidated damages suffered by the **City**, the **Contractor** shall be liable to pay the difference.

ARTICLE 16. OCCUPATION OR USE PRIOR TO COMPLETION

16.1 Unless otherwise provided for in the specifications, the **Commissioner** may take over, use, occupy or operate any part of the **Work** at any time prior to **Final Acceptance**, upon written notification to the **Contractor**. The **Engineer** shall inspect the part of the **Work** to be taken over, used, occupied, or operated, and will furnish the **Contractor** with a written statement of the **Work**, if any, which remains to be performed on such part. The **Contractor** shall not object to, nor interfere with, the **Commissioner's** decision to exercise the rights granted by this article. In the event the **Commissioner** takes over, uses, occupies, or operates any part of the **Work**:

16.1.1 the **Commissioner** shall issue a written determination of **Substantial Completion** with respect to such part of the **Work**;

16.1.2 the **Contractor** shall be relieved of its absolute obligation to protect such part of the unfinished **Work** in accordance with Article 7;

16.1.3 the **Contractor's** guarantee on such part of the **Work** shall begin on the date of such use by the **City**; and;

16.1.4 the **Contractor** shall be entitled to a return of so much of the amount retained in accordance with Article 21 as it relates to such part of the **Work**, except so much thereof as may be retained under Articles 24 and 44.

CHAPTER IV SUBCONTRACTS AND ASSIGNMENTS

ARTICLE 17. SUBCONTRACTS

17.1 The **Contractor** shall not make subcontracts totaling an amount more than the percentage of the total **Contract** price fixed in Schedule A of the General Conditions, without prior written permission from the **Commissioner**. All subcontracts made by the **Contractor** shall be in writing. No work may be performed by a **Subcontractor** prior to the **Contractor** entering into a written subcontract with the **Subcontractor** and complying with the provisions of this Article 17.

17.2 Before making any subcontracts, the **Contractor** shall submit a written statement to the **Commissioner** giving the name and address of the proposed **Subcontractor**, the portion of the **Work** and materials which it is to perform and furnish, the cost of the subcontract, the VENDEX questionnaire if required, and any other information tending to prove that the proposed **Subcontractor** has the necessary facilities, skill, integrity, past experience and financial resources to perform the **Work** in accordance with the terms and conditions of this **Contract**.

17.3 If an approved **Subcontractor** elects to subcontract any portion of its subcontract, the proposed subcontract shall be submitted in the same manner as directed above.

17.4 The **Commissioner** will notify the **Contractor** in writing whether the proposed **Subcontractor** is qualified or not qualified. If the proposed **Subcontractor** is not qualified, the **Contractor** may submit another proposed **Subcontractor** unless the **Contractor** decides to do the **Work**. No **Subcontractor** shall be permitted on the **Site** unless approved.

17.5 Before entering into any subcontract hereunder, the **Contractor** shall inform the **Subcontractor** fully and completely of all provisions and requirements of this **Contract** relating either directly or indirectly to the **Work** to be performed and the materials to be furnished under such subcontract, and every such **Subcontractor** shall

expressly stipulate that all labor performed and materials furnished by the **Subcontractor** shall strictly comply with the requirements of this **Contract**.

17.6 Documents given to a **Subcontractor** for the purpose of soliciting the **Subcontractor's** bid shall include either a copy of the bid cover or a separate information sheet setting forth the **Project** name, the **Contract** number (if available), the **Agency** (as noted in Article 2.1.6), and the **Project's** location.

17.7 The **Commissioner's** approval of a **Subcontractor** shall not relieve the **Contractor** of any of its responsibilities, duties and liabilities hereunder. The **Contractor** shall be solely responsible to the **City** for the acts or defaults of its **Subcontractor** and of such **Subcontractor's** officers, agents and employees, each of whom shall, for this purpose, be deemed to be the agent or employee of the **Contractor** to the extent of its subcontract.

17.8 The **Contractor** shall be responsible for ensuring that all **Subcontractors** performing **Work** at the **Site** have either their own insurance coverage or are covered by the **Contractor's** insurance as required by Article 22.

17.9 The **Contractor** shall promptly, upon request, file with the **Engineer** a conformed copy of the subcontract and its cost. The subcontract shall provide the following:

17.9.1 **Payment to Subcontractors:** The agreement between the **Contractor** and its **Subcontractors** shall contain the same terms and conditions as to method of payment for **Work**, labor and materials, and as to retained percentages, as are contained in this **Contract**.

17.9.2 **Prevailing Rate of Wages:** The agreement between the **Contractor** and its **Subcontractors** shall include the prevailing wage rates and supplemental benefits to be paid in accordance with Labor Law Section 220.

17.9.3 **Section 6-123 of the Administrative Code:** Pursuant to the requirements of Section 6-123 of the Administrative Code, every agreement between the **Contractor** and its **Subcontractors** in excess of \$50,000 shall include a provision that the **Subcontractor** shall not engage in any unlawful discriminatory practice as defined in Title VIII of the Administrative Code (Section 8-101 et. seq.).

17.10 The **Commissioner** may deduct from the amounts certified under this **Contract** to be due to the **Contractor**, the sum or sums due and owing from the **Contractor** to the **Subcontractors** according to the terms of the said subcontracts, and in case of dispute between the **Contractor** and its **Subcontractor**, or **Subcontractors**, as to the amount due and owing, the **Commissioner** may deduct and withhold from the amounts certified under this **Contract** to be due to the **Contractor** such sum or sums as may be claimed by such **Subcontractor**, or **Subcontractors**, in a sworn affidavit, to be due and owing until such time as such claim or claims shall have been finally adjusted.

17.11 On **Contracts** where 100% performance bonds and payment bonds are executed, the **Contractor** shall include on each requisition for payment the following data: **Subcontractor's** name, value of the subcontract, total amount previously paid to **Subcontractor** for **Work** previously requisitioned, and the amount, including retainage, to be paid to the **Subcontractor** for **Work** included in the requisition.

17.12 On **Contracts** where performance bonds and payment bonds are not executed, the **Contractor** shall include with each requisition for payment submitted hereunder, a signed statement from each and every **Subcontractor** and/or **Materialman** for whom payment is requested in such requisition. Such signed statement shall be on the letterhead of the **Subcontractor** and/or **Materialman** for whom payment is requested and shall (i) verify that such **Subcontractor** and/or **Materialman** has been paid in full for all work performed and/or material supplied to date, exclusive of any amount retained and any amount included on the current requisition, and (ii) state the total amount of retainage to date, exclusive of any amount retained on the current requisition.

ARTICLE 18. ASSIGNMENTS

18.1 The **Contractor** shall not assign, transfer, convey or otherwise dispose of this **Contract**, or the right to execute it, or the right, title or interest in or to it or any part thereof, or assign, by power of attorney or otherwise any of the monies due or to become due under this **Contract**, unless the previous written consent of the **Commissioner** shall first be obtained thereto, and the giving of any such consent to a particular assignment shall not dispense with the necessity of such consent to any further or other assignments.

18.2 Such assignment, transfer, or conveyance shall not be valid until filed in the office of the **Commissioner** and the **Treasurer**, with the written consent of the **Commissioner** endorsed thereon or attached thereto.

18.3 Failure to obtain the previous written consent of the **Commissioner** to such an assignment, transfer or conveyance, may result in the revocation and annulment of this **Contract**. The **City** shall thereupon be relieved and discharged from any further liability to the **Contractor**, its assignees, transferees or sublessees, who shall forfeit and lose all monies therefor earned under the **Contract**, except so much as may be required to pay the **Contractor's** employees.

18.4 The provisions of this clause shall not hinder, prevent, or affect an assignment by the **Contractor** for the benefit of its creditors made pursuant to the **Laws** of the State of New York.

18.5 This **Contract** may be assigned by the **City** to any corporation, agency or instrumentality having authority to accept such assignment.

CHAPTER V CONTRACTOR'S SECURITY AND GUARANTY

ARTICLE 19. SECURITY DEPOSIT

19.1 The bid deposit, if required, shall be retained by the **Comptroller** as security for the **Contractor's** faithful performance of the **Contract** and will be returned to the **Contractor** only after the sum retained under Article 21 equals the amount of the bid deposit, subject to the other provisions of this **Contract**. If performance and payment bonds are required, any bid security posted shall be returned within a reasonable time after posting of such bonds and execution of this **Contract** by the **City**. When no partial payments are provided, the bid deposit will be released when final payment is certified to the **Comptroller** for payment.

19.2 If the **Contractor** is declared in default under Article 48 prior to the return of the deposit, or if any claim is made such as referred to in Article 23, the amount of such deposit, or so much thereof as the **Comptroller** may deem necessary, may be retained and then applied by the **Comptroller**:

19.2.1 To compensate the **City** for any expense, loss or damage suffered or incurred by reason of or resulting from such default, including the cost of re-letting and liquidated damages; or

19.2.2 To indemnify the **City** against any and all claims.

ARTICLE 20. PAYMENT GUARANTEE

20.1 On **Contracts** where 100% performance bonds and payment bonds are executed, this article does not apply.

20.2 In the event the terms of this **Contract** do not require the **Contractor** to provide a payment bond, the **City** shall, in accordance with the terms of this article, guarantee payment of all lawful demands for:

20.2.1 Wages and compensation for labor performed and/or services rendered; and

20.2.2 Materials, equipment, and supplies provided, whether incorporated into the **Work** or not, when demands have been filed with the **City** as provided hereinafter by any person, firm, or corporation which furnished labor, material, equipment, supplies, or any combination thereof, in connection with the **Work** performed hereunder (hereinafter referred to as the "beneficiary") at the direction of the **City** or the **Contractor**.

20.3 The provisions of Article 20.2 are subject to the following limitations and conditions:

20.3.1 The guarantee is made for the benefit of all beneficiaries as defined in Article 20.2 provided that those beneficiaries strictly adhere to the terms and conditions of this Article 20.3.

20.3.2 Nothing in this article shall prevent a beneficiary providing labor, services or material for the **Work** from suing the **Contractor** for any amounts due and owing the beneficiary by the **Contractor**.

20.3.3 All demands made against the **City** pursuant to this article shall be made within four (4) months from the date payment is due on the invoice or invoices submitted by the beneficiary to the **Contractor** for labor or **Work** done or for materials or supplies delivered, or, if the demand is for wages, four (4) months from the date the wages were due to be paid to the beneficiary.

20.3.4 All demands made against the **City** by such beneficiary shall be presented to the **Engineer** along with all written documentation concerning the demand which the **Engineer** deems appropriate or necessary, which may include, but shall not be limited to: the subcontract; any invoices presented to the **Contractor** for payment; the notarized statement of the beneficiary that the demand is due and payable, that a request for payment has been made of the **Contractor** and that the demand has not been paid by the **Contractor** within the time allowed for such payment by the subcontract; and copies of any correspondence between the beneficiary and the **Contractor** concerning such demand. The **City** shall notify the **Contractor** that a demand has been made. The **Contractor** shall inform the **City** of any defenses to the demand, and shall forward to the **City** any documents the **City** requests concerning the demand.

20.3.5 The **City** shall make payment only if, after considering all defenses presented by the **Contractor**, it determines that the payment is due and owing to the beneficiary making the demand.

20.3.6 The **City** will not initiate the payment process of this article or make payment on a demand where the beneficiary making the demand has filed a lien against the **Work** or otherwise sues the **City** prior to receiving a written notice from the **City** that it will not pay the demand.

20.3.7 No beneficiary shall be entitled to interest from the **City**, or to any other costs, including, but not limited to, attorney's fees.

20.4 Upon the receipt by the **City** of a demand pursuant to this article, the **City** may withhold from any payment otherwise due and owing to the **Contractor** under this **Contract** an amount sufficient to satisfy the demand.

20.4.1 In the event the **City** determines that the demand is valid, the **City** shall notify the **Contractor** of such determination and the amount thereof, and direct the **Contractor** to immediately pay such amount to the beneficiary. In the event the **Contractor**, within seven (7) days of receipt of such notification from the **City**, fails to pay the beneficiary, such failure shall constitute an automatic

and irrevocable assignment of payment by the **Contractor** to the beneficiary for the amount of the demand determined by the **City** to be valid. The **Contractor**, without further notification or other process, hereby gives its unconditional consent to such assignment of payment to the beneficiary and authorizes the **City**, on its behalf, to take all necessary actions to implement such assignment of payment, including without limitation the execution of any instrument or documentation necessary to effectuate such assignment.

In the event that the amount otherwise due and owing to the **Contractor** by the **City** is insufficient to satisfy such demand, the **City** may, at its option, require payment from the **Contractor** of an amount sufficient to cover such demand and exercise any other right to require or recover payment which the **City** may have under **Law** or **Contract**.

20.4.2 In the event the **City** determines that the demand is invalid, any amount withheld pending the **City's** review of such demand shall be paid to the **Contractor**; provided, however, no lien has been filed. In the event a lien has been filed, the terms and conditions set forth in Article 23 shall apply.

20.5 The provisions of this article shall not prevent the **City** and the **Contractor** from resolving disputes in accordance with the **PPB** Rules, where applicable.

20.6 In the event the **City** determines that the beneficiary is entitled to payment pursuant to this article, such determination and any defenses and counterclaims raised by the **Contractor** shall be taken into account in evaluating the **Contractor's** performance.

20.7 Nothing in this article shall relieve the **Contractor** of the obligation to pay the claims of all persons with valid and lawful claims against the **Contractor** relating to the **Work**.

20.8 The **Contractor** shall not require any performance, payment or other bonds of any **Subcontractor** if this **Contract** does not require such bonds of the **Contractor**.

20.9 The payment guarantee made pursuant to this article shall be construed in a manner consistent with Section 137 of the State Finance Law and shall afford to persons furnishing labor or materials to the **Contractor** or his **Subcontractors** in the prosecution of the **Work** under this **Contract** all of the rights and remedies afforded to such persons by such section, including but not limited to, the right to commence an action against the **City** on the payment guarantee provided by this article within the one year limitations period set forth in Section 137(4)(b).

ARTICLE 21. RETAINED PERCENTAGE

21.1 If this **Contract** requires 100% performance and payment security, then as further security for the faithful performance of this **Contract**, the **Commissioner** shall deduct, and retain until the substantial completion of the **Work**, five (5%) percent of the value of **Work** certified for payment in each partial payment voucher.

21.2 If this **Contract** does not require 100% performance and payment security and if the price for which this **Contract** was awarded does not exceed \$500,000, then as further security for the faithful performance of this **Contract**, the **Commissioner** shall deduct, and retain until the substantial completion of the **Work**, ten (10%) percent of the value of **Work** certified for payment in each partial payment voucher.

21.3 If this **Contract** does not require 100% performance and payment security and if the price for which this **Contract** was awarded exceeds \$500,000, then as further security for the faithful performance of this **Contract**, the **Commissioner** shall deduct, and retain until the substantial completion of the **Work**, up to ten (10%) percent of the value of **Work** certified for payment in each partial payment voucher. The percentage to be retained is set forth in Schedule A of the General Conditions.

ARTICLE 22. INSURANCE

22.1 Types of Insurance: From the date the **Contractor** is required to provide Proof of Insurance pursuant to Article 22.3.1 through the date of completion of all required **Work** (including punch list work as certified in writing by the **Resident Engineer**), the **Contractor** shall effect and maintain the following types of insurance if and as indicated in Schedule A of the General Conditions (with the minimum limits and special conditions specified in Schedule A). Such insurance shall be issued by companies that meet the standards of Article 22.2.1 and shall be primary (and non-contributing) to any insurance or self-insurance maintained by the **City**.

22.1.1 Commercial General Liability Insurance: The **Contractor** shall provide a Commercial General Liability Insurance policy covering the **Contractor** as Named Insured and the **City** as an Additional Insured. This policy shall protect the **City** and the **Contractor** from claims for property damage and/or bodily injury, including death, which may arise from any of the operations under this **Contract**. Coverage under this policy shall be at least as broad as that provided by ISO Form CG 0001 (10/01 ed.), must be "occurrence" based rather than "claims-made", and shall include, without limitation, the following types of coverage: Premises Operations, Products and Completed Operations, Contractual Liability (including the tort liability of another assumed in a contract), Broad Form Property Damage, Medical Payments, Independent Contractors, Personal Injury (Contractual Exclusion deleted), Explosion, Collapse and Underground Property, and Incidental Malpractice. If such insurance contains an aggregate limit, it shall apply separately to this **Project**.

22.1.1(a) Such Commercial General Liability Insurance shall name the **City**, together with its officials and employees, as an Additional Insured under this policy. Coverage for the **City** as Additional Insured shall specifically include the **City's** officials and employees, and shall be at least as broad as either Insurance Services Office ("ISO") Form CG 20 10 (07/04 ed.) or Form CG 20 33 (07/04 ed.) and shall provide completed operations coverage at least as broad as CG 20 37 (07/04 ed.).

22.1.1(b) If this **Contract** is equal to or greater than Ten Million Dollars (\$10,000,000.00), each Commercial General Liability Insurance policy provided shall contain each of the following endorsements:

22.1.1(b)(i) The Duties in the Event of Occurrence, Claim or Suit condition of the policy is amended per the following: If and insofar as knowledge of an "occurrence", "claim", or "suit" is relevant to the **City of New York** as Additional Insured under this policy, such knowledge by an agent, servant, official, or employee of the **City of New York** will not be considered knowledge on the part of the **City of New York** of the "occurrence", "claim", or "suit" unless the following position shall have received notice thereof from such agent, servant, official, or employee: Insurance Claims Specialist, Affirmative Litigation Division, New York City Law Department; and

22.1.1(b)(ii) Any notice, demand or other writing by or on behalf of the Named Insured to the Insurance Company shall also be deemed to be a notice, demand, or other writing on behalf of the **City** as Additional Insured. Any response by the Insurance Company to such notice, demand or other writing shall be addressed to Named Insured and to the **City** at the following addresses: Insurance Unit, NYC Comptroller's Office, 1 Centre Street – Room 1222, New York, N.Y. 10007; and Insurance Claims Specialist, Affirmative Litigation Division, New York City Law Department, 100 Church Street, New York, NY 10007.

22.1.2 Workers' Compensation Insurance and Disability Benefits Insurance: The **Contractor** shall provide, and ensure that each **Subcontractor** provides, Workers Compensation Insurance and Disability Benefits Insurance in accordance with the **Laws** of the State of New York on behalf of all employees providing services under this **Contract** (except for those qualifying for insurance pursuant to Article 22.1.4).

22.1.3 Employers' Liability Insurance: The **Contractor** shall provide, and ensure that each **Subcontractor** provides, Employers Liability Insurance affording compensation due to bodily injury by accident or disease sustained by any employee arising out of and in the course of his/her employment under this **Contract** (except for those qualifying for insurance pursuant to Article 22.1.4).

22.1.4 United States Longshoremen's and Harbor Workers Act and/or Jones Act Insurance: The **Contractor** shall provide, and ensure that each **Subcontractor** provides, insurance in accordance with the United States Longshoremen's and Harbor Workers Act and/or the Jones Act, on behalf of all qualifying employees providing services under this **Contract**.

22.1.5 Builders' Risk Insurance: The **Contractor** shall provide a Builders' Risk Insurance policy covering all risks in completed value form. Such policy shall cover the total value of the **Work** performed in accordance with Schedule A, as well as the value of any equipment, supplies and/or material for the **Project** that may be in storage (on or off the **Site**) or in transit. The policy shall cover the cost of removing debris, including demolition as may be legally necessary by the operation of any law, ordinance or regulation, and for loss or damage to any owned, borrowed, leased or rented capital equipment, tools, including tools of their agents and employees, staging towers and forms, and property of the **City** held in their care, custody and/or control. Such policy shall name as insureds the **City**, the **Contractor**, and its **Subcontractors**. The Builders' Risk policy shall contain the following endorsements:

22.1.5(a) The **City** and the **Contractor** shall be named as loss payee for the **Work** in order of precedence, as their interest may appear; and

22.1.5(b) In the event the loss occurs at an occupied facility, the policy shall permit occupancy without the consent of the Insurance Company; and

22.1.5(c) In the event that the insurance policy has been issued by a mutual insurance company, the following language shall be included: "The City of New York is not liable for any premium or assessment under this policy of insurance. The First Named Insured is solely liable therefor."

22.1.6 Comprehensive Business Automobile Liability Insurance: The **Contractor** shall provide a Comprehensive Business Automobile Liability policy for liability arising out of any owned, non-owned, leased and hired vehicles to be used in connection with this **Contract**. Coverage should be at least as broad as ISO Form CA0001, ed. 10/01.

22.1.6(a) If autos are used for transporting hazardous materials, the Automobile Liability Insurance shall be endorsed to provide pollution liability broadened coverage for covered vehicles (endorsement CA 99 48) as well as proof of MCS 90.

22.1.7 Pollution/Environmental Liability Insurance: The **Contractor** shall provide Pollution/Environmental Liability Insurance covering bodily injury and property damage, including loss of use of damaged property or of property that has not been physically injured. Such insurance shall provide coverage for actual, alleged or threatened emission, discharge, dispersal, seepage, release or escape of pollutants (including asbestos), including any loss, cost or expense incurred as a

result of any cleanup of pollutants (including asbestos) or in the investigation, settlement or defense of any claim, suit, or proceedings against the **City** arising from the operations under this **Contract**. Such insurance shall be in the **Contractor's** name and list the **City** as an Additional Insured. Coverage for the **City** as Additional Insured shall specifically include the **City's** officials and employees, and shall be at least as broad as provided to the **Contractor** for this **Project**.

22.1.7(a) If such coverage is written on a claims-made policy, such policy shall have a retroactive date on or before the effective date of this **Contract**, and continuous coverage shall be maintained, or an extended discovery period exercised, for a period of not less than three years from the time the **Work** under this **Contract** is completed.

22.1.8 Marine Insurance:

22.1.8(a) Marine Protection and Indemnity Insurance: The **Contractor** shall provide a Marine Protection and Indemnity policy with coverage at least as broad as policy form SP-23. The policy shall provide coverage for the **Contractor** and for the **City** (together with its officials and employees) as Additional Insured for bodily injury and property damage arising from marine operations under this **Contract** including injury or death of crew members (if not fully provided through other insurance), damage to piers, wharves and other fixed or movable structures and loss of or damage to any other vessel or craft, or to property on such other vessel or craft, not caused by collision.

22.1.8(b) Ship Repairers Legal Liability Insurance: The **Contractor** shall provide a Ship Repairers Legal Liability Insurance policy covering all repair operations under this **Contract** at or in the vicinity of a designated approved port or yard under this **Contract**. The policy shall provide coverage from the point of acceptance of care custody and control of any **City** vessel. The policy shall provide Bailee Coverage for any **City** vessel in the **Contractor's** care, custody and control and coverage for damage to property of others caused by any **City** vessel in the **Contractor's** care custody and control.

22.1.8(c) Collision Liability/Towers Liability Insurance: The **Contractor** shall provide a Collision Liability/Towers Liability Insurance policy with coverage for the **Contractor** and for the **City** (together with its officials and employees) as Additional Insured at least as broad as the American Institute Tug Form (08/01/76) for all tugs used under this **Contract** and Collision Liability per American Institute Hull Clauses (6/2/77).

22.1.8(d) Marine Pollution Liability Insurance: The **Contractor** shall provide a Marine Pollution Liability Insurance policy covering itself as Named Insured and the **City** (together with its officials and employees) as Additional Insured for liability arising from the discharge or substantial threat of a discharge of oil, or from the release or threatened release of a hazardous substance including injury to, or economic losses resulting from, the destruction of or damage to real property, personal property or natural resources. Coverage under this policy shall be at least as broad as that provided by Water Quality Insurance Syndicate Form (09/98 ed.).

22.1.9 The **Contractor** shall provide such other types of insurance, at such minimum limits, as are specified in Schedule A of the General Conditions.

22.2 General Requirements for Insurance Policies:

22.2.1 All required insurance policies shall be maintained with companies that may lawfully issue the required policy and have an A.M. Best rating of at least A- VII or a Standard and Poor's rating of at least AA, unless prior written approval is obtained from the Mayor's Office of Operations.

22.2.2 The **Contractor** shall be solely responsible for the payment of all premiums for all required policies and all deductibles and self-insured retentions to which such policies are subject, whether or not the **City** is an insured under the policy.

22.2.3 In his/her sole discretion, the **Commissioner** may, subject to the approval of the **Comptroller** and the Corporation Counsel, accept Letters of Credit and/or custodial accounts in lieu of required insurance.

22.2.4 The **City's** limits of coverage for all types of insurance required pursuant to Schedule A of the General Conditions shall be the greater of (i) the minimum limits set forth in Schedule A or (ii) the limits provided to the **Contractor** as Named Insured under all primary, excess and umbrella policies of that type of coverage.

22.2.5 All required insurance policies, except for insurance required pursuant to Sections 22.1.2, 22.1.3, and 22.1.4, shall contain the following endorsement: "This policy may not be cancelled, terminated, modified or changed unless thirty (30) days prior written notice is sent by the Insurance Company to the Named Insured (or First Named Insured, as appropriate), the **Commissioner**, and to the **Comptroller**, attn: Office of Contract Administration, Municipal Building, Room 1005, New York, New York 10007."

22.3 Proof of Insurance:

22.3.1 Within ten (10) **Days** of award, the **Contractor** shall, for each policy required under this **Contract**, except for Workers Compensation Insurance and Disability Benefits Insurance and builders' risk insurance, file a Certificate of Insurance with the **Commissioner** pursuant to Article 22.6. For Workers' Compensation Insurance and Disability Benefits Insurance, the **Contractor** shall file proof of insurance in a form acceptable to the **Commissioner** within ten (10) **Days** of award. Accord forms are not acceptable proof of workers' compensation coverage. The Contractor must submit one of the following forms to the Department, or another form acceptable to the Department: C-105.2 -- Certificate of Workers' Compensation Insurance, or U-26.3 -- State Insurance Fund Certificate of Workers' Compensation Insurance. For builders' risk insurance, the **Contractor** shall file a Certificate of Insurance with the **Commissioner** at the direction of the **Commissioner** but in any event no later than ten (10) **Days** prior to commencement of the **Work**.

22.3.1(a) All Certificates of Insurance shall be in a form acceptable to the **City** and shall certify the issuance and effectiveness of the types of insurance specified in Schedule A, each with the specified minimum limits and evidence of the compliance with the Additional Insured or Named Insured provisions of Articles 22.1.1(a), 22.1.5, 22.1.7, and 22.1.8, as applicable. All Certificate(s) of Insurance shall be accompanied by either a duly executed "Certification by Broker" in the form contained in Part II of Schedule A or completed copies of all policies referenced in the Certificate of Insurance. In the absence of completed policies, binders are acceptable.

22.3.2 Certificates of Insurance confirming renewals of insurance shall be submitted to the **Commissioner** prior to the expiration date of coverage of policies required under this **Contract**. Such Certificates of Insurance shall comply with the requirements of Article 22.3.1(a) and, if applicable, Article 22.3.1(b).

22.3.3 The **Contractor** shall be obligated to provide the **City** with a copy of any policy required by this Article 22 upon the demand for such policy by the **Commissioner** or the New York City Law Department.

22.4 Operations of the Contractor:

22.4.1 The **Contractor** shall not commence the **Work** unless and until all required certificates have been submitted to and accepted by the **Commissioner**. Acceptance by the **Commissioner** of a certificate hereunder does not excuse the **Contractor** from securing a policy consistent with all provisions of this Article or of any liability arising from its failure to do so.

22.4.2 The **Contractor** shall be responsible for providing continuous insurance coverage in the manner, form, and limits required by this **Contract** and shall be authorized to perform **Work** only during the effective period of all required coverage.

22.4.3 In the event that any of the required insurance policies lapse, are revoked, suspended or otherwise terminated, for whatever cause, the **Contractor** shall immediately stop all **Work**, and shall not recommence **Work** until authorized in writing to do so by the **Commissioner**. Upon quitting the **Site**, except as otherwise directed by the **Commissioner**, the **Contractor** shall leave all plant, materials, equipment, tools and supplies on the **Site**. **Contract** time shall continue to run during such periods and no extensions of time will be granted. The **Commissioner** may also declare the **Contractor** in default for failure to maintain required insurance.

22.5 The **City** as Additional Insured or Loss Payee under **Subcontractors'** Insurance. The **Contractor** shall ensure that each **Subcontractor** name the **City** as Additional Insured or loss payee, as appropriate, under all policies covering **Work** performed by such **Subcontractor** under this **Contract**. The **City's** coverage as Additional Insured shall include the **City's** officials and employees and be at least as broad as that provided to the **Contractor**. The foregoing requirements shall not apply to insurance provided pursuant to Articles 22.1.2, 22.1.3, and 22.1.4.

22.6 Wherever reference is made in Article 7 or this Article 22 to documents to be sent to the **Commissioner** (e.g., notices, filings, or submissions), such documents shall be sent to the address set forth in Schedule A of the General Conditions. In the event no address is set forth in Schedule A, such documents are to be sent to the **Commissioner's** address as provided elsewhere in this **Contract**.

22.7 If the **Contract** involves disposal of hazardous materials, the **Contractor** shall dispose such materials only at sites where the disposal site operator maintains Pollution Legal Liability Insurance in the amount of at least \$2,000,000 for losses arising from such disposal site.

22.8 Materiality/Non-Waiver: The **Contractor's** failure to secure policy(ies) in complete conformity with this Article, or to give the Insurance Company timely notice of any sort required in this **Contract** on behalf of the **City**, or to do anything else required by this Article shall constitute a material breach of this **Contract**. Such breach shall not be waived or otherwise excused by any action or inaction by the **City** at any time.

22.9 Other Remedies: Insurance coverage in the minimum amounts provided for herein shall not relieve the **Contractor** or **Subcontractors** of any liability under this **Contract**, nor shall it preclude the **City** from exercising any rights or taking such other actions as are available to it under any other provisions of this **Contract** or **Law**.

ARTICLE 23. MONEY RETAINED AGAINST CLAIMS

23.1 If any claim shall be made by any person or entity (including **Other Contractors** with the **City** on this **Project**) against the **City** or against the **Contractor** and the **City** for any of the following:

(a) An alleged loss, damage, injury, theft or vandalism of any of the kinds referred to in Articles 7 and 12, plus the reasonable costs of defending the **City**, which in the opinion of the **Comptroller** may not be paid by an insurance company (for any reason whatsoever); or

(b) An infringement of copyrights, patents or use of patented articles, tools, etc., as referred to in Article 57; or

(c) Damage claimed to have been caused directly or indirectly by the failure of the **Contractor** to perform the **Work** in strict accordance with this **Contract**,

the amount of such claim, or so much thereof as the **Comptroller** may deem necessary, may be withheld by the **Comptroller**, as security against such claim, from any money due hereunder. The **Comptroller**, in his/her discretion, may permit the **Contractor** to substitute other satisfactory security in lieu of the monies so withheld.

23.2 If an action on such claim is timely commenced and the liability of the **City**, or the **Contractor**, or both, shall have been established therein by a final judgment of a Court of competent jurisdiction, or if such claim shall have been admitted by the **Contractor** to be valid, the **Comptroller** shall pay such judgment or admitted claim out of the monies retained by the **Comptroller** under the provisions of this article, and return the balance, if any, without interest, to the **Contractor**.

23.3 Liens: If at any time before or within thirty (30) **Days** after the **Work** is completed and accepted by the **City**, any persons claiming to have performed any labor or furnished any material toward the performance or completion of this **Contract**, shall file with the **Agency** and with the **Treasurer** any notice as is described in the New York State Lien Law, or any act of the Legislature of the State of New York, the **City** shall retain, from the monies due or to become due under this **Contract**, so much of such monies as shall be sufficient to pay the amount claimed in said notice, together with the reasonable costs of any action or actions brought or that may be brought to enforce such lien. The monies so retained shall be held by the **City** until the lien thereon created by the said act and the filing of the said notice shall be discharged pursuant to Law.

ARTICLE 24. MAINTENANCE AND GUARANTY

24.1 The **Contractor** shall promptly repair, replace, restore or rebuild, as the **Commissioner** may determine, any finished **Work** in which defects of materials or workmanship may appear or to which damage may occur because of such defects, during the one (1) year period subsequent to the date of **Substantial Completion** (or use and occupancy in accordance with Article 16), except where other periods of maintenance and guarantee are provided for.

24.2 As security for the faithful performance of its obligations hereunder, the **Contractor**, upon filing its requisition for payment on **Substantial Completion**, shall deposit with the **Commissioner** a sum equal to one (1%) percent of the price (or the amount fixed in Schedule A of the General Conditions) in cash or certified check upon a state or national bank and trust company or a check of such bank and trust company signed by a duly authorized officer thereof and drawn to the order of the **Comptroller**, or obligations of the **City**, which the **Comptroller** may approve as of equal value with the sum so required.

24.3 In lieu of the above, the **Contractor** may make such security payment to the **City** by authorizing the **Commissioner** in writing to deduct the amount from the **Substantial Completion** payment which shall be deemed the deposit required above.

24.4 If the **Contractor** has faithfully performed all of its obligations hereunder the **Commissioner** shall so certify to the **Comptroller** within five (5) **Days** after the expiration of one (1) year from the date of **Substantial Completion** and acceptance of the **Work** or within thirty (30) **Days** after the expiration of the guarantee period fixed in the **Specifications**. The security payment shall be repaid to the **Contractor** without interest within thirty (30) **Days** after certification by the **Commissioner** to the **Comptroller** that the **Contractor** has faithfully performed all of its obligations hereunder.

24.5 Notice by the **Commissioner** to the **Contractor** to repair, replace, rebuild or restore such defective or damaged **Work** shall be timely, pursuant to this article, if given not later than ten (10) **Days** subsequent to the expiration of the one (1) year period or other periods provided for herein.

24.6 If the **Contractor** shall fail to repair, replace, rebuild or restore such defective or damaged **Work** promptly after receiving such notice, the **Commissioner** shall have the right to have the **Work** done by others in the same manner as provided for in the completion of a defaulted **Contract**, under Article 51.

24.7 If the security payment so deposited is insufficient to cover the cost of such **Work**, the **Contractor** shall be liable to pay such deficiency on demand by the **Commissioner**.

24.8 The **Engineer's** certificate setting forth the fair and reasonable cost of repairing, replacing, rebuilding or restoring any damaged or defective **Work** when performed by one other than the **Contractor**, shall be binding and conclusive upon the **Contractor** as to the amount thereof.

24.9 The **Contractor** shall obtain all manufacturers' warranties and guaranties of all equipment and materials required by this **Contract** in the name of the **City** and shall deliver same to the **Commissioner**. All of the **City's** rights and title and interest in and to said manufacturers' warranties and guaranties may be assigned by the **City** to any subsequent purchasers or lessees of the premises.

CHAPTER VI CHANGES, EXTRA WORK AND DOCUMENTATION OF CLAIM

ARTICLE 25. CHANGES

25.1 Changes may be made to this **Contract** only as duly authorized in writing by the **Commissioner** in accordance with the **Laws** and this **Contract**. All such changes, modifications and amendments will become a part of the **Contract**. **Work** so ordered shall be performed by the **Contractor**.

25.2 **Contract** changes will be made only for **Work** necessary to complete the **Work** included in the original scope of the **Contract** and/or for non-material changes to the scope of the **Contract**. Changes are not permitted for any material alteration in the scope of **Work** in the **Contract**.

25.3 The **Contractor** shall be entitled to a price adjustment for **Extra Work** performed pursuant to a written change order. Adjustments to price shall be computed in one or more of the following ways:

25.3.1 By applicable unit prices specified in the **Contract**; and/or

25.3.2 By agreement of a fixed price; and/or

25.3.3 By time and material records; and/or

25.3.4 In any other manner approved by the **CCPO**.

25.4 All payments for change orders are subject to pre-audit by the **Engineering Audit Officer** and may be post-audited by the **Comptroller** and/or the **Department**.

ARTICLE 26. METHODS OF PAYMENT FOR OVERRUNS AND EXTRA WORK

26.1 **Overrun of Unit Price Item:** An overrun is any quantity of a unit price item which the **Contractor** is directed to provide which is in excess of one hundred twenty-five (125%) percent of the estimated quantity for that item set forth in the bid schedule.

26.1.1 For any unit price item, the **Contractor** will be paid at the unit price bid for any quantity up to one hundred twenty five (125%) percent of the estimated quantity for that item set forth in the bid schedule. If during the progress of the **Work**, the actual quantity of any unit price item required to complete the **Work** approaches the estimated quantity for that item, and for any reason it appears that the actual quantity of any unit price item necessary to complete the **Work** will exceed the estimated quantity for that item by twenty-five (25%) percent, the **Contractor** shall immediately notify the **Engineer** of such anticipated overrun. The **Contractor** shall not be compensated for any quantity of a unit price item provided which is in excess of one hundred twenty five (125%) percent of the estimated quantity for that item set forth in the bid schedule without written authorization from the **Engineer**.

26.1.2 If the actual quantity of any unit price item necessary to complete the **Work** will exceed one hundred twenty five (125%) percent of the estimated quantity for that item set forth in the bid schedule, the **City** reserves the right and the **Contractor** agrees to negotiate a new unit price for such item. In no event shall such negotiated new unit price exceed the unit bid price. If the **City** and **Contractor** cannot agree on a new unit price, then the **City** shall order the **Contractor** and the **Contractor** agrees to provide additional quantities of the item on a time and material basis for the actual and reasonable cost as determined under Article 26.2, but in no event at a unit price exceeding the unit price bid.

26.2 **Extra Work:** For **Extra Work** where payment is by agreement on a fixed price in accordance with Article 25.3.2, the price to be paid for such **Extra Work** shall be based on the fair and reasonable estimated cost of the items set forth below. For **Extra Work** where payment is on a time and material basis in accordance with Article 25.3.3, the price to be paid for such **Extra Work** shall be the actual and reasonable cost of the items set forth below.

26.2.1 Necessary materials (including transportation to the **Site**); plus

26.2.2 Necessary direct labor, including payroll taxes and supplemental benefits; plus

26.2.3 Sales and personal property taxes, if any, required to be paid on materials not incorporated into such **Extra Work**; plus

26.2.4 Reasonable rental value of **Contractor**-owned, necessary plant and equipment other than small tools, plus fuel/energy costs. Except for fuel costs for pick-up trucks which shall be reimbursed based on a consumption of five (5) gallons per shift, fuel costs shall be reimbursed based on actual costs or, in the absence of auditable documentation, the following fuel consumption formula per operating hour: $(.035) \times (\text{HP rating}) \times (\text{Fuel cost/gallon})$. Reasonable rental value is defined as the lower of either seventy-five percent of the monthly prorated rental rates established in "The AED Green Book, Rental Rates and Specifications for Construction Equipment" published by PRIMEDIA (the "Green Book"), or seventy-five percent of the monthly prorated rental rates established in the "Rental Rate Blue Book for Construction Equipment" published by PRIMEDIA (the "Blue Book"). The reasonable rental value is inclusive of all operating costs except for fuel/energy consumption and equipment operator's wages/costs. For multiple shift utilization, reimbursement shall be calculated as follows: first shift shall be seventy-five percent of such rental rates; second shift shall be sixty percent of the first shift rate; and third shift shall be forty

percent of the first shift rate. Equipment on standby shall be reimbursed at one-third the prorated monthly rental rate. **Contractor**-owned equipment includes equipment from rental companies affiliated with or controlled by the **Contractor**, as determined by the **Commissioner**. In establishing cost reimbursement for non-operating contractor-owned equipment (scaffolding, sheeting systems, road plates, etc.), the City may restrict reimbursement to a purchase-salvage/life cycle basis if less than the computed rental costs; plus

26.2.5 Necessary installation and dismantling of such plant and equipment, including transportation to and from the **Site**, if any, provided that, in the case of non-**Contractor**-owned equipment rented from a third party, the cost of installation and dismantling are not allowable if such costs are included in the rental rate; plus

26.2.6 Reasonable rental costs of non-**Contractor**-owned necessary plant and equipment other than small tools, plus fuel/energy costs. Except for fuel costs for pick-up trucks which shall be reimbursed based on a consumption of five (5) gallons per shift, fuel costs shall be reimbursed based on actual costs or, in the absence of auditable documentation, the following fuel consumption formula per hour of operation: $(.035) \times (\text{HP rating}) \times (\text{Fuel cost/gallon})$. In lieu of renting, the City reserves the right to direct the purchase of non-operating equipment (scaffolding, sheeting systems, road plates, etc.), with payment on a purchase-salvage/life cycle basis, if less than the projected rental costs; plus

26.2.7 Workers' compensation insurance, and any insurance coverage expressly required by the **City** for the performance of the **Extra Work** which is different than the types of insurance required by Article 22 and Schedule A of the General Conditions. The cost of workers' compensation insurance shall be based upon the Manual Rate for such insurance for the applicable work classifications/codes, in accordance with the most recent schedule promulgated by the New York Compensation Insurance Rating Board; plus

26.2.8 Additional costs incurred as a result of the **Extra Work** for performance and payment bonds; plus

26.2.9 Ten (10%) percent of the total of items in Articles 26.2.1 through 26.2.5 as compensation for overhead, except that no percentage for overhead will be allowed on **Payroll Taxes** or on the premium portion of overtime pay or on sales and personal property taxes. Overhead shall include without limitation, all costs and expenses in connection with administration, management superintendence, small tools, and insurance required by Schedule A of the General Conditions other than workers' compensation insurance; plus

26.2.10 Ten (10%) percent of the total of items in Articles 26.2.1 through 26.2.5, plus item 26.2.9, as compensation for profit, except that no percentage for profit will be allowed on **Payroll Taxes** or on the premium portion of overtime pay or on sales and personal property taxes; plus

26.2.11 Five (5%) percent of the total of items in Article 26.2.6, 26.2.7, and 26.2.8 as compensation for overhead and profit.

26.3 Where the **Extra Work** is performed in whole or in part by other than the **Contractor's** own forces pursuant to Article 26.2, the **Contractor** shall be paid, subject to pre-audit by the **Engineering Audit Officer**, the cost of such **Work** computed in accordance with Article 26.2 above, plus an additional allowance of five (5%) percent to cover the **Contractor's** overhead and profit.

26.4 Where a change is ordered, involving both **Extra Work** and omitted or reduced **Contract Work**, the **Contract** price shall be adjusted, subject to pre-audit by the **EAO**, in an amount based on the difference between the cost of such **Extra Work** and of the omitted or reduced **Work**. The cost of such **Extra Work** and of such omitted or reduced **Work** shall be computed based upon applicable **Contract** unit prices. Where there are no applicable **Contract** unit prices, the cost of such **Extra Work** and of such omitted or reduced **Contract Work** shall

be computed in accordance with items 26.2.1 through 26.2.8. If the cost of such **Extra Work** exceeds the costs of such omitted or reduced **Contract Work**, the **Contract** price shall be increased by the difference, plus percentages for overhead and profit as provided in Articles 26.2.9 through 26.2.11. If the cost of the omitted or reduced **Contract Work** exceeds the cost of the **Extra Work**, then the **Contract** price shall be reduced by the difference.

26.5 Where the **Contractor** and the **Commissioner** can agree upon a fixed price for **Extra Work** in accordance with Article 25.3.2 or another method of payment for **Extra Work** in accordance with Article 25.3.4, or for **Extra Work** ordered in connection with omitted work, such method, subject to pre-audit by the **EAO**, may, at the option of the **Commissioner**, be substituted for the cost plus a percentage method provided in Article 26.2; provided, however, that if the **Extra Work** is performed by a **Subcontractor**, the **Contractor** shall not be entitled to receive more than an additional allowance of five (5%) percent for overhead and profit over the cost of such **Subcontractor's Work** as computed in accordance with Article 26.2.

ARTICLE 27. RESOLUTION OF DISPUTES

27.1 All disputes between the **City** and the **Contractor** of the kind delineated in this article that arise under, or by virtue of, this **Contract** shall be finally resolved in accordance with the provisions of this article and the **PPB Rules**. This procedure for resolving all disputes of the kind delineated herein shall be the exclusive means of resolving any such disputes.

27.1.1 This article shall not apply to disputes concerning matters dealt with in other sections of the **PPB Rules**, or to disputes involving patents, copyrights, trademarks, or trade secrets (as interpreted by the courts of New York State) relating to proprietary rights in computer software.

27.1.2 This article shall apply only to disputes about the scope of work delineated by the **Contract**, the interpretation of **Contract** documents, the amount to be paid for **Extra Work** or disputed work performed in connection with the **Contract**, the conformity of the **Contractor's Work** to the **Contract**, and the acceptability and quality of the **Contractor's Work**; such disputes arise when the **Engineer, Resident Engineer, Engineering Audit Officer**, or other designee of the **Commissioner** makes a determination with which the **Contractor** disagrees.

27.2 All determinations required by this article shall be made in writing clearly stated, with a reasoned explanation for the determination based on the information and evidence presented to the party making the determination. Failure to make such determination within the time required by this article shall be deemed a non-determination without prejudice that will allow application to the next level.

27.3 During such time as any dispute is being presented, heard, and considered pursuant to this article, the **Contract** terms shall remain in force and the **Contractor** shall continue to perform **Work** as directed by the **ACCO** or the **Engineer**. Failure of the **Contractor** to continue **Work** as directed shall constitute a waiver by the **Contractor** of its claim.

27.4 Presentation of Disputes to **Commissioner**.

Notice of Dispute and Agency Response. The **Contractor** shall present its dispute in writing ("Notice of Dispute") to the **Commissioner** within thirty (30) Days of receiving written notice of the determination or action that is the subject of the dispute. This notice requirement shall not be read to replace any other notice requirements contained in the **Contract**. The Notice of Dispute shall include all the facts, evidence, documents, or other basis upon which the **Contractor** relies in support of its position, as well as a detailed computation demonstrating how any amount of money claimed by the **Contractor** in the dispute was arrived at. Within thirty (30) Days after receipt of the detailed written submission comprising the complete Notice of Dispute, the **Engineer, Resident Engineer, Engineering Audit Officer**, or other designee of the **Commissioner** shall submit to the **Commissioner** all materials he or she deems pertinent to the dispute. Following initial submissions to the **Commissioner**, either

party may demand of the other the production of any document or other material the demanding party believes may be relevant to the dispute. The requested party shall produce all relevant materials that are not otherwise protected by a legal privilege recognized by the courts of New York State. Any question of relevancy shall be determined by the **Commissioner** whose decision shall be final. Willful failure of the **Contractor** to produce any requested material whose relevancy the **Contractor** has not disputed, or whose relevancy has been affirmatively determined, shall constitute a waiver by the **Contractor** of its claim.

27.4.1 **Commissioner Inquiry.** The **Commissioner** shall examine the material and may, in his or her discretion, convene an informal conference with the **Contractor**, the **ACCO**, and the **Engineer**, **Resident Engineer**, **Engineering Audit Officer**, or other designee of the **Commissioner** to resolve the issue by mutual consent prior to reaching a determination. The **Commissioner** may seek such technical or other expertise as he or she shall deem appropriate, including the use of neutral mediators, and require any such additional material from either or both parties as he or she deems fit. The **Commissioner's** ability to render, and the effect of, a decision hereunder shall not be impaired by any negotiations in connection with the disputed presented, whether or not the **Commissioner** participated therein. The **Commissioner** may or, at the request of any party to the dispute, shall compel the participation of any other **Contractor** with a **Contract** related to the **Work** of this **Contract**, and that **Contractor** shall be bound by the decision of the **Commissioner**. Any **Contractor** thus brought into the dispute resolution proceeding shall have the same rights and obligations under this article as the **Contractor** initiating the dispute.

27.4.2 **Commissioner Determination.** Within thirty (30) days after the receipt of all materials and information, or such longer time as may be agreed to by the parties, the **Commissioner** shall make his or her determination and shall deliver or send a copy of such determination to the **Contractor**, the **ACCO**, and **Engineer**, **Resident Engineer**, **Engineering Audit Officer**, or other designee of the **Commissioner**, as applicable, together with a statement concerning how the decision may be appealed.

27.4.3 **Finality of Commissioner Decision.** The **Commissioner's** decision shall be final and binding on all parties, unless presented to the Contract Dispute Resolution Board pursuant to this article. The **City** may not take a petition to the Contract Dispute Resolution Board. However, should the **Contractor** take such a petition, the **City** may seek, and the Contract Dispute Resolution Board may render, a determination less favorable to the **Contractor** and more favorable to the **City** than the decision of the **Commissioner**.

27.5 **Presentation of Dispute to the Comptroller.** Before any dispute may be brought by the **Contractor** to the Contract Dispute Resolution Board, the **Contractor** must first present its claim to the **Comptroller** for his or her review, investigation, and possible adjustment.

27.5.1 **Time, Form, and Content of Notice.** Within thirty (30) days of its receipt of a decision by the **Commissioner**, the **Contractor** shall submit to the **Comptroller** and to the **Commissioner** a Notice of Claim regarding its dispute with the **Agency**. The Notice of Claim shall consist of (i) a brief Written statement of the substance of the dispute, the amount of money, if any, claimed and the reason(s) the **Contractor** contends the dispute was wrongly decided by the **Commissioner**; (ii) a copy of the written decision of the **Commissioner**; and (iii) a copy of all materials submitted by the **Contractor** to the **Agency**, including the Notice of Dispute. The **Contractor** may not present to the **Comptroller** any material not presented to the **Commissioner**, except at the request of the **Comptroller**.

27.5.2 **Agency Response.** Within thirty (30) days of receipt of the Notice of Claim, the **Agency** shall make available to the **Comptroller** a copy of all material submitted by the **Agency** to the **Commissioner** in connection with the dispute. The **Agency** may not present to the **Comptroller** any material not presented to the **Commissioner** except at the request of the **Comptroller**.

27.5.3 **Comptroller Investigation.** The **Comptroller** may investigate the claim in dispute and, in the course of such investigation, may exercise all powers provided in section 7-201 and 7-203 of the New York City Administrative Code. In addition, the **Comptroller** may demand of either party, and such party shall provide, whatever additional material the **Comptroller** deems pertinent to the claim, including original business records of the **Contractor**. Willful failure of the **Contractor** to produce within fifteen (15) days any material requested by the **Comptroller** shall constitute a waiver by the **Contractor** of its claim. The **Comptroller** may also schedule an informal conference to be attended by the **Contractor**, Agency representatives, and any other personnel desired by the **Comptroller**.

27.5.4 **Opportunity of Comptroller to Compromise or Adjust Claim.** The **Comptroller** shall have forty-five (45) days from his or her receipt of all materials referred to in Article 27.5.3 to investigate the disputed claim. The period for investigation and compromise may be further extended by agreement between the **Contractor** and the **Comptroller**, to a maximum of ninety (90) days from the **Comptroller's** receipt of all materials. The **Contractor** may not present its petition to the Contract Dispute Resolution Board until the period for investigation and compromise delineated in Article 27.5.4 has expired. In compromising or adjusting any claim hereunder, the **Comptroller** may not revise or disregard the terms of the **Contract** between the parties.

27.6 **Contract Dispute Resolution Board.** There shall be a Contract Dispute Resolution Board composed of:

27.6.1 The chief administrative law judge of the Office of Administrative Trials and Hearings (OATH) or his/her designated OATH administrative law judge, who shall act as chairperson, and may adopt operational procedures and issue such orders consistent with this article as may be necessary in the execution of the Contract Dispute Resolution Board's functions, including, but not limited to, granting extensions of time to present or respond to submissions;

27.6.1.1 The **CCPO** or his/her designee; any designee shall have the requisite background to consider and resolve the merits of the dispute and shall not have participated personally and substantially in the particular matter that is the subject of the dispute or report to anyone who so participated; and

27.6.2 A person with appropriate expertise who is not an employee of the City. This person shall be selected by the presiding administrative law judge from a prequalified panel of individuals, established and administered by OATH with appropriate background to act as decision-makers in a dispute. Such individual may not have a contract or dispute with the City or be an officer or employee of any company or organization that does, or regularly represents persons, companies, or organizations having disputes with the City.

27.7 **Petition to the Contract Dispute Resolution Board.** In the event the claim has not been settled or adjusted by the **Comptroller** within the period provided in this article, the **Contractor**, within thirty (30) days thereafter, may petition the Contract Dispute Resolution Board to review the **Commissioner's** determination.

27.7.1 **Form and Content of Petition by Contractor.** The **Contractor** shall present its dispute to the Contract Dispute Resolution Board in the form of a petition, which shall include (i) a brief written statement of the substance of the dispute, the amount of money, if any, claimed, and the reason(s) the Contractor contends the dispute was wrongly decided by the **Commissioner**; (ii) a copy of the written Decision of the **Commissioner**, (iii) copies of all materials submitted by the **Contractor** to the Agency; (iv) a copy of the written decision of the **Comptroller**, if any, and (v) copies of all correspondence with, or written material submitted by the **Contractor**, to the **Comptroller**. The **Contractor** shall concurrently submit four (4) complete sets of the Petition: one set to the Corporation Counsel (Attn: Commercial and Real Estate Litigation Division) and three (3) sets to the Contract

Dispute Resolution Board at OATH's offices with proof of service on the Corporation Counsel. In addition, the **Contractor** shall submit a copy of the written statement of the substance of the dispute, cited in (i) above, to both the **Commissioner** and the **Comptroller**.

27.7.2 **Agency Response.** Within thirty (30) Days of its receipt of the petition by the Corporation Counsel, the **Agency** shall respond to the brief written statement of the **Contractor** and make available to the Contract Dispute Resolution Board all material it submitted to the **Commissioner** and **Comptroller**. Three (3) complete copies of the **Agency** response shall be provided to the Contract Dispute Resolution Board and one to the **Contractor**. Extensions of time for submittal of the **Agency** response shall be given as necessary upon a showing of good cause or, upon consent of the parties, for an initial period of up to thirty (30) Days.

27.7.3 **Further Proceedings.** The Contract Dispute Resolution Board shall permit the **Contractor** to present its case by submission of memoranda, briefs, and oral argument. The Contract Dispute Resolution Board shall also permit the **Agency** to present its case in response to the **Contractor** by submission of memoranda, briefs, and oral argument. If requested by the Corporation Counsel, the **Comptroller** shall provide reasonable assistance in the preparation of the **Agency's** case. Neither the **Contractor** nor the **Agency** may support its case with any documentation or other material that was not considered by the **Comptroller**, unless requested by the Contract Dispute Resolution Board. The Contract Dispute Resolution Board, in its discretion, may seek such technical or other expert advice as it shall deem appropriate and may seek, on its own or upon application of a party, any such additional material from any party as it deems fit. The Contract Dispute Resolution Board, in its discretion, may combine more than one dispute between the parties for concurrent resolution.

27.7.4 **Contract Dispute Resolution Board Determination.** Within forty-five (45) Days of the conclusion of all written submissions and oral arguments, the Contract Dispute Resolution Board shall render a written decision resolving the dispute. In an unusually complex case, the Contract Dispute Resolution Board may render its decision in a longer period, not to exceed ninety (90) Days, and shall so advise the parties at the commencement of this period. The Contract Dispute Resolution Board's decision must be consistent with the terms of the **Contract**. Decisions of the Contract Dispute Resolution Board shall only resolve matters before the Contract Dispute Resolution Board and shall not have precedential effect with respect to matters not before the Contract Dispute Resolution Board.

27.7.5 **Notification of Contract Dispute Resolution Board Decision.** The Contract Dispute Resolution Board shall send a copy of its decision to the **Contractor**, the **ACCO**, the Engineer, the **Comptroller**, the Corporation Counsel, the Director of the Office of Construction, and the **PPB**. A decision in favor of the **Contractor** shall be subject to the prompt payment provisions of the **PPB** Rules. The Required Payment Date shall be thirty (30) Days after the date the parties are formally notified of the Contract Dispute Resolution Board's decision.

27.7.6 **Finality of Contract Dispute Resolution Board Decision.** The Contract Dispute Resolution Board's decision shall be final and binding on all parties. Any party may seek review of the Contract Dispute Resolution Board's decision solely in the form of a challenge, filed within four (4) months of the date of the Contract Dispute Resolution Board's decision, in a court of competent jurisdiction of the State of New York, County of New York pursuant to Article 78 of the Civil Practice Laws and Rules. Such review by the court shall be limited to the question of whether or not the Contract Dispute Resolution Board's decision was made in violation of lawful procedure, was affected by an error of **Law**, or was arbitrary and capricious or an abuse of discretion. No evidence or information shall be introduced or relied upon in such proceeding that was not presented to the Contract Dispute Resolution Board in accordance with this article.

27.8 Any termination, cancellation, or alleged breach of the **Contract** prior to or during the pendency of any proceedings pursuant to this article shall not affect or impair the ability of the **Commissioner** or Contract Dispute Resolution Board to make a binding and final decision pursuant to this article.

ARTICLE 28. RECORD KEEPING FOR EXTRA OR DISPUTED WORK

28.1 While the **Contractor** or any of its **Subcontractors** is performing **Extra Work** on a Time and Material Basis ordered by the **Commissioner** under Article 25, or is performing disputed **Work**, or complying with a determination or order under protest in accordance with Articles 27 and 30, in each such case the **Contractor** shall furnish the **Resident Engineer** daily with three (3) copies of written statements signed by the **Contractor's** representative at the **Site** showing:

28.1.1 The name and number of each **Worker** employed on such **Work** or engaged in complying with such determination or order, the number of hours employed, and the character of the **Work** each is doing; and

28.1.2 The nature and quantity of any materials, plant and equipment furnished or used in connection with the performance of such **Work** or compliance with such determination or order, and from whom purchased or rented.

28.2 A copy of such statement will be countersigned by the **Resident Engineer**, noting thereon any items not agreed to or questioned, and will be returned to the **Contractor** within two (2) **Days** after submission.

28.3 The **Contractor** and its **Subcontractors**, when required by the **Commissioner**, or the **Comptroller**, shall also produce for inspection, at the office of the **Contractor** or **Subcontractor**, any and all of its books, bid documents, financial statements, vouchers, records, daily job diaries and reports, and cancelled checks, and any other documents relating to showing the nature and quantity of the labor, materials, plant and equipment actually used in the performance of such **Work**, or in complying with such determination or order, and the amounts expended therefor, and shall permit the **Commissioner** and the **Comptroller** to make such extracts therefrom, or copies thereof, as they or either of them may desire.

28.4 In connection with the examination provided for herein, the **Commissioner**, upon demand therefor, will produce for inspection by the **Contractor** such records as the **Agency** may have with respect to such **Extra** or disputed **Work** performed under protest pursuant to order of the **Commissioner**, except those records and reports which may have been prepared for the purpose of determining the accuracy and validity of the **Contractor's** claim.

28.5 Failure to comply strictly with these requirements shall constitute a waiver of any claim for extra compensation or damages on account of the performance of such **Work** or compliance with such determination or order.

ARTICLE 29. OMITTED WORK

29.1 If any **Contract Work** in a lump sum **Contract**, or if any part of a lump sum item in a unit price, lump sum, or percentage-bid **Contract** is omitted by the **Commissioner** pursuant to Article 33, the **Contract** price, subject to audit by the EAO, shall be reduced by a pro rata portion of the lump sum bid amount based upon the percent of **Work** omitted subject to Article 29.4. For the purpose of determining the pro rata portion of the lump sum bid amount, the bid breakdown submitted in accordance with Article 41 shall be considered, but shall not be the determining factor.

29.2 If the whole of a lump sum item or units of any other item is so omitted by the **Commissioner** in a unit price, lump sum, or percentage-bid **Contract**, then no payment will be made therefor except as provided in Article 29.4.

29.3 For units that have been ordered but are only partially completed, the unit price shall be reduced by a pro rata portion of the unit price bid based upon the percentage of **Work** omitted subject to Article 29.4.

29.4 In the event the **Contractor**, with respect to any omitted **Work**, has purchased any non-cancelable material and/or equipment that is not capable of use except in the performance of this **Contract** and has been specifically fabricated for the sole purpose of this **Contract**, but not yet incorporated into the **Work**, the **Contractor** shall be paid for such material and/or equipment in accordance with Article 64.2.1(b); provided, however, such payment is contingent upon the **Contractor's** delivery of such material and/or equipment in acceptable condition to a location designated by the **City**.

29.5 The **Contractor** agrees to make no claim for damages or for loss of overhead and profit with regard to any omitted **Work**.

ARTICLE 30. NOTICE AND DOCUMENTATION OF COSTS AND DAMAGES; PRODUCTION OF FINANCIAL RECORDS

30.1 If the **Contractor** shall claim to be sustaining damages by reason of any act or omission of the **City** or its agents, it shall submit to the **Commissioner** within forty-five (45) **Days** from the time such damages are first incurred, and every thirty (30) **Days** thereafter for as long as such damages are incurred, verified statements of the details and the amounts of such damages, together with documentary evidence of such damages. The **Contractor** may submit any of the above statements within such additional time as may be granted by the **Commissioner** in writing upon written request therefor. Failure of the **Commissioner** to respond in writing to a written request for additional time within thirty (30) **Days** shall be deemed a denial of the request. On failure of the **Contractor** to fully comply with the foregoing provisions, such claims shall be deemed waived and no right to recover on such claims shall exist. Damages that the **Contractor** may claim in any action or dispute resolution procedure arising under or by reason of this **Contract** shall not be different from or in excess of the statements and documentation made pursuant to this article.

30.2 In addition to the foregoing statements, the **Contractor** shall, upon notice from the **Commissioner**, produce for examination at the **Contractor's** office, by the **Engineer, Architect or Project Manager**, all of its books of account, bills, invoices, payrolls, subcontracts, time books, daily reports, bank deposit books, bank statements, check books, cancelled checks, showing all of its acts and transactions in connection with or relating to or arising by reason of this **Contract**, and submit itself and persons in its employment, for examination under oath by any person designated by the **Commissioner** or **Comptroller** to investigate claims made or disputes against the **City** under this **Contract**. At such examination, a duly authorized representative of the **Contractor** may be present.

30.3 In addition to the statements required under Article 28 and this Article, the **Contractor** and/or its **Subcontractor** shall, within thirty (30) **Days** upon notice from the **Commissioner** or **Comptroller**, produce for examination at the **Contractor's** and/or **Subcontractor's** office, by a representative of either the **Commissioner** or **Comptroller**, all of its books of account, bid documents, financial statements, accountant workpapers, bills, invoices, payrolls, subcontracts, time books, daily reports, bank deposit books, bank statements, check books, cancelled checks, showing all of its acts and transactions in connection with or relating to or arising by reason of this **Contract**. Further, the **Contractor** and/or its **Subcontractor** shall submit any person in its employment, for examination under oath by any person designated by the **Commissioner** or **Comptroller** to investigate claims made or disputes against the **City** under this **Contract**. At such examination, a duly authorized representative of the **Contractor** may be present.

30.4 Unless the information and examination required under Article 30.3 is provided by the **Contractor** and/or its **Subcontractor** upon thirty (30) **Days** notice from the **Commissioner** or **Comptroller**, or upon the **Commissioner's** or **Comptroller's** written authorization to extend the time to comply, the **City** shall be released

from all claims arising under, relating to or by reason of this **Contract**, except for sums certified by the **Commissioner** or **Comptroller** to be due under the provisions of this **Contract**. It is further stipulated and agreed that no person has the power to waive any of the foregoing provisions and that in any action or dispute resolution procedure against the **City** to recover any sum in excess of the sums certified by the **Commissioner** or **Comptroller** to be due under or by reason of this **Contract**, the **Contractor** must allege in its complaint and prove, at trial or during such dispute resolution procedure, compliance with the provisions of this Article.

30.5 In addition, after the commencement of any action or dispute resolution procedure by the **Contractor** arising under or by reason of this **Contract**, the **City** shall have the right to require the **Contractor** to produce for examination under oath, up until the trial of the action or hearing before the Contract Dispute Resolution Board, the books and documents described in Article 30.3 and submit itself and all persons in its employ for examination under oath. If this Article is not complied with as required, then the **Contractor** hereby consents to the dismissal of the action or dispute resolution procedure.

CHAPTER VII
POWERS OF THE RESIDENT ENGINEER,
THE ENGINEER OR ARCHITECT AND THE COMMISSIONER

ARTICLE 31. THE RESIDENT ENGINEER

31.1 The **Resident Engineer** shall have the power to inspect, supervise and control the performance of the **Work**, subject to review by the **Commissioner**. The **Resident Engineer** shall not, however, have the power to issue an **Extra Work** order, except as specifically designated in writing by the **Commissioner**.

ARTICLE 32. THE ENGINEER OR ARCHITECT OR PROJECT MANAGER

32.1 The **Engineer** or **Architect** or **Project Manager**, in addition to those matters elsewhere herein delegated to the **Engineer** and expressly made subject to his/her determination, direction or approval, shall have the power, subject to review by the **Commissioner**:

32.1.1 To determine the amount, quality, and location of the **Work** to be paid for hereunder; and

32.1.2 To determine all questions in relation to the **Work**, to interpret the **Contract Drawings**, **Specifications**, and **Addenda**, and to resolve all patent inconsistencies or ambiguities therein; and

32.1.3 To determine how the **Work** of this **Contract** shall be coordinated with **Work** of other **Contractors** engaged simultaneously on this **Project**, including the power to suspend any part of the **Work**, but not the whole thereof; and

32.1.4 To make minor changes in the **Work** as he/she deems necessary, provided such changes do not result in a net change in the cost to the **City** or to the **Contractor** of the **Work** to be done under the **Contract**; and

32.1.5 To amplify the **Contract Drawings**, add explanatory information and furnish additional **Specifications** and drawings, consistent with this **Contract**.

32.2 The foregoing enumeration shall not imply any limitation upon the power of the **Engineer** or **Architect** or **Project Manager**, for it is the intent of this **Contract** that all of the **Work** shall generally be subject to his/her determination, direction and approval, except where the determination, direction or approval of someone other than the **Engineer** or **Architect** or **Project Manager** is expressly called for herein.

32.3 The **Engineer** or **Architect** or **Project Manager** shall not, however, have the power to issue an **Extra Work** order, except as specifically designated in writing by the **Commissioner**.

ARTICLE 33. THE COMMISSIONER

33.1 The **Commissioner**, in addition to those matters elsewhere herein expressly made subject to his/her determination, direction or approval, shall have the power:

33.1.1 To review and make determinations on any and all questions in relation to this **Contract** and its performance; and

33.1.2 To modify or change this **Contract** so as to require the performance of **Extra Work** (subject, however, to the limitations specified in Article 25) or the omission of **Contract Work**; and

33.1.3 To suspend the whole or any part of the **Work** whenever in his/her judgment such suspension is required:

33.1.3(a) In the interest of the **City** generally; or

33.1.3(b) To coordinate the **Work** of the various **Contractors** engaged on this **Project** to the provisions of Article 12; or

33.1.3(c) To expedite the completion of the entire **Project** even though the completion of this particular **Contract** may thereby be delayed.

ARTICLE 34. NO ESTOPPEL

34.1 Neither the **City** nor any **Agency**, officer, agent or employee thereof, shall be bound, precluded or estopped by any determination, decision, approval, order, letter, payment or certificate made or given under or in connection with this **Contract** by the **City**, the **Commissioner**, the **Resident Engineer**, or any other officer, agent or employee of the **City**, either before or after the final completion and acceptance of the **Work** and payment therefor:

34.1.1 From showing the true and correct classification, amount, quality or character of the **Work** actually done; or that any such determination, decision, order, letter, payment or certificate was untrue, incorrect or improperly made in any particular, or that the **Work**, or any part thereof, does not in fact conform to the requirements of this **Contract**; and

34.1.2 From demanding and recovering from the **Contractor** any overpayment made to it, or such damages as the **City** may sustain by reason of the **Contractor's** failure to perform each and every part of its **Contract**.

CHAPTER VIII LABOR PROVISIONS

ARTICLE 35. EMPLOYEES

35.1 The **Contractor** and its **Subcontractors** shall not employ on the **Work**:

35.1.1 Anyone who is not competent, faithful and skilled in the **Work** for which he/she shall be employed; and whenever the **Commissioner** shall inform the **Contractor**, in writing, that any employee is, in his/her opinion, incompetent, unfaithful or disobedient, that

employee shall be discharged from the **Work** forthwith, and shall not again be employed upon it; or

35.1.2 Any labor, materials or means whose employment, or utilization during the course of this **Contract**, may tend to or in any way cause or result in strikes, work stoppages, delays, suspension of **Work** or similar troubles by workers employed by the **Contractor** or its **Subcontractors**, or by any of the trades working in or about the buildings and premises where **Work** is being performed under this **Contract**, or by **Other Contractors** or their **Subcontractors** pursuant to other **Contracts**, or on any other building or premises owned or operated by the **City**, its **Agencies**, departments, boards or authorities. Any violation by the **Contractor** of this requirement may, upon certification of the **Commissioner**, be considered as proper and sufficient cause for declaring the **Contractor** to be in default, and for the **City** to take action against it as set forth in Chapter X of this **Contract**, or such other article of this **Contract** as the **Commissioner** may deem proper; or

35.1.3 In accordance with Section 220.3-e of the Labor Law of the State of New York (hereinafter "**Labor Law**"), the **Contractor** and its **Subcontractors** shall not employ on the **Work** any apprentice, unless he/she is a registered individual, under a bona fide program registered with the New York State Department of Labor. The allowable ratio of apprentices to journey-level workers in any craft classification shall not be greater than the ratio permitted to the **Contractor** as to its **Work** force on any job under the registered program. Any employee listed on a payroll at an apprentice wage rate, who is not registered as above, shall be paid the wage rate determined by the **Comptroller** of the **City** for the classification of **Work** actually performed. The **Contractor** or **Subcontractor** will be required to furnish written evidence of the registration of its program and apprentices as well as all the appropriate ratios and wage rates, for the area of the construction prior to using any apprentices on the **Contract Work**.

35.2 If the total cost of the **Work** under this **Contract** is at least two hundred fifty thousand dollars, all laborers, workers, and mechanics employed in the performance of the **Contract** on the public work site, either by the **Contractor**, **Subcontractor** or other person doing or contracting to do the whole or a part of the work contemplated by the contract, shall be certified prior to performing any **Work** as having successfully completed a course in construction safety and health approved by the United States department of labor's occupational safety and health administration that is at least ten hours in duration.

ARTICLE 36. NO DISCRIMINATION

36.1 The **Contractor** specifically agrees, as required by Labor Law Section 220-e, as amended, that:

36.1.1 In the hiring of employees for the performance of **Work** under this **Contract** or any subcontract hereunder, neither the **Contractor**, **Subcontractor**, nor any person acting on behalf of such **Contractor** or **Subcontractor**, shall by reason of race, creed, color or national origin discriminate against any citizen of the State of New York who is qualified and available to perform the **Work** to which the employment relates;

36.1.2 Neither the **Contractor**, **Subcontractor**, nor any person on its behalf shall, in any manner, discriminate against or intimidate any employee hired for the performance of work under this **Contract** on account of race, creed, color or national origin;

36.1.3 There may be deducted from the amount payable to the **Contractor** by the **City** under this **Contract** a penalty of fifty (\$50.00) dollars for each person for each **Day** during which such person was discriminated against or intimidated in violation of the provisions of this **Contract**; and

36.1.4 This **Contract** may be cancelled or terminated by the **City** and all moneys due or to become due hereunder may be forfeited, for a second or any subsequent violation of the terms or conditions of this article.

36.1.5 The aforesaid provisions of this article covering every **Contract** for or on behalf of the **State** or a municipality for the manufacture, sale or distribution of materials, equipment or supplies shall be limited to operations performed within the territorial limits of the **State of New York**.

36.2 The Contractor specifically agrees, as required by Section 6-108 of the Administrative Code, as amended, that:

36.2.1 It shall be unlawful for any person engaged in the construction, alteration or repair of buildings or engaged in the construction or repair of streets or highways pursuant to a **Contract** with the **City** or engaged in the manufacture, sale or distribution of materials, equipment or supplies pursuant to a **Contract** with the **City** to refuse to employ or to refuse to continue in any employment any person on account of the race, color or creed of such person.

36.2.2 It shall be unlawful for any person or any servant, agent or employee of any person, described in Article 36.1.2, to ask, indicate or transmit, orally or in writing, directly or indirectly, the race, color or creed or religious affiliation of any person employed or seeking employment from such person, firm or corporation.

36.2.3 Breach of the foregoing provisions shall be deemed a violation of a material provision of this **Contract**.

36.2.4 Any person, or the employee, manager or owner of or officer of such firm or corporation who shall violate any of the provisions of this section shall, upon conviction thereof, be punished by a fine of not more than one hundred (\$100.00) dollars or by imprisonment for not more than thirty (30) **Days**, or both.

36.3 This **Contract** is subject to the requirements of Executive Order No. 50 (1980) ("E.O. 50"), as revised, and the Rules and Regulations promulgated thereunder. No **Contract** will be awarded unless and until these requirements have been complied with in their entirety. By signing this **Contract**, the **Contractor** agrees that it:

36.3.1 Will not engage in any unlawful discrimination against any employee or applicant for employment because of race, creed, color, national origin, sex, age, disability, marital status or sexual orientation with respect to all employment decisions including, but not limited to, recruitment, hiring, upgrading, demotion, downgrading, transfer, training, rates of pay or other forms of compensation, layoff, termination, and all other terms and conditions of employment; and

36.3.2 Will not engage in any unlawful discrimination in the selection of **Subcontractors** on the basis of the owner's race, color, creed, national origin, sex, age, disability, marital status or sexual orientation; and

36.3.3 Will state in all solicitations or advertisements for employees placed by or on behalf of the **Contractor** that all qualified applicants will receive consideration for employment without unlawful discrimination based on race, creed, color, national origin, sex, age, citizens status, disability, marital status, sexual orientation, or that it is an equal employment opportunity employer; and

36.3.4 Will send to each labor organization or representative of workers with which it has a Collective Bargaining Agreement or other **Contract** or memorandum of understanding, written

notification of its equal employment opportunity commitments under E.O. 50 and the Rules and Regulations promulgated thereunder; and

36.3.5 Will furnish all information and reports including an Employment Report before the award of the **Contract** which are required by E.O. 50, the Rules and Regulations promulgated thereunder, and orders of the Department of Business Services, Division of Labor Services ("**DLS**") and will permit access to its books, records and accounts by the **DLS** for the purposes of investigation to ascertain compliance with such rules, regulations, and orders.

36.4 The **Contractor** understands that in the event of its noncompliance with the nondiscrimination clauses of this **Contract** or with any of such rules, regulations, or orders, such noncompliance shall constitute a material breach of this **Contract** and noncompliance with E.O. 50 and the Rules and Regulations promulgated thereunder. After a hearing held pursuant to the rules of the **DLS**, the Director of the **DLS** may direct the **Commissioner** to impose any or all of the following sanctions:

36.4.1 Disapproval of the **Contractor**; and/or

36.4.2 Suspension or termination of the **Contract**; and/or

36.4.3 Declaring the **Contractor** in default; and/or

36.4.4 In lieu of any of the foregoing sanctions, the Director of the **DLS** may impose an employment program.

Failure to comply with E.O. 50 and the rules and regulations promulgated thereunder, in one or more instances, may result in the **Agency** declaring the **Contractor** to be non-responsible.

The **Contractor** further agrees that it will refrain from entering into any **Contract** or **Contract** modification subject to E.O. 50 and the rules and regulations promulgated thereunder with a **Subcontractor** who is not in compliance with the requirements of E.O. 50 and the rules and regulations promulgated thereunder.

36.5 The **Contractor** specifically agrees, as required by Section 6-123 of the Administrative Code, that:

36.5.1 The **Contractor** will not engage in any unlawful discriminatory practice in violation of Title VIII of the Administrative Code;

36.5.2 every agreement between the **Contractor** and its **Subcontractors** in excess of \$50,000 shall include a provision that the **Subcontractor** shall not engage in any unlawful discriminatory practice as defined in title viii of the Administrative Code (Section 8-101 et. seq.); and

36.5.3 Any failure to comply with this Article 36.5 may subject the **Contractor** to the remedies set forth in Section 6-123 of the Administrative Code, including, where appropriate, sanctions such as withholding of payment, imposition of an employment program, finding the **Contractor** to be in default, cancellation of the **Contract**, or any other sanction or remedy provided by **Law** or **Contract**.

ARTICLE 37. LABOR LAW REQUIREMENTS

37.1 The **Contractor** shall strictly comply with all applicable provisions of the Labor Law, as amended. Such compliance is a material term of this **Contract**.

37.2 The **Contractor** specifically agrees, as required by Labor Law Section 220 and 220-d, as amended, that:

37.2.1 **Hours of Work:** No laborer, worker, or mechanic in the employ of the **Contractor**, **Subcontractor** or other person doing or contracting to do the whole or a part of the **Work** contemplated by this **Contract** shall be permitted or required to work more than eight (8) hours in any one (1) calendar **Day**, or more than five (5) **Days** in any one (1) week, except as provided in the Labor Law and in cases of extraordinary emergency including fire, flood, or danger to life or property, or in the case of national emergency when so proclaimed by the President of the United States of America.

37.2.2 In situations in which there are not sufficient laborers, workers and mechanics who may be employed to carry on expeditiously the **Work** contemplated by this **Contract** as a result of such restrictions upon the number of hours and days of labor, and the immediate commencement or prosecution or completion without undue delay of the **Work** is necessary for the preservation of the **Site** and/or for the protection of the life and limb of the persons using the same, such laborers, workers, and mechanics shall be permitted or required to work more than eight (8) hours in any one (1) **Day**; or five (5) **Days** in any one (1) week; provided, however, that upon application of any **Contractor**, the **Commissioner** shall have first certified to the Commissioner of Labor of the State of New York (hereinafter "Commissioner of Labor") that such public **Work** is of an important nature and that a delay in carrying it to completion would result in serious disadvantage to the public; and provided, further, that such Commissioner of Labor shall have determined that such an emergency does in fact exist as provided in Labor Law Section 220.2.

37.2.3 Failure of the **Commissioner** to make such a certification to the Commissioner of Labor shall not entitle the **Contractor** to damages for delay or for any cause whatsoever.

37.2.4 **Prevailing Rate of Wages:** The wages to be paid for a legal day's **Work** to laborers, workers, or mechanics employed upon the **Work** contemplated by this **Contract** or upon any materials to be used thereon shall not be less than the "prevailing rate of wage" as defined in Labor **Law** Section 220, and as fixed by the **Comptroller** in the attached Schedule of Wage Rates and in updated schedules thereof. The prevailing wage rates and supplemental benefits to be paid are those in effect at the time the **Work** is being performed.

37.2.5 Requests for interpretation or correction in the Information for Bidders includes all requests for clarification of the classification of trades to be employed in the performance of the **Work** under this **Contract**. In the event that a trade not listed in the **Contract** is in fact employed during the performance of this **Contract**, the **Contractor** shall be required to obtain from the **Agency** the prevailing wage rates and supplementary benefits for the trades used and to complete the performance of this **Contract** at the price at which the **Contract** was awarded.

37.2.6 **Minimum Wages:** Except for employees whose wage is required to be fixed pursuant to Labor Law Section 220, all persons employed by the **Contractor** and any **Subcontractor** in the manufacture or furnishing of the supplies, materials, or equipment, or the furnishing of work, labor, or services, used in the performance of this **Contract**, shall be paid, without subsequent deduction or rebate unless expressly authorized by **Law**, not less than the sum mandated by **Law**. Minimum wages shall be the rates fixed by Federal **Law** and regulations.

37.3 **Working Conditions:** No part of the **Work**, labor or services shall be performed or rendered by the **Contractor** in any plants, factories, buildings or surroundings or under working conditions which are unsanitary or hazardous or dangerous to the health and safety of employees engaged in the performance of this **Contract**. Compliance with the safety, sanitary and factory inspection **Laws** of the state in which the **Work** is to be performed shall be prima facie evidence of compliance with this article.

37.4 Prevailing Wage Enforcement: The **Contractor** agrees to pay for all costs incurred by the **City** in enforcing prevailing wage requirements, including the cost of any investigation conducted by or on behalf of the **Agency** or the **Comptroller**, where the **City** discovers a failure to comply with any of the requirements of this Article 37 by the **Contractor** or its **Subcontractor(s)**. The **Contractor** also agrees, that should it fail or refuse to pay for any such investigation, the **Agency** is hereby authorized to deduct from a **Contractor's** account an amount equal to the cost of such investigation.

37.4.1 The Labor Law Section 220 and Section 220-d, as amended, provide that this **Contract** shall be forfeited and no sum paid for any Work done hereunder on a second conviction for willfully paying less than:

37.4.1(a) The stipulated wage scale as provided in Labor Law Section 220, as amended, or

37.4.1(b) Less than the stipulated minimum hourly wage scale as provided in Labor Law Section 220-d, as amended.

37.4.2 For any breach or violation of either Working Conditions (Article 37.3) and Minimum Wages (Article 37.2.6), the party responsible therefore shall be liable to the **City** for liquidated damages, which may be withheld from any amounts due on any **Contracts** with the **City** of such party responsible, or may be recovered in suits brought by the Corporation Counsel in the name of the **City**, in addition to damage for any other breach of this **Contract**, a sum equal to the amount of any underpayment of wages due to any employee engaged in the performance of this **Contract**. In addition, the **Commissioner** shall have the right to cancel **Contracts** and enter into other **Contracts** for the completion of the original **Contract**, with or without public letting, and the original **Contractor** shall be liable for any additional cost. All sums withheld or recovered as deductions, rebates, refunds, or underpayment of wages hereunder, shall be held in a special deposit account and shall be paid without interest, on order of the **Comptroller**, directly to the employees who have been paid less than minimum rates of pay as set forth herein and on whose account such sums were withheld or recovered, provided that no claims by employees for such payments shall be entertained unless made within two (2) years from the date of actual notice to the **Contractor** of the withholding or recovery of such sums by the **City**.

37.4.3 A determination by the **Comptroller** that a **Contractor** and/or its **Subcontractor** willfully violated Labor Law Section 220 will be forwarded to the **City's** five District Attorneys for review.

37.4.4 The **Contractor's** or **Subcontractor's** noncompliance with this article and Labor Law Section 220, may result in an unsatisfactory performance evaluation and the **Comptroller** may also find and determine that the **Contractor** or **Subcontractor** willfully violated the New York Labor Law.

37.4.4(a) An unsatisfactory performance evaluation for noncompliance with this article may result in a determination that the **Contractor** is a non-responsible bidder on subsequent procurements with the **City** and thus a rejection of a future award of a contract with the **City**, as well as any other sanctions provided for by Law.

37.4.4(b) Labor Law Section 220-b, as amended, provides that when two (2) final determinations have been rendered against a **Contractor** or **Subcontractor** within any consecutive six (6) year period determining that such **Contractor** or **Subcontractor** has willfully failed to pay the prevailing rate of wages or to provide supplements in accordance with the Labor Law and this article, whether such failures were concurrent or consecutive and whether or not such final determinations concerning separate public work projects are rendered

simultaneously, such **Contractor** or **Subcontractor** shall be ineligible to submit a bid on or be awarded any public work contract with the **City** for a period of five (5) years from the second final determination. If the final determination involves the falsification of payroll records or the kickback of wages or supplements, the **Contractor** or **Subcontractor** shall be ineligible to submit a bid on or be awarded any public work contract with the **City** for a period of five (5) years from the first final determination.

37.4.4(c) Labor Law Section 220, as amended, provides that the **Contractor** or **Subcontractor** found to have violated this article may be directed to make payment of wages or supplements including interest found to be due, and the **Contractor** or **Subcontractor** may be directed to make payment of a further sum as a civil penalty in an amount not exceeding twenty-five (25%) percent of the total amount found to be due.

37.5 The **Contractor** and its **Subcontractors** shall within ten (10) **Days** after mailing of a Notice of Award or written order, post in prominent and conspicuous places in each and every plant, factory, building, and structure where employees of the **Contractor** and its **Subcontractors** engaged in the performance of this **Contract** are employed, notices furnished by the **City**, in relation to prevailing wages and supplements, minimum wages and other stipulations contained in Sections 220 and 220-h of the Labor Law, and the **Contractor** and its **Subcontractors** shall continue to keep such notices posted in such prominent and conspicuous places until **Final Acceptance** of the supplies, materials, equipment, or **Work**, labor, or services required to be furnished or rendered under this **Contract**.

37.6 The **Contractor** shall strictly comply with all of the provisions of Articles 37.6.1 through 37.6.5, and provide for all workers, laborers or mechanics in its employ, the following:

37.6.1 Notices Posted At **Site**: Post, in a location designated by the **City**, schedules of prevailing wages and supplements for this **Project**, a copy of all re-determinations of such schedules for the **Project**, the Workers' Compensation Law Section 51 notice, all other notices required by law to be posted at the **Site**, the **City** notice that this **Project** is a public works **Project** on which each worker is entitled to receive the prevailing wages and supplements for the occupation at which he or she is working, and all other notices which the **City** directs the **Contractor** to post. The **Contractor** shall provide a surface for such notices which is satisfactory to the **City**. The **Contractor** shall maintain and keep current such notices in a legible manner and shall replace any notice or schedule which is damaged, defaced, illegible or removed for any reason. The **Contractor** shall post such notices before commencing any **Work** on the **Site** and shall maintain such notices until all **Work** on the **Site** is complete; and

37.6.2 Daily **Site** Sign-in Sheets: Maintain daily **Site** sign-in sheets, and require that **Subcontractors** maintain daily **Site** sign-in sheets for its employees, which include blank spaces for an employee's name to be both printed and signed, job title, date started and Social Security number, the time the employee began **Work** and the time the employee left **Work**, until **Final Acceptance** of the supplies, materials, equipment, or **Work**, labor, or services to be furnished or rendered under this **Contract** unless exception is granted by the Comptroller upon application by the **Agency**. In the alternative, subject to the approval of the CCPO, the **Contractor** and **Subcontractor** may maintain an electronic or biometric sign-in system, which provides the information required by this Article 37.6.2; and

37.6.3 Individual Employee Information Notices: Distribute a notice, to each worker, laborer or mechanic employed under this **Contract**, in a form provided by the **Agency**, that this **Project** is a public work project on which each worker, laborer or mechanic is entitled to receive the prevailing rate of wages and supplements for the occupation at which he or she is working. If the total cost of the **Work** under this **Contract** is at least two hundred fifty thousand dollars, such notice shall also include a statement that, that each worker, laborer or mechanic be certified prior to performing any

Work as having successfully completed a course in construction safety and health approved by the United States department of labor's occupational safety and health administration that is at least ten hours in duration. Such notice shall be distributed to each worker before he or she starts performing any **Work** of this **Contract** and with the first paycheck after July first of each year. Worker, laborer or mechanic includes employees of the **Contractor** and all **Subcontractors** and all employees of suppliers entering the **Site**. At the time of distribution, the **Contractor** shall have each worker, laborer or mechanic sign a statement, in a form provided by the **Agency**, certifying that the worker has received the notice required by this article, which signed statement shall be maintained with the payroll records required by this **Contract**; and

37.6.3.1 The Contractor and each Subcontractor shall notify each worker, laborer or mechanic employed under this **Contract** in writing of the prevailing rate of wages for their particular job classification. Such notification shall be given to every worker, laborer and mechanic on their first pay stub and with every pay stub thereafter; and

37.6.4 **Site Laminated Identification Badges:** Provide laminated identification badges which indicate the worker's, laborer's or mechanic's name, trade, employer's name and employment starting date (month/day/year). Further, require as a condition of employment on the **Site**, that each and every worker, laborer or mechanic wear the laminated identification badge at all times and that it may be seen by any representative of the **City**; and

37.6.5 **Language Other Than English Used On Site:** Provide the **ACCO** notice when three (3) or more employees (worker and/or laborer and/or mechanic) on the **Site**, at any time, speak a language other than English. The **ACCO** will then provide the **Contractor** the notices in Article 37.6.1 in that language or languages as may be required. The **Contractor** is responsible for all distributions under Article 37; and

37.6.6 **Provision of Records:** The **Contractor** and **Subcontractor(s)** shall produce within five (5) **Days** on the **Site** of the **Work** and upon a written order of the **Engineer**, the **Commissioner**, the **ACCO**, the **Agency EAO**, or the **Comptroller**, such records as are required to be kept by this Article 37.6; and

37.6.7 If this **Contract** is for an amount greater than \$1,000,000, checks issued by the **Contractor** to covered employees shall be generated by a payroll service or automated payroll system (an in-house system may be used if approved by the **Agency**). For any subcontract for an amount greater than \$750,000, checks issued by a **Subcontractor** to covered employees shall be generated by a payroll service or automated payroll system (an in-house system may be used if approved by the **Agency**); and

37.6.8 The failure of the **Contractor** or **Subcontractor(s)** to comply with the provisions of Articles 37.6.1 through 37.6.7 may result in the **Commissioner** declaring the **Contractor** or **Subcontractor(s)** in default and/or the withholding of payments otherwise due under the **Contract**.

37.7 The **Contractor** and its **Subcontractors** shall keep such employment and payroll records as are required by Section 220 of the Labor Law.

37.8 At the time the **Contractor** makes application for each partial payment and for final payment, the **Contractor** shall submit to the **Commissioner** a written payroll certification, in the form provided by this **Contract**, of compliance with the prevailing wage, minimum wage and other provisions and stipulations required by Labor Law Section 220 and of compliance with the training requirements of Labor law section 220-h set forth in Article 35.2. This certification of compliance with the provisions of this article shall be a condition precedent to payment and no payment shall be made to the **Contractor** unless and until each such certification shall have been submitted to and received by the **Commissioner**.

37.9 This **Contract** is executed by the **Contractor** with the express warranty and representation that the **Contractor** is not disqualified under the provisions of Section 220 of the Labor Law for the award of the **Contract**.

37.10 Any breach or violation of any of the foregoing shall be deemed a breach or violation of a material provision of this **Contract**, and grounds for cancellation thereof by the **City**.

ARTICLE 38. PAYROLL REPORTS

38.1 The **Contractor** shall maintain on the **Site** the original payrolls or transcripts thereof which the **Contractor** and its **Subcontractor(s)** are required to maintain pursuant to Labor Law Section 220. The **Contractor** and **Subcontractor(s)** shall submit original payrolls or transcripts, subscribed and affirmed by it as true, with each and every payment requisition. The **Contractor** and **Subcontractor(s)** shall produce within five (5) **Days** on the **Site** of the **Work** and upon a written order of the **Engineer**, the **Commissioner**, the **ACCO**, the **Agency EAO**, or the **Comptroller**, such original payrolls or transcripts thereof, subscribed and affirmed by it as true, and the statements signed by each worker pursuant to this Chapter VIII. In addition, the **Contractor** and **Subcontractor(s)** shall furnish to the **Engineer** upon written demand any other information to satisfy the **Engineer** that this Chapter VIII and the Labor Law, as to the hours of employment and rates of wages, are being observed. The **Contractor** shall maintain the payrolls or transcripts thereof for six (6) years from the date of completion of the **Work** on this **Contract**.

38.2 When directed by the **Engineer**, the **Contractor** or **Subcontractor** shall provide the **Engineer** with an attendance sheet for each **Day** on which **Work** is performed on the **Site**. Such attendance sheet shall be in a form acceptable to the **Agency** and shall provide information for employees of the **Contractor** and **Subcontractor(s)**.

ARTICLE 39. DUST HAZARDS

39.1 Should a harmful dust hazard be created in performing the **Work** of this **Contract**, for the elimination of which appliances or methods have been approved by the Board of Standards and Appeals of the City of New York, such appliances and methods shall be installed, maintained, and effectively operated during the continuance of such harmful dust hazard. Failure to comply with this provision after notice shall make this **Contract** void.

CHAPTER IX PARTIAL AND FINAL PAYMENTS

ARTICLE 40. CONTRACT PRICE

40.1 The **City** shall pay, and the **Contractor** agrees to accept, in full consideration for the **Contractor's** performance of the **Work** subject to the terms and conditions hereof, the lump sum price or unit prices which this **Contract** was awarded, plus the amount required to be paid for any **Extra Work** ordered by the **Commissioner** under Article 25, less credit for any **Work** omitted pursuant to Article 29.

ARTICLE 41. BID BREAKDOWN ON LUMP SUM

41.1 Within fifteen (15) **Days** after the commencement date specified in the Notice to Proceed, unless otherwise directed by the **Resident Engineer**, the **Contractor** shall submit to the **Resident Engineer** a breakdown of its bid price, or of lump sums bid for items of the **Contract**, showing the various operations to be performed

under the **Contract**, as directed in the progress schedule required under Article 9, and the value of each of such operations, the total of such items to equal the lump sum price bid. Said breakdown must be approved in writing by the **Resident Engineer**.

41.2 No partial payment will be approved until the **Contractor** submits a bid breakdown that is acceptable to the **Resident Engineer**.

41.3 The **Contractor** shall also submit such other information relating to the bid breakdown as directed by the **Resident Engineer**. Thereafter, the breakdown may be used only for checking the **Contractor's** applications for partial payments hereunder, but shall not be binding upon the **City**, the **Commissioner**, or the **Engineer** for any purpose whatsoever.

ARTICLE 42. PARTIAL PAYMENTS

42.1 From time to time as the **Work** progresses satisfactorily, but not more often than once a month, the **Contractor** may submit to the **Engineer** a requisition for a partial payment in the prescribed form, which shall contain an estimate of the quantity and the fair value of the **Work** done during the payment period.

42.2 Partial payments may be made for materials, fixtures and equipment in advance of their actual incorporation in the **Work**, as the **Commissioner** may approve, and upon the terms and conditions set forth in the General Conditions.

42.3 The **Contractor** shall also submit to the **Commissioner** in connection with every application for partial payment a verified statement in the form prescribed by the **Comptroller** setting forth the information required under Labor Law Section 220-a.

42.4 Within thirty (30) **Days** after receipt of such satisfactory payment application, the **Engineer** will prepare and certify, and the **Commissioner** will approve, a voucher for a partial payment in the amount of such approved estimate, less any and all deductions authorized to be made by the **Commissioner** under the terms of this **Contract** or by **Law**.

ARTICLE 43. PROMPT PAYMENT

43.1 The Prompt Payment provisions of the **PPB** Rules in effect at the time of the Bid will be applicable to payments made under this **Contract**. The provisions require the payment to **Contractor** of interest on payments made after the required payment date, except as set forth in the **PPB** Rules.

43.2 The **Contractor** shall submit a proper invoice to receive payment, except where the **Contract** provides that the **Contractor** will be paid at predetermined intervals without having to submit an invoice for each scheduled payment.

43.3 Determination of interest due will be made in accordance with the **PPB** Rules.

43.4 If the **Contractor** is paid interest, the proportionate share of that interest shall be forwarded by the **Contractor** to its **Subcontractor(s)**.

43.5 The **Contractor** shall pay each **Subcontractor** or **Materialman** not later than seven (7) **Days** after receipt of payment out of amounts paid to the **Contractor** by the **City** for **Work** performed by the **Subcontractor** or **Materialman** under this **Contract**.

43.5.1 If **Contractor** fails to make any payment to any **Subcontractor** or **Materialman** within seven (7) days after receipt of payment by the **City** pursuant to section 43.5 herein, then the **Contractor** shall pay interest on amounts due to such **Subcontractor** or **Materialman** at a rate of interest in effect on the date such payment is made by the **Contractor** computed in accordance with section 756-b (1)(b) of the NY General Business Law. Accrual of interest shall commence on the day immediately following the expiration of the seventh day following receipt of payment to the **Contractor** by the **City** and shall end on the date on which payment is made.

43.6 The **Contractor** shall include in each of its subcontracts a provision requiring each **Subcontractor** to make payment to each of its **Subcontractors** or suppliers for **Work** performed under this **Contract** in the same manner and within the same time period set forth above.

ARTICLE 44. SUBSTANTIAL COMPLETION PAYMENT

44.1 When the **Work** in the opinion of the **Commissioner**, has been substantially but not entirely completed, he/she shall issue a certificate of **Substantial Completion**.

44.2 The **Contractor** shall submit with the **Substantial Completion** requisition:

44.2.1 A Final Verified Statement of any and all alleged claims against the **City** and any pending dispute resolution procedures in accord with the **PPB** Rules and this **Contract**, in any way connected with or arising out of this **Contract** (including those as to which details may have been furnished pursuant to Articles 11, 27, 28, and 30) setting forth with respect to each such claim the total amount thereof, the various items of labor and materials included therein, and the alleged value of each item; and if the alleged claim be one for delay, the alleged cause of each such delay, the period or periods of time, giving the dates when the **Contractor** claims the performance of the **Work** or a particular part thereof was delayed, and an itemized statement and breakdown of the amount claimed for each such delay.

44.2.1(a) With respect to each such claim, the **Commissioner**, the **Comptroller** and, in the event of litigation, the Corporation Counsel of the **City** shall have the same right to inspect, and to make extracts or copies of, the **Contractor's** books, vouchers, records, etc., as is referred to in Articles 11, 27, 28, and 30. Nothing contained in this article is intended to or shall relieve the **Contractor** from the obligation of complying strictly with Articles 11, 27, 28, and 30. The **Contractor** is warned that unless such claims are completely set forth as herein required, the **Contractor** upon acceptance of the **Substantial Completion** payment pursuant to this article, will have waived any such claims.

44.2.2 A **Final Approved Punch List**.

44.2.3 Where required, a request for a substantial or final extension of time.

44.3 The **Commissioner** shall issue a voucher calling for payment of any part or all of the balance due for **Work** performed under the **Contract**, including monies retained under Article 21, less any and all deductions authorized to be made by the **Commissioner**, under this **Contract** or by **Law**, and less twice the amount the **Commissioner** considers necessary to ensure the completion of the balance of the **Work** by the **Contractor**. Such a payment shall be considered a Partial and not a Final Payment. No **Substantial Completion** payment shall be made under this article where the **Contractor** shall fail to complete the **Work** within the time fixed for such completion in the Schedule A of the General Conditions, or within the time to which completion may have been extended, until an extension or extensions of time for the completion of **Work** have been acted upon pursuant to Article 13.

44.4 No further partial payments shall be made to the **Contractor** after the **Commissioner** issues a Certificate of **Substantial Completion**, except the **Substantial Completion** payment and **Contractor's** requisition that were properly filed with the **Commissioner** prior to the date of **Substantial Completion**; however, the **Commissioner** may grant a waiver for further partial payments after the date of **Substantial Completion** to permit payments for change order **Work** and/or release of retainage and deposits pursuant to Articles 21 and 24. Such waiver shall be in writing.

44.5 The **Contractor** acknowledges that nothing contained in this article is intended to or shall in any way diminish the force and effect of Article 13.

ARTICLE 45. FINAL PAYMENT

45.1 After completion and **Final Acceptance** of the **Work**, the **Contractor** shall submit all required certificates and documents, together with a requisition for the balance claimed to be due under the **Contract**, less the amount authorized to be retained for maintenance under Article 24. A verified statement similar to that required in connection with applications for partial payments shall also be submitted to the **Commissioner**.

45.2 Amended Verified Statement of Claims: The **Contractor** shall also submit with the final requisition any amendments to the final verified statement of any and all alleged claims against the **City**, and any pending dispute resolution procedures in accord with the **PPB Rules** and this **Contract**, in any way connected with or arising out of this **Contract** (including those as to which details may have been furnished pursuant to Articles 11, 27, 28, and 30.) that have occurred subsequent to **Substantial Completion**, setting forth with respect to each such claim the total amount thereof, the various items of labor and materials included therein, and the alleged value of each such item; and if the alleged claim be one for delay, the alleged cause of each such delay, the period or periods of time, giving the dates when the **Contractor** claims the performance of the **Work** or a particular part thereof was delayed, and an itemized statement and breakdown of the amount claimed for each such delay. With reference to each such claim, the **Commissioner**, the **Comptroller** and, in the event of litigation, the Corporation Counsel of the **City** shall have the same right to inspect, and to make extracts or copies of, the **Contractor's** books, vouchers, records, etc., as is referred to in Articles 11, 27, 28, and 30. Nothing contained in this article, is entitled to or shall relieve the **Contractor** from the obligation of complying strictly with Articles 11, 27, 28, and 30. The **Contractor** is warned that unless such claims are completely set forth as herein required, the **Contractor**, upon acceptance of the Final Payment pursuant to Article 46, will have waived any such claims.

45.3 Preparation of Final Voucher: Upon determining the balance due hereunder other than on account of claims, the **Engineer** will prepare and certify, for the **Commissioner's** approval, a voucher for final payment in that amount less any and all deductions authorized to be made by the **Commissioner** under this **Contract** or by **Law**. In the case of a lump sum **Contract**, the **Commissioner** shall certify the voucher for final payment within thirty (30) **Days** from the date of completion and acceptance of the **Work**, provided all requests for extensions of time have been acted upon.

45.3.1 All prior certificates and vouchers upon which partial payments were made, being merely estimates made to enable the **Contractor** to prosecute the **Work** more advantageously, shall be subject to correction in the final voucher, and the certification of the **Engineer** thereon and the approval of the **Commissioner** thereof, shall be conditions precedent to the right of the **Contractor** to receive any money hereunder. Such final voucher shall be binding and conclusive upon the **Contractor**.

45.3.2 Payment pursuant to such final voucher, less any deductions authorized to be made by the **Commissioner** under this **Contract** or by **Law**, shall constitute the final payment, and shall be made by the **Comptroller** within thirty (30) **Days** after the filing of such voucher in his/her office.

45.4 The **Contractor** acknowledges that nothing contained in this article is intended to or shall in any way diminish the force and effect of Article 13.

ARTICLE 46. ACCEPTANCE OF FINAL PAYMENT

46.1 The acceptance by the **Contractor**, or by anyone claiming by or through it, of the final payment, whether such payment be made pursuant to any judgment of any Court, or otherwise, shall constitute and operate as a release to the **City** from any and all claims of and liability to the **Contractor** for anything heretofore done or furnished for the **Contractor** relating to or arising out of this **Contract** and the **Work** done hereunder, and for any prior act, neglect or default on the part of the **City** or any of its officers, agents or employees, excepting only a claim against the **City** for the amounts deducted or retained in accordance with the terms and provisions of this **Contract** or by **Law**, and excepting any claims, not otherwise waived, or any pending dispute resolution procedures which are contained in the verified statement filed with the **Contractor's** substantial and final requisitions pursuant to Articles 44 and 45.

46.2 The **Contractor** is warned that the execution by it of a release, in connection with the acceptance of the final payment, containing language purporting to reserve claims other than those herein specifically excepted from the operation of this article, or those for amounts deducted by the **Commissioner** from the final requisition or by the **Comptroller** from the final payment as certified by the **Engineer** and approved by the **Commissioner**, shall not be effective to reserve such claims, anything stated to the **Contractor** orally or in writing by any officer, agent or employee of the **City** to the contrary notwithstanding.

46.3 Should the **Contractor** refuse to accept the final payment as tendered by the **Comptroller**, it shall constitute a waiver of any right to interest thereon.

46.4 The **Contractor**, however, shall not be barred from commencing an action for breach of **Contract** under this provision to the extent permitted by **Law** and by the terms of the **Contract** provided that a detailed and verified statement of claim is served upon the contracting **Agency** and **Comptroller** not later than forty (40) **Days** after the mailing of such final payment. The statement shall specify the items upon which the claim will be based and any such claim shall be limited to such items.

ARTICLE 47. APPROVAL BY PUBLIC DESIGN COMMISSION

47.1 All works of art, including paintings, mural decorations, stained glass, statues, bas-reliefs and other sculptures, monuments, fountains, arches, and other structures of a permanent character intended for ornament or commemoration, and every design of the same to be used in the performance of this **Contract**, and the design of all bridges, approaches, buildings, gates, fences, lamps, or structures to be erected, pursuant to the terms of this **Contract**, shall be submitted to the Art Commission, d/b/a the Public Design Commission of the City of New York, and shall be approved by the Public Design Commission prior to the erection or placing in the position of the same. The final payment shall not become due or payable under this **Contract** unless and until the Public Design Commission shall certify that the design for the **Work** herein contracted for has been approved by the said Public Design Commission, and that the same has been executed in substantial accordance with the design so approved, pursuant to the provisions of Chapter 37, Section 854 of the **City** Charter, as amended.

CHAPTER X
CONTRACTOR'S DEFAULT

ARTICLE 48. COMMISSIONER'S RIGHT TO DECLARE CONTRACTOR IN DEFAULT

48.1 In addition to those instances specifically referred to in other Articles herein, the **Commissioner** shall have the right to declare the **Contractor** in default of this **Contract** if:

48.1.1 The **Contractor** fails to commence **Work** when notified to do so by the **Commissioner**; or if

48.1.2 The **Contractor** shall abandon the **Work**; or if

48.1.3- The **Contractor** shall refuse to proceed with the **Work** when and as directed by the **Commissioner**; or if

48.1.4 The **Contractor** shall, without just cause, reduce its working force to a number which, if maintained, would be insufficient, in the opinion of the **Commissioner**, to complete the **Work** in accordance with the Progress Schedule; or if

48.1.5 The **Contractor** shall fail or refuse to increase sufficiently such working force when ordered to do so by the **Commissioner**; or if

48.1.6 The **Contractor** shall sublet, assign, transfer, convert or otherwise dispose of this **Contract** other than as herein specified; or sell or assign a majority interest in the **Contractor**; or if

48.1.7 The **Contractor** fails to secure and maintain all required insurance; or if

48.1.8 A receiver or receivers are appointed to take charge of the **Contractor's** property or affairs; or if

48.1.9 The **Commissioner** shall be of the opinion that the **Contractor** is or has been unnecessarily or unreasonably or willfully delaying the performance and completion of the **Work**, or the award of necessary subcontracts, or the placing of necessary material and equipment orders; or if

48.1.10 The **Commissioner** shall be of the opinion that the **Contractor** is or has been willfully or in bad faith violating any of the provisions of this **Contract**; or if

48.1.11 The **Commissioner** shall be of the opinion that the **Work** cannot be completed within the time herein provided therefor or within the time to which such completion may have been extended; provided, however, that the impossibility of timely completion is, in the **Commissioner's** opinion, attributable to conditions within the **Contractor's** control; or if

48.1.12 The **Work** is not completed within the time herein provided therefor or within the time to which the **Contractor** may be entitled to have such completion extended; or if

48.1.13 Any statement or representation of the **Contractor** in the **Contract** or in any document submitted by the **Contractor** with respect to the **Work**, the **Project**, or the **Contract** (or for purposes of securing the **Contract**) was untrue or incorrect when made.

48.1.14 The **Contractor** or any of its officers, directors, partners, five (5%) percent shareholders, principals, or other persons substantially involved in its activities, commits any of the acts or omissions specified as the grounds for debarment in the **PPB** Rules.

48.2 Before the **Commissioner** shall exercise his/her right to declare the **Contractor** in default, the **Commissioner** shall give the **Contractor** an opportunity to be heard, upon not less than two (2) **Days** notice.

ARTICLE 49. EXERCISE OF THE RIGHT TO DECLARE DEFAULT

49.1 The right to declare in default for any of the grounds specified or referred to in Article 48 shall be exercised by sending the **Contractor** a notice, signed by the **Commissioner**, setting forth the ground or grounds upon which such default is declared (hereinafter referred to as a "Notice of Default").

49.2 The **Commissioner's** determination that the **Contractor** is in default shall be conclusive, final and binding on the parties and such a finding shall preclude the **Contractor** from commencing a plenary action for any damages relating to the **Contract**. If the **Contractor** protests the determination of the **Commissioner**, the **Contractor** may commence a lawsuit in a court of competent jurisdiction of the State of New York under Article 78 of the New York Civil Practice Law and Rules.

ARTICLE 50. QUITTING THE SITE

50.1 Upon receipt of such notice the **Contractor** shall immediately discontinue all further operations under this **Contract** and shall immediately quit the **Site**, leaving untouched all plant, materials, equipment, tools and supplies then on the **Site**.

ARTICLE 51. COMPLETION OF THE WORK

51.1 The **Commissioner**, after declaring the **Contractor** in default, may then have the **Work** completed by such means and in such manner, by **Contract** with or without public letting, or otherwise, as he/she may deem advisable, utilizing for such purpose such of the **Contractor's** plant, materials, equipment, tools and supplies remaining on the **Site**, and also such **Subcontractors**, as he/she may deem advisable.

51.2 After such completion, the **Commissioner** shall make a certificate stating the expense incurred in such completion, which shall include the cost of re-letting and also the total amount of liquidated damages (at the rate provided for in the **Contract**) from the date when the **Work** should have been completed by the **Contractor** in accordance with the terms hereof to the date of actual completion of the **Work**. Such certificate shall be binding and conclusive upon the **Contractor**, its Sureties, and any person claiming under the **Contractor**, as to the amount thereof.

51.3 The expense of such completion, including any and all related and incidental costs, as so certified by the **Commissioner**, and any liquidated damages assessed against the **Contractor**, shall be charged against and deducted out of monies which are earned by the **Contractor** prior to the date of default. Should the expense of such completion, as certified by the **Commissioner**, exceed the total sum which would have been payable under the **Contract** if it had been completed by the **Contractor**, any excess shall be paid by the **Contractor**.

ARTICLE 52. PARTIAL DEFAULT

52.1 In case the **Commissioner** shall declare the **Contractor** in default as to a part of the **Work** only, the **Contractor** shall discontinue such part, shall continue performing the remainder of the **Work** in strict conformity with the terms of this **Contract**, and shall in no way hinder or interfere with any **Other Contractor(s)** or persons whom the **Commissioner** may engage to complete the **Work** as to which the **Contractor** was declared in default.

52.2 The provisions of this Chapter relating to declaring the **Contractor** in default as to the entire **Work** shall be equally applicable to a declaration of partial default, except that the **Commissioner** shall be entitled to utilize for completion of the part of the **Work** as to which the **Contractor** was declared in default only such plant, materials, equipment, tools and supplies as had been previously used by the **Contractor** on such part.

ARTICLE 53. PERFORMANCE OF UNCOMPLETED WORK

53.1 In completing the whole or any part of the **Work** under the provision of this Chapter X, the **Commissioner** shall have the power to depart from or change or vary the terms and provisions of this **Contract**, provided, however, that such departure, change or variation is made for the purpose of reducing the time or expense of such completion. Such departure, change or variation, even to the extent of accepting a lesser or different performance, shall not affect the conclusiveness of the **Commissioner's** certificate of the cost of completion referred to in Article 51, nor shall it constitute a defense to an action to recover the amount by which such certificate exceeds the amount which would have been payable to the **Contractor** hereunder but for its default.

ARTICLE 54. OTHER REMEDIES

54.1 In addition to the right to declare the **Contractor** in default pursuant to this Chapter X, the **Commissioner** shall have the absolute right, in his/her sole discretion and without a hearing, to complete or cause to complete in the same manner as described in Articles 51 and 53, any or all unsatisfactory or uncompleted punch list **Work** that remains after the completion date specified in the Final Approved Punch List. A written notice of the exercise of this right shall be sent to the **Contractor** who shall immediately quit the **Site** in accordance with the provisions of Article 50.

54.2 The previous provisions of this Chapter X shall be in addition to any and all other legal or equitable remedies permissible in the premises.

54.3 The exercise by the **City** of any remedy set forth herein shall not be deemed a waiver by the **City** of any other legal or equitable remedy contained in this **Contract** or provided under **Law**.

54.4 The expense of such completion, including any and all related and incidental costs, as so certified by the **Commissioner**, shall be charged against and deducted out of monies which have been earned by the **Contractor** prior to the date of the exercise of the right set forth in Article 54.1; the balance of such monies, if any, subject to the other provisions of this **Contract**, to be paid to the **Contractor** without interest after such completion. Should the expense of such completion, as certified by the **Commissioner**, exceed the total sum which would have been payable under the **Contract** if it had been completed by the **Contractor**, any excess shall be paid by the **Contractor**.

CHAPTER XI MISCELLANEOUS PROVISIONS

ARTICLE 55. CONTRACTOR'S WARRANTIES

55.1 In consideration of, and to induce, the award of this **Contract** to the **Contractor**, the **Contractor** represents and warrants:

55.1.1 That it is financially solvent, sufficiently experienced and competent to perform the **Work**;
and

55.1.2 That the facts stated in its bid and the information given by it pursuant to the Information for Bidders is true and correct in all respects; and

55.1.3 That it has read and complied with all requirements set forth in the **Contract**.

ARTICLE 56. CLAIMS AND ACTIONS THEREON

56.1 Any claim, that is not subject to dispute resolution under the PPB Rules or this **Contract**, against the **City** for damages for breach of **Contract** shall not be made or asserted in any lawsuit, unless the **Contractor** shall have strictly complied with all requirements relating to the giving of notice and of information with respect to such claims, as herein before provided.

56.2 Nor shall any lawsuit be instituted or maintained on any such claims unless such lawsuit is commenced within six (6) months after the date the **Commissioner** issues a Certificate of **Substantial Completion** pursuant to Article 44; except that:

56.2.1 Any claims arising out of events occurring after the date the **Commissioner** issues a Certificate of **Substantial Completion** and before **Final Acceptance** of the **Work** shall be asserted within six (6) months of **Final Acceptance** of the **Work**;

56.2.2 Any claims for monies deducted, retained or withheld under the provisions of this **Contract** shall be asserted within six (6) months after the date when such monies becomes due and payable hereunder; and

56.2.3 If the **Commissioner** exercises his/her right to terminate the **Contract** pursuant to Article 64, any such lawsuit shall be commenced within six (6) months of the date the **Commissioner** exercises said right.

ARTICLE 57. INFRINGEMENT

57.1 The **Contractor** shall be solely responsible for and shall indemnify the **City** against any and all claims and judgments for damages for any infringement of copyright and patents or use of patented articles, tools, materials, equipment, appliances or processes in the performance or completion of the **Work**, including all costs and expenses which the **City** shall or may incur or be obligated to pay by reason thereof.

ARTICLE 58. NO CLAIM AGAINST OFFICERS, AGENTS OR EMPLOYEES

58.1 No claim whatsoever shall be made by the **Contractor** against any officer, agent or employee of the **City** for, or on account of, anything done or omitted to be done in connection with this **Contract**.

ARTICLE 59. SERVICES OF NOTICES

59.1 The **Contractor** hereby designates the business address specified in its bid, as the place where all notices, directions or other communications to the **Contractor** may be delivered, or to which they may be mailed. Actual delivery of any such notice, direction or communication to the aforesaid place, or depositing it in a postpaid wrapper addressed thereto in any post office box (P.O. Box) regularly maintained by the United States Postal Service, shall be conclusively deemed to be sufficient service thereof upon the **Contractor** as the date of such delivery or deposit.

59.2 Such address may be changed at any time by an instrument in writing, executed and acknowledged by the **Contractor**, and delivered to the **Commissioner**.

59.3 Nothing herein contained shall, however, be deemed to preclude or render inoperative the service of any notice, direction or other communication upon the **Contractor** personally, or, if the **Contractor** is a corporation, upon any officer thereof.

ARTICLE 60. UNLAWFUL PROVISIONS DEEMED STRICKEN FROM CONTRACT

60.1 If this **Contract** contains any unlawful provision not an essential part of the **Contract** and which shall not appear to have been a controlling or material inducement to the making thereof, the same shall be deemed of no effect and shall, upon notice by either party, be deemed stricken from the **Contract** without affecting the binding force of the remainder.

ARTICLE 61. ALL LEGAL PROVISIONS DEEMED INCLUDED

61.1 It is the intent and understanding of the parties to this **Contract** that each and every provision of **Law** required to be inserted in this **Contract** shall be and is inserted herein. Furthermore, it is hereby stipulated that every such provision is to be deemed to be inserted herein, and if, through mistake or otherwise, any such provision is not inserted, or is not inserted in correct form, then this **Contract** shall forthwith upon the application of either party be amended by such insertion so as to comply strictly with the **Law** and without prejudice to the rights of either party hereunder.

ARTICLE 62. TAX EXEMPTION

62.1 The **City** is exempt from payment of Federal, State, local taxes and Sales and Compensation Use Taxes of the State of New York and of cities and counties on all materials and supplies sold to the **City** pursuant to the provisions of this **Contract**. These taxes are not to be included in bids. However, this exemption does not apply to tools, machinery, equipment or other property leased by or to the **Contractor** or a **Subcontractor**, or to supplies and materials which even though they are consumed, are not incorporated into the completed **Work** (consumable supplies), and the **Contractor** and its **Subcontractors** shall be responsible for and pay any and all applicable taxes, including Sales and Compensation Use Taxes, on such leased tools, machinery, equipment or other property and upon all such unincorporated supplies and materials.

62.2 The **Contractor** agrees to sell and the **City** agrees to purchase all supplies and materials, other than consumable supplies, required, necessary or proper for or incidental to the construction of the **Project** covered by this **Contract**. The sum paid under this **Contract** for such supplies and materials shall be in full payment and consideration for the sale of such supplies and materials herein.

62.2.1 The **Contractor** agrees to construct the **Project** and to perform all **Work**, labor and services rendered, necessary, proper or incidental thereto for the sum shown in the bid for the performance of such **Work**, labor and services, and the sum so paid pursuant to this **Contract** for such **Work**, labor, etc., shall be in full consideration for the performance by the **Contractor** of all its duties and obligations under this **Contract** in connection with said **Work** and labor.

62.3 The purchase by the **Contractor** of the supplies and materials sold hereunder shall be a purchase or procurement for resale and therefore not subject to the New York State or **City** Sales or Compensation Use Taxes or any such taxes of cities or counties. The sale of such supplies and materials by the **Contractor** to the **City** is exempt from the aforesaid sales or compensating use taxes. With respect to such supplies and materials, the

Contractor, at the request of the **City**, shall furnish to the **City** such Bills of Sale and other instruments as may be required by the **City**, properly executed, acknowledged and delivered assuring to the **City** title to such supplies and materials, free of liens and/or encumbrances, and the **Contractor** shall mark or otherwise identify all such materials as the property of the **City**.

62.4 Title to all materials to be sold by the **Contractor** to the **City** pursuant to the provisions of the **Contract** shall immediately vest in and become the sole property of the **City** upon delivery of such supplies and materials to the **Site** and prior to its becoming a part of the permanent structure and/or construction. Notwithstanding such transfer of title, the **Contractor** shall have the full and continuing responsibility to install such materials and supplies in accordance with the provisions of this **Contract**, protect them, maintain them in a proper condition and forthwith repair, replace and make good any damage thereto, theft or disappearance thereof, and furnish additional materials in place of any that may be lost, stolen or rendered unusable, without cost to the **City**, until such time as the **Work** covered by the **Contract** is fully accepted by the **City**. Such transfer of title shall in no way affect any of the **Contractor's** obligations hereunder. In the event that, after title has passed to the **City**, any of such supplies and materials are rejected as being defective or otherwise unsatisfactory, title to all such supplies and materials shall be deemed to have been transferred back to the **Contractor**.

62.5 The purchase by **Subcontractors** of supplies and materials to be sold hereunder shall also be a purchase or procurement for resale to the **Contractor** (either directly or through other **Subcontractors**) and therefore not subject to the aforesaid Sales or Compensation Use Taxes, provided that the subcontract agreements provide for the resale of such supplies and materials prior to and separate and apart from the incorporation of such supplies and materials into the permanent structure and/or construction and that such subcontract agreements are in a form similar to this **Contract** with respect to the separation of the sale of materials from the **Work** and labor, services, consumable supplies and any other matters to be provided, and provided further that the subcontract agreements provide separate prices for materials and all other services and matters. Such separation shall actually be followed in practice, including the separation of payments for supplies and materials from the payments for other **Work** and labor and other things to be provided.

62.6 The **Contractor** and its **Subcontractors** and Materialmen shall obtain any and all necessary **Contractor** Exempt Purchase Certificates or Resale Certificates from the appropriate governmental **Agency** or **Agencies**, and furnish a **Contractor** Exempt Purchase Certificate or Resale Certificate to all persons, firms or corporations from which they purchase supplies and materials for the performance of the **Work** covered by this **Contract**.

62.7 In the event any of the provisions of this article shall be deemed to be in conflict with any other provisions of this **Contract** or create any ambiguity, then the provisions of this article shall control.

ARTICLE 63. INVESTIGATION(S) CLAUSE

63.1 The parties to this **Contract** agree to cooperate fully and faithfully with any investigation, audit or inquiry conducted by a United States, a State of New York (State) or a **City** governmental **Agency** or authority that is empowered directly or by designation to compel the attendance of witnesses and to examine witnesses under oath, or conducted by the Inspector General of a governmental **Agency** that is a party in interest to the transaction, submitted bid, submitted proposal, **Contract**, lease, permit or license that is the subject of the investigation, audit or inquiry.

63.2 If any person who has been advised that his/her statement, and any information from such statement, will not be used against him/her in any subsequent criminal proceeding refuses to testify before a grand jury or other governmental **Agency** or authority empowered directly or by designation to compel the attendance of witnesses and to examine witnesses under oath concerning the award of or performance under any transaction, agreement, lease, permit, **Contract**, or license entered into with the **City**, the State, or any political subdivision or

public authority thereof, or the Port Authority of New York and New Jersey, or any local development corporation within the **City**, or any public benefit corporation organized under the **Laws** of the State of New York, or;

63.3 If any person refuses to testify for a reason other than the assertion of his/her privilege against self incrimination in an investigation, audit or inquiry conducted by a **City** or State governmental **Agency** or authority empowered directly or by designation to compel the attendance of witnesses and to take testimony under oath, or by the Inspector General of the governmental **Agency** that is a party in interest in, and is seeking testimony concerning the award of, or performance under any transaction, agreement, lease, permit, **Contract**, or license entered into with the **City**, the State, or any political subdivision thereof or any local development corporation within the **City**, then;

63.4 The **Commissioner** whose **Agency** is a party in interest to the transaction, submitted bid, submitted proposal, **Contract**, lease, permit, or license shall convene a hearing, upon not less than five (5) days written notice to the parties involved to determine if any penalties should attach for the failure of a person to testify.

63.5 If any non-governmental party to the hearing requests an adjournment, the **Commissioner** who convened the hearing may, upon granting the adjournment, suspend any **Contract**, lease, permit, or license, pending the final determination pursuant to Article 63.7 without the **City** incurring any penalty or damages for delay or otherwise.

63.6 The penalties which may attach after a final determination by the **Commissioner** may include but shall not exceed:

63.6.1 The disqualification for a period not to exceed five (5) years from the date of an adverse determination for any person, or any entity of which such person was a member at the time the testimony was sought, from submitting bids for, or transacting business with, or entering into or obtaining any **Contract**, lease, permit or license with or from the **City**; and/or

63.6.2 The cancellation or termination of any and all such existing **City Contracts**, leases, permits or licenses that the refusal to testify concerns and that have not been assigned as permitted under this **Agreement**, nor the proceeds of which pledged, to an unaffiliated and unrelated institutional lender for fair value prior to the issuance of the notice scheduling the hearing, without the **City** incurring any penalty or damages on account of such cancellation or termination; monies lawfully due for goods delivered, **Work** done, rentals, or fees accrued prior to the cancellation or termination shall be paid by the **City**.

63.7 The **Commissioner** shall consider and address in reaching his/her determination and in assessing an appropriate penalty the factors in Articles 63.7.1 and 63.7.2. The **Commissioner** may also consider, if relevant and appropriate, the criteria established in Articles 63.7.3 and 63.7.4, in addition to any other information which may be relevant and appropriate:

63.7.1 The party's good faith endeavors or lack thereof to cooperate fully and faithfully with any governmental investigation or audit, including but not limited to the discipline, discharge, or disassociation of any person failing to testify, the production of accurate and complete books and records, and the forthcoming testimony of all other members, agents, assignees or fiduciaries whose testimony is sought.

63.7.2 The relationship of the person who refused to testify to any entity that is a party to the hearing, including but not limited to, whether the person whose testimony is sought has an ownership interest in the entity and/or the degree of authority and responsibility the person has within the entity.

63.7.3 The nexus of the testimony sought to the subject entity and its **Contracts**, leases, permits or licenses with the **City**.

63.7.4 The effect a penalty may have on an unaffiliated and unrelated party or entity that has a significant interest in an entity subject to penalties under Article 63.6, provided that the party or entity has given actual notice to the **Commissioner** upon the acquisition of the interest, or at the hearing called for in Article 63.4, gives notice and proves that such interest was previously acquired. Under either circumstance the party or entity shall present evidence at the hearing demonstrating the potential adverse impact a penalty will have on such person or entity.

63.8 Definitions:

63.8.1 The term "license" or "permit" as used herein shall be defined as a license, permit, franchise or concession not granted as a matter of right.

63.8.2 The term "person" as used herein shall be defined as any natural person doing business alone or associated with another person or entity as a partner, director, officer, principal or employee.

63.8.3 The term "entity" as used herein shall be defined as any firm, partnership, corporation, association, joint venture, or person that receives monies, benefits, licenses, leases, or permits from or through the **City** or otherwise transacts business with the **City**.

63.8.4 The term "member" as used herein shall be defined as any person associated with another person or entity as a partner, director, officer, principal or employee.

63.9 In addition to and notwithstanding any other provision of this **Contract**, the **Commissioner** may in his/her sole discretion terminate this **Contract** upon not less than three (3) **Days** written notice in the event the **Contractor** fails to promptly report in writing to the **Commissioner** of the Department of Investigations ("DOI") of the **City** any solicitation of money, goods, requests for future employment or other benefit or thing of value, by or on behalf of any employee of the **City** or other person, firm, corporation or entity for any purpose which may be related to the procurement or obtaining of this **Contract** by the **Contractor**, or affecting the performance of this **Contract**.

ARTICLE 64. TERMINATION BY THE CITY

64.1 In addition to termination pursuant to any other article of this **Contract**, the **Commissioner** may, at any time, terminate this **Contract** by written notice to the **Contractor**. In the event of termination, the **Contractor** shall, upon receipt of such notice, unless otherwise directed by the **Commissioner**:

64.1.1 Stop **Work** on the date specified in the notice;

64.1.2 Take such action as may be necessary for the protection and preservation of the **City's** materials and property;

64.1.3 Cancel all cancelable orders for material and equipment;

64.1.4 Assign to the **City** and deliver to the **Site** or another location designated by the **Commissioner**, any non-cancelable orders for material and equipment that is not capable of use except in the performance of this **Contract** and has been specifically fabricated for the sole purpose of this **Contract** and not incorporated in the **Work**;

64.1.5 Take no action which will increase the amounts payable by the **City** under this **Contract**.

64.2 In the event of termination by the **City** pursuant to this article, payment to the **Contractor** shall be in accordance with Articles 64.2.1, 64.2.2 or 64.2.3, to the extent that each respective article applies.

64.2.1 Lump Sum Contracts or Items: On all lump sum **Contracts**, or on lump sum items in a **Contract**, the **City** will pay the **Contractor** the sum of Articles 64.2.1(a) and 64.2.1(b), less all payments previously made pursuant to this **Contract**. On lump sum **Contracts** only, the **City** will also pay the **Contractor** an additional sum as provided in 64.2.1(c).

64.2.1(a) For **Work** completed prior to the notice of termination, the **Contractor** shall be paid a pro rata portion of the lump sum bid amount, plus approved change orders, based upon the percent completion of the **Work**, as determined by the **Commissioner**. For the purpose of determining the pro rata portion of the lump sum bid amount to which the **Contractor** is entitled, the Bid Breakdown submitted in accordance with Article 41 shall be considered, but shall not be dispositive. The **Commissioner's** determination hereunder shall be final, binding and conclusive.

64.2.1(b) For non-cancelable material and equipment, less salvage value, that is not capable of use except in the performance of this **Contract** and has been specifically fabricated for the sole purpose of this **Contract**, but not yet incorporated in the **Work**, the **Contractor** shall be paid the lesser of:

64.2.1(b)(i) The direct cost, as defined in Article 64.2.4; or

64.2.1(b)(ii) The fair and reasonable value, whichever is less, of such material and equipment, plus necessary and reasonable delivery costs.

64.2.1(b)(iii) In addition, the **Contractor** shall be paid five (5%) percent of Article 64.2.1(b)(i) or Article 64.2.1(b)(ii), whichever applies.

64.2.1(c) Except as otherwise provided in Article 64.2.1(d), on all lump sum **Contracts**, the **Contractor** shall be paid the percentage indicated below applied to the difference between the total lump sum bid amount and the total of all payments made prior to the notice of termination plus all payments allowed pursuant to Articles 64.2.1(a) and 64.2.1(b):

64.2.1(c)(i) Five (5%) percent of the first five million (\$5,000,000.) dollars; and

64.2.1(c)(ii) Three (3%) percent of any amount between five million (\$5,000,000.) dollars and fifteen million (\$15,000,000.) dollars; plus

64.2.1(c)(iii) One (1%) percent of any amount over fifteen million (\$15,000,000.) dollars.

64.2.1(d) In the event the **City** terminates a lump sum **Contract** pursuant to this article within ninety (90) days after registration of the **Contract** with the **Comptroller**, the **Contractor** shall be paid one (1%) percent of the difference between the lump sum bid amount and the total of all payments made pursuant to this article.

64.2.2 Unit Price Contracts or Items: On all unit price **Contracts**, or on unit price items in a **Contract**, the **City** will pay the **Contractor** the sum of Articles 64.2.2(a) and 64.2.2(b), less all payments previously made pursuant to this **Contract**:

64.2.2(a) For all completed units, the unit price stated in the **Contract**, and

64.2.2(b) For units that have been ordered but are only partially completed, the **Contractor** will be paid:

64.2.2(b)(i) A pro rata portion of the unit price stated in the **Contract** based upon the percent completion of the unit and

64.2.2(b)(ii) For non-cancelable material and equipment, payment will be made pursuant to Article 64.2.1(b).

64.2.3 Time and Material Contracts or Items: On all **Contracts** or items in a **Contract** where time and material records are specified as the basis for payment of the **Work**, the **Contractor** shall be paid in accordance with Article 26, less all payments previously made pursuant to this **Contract**.

64.2.4 Direct Costs: Direct Costs as used in this article shall mean:

64.2.4(a) The actual purchase price of material and equipment, plus necessary and reasonable delivery costs,

64.2.4(b) The actual cost of labor involved in construction and installation at the **Site**, and

64.2.4(c) The actual cost of necessary bonds and insurance purchased pursuant to requirements of this **Contract** less any amounts that have been or should be refunded by the **Contractor's** sureties or insurance carriers.

64.2.4(d) Direct Cost shall not include overhead.

64.3 In no event shall any payments under this article exceed the **Contract** price for such items.

64.4 All payments pursuant to this article shall be in the nature of liquidated damages and shall be accepted by the **Contractor** in full satisfaction of all claims against the **City**.

64.5 The **City** may deduct or set off against any sums due and payable pursuant to this article, any deductions authorized by this **Contract** or by **Law** (including but not limited to liquidated damages) and any claims it may have against the **Contractor**. The **City's** exercise of the right to terminate the **Contract** pursuant to this article shall not impair or otherwise effect the **City's** right to assert any claims it may have against the **Contractor** in a plenary action.

64.6 Where the **Work** covered by the **Contract** has been substantially completed, as determined in writing by the **Commissioner**, termination of the **Work** shall be handled as an omission of **Work** pursuant to Articles 29 and 33, in which case a Change Order will be issued to reflect an appropriate reduction in the **Contract** Sum, or if the amount is determined after final payment, such amount shall be paid by the **Contractor**.

ARTICLE 65. CHOICE OF LAW, CONSENT TO JURISDICTION AND VENUE

65.1 This **Contract** shall be deemed to be executed in the **City** of New York, State of New York, regardless of the domicile of the **Contractor**, and shall be governed by and construed in accordance with the **Laws** of the State of New York and the **Laws** of the United States, where applicable.

65.2 The parties agree that any and all claims asserted against the **City** arising under this **Contract** or related thereto shall be heard and determined in the courts of the State of New York ("New York State Courts") located in the **City** and County of New York. To effect this **Contract** and intent, the **Contractor** agrees:

65.2.1 If the **City** initiates any action against the **Contractor** in Federal Court or in New York State Court, service of process may be made on the **Contractor** either in person, wherever such **Contractor** may be found, or by registered mail addressed to the **Contractor** at its address as set forth in this **Contract**, or to such other address as the **Contractor** may provide to the **City** in writing; and

65.2.2 With respect to any action between the **City** and the **Contractor** in New York State Court, the **Contractor** hereby expressly waives and relinquishes any rights it might otherwise have:

65.2.2(a) To move to dismiss on grounds of forum non conveniens;

65.2.2(b) To remove to Federal Court; and

65.2.2(c) To move for a change of venue to a New York State Court outside New York County.

65.2.3 With respect to any action brought by the **City** against the **Contractor** in Federal Court located in the **City**, the **Contractor** expressly waives and relinquishes any right it might otherwise have to move to transfer the action to a United States Court outside the **City**.

65.2.4 If the **Contractor** commences any action against the **City** in a Court located other than in the **City** and State of New York, upon request of the **City**, the **Contractor** shall either consent to a transfer of the action to a State Court of competent jurisdiction located in the **City** and State of New York or, if the Court where the action is initially brought will not or cannot transfer the action, the **Contractor** shall consent to dismiss such action without prejudice and may thereafter reinstate the action in a State Court of competent jurisdiction in the **City**.

65.3 If any provision(s) of this article is held unenforceable for any reason, each and all other provision(s) shall nevertheless remain in full force and effect.

ARTICLE 66. PARTICIPATION IN AN INTERNATIONAL BOYCOTT

66.1 The **Contractor** agrees that neither the **Contractor** nor any substantially owned affiliated company is participating or shall participate in an international boycott in violation of the provisions of the Export Administration Act of 1979, as amended, or the regulations of the United States Department of Commerce promulgated thereunder.

66.2 Upon the final determination by the Commerce Department or any other **Agency** of the United States as to, or conviction of the **Contractor** or a substantially-owned affiliated company thereof, participation in an international boycott in violation of the provisions of the Export Administration Act of 1979, as amended, or the regulations promulgated thereunder, the **Comptroller** may, at his/her option, render forfeit and void this **Contract**.

66.3 The **Contractor** shall comply in all respects, with the provisions of Section 6-114 of the Administrative Code and the rules and regulations issued by the **Comptroller** thereunder.

ARTICLE 67. LOCALLY BASED ENTERPRISE PROGRAM

67.1 This **Contract** is subject to the requirements of Section 6-108.1 of the Administrative Code and regulations promulgated thereunder. No construction **Contract** shall be awarded unless and until these requirements have been complied with in their entirety.

67.2 Unless specifically waived by the **Commissioner** with the approval of the Division of Economic and Financial Opportunity of the Department of Business Services, if any portion of the **Contract** is subcontracted, not less than ten (10%) percent of the total dollar amount of the **Contract** shall be awarded to locally based enterprise ("LBEs"); except that where less than ten (10%) percent of the total dollar amount of the **Contract** is subcontracted, such lesser percentage shall be so awarded.

67.3 The prime **Contractor** shall not require performance and payment bonds from LBE **Subcontractors**.

67.4 If the **Contractor** has indicated prior to award that no **Work** will be subcontracted, no **Work** shall be subcontracted without the prior approval of the **Commissioner**, which shall be granted only if the **Contractor** makes a good faith effort beginning at least six (6) weeks before the **Work** is to be performed to obtain LBE **Subcontractors** to perform the **Work**.

67.5 If the **Contractor** has not identified sufficient LBE **Subcontractors** prior to award, it shall sign a letter of compliance stating that it complies with Section 6-108.1 of the Administrative Code, recognizes that achieving the LBE requirement is a condition of its **Contract**, and shall submit documentation demonstrating its good faith efforts to obtain LBEs. After award, the **Contractor** shall begin to solicit LBE's to perform subcontracted **Work** at least six (6) weeks before the date such **Work** is to be performed and shall demonstrate that a good faith effort has been made to obtain LBE's on each subcontract until it meets the required percentage.

67.6 Failure of the **Contractor** to comply with the requirements of Section 6-108.1 of the Administrative Code and the regulations promulgated thereunder shall constitute a material breach of **Contract**. Remedy for such breach of **Contract** may include the imposition of any or all of the following sanctions:

67.6.1 Reducing a **Contractor's** compensation by an amount equal to the dollar value of the percentage of the LBE subcontracting requirement not complied with;

67.6.2 Declaring the **Contractor** in default;

67.6.3 Where non-compliance is by an LBE, de-certifying and declaring the LBE ineligible to participate in the LBE program for a period of up to three (3) years.

ARTICLE 68. ANTITRUST

68.1 The **Contractor** hereby assigns, sells and transfers to the **City** all right, title and interest in and to any claims and causes of action arising under the antitrust **Laws** of New York State or of the United States relating to the particular goods or services purchased or procured by the **City** under this **Contract**.

ARTICLE 69. MacBRIDE PRINCIPLES PROVISIONS

69.1 Notice To All Prospective **Contractors**:

69.1.1 Local Law No. 34 of 1991 became effective on September 10, 1991 and added Section 6-115.1 of the Administrative Code. The local **Law** provides for certain restrictions on **City Contracts** to express the opposition of the people of the **City** to employment discrimination practices in Northern Ireland to promote freedom of work-place opportunity.

69.1.2 Pursuant to Section 6-115.1, prospective **Contractors** for **Contracts** to provide goods or services involving an expenditure of an amount greater than ten thousand (\$10,000.) dollars, or for construction involving an amount greater than fifteen thousand (\$15,000.) dollars, are asked to sign a rider in which they covenant and represent, as a material condition of their **Contract**, that any business operations in Northern Ireland conducted by the **Contractor** and any individual or legal entity in which the **Contractor** holds a ten (10%) percent or greater ownership interest in the **Contractor** will be conducted in accordance with the MacBride Principles of nondiscrimination in employment.

69.1.3 Prospective **Contractors** are not required to agree to these conditions. However, in the case of **Contracts** let by competitive sealed bidding, whenever the lowest responsible bidder has not agreed to stipulate to the conditions set forth in this notice and another bidder who has agreed to stipulate to such conditions has submitted a bid within five (5%) percent of the lowest responsible bid for a **Contract** to supply goods, services or contraction of comparable quality, the **Agency** shall refer such bids to the Mayor, the Speaker or other officials, as appropriate, who may determine, in accordance with applicable **Law** and rules, that it is in the best interest of the **City** that the **Contract** be awarded to other than the lowest responsible pursuant to Section 313(b)(2) of the **City Charter**.

69.1.4 In the case of **Contracts** let by other than competitive sealed bidding, if a prospective **Contractor** does not agree to these conditions, no **Agency**, elected official or the **City Council** shall award the **Contract** to that bidder unless the **Agency** seeking to use the goods, services or construction certifies in writing that the **Contract** is necessary for the **Agency** to perform its functions and there is no other responsible **Contractor** who will supply goods, services or construction of comparable quality at a comparable price.

69.2 In accordance with Section 6-115.1 of the Administrative Code, the **Contractor** stipulates that such **Contractor** and any individual or legal entity in which the **Contractor** holds a ten (10%) percent or greater ownership interest in the **Contractor** either:

69.2.1 Have no business operations in Northern Ireland, or

69.2.2 Shall take lawful steps in good faith to conduct any business operations they have in Northern Ireland in accordance with the MacBride Principles, and shall permit independent monitoring of their compliance with such principles.

69.3 For purposes of this Article, the following terms shall have the following meanings:

69.3.1 "MacBride Principles" shall mean those principles relating to nondiscrimination in employment and freedom of work-place opportunity which require employers doing business in Northern Ireland to:

69.3.1(a) increase the representation of individuals from under-represented religious groups in the workforce, including managerial, supervisory, administrative, clerical and technical jobs;

69.3.1(b) take steps to promote adequate security for the protection of employees from under-represented religious groups both at the work-place and while traveling to and from **Work**;

69.3.1(c) ban provocative religious or political emblems from the workplace;

69.3.1(d) publicly advertise all job openings and make special recruitment efforts to attract applicants from under-represented religious groups;

69.3.1(e) establish layoff, recall and termination procedures which do not in practice favor a particular religious group;

69.3.1(f) abolish all job reservations, apprenticeship restrictions and different employment criteria which discriminate on the basis of religion;

69.3.1(g) develop training programs that will prepare substantial numbers of current employees from under-represented religious groups for skilled jobs, including the expansion of existing programs and the creation of new programs to train, upgrade and improve the skills of workers from under-represented religious groups;

69.3.1(h) establish procedures to assess, identify and actively recruit employees from under-represented religious groups with potential for further advancement; and

69.3.1(i) appoint a senior management staff member to oversee affirmative action efforts and develop a timetable to ensure their full implementation.

69.4 The **Contractor** agrees that the covenants and representations in Article 69.2 are material conditions to this **Contract**. In the event the **Agency** receives information that the **Contractor** who made the stipulation required by this Article is in violation thereof, the **Agency** shall review such information and give the **Contractor** an opportunity to respond. If the **Agency** finds that a violation has occurred, the **Agency** shall have the right to declare the **Contractor** in default and/or terminate this **Contract** for cause and procure supplies, services or **Work** from another source in the manner the **Agency** deems proper. In the event of such termination, the **Contractor** shall pay to the **Agency**, or the **Agency** in its sole discretion may withhold from any amounts otherwise payable to the **Contractor**, the difference between the **Contract** price for the uncompleted portion of this **Contract** and the cost to the **Agency** of completing performance of this **Contract** either itself or by engaging another Contractor or Contractors. In the case of a requirement **Contract**, the **Contractor** shall be liable for such difference in price for the entire amount of supplies required by the **Agency** for the uncompleted term of **Contractor's Contract**. In the case of a construction **Contract**, the **Agency** shall also have the right to hold the **Contractor** in partial or total default in accordance with the default provisions of this **Contract**, and/or may seek debarment or suspension of the **Contractor**. The rights and remedies of the **Agency** hereunder shall be in addition to, and not in lieu of, any rights and remedies the **Agency** has pursuant to this **Contract** or by operation of **Law**.

ARTICLE 70. HEALTH INSURANCE COVERAGE

70.1 If the price for which this **Contract** was awarded exceeds \$100,000, or if the price for which this **Contract** was awarded when combined with other construction or services contracts awarded the **Contractor** by the **City** in the year prior to award of this **Contract** exceeds \$100,000, the **Contractor**, following registration of the **Contract**, shall be required to submit responses to requests for information regarding the nature of any health

insurance provided by the Contractor to its employees and their spouses and domestic partners, upon request of the Agency or other designated City agency.

ARTICLE 71. PROHIBITION OF TROPICAL HARDWOODS

71.1 Tropical hardwoods, as defined in Section 165 of the New York State Finance Law ("Finance Law"), shall not be utilized in the performance of this Contract except as expressly permitted by Section 165 of the Finance Law.

ARTICLE 72. CONFLICTS OF INTEREST

72.1 Section 2604 of the City Charter and other related provisions of the City Charter, the Administrative Code and the Penal Law are applicable under the terms of this Contract in relation to Conflicts of Interest and shall be extended to Subcontractors authorized to perform Work, labor and services pursuant to this Contract and further, it shall be the duty and responsibility of the Contractor to so inform its respective Subcontractors. Notice is hereby given that, under certain circumstances, penalties may be invoked against the donor as well as the recipient of any form of valuable gift.

ARTICLE 73. MERGER CLAUSE

73.1 The Written Contract herein, contains all the terms and conditions agreed upon by the parties hereto, and no other agreement, oral or otherwise, regarding the subject matter of this Contract shall be deemed to exist or to bind any of the parties hereto, or to vary any of the terms contained herein.

ARTICLE 74. STATEMENT OF WORK

74.1 The Contractor shall furnish all labor and materials and perform all Work in strict accordance with the Specifications and Addenda thereto, numbered ONE THRU EIGHT.

ARTICLE 75. COMPENSATION TO BE PAID TO CONTRACTOR

75.1 The City will pay and the Contractor will accept in full consideration for the performance of the Contract, subject to additions and deductions as provided herein, the total sum of: SEE BELOW Dollars, (\$10,765,042.24), this said sum being the Amount at which the Contract was awarded to the Contractor at a public letting thereof, based upon the Contractor's bid for the Contract.

Seven Hundred sixty five thousand, forty two dollars
24/100

ARTICLE 76. ELECTRONIC FUNDS TRANSFER

76.1 In accordance with Section 6-107.1 of the New York City Administrative Code, the Contractor agrees to accept payments under this Agreement from the City by electronic funds transfer. An electronic funds transfer is any transfer of funds, other than a transaction originated by check, draft or similar paper instrument, which is initiated through an electronic terminal, telephonic instrument or computer or magnetic tape so as to order, instruct or authorize a financial institution to debit or credit an account. Prior to the first payment made under this Agreement, Contractor shall designate one financial institution or other authorized payment agent and shall complete the "EFT Vendor Payment Enrollment Form" (available at <http://www.nyc.gov/dof>) in order to provide the Commissioner of Finance with information necessary for Contractor to receive electronic funds transfer payments through the designated financial institution or authorized payment agent. The crediting of the amount of a

payment to the appropriate account on the books of a financial institution or other authorized payment agent designated by the Contractor shall constitute full satisfaction by the City for the amount of the payment under this agreement. The account information supplied by the Contractor to facilitate the electronic funds transfer shall remain confidential to the fullest extent provided by law.

76.2 The agency head may waive the application of the requirements herein to payments on contracts entered into pursuant to §315 of the City Charter. In addition, the Commissioner of the Department of Finance and the Comptroller may jointly issue standards pursuant to which the contracting agency may waive the requirements hereunder for payments in the following circumstances: (i) for individuals or classes of individuals for whom compliance imposes a hardship; (ii) for classifications or types of checks; or (iii) in other circumstances as may be necessary in the interest of the City.

ARTICLE 77 – PARTICIPATION BY MINORITY-OWNED AND WOMEN-OWNED BUSINESS ENTERPRISES IN CITY PROCUREMENT

NOTICE TO ALL PROSPECTIVE CONTRACTORS

ARTICLE I. M/WBE PROGRAM

Local Law No. 129 of 2005 added Section 6-129 to the Administrative Code of the City of New York. The local law creates a program for participation by minority-owned and women-owned business enterprises (MBEs and WBEs) in City procurement. As stated in the Section 6-129, the intent of the program is to address the impact of discrimination on the City's procurement process, and to promote the public interest in avoiding fraud and favoritism in the procurement process, increasing competition for City business, and lowering contract costs. The contract provisions contained herein are made pursuant to Local Law 129, and the rules of the Department of Small Business Services ("DSBS") promulgated thereunder.

If this Contract is subject to the Minority-Owned and Women-Owned Business Enterprise ("M/WBE") program created by Local Law 129, the specific requirements of M/WBE participation for this Contract are set forth in Schedule B of the Contract (entitled the "Subcontractor Utilization Plan"), and are detailed below. The Contractor must comply with all applicable M/WBE requirements for this Contract. Schedule B of the Contract ("Subcontractor Utilization Plan") is included in the Bid Booklet.

Article I, Part A, below, sets forth provisions related to the participation goals for construction and professional services contracts. Article I, Part B, below, sets forth miscellaneous provisions related to the M/WBE program.

PART A: PARTICIPATION GOALS FOR CONSTRUCTION AND PROFESSIONAL SERVICES CONTRACTS

1. The Target Subcontracting Percentage applicable to this Contract is set forth on Schedule B, Part I to this Contract (see Page 1, line (1)). The "Target Subcontracting Percentage" is the percentage of the total Contract which Agency anticipates that the prime contractor for this Contract would in the normal course of business award to one or more subcontractors for amounts under \$1 million for construction and professional services.

A prospective contractor may seek a full or partial pre-award waiver of the **Target Subcontracting Percentage** in accordance with Local Law 129 and Part A, Section 10 below. To apply for the a full or partial waiver of the **Target Subcontracting Percentage**, a prospective contractor must complete Part III (Page 4) of Schedule B, and must submit such request no later than seven (7) days prior to the date and time the bids or proposals are due, in writing to the Agency by e-mail at poped@ddc.nyc.gov or via facsimile at (718) 391-1885. Bidders/proposers who have submitted requests will receive a response by no later than two (2) calendar days prior to the date bids or proposals are due, provided, however, that if that date would fall on a weekend or holiday, a response will be provided by close-of-business on the business day before such weekend or holiday date.

2. The **Subcontractor Participation Goals** established for this Contract are set forth on Schedule B, Part I to this Contract (see Page 1, line (2) and/or line (3)). The **Subcontractor Participation Goals** represent a percentage of the total dollar value of all construction and/or professional services subcontracts under this Agreement for amounts under \$1 million.

3. If **Subcontractor Participation Goals** have been established for this Contract, Contractor agrees or shall agree as a material term of the Agreement that, with respect to the total amount of the Agreement to be awarded to one or more subcontractors pursuant to subcontracts for amounts under \$1 million, Contractor shall be subject to the **Subcontractor Participation Goals**, unless the goals are modified by Agency in accordance with Local Law 129 and Part A, Section 11 below.

4. If **Subcontractor Participation Goals** have been established for this Contract, a prospective contractor shall be required to submit with its bid or proposal, as applicable, a completed Schedule B, Part II Subcontractor Utilization Plan (see Page 2-3) indicating: (a) the percentage of work it intends to subcontract; (b) the percentage of work it intends to award to subcontractors for amounts under \$1 million; (c) in cases where the prospective contractor intends to award subcontracts for amounts under \$1 million, a description of the type and dollar value of work designated for participation by MBEs and/or WBEs; and (d) the general time frames in which such work by MBEs and/or WBEs is scheduled to occur. In the event that this Subcontractor Utilization Plan indicates that the bidder or proposer, as applicable, does not intend to award the **Target Subcontracting Percentage**, the bid or proposal, as applicable, shall be deemed non-responsive, unless Agency has granted the bidder or proposer, as applicable, a pre-award waiver of the **Target Subcontracting Percentage** in accordance with Local Law 129 and Part A, Section 10 below.

THE BIDDER/PROPOSER MUST COMPLETE THE SUBCONTRACTOR UTILIZATION PLAN INCLUDED HEREIN (SCHEDULE B, PART II). SUBCONTRACTOR UTILIZATION PLANS WHICH DO NOT INCLUDE THE REQUIRED AFFIRMATIONS WILL BE DEEMED TO BE NON-RESPONSIVE, UNLESS A FULL WAIVER OF THE TARGET SUBCONTRACTING PERCENTAGE IS GRANTED (SCHEDULE B PART III). IN THE EVENT THAT THE CITY DETERMINES THAT VENDOR HAS SUBMITTED A SUBCONTRACTOR UTILIZATION PLAN WHERE THE REQUIRED AFFIRMATIONS ARE COMPLETED BUT OTHER ASPECTS OF THE PLAN ARE NOT COMPLETE, OR CONTAIN A COPY OR COMPUTATION ERROR THAT IS AT ODDS WITH THE AFFIRMATION, THE VENDOR WILL BE NOTIFIED BY THE AGENCY AND WILL BE GIVEN FOUR (4) CALENDAR DAYS FROM RECEIPT OF NOTIFICATION TO CURE THE SPECIFIED DEFICIENCIES AND RETURN A COMPLETED PLAN TO THE AGENCY. FAILURE TO DO SO WILL RESULT IN A DETERMINATION THAT THE BID/PROPOSAL IS NON-RESPONSIVE. RECEIPT OF NOTIFICATION IS DEFINED AS THE DATE NOTICE IS EMAILED OR FAXED (IF THE VENDOR HAS PROVIDED AN EMAIL ADDRESS OR FAX NUMBER), OR NO LATER THAN FIVE (5) DAYS FROM THE DATE OF MAILING OR UPON DELIVERY, IF DELIVERED.

5. Where a Subcontractor Utilization Plan has been submitted, the Contractor shall, within 30 days of issuance by Agency of a notice to proceed, submit a list of proposed persons or entities to which it intends to award subcontracts within the subsequent 12 months. In the case of multi-year contracts, such list shall also be submitted every year thereafter. **PLEASE NOTE: If this Contract is a public works project subject to GML §101(5) (i.e., a contract valued at or below \$3M for projects in New York City) or if the Contract is subject to a project labor agreement in accordance with Labor Law §222, and the bidder is required to identify at the time of bid submission its intended subcontractors for the Wicks trades (plumbing and gas fitting; steam heating, hot water heating, ventilating and air conditioning (HVAC); and electric wiring), the Contractor must identify all those to which it intends to award construction subcontracts for any portion of the Wicks trade work at the time of bid submission, regardless of what point in the life of the contract such subcontracts will occur. In identifying intended subcontractors in the bid submission, bidders may satisfy any Subcontractor Participation Goals established for this Contract by proposing one or more subcontractors that are M/WBEs for any portion of the Wicks trade work if the amount to be awarded to such M/WBE subcontractor is under**

\$1 million. In the event that the Contractor's selection of a subcontractor is disapproved, the Contractor shall have a reasonable time to propose alternate subcontractors.

6. M/WBE firms must be certified by DSBS in order for the Contractor to credit such firms' participation toward the attainment of the M/WBE participation goals. Such certification must occur prior to the firms' commencement of work as subcontractors. A list of M/WBE firms may be obtained from the DSBS website at www.nyc.gov/buycertified, by emailing DSBS at buyer@sbs.nyc.gov, by calling (212) 513-6356, or by visiting or writing DSBS at 110 William St., New York, New York, 10038, 7th floor. Eligible firms that have not yet been certified may contact DSBS in order to seek certification by visiting www.nyc.gov/getcertified, emailing MWBE@sbs.nyc.gov, or calling the DSBS certification helpline at (212) 513-6311.

7. Where a Subcontractor Utilization Plan has been submitted, the Contractor shall, with each voucher for payment, and/or periodically as Agency may require, submit statements, certified under penalty of perjury, which shall include, but not be limited to, the total amount paid to subcontractors (including subcontractors that are not MBEs or WBEs); the names, addresses and contact numbers of each MBE or WBE hired as a subcontractor pursuant to such plan as well as the dates and amounts paid to each MBE or WBE. The Contractor shall also submit, along with its voucher for final payment, the total amount paid to subcontractors (including subcontractors that are not MBEs or WBEs); and a final list, certified under penalty of perjury, which shall include the name, address and contact information of each subcontractor that is an MBE or WBE hired pursuant to such plan, the work performed by, and the dates and amounts paid to each.

8. If payments made to, or work performed by, MBEs or WBEs are less than the amount specified in the Contractor's Subcontractor Utilization Plan, Agency shall take appropriate action, in accordance with Local Law 129 and Article II below, unless the Contractor has obtained a modification of its Subcontractor Utilization Plan in accordance with Local Law 129 and Part A, Section 11 below.

9. Where a Subcontractor Utilization Plan has been submitted, and the Contractor requests a change order the value of which exceeds 10 percent of the Agreement, Agency shall establish participation goals for the work to be performed pursuant to the change order.

10. Pre-award waiver of **Target Subcontracting Percentage**. Agency may grant a full or partial waiver of the **Target Subcontracting Percentage** to a bidder or proposer, as applicable, who demonstrates—before submission of the bid or proposal—that it has legitimate business reasons for proposing the level of subcontracting in its Subcontractor Utilization Plan. In making its determination, Agency shall consider factors that shall include, but not be limited to, whether the bidder or proposer, as applicable, has the capacity and the bona fide intention to perform the Contract without any subcontracting, or to perform the Contract without awarding the amount of subcontracts for under one million dollars represented by the **Target Subcontracting Percentage**. In making such determination, Agency may consider whether the Subcontractor Utilization Plan is consistent with past subcontracting practices of the bidder or proposer, as applicable, and whether the bidder or proposer, as applicable, has made good faith efforts to identify portions of the Contract that it intends to subcontract.

11. Modification of Subcontractor Utilization Plan. A Contractor may request a modification of its Subcontractor Utilization Plan (**Subcontractor Participation Goals**) after award of this Contract. **PLEASE NOTE: If this Contract is a public works project subject to GML §101(5) (i.e., a contract valued at or below \$3M for projects in New York City) or if the Contract is subject to a project labor agreement in accordance with Labor Law §222, and the bidder is required to identify at the time of bid submission its intended subcontractors for the Wicks trades (plumbing and gas fitting; steam heating, hot water heating, ventilating and air conditioning (HVAC); and electric wiring), the Contractor may request a Modification of its Subcontractor Utilization Plan as part of its bid submission.** The Agency may grant a request for Modification of a Contractor's Subcontractor Utilization Plan if it determines that the Contractor has established, with appropriate documentary and other evidence, that it made reasonable, good faith efforts to meet the **Subcontractor Participation Goals**. In making such determination, Agency shall consider evidence of the following efforts, as applicable, along with any other relevant factors:

- (a) The Contractor advertised opportunities to participate in the Contract, where appropriate, in general circulation media, trade and professional association publications and small business media, and publications of minority and women's business organizations;
- (b) The Contractor provided notice of specific opportunities to participate in the Contract, in a timely manner, to minority and women's business organizations;
- (c) The Contractor sent written notices, by certified mail or facsimile, in a timely manner, to advise MBEs and WBEs that their interest in the Contract was solicited;
- (d) The Contractor made efforts to identify portions of the work that could be substituted for portions originally designated for participation by MBEs and/or WBEs in the Subcontractor Utilization Plan, and for which the Contractor claims an inability to retain MBEs or WBEs;
- (e) The Contractor held meetings with MBEs and/or WBEs prior to the date their bids or proposals were due, for the purpose of explaining in detail the scope and requirements of the work for which their bids or proposals were solicited;
- (f) The Contractor made efforts to negotiate with MBEs and/or WBEs as relevant to perform specific subcontracts;
- (g) Timely written requests for assistance made by the Contractor to Agency's M/WBE liaison officer and to DSBS;
- (h) Description of how recommendations made by DSBS and Agency were acted upon and an explanation of why action upon such recommendations did not lead to the desired level of participation of MBEs and/or WBEs.

Agency's M/WBE officer shall provide written notice to the Contractor of the determination.

12. If this Contract is for an indefinite quantity of construction or professional services or is a requirements type contract and the Contractor has submitted a Subcontractor Utilization Plan and has committed to subcontract work to MBEs and/or WBEs in order to meet the **Subcontractor Participation Goals**, the Contractor will not be deemed in violation of the M/WBE requirements for this Contract with regard to any work which was intended to be subcontracted to an MBE and/or WBE to the extent that the Agency has determined that such work is not needed.

13. If **Subcontractor Participation Goals** have been established for this Contract, Agency shall evaluate and assess the Contractor's performance in meeting those goals, and such evaluation and assessment shall become part of the Contractor's overall contract performance evaluation.

PART B: MISCELLANEOUS

1. The Contractor shall take notice that, if this solicitation requires the establishment of a Subcontractor Utilization Plan, the resulting contract may be audited by DSBS to determine compliance with Section 6-129. See 6-129(e)(10). Furthermore, such resulting contract may also be examined by the City's Comptroller to assess compliance with the Subcontractor Utilization Plan.

2. Pursuant to DSBS rules, construction contracts that include a requirement for a Subcontractor Utilization Plan shall not be subject to the law governing Locally Based Enterprises set forth in Administrative Code Section 6-108.1.

3. DSBS is available to assist contractors and potential contractors in determining the availability of MBEs and WBEs to participate as subcontractors, and in identifying opportunities that are appropriate for participation by MBEs and WBEs in contracts.

4. Prospective contractors are encouraged to enter into joint ventures with MBEs and WBEs.

5. By submitting a bid or proposal the Contractor hereby acknowledges its understanding of the M/WBE requirements set forth herein and the pertinent provisions of Local Law 129 of 2005, and any rules promulgated thereunder, and if awarded this Contract, the Contractor hereby agrees to comply with the M/WBE requirements of

this Contract and pertinent provisions of Local Law 129 of 2005, and any rules promulgated thereunder, all of which shall be deemed to be material terms of this Contract. The Contractor hereby agrees to make all reasonable, good faith efforts to solicit and obtain the participation of M/WBE's to meet the required **Subcontractor Participation Goals**.

ARTICLE II. ENFORCEMENT

1. If Agency determines that a bidder or proposer, as applicable, has, in relation to this procurement, violated Section 6-129 or the DSBS rules promulgated pursuant to Section 6-129, Agency may disqualify such bidder or proposer, as applicable, from competing for this Contract and the Agency may revoke such bidder's or proposer's prequalification status, if applicable.
2. Whenever Agency believes that the Contractor or a subcontractor is not in compliance with Section 6-129 or the DSBS rules promulgated pursuant to Section 6-129, or any provision of this Contract that implements Section 6-129, including, but not limited to any Subcontractor Utilization Plan, Agency shall send a written notice to the Contractor describing the alleged noncompliance and offering an opportunity to be heard. Agency shall then conduct an investigation to determine whether such Contractor or subcontractor is in compliance.
3. In the event that the Contractor has been found to have violated Section 6-129, the DSBS rules promulgated pursuant to Section 6-129, or any provision of this Contract that implements this Section 6-129, including, but not limited any Subcontractor Utilization Plan, Agency may determine that one of the following actions should be taken:
 - (a) entering into an agreement with the Contractor allowing the Contractor to cure the violation;
 - (b) revoking the Contractor's pre-qualification to bid or make proposals for future contracts;
 - (c) making a finding that the Contractor is in default of the Contract;
 - (d) terminating the Contract;
 - (e) declaring the Contractor to be in breach of Contract;
 - (f) withholding payment or reimbursement;
 - (g) determining not to renew the Contract;
 - (h) assessing actual and consequential damages;
 - (i) assess liquidated damages or reduction of fees, provided that liquidated damages may be based on amounts representing costs of delays in carrying out the purposes of the program established by Section 6-129, or in meeting the purposes of the Contract, the costs of meeting utilization goals through additional procurements, the administrative costs of investigation and enforcement, or other factors set forth in the Contract;
 - (j) exercise rights under the Contract to procure goods, services or construction from another contractor and charge the cost of such contract to the Contractor that has been found to be in noncompliance; or
 - (k) take any other appropriate remedy.
4. If a Subcontractor Utilization Plan has been submitted, and pursuant to this Article II, Section 3, the Contractor has been found to have failed to award subcontracts to MBEs and/or WBEs sufficient to meet the Subcontractor Participation Goals contained in its Subcontractor Utilization Plan or the Subcontractor Participation Goals as modified by Agency pursuant to Article I, Part A, Section 11, Agency may assess liquidated damages in the amount of ten percent (10%) of the difference between the dollar amount of subcontracts required to be awarded to MBE and/or WBE subcontractors to meet the Subcontractor Participation Goals and the dollar amount the Contractor actually awarded and paid to MBE and/or WBE subcontractors. In view of the difficulty of accurately ascertaining the loss which the City will suffer by reason of Contractor's failure to meet the Subcontractor Participation Goals, the foregoing amount is hereby fixed and agreed as the liquidated damages that the City will suffer by reason of such failure, and not as a penalty. Agency may deduct and retain out of any monies which may become due under this Contract the amount of any such liquidated damages; and in case the amount which may become due under this Contract shall be less than the amount of liquidated damages suffered by the City, the Contractor shall be liable to pay the difference.


5. Whenever Agency has reason to believe that an MBE or WBE is not qualified for certification, or is participating in a contract in a manner that does not serve a commercially useful function (as defined in Section 6-129), or has violated any provision of Section 6-129, Agency shall notify the commissioner of DSBS who shall determine whether the certification of such business enterprise should be revoked.

6. Statements made in any instrument submitted to Agency pursuant to Section 6-129 shall be submitted under penalty of perjury and any false or misleading statement or omission shall be grounds for the application of any applicable criminal and/or civil penalties for perjury. The making of a false or fraudulent statement by an MBE or WBE in any instrument submitted pursuant to Section 6-129 shall, in addition, be grounds for revocation of its certification.


7. The Contractor's record in implementing its Subcontractor Utilization Plan shall be a factor in the evaluation of its performance. Whenever a contracting agency determines that a contractor's compliance with a Subcontractor Utilization Plan has been unsatisfactory, the agency shall, after consultation with the city chief procurement officer, file an advice of caution form for inclusion in VENDEX as caution data.

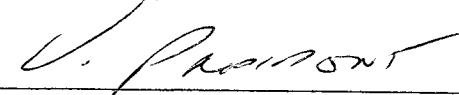
IN WITNESS WHEREOF, the Commissioner, on behalf of the City of New York, and the Contractor, have executed this agreement in quadruplicate, two parts of which are to remain with the Commissioner, another to be filed with the Comptroller of the City, and the fourth to be delivered to the Contractor.

THE CITY OF NEW YORK

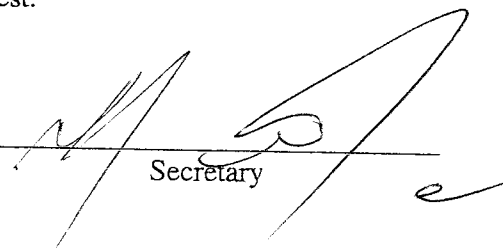
By: 
Deputy Commissioner

CONTRACTOR: Trocom Construction Co

By: 
(Member of Firm or Officer of Corporation)

Title: 

(Where Contractor is a Corporation, add):
Attest:


Secretary

(Seal)

ACKNOWLEDGEMENT OF PRINCIPAL, IF A CORPORATION

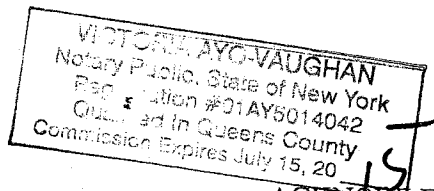
State of N.Y. County of Queens ss:

On this 20 day of June, 2013, before me personally came Armando SANTERO to me known who, being by me duly sworn did depose and say that he resides at 5747 151st ST BAY PL BAY PL that he is the V. President

of the corporation described in and which executed the foregoing instrument; that he knows the seal of said corporation; that one of the seals affixed to said instrument is such seal; that it was so affixed by order of the directors of said corporation, and that he signed his name thereto by like order.

[Handwritten Signature]

Notary Public or Commissioner of Deeds



ACKNOWLEDGEMENT OF PRINCIPAL, IF A PARTNERSHIP

State of _____ County of _____ ss:

On this _____ day of _____, _____, before me personally appeared _____ to me known, and known to me to be one of the members of the firm of _____

described in and who executed the foregoing instrument; and he acknowledged to me that he executed the same as and for the act and deed, of said firm.

Notary Public or Commissioner of Deeds

ACKNOWLEDGEMENT OF PRINCIPAL, IF AN INDIVIDUAL

State of _____ County of _____ ss:

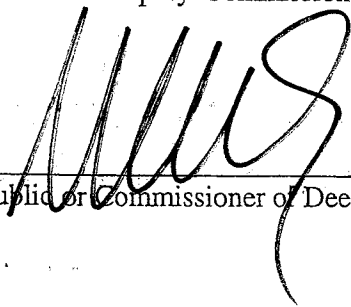
On this _____ day of _____, _____, before me personally appeared _____ to me known, and known to me to be the person described in and who executed the foregoing instrument; and acknowledged that he executed the same.

Notary Public or Commissioner of Deeds

ACKNOWLEDGEMENT BY COMMISSIONER

State of New York County of Queens ss:

On this 20th day of June, 2013, before me personally came Eric MacFarlane to me known, and known to be the Deputy Commissioner of the Department of Design and Construction of The City of New York, the person described as such in and who as such executed the foregoing instrument and acknowledged to me that he executed the same as Deputy Commissioner for the purposes therein mentioned.



Notary Public or Commissioner of Deeds

VICTORIA AYO-VAUGHAN
Notary Public, State of New York
Registration #01AY5014042
Qualified In Queens County
Commission Expires July 15, 2015

AUTHORITY

MAYOR'S CERTIFICATE NO. CBX
BUDGET DIRECTOR'S CERTIFICATE NO.

DATED
DATED

APPROPRIATION
COMMISSIONER'S CERTIFICATE

In conformity with the provisions of Section 6-101 of the Administrative Code of the City of New York, it is hereby certified that the estimated cost of the work, materials and supplies required by the within Contract, amounting to

Ten Million, Seven Hundred
Sixty-five Thousand, forty-two Dollars

Dollars (\$ 10,765,042.24)
24/100

is chargeable to the fund of the Department of Design and Construction entitled Code

Various

Department of Design and Construction

I hereby certify that the specifications contained herein comply with the terms and conditions of the BUDGET.

[Signature]
Deputy Commissioner

COMPTROLLER'S CERTIFICATE

The City of New York _____

Pursuant to the provisions of Section 6-101 of the Administrative Code of the City of New York, I hereby certify that there remains unapplied and unexpended a balance of the above mentioned fund applicable to this Contract sufficient to pay the estimated expense of executing the same viz:

\$ _____

Comptroller

Performance Bond #2 (Pages 82 to 85): Use if the total contract price is more than \$5 Million.

PERFORMANCE BOND #2 (Page 1)

PERFORMANCE BOND #2

Bond #015039677

KNOW ALL PERSONS BY THESE PRESENTS,;

That we, Trocom Construction Corp.

46-27 54th Rd.

Maspeth, NY 11378

hereinafter referred to as the "Principal,"
and, Liberty Mutual Insurance Company

1200 MacArthur Blvd.

Mahwah, NJ 07430

hereinafter referred to as the "Surety" ("Sureties") are held and firmly bound to THE CITY OF NEW YORK, hereinafter referred to as the "City" or to its successors and assigns in the penal sum of Ten Million Seven Hundred Sixty Five Thousand Forty Two and 24/100

(\$ 10,765,042.24) Dollars, lawful money of the United States for the payment of which said sum of money well and truly to be made, we, and each of us, bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal is about to enter, or has entered, into a Contract in writing with the City for

FMS ID: HWXRCPLZ, E-PIN: 85013B0044001, DDC PIN: 8502012HW0007C, Reconstruction

of Roberto Clemente Plaza, Including Sewer, Water Main, Street Lighting & Traffic Signal Work

Boro of the Bronx
a copy of which Contract is annexed to and hereby made a part of this bond as though herein set forth in full;

NOW, THEREFORE, the conditions of this obligation are such that if the Principal, his or its representatives or assigns, shall well and faithfully perform the said Contract and all modifications, amendments, additions and alterations thereto that may hereafter be made, according to its terms and its true intent and meaning, including repair and or replacement of defective work and guarantees of maintenance for the periods stated in the Contract, and shall fully indemnify and save harmless the City from all cost and damage which it may suffer by reason of the Principal's default of the Contract, and shall fully reimburse and repay the City for all outlay and expense which the City may incur in making



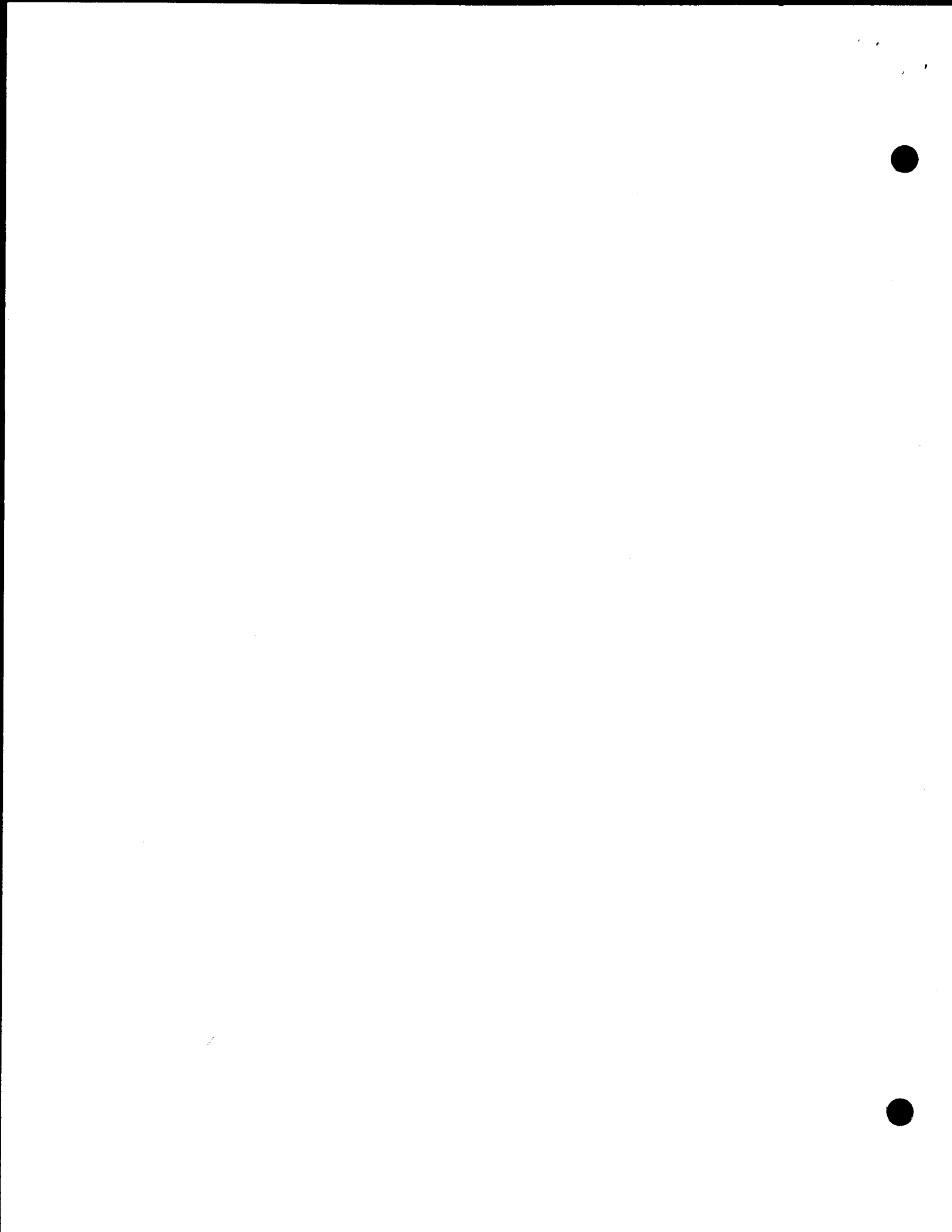
Performance Bond #2 (Pages 82 to 85): Use if the total contract price is more than \$5 Million.

PERFORMANCE BOND #2 (Page 2)

good any such default and shall protect the said City of New York against, and pay any and all amounts, damages, cost and judgments which may or shall be recovered against said City or its officers or agents or which the said City of New York may be called upon to pay any person or corporation by reason of any damages arising or growing out of the Principal's default of the Contract, then this obligation shall be null and void, otherwise to remain in full force and effect.

The Surety (Sureties), for value received, hereby stipulates and agrees, upon written notice from the City that the City has determined that the Principal is in default of the Contract, to either (1) pay the full amount of the above penal sum in complete discharge and exoneration of this bond and of all the liabilities of the Surety relating to this bond, or (2) fully perform and complete the Work to be performed under the Contract, pursuant to the terms, conditions, and covenants thereof. The Surety (Sureties) further agrees, at its option, either to tender the penal sum or to commence and diligently perform the Work specified in the Contract, including physical site work, within twenty-five (25) business days after written notice thereof from the City and to complete all Work within the time set forth in the Contract or such other time as agreed to between the City and Surety in accordance with the Contract. The Surety and the City reserve all rights and defenses each may have against the other; provided, however, that the Surety expressly agrees that its reservation of rights shall not provide a basis for non-performance of its obligation to commence and to complete all Work as provided herein.

The Surety (Sureties), for value received, for itself and its successors and assigns, hereby stipulates and agrees that the obligation of said Surety (Sureties) and its bond shall be in no way impaired or affected by any extension of time, modification, omission, addition, or change in or to the said Contract or the Work to be performed thereunder, or by any payment thereunder before the time required therein, or by any waiver of any provisions thereof, or by any assignment, subletting or other transfer thereof or of any Work to be performed or any moneys due or to become due thereunder; and said Surety (Sureties) does hereby waive notice of any and all of such extensions, modifications, omissions, additions, changes, payments, waivers, assignments, subcontracts and transfers, and hereby expressly stipulates and agrees that any and all things done and omitted to be done by and in relation to assignees, subcontractors, and other transferees shall have the same effect as to said Surety (Sureties) as though done or omitted to be done by or in relation to said Principal.



Performance Bond #2 (Pages 82 to 85): Use if the total contract price is more than \$5 Million.

PERFORMANCE BOND #2 (Page 3)

IN WITNESS WHEREOF, The Principal and the Surety (Sureties) have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereunto affixed and these presents to be signed by their proper officers, this

_____ 13th _____ day of _____ June _____ 20 13 _____

(Seal)

Trocom Construction Corp. (L.S.)

Principal

By: _____

(Seal)

Surety

By: _____

Liberty Mutual Insurance Company

(Seal)

Surety

By: _____

Susan P. Hammel, Attorney-In-Fact

(Seal)

Surety

By: _____

(Seal)

Surety

By: _____

(Seal)

Surety

By: _____

Bond Premium Rate _____

Bond Premium Cost _____

If the Contractor (Principal) is a partnership, the bond should be signed by each of the individuals who are partners.

If the Contractor (Principal) is a corporation, the bond should be signed in its correct corporate name by a duly authorized officer, agent, or attorney-in-fact.

There should be executed an appropriate number of counterparts of the bond corresponding to the number of counterparts of the Contract.

1950
1951
1952
1953
1954
1955
1956
1957
1958
1959
1960

Performance Bond #2 (Pages 82 to 85): Use if the total contract price is more than \$5 Million.

PERFORMANCE BOND #2 (Page 4)

ACKNOWLEDGMENT OF PRINCIPAL IF A CORPORATION

State of New York County of Queens ss:

On this 17 day of June, 2013 before me personally

came Anthony J. Santoro
to me known, who, being by me duly sworn did depose and say that he resides
at Flaten Island

; that he/she is the Vice President

of the corporation described in and which executed the foregoing instrument; that he/she signed his/her name to the foregoing instrument by order of Director of Notary Public State of New York authorized and binding act thereof.

Notary Public or Commissioner of Deeds

Commission Expires February 11, 2016

ACKNOWLEDGMENT OF PRINCIPAL IF A PARTNERSHIP

State of _____ County of _____ ss:

On this _____ day of _____, 20 _____ before me personally

came _____
to me known, who, being by me duly sworn did depose and say that he/she resides
at _____

_____ ; that he/she is _____ partner of
_____, a limited/general partnership existing under the laws of the State of
_____, the partnership described in and which executed the foregoing instrument;
and that he/she signed his/her name to the foregoing instrument as the duly authorized and binding act of
said partnership.

Notary Public or Commissioner of Deeds

ACKNOWLEDGMENT OF PRINCIPAL IF AN INDIVIDUAL

State of _____ County of _____ ss:

On this _____ day of _____, 20 _____ before me personally

came _____
to me known, who, being by me duly sworn did depose and say that he/she resides
at _____

_____, and that he/she is the individual whose name is
subscribed to the within instrument and acknowledged to me that by his/her signature on the
instrument, said individual executed the instrument.

Notary Public or Commissioner of Deeds

Each executed bond should be accompanied by: (a) appropriate acknowledgments of the respective parties; (b) appropriate
duly certified copy of Power of Attorney or other certificate of authority where bond is executed by agent, officer or other
representative of Principal or Surety; (c) a duly certified extract from By-Laws or resolutions of Surety under which Power
of Attorney or other certificate of authority of its agent, officer or representative was issued, and (d) certified copy of latest
published financial statement of assets and liabilities of Surety.

Affix Acknowledgments and Justification of Sureties.



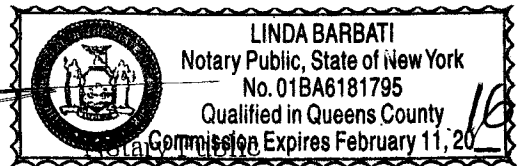
ACKNOWLEDGEMENT OF PRINCIPAL, OF A CORPORATION

STATE OF New York

COUNTY OF Queens

SS:

On this 17 day of June, 2013 before me personally came Anthony J. Santoro to me known, who, being by me duly sworn did depose and say that he resides at Staten Island that he is the Vice President of Proctor Construction Corp the corporation described in and which executed the foregoing instrument; that he knows the seal of said corporation; that one of the seals affixed to the foregoing instrument is such seal; that it was an affixed by order of the board of directors of said corporation; and that he signed his name thereto by like order.



ACKNOWLEDGEMENT OF SURETY

STATE OF New York

COUNTY OF Nassau

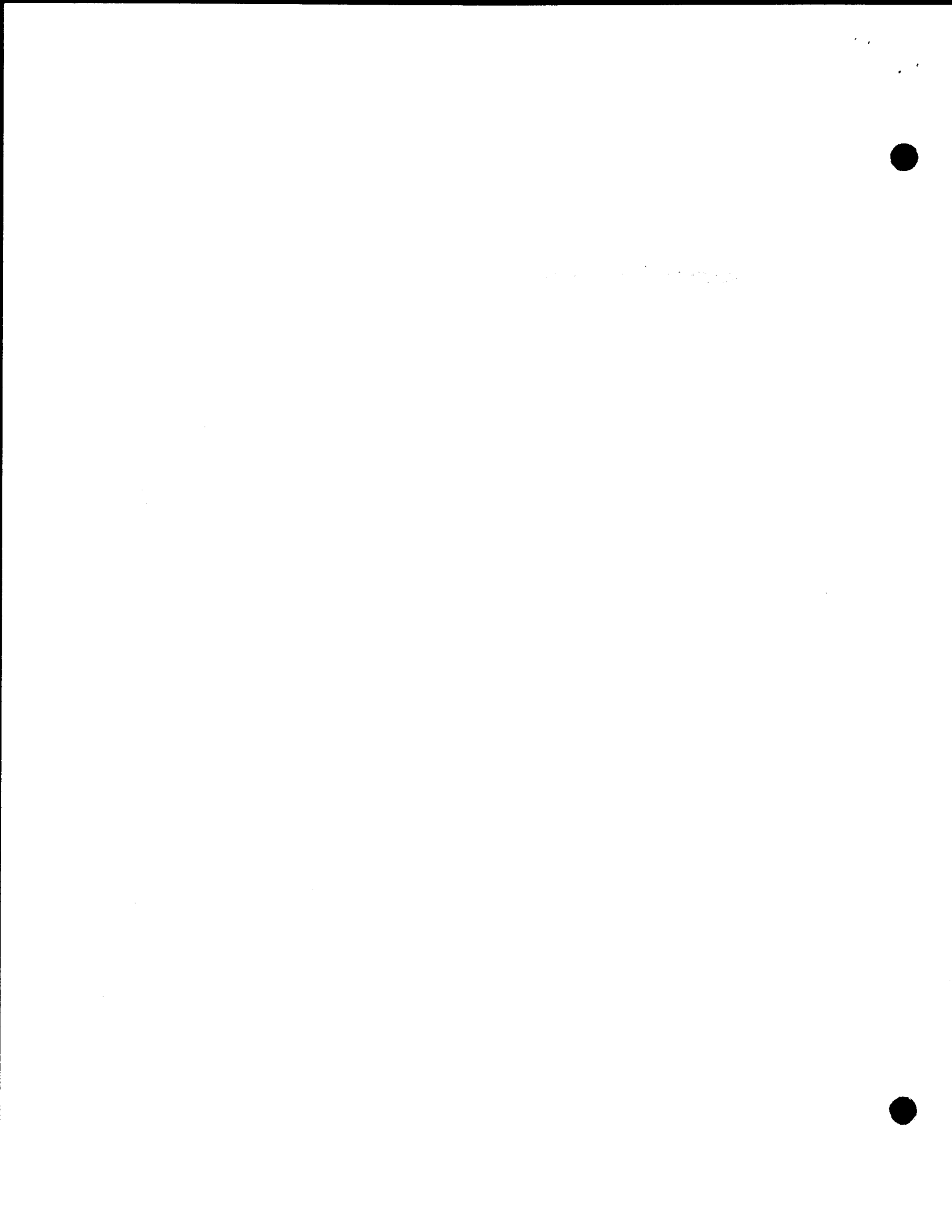
SS:

On this 13th day of June, 2013, before me personally came Susan P. Hammel to me known, who, being by me duly sworn, did depose and say that he is an Attorney-In-Fact of Liberty Mutual Insurance Company the corporation described in and which executed the within instrument; that he knows the corporate seal of said corporation; that the seal affixed to the within instrument is such corporate seal, and that he signed and said instrument and affixed the said seal as Attorney-In-Fact by authority of the Board of Directors of said corporation and by authority of this office under the Standing Resolutions thereof.

LYNN ANN INFANTI
Notary Public, State of New York
No. 011N6004351
Qualified in Suffolk County 2014
Commission Expires March 23, 2014

My commission expires _____

Notary Public



THIS POWER OF ATTORNEY IS NOT VALID UNLESS IT IS PRINTED ON RED BACKGROUND.

This Power of Attorney limits the acts of those named herein, and they have no authority to bind the Company except in the manner and to the extent herein stated.

Certificate No. 6085408

American Fire and Casualty Company
The Ohio Casualty Insurance Company

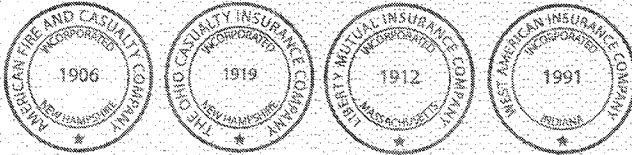
Liberty Mutual Insurance Company
West American Insurance Company

POWER OF ATTORNEY

KNOWN ALL PERSONS BY THESE PRESENTS: That American Fire & Casualty Company and The Ohio Casualty Insurance Company are corporations duly organized under the laws of the State of New Hampshire, that Liberty Mutual Insurance Company is a corporation duly organized under the laws of the State of Massachusetts, and West American Insurance Company is a corporation duly organized under the laws of the State of Indiana (herein collectively called the "Companies"), pursuant to and by authority herein set forth, does hereby name, constitute and appoint, Joseph Sforzo; Robert Kempner; Robert W. O'Kane; Susan P. Hammel

all of the city of Plainview, state of NY each individually if there be more than one named, its true and lawful attorney-in-fact to make, execute, seal, acknowledge and deliver, for and on its behalf as surety and as its act and deed, any and all undertakings, bonds, recognizances and other surety obligations, in pursuance of these presents and shall be as binding upon the Companies as if they have been duly signed by the president and attested by the secretary of the Companies in their own proper persons.

IN WITNESS WHEREOF, this Power of Attorney has been subscribed by an authorized officer or official of the Companies and the corporate seals of the Companies have been affixed thereto this 18th day of April, 2013.



American Fire and Casualty Company
The Ohio Casualty Insurance Company
Liberty Mutual Insurance Company
West American Insurance Company

By: Gregory W. Davenport
Gregory W. Davenport, Assistant Secretary

STATE OF WASHINGTON ss
COUNTY OF KING

On this 18th day of April, 2013, before me personally appeared Gregory W. Davenport, who acknowledged himself to be the Assistant Secretary of American Fire and Casualty Company, Liberty Mutual Insurance Company, The Ohio Casualty Company, and West American Insurance Company, and that he, as such, being authorized so to do, execute the foregoing instrument for the purposes therein contained by signing on behalf of the corporations by himself as a duly authorized officer.

IN WITNESS WHEREOF, I have hereunto subscribed my name and affixed my notarial seal at Seattle, Washington, on the day and year first above written.



By: KD Riley
KD Riley, Notary Public

This Power of Attorney is made and executed pursuant to and by authority of the following By-laws and Authorizations of American Fire and Casualty Company, The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company which resolutions are now in full force and effect reading as follows:

ARTICLE IV - OFFICERS - Section 12. Power of Attorney. Any officer or other official of the Corporation authorized for that purpose in writing by the Chairman or the President, and subject to such limitation as the Chairman or the President may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Corporation to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact, subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Corporation by their signature and execution of any such instruments and to attach thereto the seal of the Corporation. When so executed, such instruments shall be as binding as if signed by the President and attested to by the Secretary. Any power or authority granted to any representative or attorney-in-fact under the provisions of this article may be revoked at any time by the Board, the Chairman, the President or by the officer or officers granting such power or authority.

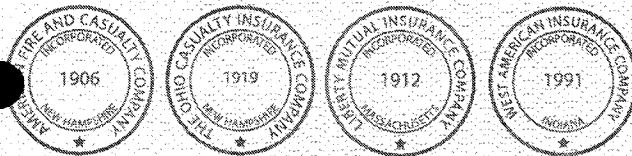
ARTICLE XIII - Execution of Contracts - SECTION 5. Surety Bonds and Undertakings. Any officer of the Company authorized for that purpose in writing by the chairman or the president, and subject to such limitations as the chairman or the president may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Company by their signature and execution of any such instruments and to attach thereto the seal of the Company. When so executed such instruments shall be as binding as if signed by the president and attested by the secretary.

Certificate of Designation - The President of the Company, acting pursuant to the Bylaws of the Company, authorizes Gregory W. Davenport, Assistant Secretary to appoint such attorneys-in-fact as may be necessary to act on behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations.

Authorization - By unanimous consent of the Company's Board of Directors, the Company consents that facsimile or mechanically reproduced signature of any assistant secretary of the Company, wherever appearing upon a certified copy of any power of attorney issued by the Company in connection with surety bonds, shall be valid and binding upon the Company with the same force and effect as though manually affixed.

I, David M. Carey, the undersigned, Assistant Secretary, of American Fire and Casualty Company, The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company do hereby certify that the original power of attorney of which the foregoing is a full, true and correct copy of the Power of Attorney executed by said Companies, is in full force and effect and has not been revoked.

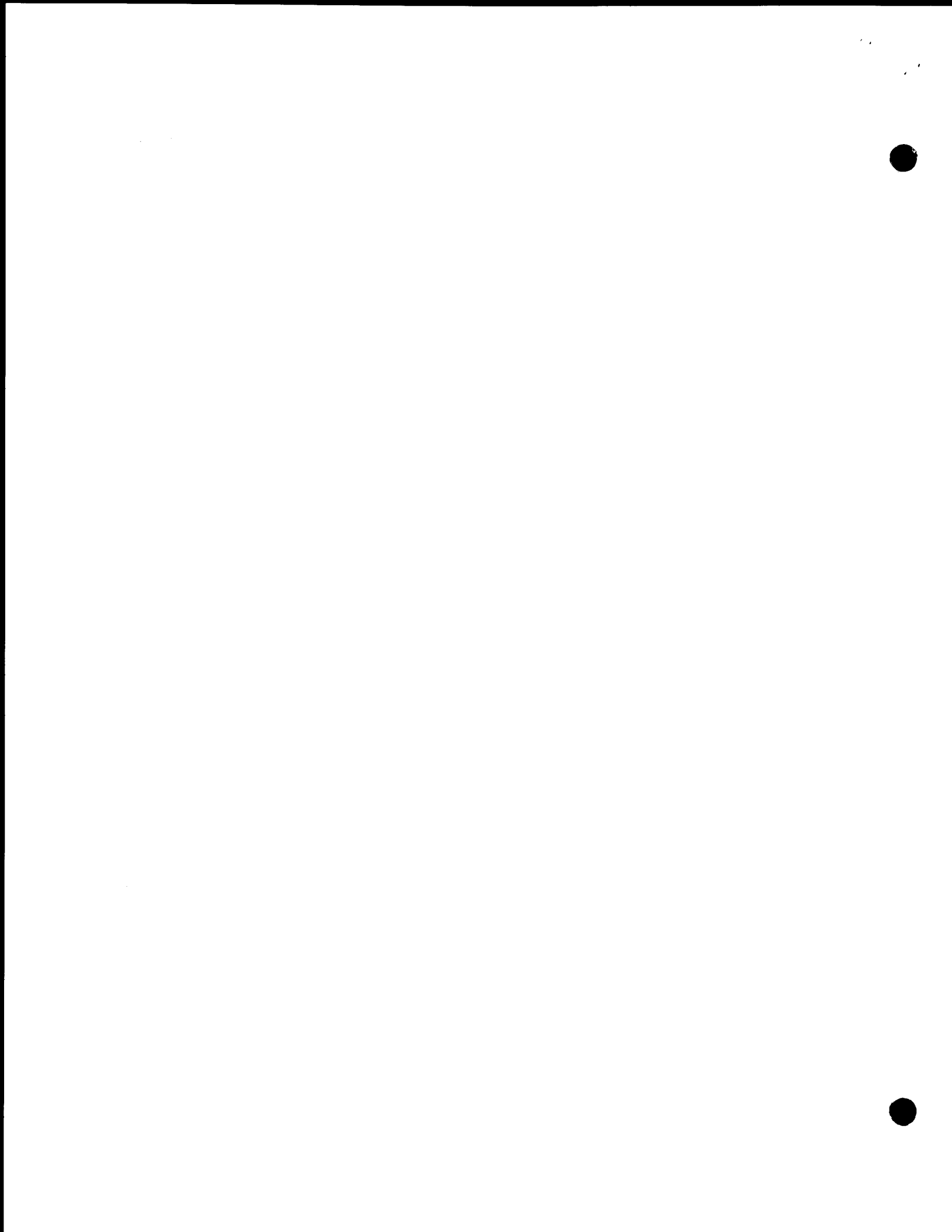
IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the seals of said Companies this 13th day of June, 20 13.



By: David M. Carey
David M. Carey, Assistant Secretary

Not valid for mortgage, note, loan, letter of credit, bank deposit, currency rate, interest rate or residual value guarantees.

To confirm the validity of this Power of Attorney call 1-610-832-8240 between 9:00 am and 4:30 pm EST on any business day.





LIBERTY MUTUAL INSURANCE COMPANY
FINANCIAL STATEMENT — DECEMBER 31, 2012

Assets	Liabilities
Cash and Bank Deposits\$ 903,711,694	Unearned Premiums \$4,205,141,671
*Bonds — U.S Government 1,166,929,471	Reserve for Claims and Claims Expense 17,056,420,207
*Other Bonds 11,415,194,219	Funds Held Under Reinsurance Treaties 1,315,062,091
*Stocks 8,104,853,899	Reserve for Dividends to Policyholders 2,455,411
Real Estate 255,967,320	Additional Statutory Reserve 49,768,998
Agents' Balances or Uncollected Premiums 3,482,069,753	Reserve for Commissions, Taxes and
Accrued Interest and Rents 144,016,763	Other Liabilities..... <u>3,066,051,537</u>
Other Admitted Assets <u>14,732,623,458</u>	Total..... \$25,694,899,915
Total Admitted Assets.....<u>\$40,205,366,577</u>	Special Surplus Funds \$604,621,497
	Capital Stock 10,000,000
	Paid in Surplus 7,899,471,886
	Unassigned Surplus 5,996,373,279
	Surplus to Policyholders 14,510,466,662
	Total Liabilities and Surplus.....<u>\$40,205,366,577</u>



* Bonds are stated at amortized or investment value; Stocks at Association Market Values.
The foregoing financial information is taken from Liberty Mutual Insurance Company's financial statement filed with the state of Massachusetts Department of Insurance.

I, TIM MIKOLAJEWSKI, Assistant Secretary of Liberty Mutual Insurance Company, do hereby certify that the foregoing is a true, and correct statement of the Assets and Liabilities of said Corporation, as of December 31, 2012, to the best of my knowledge and belief.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of said Corporation at Seattle, Washington, this 25th day of March, 2013.

T. Mikolajewski

Assistant Secretary



Payment Bond (Pages 86 to 89): Use for any contract for which a Payment Bond is required.

PAYMENT BOND (Page 1)

PAYMENT BOND

Bond #015039677

KNOW ALL PERSONS BY THESE PRESENTS, That we, _____

Trocom Construction Corp.

46-27 54th Rd.

Maspeth, NY 11378

hereinafter referred to as the "Principal", and _____

Liberty Mutual Insurance Company

1200 MacArthur Blvd.

Mahwah, NJ 07430

hereinafter referred to as the "Surety" ("Sureties") are held and firmly bound to THE CITY OF NEW YORK, hereinafter referred to as the "City" or to its successors and assigns, in the penal sum of

Ten Million Seven Hundred Sixty Five Thousand Forty Two and 24/100

(\$ ^{10,765,042.24}) Dollars, lawful money of the United States, for the payment of which said sum of money well and truly to be made, we, and each of us, bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal is about to enter, or has entered, into a Contract in writing with the City for

FMS ID: HWXRCPLZ, E-PIN: 85013B0044001, DDC PIN: 8502012HW0007C,

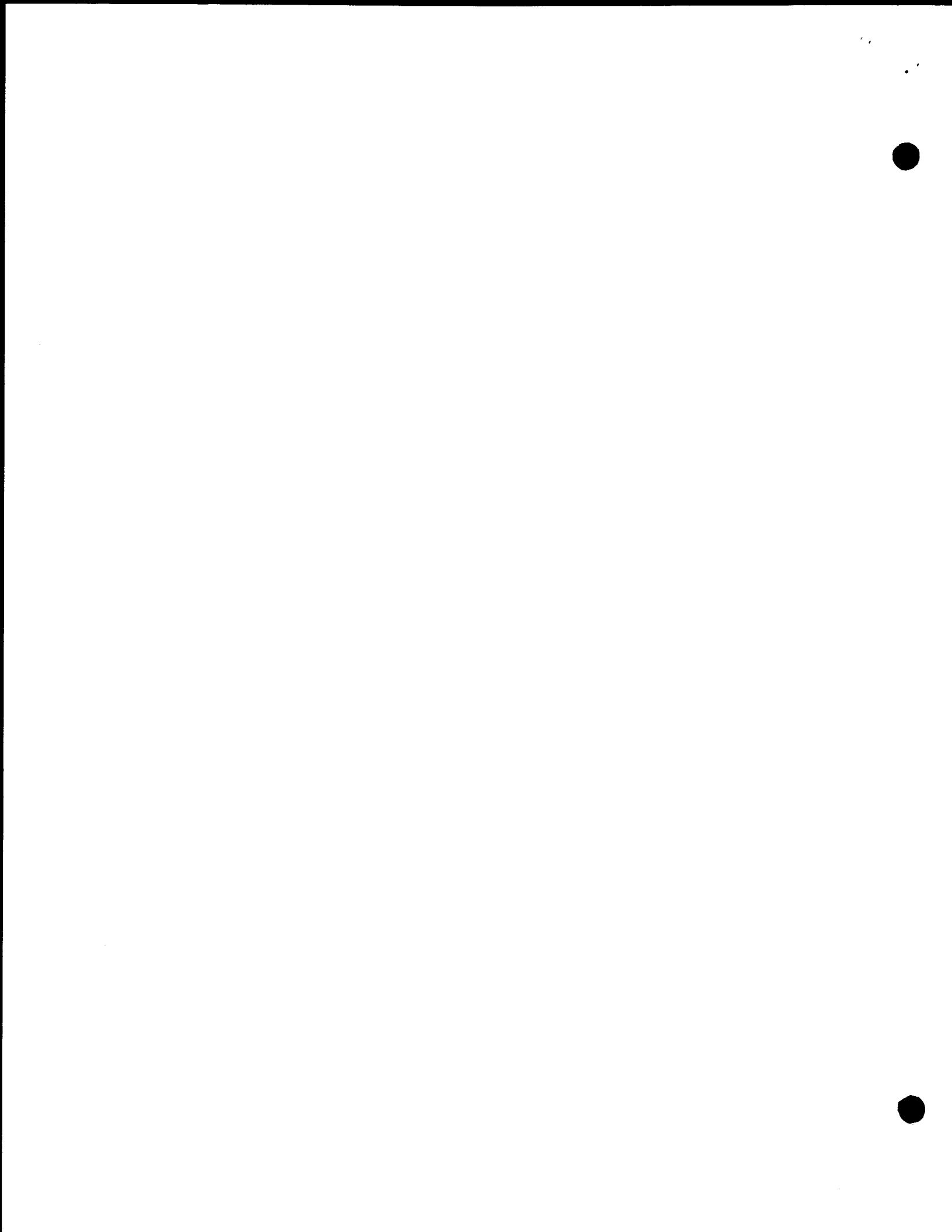
Reconstruction of Roberto Clemente Plaza Including Sewer, Water Main, Street Lighting

and Traffic Signal Work - Boro of the Bronx

a copy of which Contract is annexed to and hereby made a part of this bond as though herein set forth in full;

NOW, THEREFORE, the conditions of this obligation are such that if the Principal, his or its representatives or assigns and other Subcontractors to whom Work under this Contract is sublet and his or their successors and assigns shall promptly pay or cause to be paid all lawful claims for

(a) Wages and compensation for labor performed and services rendered by all persons engaged in the prosecution of the Work under said Contract, and any amendment or extension thereof or addition thereto, whether such persons be agents servants or employees of the Principal or any such Subcontractor, including all persons so engaged who perform the work of laborers or mechanics at or in the vicinity of the site



Payment Bond (Pages 86 to 89): Use for any contract for which a Payment Bond is required.

PAYMENT BOND (Page 2)

of the Project regardless of any contractual relationship between the Principal or such Subcontractors, or his or their successors or assigns, on the one hand and such laborers or mechanics on the other, but not including office employees not regularly stationed at the site of the project; and

(b) Materials and supplies (whether incorporated in the permanent structure or not), as well as teams, fuels, oils, implements or machinery furnished, used or consumed by said Principal or any subcontractor at or in the vicinity of the site of the Project in the prosecution of the Work under said Contract and any amendment or extension thereof or addition thereto; then this obligation shall be void, otherwise to remain in full force and effect.

This bond is subject to the following additional conditions, limitations and agreements:

(a) The Principal and Surety (Sureties) agree that this bond shall be for the benefit of any materialmen or laborer having a just claim, as well as the City itself.

(b) All persons who have performed labor, rendered services or furnished materials and supplies, as aforesaid, shall have a direct right of action against the Principal and his, its or their successors and assigns, and the Surety (Sureties) herein, or against either or both or any of them and their successors and assigns. Such persons may sue in their own name, and may prosecute the suit to judgment and execution without the necessity of joining with any other persons as party plaintiff.

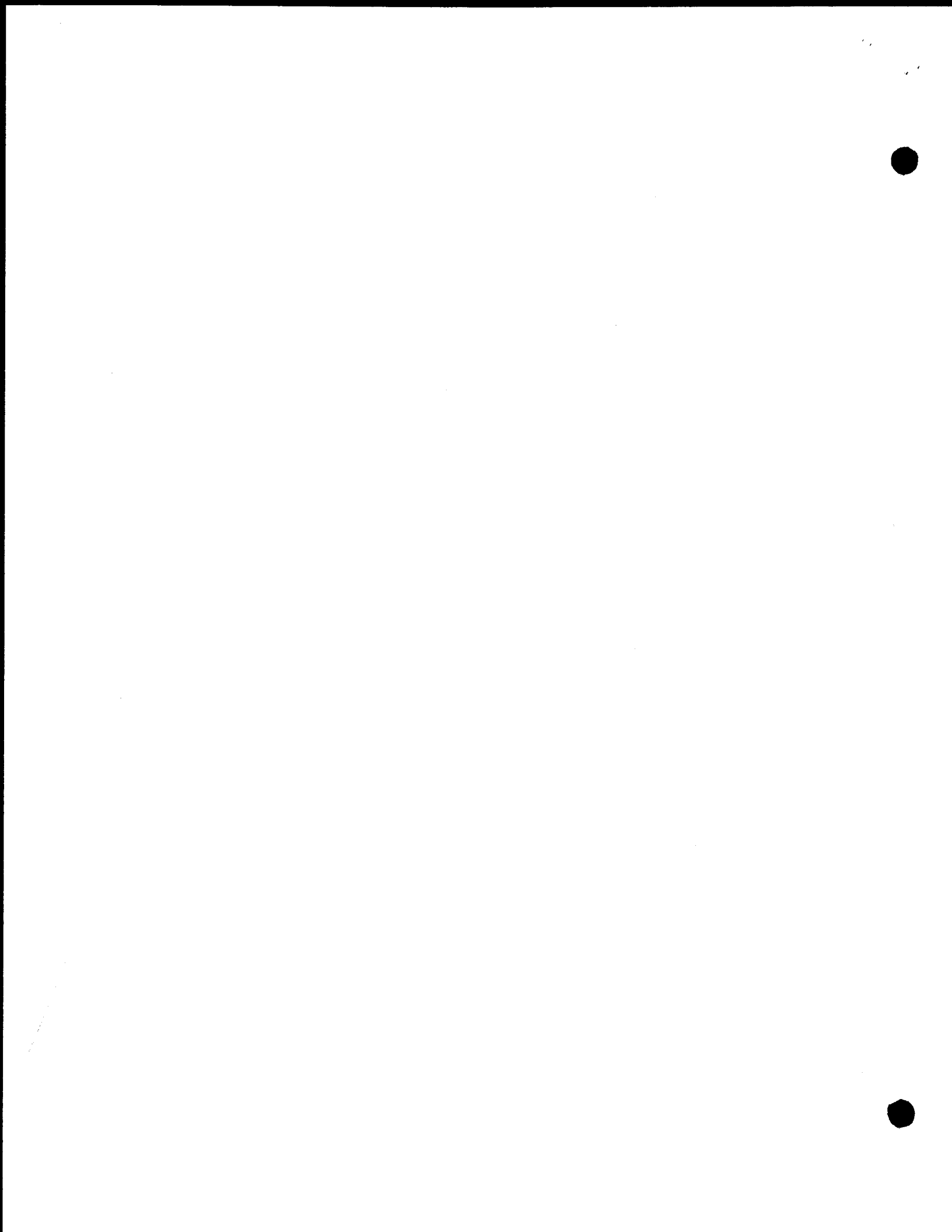
(c) The Principal and Surety (Sureties) agree that neither of them will hold the City liable for any judgment for costs of otherwise, obtained by either or both of them against a laborer or materialman in a suit brought by either a laborer or materialman under this bond for moneys allegedly due for performing work or furnishing material.

(d) The Surety (Sureties) or its successors and assigns shall not be liable for any compensation recoverable by an employee or laborer under the Workmen's Compensation Law.

(e) In no event shall the Surety (Sureties), or its successors or assigns, be liable for a greater sum than the penalty of this bond or be subject to any suit, action or proceeding hereon that is instituted by any person, firm, or corporation hereunder later than two years after the complete performance of said Contract and final settlement thereof.

The Principal, for himself and his successors and assigns, and the Surety (Sureties), for itself and its successors and assigns, do hereby expressly waive any objection that might be interposed as to the right of the City to require a bond containing the foregoing provisions, and they do hereby further expressly waive any defense which they or either of them might interpose to an action brought hereon by any person, firm or corporation, including subcontractors, materialmen and third persons, for work, labor, services, supplies or material performed rendered, or furnished as aforesaid upon the ground that there is no law authorizing the City to require the foregoing provisions to be place in this bond.

And the Surety (Sureties), for value received, for itself and its successors and assigns, hereby stipulates and agrees that the obligation of said Surety (Sureties), and its bonds shall be in no way impaired or affected by any extension of time, modification, omission, addition, or change in or of the said Contract or the work to be performed thereunder, or by any payment thereunder before the time required therein, or by any waiver of any provisions thereof, or by any assignment, subletting or other transfer thereof or of any part thereof, or of any Work to be performed, or any moneys due to become due thereunder and said Surety (Sureties) does hereby waive notice of any and all of such extensions, modifications, omissions, additions, changes, payments, waivers, assignments, subcontracts and transfers, and hereby expressly stipulates and agrees that any and all things done and omitted to be done by and in relation to assignees, Subcontractors, and other transferees shall have the same effect as to said Surety (Sureties) as though done or omitted to be done or in relation to said Principal.



Payment Bond (Pages 86 to 89): Use for any contract for which a Payment Bond is required.

PAYMENT BOND (Page 3)

IN WITNESS WHEREOF, the Principal and the Surety (Sureties) have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereunto affixed and these presents to be signed by their proper officers, this 13th day of June, 2013.

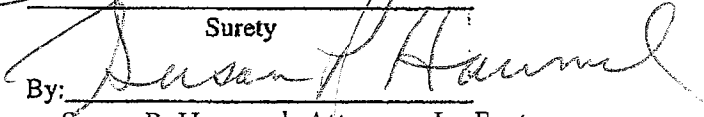
(Seal)

Trocom Construction Corp. (L.S.)
Principal

By: 

(Seal)

Liberty Mutual Insurance Company
Surety

By: 
Susan P. Hammel, Attorney-In-Fact

(Seal)

Surety

By: _____

(Seal)

Surety

By: _____

(Seal)

Surety

By: _____

If the Contractor (Principal) is a partnership, the bond should be signed by each of the individuals who are partners.

If the Contractor (Principal) is a corporation, the bond should be signed in its correct corporate name by a duly authorized officer, agent, or attorney-in-fact.

There should be executed an appropriate number of counterparts of the bond corresponding to the number of counterparts of the Contract.



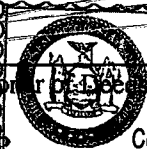
Payment Bond (Pages 86 to 89): Use for any contract for which a Payment Bond is required.

PAYMENT BOND (Page 4)

ACKNOWLEDGMENT OF PRINCIPAL, IF A CORPORATION

State of New York County of Queens ss:

On this 17 day of June, 2013, before me personally came ANTHONY J. SANCHEZ to me known, who, being by me duly sworn did depose and say that he resides at Staten Island that he is the Vice President of the corporation described in and which executed the foregoing instrument; that he knows the seal of said corporation; that one of the seals affixed to said instrument is such seal; that it was so affixed by order of the directors of said corporation, and that he signed his name thereto by like order.

Notary Public or Commissioner of Deeds  LINDA BARBATI
Notary Public, State of New York
No. 01BA6181795
Qualified in Queens County
Commission Expires February 11, 2014

ACKNOWLEDGMENT OF PRINCIPAL, IF A PARTNERSHIP

State of _____ County of _____ ss:

On this _____ day of _____, _____, before me personally appeared _____ to me known, and known to me to be one of the members of the firm of _____ described in and who executed the foregoing instrument; and he acknowledged to me that he executed the same as and for the act and deed of said firm.

Notary Public or Commissioner of Deeds

ACKNOWLEDGMENT OF PRINCIPAL, IF AN INDIVIDUAL

State of _____ County of _____ ss:

On this _____ day of _____, _____, before me personally appeared _____ to me known, and known to me to be the person described in and who executed the foregoing instrument; and acknowledged that he executed the same.

Notary Public or Commissioner of Deeds

Each executed bond should be accompanied by: (a) appropriate acknowledgments of the respective parties; (b) appropriate duly certified copy of Power of Attorney or other certificate of authority where bond is executed by agent, officer or other representative of Principal or Surety; (c) a duly certified extract from By-Laws or resolutions of Surety under which Power of Attorney or other certificate of authority of its agent, officer or representative was issued, and (d) certified copy of latest published financial statement of assets and liabilities of Surety.

Affix Acknowledgments and Justification of Sureties.

ACKNOWLEDGEMENT OF PRINCIPAL, OF A CORPORATION

STATE OF New York

COUNTY OF Queens

SS:

On this 17 day of June, 2013 before me personally came Anthony J. Santoro to me known, who, being by me duly sworn did depose and say that he resides at Staten Island that he is the Vice President of Trocon Construction Corp the corporation described in and which executed the foregoing instrument; that he knows the seal of said corporation; that one of the seals affixed to the foregoing instrument is such seal; that it was an affixed by order of the board of directors of said corporation; and that he signed his name thereto by like order.



ACKNOWLEDGEMENT OF SURETY

STATE OF New York

COUNTY OF Nassau

SS:

On this 13th day of June, 2013, before me personally came Susan P. Hammel to me known, who, being by me duly sworn, did depose and say that he is an Attorney-In-Fact of Liberty Mutual Insurance Company the corporation described in and which executed the within instrument; that he knows the corporate seal of said corporation; that the seal affixed to the within instrument is such corporate seal, and that he signed and said instrument and affixed the said seal as Attorney-In-Fact by authority of the Board of Directors of said corporation and by authority of this office under the Standing Resolutions thereof.

LYNN ANN INFANTI
Notary Public, State of New York
No. 011N6004351
Qualified in Suffolk County 2014
Commission Expires March 23, 2014

My commission expires _____

Notary Public

THIS POWER OF ATTORNEY IS NOT VALID UNLESS IT IS PRINTED ON RED BACKGROUND.

This Power of Attorney limits the acts of those named herein, and they have no authority to bind the Company except in the manner and to the extent herein stated.

Certificate No. 6085404

American Fire and Casualty Company
The Ohio Casualty Insurance Company

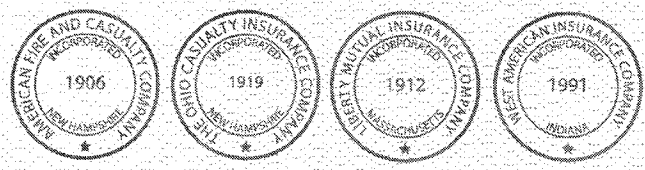
Liberty Mutual Insurance Company
West American Insurance Company

POWER OF ATTORNEY

KNOWN ALL PERSONS BY THESE PRESENTS: That American Fire & Casualty Company and The Ohio Casualty Insurance Company are corporations duly organized under the laws of the State of New Hampshire, that Liberty Mutual Insurance Company is a corporation duly organized under the laws of the State of Massachusetts, and West American Insurance Company is a corporation duly organized under the laws of the State of Indiana (herein collectively called the "Companies"), pursuant to and by authority herein set forth, does hereby name, constitute and appoint, Joseph Storzo; Robert Kempner; Robert W. O'Kane; Susan P. Hammel

all of the city of Plainview, state of NY each individually if there be more than one named, its true and lawful attorney-in-fact to make, execute, seal, acknowledge and deliver, for and on its behalf as surety and as its act and deed, any and all undertakings, bonds, recognizances and other surety obligations, in pursuance of these presents and shall be as binding upon the Companies as if they have been duly signed by the president and attested by the secretary of the Companies in their own proper persons.

IN WITNESS WHEREOF, this Power of Attorney has been subscribed by an authorized officer or official of the Companies and the corporate seals of the Companies have been affixed thereto this 18th day of April, 2013.



American Fire and Casualty Company
The Ohio Casualty Insurance Company
Liberty Mutual Insurance Company
West American Insurance Company
By: Gregory W. Davenport
Gregory W. Davenport, Assistant Secretary

STATE OF WASHINGTON ss
COUNTY OF KING

On this 18th day of April, 2013, before me personally appeared Gregory W. Davenport, who acknowledged himself to be the Assistant Secretary of American Fire and Casualty Company, Liberty Mutual Insurance Company, The Ohio Casualty Company, and West American Insurance Company, and that he, as such, being authorized so to do, execute the foregoing instrument for the purposes therein contained by signing on behalf of the corporations by himself as a duly authorized officer.

IN WITNESS WHEREOF, I have hereunto subscribed my name and affixed my notarial seal at Seattle, Washington, on the day and year first above written.



By: KD Riley
KD Riley, Notary Public

This Power of Attorney is made and executed pursuant to and by authority of the following By-laws and Authorizations of American Fire and Casualty Company, The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company which resolutions are now in full force and effect reading as follows:

ARTICLE IV – OFFICERS – Section 12. Power of Attorney. Any officer or other official of the Corporation authorized for that purpose in writing by the Chairman or the President, and subject to such limitation as the Chairman or the President may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Corporation to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact, subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Corporation by their signature and execution of any such instruments and to attach thereto the seal of the Corporation. When so executed, such instruments shall be as binding as if signed by the President and attested to by the Secretary. Any power or authority granted to any representative or attorney-in-fact under the provisions of this article may be revoked at any time by the Board, the Chairman, the President or by the officer or officers granting such power or authority.

ARTICLE XIII – Execution of Contracts – SECTION 5. Surety Bonds and Undertakings. Any officer of the Company authorized for that purpose in writing by the chairman or the president, and subject to such limitations as the chairman or the president may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Company by their signature and execution of any such instruments and to attach thereto the seal of the Company. When so executed such instruments shall be as binding as if signed by the president and attested by the secretary.

Certificate of Designation – The President of the Company, acting pursuant to the Bylaws of the Company, authorizes Gregory W. Davenport, Assistant Secretary to appoint such attorneys-in-fact as may be necessary to act on behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations.

Authorization – By unanimous consent of the Company's Board of Directors, the Company consents that facsimile or mechanically reproduced signature of any assistant secretary of the Company, wherever appearing upon a certified copy of any power of attorney issued by the Company in connection with surety bonds, shall be valid and binding upon the Company with the same force and effect as though manually affixed.

I, David M. Carey, the undersigned, Assistant Secretary, of American Fire and Casualty Company, The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company do hereby certify that the original power of attorney of which the foregoing is a full, true and correct copy of the Power of Attorney executed by said Companies, is in full force and effect and has not been revoked.

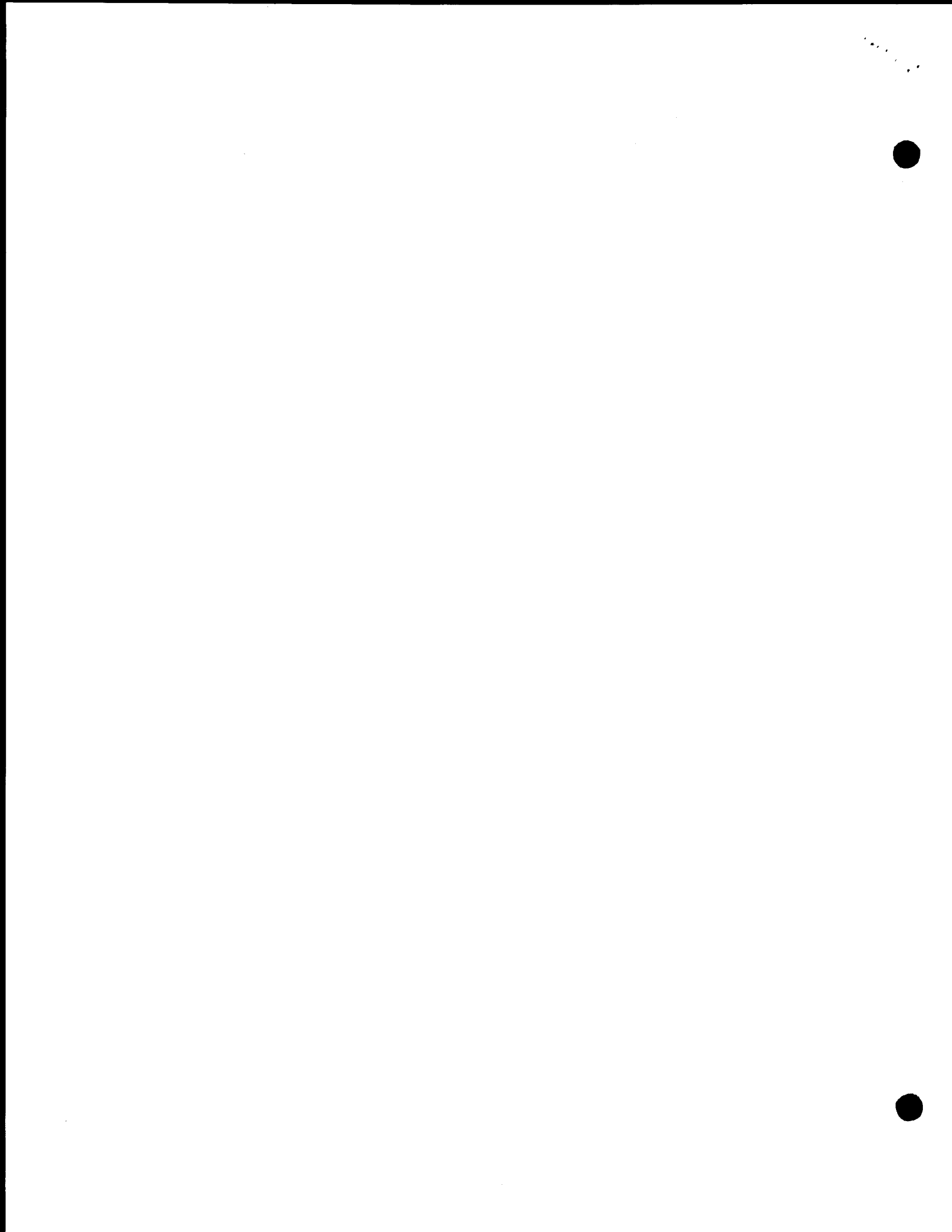
IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the seals of said Companies this 13th day of June, 20 13.



By: David M. Carey
David M. Carey, Assistant Secretary

Not valid for mortgage, note, loan, letter of credit, bank deposit, currency rate, interest rate or residual value guarantees.

To confirm the validity of this Power of Attorney call 1-610-832-8240 between 9:00 am and 4:30 pm EST on any business day.





LIBERTY MUTUAL INSURANCE COMPANY
 FINANCIAL STATEMENT — DECEMBER 31, 2012

Assets		Liabilities	
Cash and Bank Deposits	\$ 903,711,694	Unearned Premiums	\$4,205,141,671
*Bonds — U.S Government	1,166,929,471	Reserve for Claims and Claims Expense	17,056,420,207
*Other Bonds	11,415,194,219	Funds Held Under Reinsurance Treaties	1,315,062,091
*Stocks	8,104,853,899	Reserve for Dividends to Policyholders	2,455,411
Real Estate	255,967,320	Additional Statutory Reserve	49,768,998
Agents' Balances or Uncollected Premiums	3,482,069,753	Reserve for Commissions, Taxes and	
Accrued Interest and Rents	144,016,763	Other Liabilities	<u>3,066,051,537</u>
Other Admitted Assets	<u>14,732,623,458</u>	Total	\$25,694,899,915
Total Admitted Assets	<u>\$40,205,366,577</u>	Special Surplus Funds	\$604,621,497
		Capital Stock	10,000,000
		Paid in Surplus	7,899,471,886
		Unassigned Surplus	5,996,373,279
		Surplus to Policyholders	<u>14,510,466,662</u>
		Total Liabilities and Surplus	<u>\$40,205,366,577</u>



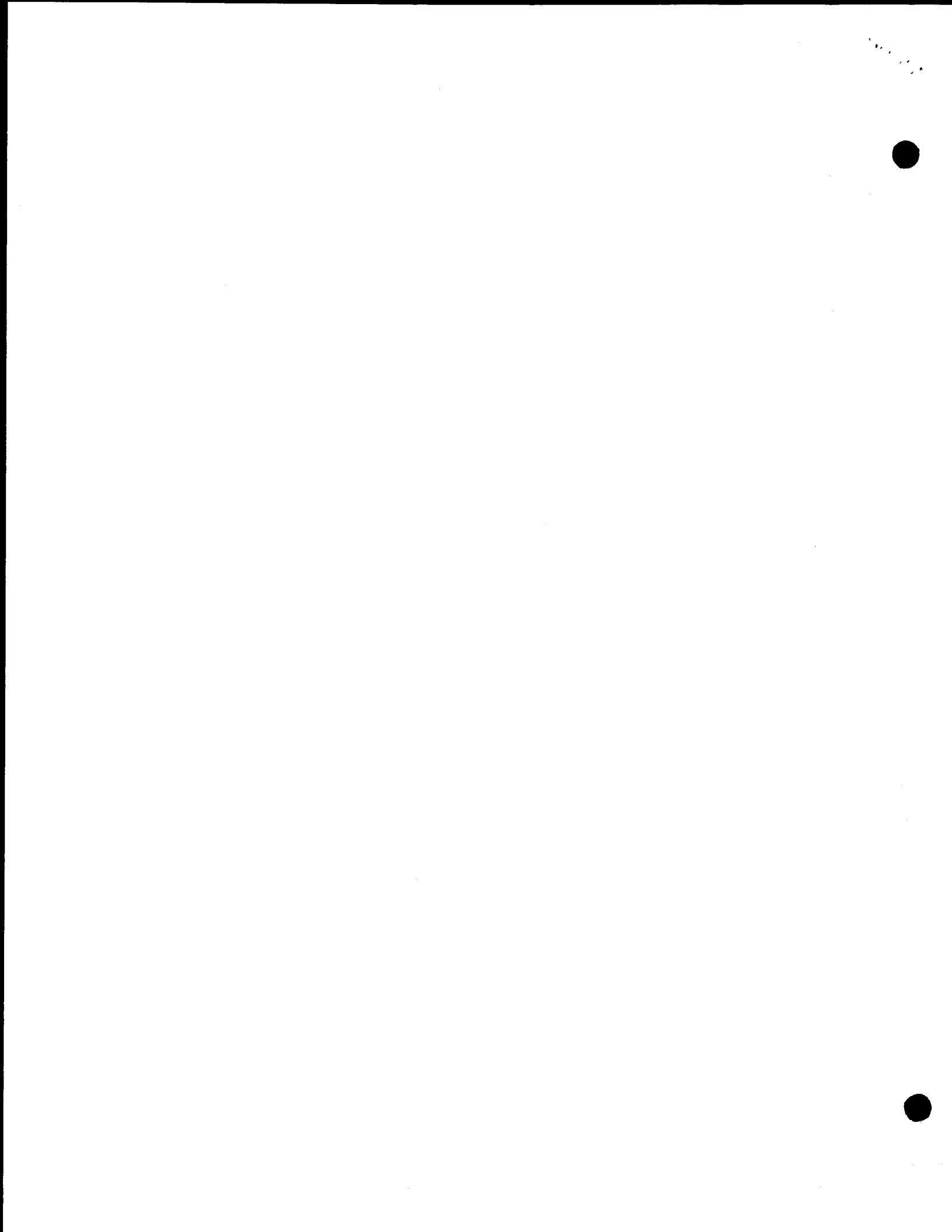
* Bonds are stated at amortized or investment value; Stocks at Association Market Values.
 The foregoing financial information is taken from Liberty Mutual Insurance Company's financial statement filed with the state of Massachusetts Department of Insurance.

I, TIM MIKOLAJEWSKI, Assistant Secretary of Liberty Mutual Insurance Company, do hereby certify that the foregoing is a true, and correct statement of the Assets and Liabilities of said Corporation, as of December 31, 2012, to the best of my knowledge and belief.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of said Corporation at Seattle, Washington, this 25th day of March, 2013.

TAMIKOLAJEWSKI

Assistant Secretary





TROCO-1

OP ID: SA

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)
06/12/13

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Brown & Brown of New York, Inc 2500 Westchester Avenue Purchase, NY 10577	914-253-8400	CONTACT NAME:	
	914-253-8650	PHONE (A/C, No, Ext):	FAX (A/C, No):
		E-MAIL ADDRESS:	
		INSURER(S) AFFORDING COVERAGE	NAIC #
		INSURER A: Liberty Insurance Underwriters	
		INSURER B: The State Insurance Fund	36102
		INSURER C: Zurich American Insurance	16535
		INSURER D: Hanover Insurance Co.	158
		INSURER E:	
		INSURER F:	

COVERAGES CERTIFICATE NUMBER: REVISION NUMBER:

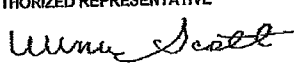
THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL SUBR INSR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
	GENERAL LIABILITY <input type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input type="checkbox"/> OCCUR					EACH OCCURRENCE \$ DAMAGE TO RENTED PREMISES (Ea occurrence) \$ MED EXP (Any one person) \$ PERSONAL & ADV INJURY \$ GENERAL AGGREGATE \$ PRODUCTS - COMP/OP AGG \$
	GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC					\$
A	AUTOMOBILE LIABILITY <input checked="" type="checkbox"/> ANY AUTO <input type="checkbox"/> ALL OWNED AUTOS <input checked="" type="checkbox"/> HIRED AUTOS <input type="checkbox"/> SCHEDULED AUTOS <input checked="" type="checkbox"/> NON-OWNED AUTOS	X	GMIB00683-0212	07/07/12	07/07/13	COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$
	UMBRELLA LIAB EXCESS LIAB DED RETENTION \$					EACH OCCURRENCE \$ AGGREGATE \$
B	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	N/A	1388050-5	04/01/12	04/01/14	<input checked="" type="checkbox"/> WC STATUTORY LIMITS E.L. EACH ACCIDENT \$ Cert To E.L. DISEASE - EA EMPLOYEE \$ Follow From E.L. DISEASE - POLICY LIMIT \$ State Fund
C	NYS Disability		1913195	04/01/12	04/01/14	LEAS/RENT 1,000,000
D	Property		RHY 3468541	07/07/12	07/12/13	DED 1,000

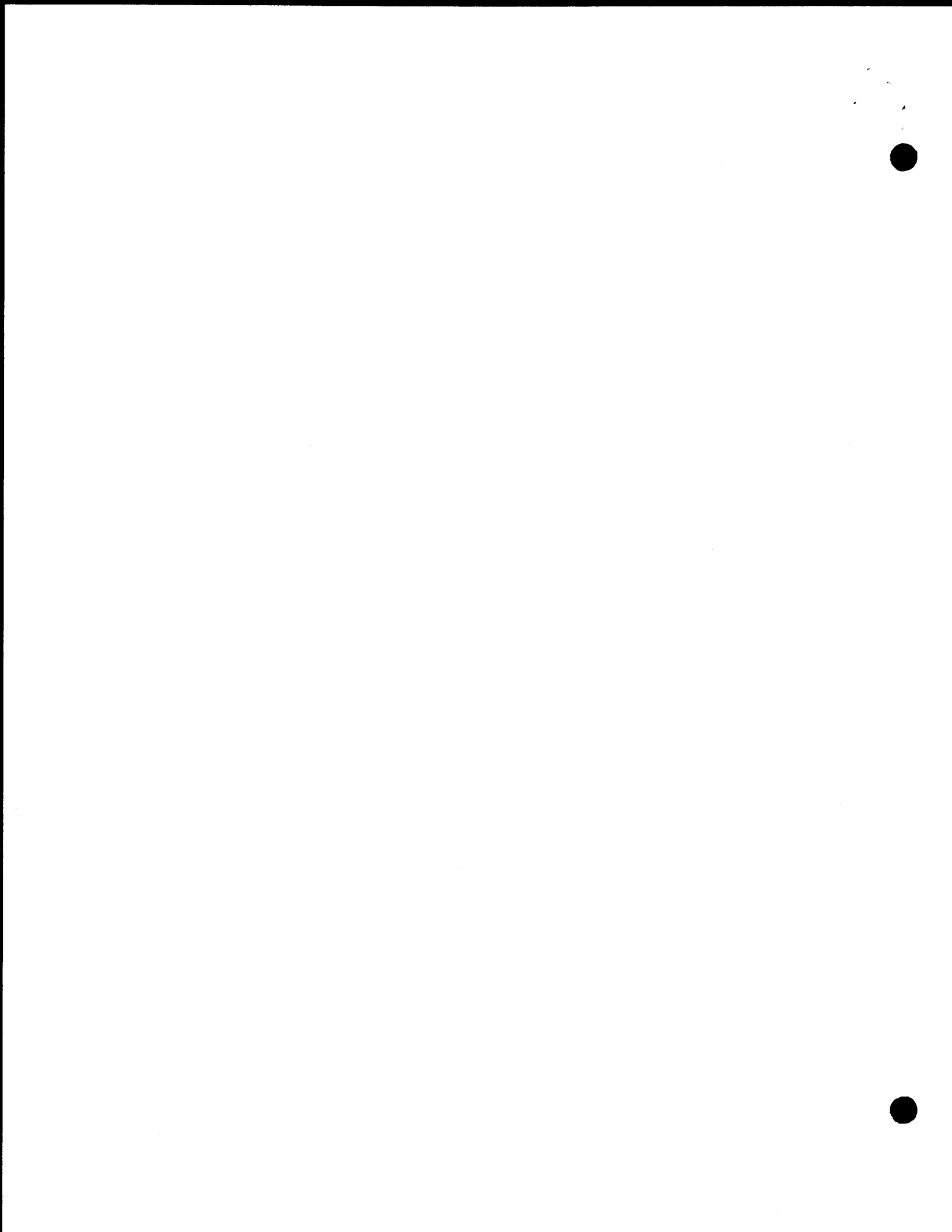
DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)

Re: FMS ID: HWXRCPLZ, E-Pin: 85013B0044001, DDC PIN: 8502012HW0007C
Reconstruction of Roberto Clemente Plaza, Including Sewer, Water Main, Street Lighting and Traffic Signal Work - Borough of the Bronx

(Please see attached for additional wording)

CERTIFICATE HOLDER NEWYO-8 New York City Department of Design & Construction 30-30 Thomson Avenue Long Island City, NY 11101-3045	CANCELLATION SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.
	AUTHORIZED REPRESENTATIVE 

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NOTEPAD:

HOLDER CODE **NEWYO-8**
INSURED'S NAME **Trocom Construction Corp.**

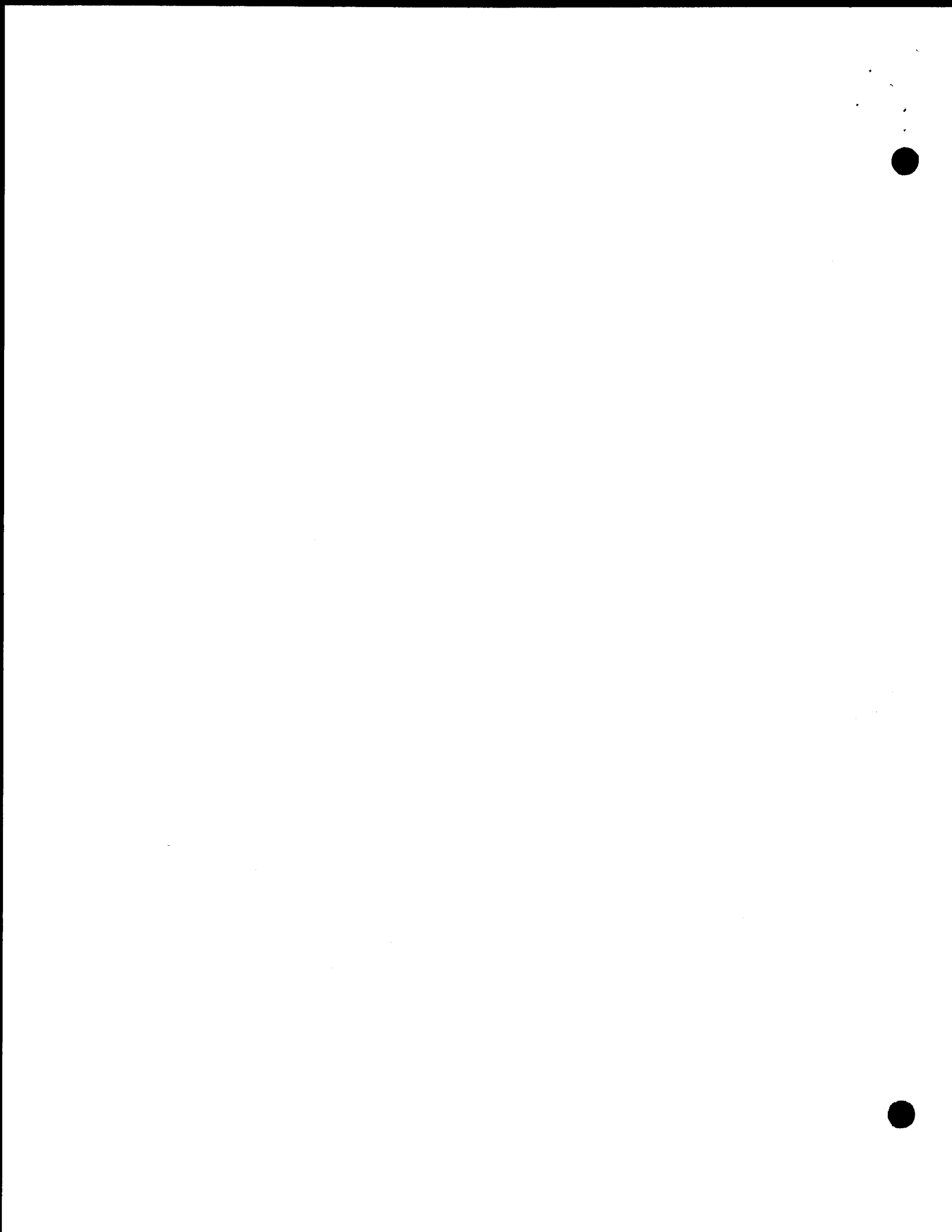
TROCO-1
OP ID: SA

PAGE 2
DATE **06/12/13**

Certificate Holder: New York City Department of Design & Construction

Re: FMS ID: HWXRCPLZ, E-Pin: 85013B0044001, DDC PIN: 8502012HW0007C
Reconstruction of Roberto Clemente Plaza, Including Sewer, Water Main,
Street Lighting and Traffic Signal Work - Borough of the Bronx

City of New York, including its officials and employees and The New York
City Transit Authority (NYCTA), Manhattan and Bronx Surface Transit
Operation Authority (MaBSTOA), Staten Island Rapid Transit Operation
Authority (SIRTOA), Metropolitan Transportation Authority (MTA), its
subsidiaries and affiliated companies are included as additional insured
if required by a written contract. LM/js

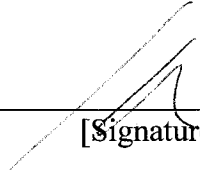


CERTIFICATION BY BROKER

The undersigned insurance broker represents to the City of New York that the attached Certificate of Insurance, dated 6/12/13 concerning insurance policy number GMIB00683-0212 is accurate in all material respects, and that the described insurance is effective as of the date of this Certification.

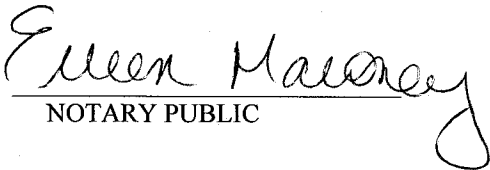
Brown & Brown of New York, Inc.
[Name of broker (typewritten)]

2500 Westchester Ave Purchase, NY 10577
[Address of broker (typewritten)]

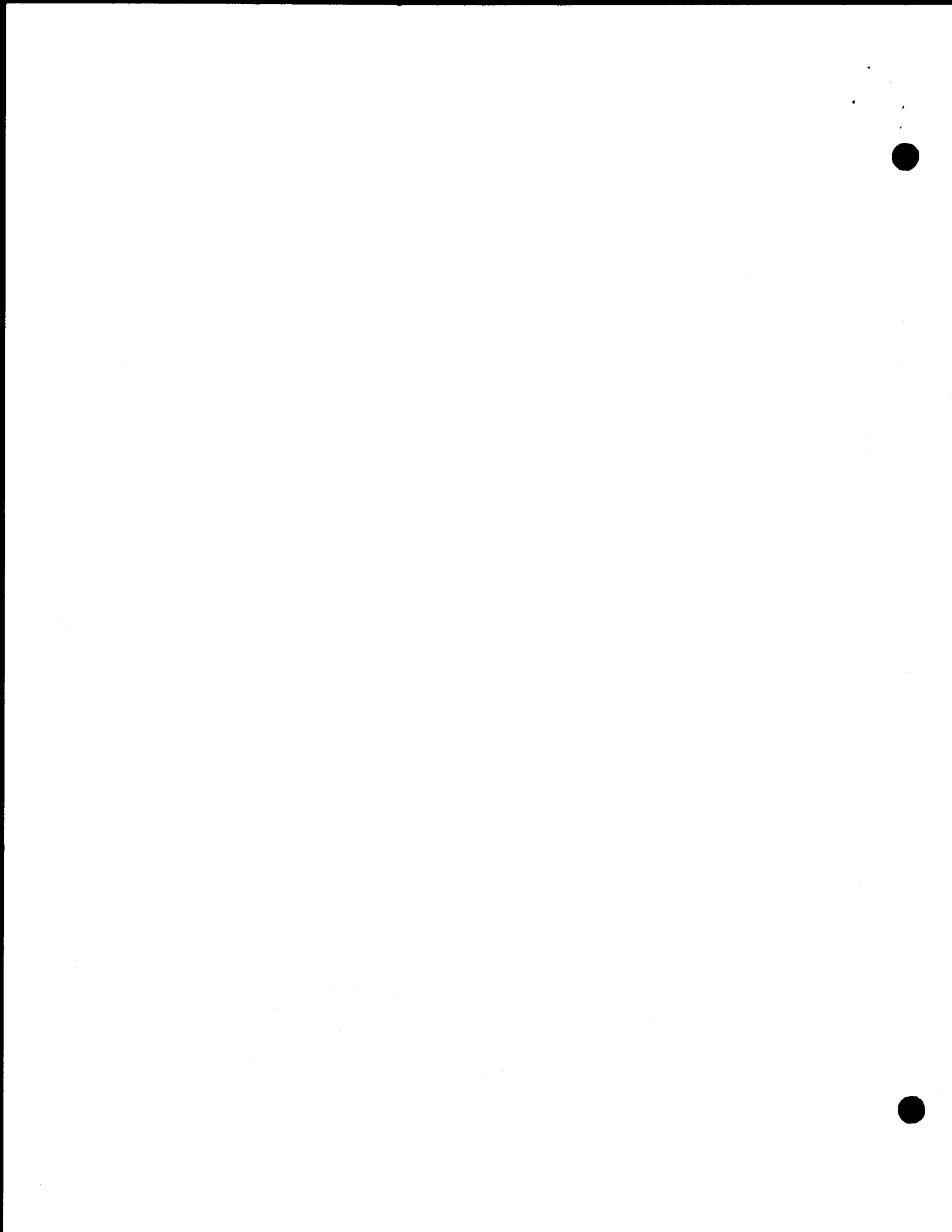

[Signature of Authorized Official or broker]

Lorraine Marotz - Vice President
[Name & Title of Authorized Official (typewritten)]

Sworn to before me this
12th day of June 2013


NOTARY PUBLIC

EILEEN MALONEY
NOTARY PUBLIC-STATE OF NEW YORK
No. 01MA6174339
Qualified in Westchester County
My Commission Expires September 17, 2015



**STATE OF NEW YORK
WORKERS' COMPENSATION BOARD**

**CERTIFICATE OF INSURANCE COVERAGE UNDER THE NYS DISABILITY BENEFITS
LAW**

Part 1. To be completed by Disability Benefits Carrier or Licensed Insurance Agent of that Carrier

<p>1a. Legal Name and Address of Insured (Use Street Address only)</p> <p>Trocom Construction Corp. 46-27 54th Road Maspeth, NY 11378</p>	<p>1b. Business Telephone Number of Insured 718-937-2000</p> <p>1c. NYS Unemployment Insurance Employer Registration Number of Insured</p> <p>1d. Federal Employer Identification Number of Insured or Social Security Number 112203562</p>
<p>2. Name and Address of the Entity Requesting Proof of Coverage (Entity Being Listed as the certificate holder)</p> <p>Director, Risk Management, MTA Risk and Insurance Management Standards, Enforcement and Claims Unit 2 Broadway, 21st Floor New York, NY 10004</p>	<p>3a. Name of Insurance Carrier 1913195</p> <p>3b. Policy Number of entity listed in box "1a" Zurich American Insurance</p> <p>3c. Policy effective period: <u>4/1/13</u> to <u>4/1/14</u></p>
<p>4. Policy covers:</p> <p>a. <input checked="" type="checkbox"/> All of the employer's employees eligible under the New York Disability benefits Law</p> <p>b. <input type="checkbox"/> Only the following class or classes of the employees:</p> <p>Under penalty of perjury, I certify that I am an authorized representative or licensed agent of the insurance carrier referenced above and that the named insured has NYS Disability Benefits insurance coverage as described above.</p> <p>Date Signed <u>6/12/13</u> By <u>[Signature]</u> (Signature of insured's carrier's authorized representative of NYS Licensed Insurance Agent of that insurance carrier)</p> <p>Telephone Number <u>914-253-8400</u> Title <u>Vice President</u></p> <p>IMPORTANT: If box "4a" is checked and this form is signed by the insurance carrier's authorized representative or NYS Licensed Insurance Agent of that carrier, this certificate is COMPLETE. Mail it directly to the certificate holder. If box "4b" is checked, this certificate is NOT COMPLETE for purposes of Section 220, Subd, 6 of the Disability Benefits Law. It must be mailed for completion to the Workers' Compensation Board, DB Plans Acceptance Unit, 20 Park Street, Albany, New York 12207</p>	

PART2. To be completed by NYS Workers' Compensation Board (Only if box "4b" of Part 1 has been checked)

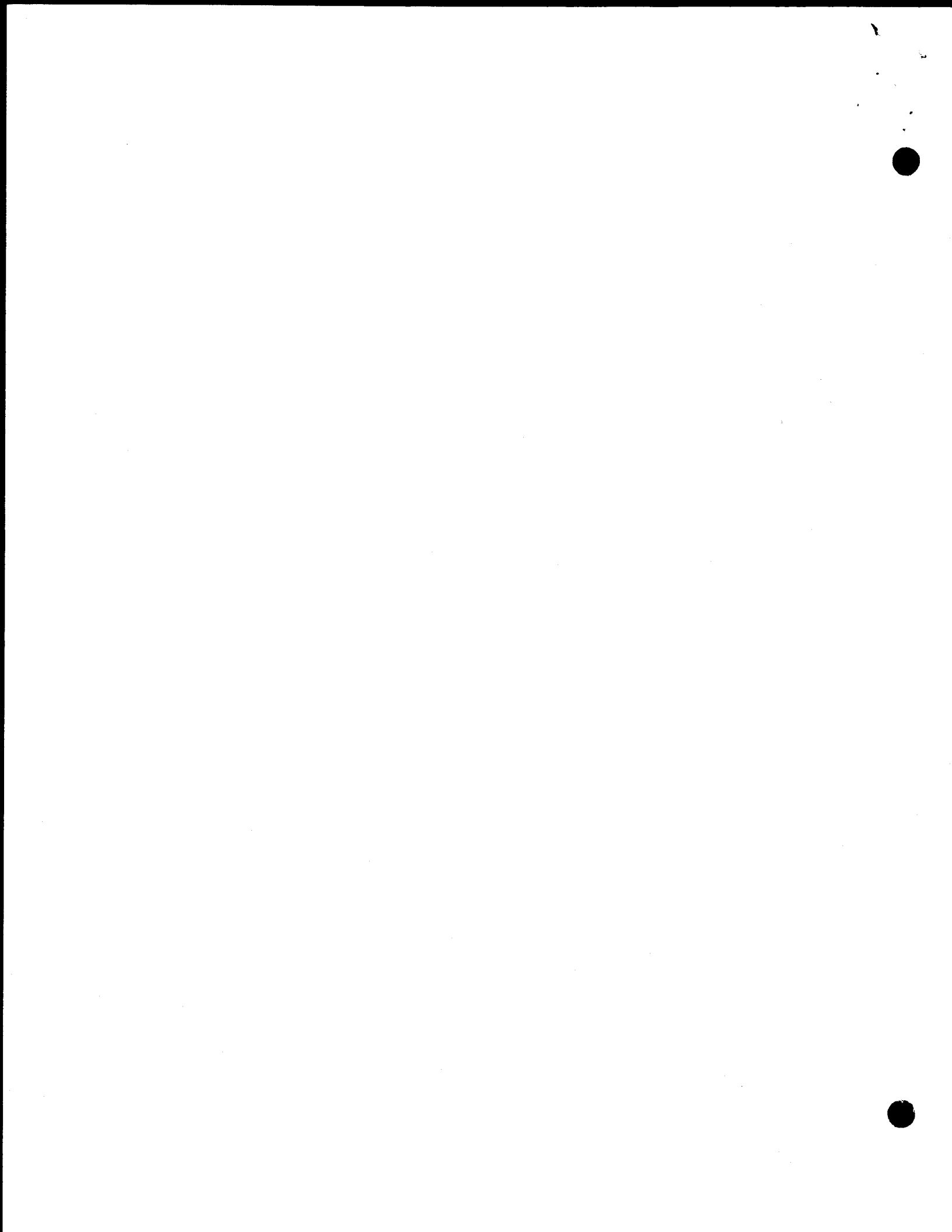
State Of New York
Workers' Compensation Board

According to information maintained by the NYS Workers Compensation Board, the above- named employer has complied with the NYS Disability Benefits law with respect to all of his/her employees.

Date Signed _____ By _____
(Signature of NYS Workers' Compensation Board Employee)

Telephone Number _____ Title _____

Please note: Only insurance carriers licensed to write NYS Disability benefits insurance policies and NYS Licensed insurance agents of those insurance carriers are authorized to issue Form DB-120.1. Insurance brokers are NOT authorized to issue this form.



Additional Instructions for Form DB-120.1

By signing this form, the insurance carrier identified in box "3" on this form is certifying that it is insuring the business referenced in box "1a" for disability benefits under the New York State Disability Benefits Law. The Insurance Carrier or its licensed agent will send this Certificate of Insurance to the entity listed as the certificate holder in box "2". *This Certificate is valid for the earlier of one year after this form is approved by the insurance carrier or its licensed agent, or the policy expiration date listed in box "3c".*

Please Note: Upon the cancellation of the disability benefits policy indicated on this form, if the business continues to be named on a permit, license or contract issued by a certificate holder, the business must provide that certificate holder with a new Certificate of NYS Disability Benefits Coverage or other authorized proof that the business is complying with the mandatory coverage requirements of the New York State Disability Benefits Law.

DISABILITY BENEFITS LAW

§ 220. Subd. 8

- (a) The head of a state or municipal department, board, commission or office authorized or required by law to issue any permit for or in connection with any work involving the employment of employees in employment as defined in this article, and notwithstanding any general or special statute requiring or authorizing the issue of such permits, shall not issue such permit unless proof duly subscribed by an insurance carrier is produced in a form satisfactory to the chair, that the payment of disability benefits for all employees has been secured as provided by this article. Nothing herein, however, shall be construed as creating any liability on the part of such state or municipal department, board, commission or office to pay any disability benefits to any such employee if so employed.

- (b) The head of a state or municipal department, board, commission or office authorized or required by law to enter into any contract for or in connection with any work involving the employment of employees in employment as defined in this article, and notwithstanding any general or special statute requiring or authorizing any such contract, shall not enter into any such contract unless proof duly subscribed by an insurance carrier is produced in a form satisfactory to the chair, that the payment of disability benefits for all employees has been secured as provided by this article.



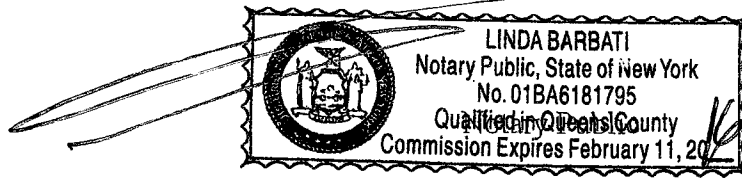
ACKNOWLEDGEMENT OF PRINCIPAL, OF A CORPORATION

STATE OF New York

COUNTY OF Queens

SS:

On this 17 day of June, 2013 before me personally came Anthony J. Santoro to me known, who, being by me duly sworn did depose and say that he resides at Staten Island that he is the Vice President of Tropic Construction Corp. the corporation described in and which executed the foregoing instrument; that he knows the seal of said corporation; that one of the seals affixed to the foregoing instrument is such seal; that it was an affixed by order of the board of directors of said corporation; and that he signed his name thereto by like order.



ACKNOWLEDGEMENT OF SURETY

STATE OF New York

COUNTY OF Nassau

SS:

On this 13th day of June, 2013, before me personally came Susan P. Hammel to me known, who, being by me duly sworn, did depose and say that he is an Attorney-In-Fact of Liberty Mutual Insurance Company the corporation described in and which executed the within instrument; that he knows the corporate seal of said corporation; that the seal affixed to the within instrument is such corporate seal, and that he signed and said instrument and affixed the said seal as Attorney-In-Fact by authority of the Board of Directors of said corporation and by authority of this office under the Standing Resolutions thereof.

LYNN ANN INFANTI
Notary Public, State of New York
No. 011N6004351
Qualified in Suffolk County 2014
Commission Expires March 23, 2014

My commission expires _____

Notary Public

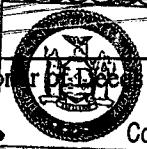
Payment Bond (Pages 86 to 89): Use for any contract for which a Payment Bond is required.

PAYMENT BOND (Page 4)

ACKNOWLEDGMENT OF PRINCIPAL, IF A CORPORATION

State of New York County of Queens ss:

On this 17 day of June, 2013, before me personally came Anthony J. Santoro to me known, who, being by me duly sworn did depose and say that he resides at Staten Island that he is the Vice President of the corporation described in and which executed the foregoing instrument; that he knows the seal of said corporation; that one of the seals affixed to said instrument is such seal; that it was so affixed by order of the directors of said corporation, and that he signed his name thereto by like order.

Notary Public or Commissioner of Deeds
 LINDA BARBATI
Notary Public, State of New York
No. 01BA6181795
Qualified in Queens County
Commission Expires February 11, 2014

ACKNOWLEDGMENT OF PRINCIPAL, IF A PARTNERSHIP

State of _____ County of _____ ss:

On this _____ day of _____, _____, before me personally appeared _____ to me known, and known to me to be one of the members of the firm of _____ described in and who executed the foregoing instrument; and he acknowledged to me that he executed the same as and for the act and deed of said firm.

Notary Public or Commissioner of Deeds

ACKNOWLEDGMENT OF PRINCIPAL, IF AN INDIVIDUAL

State of _____ County of _____ ss:

On this _____ day of _____, _____, before me personally appeared _____ to me known, and known to me to be the person described in and who executed the foregoing instrument; and acknowledged that he executed the same.

Notary Public or Commissioner of Deeds

Each executed bond should be accompanied by: (a) appropriate acknowledgments of the respective parties; (b) appropriate duly certified copy of Power of Attorney or other certificate of authority where bond is executed by agent, officer or other representative of Principal or Surety; (c) a duly certified extract from By-Laws or resolutions of Surety under which Power of Attorney or other certificate of authority of its agent, officer or representative was issued, and (d) certified copy of latest published financial statement of assets and liabilities of Surety.

Affix Acknowledgments and Justification of Sureties.

SCHEDULE OF WORKMEN, MECHANICS AND LABORERS

The following is a list of classifications for workmen, mechanics and laborers which are anticipated to be employed in the performance of work under this contract, followed by a schedule of the prevailing wage rates and supplemental benefits for all classifications as established by the Comptroller of the City of New York.

Request for interpretation or correction under Subsection A of Section No. 3 in the Information for Bidders includes all requests for clarification of the classification of trades to be employed in the performance of the work under this contract.

In the event that a trade not listed in the classification of trades required to be used at the time of the award of the contract is in fact employed during the performance of this contract, the Contractor shall be required to obtain from the agency the prevailing wage rates and supplementary benefits for the trades used and to complete the performance of this contract at the price at which the contract was awarded.

<u>CODE</u>	<u>CLASSIFICATION</u>
15 42 001	Rigger
15 42 002	Sign Erector
16 11 001	Gardener
16 11 002	Tree Pruner
16 11 003	Tree Remover
16 11 011	Asphalt Raker (Highway & Paving)
16 11 012	Tamper (Highway & Paving)
16 11 013	Curbsetter (Highway & Paving)
16 11 014	Formsetter (Highway & Paving)
16 11 015	Rammerman (Highway & Paving)
16 11 016	Laborer (Highway & Paving)
16 11 017	ALL OTHER TITLES (Highway & Paving)
16 23 001	Laborer
16 23 002	Operating Engineer (Heavy Construction-Maintenance)
16 23 003	Junior Operating Engineer
16 23 004	Junior Operating Engineer
16 23 005	Junior Operating Engineer
16 23 006	Fireman (Heavy Construction)
16 23 007	Oiler (Heavy Construction)
16 23 051	Surveyor-Heavy Construction
16 23 052	Surveyor-Heavy Construction-Instrument Man
16 23 053	Surveyor-Heavy Construction-Rodman
16 23 057	Surveyor-Land Surveying-Party Chief
16 23 058	Surveyor-Land Surveying-Instrument Man
16 23 059	Surveyor-Land Surveying-Rodman

<u>CODE</u>	<u>CLASSIFICATION</u>
16 23 061	Operating Engineer-Road & Heavy Construction
16 23 062	Operating Engineer-Paving
16 23 063	Operating Engineer-Concrete
16 23 071	Teamster-Heavy Equipment Trailer Driver
16 23 072	Teamster-Dump Truck Driver
16 23 073	Teamster-Flat Bed Trailer Driver (3-Axle)
16 23 074	Teamster-Redi-Mix (Sand and Gravel)
16 29 011	Drill Runners
17 11 001	Plumbers
17 21 001	Painter (Brush & Roller)
17 31 001	Electrician
17 41 001	Bricklayer
17 41 002	Mason Tender
17 41 004	Cement Mason
17 42 002	Metallic Lather
17 51 001	Carpenter
17 51 002	Dock Builder
17 71 001	Cement & Concrete Worker
17 91 001	Structural Iron Worker
17 95 001	Barman
17 96 021	Derrickmen & Riggers
17 99 001	Ornamental Iron Worker
17 99 002	Sandblaster
17 99 005	Pointers (Waterproofer)
17 99 011	Welders

Each classification may include trainees depending upon project staffing schedules and as required by the terms of this contract.

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

LABOR LAW §220 PREVAILING WAGE SCHEDULE

Workers, Laborers and Mechanics employed on a public work project must receive not less than the prevailing rate of wage and benefits for the classification of work performed by each upon such public work. Contractors are solely responsible for maintaining original payroll records which delineate, among other things, the hours each employee worked within a given classification. Contractors using rates and/or classifications not promulgated by the Comptroller do so at their own risk. Additionally, prior to bid, Agency Chief Contracting Officers must contact the Bureau of Labor Law when the need arises for a work classification not published in this schedule.

Pursuant to Labor Law §220 (3) the Comptroller of the City of New York has promulgated this schedule solely for Workers, Laborers and Mechanics engaged by private contractors on New York City public work contracts. Contracting agencies anticipating doing work which requires the employment of a trade or classification not included in this schedule must request the Comptroller to establish a proper classification for the work pursuant to Labor Law §220 (3-a) (a). The prevailing rate schedule as promulgated by the Comptroller, must, in compliance with law, be annexed to and form part of the contract.

The appropriate schedule of prevailing wages and benefits must be posted at all public work sites pursuant to Labor Law §220 (3-a) (a).

This schedule is applicable for work performed during the effective period, unless otherwise noted. You will be notified of any changes to this schedule by addenda published on our web site at www.comptroller.nyc.gov. The rate of wages and supplemental benefits to be paid or provided are those that prevail at the time the work is being performed. Preliminary schedules for future one-year periods are published annually in the City Record on or about June 1st of each succeeding year. Final schedules are published on or about July 1st in the City Record and on our web site at www.comptroller.nyc.gov.

The Comptroller's Office has attempted to include all overtime, shift and night differential, Holiday, Saturday, Sunday or other premium time work. However, this schedule does not set forth every prevailing practice with respect to such rates with which employers must comply. All such practices are nevertheless part of the employer's prevailing wage obligation and contained in the collective bargaining agreements of the prevailing wage unions. These collective bargaining agreements are available for inspection by appointment. Requests for appointments may be made by calling (212) 669-4443, Monday through Friday between the hours of 9 a.m. and 5 p.m.

Answers to questions concerning prevailing trade practices may be obtained from the Classification Unit by calling (212) 669-7974. Please direct all other compliance issues to: Bureau of Labor Law, Attn: Wasyl Kinach, P.E., Office of the Comptroller, 1 Centre Street, Room 1122, New York, N.Y. 10007; Fax (212) 669-4002.

Prevailing rates and ratios for apprentices are attached to this schedule in the Appendix. Pursuant to Labor Law §220 (3-e), only apprentices who are individually registered in a bona fide program to which the employer contractor is a participant, registered with the New York State Department of Labor, may be employed on a public work project. Workers who are not journey persons or not registered apprentices pursuant to Labor Law §220 (3-e) may not be substituted for apprentices and must be paid as journey persons.

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

Prevailing Rate Schedule Information: The information below is intended to assist you in meeting your prevailing wage rate obligation.

Covered Workers: Any and all individuals who are engaged, employed or otherwise occupied as Workers, Laborers or Mechanics on the public work site.

Contractors are advised to review the applicable Collective Bargaining Agreements and the Comptroller's Prevailing Wage Schedule before bidding on Public Work. If there are any questions concerning prevailing wages, benefits, overtime, Holiday pay, shift differentials or any prevailing practice, please contact this office.

Public Work construction, reconstruction, demolition, excavation, rehabilitation, repair, renovation, alteration, or improvement contracts awarded pursuant to a Project Labor Agreement ("PLA") in accordance with Labor Law section 222 may have different labor standards for shift, premium and overtime work. Please refer to the PLA's pre-negotiated labor agreements for wage and benefit rates applicable to work performed outside of the regular workday. More information is available at the Mayor's Office of Contract Services (MOCS) web page at <http://www.nyc.gov/html/mocs/html/vendors/pla.shtml>.

All the provisions of Labor Law section 220 remain applicable to PLA work including, but not limited to, the enforcement of prevailing wage requirements by the Comptroller; however, we will enforce shift, premium, overtime and other non-standard rates as they appear in a project's pre-negotiated labor agreement.

Any error as to compensation under the prevailing wage law or other information as to trade classification, made by the contracting agency in the contract documents or in any other communication, will not preclude a finding against the contractor of prevailing wage violation.

In order to meet their obligation to provide prevailing supplemental benefits to each covered employee, employers must either:

- 1) Provide bona-fide benefits which cost the employer no less than the prevailing supplemental benefits rate; or
- 2) Supplement the employee's hourly wage by an amount no less than the prevailing supplemental benefits rate; or
- 3) Provide a combination of bona-fide benefits and wage supplements which cost the employer no less than the prevailing supplemental benefits rate in total.

Particular attention should be given to the supplemental benefits requirement. Although in most instances the payment or provision for supplemental benefits is for each hour worked, some classifications require the payment or provision of supplemental benefits for each hour paid. Consequently, some prevailing practices require benefits to be purchased at the overtime, shift differential, Holiday, Saturday, Sunday or other premium time rate.

Benefits are paid for EACH HOUR WORKED unless otherwise noted.

Wasył Kinach, P.E.
Director of Classifications
Bureau of Labor Law

220 SCHEDULE OF PREVAILING WAGES AND SUPPLEMENTAL BENEFITS ADDENDUM
EFFECTIVE PERIOD JANUARY 1, 2013 THROUGH JUNE 30, 2013

List of Amended Classifications

1. BOILERMAKER
2. CEMENT MASON
3. DERRICKPERSON AND RIGGER
4. DRIVER: TRUCK (TEAMSTER)
5. ENGINEER - FIELD (BUILDING CONSTRUCTION)
6. ENGINEER - OPERATING
7. HEAT AND FROST INSULATOR
8. HOUSE WRECKER
9. IRON WORKER - ORNAMENTAL
10. IRON WORKER - STRUCTURAL
11. MASON TENDER
12. MASON TENDER (INTERIOR DEMOLITION WORKER)
13. MOSAIC MECHANIC
14. PAPERHANGER
15. PLASTERER
16. PLASTERER - TENDER
17. PLUMBER
18. PLUMBER (MECHANICAL EQUIPMENT AND SERVICE)
19. PLUMBER (RESIDENTIAL RATES FOR 1, 2 AND 3 FAMILY HOME CONSTRUCTION)
20. ROOFER

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

- 21. SHEET METAL WORKER
- 22. SIGN ERECTOR
- 23. STEAMFITTER
- 24. STEAMFITTER - REFRIGERATION AND AIR CONDITIONER
- 25. TILE FINISHER
- 26. TILE LAYER - SETTER

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

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§220 PREVAILING WAGE SCHEDULE

ASBESTOS HANDLER

(Hazardous Material; Disturbs, removes, encapsulates, repairs, or encloses friable asbestos material)

Asbestos Handler

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$35.10

Supplemental Benefit Rate per Hour: \$14.85

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Sunday.

Time and one half the regular hourly rate after 40 hours in any work week.

Overtime Holidays

Time and one half the regular rate for work on the following holiday(s).

New Year's Day

Good Friday

Memorial Day

Independence Day

Labor Day

Thanksgiving Day

Christmas Day

Easter

Paid Holidays

None

(Local #78)

BLASTER

Blaster

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$43.20

Supplemental Benefit Rate per Hour: \$37.29

Blaster (Hydraulic)

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$43.95

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Supplemental Benefit Rate per Hour: \$37.29

Blaster - Trac Drill Hydraulic

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$38.96

Supplemental Benefit Rate per Hour: \$37.29

Blaster - Wagon: Air Trac: Quarry Bar: Drillrunners

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$38.24

Supplemental Benefit Rate per Hour: \$37.29

Blaster - Operators of Jack Hammers

Chippers: Spaders: Concrete Breakers: and all other pneumatic tools of like usage: Walk Behind Self Propelled Hydraulic Asphalt and Concrete Breakers: Hydro (Water) Demolition

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$37.29

Supplemental Benefit Rate per Hour: \$37.29

Blaster - Powder Carriers

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$33.73

Supplemental Benefit Rate per Hour: \$37.29

Blaster - Hydraulic Trac Drill Chuck Tender

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$32.57

Supplemental Benefit Rate per Hour: \$37.29

Blaster - Chuck Tender & Nipper

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$31.88

Supplemental Benefit Rate per Hour: \$37.29

Blaster - Magazine Keepers: (Watch Person)

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$19.26

Supplemental Benefit Rate per Hour: \$37.29

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

Overtime Description

For Blaster - Magazine Keepers: (Watch Person) only - time and one half the regular rate for work after an 8 hour day, Saturday, Sunday and holidays listed below.

Overtime

Double time the regular rate after an 8 hour day.
Time and one half the regular rate for Saturday.
Double time the regular rate for Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day
Memorial Day
Independence Day
Labor Day
Columbus Day
Presidential Election Day
Thanksgiving Day
Christmas Day

Paid Holidays

None

Shift Rates

A single shift shall be 8 hours plus an unpaid lunch, starting at 8:00 A.M (or between 6:00 A.M. and 10:00 A.M. on weekdays). When two (2) shifts are employed, each shift shall be 8 hours plus ½ hour unpaid lunch. When three (3) shifts are employed, each shift will work seven and one-half (7 ½) hours, but will be paid for eight (8) hours, since only one-half (½) hour is allowed for mealtime. When two (2) or more shifts are employed, single time will be paid for each shift. The first 8 hours of any and all work performed Monday through Friday inclusive of any off-shift shall be at the single time rate.

(Local #29)

BOILERMAKER

Boilermaker

Effective Period: 7/1/2012 - 12/31/2012

Wage Rate per Hour: **\$47.98**

Supplemental Benefit Rate per Hour: **\$37.88**

Supplemental Note: The above rate applies to repair or maintenance and new construction; For time and one half overtime - \$56.36; For double overtime - \$74.86.

Effective Period: 1/1/2013 - 3/31/2013

Wage Rate per Hour: **\$49.47**

Supplemental Benefit Rate per Hour: **\$39.48**

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

Supplemental Note: The above rate applies to repair or maintenance and new construction; For time and one half overtime - \$58.78; For double overtime - \$78.07.

Effective Period: 4/1/2013 - 6/30/2013

Wage Rate per Hour: **\$49.47**

Supplemental Benefit Rate per Hour: **\$39.78**

Supplemental Note: The above rate applies to repair or maintenance and new construction; For time and one half overtime - \$59.08; For double overtime - \$78.37.

Overtime Description

For Repair and Maintenance work:

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

For New Construction work:

Double time the regular rate after an 8 hour day.

Double time the regular time rate for Saturday.

Double time the regular rate for Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day

President's Day

Memorial Day

Independence Day

Columbus Day

Election Day

Veteran's Day

Thanksgiving Day

Christmas Day

Quadruple time the regular rate for work on the following holiday(s).

Labor Day

Paid Holidays

Good Friday

Day after Thanksgiving

Day before Christmas

Day before New Year's Day

Shift Rates

When shifts are required, the first shift shall work eight (8) hours at the regular straight-time hourly rate. The second shift shall work seven and one-half (7 ½) hours and receive eight hours at the regular straight time hourly rate plus twenty-five cents (\$0.25) per hour. The third shift shall work seven (7) hours and receive eight hours at the regular straight time hourly rate plus fifty cents (\$0.50) per hour. A thirty (30) minute lunch period shall not be considered as time worked. Work in excess of the above shall be paid overtime at the appropriate new construction work or repair work overtime wage and supplemental benefit hourly rate.

(Local #5)

BRICKLAYER

Bricklayer

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: **\$46.44**

Supplemental Benefit Rate per Hour: **\$27.53**

Overtime

Time and one half the regular rate after a 7 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

Saturday may be used as a make-up day at straight time when a day is lost during that week to inclement weather.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day

Memorial Day

Independence Day

Labor Day

Thanksgiving Day

Christmas Day

Paid Holidays

None

Shift Rates

Overtime rates to be paid outside the regular scheduled work day.

(Bricklayer District Council)

CARPENTER - BUILDING COMMERCIAL

Building Commercial

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: **\$46.15**

Supplemental Benefit Rate per Hour: **\$38.50**

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

Saturday may be used as a make-up day at straight time when a day is lost during that week to inclement weather.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day
Washington's Birthday
Memorial Day
Independence Day
Labor Day
Columbus Day
Presidential Election Day
Thanksgiving Day
Day after Thanksgiving
Christmas Day

Paid Holidays

None

Shift Rates

The second shift will receive one hour at the double time rate of pay for the last hour of the shift; eight hours pay for seven hours of work, nine hours pay for eight hours of work. There must be a first shift in order to work a second shift.

(Carpenters District Council)

CARPENTER - HEAVY CONSTRUCTION WORK (Construction of Engineering Structures and Building Foundations)

Heavy Construction Work

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$46.74

Supplemental Benefit Rate per Hour: \$42.37

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

Saturday may be used as a make-up day at straight time when a day is lost during that week to inclement weather.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day
President's Day

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

Memorial Day
Independence Day
Labor Day
Columbus Day
Presidential Election Day
Thanksgiving Day
Christmas Day

Paid Holidays

None

Shift Rates

Off shift work, commencing between 5:00 P.M. and 10:00 P.M. shall work eight and one half hours allowing for one half hour for lunch, but will be paid for 9 hours including benefits at the straight time rate for 8 hours.

(Carpenters District Council)

CEMENT & CONCRETE WORKER

Cement & Concrete Worker

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: **\$38.98**

Supplemental Benefit Rate per Hour: **\$25.67**

Supplemental Note: **\$28.42** on Saturdays; **\$31.17** on Sundays & Holidays

Overtime Description

Time and one half the regular rate after 7 hour day (time and one half the regular rate after an 8 hour day when working with Dockbuilders on pile cap forms and for work below street level to the top of the foundation wall, not to exceed 2 feet or 3 feet above the sidewalk-brick shelf, when working on the foundation and structure.)

Overtime

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day
President's Day
Good Friday
Memorial Day
Independence Day
Labor Day
Columbus Day
Presidential Election Day
Thanksgiving Day
Christmas Day

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Paid Holidays

1/2 day before Christmas Day
1/2 day before New Year's Day

Shift Rates

On shift work extending over a twenty-four hour period, all shifts are paid at straight time.

(Cement Concrete Workers District Council)

CEMENT MASON

Cement Mason

Effective Period: 7/1/2012 - 12/31/2012

Wage Rate per Hour: **\$42.50**

Supplemental Benefit Rate per Hour: **\$39.06**

Supplemental Note: Overtime supplemental benefit rate per hour: **\$57.56**

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate per Hour: **\$37.63**

Supplemental Benefit Rate per Hour: **\$39.06**

Supplemental Note: Overtime supplemental benefit rate per hour: **\$57.56**

Overtime

Double time the regular rate after an 8 hour day.

Double time the regular time rate for Saturday.

Double time the regular rate for Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day

President's Day

Good Friday

Memorial Day

Independence Day

Labor Day

Columbus Day

Presidential Election Day

Thanksgiving Day

Christmas Day

Paid Holidays

Any worker who reports to work on Christmas Eve or New Year's Eve pursuant to his employer's instruction shall be entitled to three (3) hours afternoon pay without working.

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
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Shift Rates

For an off shift day, (work at times other than the regular 7:00 A.M. to 3:30 P.M. work day) a cement mason shall be paid at the regular hourly rate plus a 25% per hour differential.

(Local #780)

CORE DRILLER

Core Driller

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: **\$35.44**

Supplemental Benefit Rate per Hour: **\$19.75**

Core Driller Helper

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: **\$28.60**

Supplemental Benefit Rate per Hour: **\$19.75**

Core Driller Helper(Third year in the industry)

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: **\$25.74**

Supplemental Benefit Rate per Hour: **\$19.75**

Core Driller Helper (Second year in the industry)

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: **\$22.88**

Supplemental Benefit Rate per Hour: **\$19.75**

Core Driller Helper (First year in the industry)

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: **\$20.02**

Supplemental Benefit Rate per Hour: **\$19.75**

Overtime Description

Time and one half the regular rate for work on a holiday plus Holiday pay when worked.

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

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Double time the regular rate for Sunday.
Time and one half the regular rate for work on the following holiday(s).

Paid Holidays

New Year's Day
Memorial Day
Independence Day
Labor Day
Thanksgiving Day
Christmas Day

Shift Rates

The shift day shall be the continuous eight and one-half (8½) hours from 6:00 A.M. to 2:30 P.M. and from 2:30 P.M. to 11:00 P.M., including one-half (½) hour of employees regular rate of pay for lunch. When two (2) or more shifts are employed, single time shall be paid for each shift, but those employees employed on a shift other than from 8:00 A.M. to 5:00 P.M. shall, in addition, receive seventy-five cents (\$0.75) per hour differential for each hour worked. When three (3) shifts are needed, each shift shall work seven and one-half (7 ½) hours paid for eight (8) hours of labor and be permitted one-half (½) hour for mealtime.

(Carpenters District Council)

DERRICKPERSON AND RIGGER

Derrick Person & Rigger

Effective Period: 7/1/2012 - 12/31/2012

Wage Rate per Hour: **\$40.50**

Supplemental Benefit Rate per Hour: **\$42.07**

Supplemental Note: The above supplemental rate applies for work performed in Manhattan, Bronx, Brooklyn and Queens. \$43.49 - For work performed in Staten Island.

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate per Hour: **\$41.00**

Supplemental Benefit Rate per Hour: **\$46.07**

Supplemental Note: The above supplemental rate applies for work performed in Manhattan, Bronx, Brooklyn and Queens. \$47.49 - For work performed in Staten Island.

Derrick Person & Rigger - Site Work

For site work where no rigging is involved.

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: **\$30.00**

Supplemental Benefit Rate per Hour: **\$31.32**

Overtime Description

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The first two hours of overtime on weekdays and the first seven hours of work on Saturdays are paid at time and one half for wages and supplemental benefits. All additional overtimes is paid at double time for wages and supplemental benefits. Deduct \$1.42 from the Staten Island hourly benefits rate before computing overtime.

Overtime

Double time the regular rate for Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day
Washington's Birthday
Good Friday
Memorial Day
Independence Day
Labor Day
Thanksgiving Day
Christmas Day

Paid Holidays

1/2 day on Christmas Eve if work is performed in the A.M.

(Local #197)

DIVER

Diver (Marine)

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$58.95

Supplemental Benefit Rate per Hour: \$42.37

Diver Tender (Marine)

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$42.10

Supplemental Benefit Rate per Hour: \$42.37

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

Saturday may be used as a make-up day at straight time when a day is lost during that week to inclement weather.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

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New Year's Day
President's Day
Memorial Day
Independence Day
Labor Day
Columbus Day
Presidential Election Day
Thanksgiving Day
Christmas Day

Paid Holidays

None

Shift Rates

When three shifts are utilized each shift shall work seven and one half-hours (7 1/2 hours) and paid for 8 hours, allowing for one half hour for lunch.

(Carpenters District Council)

DOCKBUILDER - PILE DRIVER

Dockbuilder - Pile Driver

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: **\$46.74**

Supplemental Benefit Rate per Hour: **\$42.37**

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

Saturday may be used as a make-up day at straight time when a day is lost during that week to inclement weather.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day
President's Day
Memorial Day
Independence Day
Labor Day
Columbus Day
Presidential Election Day
Thanksgiving Day
Christmas Day

Paid Holidays

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None

Shift Rates

Off shift work, commencing between 5:00 P.M. and 10:00 P.M., shall work eight and one half hours allowing for one half hour for lunch but will be paid the straight time hourly wage for 9 hours and the straight time supplemental benefits for 8 hours.

(Carpenters District Council)

DRIVER: TRUCK (TEAMSTER)

Driver - Automobile Chauffeur (Dump Truck)

Effective Period: 7/1/2012 - 12/31/2012

Wage Rate per Hour: **\$35.84**

Supplemental Benefit Rate per Hour: **\$36.93**

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate per Hour: **\$37.01**

Supplemental Benefit Rate per Hour: **\$38.65**

Driver - Heavy Equipment Trailer Driver

Effective Period: 7/1/2012 - 12/31/2012

Wage Rate per Hour: **\$37.34**

Supplemental Benefit Rate per Hour: **\$36.93**

Note: For time and one half overtime Wage Rate - \$53.76; for double time overtime Wage Rate - \$71.68

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate per Hour: **\$38.51**

Supplemental Benefit Rate per Hour: **\$38.65**

Note: For time and one half overtime Wage Rate - \$55.51; for double time overtime Wage Rate - \$74.01

Driver - Euclid & Turnapull Operator

Effective Period: 7/1/2012 - 12/31/2012

Wage Rate per Hour: **\$36.41**

Supplemental Benefit Rate per Hour: **\$36.93**

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate per Hour: **\$37.57**

Supplemental Benefit Rate per Hour: **\$38.65**

Driver - Six Wheeler(3 Axle) Tractors & Trailers

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Effective Period: 7/1/2012 - 12/31/2012

Wage Rate per Hour: **\$36.84**

Supplemental Benefit Rate per Hour: **\$36.93**

Note: For time and one half overtime Wage Rate - \$54.62; for double time overtime Wage Rate - \$72.82

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate per Hour: **\$38.01**

Supplemental Benefit Rate per Hour: **\$38.65**

Note: For time and one half overtime Wage Rate - \$56.36; for double time overtime Wage Rate - \$75.14

Driver - Boom Truck

Effective Period: 7/1/2012 - 12/31/2012

Wage Rate per Hour: **\$37.09**

Supplemental Benefit Rate per Hour: **\$36.93**

Note: For time and one half overtime Wage Rate - \$54.62; for double time overtime Wage Rate - \$72.82

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate per Hour: **\$38.26**

Supplemental Benefit Rate per Hour: **\$38.65**

Note: For time and one half overtime Wage Rate - \$56.36; for double time overtime Wage Rate - \$75.14

Overtime Description

For Paid Holidays: Holiday pay for all holidays shall be prorated based two hours per day for each day worked in the holiday week, not to exceed 8 hours of holiday pay. For Thanksgiving week, the prorated share shall be 5 1/3 hours of holiday pay for each day worked in Thanksgiving week.

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

President's Day

Columbus Day

Veteran's Day

Day after Thanksgiving

Triple time the regular rate for work on the following holiday(s).

New Year's Day

Memorial Day

Independence Day

Labor Day

Presidential Election Day

Thanksgiving Day

Christmas Day

Paid Holidays

New Year's Day

President's Day

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Memorial Day
Independence Day
Labor Day
Columbus Day
Veteran's Day
Thanksgiving Day
Day after Thanksgiving
Christmas Day

Driver - Redi-Mix Driver (Sand & Gravel)

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$37.47

Supplemental Benefit Rate per Hour: \$38.65

Overtime Description

For Paid Holidays: Employees working two (2) days in the calendar week in which the holiday falls are to paid for these holidays, provided they shape each remaining workday during that calendar week.

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

President's Day

Columbus Day

Veteran's Day

Triple time the regular rate for work on the following holiday(s).

New Year's Day

Memorial Day

Independence Day

Labor Day

Thanksgiving Day

Christmas Day

Paid Holidays

New Year's Day

President's Day

Memorial Day

Independence Day

Labor Day

Columbus Day

Veteran's Day

Thanksgiving Day

Day after Thanksgiving

Christmas Day

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(Local #282)

ELECTRICIAN

(Including all low voltage cabling carrying data; video; and voice in combination with data and or video.)

Electrician "A" (Regular Day)

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$51.00

Supplemental Benefit Rate per Hour: \$42.45

Electrician "A" (Regular Day Overtime)

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$76.50

Supplemental Benefit Rate per Hour: \$45.13

Electrician "A" (Day Shift)

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$51.00

Supplemental Benefit Rate per Hour: \$42.45

Electrician "A" (Day Shift Overtime After 8 hours)

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$76.50

Supplemental Benefit Rate per Hour: \$45.13

Electrician "A" (Swing Shift)

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$59.84

Supplemental Benefit Rate per Hour: \$48.20

Electrician "A" (Swing Shift Overtime After 7.5 hours)

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$89.76

Supplemental Benefit Rate per Hour: \$51.36

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Electrician "A" (Graveyard Shift)

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$67.03

Supplemental Benefit Rate per Hour: \$53.07

Electrician "A" (Graveyard Shift Overtime After 7 hours)

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$100.55

Supplemental Benefit Rate per Hour: \$56.60

Overtime

Time and one half the regular rate after a 7 hour day.

Time and one half the regular rate for Saturday.

Time and one half the regular rate for Sunday.

Overtime Holidays

Time and one half the regular rate for work on a holiday.

New Year's Day

Martin Luther King Jr. Day

President's Day

Memorial Day

Independence Day

Labor Day

Columbus Day

Veteran's Day

Thanksgiving Day

Day after Thanksgiving

Christmas Day

Paid Holidays

None

Shift Rates

When so elected by the Employer, one or more shifts of at least five days duration may be scheduled as follows:

Day Shift: 8:00 am to 4:30 pm, Swing Shift 4:30 pm to 12:30 am, Graveyard Shift: 12:30 am to 8:00 am.

For multiple shifts of temporary light and/or power, the temporary light and/or power employee shall be paid for 8 hours at the straight time rate.

Electrician "M" (First 8 hours)

"M" rated work shall be defined as jobbing: electrical work of limited duration and scope, also consisting of repairs and/or replacement of electrical and tele-data equipment. Includes all work necessary to retrofit, service,

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maintain and repair all kinds of lighting fixtures and local lighting controls and washing and cleaning of foregoing fixtures.

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$25.30

Supplemental Benefit Rate per Hour: \$17.52

Electrician "M" (Overtime After First 8 hours)

"M" rated work shall be defined as jobbing: electrical work of limited duration and scope, also consisting of repairs and/or replacement of electrical and tele-data equipment. Includes all work necessary to retrofit, service, maintain and repair all kinds of lighting fixtures and local lighting controls and washing and cleaning of foregoing fixtures.

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$37.95

Supplemental Benefit Rate per Hour: \$18.85

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Time and one half the regular rate for Sunday.

Overtime Holidays

Time and one half the regular rate for work on the following holiday(s).

New Year's Day

Martin Luther King Jr. Day

President's Day

Memorial Day

Independence Day

Labor Day

Columbus Day

Veteran's Day

Thanksgiving Day

Day after Thanksgiving

Christmas Day

Paid Holidays

None

(Local #3)

ELECTRICIAN - ALARM TECHNICIAN

(Scope of Work - Inspect, test, repair, and replace defective, malfunctioning, or broken devices, components and controls of Fire, Burglar and Security Systems)

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Alarm Technician

Effective Period: 7/1/2012 - 3/9/2013

Wage Rate per Hour: \$29.90

Supplemental Benefit Rate per Hour: \$13.70

Supplemental Note: \$12.20 only after 8 hours worked in a day

Effective Period: 3/10/2013 - 6/30/2013

Wage Rate per Hour: \$30.40

Supplemental Benefit Rate per Hour: \$13.90

Supplemental Note: \$12.40 only after 8 hours worked in a day

Overtime Description

Time and one half the regular rate for work on the following holidays: Columbus Day, Veterans Day, Day after Thanksgiving.

Double time the regular rate for work on the following holidays: New Year's day, Martin Luther King Jr. Day, President's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Christmas Day.

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

Paid Holidays

New Year's Day

Martin Luther King Jr. Day

President's Day

Memorial Day

Independence Day

Labor Day

Columbus Day

Veteran's Day

Thanksgiving Day

Day after Thanksgiving

Christmas Day

Shift Rates

Night Differential is based upon a ten percent (10%) differential between the hours of 4:00 P.M. and 12:30 A.M. and a fifteen percent (15%) differential for the hours 12:00 A.M. to 8:00 A.M.

Vacation

At least 1 year of employment.....ten (10) days

5 years or more of employment.....fifteen (15) days

10 years of employment.....twenty (20) days

Plus one Personal Day per year

Sick Days:

One day per Year

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(Local #3)

ELECTRICIAN-STREET LIGHTING WORKER

Electrician - Electro Pole Electrician

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$51.00

Supplemental Benefit Rate per Hour: \$44.18

Electrician - Electro Pole Foundation Installer

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$38.66

Supplemental Benefit Rate per Hour: \$34.12

Electrician - Electro Pole Maintainer

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$33.10

Supplemental Benefit Rate per Hour: \$30.84

Overtime Description

Electrician - Electro Pole Electrician: Time and one half the regular rate after a 7 hour day and after 5 consecutive days worked per week.

Electrician - Electro Pole Foundation Installer: Time and one half the regular rate after 8 hours within a 24 hour period and Saturday and Sunday.

Electrician - Electro Pole Maintainer: Time and one half the regular rate after a 7 hour day and after 5 consecutive days worked per week. Saturdays and Sundays may be used as a make-up day at straight time when a day is lost during the week to inclement weather.

Overtime Holidays

Time and one half the regular rate for work on the following holiday(s).

New Year's Day

Martin Luther King Jr. Day

President's Day

Memorial Day

Independence Day

Labor Day

Columbus Day

Veteran's Day

Thanksgiving Day

Day after Thanksgiving

Christmas Day

Paid Holidays

None

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(Local #3)

ELEVATOR CONSTRUCTOR

Elevator Constructor

Effective Period: 7/1/2012 - 3/16/2013

Wage Rate per Hour: **\$55.20**

Supplemental Benefit Rate per Hour: **\$32.78**

Effective Period: 3/17/2013 - 6/30/2013

Wage Rate per Hour: **\$57.01**

Supplemental Benefit Rate per Hour: **\$34.48**

Overtime Description

For New Construction: work performed after 7 or 8 hour day, Saturday, Sunday or between 4:30pm and 7:00am shall be paid at double time rate.

Existing buildings: work performed after an 8 hour day, Saturday, Sunday or between 5:30pm and 7:00 am shall be paid time and one half.

Overtime

Double time the regular rate for work on the following holiday(s).

Paid Holidays

New Year's Day

President's Day

Good Friday

Memorial Day

Independence Day

Labor Day

Columbus Day

Veteran's Day

Thanksgiving Day

Day after Thanksgiving

Christmas Day

Vacation

Employer contributes 8% of regular basic hourly rate as vacation pay for employees with more than 15 years of service, and 6% for employees with 5 to 15 years of service, and 4% for employees with less than 5 years of service.

(Local #1)

ELEVATOR REPAIR & MAINTENANCE

Elevator Service/Modernization Mechanic

Effective Period: 7/1/2012 - 3/16/2013

Wage Rate per Hour: \$43.79

Supplemental Benefit Rate per Hour: \$31.37

Effective Period: 3/17/2013 - 6/30/2013

Wage Rate per Hour: \$45.14

Supplemental Benefit Rate per Hour: \$33.02

Overtime Description

For Service Work: Double time - all work performed on Sundays, Holidays, and between midnight and 7:00am.

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Time and one half the regular rate for Sunday.

Time and one half the regular rate for work on a holiday plus the day's pay.

Paid Holidays

New Year's Day

President's Day

Good Friday

Memorial Day

Independence Day

Labor Day

Columbus Day

Veteran's Day

Thanksgiving Day

Day after Thanksgiving

Christmas Day

Shift Rates

For Modernization Work (4pm to 12:30am) - regularly hourly rate plus a (15%) fifteen percent differential.

Vacation

Employer contributes 8% of regular basic hourly rate as vacation pay for employees with more than 15 years of service, and 6% for employees with 5 to 15 years of service, and 4% for employees with less than 5 years of service.

(Local #1)

ENGINEER

Engineer - Heavy Construction Operating Engineer I

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Cherrypickers 20 tons and over and Loaders (rubber tired and/or tractor type with a manufacturer's minimum rated capacity of six cubic yards and over).

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$58.75

Supplemental Benefit Rate per Hour: \$31.07

Supplemental Note: \$55.74 on overtime

Shift Wage Rate: \$94.00

Engineer - Heavy Construction Operating Engineer II

Backhoes, Basin Machines, Groover, Mechanical Sweepers, Bobcat, Boom Truck, Barrier Transport (Barrier Mover) & machines of similar nature. Operation of Churn Drills and machines of a similar nature, Stetco Silent Hoist and machines of similar nature, Vac-Alls, Meyers Machines, John Beam and machines of a similar nature, Ross Carriers and Travel Lifts and machines of a similar nature, Bulldozers, Scrapers and Turn-a-Pulls: Tugger Hoists (Used exclusively for handling excavated material); Tractors with attachments, Hyster and Roustabout Cranes, Cherrypickers. Austin Western, Grove and machines of a similar nature, Scoopmobiles, Monorails, Conveyors, Trenchers: Loaders-Rubber Tired and Tractor: Barber Greene and Eimco Loaders and Eimco Backhoes; Mighty Midget and similar breakers and Tampers, Curb and Gutter Pavers and Motor Patrol, Motor Graders and all machines of a similar nature. Locomotives 10 Tons or under. Mini-Max, Break-Tech and machines of a similar nature; Milling machines, robotic and demolition machines and machines of a similar nature, shot blaster, skid steer machines and machines of a similar nature including bobcat, pile rig rubber-tired excavator (37,000 lbs. and under), 2 man auger.

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$57.00

Supplemental Benefit Rate per Hour: \$31.07

Supplemental Note: \$55.74 on overtime

Shift Wage Rate: \$91.20

Engineer - Heavy Construction Maintenance Engineer I

Installing, Repairing, Maintaining, Dismantling and Manning of all equipment including Steel Cutting, Bending and Heat Sealing Machines, Mechanical Heaters, Grout Pumps, Bentonite Pumps & Plants, Screening Machines, Fusion Coupling Machines, Tunnel Boring Machines Moles and Machines of a similar nature, Power Packs, Mechanical Hydraulic Jacks; all drill rigs including but not limited to Churn, Rotary Caisson, Raised Bore & Drills of a similar nature; Personnel, Inspection & Safety Boats or any boats used to perform functions of same, Mine Hoists, Whirlies, all Climbing Cranes, all Tower Cranes, including but not limited to Truck Mounted and Crawler Type and machines of similar nature; Maintaining Hydraulic Drills and machines of a similar nature; Well Point System-Installation and dismantling; Burning, Welding, all Pumps regardless of size and/or motor power, except River Cofferdam Pumps and Wells Point Pumps; Motorized Buggies (three or more); equipment used in the cleaning and televising of sewers, but not limited to jet-rodder/vacuum truck, vacall/vactor, closed circuit television inspection equipment; high powered water pumps, jet pumps; screed machines and concrete finishing machines of a similar nature; vermeers.

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$56.74

Supplemental Benefit Rate per Hour: \$31.07

Supplemental Note: \$55.74 on overtime

Shift Wage Rate: \$90.78

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Engineer - Heavy Construction Maintenance Engineer II

On Base Mounted Tower Cranes

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: **\$74.44**

Supplemental Benefit Rate per Hour: **\$31.07**

Supplemental Note: **\$55.74** on overtime

Shift Wage Rate: **\$119.10**

Engineer - Heavy Construction Maintenance Engineer III

On Generators, Light Towers

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: **\$37.56**

Supplemental Benefit Rate per Hour: **\$31.07**

Supplemental Note: **\$55.74** on overtime

Shift Wage Rate: **\$60.10**

Engineer - Heavy Construction Maintenance Engineer IV

On Pumps and Mixers including mud sucking

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: **\$38.53**

Supplemental Benefit Rate per Hour: **\$31.07**

Supplemental Note: **\$55.74** on overtime

Shift Wage Rate: **\$61.65**

Engineer - Heavy Construction Operating Engineer III

Minor Equipment such as Tractors, Post Hole Diggers, Ditch Witch (Walk Behind), Road Finishing Machines, Rollers five tons and under, Tugger Hoists, Dual Purpose Trucks, Fork Lifts, and Dempsey Dumpers, Fireperson.

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: **\$54.09**

Supplemental Benefit Rate per Hour: **\$31.07**

Supplemental Note: **\$55.74** on overtime

Shift Wage Rate: **\$86.54**

Engineer - Heavy Construction Oilers I

Gradalls, Cold Planer Grader, Concrete Pumps, Driving Truck Cranes, Driving and Operating Fuel and Grease Trucks.

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: **\$51.19**

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Supplemental Benefit Rate per Hour: \$31.07
Supplemental Note: \$55.74 on overtime
Shift Wage Rate: \$81.90

Engineer - Heavy Construction Oilers II

All gasoline, electric, diesel or air operated Shovels, Draglines, Backhoes, Keystones, Pavers, Guniting Machines, Battery of Compressors, Crawler Cranes, two-person Trenching Machines.

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate per Hour: \$35.50
Supplemental Benefit Rate per Hour: \$31.07
Supplemental Note: \$55.74 on overtime
Shift Wage Rate: \$56.80

Engineer - Steel Erection Maintenance Engineers

Derrick, Travelers, Tower, Crawler Tower and Climbing Cranes

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate per Hour: \$54.33
Supplemental Benefit Rate per Hour: \$29.66
Supplemental Note: \$53.17 on overtime
Shift Wage Rate: \$86.93

Engineer - Steel Erection Oiler I

On a Truck Crane

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate per Hour: \$50.91
Supplemental Benefit Rate per Hour: \$29.66
Supplemental Note: \$53.17 on overtime
Shift Wage Rate: \$81.46

Engineer - Steel Erection Oiler II

On a Crawler Crane

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate per Hour: \$39.04
Supplemental Benefit Rate per Hour: \$29.66
Supplemental Note: \$53.17 on overtime
Shift Wage Rate: \$62.46

Overtime Description

On jobs of more than one shift, if the next shift employee fails to report for work through any cause over which the employer has no control, the employee on duty who works the next shift continues to work at the single time rate.

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Overtime

Double time the regular rate after an 8 hour day.
Double time the regular time rate for Saturday.
Double time the regular rate for Sunday.
Double time the regular rate for work on the following holiday(s).

Paid Holidays

New Year's Day
Lincoln's Birthday
President's Day
Memorial Day
Independence Day
Labor Day
Columbus Day
Election Day
Veteran's Day
Thanksgiving Day
Christmas Day

Employees must work at least one day in the payroll week in which the holiday occurs to receive the paid holiday

Engineer - Building Work Maintenance Engineers I

Installing, repairing, maintaining, dismantling (of all equipment including: Steel Cutting and Bending Machines, Mechanical Heaters, Mine Hoists, Climbing Cranes, Tower Cranes, Linden Peine, Lorain, Liebherr, Mannes, or machines of a similar nature, Well Point Systems, Deep Well Pumps, Concrete Mixers with loading Device, Concrete Plants, Motor Generators when used for temporary power and lights), skid steer machines of a similar nature including bobcat.

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$51.62

Supplemental Benefit Rate per Hour: \$29.66

Supplemental Note: \$53.17 on overtime

Engineer - Building Work Maintenance Engineers II

On Pumps, Generators, Mixers and Heaters

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$40.34

Supplemental Benefit Rate per Hour: \$29.66

Supplemental Note: \$53.17 on overtime

Engineer - Building Work Oilers I

All gasoline, electric, diesel or air operated Gradealls: Concrete Pumps, Overhead Cranes in Power Houses:
Their duties shall be to assist the Engineer in oiling, greasing and repairing of all machines; Driving Truck

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Cranes: Driving and Operating Fuel and Grease Trucks, Cherrypickers (hydraulic cranes) over 70,000 GVW, and machines of a similar nature.

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: **\$49.12**

Supplemental Benefit Rate per Hour: **\$29.66**

Supplemental Note: \$53.17 on overtime

Engineer - Building Work Oilers II

Oilers on Crawler Cranes, Backhoes, Trenching Machines, Gunite Machines, Compressors (three or more in Battery).

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: **\$36.75**

Supplemental Benefit Rate per Hour: **\$29.66**

Supplemental Note: \$53.17 on overtime

Overtime Description

On jobs of more than one shift, if an Employee fails to report for work through any cause over which the Employer has no control, the Employee on duty will continue to work at the rate of single time.

Overtime

Double time the regular rate after an 8 hour day.

Double time the regular time rate for Saturday.

Double time the regular rate for Sunday.

Double time the regular rate for work on the following holiday(s).

Paid Holidays

New Year's Day

Lincoln's Birthday

President's Day

Memorial Day

Independence Day

Labor Day

Columbus Day

Veteran's Day

Thanksgiving Day

Christmas Day

Employees must work at least one day in the payroll week in which the holiday occurs to receive the paid holiday

Shift Rates

Off Shift: double time the regular hourly rate.

(Local #15)

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ENGINEER - CITY SURVEYOR AND CONSULTANT

Party Chief

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: **\$34.61**

Supplemental Benefit Rate per Hour: **\$17.30**

Instrument Person

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: **\$28.59**

Supplemental Benefit Rate per Hour: **\$17.30**

Rodperson

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: **\$24.79**

Supplemental Benefit Rate per Hour: **\$17.30**

Overtime Description

Overtime Benefit Rate - \$23.63 per hour (time & one half) \$29.95 per hour (double time).

Time and one half the regular rate after an 8 hour day, Time and one half the regular rate for Saturday for the first eight hours worked, Double time the regular time rate for Saturday for work performed in excess of eight hours, Double time the regular rate for Sunday and Double time the regular rate for work on a holiday.

Paid Holidays

New Year's Day

Lincoln's Birthday

President's Day

Memorial Day

Independence Day

Labor Day

Columbus Day

Veteran's Day

Thanksgiving Day

Day after Thanksgiving

Christmas Day

Employees must work at least one day in the payroll week in which the holiday occurs to receive the paid holiday

(Operating Engineer Local #15-D)

ENGINEER - FIELD (BUILDING CONSTRUCTION)
(Construction of Building Projects, Concrete Superstructures, etc.)

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Field Engineer - BC Party Chief

Effective Period: 7/1/2012 - 12/31/2012

Wage Rate per Hour: **\$53.64**

Supplemental Benefit Rate per Hour: **\$26.95**

Supplemental Note: Overtime Benefit Rate - \$37.48 per hour (time & one half) \$48.00 per hour (double time).

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate per Hour: **\$55.74**

Supplemental Benefit Rate per Hour: **\$29.73**

Supplemental Note: Overtime Benefit Rate - \$41.40 per hour (time & one half) \$53.06 per hour (double time).

Field Engineer - BC Instrument Person

Effective Period: 7/1/2012 - 12/31/2012

Wage Rate per Hour: **\$41.94**

Supplemental Benefit Rate per Hour: **\$26.95**

Supplemental Note: Overtime Benefit Rate - \$37.48 per hour (time & one half) \$48.00 per hour (double time).

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate per Hour: **\$43.30**

Supplemental Benefit Rate per Hour: **\$29.73**

Supplemental Note: Overtime Benefit Rate - \$41.40 per hour (time & one half) \$53.06 per hour (double time).

Field Engineer - BC Rodperson

Effective Period: 7/1/2012 - 12/31/2012

Wage Rate per Hour: **\$27.52**

Supplemental Benefit Rate per Hour: **\$26.95**

Supplemental Note: Overtime Benefit Rate - \$37.48 per hour (time & one half) \$48.00 per hour (double time).

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate per Hour: **\$27.97**

Supplemental Benefit Rate per Hour: **\$29.73**

Supplemental Note: Overtime Benefit Rate - \$41.40 per hour (time & one half) \$53.06 per hour (double time).

Overtime Description

Time and one half the regular rate after a 7 hour work and time and one half the regular rate for Saturday for the first seven hours worked, Double time the regular time rate for Saturday for work performed in excess of seven hours, Double time the regular rate for Sunday and Double time the regular rate for work on a holiday.

Paid Holidays

New Year's Day

President's Day

Good Friday

Memorial Day

Independence Day

Labor Day

Columbus Day

Veteran's Day

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Thanksgiving Day
Christmas Day

Employees must work at least one day in the payroll week in which the holiday occurs to receive the paid holiday

(Operating Engineer Local #15-D)

ENGINEER - FIELD (HEAVY CONSTRUCTION)
(Construction of Roads, Tunnels, Bridges, Sewers, Building Foundations,
Engineering Structures etc.)

Field Engineer - HC Party Chief

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: **\$60.28**

Supplemental Benefit Rate per Hour: **\$29.73**

Supplemental Note: Overtime benefit rate - \$41.40 per hour (time & one half), \$53.06 per hour (double time).

Field Engineer - HC Instrument Person

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: **\$44.28**

Supplemental Benefit Rate per Hour: **\$29.73**

Supplemental Note: Overtime benefit rate - \$41.40 per hour (time & one half), \$53.06 per hour (double time).

Field Engineer - HC Rodperson

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: **\$37.11**

Supplemental Benefit Rate per Hour: **\$29.73**

Supplemental Note: Overtime benefit rate - \$41.40 per hour (time & one half), \$53.06 per hour (double time).

Overtime Description

Time and one half the regular rate after an 8 hour day, Time and one half the regular rate for Saturday for the first eight hours worked, Double time the regular time rate for Saturday for work performed in excess of eight hours, Double time the regular rate for Sunday and Double time the regular rate for work on a holiday.

Paid Holidays

New Year's Day
Lincoln's Birthday
President's Day
Memorial Day
Independence Day
Labor Day
Columbus Day
Veteran's Day

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Thanksgiving Day
Christmas Day

Employees must work at least one day in the payroll week in which the holiday occurs to receive the paid holiday

(Operating Engineer Local #15-D)

ENGINEER - FIELD (STEEL ERECTION)

Field Engineer - Steel Erection Party Chief

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: **\$54.50**

Supplemental Benefit Rate per Hour: **\$26.95**

Supplemental Note: Overtime benefit rate - \$37.48 per hour (time & one half), \$48.00 per hour (double time).

Field Engineer - Steel Erection Instrument Person

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: **\$42.63**

Supplemental Benefit Rate per Hour: **\$26.95**

Supplemental Note: Overtime benefit rate - \$37.48 per hour (time & one half), \$48.00 per hour (double time).

Field Engineer - Steel Erection Rodperson

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: **\$28.84**

Supplemental Benefit Rate per Hour: **\$26.95**

Supplemental Note: Overtime benefit rate - \$37.48 per hour (time & one half), \$48.00 per hour (double time).

Overtime Description

Time and one half the regular rate for Saturday for the first eight hours worked.

Double time the regular rate for Saturday for work performed in excess of eight hours.

Overtime

Time and one half the regular rate after an 8 hour day.

Double time the regular rate for Sunday.

Double time the regular rate for work on the following holiday(s).

Paid Holidays

New Year's Day

Lincoln's Birthday

President's Day

Memorial Day

Independence Day

Labor Day

Columbus Day

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Veteran's Day
Thanksgiving Day
Christmas Day

Employees must work at least one day in the payroll week in which the holiday occurs to receive the paid holiday

(Operating Engineer Local #15-D)

ENGINEER - OPERATING

Operating Engineer - Road & Heavy Construction I

Back Filling Machines, Cranes, Mucking Machines and Dual Drum Paver.

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: **\$64.38**

Supplemental Benefit Rate per Hour: **\$28.65**

Supplemental Note: **\$51.85** overtime hours

Shift Wage Rate: **\$103.01**

Operating Engineer - Road & Heavy Construction II

Backhoes, Power Shovels, Hydraulic Clam Shells, Steel Erection, Moles and machines of a similar nature.

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: **\$66.70**

Supplemental Benefit Rate per Hour: **\$28.65**

Supplemental Note: **51.85** overtime hours

Shift Wage Rate: **\$106.72**

Operating Engineer - Road & Heavy Construction III

Mine Hoists, Cranes, etc. (Used as Mine Hoists)

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: **\$68.86**

Supplemental Benefit Rate per Hour: **\$28.65**

Supplemental Note: **\$51.85** overtime hours

Shift Wage Rate: **\$110.18**

Operating Engineer - Road & Heavy Construction IV

Gradealls, Keystones, Cranes on land or water (with digging buckets), Bridge Cranes, Vermeer Cutter and machines of a similar nature, Trenching Machines.

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: **\$67.21**

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Supplemental Benefit Rate per Hour: \$28.65
Supplemental Note: \$51.85 overtime hours
Shift Wage Rate: \$107.54

Operating Engineer - Road & Heavy Construction V

Pile Drivers & Rigs (employing Dock Builder foreperson): Derrick Boats, Tunnel Shovels.

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate per Hour: \$65.86
Supplemental Benefit Rate per Hour: \$28.65
Supplemental Note: \$51.85 overtime hours
Shift Wage Rate: \$105.38

Operating Engineer - Road & Heavy Construction VI

Mixers (Concrete with loading attachment), Concrete Pavers, Cableways, Land Derricks, Power Houses (Low Air Pressure Units).

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate per Hour: \$62.51
Supplemental Benefit Rate per Hour: \$28.65
Supplemental Note: \$51.85 overtime hours
Shift Wage Rate: \$100.02

Operating Engineer - Road & Heavy Construction VII

Barrier Movers , Barrier Transport and Machines of a Similar Nature.

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate per Hour: \$50.27
Supplemental Benefit Rate per Hour: \$28.65
Supplemental Note: \$51.85 overtime hours
Shift Wage Rate: \$80.43

Operating Engineer - Road & Heavy Construction VIII

Utility Compressors

Effective Period: 7/1/2012 - 12/31/2012
Wage Rate per Hour: \$36.37
Supplemental Benefit Rate per Hour: \$28.65
Supplemental Note: \$51.85 overtime hours
Shift Wage Rate: \$46.38

Effective Period: 1/1/2013 - 6/30/2013
Wage Rate per Hour: \$38.78
Supplemental Benefit Rate per Hour: \$28.65
Supplemental Note: \$51.85 overtime hours

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Shift Wage Rate: **\$49.16**

Operating Engineer - Road & Heavy Construction IX

Horizontal Boring Rig

Effective Period: 7/1/2012 - 12/31/2012

Wage Rate per Hour: **\$56.24**

Supplemental Benefit Rate per Hour: **\$28.65**

Supplemental Note: **\$51.85** overtime hours

Shift Wage Rate: **\$89.98**

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate per Hour: **\$59.39**

Supplemental Benefit Rate per Hour: **\$28.65**

Supplemental Note: **\$51.85** overtime hours

Shift Wage Rate: **\$95.02**

Operating Engineer - Road & Heavy Construction X

Elevators (manually operated as personnel hoist).

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: **\$54.50**

Supplemental Benefit Rate per Hour: **\$28.65**

Supplemental Note: **\$51.85** overtime hours

Shift Wage Rate: **\$87.20**

Operating Engineer - Road & Heavy Construction XI

Compressors (Portable 3 or more in battery), Driving of Truck Mounted Compressors, Well-point Pumps, Tugger Machines Well Point Pumps, Churn Drill.

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: **\$42.11**

Supplemental Benefit Rate per Hour: **\$28.65**

Supplemental Note: **\$51.85** overtime hours

Shift Wage Rate: **\$67.38**

Operating Engineer - Road & Heavy Construction XII

All Drills and Machines of a similar nature.

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: **\$63.18**

Supplemental Benefit Rate per Hour: **\$28.65**

Supplemental Note: **\$51.85** overtime hours

Shift Wage Rate: **\$101.09**

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Operating Engineer - Road & Heavy Construction XIII

Concrete Pumps, Concrete Plant, Well Drilling Machines, Stone Crushers, Double Drum Hoist, Power Houses (other than above).

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$61.14

Supplemental Benefit Rate per Hour: \$28.65

Supplemental Note: \$51.85 overtime hours

Shift Wage Rate: \$97.82

Operating Engineer - Road & Heavy Construction XIV

Concrete Mixer

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$58.34

Supplemental Benefit Rate per Hour: \$28.65

Supplemental Note: \$51.85 overtime hours

Shift Wage Rate: \$93.49

Operating Engineer - Road & Heavy Construction XV

Compressors (Portable Single or two in Battery, not over 100 feet apart), Pumps (River Cofferdam) and Welding Machines, Push Button Machines, All Engines Irrespective of Power (Power-Pac) used to drive auxiliary equipment, Air, Hydraulic, etc.

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$39.03

Supplemental Benefit Rate per Hour: \$28.65

Supplemental Note: \$51.85 overtime hours

Shift Wage Rate: \$62.45

Operating Engineer - Road & Heavy Construction XVI

Concrete Breaking Machines, Single Drum Hoists, Locomotives (over ten tons) and Dinkies over ten tons, Hydraulic Crane-Second Engineer.

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$55.73

Supplemental Benefit Rate per Hour: \$28.65

Supplemental Note: \$51.85 overtime hours

Shift Wage Rate: \$89.17

Operating Engineer - Road & Heavy Construction XVII

On-Site concrete plant engineer, On-site Asphalt Plant Engineer, and Vibratory console.

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Effective Period: 7/1/2012 - 6/30/2013
Wage Rate per Hour: \$56.19
Supplemental Benefit Rate per Hour: \$28.65
Supplemental Note: \$51.85 overtime hours
Shift Wage Rate: \$89.90

Operating Engineer - Road & Heavy Construction XVIII

Tower Crane

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate per Hour: \$81.09
Supplemental Benefit Rate per Hour: \$28.65
Supplemental Note: \$51.85 overtime hours
Shift Wage Rate: \$129.74

Operating Engineer - Paving I

Asphalt Spreaders, Autogrades (C.M.I.), Roto/Mil

Effective Period: 7/1/2012 - 12/31/2012
Wage Rate per Hour: \$59.25
Supplemental Benefit Rate per Hour: \$28.65
Supplemental Note: \$51.85 overtime hours
Shift Wage Rate: \$94.80

Effective Period: 1/1/2013 - 6/30/2013
Wage Rate per Hour: \$62.51
Supplemental Benefit Rate per Hour: \$28.65
Supplemental Note: \$51.85 overtime hours
Shift Wage Rate: \$100.02

Operating Engineer - Paving II

Asphalt Roller

Effective Period: 7/1/2012 - 12/31/2012
Wage Rate per Hour: \$57.65
Supplemental Benefit Rate per Hour: \$28.65
Supplemental Note: \$51.85 overtime hours
Shift Wage Rate: \$92.24

Effective Period: 1/1/2013 - 6/30/2013
Wage Rate per Hour: \$60.85
Supplemental Benefit Rate per Hour: \$28.65
Supplemental Note: \$51.85 overtime hours
Shift Wage Rate: \$97.36

Operating Engineer - Paving III

Asphalt Plants

Effective Period: 7/1/2012 - 12/31/2012

Wage Rate per Hour: \$48.46

Supplemental Benefit Rate per Hour: \$28.65

Supplemental Note: \$51.85 overtime hours

Shift Wage Rate: \$77.54

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate per Hour: \$51.32

Supplemental Benefit Rate per Hour: \$28.65

Supplemental Note: \$51.85 overtime hours

Shift Wage Rate: \$82.11

Operating Engineer - Concrete I

Cranes

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$63.49

Supplemental Benefit Rate per Hour: \$28.65

Supplemental Note: \$51.85 overtime hours

Operating Engineer - Concrete II

Compressors

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$36.91

Supplemental Benefit Rate per Hour: \$28.65

Supplemental Note: \$51.85 overtime hours

Operating Engineer - Concrete III

Micro-traps (Negative Air Machines), Vac-All Remediation System.

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$50.31

Supplemental Benefit Rate per Hour: \$28.65

Supplemental Note: \$51.85 overtime hours

Operating Engineer - Steel Erection I

Three Drum Derricks

Effective Period: 7/1/2012 - 12/31/2012

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Wage Rate per Hour: **\$67.62**
Supplemental Benefit Rate per Hour: **\$28.65**
Supplemental Note: **\$51.85** overtime hours
Shift Wage Rate: **\$108.19**

Effective Period: 1/1/2013 - 6/30/2013
Wage Rate per Hour: **\$70.50**
Supplemental Benefit Rate per Hour: **\$28.65**
Supplemental Note: **\$51.85** overtime hours
Shift Wage Rate: **\$112.80**

Operating Engineer - Steel Erection II

Cranes, 2 Drum Derricks, Hydraulic Cranes and Fork Lifts.

Effective Period: 7/1/2012 - 12/31/2012
Wage Rate per Hour: **\$64.91**
Supplemental Benefit Rate per Hour: **\$28.65**
Supplemental Note: **\$51.85** overtime hours
Shift Wage Rate: **\$103.86**

Effective Period: 1/1/2013 - 6/30/2013
Wage Rate per Hour: **\$67.71**
Supplemental Benefit Rate per Hour: **\$28.65**
Supplemental Note: **\$51.85** overtime hours
Shift Wage Rate: **\$108.34**

Operating Engineer - Steel Erection III

Compressors, Welding Machines.

Effective Period: 7/1/2012 - 12/31/2012
Wage Rate per Hour: **\$37.87**
Supplemental Benefit Rate per Hour: **\$28.65**
Supplemental Note: **\$51.85** overtime hours
Shift Wage Rate: **\$60.59**

Effective Period: 1/1/2013 - 6/30/2013
Wage Rate per Hour: **\$39.86**
Supplemental Benefit Rate per Hour: **\$28.65**
Supplemental Note: **\$51.85** overtime hours
Shift Wage Rate: **\$63.78**

Operating Engineer - Steel Erection IV

Compressors - Not Combined with Welding Machine.

Effective Period: 7/1/2012 - 12/31/2012
Wage Rate per Hour: **\$36.00**

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Supplemental Benefit Rate per Hour: **\$28.65**
Supplemental Note: \$51.85 overtime hours
Shift Wage Rate: **\$57.60**

Effective Period: 1/1/2013 - 6/30/2013
Wage Rate per Hour: **\$37.93**
Supplemental Benefit Rate per Hour: **\$28.65**
Supplemental Note: \$51.85 overtime hours
Shift Wage Rate: **\$60.69**

Operating Engineer - Building Work I

Forklifts, House Cars, Rack and Pinion, Plaster (Platform machine), Plaster Bucket, Concrete Pump and all other equipment used for hoisting material.

Effective Period: 7/1/2012 - 12/31/2012
Wage Rate per Hour: **\$53.09**
Supplemental Benefit Rate per Hour: **\$28.65**
Supplemental Note: \$51.85 overtime hours

Effective Period: 1/1/2013 - 6/30/2013
Wage Rate per Hour: **\$55.46**
Supplemental Benefit Rate per Hour: **\$28.65**
Supplemental Note: \$51.85 overtime hours

Operating Engineer - Building Work II

Compressors, Welding Machines (Cutting Concrete-Tank Work), Paint Spraying, Sandblasting, Pumps (with the exclusion of Concrete Pumps), House Car (settlement basis only), All Engines irrespective of Power (Power-Pac) used to drive Auxiliary Equipment, Air, Hydraulic, etc.

Effective Period: 7/1/2012 - 12/31/2012
Wage Rate per Hour: **\$39.35**
Supplemental Benefit Rate per Hour: **\$28.65**
Supplemental Note: \$51.85 overtime hours

Effective Period: 1/1/2013 - 6/30/2013
Wage Rate per Hour: **\$41.32**
Supplemental Benefit Rate per Hour: **\$28.65**
Supplemental Note: \$51.85 overtime hours

Operating Engineer - Building Work III

Double Drum

Effective Period: 7/1/2012 - 12/31/2012
Wage Rate per Hour: **\$60.66**
Supplemental Benefit Rate per Hour: **\$28.65**
Supplemental Note: \$51.85 overtime hours

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Effective Period: 1/1/2013 - 6/30/2013
Wage Rate per Hour: **\$63.25**
Supplemental Benefit Rate per Hour: **\$28.65**
Supplemental Note: \$51.85 overtime hours

Operating Engineer - Building Work IV

Stone Derrick, Cranes, Hydraulic Cranes Boom Trucks.

Effective Period: 7/1/2012 - 12/31/2012
Wage Rate per Hour: **\$64.35**
Supplemental Benefit Rate per Hour: **\$28.65**
Supplemental Note: \$51.85 overtime hours

Effective Period: 1/1/2013 - 6/30/2013
Wage Rate per Hour: **\$67.05**
Supplemental Benefit Rate per Hour: **\$28.65**
Supplemental Note: \$51.85 overtime hours

Operating Engineer - Building Work V

Dismantling and Erection of Cranes, Relief Engineer.

Effective Period: 7/1/2012 - 12/31/2012
Wage Rate per Hour: **\$59.17**
Supplemental Benefit Rate per Hour: **\$28.65**
Supplemental Note: \$51.85 overtime hours

Effective Period: 1/1/2013 - 6/30/2013
Wage Rate per Hour: **\$61.72**
Supplemental Benefit Rate per Hour: **\$28.65**
Supplemental Note: \$51.85 overtime hours

Operating Engineer - Building Work VI

4 Pole Hoist, Single Drum Hoists.

Effective Period: 7/1/2012 - 12/31/2012
Wage Rate per Hour: **\$58.53**
Supplemental Benefit Rate per Hour: **\$28.65**
Supplemental Note: \$51.85 overtime hours

Effective Period: 1/1/2013 - 6/30/2013
Wage Rate per Hour: **\$61.06**
Supplemental Benefit Rate per Hour: **\$28.65**
Supplemental Note: \$51.85 overtime hours

Overtime Description

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

On jobs of more than one shift, if an Employee fails to report for work through any cause over which the Employer has no control, the Employee on duty will continue to work at the rate of single time.

Overtime

Double time the regular rate after an 8 hour day.
Double time the regular time rate for Saturday.
Double time the regular rate for Sunday.
Double time the regular rate for work on the following holiday(s).

Paid Holidays

New Year's Day
Lincoln's Birthday
President's Day
Memorial Day
Independence Day
Labor Day
Columbus Day
Veteran's Day
Thanksgiving Day
Day after Thanksgiving
Christmas Day

Employees must work at least one day in the payroll week in which the holiday occurs to receive the paid holiday

Shift Rates

Shifts may be worked at the single time rate at other than the regular working hours (8:00 A.M. to 4:30 P.M.) on the following work ONLY: Heavy construction jobs on work below the street level, over railroad tracks and on building jobs.

(Operating Engineer Local #14)

FLOOR COVERER

(Interior vinyl composition tile, sheath vinyl linoleum and wood parquet tile including site preparation and synthetic turf not including site preparation)

Floor Coverer

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate per Hour: \$46.15
Supplemental Benefit Rate per Hour: \$38.50

Overtime

Time and one half the regular rate after an 8 hour day.
Time and one half the regular rate for Saturday.
Double time the regular rate for Sunday.

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day
President's Day
Memorial Day
Independence Day
Labor Day
Columbus Day
Presidential Election Day
Thanksgiving Day
Day after Thanksgiving
Christmas Day

Paid Holidays

1/2 day on Christmas Eve if work is performed in the A.M.
1/2 day on New Year's Eve if work is performed in the A.M.

Shift Rates

Two shifts may be utilized with the first shift working 8:00 A.M. to the end of the shift at the straight time of pay. The second shift will receive one hour at double time rate for the last hour of the shift. (eight for seven, nine for eight).

(Carpenters District Council)

GLAZIER
(New Construction, Remodeling, and Alteration)

Glazier

Effective Period: 7/1/2012 - 10/31/2012

Wage Rate per Hour: **\$40.00**

Supplemental Benefit Rate per Hour: **\$32.89**

Supplemental Note: Supplemental Benefit Overtime Rate: **\$40.54**

Effective Period: 11/1/2012 - 6/30/2013

Wage Rate per Hour: **\$40.50**

Supplemental Benefit Rate per Hour: **\$33.24**

Supplemental Note: Supplemental Benefit Overtime Rate: **\$41.24**

Overtime Description

An optional 8th hour can be worked at straight time rate. If 9th hour is worked, then both hours or more (8th & 9th or more) will be at the double time rate of pay.

Overtime

Double time the regular rate after a 7 hour day.

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

Double time the regular time rate for Saturday.
Double time the regular rate for Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day
President's Day
Memorial Day
Independence Day
Labor Day
Thanksgiving Day
Day after Thanksgiving
Christmas Day

Paid Holidays

None

Shift Rates

Shifts shall be any 7 hours beyond 4:00 P.M. for which the glazier shall receive 8 hours pay for 7 hours worked.

(Local #1281)

GLAZIER - REPAIR & MAINTENANCE

(For the Installation of Glass - All repair and maintenance work on a particular building, whenever performed, where the total cumulative contract value is under \$105,000. Except where enumerated (i.e. plate glass windows) does not apply to non-residential buildings.)

Craft Jurisdiction for repair, maintenance and fabrication

Plate glass replacement, Residential glass replacement, Residential mirrors and shower doors, Storm windows and storm doors, Residential replacement windows, Herculite door repairs, Door closer repairs, Retrofit apartment house (non commercial buildings), Glass tinting.

Effective Period: 7/1/2012 - 4/30/2013

Wage Rate per Hour: **\$23.40**

Supplemental Benefit Rate per Hour: **\$18.04**

Effective Period: 5/1/2013 - 6/30/2013

Wage Rate per Hour: **\$23.50**

Supplemental Benefit Rate per Hour: **\$18.54**

Overtime

Time and one half the regular rate after an 8 hour day.

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

Double time the regular rate for Sunday.
Time and one half the regular hourly rate after 40 hours in any work week.

Paid Holidays

New Year's Day
President's Day
Memorial Day
Independence Day
Labor Day
Thanksgiving Day
Day after Thanksgiving
Christmas Day

(Local #1281)

HEAT AND FROST INSULATOR

Heat & Frost Insulator

Effective Period: 7/1/2012 - 12/31/2012
Wage Rate per Hour: **\$54.28**
Supplemental Benefit Rate per Hour: **\$31.36**

Effective Period: 1/1/2013 - 6/30/2013
Wage Rate per Hour: **\$55.98**
Supplemental Benefit Rate per Hour: **\$32.36**

Overtime Description

Double time shall be paid for supplemental benefits during overtime work.
8th hour paid at time and one half.

Overtime

Double time the regular rate after an 8 hour day.
Double time the regular time rate for Saturday.
Double time the regular rate for Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day
Martin Luther King Jr. Day
President's Day
Memorial Day
Independence Day
Columbus Day
Veteran's Day
Thanksgiving Day
Day after Thanksgiving

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

Christmas Day

Triple time the regular rate for work on the following holiday(s).
Labor Day

Paid Holidays

None

Shift Rates

The first shift shall work seven hours at the regular straight time rate. The second and third shift shall work seven hours the regular straight time hourly rate plus a fourteen percent wage and benefit premium. Off hour work in occupied or retail buildings may be worked on weekdays with an increment of \$1.00 per hour and eight hours pay for seven (7) hours worked. Double time will apply for over seven (7) hours worked on weekdays, weekends or holidays.

(Local #12)

**HOUSE WRECKER
(TOTAL DEMOLITION)**

House Wrecker - Tier A

On all work sites the first, second, eleventh and every third House Wrecker thereafter shall be Tier A House Wreckers (i.e. 1st, 2nd, 11th, 14th etc). The 10th and 20th House Wrecker shall be apprentices. Other House Wreckers shall be Tier B House Wreckers.

Effective Period: 7/1/2012 - 12/31/2012

Wage Rate per Hour: **\$33.00**

Supplemental Benefit Rate per Hour: **\$24.15**

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate per Hour: **\$33.51**

Supplemental Benefit Rate per Hour: **\$24.64**

House Wrecker - Tier B

On all work sites the first, second, eleventh and every third House Wrecker thereafter shall be Tier A House Wreckers (i.e. 1st, 2nd, 11th, 14th etc). The 10th and 20th House Wrecker shall be apprentices. Other House Wreckers shall be Tier B House Wreckers.

Effective Period: 7/1/2012 - 12/31/2012

Wage Rate per Hour: **\$23.05**

Supplemental Benefit Rate per Hour: **\$17.85**

Effective Period: 1/1/2013 - 6/30/2013

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

Wage Rate per Hour: **\$23.25**

Supplemental Benefit Rate per Hour: **\$18.35**

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day

President's Day

Memorial Day

Independence Day

Labor Day

Thanksgiving Day

Christmas Day

Paid Holidays

None

(Mason Tenders District Council)

IRON WORKER - ORNAMENTAL

Iron Worker - Ornamental

Effective Period: 7/1/2012 - 12/31/2012

Wage Rate per Hour: **\$41.50**

Supplemental Benefit Rate per Hour: **\$39.52**

Supplemental Note: Supplemental benefits are to be paid at the applicable overtime rate when overtime is in effect.

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate per Hour: **\$42.00**

Supplemental Benefit Rate per Hour: **\$42.89**

Supplemental Note: Supplemental benefits are to be paid at the applicable overtime rate when overtime is in effect.

Overtime Description

Time and one half the regular rate after a 7 hour day for a maximum of two hours on any regular work day (the 8th and 9th hour) and double time shall be paid for all work on a regular work day thereafter, time and one half the regular rate for Saturday for the first seven hours of work and double time shall be paid for all work on a Saturday thereafter.

Overtime

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

Double time the regular rate for Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day
President's Day
Memorial Day
Independence Day
Labor Day
Thanksgiving Day
Christmas Day

Paid Holidays

None

Shift Rates

For off shift work - 8 hours pay for 7 hours of work. When two or three shifts are employed on a job, Monday through Friday, the workday for each shift shall be seven hours and paid for ten and one-half hours at the single time rate. When two or three shifts are worked on Saturday, Sunday or holidays, each shift shall be seven hours and paid fifteen and three-quarters hours.

(Local #580)

IRON WORKER - STRUCTURAL

Iron Worker - Structural

Effective Period: 7/1/2012 - 12/31/2012

Wage Rate per Hour: \$45.05

Supplemental Benefit Rate per Hour: \$57.85

Supplemental Note: Supplemental benefits are to be paid at the applicable overtime rate when overtime is in effect.

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate per Hour: \$46.00

Supplemental Benefit Rate per Hour: \$61.23

Supplemental Note: Supplemental benefits are to be paid at the applicable overtime rate when overtime is in effect.

Overtime Description

Monday through Friday- the first eight hours are paid at straight time, the 9th and 10th hours are paid at time and one-half the regular rate, all additional weekday overtime is paid at double the regular rate. Saturdays- the first eight hours are paid at time and one-half the regular rate, double time thereafter. Sunday-all shifts are paid at double time.

Overtime

Time and one half the regular rate after an 8 hour day.

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

Time and one half the regular rate for Saturday.
Double time the regular rate for Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day
Good Friday
Memorial Day
Independence Day
Labor Day
Thanksgiving Day
Christmas Day

Paid Holidays

1/2 day on Christmas Eve if work is performed in the A.M.
1/2 day on New Year's Eve if work is performed in the A.M.

Shift Rates

Monday through Friday - First Shift: First eight hours are paid at straight time, the 9th & 10th hours are paid at time and a half, double time paid thereafter. Second and third Shifts: First eight hours are paid at time and one-half, double time thereafter. Saturdays: All shifts, first eight hours paid at time and one-half, double time thereafter: Sunday all shifts are paid at double time.

(Local #40 & #361)

LABORER

(Foundation, Concrete, Excavating, Street Pipe Layer and Common)

Laborer

Excavation and foundation work for buildings, heavy construction, engineering work, and hazardous waste removal in connection with the above work. Landscaping tasks in connection with heavy construction work, engineering work and building projects. Projects include, but are not limited to pollution plants, sewers, parks, subways, bridges, highways, etc.

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$38.70

Supplemental Benefit Rate per Hour: \$31.75

Overtime

Time and one half the regular rate after an 8 hour day.
Time and one half the regular rate for Saturday.
Double time the regular rate for Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

New Year's Day
Memorial Day
Independence Day
Labor Day
Columbus Day
Presidential Election Day
Thanksgiving Day
Christmas Day

Paid Holidays

Labor Day
Thanksgiving Day

Shift Rates

When two shifts are employed, single time rate shall be paid for each shift. When three shifts are found necessary, each shift shall work seven and one half hours (7 ½), but shall be paid for eight (8) hours of labor, and be permitted one half hour for lunch.

(Local #731)

LANDSCAPING

(Landscaping tasks, as well as tree pruning, tree removing, spraying and maintenance in connection with the planting of street trees and the planting of trees in city parks but not when such activities are performed as part of, or in connection with, other construction or reconstruction projects.)

Landscaper (Above 6 years experience)

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate per Hour: \$24.25
Supplemental Benefit Rate per Hour: \$12.30

Landscaper (3 - 6 years experience)

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate per Hour: \$23.25
Supplemental Benefit Rate per Hour: \$12.30

Landscaper (up to 3 years experience)

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate per Hour: \$20.75
Supplemental Benefit Rate per Hour: \$12.30

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
\$220 PREVAILING WAGE SCHEDULE

Groundperson

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate per Hour: \$20.75
Supplemental Benefit Rate per Hour: \$12.30

Tree Remover / Pruner

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate per Hour: \$29.25
Supplemental Benefit Rate per Hour: \$12.30

Landscaper Sprayer (Pesticide Applicator)

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate per Hour: \$19.25
Supplemental Benefit Rate per Hour: \$12.30

Watering - Plant Maintainer

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate per Hour: \$14.25
Supplemental Benefit Rate per Hour: \$12.30

Overtime Description

For all overtime work performed, supplemental benefits shall include an additional seventy-five (\$0.75) cents per hour.

Overtime

Time and one half the regular rate after an 8 hour day.
Time and one half the regular rate for Saturday.
Double time the regular rate for Sunday.
Time and one half the regular rate for work on a holiday plus the day's pay.

Paid Holidays

New Year's Day
Memorial Day
Independence Day
Labor Day
Thanksgiving Day
Christmas Day

Shift Rates

Work performed on a 4pm to 12am shift has a 15% differential. Work performed on a 12am to 8am shift has a 20% differential.

(Local #175)

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
\$220 PREVAILING WAGE SCHEDULE

MARBLE MECHANIC

Marble Setter

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: **\$49.19**

Supplemental Benefit Rate per Hour: **\$32.24**

Marble Finisher

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: **\$39.05**

Supplemental Benefit Rate per Hour: **\$31.43**

Marble Polisher

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: **\$34.73**

Supplemental Benefit Rate per Hour: **\$24.60**

Overtime Description

Supplemental Benefit contributions are to be made at the applicable overtime rates. Time and one half the regular rate after a 7 hour day or time and one half the regular rate after an 8 hour day - chosen by Employer at the start of the project and then would last for the full duration of the project.

Overtime

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day

President's Day

Good Friday

Memorial Day

Independence Day

Labor Day

Columbus Day

Veteran's Day

Thanksgiving Day

Day after Thanksgiving

Christmas Day

Paid Holidays

None

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

(Local #7)

MASON TENDER

Mason Tender

Effective Period: 7/1/2012 - 12/31/2012

Wage Rate per Hour: **\$34.24**

Supplemental Benefit Rate per Hour: **\$24.40**

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate per Hour: **\$34.50**

Supplemental Benefit Rate per Hour: **\$25.14**

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

Saturday may be used as a make-up day at straight time when a day is lost during that week to inclement weather.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day

President's Day

Memorial Day

Independence Day

Labor Day

Thanksgiving Day

Christmas Day

Paid Holidays

None

Shift Rates

The Employer may work two (2) shifts with the first shift at the straight time wage rate and the second shift receiving eight (8) hours paid for seven (7) hours work at the straight time wage rate.

(Local #79)

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

MASON TENDER (INTERIOR DEMOLITION WORKER)

(The erection, building, moving, servicing and dismantling of enclosures, scaffolding, barricades, protection and site safety structures etc., on Interior Demolition jobs.)

Mason Tender Tier A

Effective Period: 7/1/2012 - 12/31/2012

Wage Rate per Hour: **\$33.87**

Supplemental Benefit Rate per Hour: **\$19.22**

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate per Hour: **\$34.07**

Supplemental Benefit Rate per Hour: **\$19.77**

Mason Tender Tier B

On Interior Demolition job sites 33 1/3 % of the employees shall be classified as Tier A Interior Demolition Workers and 66 2/3 % shall be classified as Tier B Interior Demolition Workers; provided that the employer may employ more than 33 1/3 % Tier A Interior Demolition Workers on the job site. Where the number of employees on a job site is not divisible by 3, the first additional employee (above the number of employees divisible by three) shall be a Tier B Interior Demolition Worker, and the second additional employee shall be a Tier A Interior Demolition Worker.

Effective Period: 7/1/2012 - 12/31/2012

Wage Rate per Hour: **\$23.07**

Supplemental Benefit Rate per Hour: **\$13.53**

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate per Hour: **\$23.27**

Supplemental Benefit Rate per Hour: **\$14.08**

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day

President's Day

Memorial Day

Independence Day

Labor Day

Thanksgiving Day

Christmas Day

Paid Holidays

None

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

(Local #79)

METALLIC LATHER

Metallic Lather

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$41.23

Supplemental Benefit Rate per Hour: \$38.35

Supplemental Note: Supplemental benefits for overtime are paid at the appropriate overtime rate.

Overtime Description

Overtime would be time and one half the regular rate after a seven (7) or eight (8) hours workday, which would be set at the start of the job.

Overtime

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day

Washington's Birthday

Good Friday

Memorial Day

Independence Day

Labor Day

Columbus Day

Presidential Election Day

Thanksgiving Day

Christmas Day

Paid Holidays

1/2 day on Christmas Eve if work is performed in the A.M.

1/2 day on New Year's Eve if work is performed in the A.M.

Shift Rates

There shall be either two (2) or three (3) shifts, each shift shall be eight (8) hours with nine (9) hours pay, including one half (1/2) hour for lunch. Off-Hour Start shall commence after 3:30 P.M. and shall conclude by 6:00 A.M. The first consecutive seven (7) hours shall be at straight time with a differential of twelve dollars (\$12.00) per hour. Fringes shall be paid at the straight time rate.

(Local #46)

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

MILLWRIGHT

Millwright

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: **\$46.19**

Supplemental Benefit Rate per Hour: **\$45.67**

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

Saturday may be used as a make-up day at straight time when a day is lost during that week to inclement weather.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day

President's Day

Good Friday

Memorial Day

Independence Day

Labor Day

Columbus Day

Presidential Election Day

Thanksgiving Day

Christmas Day

Paid Holidays

1/2 day on Christmas Eve if work is performed in the A.M.

1/2 day on New Year's Eve if work is performed in the A.M.

Shift Rates

The first shift shall receive the straight time rate of pay. The second shift receives the straight time rate of pay plus fifteen (15%) per cent. Members of the second shift shall be allowed one half hour to eat, with this time being included in the hours of the workday established. There must be a first shift to work a second shift. All additional hours worked shall be paid at the time and one-half rate of pay plus fifteen (15%) per cent for weekday hours.

(Local #740)

MOSAIC MECHANIC

Mosaic Mechanic - Mosaic & Terrazzo Mechanic

Effective Period: 7/1/2012 - 12/31/2012

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

Wage Rate per Hour: **\$43.93**

Supplemental Benefit Rate per Hour: **\$33.08**

Supplemental Note: Supplemental benefits for overtime to be paid at the rate of **\$44.05** per hour.

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate per Hour: **\$44.39**

Supplemental Benefit Rate per Hour: **\$35.12**

Supplemental Note: Supplemental benefits for overtime to be paid at the rate of **\$46.09** per hour.

Mosaic Mechanic - Mosaic & Terrazzo Finisher

Effective Period: 7/1/2012 - 12/31/2012

Wage Rate per Hour: **\$42.36**

Supplemental Benefit Rate per Hour: **\$33.08**

Supplemental Note: Supplemental benefits for overtime to be paid at the rate of **\$44.05** per hour.

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate per Hour: **\$42.78**

Supplemental Benefit Rate per Hour: **\$35.11**

Supplemental Note: Supplemental benefits for overtime to be paid at the rate of **\$46.08** per hour.

Mosaic Mechanic - Machine Operator Grinder

Effective Period: 7/1/2012 - 12/31/2012

Wage Rate per Hour: **\$42.36**

Supplemental Benefit Rate per Hour: **\$33.08**

Supplemental Note: Supplemental benefits for overtime to be paid at the rate of **\$44.05** per hour.

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate per Hour: **\$42.78**

Supplemental Benefit Rate per Hour: **\$35.11**

Supplemental Note: Supplemental benefits for overtime to be paid at the rate of **\$46.08** per hour.

Overtime

Time and one half the regular rate after a 7 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day

Washington's Birthday

Good Friday

Independence Day

Labor Day

Columbus Day

Veteran's Day

Thanksgiving Day

Day after Thanksgiving

Christmas Day

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

Paid Holidays

None

(Local #7)

PAINTER

Painter - Brush & Roller

Effective Period: 7/1/2012 - 10/31/2012

Wage Rate per Hour: **\$35.50**

Supplemental Benefit Rate per Hour: **\$25.12**

Supplemental Note: \$29.75 on overtime

Effective Period: 11/1/2012 - 4/30/2013

Wage Rate per Hour: **\$36.00**

Supplemental Benefit Rate per Hour: **\$25.12**

Supplemental Note: \$29.75 on overtime

Effective Period: 5/1/2013 - 6/30/2013

Wage Rate per Hour: **\$37.50**

Supplemental Benefit Rate per Hour: **\$25.12**

Supplemental Note: \$29.75 on overtime

Spray & Scaffold / Decorative / Sandblast

Effective Period: 7/1/2012 - 10/31/2012

Wage Rate per Hour: **\$38.50**

Supplemental Benefit Rate per Hour: **\$25.12**

Supplemental Note: \$29.75 on overtime

Effective Period: 11/1/2012 - 4/30/2013

Wage Rate per Hour: **\$39.00**

Supplemental Benefit Rate per Hour: **\$25.12**

Supplemental Note: \$29.75 on overtime

Effective Period: 5/1/2013 - 6/30/2013

Wage Rate per Hour: **\$40.50**

Supplemental Benefit Rate per Hour: **\$25.12**

Supplemental Note: \$29.75 on overtime

Overtime

Time and one half the regular rate after a 7 hour day.

Time and one half the regular rate for Saturday.

Time and one half the regular rate for Sunday.

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

Overtime Holidays

Time and one half the regular rate for work on the following holiday(s).

New Year's Day
President's Day
Memorial Day
Independence Day
Labor Day
Columbus Day
Thanksgiving Day
Christmas Day

Paid Holidays

None

(District Council of Painters #9)

PAINTER - SIGN

Designer

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$36.15

Supplemental Benefit Rate per Hour: \$9.66

Journey person

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$33.62

Supplemental Benefit Rate per Hour: \$9.66

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Time and one half the regular rate for Sunday.

Double time the regular rate for work on the following holiday(s).

Paid Holidays

New Year's Day
President's Day
Memorial Day
Independence Day
Labor Day
Columbus Day
Election Day
Thanksgiving Day
Day after Thanksgiving

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

Christmas Day

Shift Rates

All work performed outside the regular 8 hour work day (either 7:00 A.M to 3:30 P.M or 8:00 A.M. to 4:30 P.M) shall be paid at time and one half the regular hourly rate.

(Local #8A-28A)

PAINTER - STRIPER

Striper (paint)

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: **\$33.00**

Supplemental Benefit Rate per Hour: **\$11.52**

Supplemental Note: Overtime Supplemental Benefit rate - \$7.42; New Hire Rate (0-3 months) - \$0.00

Lineperson (thermoplastic)

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: **\$37.00**

Supplemental Benefit Rate per Hour: **\$11.52**

Supplemental Note: Overtime Supplemental Benefit rate - \$7.42; New Hire Rate (0-3 months) - \$0.00

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

Time and one half the regular rate for work on the following holiday(s).

Paid Holidays

New Year's Day

Good Friday

Memorial Day

Independence Day

Labor Day

Columbus Day

Presidential Election Day

Thanksgiving Day

Day after Thanksgiving

Christmas Day

Shift Rates

Employees hired before April 1, 2003: 15% night shift premium differential for work commenced at 9:00 PM or later.

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Vacation

Employees with one to two years service shall accrue vacation based on hours worked: 250 hours worked - 1 day vacation; 500 hours worked - 2 days vacation; 750 hours worked - 3 days vacation; 900 hours worked - 4 days vacation; 1,000 hours worked - 5 days vacation. Employees with two to five years service receive two weeks vacation. Employees with five to twenty years service receive three weeks vacation. Employees with twenty to twenty-five years service receive four weeks vacation. Employees with 25 or more years service receive five weeks vacation. Vacation must be taken during winter months. 2 Personal Days except employees hired after 4/1/12 who do not have 2 years of service.

(Local #917)

PAINTER - STRUCTURAL STEEL

Painters on Structural Steel

Effective Period: 7/1/2012 - 9/30/2012

Wage Rate per Hour: \$46.25

Supplemental Benefit Rate per Hour: \$31.58

Effective Period: 10/1/2012 - 6/30/2013

Wage Rate per Hour: \$47.00

Supplemental Benefit Rate per Hour: \$32.08

Painter - Power Tool

Effective Period: 7/1/2012 - 9/30/2012

Wage Rate per Hour: \$52.25

Supplemental Benefit Rate per Hour: \$31.58

Effective Period: 10/1/2012 - 6/30/2013

Wage Rate per Hour: \$53.00

Supplemental Benefit Rate per Hour: \$32.08

Overtime

Time and one half the regular rate after a 7 hour day.

Time and one half the regular rate for Saturday.

Time and one half the regular rate for Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day

Memorial Day

Independence Day

Labor Day

Thanksgiving Day

Christmas Day

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Paid Holidays

None

Shift Rates

Regular hourly rates plus a ten per cent (10%) differential

(Local #806)

PAPERHANGER

Paperhanger

Effective Period: 7/1/2012 - 4/30/2013

Wage Rate per Hour: **\$37.44**

Supplemental Benefit Rate per Hour: **\$29.23**

Supplemental Note: Supplemental benefits are to be paid at the appropriate straight time and overtime rate.

Effective Period: 5/1/2013 - 6/30/2013

Wage Rate per Hour: **\$39.00**

Supplemental Benefit Rate per Hour: **\$29.23**

Supplemental Note: Supplemental benefits are to be paid at the appropriate straight time and overtime rate.

Overtime

Time and one half the regular rate after a 7 hour day.

Time and one half the regular rate for Saturday.

Time and one half the regular rate for Sunday.

Overtime Holidays

Time and one half the regular rate for work on the following holiday(s).

New Year's Day

President's Day

Memorial Day

Independence Day

Labor Day

Thanksgiving Day

Day after Thanksgiving

Christmas Day

Paid Holidays

None

Shift Rates

Evening shift - 4:30 P.M. to 12:00 Midnight (regular rate of pay); any work performed before 7:00 A.M. shall be at time and one half the regular base rate of pay.

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(District Council of Painters #9)

PAVER AND ROADBUILDER

Paver & Roadbuilder - Formsetter

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$42.86

Supplemental Benefit Rate per Hour: \$32.15

Paver & Roadbuilder - Laborer

Paving and road construction work, regardless of material used, including but not limited to preparation of job sites, removal of old surfaces, asphalt and/or concrete, by whatever method, including but not limited to milling; laying of concrete; laying of asphalt for temporary, patchwork, and utility paving (but not production paving); site preparation and incidental work before the installation of rubberized materials and similar surfaces; installation and repair of temporary construction fencing; slurry seal coating, maintenance of safety surfaces; play equipment installation, and other related work.

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$38.99

Supplemental Benefit Rate per Hour: \$32.15

Production Paver & Roadbuilder - Screed Person

(Production paving is asphalt paving when using a paving machine or on a project where a paving machine is traditionally used)

Adjustment of paving machinery on production paving jobs.

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$45.00

Supplemental Benefit Rate per Hour: \$32.15

Production Paver & Roadbuilder - Raker

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$44.49

Supplemental Benefit Rate per Hour: \$32.15

Production Paver & Roadbuilder - Shoveler

General laborer (except removal of surfaces - see Paver and Roadbuilder-Laborer) including but not limited to tamper, AC paint and liquid tar work.

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$41.20

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Supplemental Benefit Rate per Hour: **\$32.15**

Overtime Description

Veteran's Day is a Paid Holiday for employees working on production paving.

If an employee works New Year's Day or Christmas Day, they receive the single time rate plus 15%, except if an employee works on production paving on New Year's Day or Christmas Day, they receive the single time rate plus one day's pay for the holiday worked.

Employees who work on a holiday listed below receive the straight time rate plus one day's pay for the holiday.

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

Paid Holidays

Memorial Day

Independence Day

Labor Day

Columbus Day

Election Day

Thanksgiving Day

Shift Rates

When two shifts are employed, the work period for each shift shall be a continuous eight (8) hours. When three shifts are employed, each shift will work seven and one half (7 ½) hours but will be paid for eight (8) hours since only one half (1/2) hour is allowed for meal time.

When two or more shifts are employed, single time will be paid for each shift.

Night Work - On night work, the first eight (8) hours of work will be paid for at fifteen percent (15%) over the single time rate, except that production paving work shall be paid at 25% over the single time rate. Hours worked over eight (8) hours during said shift shall be paid for at the time and one-half rate.

(Local #1010)

PLASTERER

Plasterer

Effective Period: 7/1/2012 - 12/31/2012

Wage Rate per Hour: **\$40.78**

Supplemental Benefit Rate per Hour: **\$26.80**

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate per Hour: **\$40.78**

Supplemental Benefit Rate per Hour: **\$27.55**

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Overtime

Time and one half the regular rate after a 7 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

Saturday may be used as a make-up day at straight time when a day is lost during that week to inclement weather.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day

Martin Luther King Jr. Day

President's Day

Good Friday

Memorial Day

Independence Day

Labor Day

Columbus Day

Presidential Election Day

Thanksgiving Day

Christmas Day

Paid Holidays

None

Shift Rates

When it is not possible to conduct alteration work during regular work hours, in a building occupied by tenants, said work shall proceed on a shift basis: however work over seven (7) hours in any twenty four (24) hour period, the time after seven (7) hours shall be considered overtime.

The second shift shall start at a time between 3:30 p.m. and 7:00 p.m. and shall consist of seven (7) working hours and shall receive eight (8) hours of wages and benefits at the straight time rate. The workers on the second shift shall be allowed one-half (½) hour to eat with this time being included in the seven (7) hours of work.

(Local #530)

PLASTERER - TENDER

Plasterer - Tender

Effective Period: 7/1/2012 - 12/31/2012

Wage Rate per Hour: **\$34.24**

Supplemental Benefit Rate per Hour: **\$24.40**

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate per Hour: **\$34.50**

Supplemental Benefit Rate per Hour: **\$25.14**

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Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

Saturday may be used as a make-up day at straight time when a day is lost during that week to inclement weather.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day

Washington's Birthday

Memorial Day

Independence Day

Labor Day

Presidential Election Day

Thanksgiving Day

Christmas Day

Paid Holidays

None

Shift Rates

When work commences outside regular work hours, workers receive an hour additional (differential) wage and supplement payment. Eight hours pay for seven hours work or nine hours pay for eight hours work.

(Mason Tenders District Council)

PLUMBER

Plumber

Effective Period: 7/1/2012 - 12/31/2012

Wage Rate per Hour: **\$51.76**

Supplemental Benefit Rate per Hour: **\$37.19**

Supplemental Note: Overtime supplemental benefit rate per hour: **\$74.10**

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate per Hour: **\$52.36**

Supplemental Benefit Rate per Hour: **\$37.34**

Supplemental Note: Overtime supplemental benefit rate per hour: **\$74.40**

Overtime Description

Double time the regular rate after a 7 hour day - unless for new construction site work where the plumbing contract price is \$1 million or less, and for public works jobs where the plumbing contract is \$1.5 million or less, the hours of labor can be 8 hours per day at the employers option. On Alteration jobs when other mechanical

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trades at the site are working an eighth hour at straight time, then the plumber shall also work an eighth hour at straight time.

Overtime

Double time the regular time rate for Saturday.

Double time the regular rate for Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day

President's Day

Memorial Day

Independence Day

Labor Day

Columbus Day

Veteran's Day

Thanksgiving Day

Day after Thanksgiving

Christmas Day

Shift Rates

Shift work, when directly specified in public agency or authority documents where plumbing contract is \$8 million or less, will be permitted. 30% shift premium shall be paid for wages and fringe benefits for 4:00 pm and midnight shifts Monday to Friday. 50% shift premium shall be paid for wages and fringe benefits for 4:00 pm and midnight shift work performed on weekends. For shift work on holidays, double time wages and fringe benefits shall be paid.

(Plumbers Local #1)

PLUMBER (MECHANICAL EQUIPMENT AND SERVICE)

(Mechanical Equipment and Service work shall include any repair and/or replacement of the present plumbing system.)

Effective Period: 7/1/2012 - 12/31/2012

Wage Rate per Hour: \$32.96

Supplemental Benefit Rate per Hour: \$15.93

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate per Hour: \$33.21

Supplemental Benefit Rate per Hour: \$16.43

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Time and one half the regular rate for Sunday.

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Overtime Holidays

Time and one half the regular rate for work on the following holiday(s).

New Year's Day
President's Day
Memorial Day
Independence Day
Thanksgiving Day
Day after Thanksgiving
Christmas Day

Paid Holidays

None

(Plumbers Local # 1)

PLUMBER (RESIDENTIAL RATES FOR 1, 2 AND 3 FAMILY HOME CONSTRUCTION)

Effective Period: 7/1/2012 - 12/31/2012

Wage Rate per Hour: **\$36.69**

Supplemental Benefit Rate per Hour: **\$25.46**

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate per Hour: **\$37.11**

Supplemental Benefit Rate per Hour: **\$25.56**

Overtime

Double time the regular rate after an 8 hour day.

Double time the regular time rate for Saturday.

Double time the regular rate for Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day
President's Day
Memorial Day
Independence Day
Labor Day
Columbus Day
Veteran's Day
Thanksgiving Day
Day after Thanksgiving
Christmas Day

Paid Holidays

None

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Shift Rates

30% shift premium shall be paid for wages and fringe benefits for 4:00 pm and midnight shifts Monday to Friday.
50% shift premium shall be paid for wages and fringe benefits for 4:00 pm and midnight shift work performed on weekends. For shift work on holidays, double time wages and fringe benefits shall be paid.

(Plumbers Local #1)

**PLUMBER: PUMP & TANK
(Installation and Maintenance)**

Plumber - Pump & Tank

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$52.31

Supplemental Benefit Rate per Hour: \$31.56

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Time and one half the regular rate for Sunday.

Overtime Holidays

Time and one half the regular rate for work on the following holiday(s).

New Year's Day

President's Day

Memorial Day

Independence Day

Labor Day

Columbus Day

Veteran's Day

Thanksgiving Day

Day after Thanksgiving

Christmas Day

Paid Holidays

None

Shift Rates

All work outside the regular workday (8:00 A.M. to 3:30 P.M.) is to be paid at time and one half the regular hourly rate

(Plumbers Local #1)

POINTER - WATERPROOFER, CAULKER MECHANIC (EXTERIOR BUILDING RENOVATION)

Pointer - Waterproofer, Caulker Mechanic

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: **\$44.63**

Supplemental Benefit Rate per Hour: **\$23.10**

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Time and one half the regular rate for Sunday.

Saturday may be used as a make-up day at straight time when a day is lost during that week to inclement weather.

Overtime Holidays

Time and one half the regular rate for work on the following holiday(s).

New Year's Day

Martin Luther King Jr. Day

President's Day

Memorial Day

Independence Day

Labor Day

Thanksgiving Day

Christmas Day

Paid Holidays

None

Shift Rates

All work outside the regular work day (an eight hour workday between the hours of 6:00 A.M. and 4:30 P.M.) is to be paid at time and one half the regular rate.

(Bricklayer District Council)

ROOFER

Roofer

Effective Period: 7/1/2012 - 12/31/2012

Wage Rate per Hour: **\$38.00**

Supplemental Benefit Rate per Hour: **\$27.07**

Effective Period: 1/1/2013 - 6/30/2013

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Wage Rate per Hour: **\$39.00**

Supplemental Benefit Rate per Hour: **\$27.37**

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Time and one half the regular rate for Sunday.

Overtime Holidays

Time and one half the regular rate for work on the following holiday(s).

New Year's Day

President's Day

Memorial Day

Independence Day

Labor Day

Presidential Election Day

Thanksgiving Day

Christmas Day

Paid Holidays

None

Shift Rates

Second shift - Regular hourly rate plus a 10% differential. Third shift - Regular hourly rate plus a 15% differential.

(Local #8)

**SANDBLASTER - STEAMBLASTER
(Exterior Building Renovation)**

Sandblaster / Steamblaster

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: **\$44.63**

Supplemental Benefit Rate per Hour: **\$23.10**

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Time and one half the regular rate for Sunday.

Saturday may be used as a make-up day at straight time when a day is lost during that week to inclement weather.

Overtime Holidays

Time and one half the regular rate for work on the following holiday(s).

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New Year's Day
Martin Luther King Jr. Day
President's Day
Memorial Day
Independence Day
Labor Day
Thanksgiving Day
Christmas Day

Paid Holidays

None

Shift Rates

All work outside the regular work day (an eight hour workday between the hours of 6:00 A.M. and 4:30 P.M.) is to be paid at time and one half the regular rate.

(Bricklayer District Council)

SHEET METAL WORKER

Sheet Metal Worker

Effective Period: 7/1/2012 - 12/31/2012

Wage Rate per Hour: \$45.65

Supplemental Benefit Rate per Hour: \$40.50

Supplemental Note: Supplemental benefit contributions are to be made at the applicable overtime rates.

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate per Hour: \$45.65

Supplemental Benefit Rate per Hour: \$42.00

Supplemental Note: Supplemental benefit contributions are to be made at the applicable overtime rates.

Sheet Metal Worker - Duct Cleaner

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$12.90

Supplemental Benefit Rate per Hour: \$8.07

Sheet Metal Worker - Fan Maintenance

(The temporary operation of fans or blowers in new or existing buildings for heating and/or ventilation, and/or air conditioning prior to the completion of the project.)

Effective Period: 7/1/2012 - 12/31/2012

Wage Rate per Hour: \$36.52

Supplemental Benefit Rate per Hour: \$40.50

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Effective Period: 1/1/2013 - 6/30/2013

Wage Rate per Hour: \$36.52

Supplemental Benefit Rate per Hour: \$42.00

Overtime

Time and one half the regular rate after a 7 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day

Martin Luther King Jr. Day

President's Day

Memorial Day

Independence Day

Labor Day

Columbus Day

Veteran's Day

Thanksgiving Day

Day after Thanksgiving

Christmas Day

Paid Holidays

None

Shift Rates

Work that can only be performed outside regular working hours (seven hours of work between 7:30 A.M. and 3:30 P.M.) - First shift (work between 3:30 P.M. and 11:30 P.M.) - 10% differential above the established hourly rate.

Second shift (work between 11:30 P.M. and 7:30 A.M.) - 15% differential above the established hourly rate.

For Fan Maintenance: On all full shifts of fan maintenance work the straight time hourly rate of pay will be paid for each shift, including nights, Saturdays, Sundays, and holidays. No journey person engaged in fan maintenance shall work in excess of forty (40) hours in any work week.

(Local #28)

SHEET METAL WORKER - SPECIALTY (Decking & Siding)

Sheet Metal Specialty Worker

The first worker to perform this work must be paid at the rate of the Sheet Metal Worker. The second and third workers shall be paid the Specialty Worker Rate. The ratio of One Sheet Metal Worker, then Two Specialty Workers shall be utilized thereafter.

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Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: **\$40.09**

Supplemental Benefit Rate per Hour: **\$22.06**

Supplemental Note: Supplemental benefit contributions are to be made at the applicable overtime rates.

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day

Martin Luther King Jr. Day

President's Day

Memorial Day

Independence Day

Labor Day

Columbus Day

Veteran's Day

Thanksgiving Day

Christmas Day

Paid Holidays

None

(Local #28)

SIGN ERECTOR

(Sheet Metal, Plastic, Electric, and Neon)

Sign Erector

Effective Period: 7/1/2012 - 12/31/2012

Wage Rate per Hour: **\$41.55**

Supplemental Benefit Rate per Hour: **\$39.32**

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate per Hour: **\$42.80**

Supplemental Benefit Rate per Hour: **\$42.17**

Overtime

Time and one half the regular rate after a 7 hour day.

Time and one half the regular rate for Saturday.

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Time and one half the regular rate for Sunday.

Time and one half the regular rate for work on the following holiday(s).

Paid Holidays

New Year's Day
Washington's Birthday
Memorial Day
Independence Day
Labor Day
Columbus Day
Election Day
Thanksgiving Day
Day after Thanksgiving
Christmas Day

Shift Rates

Time and one half the regular hourly rate is to be paid for all hours worked outside the regular workday either (7:00 A.M. through 2:30 P.M.) or (8:00 A.M. through 3:30 P.M.)

(Local #137)

STEAMFITTER

Steamfitter I

Effective Period: 7/1/2012 - 12/31/2012

Wage Rate per Hour: **\$50.75**

Supplemental Benefit Rate per Hour: **\$49.68**

Supplemental Note: Overtime supplemental benefit rate: **\$98.62**

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate per Hour: **\$51.25**

Supplemental Benefit Rate per Hour: **\$50.54**

Supplemental Note: Overtime supplemental benefit rate: **\$100.34**

Overtime

Double time the regular rate after a 7 hour day.

Double time the regular time rate for Saturday.

Double time the regular rate for Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day
President's Day
Memorial Day
Independence Day
Labor Day

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Columbus Day
Veteran's Day
Thanksgiving Day
Day after Thanksgiving
Christmas Day

Paid Holidays
None

Shift Rates

Work performed between 3:30 P.M. and 7:00 A.M. and on Saturdays, Sundays and Holidays shall be at double time the regular hourly rate and paid at the overtime supplemental benefit rate above.

Steamfitter II

For heating, ventilation, air conditioning and mechanical public works contracts with a dollar value not to exceed \$15,000,000 and for fire protection/sprinkler public works contracts not to exceed \$1,500,000.

Effective Period: 7/1/2012 - 12/31/2012

Wage Rate per Hour: \$50.75

Supplemental Benefit Rate per Hour: \$49.68

Supplemental Note: Overtime supplemental benefit rate: \$98.62

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate per Hour: \$51.25

Supplemental Benefit Rate per Hour: \$50.54

Supplemental Note: Overtime supplemental benefit rate: \$100.34

Overtime

Double time the regular rate after an 8 hour day.
Double time the regular time rate for Saturday.
Double time the regular rate for Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day
President's Day
Memorial Day
Independence Day
Labor Day
Columbus Day
Veteran's Day
Thanksgiving Day
Day after Thanksgiving
Christmas Day

Paid Holidays

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None

Shift Rates

May be performed outside of the regular workday except Saturday, Sunday and Holidays. A shift shall consist of eight working hours. All work performed in excess of eight hours shall be paid at double time. No shift shall commence after 7:00 P.M. on Friday or 7:00 P.M. the day before holidays. All work performed after 12:01 A.M. Saturday or 12:01 A.M. the day before a Holiday will be paid at double time. When shift work is performed the wage rate for regular time worked is a thirty percent premium together with fringe benefits.

On Transit Authority projects, where work is performed in the vicinity of tracks all shift work on weekends and holidays may be performed at the regular shift rates.

Local #638

STEAMFITTER - REFRIGERATION AND AIR CONDITIONER (Maintenance and Installation Service Person)

Refrigeration and Air Conditioner Mechanic

Effective Period: 7/1/2012 - 12/31/2012

Wage Rate per Hour: **\$36.30**

Supplemental Benefit Rate per Hour: **\$11.76**

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate per Hour: **\$37.05**

Supplemental Benefit Rate per Hour: **\$12.26**

Refrigeration and Air Conditioner Service Person V (4th year)

Effective Period: 7/1/2012 - 12/31/2012

Wage Rate per Hour: **\$29.82**

Supplemental Benefit Rate per Hour: **\$10.71**

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate per Hour: **\$30.44**

Supplemental Benefit Rate per Hour: **\$11.13**

Refrigeration and Air Conditioner Service Person IV (3rd year)

Effective Period: 7/1/2012 - 12/31/2012

Wage Rate per Hour: **\$24.71**

Supplemental Benefit Rate per Hour: **\$9.80**

Effective Period: 1/1/2013 - 6/30/2013

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Wage Rate per Hour: **\$25.22**
Supplemental Benefit Rate per Hour: **\$10.16**

Refrigeration and Air Conditioner Service Person III (2nd year)

Filter changing and maintenance thereof, oil and greasing, tower and coil cleaning, scraping and painting, general housekeeping, taking of water samples.

Effective Period: 7/1/2012 - 12/31/2012
Wage Rate per Hour: **\$21.21**
Supplemental Benefit Rate per Hour: **\$9.12**

Effective Period: 1/1/2013 - 6/30/2013
Wage Rate per Hour: **\$21.65**
Supplemental Benefit Rate per Hour: **\$9.44**

Refrigeration and Air Conditioner Service Person II (2nd six months)

Filter changing and maintenance thereof, oil and greasing, tower and coil cleaning, scraping and painting, general housekeeping, taking of water samples.

Effective Period: 7/1/2012 - 12/31/2012
Wage Rate per Hour: **\$17.60**
Supplemental Benefit Rate per Hour: **\$8.50**

Effective Period: 1/1/2013 - 6/30/2013
Wage Rate per Hour: **\$17.96**
Supplemental Benefit Rate per Hour: **\$8.78**

Refrigeration and Air Conditioner Service Person I (1st six months)

Filter changing and maintenance thereof, oil and greasing, tower and coil cleaning, scraping and painting, general housekeeping, taking of water samples.

Effective Period: 7/1/2012 - 12/31/2012
Wage Rate per Hour: **\$10.95**
Supplemental Benefit Rate per Hour: **\$7.90**

Effective Period: 1/1/2013 - 6/30/2013
Wage Rate per Hour: **\$11.18**
Supplemental Benefit Rate per Hour: **\$8.10**

Overtime

Time and one half the regular rate after an 8 hour day.
Time and one half the regular rate for Saturday.
Double time the regular rate for Sunday.

Overtime Holidays

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

Double time the regular rate for work on the following holiday(s).

New Year's Day
Independence Day
Labor Day
Veteran's Day
Thanksgiving Day
Christmas Day

Double time and one half the regular rate for work on the following holiday(s).

Martin Luther King Jr. Day
President's Day
Memorial Day
Columbus Day

Paid Holidays

New Year's Day
Martin Luther King Jr. Day
President's Day
Memorial Day
Independence Day
Labor Day
Columbus Day
Veteran's Day
Thanksgiving Day
Christmas Day

(Local #638B)

STONE MASON - SETTER

Stone Mason - Setters

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$47.72

Supplemental Benefit Rate per Hour: \$35.28

Overtime

Time and one half the regular rate after a 7 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day
Washington's Birthday
Good Friday
Memorial Day
Independence Day
Labor Day

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

Thanksgiving Day
Christmas Day

Paid Holidays

1/2 day on Christmas Eve if work is performed in the A.M.

Shift Rates

For all work outside the regular workday (8:00 A.M. to 3:30 P.M. Monday through Friday), the pay shall be straight time plus a ten percent (10%) differential.

(Bricklayers District Council)

TAPER

Drywall Taper

Effective Period: 7/1/2012 - 12/25/2012

Wage Rate per Hour: \$43.32

Supplemental Benefit Rate per Hour: \$21.66

Effective Period: 12/26/2012 - 6/30/2013

Wage Rate per Hour: \$43.82

Supplemental Benefit Rate per Hour: \$21.66

Overtime

Time and one half the regular rate after a 7 hour day.

Time and one half the regular rate for Saturday.

Time and one half the regular rate for Sunday.

Overtime Holidays

Time and one half the regular rate for work on the following holiday(s).

New Year's Day

Martin Luther King Jr. Day

President's Day

Good Friday

Memorial Day

Independence Day

Labor Day

Columbus Day

Thanksgiving Day

Christmas Day

Paid Holidays

Any worker who reports to work on Christmas Eve or New Year's Eve pursuant to his employer's instruction shall be entitled to three (3) hours afternoon pay without working.

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

Shift Rates

Time and one half the regular rate outside the regular work hours (8:00 A.M. through 3:30 P.M.)

(Local #1974)

TELECOMMUNICATION WORKER (Voice Installation Only)

Telecommunication Worker

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: **\$35.94**

Supplemental Benefit Rate per Hour: **\$13.19**

Supplemental Note: The above rate applies for Manhattan, Bronx, Brooklyn, Queens. \$12.64 for Staten Island only.

Overtime

Time and one half the regular rate after a 7 hour day.

Time and one half the regular rate for Saturday.

Time and one half the regular rate for Sunday.

Overtime Holidays

Time and one half the regular rate for work on the following holiday(s).

New Year's Day
Lincoln's Birthday
Washington's Birthday
Memorial Day
Independence Day
Labor Day
Columbus Day
Election Day
Veteran's Day
Thanksgiving Day
Christmas Day

Paid Holidays

New Year's Day
Lincoln's Birthday
Washington's Birthday
Memorial Day
Independence Day
Labor Day
Columbus Day
Election Day
Veteran's Day
Thanksgiving Day
Christmas Day

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

Employees have the option of observing either Martin Luther King's Birthday or the day after Thanksgiving instead of Lincoln's Birthday

Shift Rates

For any workday that starts before 8A.M. or ends after 6P.M. there is a 10% differential for the applicable worker's hourly rate.

Vacation

After 6 months.....one week.
After 12 months but less than 7 years.....two weeks.
After 7 or more but less than 15 years.....three weeks.
After 15 years or more but less than 25 years.....four weeks.

(C.W.A.)

TILE FINISHER

Tile Finisher

Effective Period: 7/1/2012 - 12/31/2012

Wage Rate per Hour: **\$38.17**

Supplemental Benefit Rate per Hour: **\$26.76**

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate per Hour: **\$38.49**

Supplemental Benefit Rate per Hour: **\$27.42**

Overtime

Time and one half the regular rate after a 7 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day

President's Day

Good Friday

Memorial Day

Independence Day

Labor Day

Columbus Day

Veteran's Day

Thanksgiving Day

Day after Thanksgiving

Christmas Day

Paid Holidays

None

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

Shift Rates

Off shift work day (work performed outside the regular 8:00 A.M. to 3:30 P.M. workday): shift differential of one and one quarter (1¼) times the regular straight time rate of pay for the seven hours of actual off-shift work.

(Local #7)

TILE LAYER - SETTER

Tile Layer - Setter

Effective Period: 7/1/2012 - 12/31/2012

Wage Rate per Hour: \$47.75

Supplemental Benefit Rate per Hour: \$30.83

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate per Hour: \$48.55

Supplemental Benefit Rate per Hour: \$31.46

Overtime

Time and one half the regular rate after a 7 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day
President's Day
Good Friday
Memorial Day
Independence Day
Labor Day
Columbus Day
Veteran's Day
Thanksgiving Day
Day after Thanksgiving
Christmas Day

Shift Rates

Off shift work day (work performed outside the regular 8:00 A.M. to 3:30 P.M. workday): shift differential of one and one quarter (1¼) times the regular straight time rate of pay for the seven hours of actual off-shift work.

(Local #7)

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

TIMBERPERSON

Timberperson

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$42.63

Supplemental Benefit Rate per Hour: \$41.99

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

Saturday may be used as a make-up day at straight time when a day is lost during that week to inclement weather.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day

President's Day

Memorial Day

Independence Day

Labor Day

Columbus Day

Presidential Election Day

Thanksgiving Day

Christmas Day

Paid Holidays

None

Shift Rates

Off shift work, commencing between 5:00 P.M. and 10:00 P.M., shall work eight and one half hours but will be paid for 9 hours, including benefits at the straight time rate for 8 hours.

(Local #1536)

TUNNEL WORKER

Blasters, Mucking Machine Operators (Compressed Air Rates)

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$52.00

Supplemental Benefit Rate per Hour: \$46.85

Tunnel Workers (Compressed Air Rates)

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate per Hour: \$50.19
Supplemental Benefit Rate per Hour: \$45.29

Top Nipper (Compressed Air Rates)

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate per Hour: \$49.27
Supplemental Benefit Rate per Hour: \$44.51

Outside Lock Tender, Outside Gauge Tender, Muck Lock Tender (Compressed Air Rates)

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate per Hour: \$48.37
Supplemental Benefit Rate per Hour: \$43.67

Bottom Bell & Top Bell Signal Person: Shaft Person (Compressed Air Rates)

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate per Hour: \$48.37
Supplemental Benefit Rate per Hour: \$43.67

Changehouse Attendant: Powder Watchperson (Compressed Air Rates)

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate per Hour: \$42.09
Supplemental Benefit Rate per Hour: \$41.41

Blasters (Free Air Rates)

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate per Hour: \$49.62
Supplemental Benefit Rate per Hour: \$44.75

Tunnel Workers (Free Air Rates)

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate per Hour: \$47.48
Supplemental Benefit Rate per Hour: \$42.84

All Others (Free Air Rates)

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate per Hour: \$43.87
Supplemental Benefit Rate per Hour: \$39.62

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

Microtunneling (Free Air Rates)

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: **\$37.98**

Supplemental Benefit Rate per Hour: **\$34.27**

Overtime Description

For Repair-Maintenance Work on Existing Equipment and Facilities - Time and one half the regular rate after a 7 hour day, or for Saturday, or for Sunday. Double time the regular rate for work on a holiday.

Overtime

Double time the regular rate after an 8 hour day.

Double time the regular time rate for Saturday.

Double time the regular rate for Sunday.

Double time the regular rate for work on the following holiday(s).

Paid Holidays

New Year's Day

Lincoln's Birthday

President's Day

Memorial Day

Independence Day

Labor Day

Columbus Day

Election Day

Veteran's Day

Thanksgiving Day

Christmas Day

(Local #147)

WELDER

**TO BE PAID AT THE RATE OF THE JOURNEYPerson IN THE TRADE
PERFORMING THE WORK.**

(NO TEXT ON THIS PAGE)

OFFICE OF THE COMPTROLLER

CITY OF NEW YORK

220 APPRENTICESHIP PREVAILING WAGE SCHEDULE

APPENDIX

Pursuant to Labor Law §220 (3-e), only apprentices who are individually registered in a bona fide program to which the employer contractor is a participant and registered with the New York State Department of Labor, may be employed on a public work project.

Any employee listed on a payroll at an apprentice wage rate, who is not registered as above, shall be paid the journey person wage rate for the classification of work he actually performed.

Apprentice ratios are established to ensure the proper safety, training and supervision of apprentices. A ratio establishes the number of journey workers required for each apprentice in a program and on a job site. Ratios are interpreted as follows: in the case of a 1:1, 1:4 ratio, there must be one journey worker for the first apprentice, and four additional journey workers for each subsequent apprentice.

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 APPRENTICESHIP PREVAILING WAGE SCHEDULE

APPRENTICESHIP SCHEDULE OF PREVAILING WAGES AND SUPPLEMENTAL BENEFITS
ADDENDUM
EFFECTIVE PERIOD JANUARY 1, 2013 THROUGH JUNE 30, 2013

List of Amended Classifications

1. Boilermaker
2. House Wrecker
3. Iron Worker - Ornamental
4. Iron Worker - Structural
5. Mason Tender
6. Plasterer
7. Plumber

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ASBESTOS HANDLER
(Ratio of Apprentice Journeyman: 1 to 1, 1 to 3)

Asbestos Handler (First 1000 Hours)

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 78% of Journeyman's rate
Supplemental Benefit Rate Per Hour: \$14.85

Asbestos Handler (Second 1000 Hours)

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 80% of Journeyman's rate
Supplemental Benefit Rate Per Hour: \$14.85

Asbestos Handler (Third 1000 Hours)

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 83% of Journeyman's rate
Supplemental Benefit Rate Per Hour: \$14.85

Asbestos Handler (Fourth 1000 Hours)

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 89% of Journeyman's rate
Supplemental Benefit Rate Per Hour: \$14.85

(Local #78)

BOILERMAKER
(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 3)

Boilermaker (First Year)

Effective Period: 7/1/2012 - 12/31/2012
Wage Rate Per Hour: 65% of Journeyman's rate
Supplemental Benefit Rate Per Hour: \$27.41

Effective Period: 1/1/2013 - 3/31/2013
Wage Rate Per Hour: 65% of Journeyman's rate
Supplemental Benefit Rate Per Hour: \$28.45

Effective Period: 4/1/2013 - 6/30/2013
Wage Rate Per Hour: 65% of Journeyman's rate

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 APPRENTICESHIP PREVAILING WAGE SCHEDULE

Supplemental Benefit Rate Per Hour: \$28.75

Boilermaker (Second Year: 1st Six Months)

Effective Period: 7/1/2012 - 12/31/2012

Wage Rate Per Hour: 70% of Journeyman's rate

Supplemental Benefit Rate Per Hour: \$28.91

Effective Period: 1/1/2013 - 3/31/2013

Wage Rate Per Hour: 70% of Journeyman's rate

Supplemental Benefit Rate Per Hour: \$30.03

Effective Period: 4/1/2013 - 6/30/2013

Wage Rate Per Hour: 70% of Journeyman's rate

Supplemental Benefit Rate Per Hour: \$30.33

Boilermaker (Second Year: 2nd Six Months)

Effective Period: 7/1/2012 - 12/31/2012

Wage Rate Per Hour: 75% of Journeyman's rate

Supplemental Benefit Rate Per Hour: \$30.40

Effective Period: 1/1/2013 - 3/31/2013

Wage Rate Per Hour: 75% of Journeyman's rate

Supplemental Benefit Rate Per Hour: \$31.61

Effective Period: 4/1/2013 - 6/30/2013

Wage Rate Per Hour: 75% of Journeyman's rate

Supplemental Benefit Rate Per Hour: \$31.91

Boilermaker (Third Year: 1st Six Months)

Effective Period: 7/1/2012 - 12/31/2012

Wage Rate Per Hour: 80% of Journeyman's rate

Supplemental Benefit Rate Per Hour: \$31.89

Effective Period: 1/1/2013 - 3/31/2013

Wage Rate Per Hour: 80% of Journeyman's rate

Supplemental Benefit Rate Per Hour: \$33.19

Effective Period: 4/1/2013 - 6/30/2013

Wage Rate Per Hour: 80% of Journeyman's rate

Supplemental Benefit Rate Per Hour: \$33.49

Boilermaker (Third Year: 2nd Six Months)

Effective Period: 7/1/2012 - 12/31/2012

Wage Rate Per Hour: 85% of Journeyman's rate

Supplemental Benefit Rate Per Hour: \$33.38

Effective Period: 1/1/2013 - 3/31/2013

Wage Rate Per Hour: 85% of Journeyman's rate

Supplemental Benefit Rate Per Hour: \$34.76

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 APPRENTICESHIP PREVAILING WAGE SCHEDULE

Effective Period: 4/1/2013 - 6/30/2013
Wage Rate Per Hour: 85% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: \$35.06

Boilermaker (Fourth Year: 1st Six Months)

Effective Period: 7/1/2012 - 12/31/2012
Wage Rate Per Hour: 90% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: \$34.88

Effective Period: 1/1/2013 - 3/31/2013
Wage Rate Per Hour: 90% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: \$36.34

Effective Period: 4/1/2013 - 6/30/2013
Wage Rate Per Hour: 90% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: \$36.64

Boilermaker (Fourth Year: 2nd Six Months)

Effective Period: 7/1/2012 - 12/31/2012
Wage Rate Per Hour: 95% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: \$36.38

Effective Period: 1/1/2013 - 3/31/2013
Wage Rate Per Hour: 95% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: \$37.90

Effective Period: 4/1/2013 - 6/30/2013
Wage Rate Per Hour: 95% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: \$38.20

(Local #5)

BRICKLAYER

(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 4)

Bricklayer (First 750 Hours)

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 50% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: \$16.60

Bricklayer (Second 750 Hours)

Effective Period: 7/1/2012 - 6/30/2013

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 APPRENTICESHIP PREVAILING WAGE SCHEDULE

Wage Rate Per Hour: 60% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: \$16.60

Bricklayer (Third 750 Hours)

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 70% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: \$16.60

Bricklayer (Fourth 750 Hours)

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 80% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: \$16.60

Bricklayer (Fifth 750 Hours)

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 90% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: \$16.60

Bricklayer (Sixth 750 Hours)

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 95% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: \$16.60

(Bricklayer District Council)

CARPENTER

(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 4)

Carpenter (First Year)

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 40% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: \$27.69

Carpenter (Second Year)

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 50% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: \$27.69

Carpenter (Third Year)

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 APPRENTICESHIP PREVAILING WAGE SCHEDULE

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 65% of Journeyman's rate
Supplemental Benefit Rate Per Hour: \$27.69

Carpenter (Fourth Year)

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 80% of Journeyman's rate
Supplemental Benefit Rate Per Hour: \$27.69

(Carpenters District Council)

CEMENT MASON
(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 4)

Cement Mason (First Year)

Effective Period: 7/1/2012 - 6/30/2013
Wage and Supplemental Rate Per Hour: 50% of Journeyman's Rate

Cement Mason (Second Year)

Effective Period: 7/1/2012 - 6/30/2013
Wage and Supplemental Rate Per Hour: 60% of Journeyman's Rate

Cement Mason (Third Year)

Effective Period: 7/1/2012 - 6/30/2013
Wage and Supplemental Rate Per Hour: 70% of Journeyman's Rate

(Local #780)

CEMENT AND CONCRETE WORKER
(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 3)

Cement & Concrete Worker (0 - 500 hours)

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 50% of Journeyman's rate
Supplemental Benefit Rate Per Hour: \$17.54

Cement & Concrete Worker (501 - 1000 hours)

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 65% of Journeyman's rate
Supplemental Benefit Rate Per Hour: \$18.37

Cement & Concrete Worker (1001 - 2000 hours)

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 65% of Journeyman's rate
Supplemental Benefit Rate Per Hour: \$23.75

Cement & Concrete Worker (2001 - 4000 hours)

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 80% of Journeyman's rate
Supplemental Benefit Rate Per Hour: \$24.57

(Cement Concrete Workers District Council)

DERRICKPERSON & RIGGER (STONE)
(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 6)

Derrickperson & Rigger (stone) - First Year

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 50% of Journeyman's rate
Supplemental Benefit Rate Per Hour: 50% of Journeyman's rate

Derrickperson & Rigger (stone) - Second Year: 1st Six Months

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 70% of Journeyman's rate
Supplemental Benefit Rate Per Hour: 75% of Journeyman's rate

Derrickperson & Rigger (stone) - Second Year: 2nd Six Months

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 80% of Journeyman's rate
Supplemental Benefit Rate Per Hour: 75% of Journeyman's rate

Derrickperson & Rigger (stone) - Third Year

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 90% of Journeyman's rate
Supplemental Benefit Rate Per Hour: 75% of Journeyman's rate

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 APPRENTICESHIP PREVAILING WAGE SCHEDULE

(Local #197)

DOCKBUILDER/PILE DRIVER
(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 6)

Dockbuilder/Pile Driver (First Year)

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 40% of Journeyman's rate
Supplemental Benefit Rate Per Hour: \$27.69

Dockbuilder/Pile Driver (Second Year)

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 50% of Journeyman's rate
Supplemental Benefit Rate Per Hour: \$27.69

Dockbuilder/Pile Driver (Third Year)

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 65% of Journeyman's rate
Supplemental Benefit Rate Per Hour: \$27.69

Dockbuilder/Pile Driver (Fourth Year)

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 80% of Journeyman's rate
Supplemental Benefit Rate Per Hour: \$27.69

(Carpenters District Council)

ELECTRICIAN
(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 3)

Electrician (First Year - Hired before 5/10/07)

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate per Hour: \$14.25
Supplemental Benefit Rate per Hour: \$11.19
Overtime Wage Rate Per Hour: \$21.38

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 APPRENTICESHIP PREVAILING WAGE SCHEDULE

Overtime Supplemental Rate Per Hour: \$11.96

Electrician (First Year - Hired on or After 5/10/07)

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$11.50

Supplemental Benefit Rate per Hour: \$9.86

Overtime Wage Rate Per Hour: \$17.25

Overtime Supplemental Rate Per Hour: \$10.48

Electrician (Second Year - Hired before 5/10/07)

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$17.05

Supplemental Benefit Rate per Hour: \$12.54

Overtime Wage Rate Per Hour: \$25.58

Overtime Supplemental Rate Per Hour: \$13.47

Electrician (Second Year - Hired on or After 5/10/07)

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$13.50

Supplemental Benefit Rate per Hour: \$10.83

Overtime Wage Rate Per Hour: \$20.25

Overtime Supplemental Rate Per Hour: \$11.56

Electrician (Third Year - Hired before 5/10/07)

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$19.15

Supplemental Benefit Rate per Hour: \$13.56

Overtime Wage Rate Per Hour: \$28.73

Overtime Supplemental Rate Per Hour: \$14.60

Electrician (Third Year - Hired on or After 5/10/07)

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$15.50

Supplemental Benefit Rate per Hour: \$11.79

Overtime Wage Rate Per Hour: \$23.25

Overtime Supplemental Rate Per Hour: \$12.63

Electrician (Fourth Year - Hired before 5/10/07)

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$21.10

Supplemental Benefit Rate per Hour: \$14.50

Overtime Wage Rate Per Hour: \$31.65

Overtime Supplemental Rate Per Hour: \$15.65

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 APPRENTICESHIP PREVAILING WAGE SCHEDULE

Electrician (Fourth Year - Hired on or After 5/10/07)

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate per Hour: \$17.50
Supplemental Benefit Rate per Hour: \$12.76
Overtime Wage Rate Per Hour: \$26.25
Overtime Supplemental Rate Per Hour: \$13.71

Electrician (Fifth Year - Hired before 5/10/07)

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate per Hour: \$25.30
Supplemental Benefit Rate per Hour: \$17.52
Overtime Wage Rate Per Hour: \$37.95
Overtime Supplemental Rate Per Hour: \$18.85

Electrician (Fifth Year - Hired on or After 5/10/07)

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate per Hour: \$21.50
Supplemental Benefit Rate per Hour: \$15.71
Overtime Wage Rate Per Hour: \$32.25
Overtime Supplemental Rate Per Hour: \$16.84

Overtime Description

For "A" rated Apprentices (work in excess of 7 hours per day)
For "M" rated Apprentices (work in excess of 8 hours per day)

(Local #3)

ELEVATOR CONSTRUCTOR

(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 2)

Elevator (Constructor) - First Year

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 50% of Journeyperson's rate
Supplemental Rate Per Hour: \$25.40
Effective 3/17/2013 - Supplemental Rate Per Hour: \$26.87

Elevator (Constructor) - Second Year

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 55% of Journeyperson's rate
Supplemental Rate Per Hour: \$26.43
Effective 3/17/2013 - Supplemental Rate Per Hour: \$27.92

Elevator (Constructor) - Third Year

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 65% of Journeyman's rate
Supplemental Rate Per Hour: \$27.84
Effective 3/17/2013 - Supplemental Rate Per Hour: \$29.38

Elevator (Constructor) - Fourth Year

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 75% of Journeyman's rate
Supplemental Rate Per Hour: \$29.25
Effective 3/17/2013 - Supplemental Benefit Per Hour: \$30.84

(Local #1)

**ELEVATOR REPAIR & MAINTENANCE
(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 2)**

Elevator Service/Modernization Mechanic (First Year)

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 50% of Journeyman's rate
Supplemental Benefit Per Hour: \$25.33
Effective 3/17/2013 - Supplemental Benefit Per Hour: \$26.79

Elevator Service/Modernization Mechanic (Second Year)

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 55% of Journeyman's rate
Supplemental Benefit Per Hour: \$25.65
Effective 3/17/2013 - Supplemental Benefit Per Hour: \$27.12

Elevator Service/Modernization Mechanic (Third Year)

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 65% of Journeyman's rate
Supplemental Benefit Per Hour: \$26.92
Effective 3/17/2013 - Supplemental Benefit Per Hour: \$28.43

Elevator Service/Modernization Mechanic (Fourth Year)

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 75% of Journeyman's rate
Supplemental Benefit Per Hour: \$28.19

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Effective 3/17/2013 - Supplemental Benefit Per Hour: \$29.74

(Local #1)

ENGINEER
(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 5)

Engineer - First Year

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate per Hour: \$21.64
Supplemental Benefit Rate per Hour: \$20.07

Engineer - Second Year

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate per Hour: \$27.05
Supplemental Benefit Rate per Hour: \$20.07

Engineer - Third Year

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate per Hour: \$29.75
Supplemental Benefit Rate per Hour: \$20.07

Engineer - Fourth Year

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate per Hour: \$32.45
Supplemental Benefit Rate per Hour: \$20.07

(Local #15)

ENGINEER - OPERATING
(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 5)

Operating Engineer - First Year

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour 40% of Journeyman's Rate

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Supplemental Benefit Per Hour: \$18.65

Operating Engineer - Second Year

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate Per Hour: 50% of Journeyman's Rate

Supplemental Benefit Per Hour: \$18.65

Operating Engineer - Third Year

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate Per Hour: 60% of Journeyman's Rate

Supplemental Benefit Per Hour: \$18.65

(Local #14)

FLOOR COVERER

(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 4)

Floor Coverer (First Year)

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate Per Hour: 40% of Journeyman's rate

Supplemental Rate Per Hour: \$25.75

Floor Coverer (Second Year)

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate Per Hour: 50% of Journeyman's rate

Supplemental Rate Per Hour: \$25.75

Floor Coverer (Third Year)

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate Per Hour: 65% of Journeyman's rate

Supplemental Rate Per Hour: \$25.75

Floor Coverer (Fourth Year)

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate Per Hour: 80% of Journeyman's rate

Supplemental Rate Per Hour: \$25.75

(Carpenters District Council)

GLAZIER

(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 3)

Glazier (First Year)

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate Per Hour: 40% of Journeyman's rate

Supplemental Rate Per Hour: \$11.97

Glazier (Second Year)

Effective Period: 7/1/2012 - 10/31/2012

Wage Rate Per Hour: 50% of Journeyman's rate

Supplemental Rate Per Hour: \$21.01

Effective Period: 11/1/2012 - 6/30/2013

Wage Rate Per Hour: 50% of Journeyman's rate

Supplemental Rate Per Hour: \$21.13

Glazier (Third Year)

Effective Period: 7/1/2012 - 10/31/2012

Wage Rate Per Hour: 60% of Journeyman's rate

Supplemental Rate Per Hour: \$23.38

Effective Period: 11/1/2012 - 6/30/2013

Wage Rate Per Hour: 50% of Journeyman's rate

Supplemental Rate Per Hour: \$23.54

Glazier (Fourth Year)

Effective Period: 7/1/2012 - 10/31/2012

Wage Rate Per Hour: 80% of Journeyman's rate

Supplemental Rate Per Hour: \$28.14

Effective Period: 11/1/2012 - 6/30/2013

Wage Rate Per Hour: 50% of Journeyman's rate

Supplemental Rate Per Hour: \$28.34

(Local #1281)

HEAT & FROST INSULATOR

(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 4)

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Heat & Frost Insulator (First Year)

Effective Period: 7/1/2012 - 6/30/2013

Wage and Supplemental Rate Per Hour: 40% of Journeyperson's rate

Heat & Frost Insulator (Second Year)

Effective Period: 7/1/2012 - 6/30/2013

Wage and Supplemental Rate Per Hour: 60% of Journeyperson's rate

Heat & Frost Insulator (Third Year)

Effective Period: 7/1/2012 - 6/30/2013

Wage and Supplemental Rate Per Hour: 70% of Journeyperson's rate

Heat & Frost Insulator (Fourth Year)

Effective Period: 7/1/2012 - 6/30/2013

Wage and Supplemental Rate Per Hour: 80% of Journeyperson's rate

(Local #12)

**HOUSE WRECKER
(TOTAL DEMOLITION)
(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 3)**

House Wrecker - First Year

Effective Period: 7/1/2012 - 12/31/2012

Wage Rate per Hour: **\$20.06**

Supplemental Benefit Rate per Hour: **\$15.45**

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate per Hour: **\$20.21**

Supplemental Benefit Rate per Hour: **\$15.80**

House Wrecker - Second Year

Effective Period: 7/1/2012 - 12/31/2012

Wage Rate per Hour: **\$21.06**

Supplemental Benefit Rate per Hour: **\$15.45**

Effective Period: 1/1/2013 - 6/30/2013

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Wage Rate per Hour: \$21.26
Supplemental Benefit Rate per Hour: \$15.80

House Wrecker - Third Year

Effective Period: 7/1/2012 - 12/31/2012
Wage Rate per Hour: \$22.56
Supplemental Benefit Rate per Hour: \$15.45

Effective Period: 1/1/2013 - 6/30/2013
Wage Rate per Hour: \$22.81
Supplemental Benefit Rate per Hour: \$15.80

House Wrecker - Fourth Year

Effective Period: 7/1/2012 - 12/31/2012
Wage Rate per Hour: \$25.06
Supplemental Benefit Rate per Hour: \$15.45

Effective Period: 1/1/2013 - 6/30/2013
Wage Rate per Hour: \$25.36
Supplemental Benefit Rate per Hour: \$15.80

(Local #79)

IRON WORKER - ORNAMENTAL
(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 4)

Iron Worker (Ornamental) - 1st Four Months - Hired on or Before 8/1/08

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 60% of Journeyman's rate
Supplemental Rate Per Hour: \$32.06

Iron Worker (Ornamental) 5 - 10 Months - Hired on or Before 8/1/08

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 65% of Journeyman's rate
Supplemental Rate Per Hour: \$32.89

Iron Worker (Ornamental) 11 - 16 Months - Hired on or Before 8/1/08

Effective Period: 7/1/2012 - 12/31/2012
Wage Rate Per Hour: 70% of Journeyman's rate
Supplemental Rate Per Hour: \$33.73

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Effective Period: 1/1/2013 - 6/30/2013
Wage Rate Per Hour: 70% of Journeyman's rate
Supplemental Rate Per Hour: \$34.34

Iron Worker (Ornamental) 17 - 22 Months - Hired on or Before 8/1/08

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 80% of Journeyman's rate
Supplemental Rate Per Hour: \$35.39

Iron Worker (Ornamental) 23 - 28 Months - Hired on or Before 8/1/08

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 85% of Journeyman's rate
Supplemental Rate Per Hour: \$36.22

Iron Worker (Ornamental) 29 - 36 Months - Hired on or Before 8/1/08

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 95% of Journeyman's rate
Supplemental Rate Per Hour: \$37.89

Iron Worker (Ornamental) - 1st Ten Months - Hired After 8/1/08

Effective Period: 7/1/2012 - 12/31/2012
Wage Rate Per Hour: 50% of Journeyman's rate
Supplemental Rate Per Hour: \$30.40

Effective Period: 1/1/2013 - 6/30/2013
Wage Rate Per Hour: 50% of Journeyman's rate
Supplemental Rate Per Hour: \$33.39

Iron Worker (Ornamental) - 11 - 16 Months - Hired After 8/1/08

Effective Period: 7/1/2012 - 12/31/2012
Wage Rate Per Hour: 55% of Journeyman's rate
Supplemental Rate Per Hour: \$31.23

Effective Period: 1/1/2013 - 6/30/2013
Wage Rate Per Hour: 55% of Journeyman's rate
Supplemental Rate Per Hour: \$34.34

Iron Worker (Ornamental) - 17 - 22 Months - Hired After 8/1/08

Effective Period: 7/1/2012 - 12/31/2012
Wage Rate Per Hour: 60% of Journeyman's rate
Supplemental Rate Per Hour: \$32.06

Effective Period: 1/1/2013 - 6/30/2013
Wage Rate Per Hour: 60% of Journeyman's rate
Supplemental Rate Per Hour: \$35.29

Iron Worker (Ornamental) - 23 - 28 Months - Hired After 8/1/08

Effective Period: 7/1/2012 - 12/31/2012
Wage Rate Per Hour: 70% of Journeyman's rate
Supplemental Rate Per Hour: \$33.73

Effective Period: 1/1/2013 - 6/30/2013
Wage Rate Per Hour: 70% of Journeyman's rate
Supplemental Rate Per Hour: \$37.19

Iron Worker (Ornamental) - 29 - 36 Months - Hired After 8/1/08

Effective Period: 7/1/2012 - 12/31/2012
Wage Rate Per Hour: 80% of Journeyman's rate
Supplemental Rate Per Hour: \$35.39

Effective Period: 1/1/2013 - 6/30/2013
Wage Rate Per Hour: 80% of Journeyman's rate
Supplemental Rate Per Hour: \$39.09

(Local #580)

**IRON WORKER - STRUCTURAL
(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 6)**

Iron Worker (Structural) - 1st Six Months

Effective Period: 7/1/2012 - 12/31/2012
Wage Rate per Hour: \$23.62
Supplemental Benefit Rate per Hour: \$41.21

Effective Period: 1/1/2013 - 6/30/2013
Wage Rate per Hour: \$24.10
Supplemental Benefit Rate per Hour: \$43.12

Iron Worker (Structural) - 7- 18 Months

Effective Period: 7/1/2012 - 12/31/2012
Wage Rate per Hour: \$24.22
Supplemental Benefit Rate per Hour: \$41.21

Effective Period: 1/1/2013 - 6/30/2013
Wage Rate per Hour: \$24.70
Supplemental Benefit Rate per Hour: \$43.12

Iron Worker (Structural) - 19 - 36 months

Effective Period: 7/1/2012 - 12/31/2012

Wage Rate per Hour: \$24.82

Supplemental Benefit Rate per Hour: \$41.21

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate per Hour: \$25.30

Supplemental Benefit Rate per Hour: \$43.12

(Local #40 and #361)

LABORER (FOUNDATION, CONCRETE, EXCAVATING, STREET PIPE LAYER & COMMON)

(Ratio Apprentice to Journeyman: 1 to 1, 1 to 3)

Laborer (Foundation, Concrete, Excavating, Street Pipe Layer & Common) - First 1000 hours

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate Per Hour: 50% of Journeyman's rate

Supplemental Rate Per Hour: \$31.75

Laborer (Foundation, Concrete, Excavating, Street Pipe Layer & Common) - Second 1000 hours

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate Per Hour: 60% of Journeyman's rate

Supplemental Rate Per Hour: \$31.75

Laborer (Foundation, Concrete, Excavating, Street Pipe Layer & Common) - Third 1000 hours

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate Per Hour: 75% of Journeyman's rate

Supplemental Rate Per Hour: \$31.75

Laborer (Foundation, Concrete, Excavating, Street Pipe Layer & Common) - Fourth 1000 hours

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate Per Hour: 90% of Journeyman's rate

Supplemental Rate Per Hour: \$31.75

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(Local #731)

MARBLE MECHANICS
(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 4)

Cutters & Setters - First 750 Hours

Effective Period: 7/1/2012 - 6/30/2013
Wage and Supplemental Rate Per Hour: 50% of Journeyman's rate

NO BENEFITS PAID DURING THE FIRST TWO MONTHS (PROBATIONARY PERIOD)

Cutters & Setters - Second 750 Hours

Effective Period: 7/1/2012 - 6/30/2013
Wage and Supplemental Rate Per Hour: 55% of Journeyman's rate

Cutters & Setters - Third 750 Hours

Effective Period: 7/1/2012 - 6/30/2013
Wage and Supplemental Rate Per Hour: 65% of Journeyman's rate

Cutters & Setters - Fourth 750 Hours

Effective Period: 7/1/2012 - 6/30/2013
Wage and Supplemental Rate Per Hour: 75% of Journeyman's rate

Cutters & Setters - Fifth 750 Hours

Effective Period: 7/1/2012 - 6/30/2013
Wage and Supplemental Rate Per Hour: 85% of Journeyman's rate

Cutters & Setters - Sixth 750 Hours

Effective Period: 7/1/2012 - 6/30/2013
Wage and Supplemental Rate Per Hour: 95% of Journeyman's rate

Polishers & Finishers - First 750 Hours

Effective Period: 7/1/2012 - 6/30/2013
Wage and Supplemental Rate Per Hour: 50% of Journeyman's rate

NO BENEFITS PAID DURING THE FIRST TWO MONTHS (PROBATIONARY PERIOD)

Polishers & Finishers - Second 750 Hours

Effective Period: 7/1/2012 - 6/30/2013

Wage and Supplemental Rate Per Hour: 60% of Journeyperson's rate

Polishers & Finishers - Third 750 Hours

Effective Period: 7/1/2012 - 6/30/2013

Wage and Supplemental Rate Per Hour: 75% of Journeyperson's rate

Polishers & Finishers - Fourth 750 Hours

Effective Period: 7/1/2012 - 6/30/2013

Wage and Supplemental Rate Per Hour: 90% of Journeyperson's rate

(Local #7)

MASON TENDER

(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 3)

Mason Tender - First Year

Effective Period: 7/1/2012 - 12/31/2012

Wage Rate per Hour: **\$20.33**

Supplemental Benefit Rate per Hour: **\$16.16**

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate per Hour: **\$20.48**

Supplemental Benefit Rate per Hour: **\$16.51**

Mason Tender - Second Year

Effective Period: 7/1/2012 - 12/31/2012

Wage Rate per Hour: **\$21.33**

Supplemental Benefit Rate per Hour: **\$16.16**

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate per Hour: **\$21.53**

Supplemental Benefit Rate per Hour: **\$16.51**

Mason Tender - Third Year

Effective Period: 7/1/2012 - 12/31/2012

Wage Rate per Hour: **\$22.83**

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Supplemental Benefit Rate per Hour: \$16.16

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate per Hour: \$23.08

Supplemental Benefit Rate per Hour: \$16.51

Mason Tender - Fourth Year

Effective Period: 7/1/2012 - 12/31/2012

Wage Rate per Hour: \$25.33

Supplemental Benefit Rate per Hour: \$16.16

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate per Hour: \$25.63

Supplemental Benefit Rate per Hour: \$16.51

(Local #79)

METALLIC LATHER

(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 3)

Metallic Lather (First Year -Called Prior to 6/29/11)

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$27.91

Supplemental Benefit Rate per Hour: \$22.79

Metallic Lather (Second Year - Called Prior to 6/29/11)

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$32.51

Supplemental Benefit Rate per Hour: \$24.44

Metallic Lather (Third Year - Called Prior to 6/29/11)

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$37.57

Supplemental Benefit Rate per Hour: \$25.59

Metallic Lather (First Year -Called On Or After 6/29/11)

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$17.71

Supplemental Benefit Rate per Hour: \$19.85

Metallic Lather (Second Year - Called On Or After 6/29/11)

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate per Hour: \$22.71
Supplemental Benefit Rate per Hour: \$19.85

Metallic Lather (Third Year - Called On Or After 6/29/11)

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate per Hour: \$27.71
Supplemental Benefit Rate per Hour: \$19.85

(Local #46)

**MILLWRIGHT
(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 4)**

Millwright (First Year)

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate per Hour: \$25.40
Supplemental Benefit Rate per Hour: \$28.67

Millwright (Second Year)

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate per Hour: \$30.02
Supplemental Benefit Rate per Hour: \$31.87

Millwright (Third Year)

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate per Hour: \$34.64
Supplemental Benefit Rate per Hour: \$36.19

Millwright (Fourth Year)

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate per Hour: \$43.88
Supplemental Benefit Rate per Hour: \$41.50

(Local #740)

PAVER AND ROADBUILDER

(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 3)

Paver and Roadbuilder - First Year (Minimum 1000 hours)

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$25.72

Supplemental Benefit Rate per Hour: \$15.75

Paver and Roadbuilder - Second Year (Minimum 1000 hours)

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$27.29

Supplemental Benefit Rate per Hour: \$15.75

(Local #1010)

PAINTER

(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 3)

Painter - Brush & Roller - First Year

Effective Period: 7/1/2012 - 10/31/2012

Wage Rate per Hour: \$14.20

Supplemental Benefit Rate per Hour: \$10.88

Effective Period: 11/1/2012 - 6/30/2013

Wage Rate per Hour: \$14.40

Supplemental Benefit Rate per Hour: \$10.88

Painter - Brush & Roller - Second Year

Effective Period: 7/1/2012 - 10/31/2012

Wage Rate per Hour: \$17.75

Supplemental Benefit Rate per Hour: \$14.73

Effective Period: 11/1/2012 - 6/30/2013

Wage Rate per Hour: \$18.00

Supplemental Benefit Rate per Hour: \$14.73

Painter - Brush & Roller - Third Year

Effective Period: 7/1/2012 - 10/31/2012

Wage Rate per Hour: \$21.30

Supplemental Benefit Rate per Hour: \$17.64

Effective Period: 11/1/2012 - 6/30/2013

Wage Rate per Hour: \$21.60

Supplemental Benefit Rate per Hour: \$17.64

Painter - Brush & Roller - Fourth Year

Effective Period: 7/1/2012 - 10/31/2012

Wage Rate per Hour: \$28.40

Supplemental Benefit Rate per Hour: \$23.02

Effective Period: 11/1/2012 - 6/30/2013

Wage Rate per Hour: \$28.80

Supplemental Benefit Rate per Hour: \$23.02

(District Council of Painters)

PAINTER - STRUCTURAL STEEL

(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 3)

Painters - Structural Steel (First Year)

Effective Period: 7/1/2012 - 6/30/2013

Wage and Supplemental Rate Per Hour: 40% of Journeyman's rate

Painters - Structural Steel (Second Year)

Effective Period: 7/1/2012 - 6/30/2013

Wage and Supplemental Rate Per Hour: 60% of Journeyman's rate

Painters - Structural Steel (Third Year)

Effective Period: 7/1/2012 - 6/30/2013

Wage and Supplemental Rate Per Hour: 80% of Journeyman's rate

(Local #806)

PLASTERER

(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 3)

Plasterer - First Year: 1st Six Months

Effective Period: 7/1/2012 - 12/31/2012

Wage Rate Per Hour: 40% of Journeyperson's rate

Supplemental Rate Per Hour: \$14.61

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate Per Hour: 40% of Journeyperson's rate

Supplemental Rate Per Hour: \$15.36

Plasterer - First Year: 2nd Six Months

Effective Period: 7/1/2012 - 12/31/2012

Wage Rate Per Hour: 45% of Journeyperson's rate

Supplemental Rate Per Hour: \$15.09

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate Per Hour: 45% of Journeyperson's rate

Supplemental Rate Per Hour: \$15.84

Plasterer - Second Year: 1st Six Months

Effective Period: 7/1/2012 - 12/31/2012

Wage Rate Per Hour: 55% of Journeyperson's rate

Supplemental Rate Per Hour: \$17.06

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate Per Hour: 55% of Journeyperson's rate

Supplemental Rate Per Hour: \$17.81

Plasterer - Second Year: 2nd Six Months

Effective Period: 7/1/2012 - 12/31/2012

Wage Rate Per Hour: 60% of Journeyperson's rate

Supplemental Rate Per Hour: \$18.14

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate Per Hour: 60% of Journeyperson's rate

Supplemental Rate Per Hour: \$18.89

Plasterer - Third Year: 1st Six Months

Effective Period: 7/1/2012 - 12/31/2012

Wage Rate Per Hour: 70% of Journeyperson's rate

Supplemental Rate Per Hour: \$20.31

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Effective Period: 1/1/2013 - 6/30/2013
Wage Rate Per Hour: 70% of Journeyman's rate
Supplemental Rate Per Hour: \$21.06

Plasterer - Third Year: 2nd Six Months

Effective Period: 7/1/2012 - 12/31/2012
Wage Rate Per Hour: 75% of Journeyman's rate
Supplemental Rate Per Hour: \$21.39

Effective Period: 1/1/2013 - 6/30/2013
Wage Rate Per Hour: 75% of Journeyman's rate
Supplemental Rate Per Hour: \$22.14

(Local #530)

PLUMBER

(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 3)

Plumber - First Year: 1st Six Months

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate per Hour: \$14.00
Supplemental Benefit Rate per Hour: \$0.71

Plumber - First Year: 2nd Six Months

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate per Hour: \$14.00
Supplemental Benefit Rate per Hour: \$2.96

Plumber - Second Year

Effective Period: 7/1/2012 - 12/31/2012
Wage Rate per Hour: \$17.96
Supplemental Benefit Rate per Hour: \$16.25

Effective Period: 1/1/2013 - 6/30/2013
Wage Rate per Hour: \$18.26
Supplemental Benefit Rate per Hour: \$16.32

Plumber - Third Year

Effective Period: 7/1/2012 - 12/31/2012

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Wage Rate per Hour: \$20.06
Supplemental Benefit Rate per Hour: \$16.25

Effective Period: 1/1/2013 - 6/30/2013
Wage Rate per Hour: \$20.36
Supplemental Benefit Rate per Hour: \$16.32

Plumber - Fourth Year

Effective Period: 7/1/2012 - 12/31/2012
Wage Rate per Hour: \$22.91
Supplemental Benefit Rate per Hour: \$16.25

Effective Period: 1/1/2013 - 6/30/2013
Wage Rate per Hour: \$23.21
Supplemental Benefit Rate per Hour: \$16.32

Plumber - Fifth Year: 1st Six Months

Effective Period: 7/1/2012 - 12/31/2012
Wage Rate per Hour: \$24.31
Supplemental Benefit Rate per Hour: \$16.25

Effective Period: 1/1/2013 - 6/30/2013
Wage Rate per Hour: \$24.61
Supplemental Benefit Rate per Hour: \$16.32

Plumber - Fifth Year: 2nd Six Months

Effective Period: 7/1/2012 - 12/31/2012
Wage Rate per Hour: \$36.38
Supplemental Benefit Rate per Hour: \$16.25

Effective Period: 1/1/2013 - 6/30/2013
Wage Rate per Hour: \$36.68
Supplemental Benefit Rate per Hour: \$16.32

(Plumbers Local #1)

POINTER - WATERPROOFER, CAULKER MECHANIC (EXTERIOR BUILDING RENOVATION)
(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 4)

Pointer - Waterproofer, Caulker Mechanic - First Year

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
\$220 APPRENTICESHIP PREVAILING WAGE SCHEDULE

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$25.00

Supplemental Benefit Rate per Hour: \$3.45

Pointer - Waterproofer, Caulker Mechanic - Second Year

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$27.25

Supplemental Benefit Rate per Hour: \$8.40

Pointer - Waterproofer, Caulker Mechanic - Third Year

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$32.23

Supplemental Benefit Rate per Hour: \$11.15

Pointer - Waterproofer, Caulker Mechanic - Fourth Year

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$38.66

Supplemental Benefit Rate per Hour: \$11.15

(Bricklayer District Council)

ROOFER

(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 2)

Roofer - First Year

Effective Period: 7/1/2012 - 6/30/2013

Wage and Supplemental Rate Per Hour: 35% of Journeyman's Rate

Roofer - Second Year

Effective Period: 7/1/2012 - 6/30/2013

Wage and Supplemental Rate Per Hour: 50% of Journeyman's Rate

Roofer - Third Year

Effective Period: 7/1/2012 - 6/30/2013

Wage and Supplemental Rate Per Hour: 60% of Journeyman's Rate

Roofer - Fourth Year

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
\$220 APPRENTICESHIP PREVAILING WAGE SCHEDULE

Effective Period: 7/1/2012 - 6/30/2013

Wage and Supplemental Rate Per Hour: 75% of Journeyman's Rate

(Local #8)

SHEET METAL WORKER

(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 3)

Sheet Metal Worker - First Year

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate Per Hour: 30% of Journeyman's rate

Supplemental Rate Per Hour: \$15.37

Sheet Metal Worker - Second Year

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate Per Hour: 35% of Journeyman's rate

Supplemental Rate Per Hour: \$18.24

Sheet Metal Worker - Third Year (1st Six Months)

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate Per Hour: 40% of Journeyman's rate

Supplemental Rate Per Hour: \$20.06

Sheet Metal Worker - Third Year (2nd Six Months)

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate Per Hour: 45% of Journeyman's rate

Supplemental Rate Per Hour: \$21.87

Sheet Metal Worker - Fourth Year (1st Six Months)

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate Per Hour: 50% of Journeyman's rate

Supplemental Rate Per Hour: \$23.69

Sheet Metal Worker - Fourth Year (2nd Six Months)

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate Per Hour: 55% of Journeyman's rate

Supplemental Rate Per Hour: \$25.33

Sheet Metal Worker - Fifth Year (1st Six Months)

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 APPRENTICESHIP PREVAILING WAGE SCHEDULE

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 60% of Journeyperson's rate
Supplemental Rate Per Hour: \$27.47

Sheet Metal Worker - Fifth Year(2nd Six Months)

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 70% of Journeyperson's rate
Supplemental Rate Per Hour: \$31.23

(Local #28)

SIGN ERECTOR
(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 4)

Sign Erector - First Year: 1st Six Months

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 35% of Journeyperson's rate
Supplemental Rate Per Hour: \$5.96

Sign Erector - First Year: 2nd Six Months

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 40% of Journeyperson's rate
Supplemental Rate Per Hour: \$6.75

Sign Erector - Second Year: 1st Six Months

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 45% of Journeyperson's rate
Supplemental Rate Per Hour: \$7.55

Sign Erector - Second Year: 2nd Six Months

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 50% of Journeyperson's rate
Supplemental Rate Per Hour: \$8.34

Sign Erector - Third Year: 1st Six Months

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 55% of Journeyperson's rate
Supplemental Rate Per Hour: \$9.13

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 APPRENTICESHIP PREVAILING WAGE SCHEDULE

Sign Erector - Third Year: 2nd Six Months

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 60% of Journeyperson's rate
Supplemental Rate Per Hour: \$9.92

Sign Erector - Fourth Year: 1st Six Months

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 65% of Journeyperson's rate
Supplemental Rate Per Hour: \$10.72

Sign Erector - Fourth Year: 2nd Six Months

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 70% of Journeyperson's rate
Supplemental Rate Per Hour: \$11.51

Sign Erector - Fifth Year

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 75% of Journeyperson's rate
Supplemental Rate Per Hour: \$12.30

Sign Erector - Sixth Year

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 80% of Journeyperson's rate
Supplemental Rate Per Hour: \$12.30

(Local #137)

STEAMFITTER

(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 3)

Steamfitter - First Year

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate and Supplemental Per Hour: 40% of Journeyperson's rate

Steamfitter - Second Year

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate and Supplemental Rate Per Hour: 50% of Journeyperson's rate.

Steamfitter - Third Year

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate and Supplemental Rate per Hour: 65% of Journeyperson's rate.

Steamfitter - Fourth Year

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate and Supplemental Rate Per Hour: 80% of Journeyperson's rate.

Steamfitter - Fifth Year

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate and Supplemental Rate Per Hour: 85% of Journeyperson's rate.

(Local #638)

STONE MASON - SETTER

(Ratio Apprentice of Journeyperson: 1 to 1, 1 to 2)

Stone Mason - Setters - First 750 Hours

Effective Period: 7/1/2012 - 6/30/2013

Wage and Supplemental Rate Per Hour: 50% of Journeyperson's rate

Stone Mason - Setters - Second 750 Hours

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate Per Hour: 60% of Journeyperson's rate

Supplemental Rate Per Hour: 50% of Journeyperson's rate

Stone Mason - Setters - Third 750 Hours

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate Per Hour: 70% of Journeyperson's rate

Supplemental Rate Per Hour: 50% of Journeyperson's rate

Stone Mason - Setters - Fourth 750 Hours

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate Per Hour: 80% of Journeyperson's rate

Supplemental Rate Per Hour: 50% of Journeyperson's rate

Stone Mason - Setters - Fifth 750 Hours

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 APPRENTICESHIP PREVAILING WAGE SCHEDULE

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 90% of Journeyperson's rate
Supplemental Rate Per Hour: 50% of Journeyperson's rate

Stone Mason - Setters - Sixth 750 Hours

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 100% of Journeyperson's rate
Supplemental Rate Per Hour: 50% of Journeyperson's rate

(Bricklayers District Council)

TAPER
(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 4)

Drywall Taper - First Year

Effective Period: 7/1/2012 - 6/30/2013
Wage and Supplemental Rate Per Hour: 40% of Journeyperson's rate

Drywall Taper - Second Year

Effective Period: 7/1/2012 - 6/30/2013
Wage and Supplemental Rate Per Hour: 60% of Journeyperson's rate

Drywall Taper - Third Year

Effective Period: 7/1/2012 - 6/30/2013
Wage and Supplemental Rate Per Hour: 80% of Journeyperson's rate

(Local #1974)

TILE LAYER - SETTER
(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 4)

Tile Layer - Setter - First 750 Hours

Effective Period: 7/1/2012 - 6/30/2013
Wage and Supplemental Rate Per Hour: 50% of Journeyperson's rate

Tile Layer - Setter - Second 750 Hours

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 APPRENTICESHIP PREVAILING WAGE SCHEDULE

Effective Period: 7/1/2012 - 6/30/2013

Wage and Supplemental Rate Per Hour: 55% of Journeyperson's rate

Tile Layer - Setter - Third 750 Hours

Effective Period: 7/1/2012 - 6/30/2013

Wage and Supplemental Rate Per Hour: 65% of Journeyperson's rate

Tile Layer - Setter - Fourth 750 Hours

Effective Period: 7/1/2012 - 6/30/2013

Wage and Supplemental Rate Per Hour: 75% of Journeyperson's rate

Tile Layer - Setter - Fifth 750 Hours

Effective Period: 7/1/2012 - 6/30/2013

Wage and Supplemental Rate Per Hour: 85% of Journeyperson's rate

Tile Layer - Setter - Sixth 750 Hours

Effective Period: 7/1/2012 - 6/30/2013

Wage and Supplemental Rate Per Hour: 95% of Journeyperson's rate

(Local #7)

TIMBERPERSON

(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 6)

Timberperson - First Year

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate Per Hour: 40% of Journeyperson's rate

Supplemental Rate Per Hour: \$27.49

Timberperson - Second Year

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate Per Hour: 50% of Journeyperson's rate

Supplemental Rate Per Hour: \$27.49

Timberperson - Third Year

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate Per Hour: 65% of Journeyperson's rate

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 APPRENTICESHIP PREVAILING WAGE SCHEDULE

Supplemental Rate Per Hour: \$27.49

Timberperson - Fourth Year

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate Per Hour: 80% of Journeyperson's rate

Supplemental Rate Per Hour: \$27.49

(Local #1536)

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§6-109 PREVAILING WAGE SCHEDULE

NYC ADMINISTRATIVE CODE § 6-109 SCHEDULE OF "LIVING WAGES"

Contractors who provide the following services to the City of New York must post a copy of this Living Wage Schedule at their work site(s) as required by New York City Administrative Code § 6-109:

- Building Services,
- Day Care Services,
- Food Services,
- Head Start Services,
- Homecare Services,
- Services to Persons with Cerebral Palsy, and
- Temporary Services.

In accordance with NYC Administrative Code § 6-109, the Comptroller of the City of New York promulgated this schedule of living wages for the above services on contracts for non-emergency work in excess of the small purchase limit set by the Procurement Policy Board; contracting agencies must annex this schedule to such contracts.

A city service contractor or subcontractor that provides homecare services, day care services, head start services or services to persons with cerebral palsy must pay its covered employees that directly render such services in performance of the city service contract or subcontract no less than the living wage and must provide its employees health benefits (supplemental benefits) or must supplement their hourly wage rate by an amount no less than the health benefits supplement rate. This requirement applies for each hour that the employee works performing the city service contract or subcontract.

A city service contractor or subcontractor that provides building services, food services or temporary services must pay its employees that are engaged in performing the city service contract or subcontract no less than the living wage or the prevailing wage, whichever is greater. Where the living wage is greater than the prevailing wage, the city service contractor or subcontractor must either provide its employees health benefits or must supplement their hourly wage rate by an amount no less than the health benefits supplement rate. Where the prevailing wage is greater than the living wage, the city service contractor or subcontractor must provide its employees the prevailing wage and supplements. These requirements apply for each hour that the employee works performing the city service contract or subcontract.

The appropriate schedule of living wages must be posted at all work sites pursuant to NYC Administrative Code 6-109.

The schedule is applicable for work performed during the effective period, unless otherwise noted. You will be notified of any changes to this schedule by addenda published on our web site www.comptroller.nyc.gov. Schedules for future one-year periods will be published annually in the City Record on or about July 1st of each succeeding year and on our web site www.comptroller.nyc.gov.

The living wage rate and the health benefit supplement rate are known through June 30 of each year and those rates are listed in this schedule.

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§6-109 PREVAILING WAGE SCHEDULE

The living wage rates listed in this schedule may not include all hourly wage calculations for overtime, shift differential, Holiday, Saturday, Sunday or other premium time work. Similarly, this schedule does not set forth every living wage practice with which employers must comply.

Some of the rates in this schedule are based on collective bargaining agreements. These agreements are available for inspection by appointment. Requests for appointments may be made by calling (212) 669-4443, Monday through Friday between the hours of 9 a.m. and 5 p.m.

Answers to questions concerning prevailing wage practices may be obtained from the Classification Unit by calling (212) 669-7974. Please direct all other compliance issues to; Bureau of Labor Law, Attn: Wasyl Kinach, P.E., Office of the Comptroller, 1 Centre Street, Room 1122, New York, N.Y. 10007; Fax (212) 669-4002.

Contractors are solely responsible for maintaining original payroll records, which delineate, among other things, the hours each employee worked within a given classification. Contractors using rates and/or classifications not promulgated by the Comptroller do so at their own risk. Additionally, prior to bid, an agency's chief contracting officer must contact the Bureau of Labor Law to obtain a wage determination for a work classification not published in this schedule.

The information listed below is intended to assist you in meeting your living wage and prevailing wage obligation. Contractors are advised to review the Comptroller's Living Wage Schedule prior to submitting a bid for City work. Any wage rate error made by the contracting agency in the contract documents will not preclude a finding against the contractor for an underpayment of the applicable living wage or the applicable prevailing wage.

This schedule sets forth the living wage and benefit rates required to be annexed to and form part of the contract specifications for work covered by New York City Administrative Code § 6-109. Contractors performing such work are required to pay not less than the rates specified in this schedule for the applicable trade or occupation.

Benefits are paid for EACH HOUR WORKED unless otherwise noted.

Wasyl Kinach, P.E.
Director of Classifications
Bureau of Labor Law

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OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§6-109 PREVAILING WAGE SCHEDULE

BUILDING CLEANER AND MAINTAINER (OFFICE)

Office Building Class "A" Cleaner/Porter, Elevator Operator, Exterminator, Fire Safety Director (Over 280,000 square feet gross area)

Effective Period: 7/1/2012 - 12/31/2012

Wage Rate per Hour: \$22.65

Supplemental Benefit Rate per Hour: \$9.13

Supplemental Note: for new employee 0-12 months of employment - \$6.64; for new employee 13-24 months of employment - \$8.81

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate per Hour: \$22.97

Supplemental Benefit Rate per Hour: \$9.51

Supplemental Note: for new employee 0-12 months of employment - \$6.92; for new employee 13-24 months of employment - \$9.18

NEW HIRE: Cleaner/Porter, Elevator Operator, Exterminator, Fire Safety Director may be paid 75% of the wage rate above for the first 21 months of employment, 85% of the wage rate above for the 22nd through 42nd months of employment, and upon the completion of 42 months of employment employee shall be paid the full wage rate. Note: New Hires hired before January 1, 2012 will continue to receive 80% of the wage rate above for the first 30 months, and upon the completion of 30 months of employment employee shall be paid the full wage rate. Upon completion of two years of employment the new hire receives the full supplemental benefit rate.

Office Building Class "B" Cleaner/Porter, Elevator Operator, Exterminator, Fire Safety Director (Over 120,000 and less than 280,000 square feet gross area)

Effective Period: 7/1/2012 - 12/31/2012

Wage Rate per Hour: \$22.62

Supplemental Benefit Rate per Hour: \$9.13

Supplemental Note: for new employee 0-12 months of employment - \$6.64; for new employee 13-24 months of employment - \$8.81

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate per Hour: \$22.94

Supplemental Benefit Rate per Hour: \$9.51

Supplemental Note: for new employee 0-12 months of employment - \$6.92; for new employee 13-24 months of employment - \$9.18

NEW HIRE: Cleaner/Porter, Elevator Operator, Exterminator, Fire Safety Director may be paid 75% of the wage rate above for the first 21 months of employment, 85% of the wage rate above for the 22nd through 42nd months of employment, and upon the completion of 42 months of employment employee shall be paid the full wage rate. Note: New Hires hired before January 1, 2012 will continue to receive 80% of the wage rate above for the first 30 months, and upon the completion of 30 months of employment employee shall be paid the full wage rate. Upon completion of two years of employment the new hire receives the full supplemental benefit rate.

Office Building Class "C" Cleaner/Porter, Elevator Operator, Exterminator, Fire Safety Director (Less than 120,000 square feet gross area)

Effective Period: 7/1/2012 - 12/31/2012

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§6-109 PREVAILING WAGE SCHEDULE

Wage Rate per Hour: **\$22.57**

Supplemental Benefit Rate per Hour: **\$9.13**

Supplemental Note: for new employee 0-12 months of employment - \$6.64; for new employee 13-24 months of employment - \$8.81

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate per Hour: **\$22.90**

Supplemental Benefit Rate per Hour: **\$9.51**

Supplemental Note: for new employee 0-12 months of employment - \$6.92; for new employee 13-24 months of employment - \$9.18

NEW HIRE: Cleaner/Porter, Elevator Operator, Exterminator, Fire Safety Director may be paid 75% of the wage rate above for the first 21 months of employment, 85% of the wage rate above for the 22nd through 42nd months of employment, and upon the completion of 42 months of employment employee shall be paid the full wage rate. Note: New Hires hired before January 1, 2012 will continue to receive 80% of the wage rate above for the first 30 months, and upon the completion of 30 months of employment employee shall be paid the full wage rate. Upon completion of two years of employment the new hire receives the full supplemental benefit rate.

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for work on a holiday plus the day's pay.

Time and one half the regular hourly rate after 40 hours in any work week.

Paid Holidays

New Year's Day

President's Day

Good Friday

Memorial Day

Independence Day

Labor Day

Columbus Day

Thanksgiving Day

Day after Thanksgiving

Christmas Day

Vacation

Less than 6 months of work.....no vacation

6 months of work.....three (3) days

1 year of work.....ten (10) days

5 years of work.....fifteen (15) days

15 years of work.....twenty (20) days

21 years of work.....twenty-one (21) days

22 years of work.....twenty-two (22) days

23 years of work.....twenty-three (23) days

24 years of work.....twenty-four (24) days

25 years or more of work.....twenty-five (25) days

Plus two Personal Days per year.

Sick Leave:

10 sick days per year.

Unused sick leave paid in the succeeding January, one full day pay for each unused sick day.

(Local #32 B/J)

BUILDING CLEANER AND MAINTAINER (RESIDENTIAL)

Residential Building Class "A" Cleaner/Porter

Residential Buildings Class "A": buildings where the assessed value of the land and building, based upon the 1935 assessment, divided by the number of rooms in the building, gives an assessed value of over \$4000.00 a room.

Effective Period: 7/1/2012 - 4/20/2013

Wage Rate per Hour: **\$20.77**

Supplemental Benefit Rate per Hour: **\$8.68**

Supplemental Note: for new employee 0-12 months of employment - \$6.37; for new employee 13-24 months of employment - \$8.43

Effective 1/1/2013 - \$9.43; for new employee 0-12 months of employment - \$6.92; for new employee 13-24 months of employment - \$9.18

Effective Period: 4/21/2013 - 6/30/2013

Wage Rate per Hour: **\$21.34**

Supplemental Benefit Rate per Hour: **\$9.43**

Supplemental Note: for new employee 0-12 months of employment - \$6.92; for new employee 13-24 months of employment - \$9.18

NEW HIRE: Porter/Cleaner, may be paid a starting rate of 80% of the hourly rate published above. Upon completion of 30 months of employment, the new hire shall be paid the full wage rate. Upon completion of two years of employment the new hire receives the full supplemental benefit rate.

Residential Building Class "B" Cleaner/Porter

Residential Building Class "B": buildings where the assessed value of the land and building, based upon the 1935 assessment, divided by the number of rooms in the building, gives an assessed value of over \$2000.00 a room and not over \$4000.00 a room.

Effective Period: 7/1/2012 - 4/20/2013

Wage Rate per Hour: **\$20.71**

Supplemental Benefit Rate per Hour: **\$8.68**

Supplemental Note: for new employee 0-12 months of employment - \$6.37; for new employee 13-24 months of employment - \$8.43

Effective 1/1/2013 - \$9.43; for new employee 0-12 months of employment - \$6.92; for new employee 13-24 months of employment - \$9.18

Effective Period: 4/21/2013 - 6/30/2013

Wage Rate per Hour: **\$21.28**

Supplemental Benefit Rate per Hour: **\$9.43**

Supplemental Note: for new employee 0-12 months of employment - \$6.92; for new employee 13-24 months of employment - \$9.18

NEW HIRE: Porter/Cleaner, may be paid a starting rate of 80% of the hourly rate published above. Upon completion of 30 months of employment, the new hire shall be paid the full wage rate. Upon completion of two years of employment the new hire receives the full supplemental benefit rate.

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§6-109 PREVAILING WAGE SCHEDULE

Residential Building Class "C" Cleaner/Porter

Residential Building Class "C": buildings where the assessed value of the land and building, based upon the 1935 assessment, divided by the number of rooms in the building, gives an assessed value of \$2000.00 or less a room.

Effective Period: 7/1/2012 - 4/20/2013

Wage Rate per Hour: \$20.65

Supplemental Benefit Rate per Hour: \$8.68

Supplemental Note: for new employee 0-12 months of employment - \$6.37; for new employee 13-24 months of employment - \$8.43

Effective 1/1/2013 - \$9.43; for new employee 0-12 months of employment - \$6.92; for new employee 13-24 months of employment - \$9.18

Effective Period: 4/21/2013 - 6/30/2013

Wage Rate per Hour: \$21.23

Supplemental Benefit Rate per Hour: \$9.43

Supplemental Note: for new employee 0-12 months of employment - \$6.92; for new employee 13-24 months of employment - \$9.18

NEW HIRE: Porter/Cleaner, may be paid a starting rate of 80% of the hourly rate published above. Upon completion of 30 months of employment, the new hire shall be paid the full wage rate. Upon completion of two years of employment the new hire receives the full supplemental benefit rate.

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for work on a holiday plus the day's pay.

Time and one half the regular hourly rate after 40 hours in any work week.

Paid Holidays

New Year's Day

Martin Luther King Jr. Day

President's Day

Memorial Day

Independence Day

Labor Day

Columbus Day

Election Day

Thanksgiving Day

Christmas Day

Vacation

6 months.....three (3) days

1 year.....ten (10) days

5 years.....fifteen (15) days

15 years.....twenty (20) days

21 years.....twenty-one (21) days

22 years.....twenty-two (22) days

23 years.....twenty-three (23) days

24 years.....twenty-four (24) days

25 years.....twenty-five (25) days

Plus two Personal Days per year.

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§6-109 PREVAILING WAGE SCHEDULE

SICK LEAVE

After 1 year of service.....ten (10) days per year

(Local #32 B/J)

DAY CARE SERVICES

Day Care Services

'Day Care Services' means provision of day care services through the city's center-based day care program administered under contract with the city's Administration for Children's Services. No other day care programs shall be covered, including family-based day care programs administered by city-contracted day care centers.

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$10.00

Supplemental Benefit Rate per Hour: \$1.50

(NYC Administrative Code §6-109)

CLEANER (PARKING GARAGE)

Garage Cleaner

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$10.00

Supplemental Benefit Rate per Hour: \$1.50

Overtime

Time and one half the regular rate after an 8 hour day or after 40 hours in any work week.

(NYC Administrative Code §6-109)

FOOD SERVICE EMPLOYEES

Cook

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$15.40

Supplemental Benefit Rate per Hour: \$1.72

Cafeteria Attendant

Effective Period: 7/1/2012 - 6/30/2013

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§6-109 PREVAILING WAGE SCHEDULE

Wage Rate per Hour: **\$10.24**
Supplemental Benefit Rate per Hour: **\$1.72**

Counter Attendant

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate per Hour: **\$10.31**
Supplemental Benefit Rate per Hour: **\$1.72**

Kitchen Helper / Dishwasher

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate per Hour: **\$9.83**
Supplemental Benefit Rate per Hour: **\$1.72**

Overtime

Time and one half the regular hourly rate after 40 hours in any work week.

(Based on data from NYS Department of Labor Occupational Employment Statistics and US Department of Labor Bureau of Labor Statistics)

GARDENER

Gardener

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate per Hour: **\$17.04**
Supplemental Benefit Rate per Hour: **\$1.72**

Overtime

Time and one half the regular rate after an 8 hour day or after 40 hours in any work week.

(Based on data from NYS Department of Labor Occupational Employment Statistics and US Department of Labor Bureau of Labor Statistics)

HEAD START SERVICES

Head Start Services

'Head Start Services' means provision of head start services through the city's center-based head start program administered under contract with the city's Administration for Children's Services. No other head start programs shall be covered.

Effective Period: 7/1/2012 - 6/30/2013

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§6-109 PREVAILING WAGE SCHEDULE

Wage Rate per Hour: \$10.00
Supplemental Benefit Rate per Hour: \$1.50

(NYC Administrative Code §6-109)

HEMOCARE SERVICES

Home Care Services

'Homecare Services' means the provision of homecare services under the city's Medicaid Personal Care/Home Attendant or Housekeeping Programs, including but not limited to the In-Home Services for the Elderly Programs administered by the Department for the Aging.

For homecare services provided under the Personal Care Services program, the wage and supplemental benefit rate above shall apply only as long as the state and federal government maintain their combined aggregate proportionate share of funding and approved rates for homecare services in effect as of the date of the enactment of this section.

For contractors or subcontractors providing homecare services, the supplemental benefit rate may be waived by the terms of a bona fide collective bargaining agreement with respect to employees who have never worked a minimum of eighty (80) hours per month for two consecutive months for that covered employer, but such provision may not be waived for any employee once a minimum of eighty (80) hours for two consecutive months has been achieved.

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$10.00
Supplemental Benefit Rate per Hour: \$1.50

(NYC Administrative Code §6-109)

SECURITY GUARD (ARMED)

Security Guard (Armed)

Effective Period: 7/1/2012 - 12/31/2012

Wage Rate per Hour: \$27.75
Supplemental Benefit Rate per Hour: \$4.73

Supplemental Note: for new employee 0-30 days of employment - \$4.09; for new employee 31-120 days of employment - \$4.26; for new employee 121 days - 2 years of employment - \$4.37

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate per Hour: \$28.00
Supplemental Benefit Rate per Hour: \$4.90

Supplemental Note: for new employee 0-30 days of employment - \$4.26; for new employee 31-120 days of employment - \$4.43; for new employee 121 days - 2 years of employment - \$4.54

Months of employment shall be defined as an Employee's length of service with the Employer or at the Facility, whichever is greater.

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§6-109 PREVAILING WAGE SCHEDULE

Overtime Description

A guard who works a holiday is paid the regular rate plus receives the paid holiday.
Supplemental Benefits shall be paid for each hour paid, up to forty (40) paid hours per week.

Overtime

Time and one half the regular rate after an 8 hour day.
Time and one half the regular hourly rate after 40 hours in any work week.

Paid Holidays

New Year's Day
President's Day
Memorial Day
Independence Day
Labor Day
Thanksgiving Day
Christmas Day

Vacation

Months on payroll	Vacation with Pay
6	3 days
12	5 days
24	10 days
60	15 days
180	20 days
300	25 days

Sick Leave

Employees accrue paid sick leave at the rate of one (1) sick day for every six (6) months worked, up to a maximum of six (6) days a year.

(Local #32B/J)

SECURITY GUARD (UNARMED)

Security Guard (Unarmed) 0 - 6 months

Effective Period: 7/1/2012 - 12/31/2012

Wage Rate per Hour: \$12.60

Supplemental Benefit Rate per Hour: \$4.37

Supplemental Note: for new employee 0-30 days of employment - \$4.09; for new employee 31-120 days of employment - \$4.26

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate per Hour: \$12.85

Supplemental Benefit Rate per Hour: \$4.54

Supplemental Note: for new employee 0-30 days of employment - \$4.26; for new employee 31-120 days of employment - \$4.43

Security Guard (Unarmed) 7 - 12 months

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§6-109 PREVAILING WAGE SCHEDULE

Effective Period: 7/1/2012 - 12/31/2012
Wage Rate per Hour: \$13.10
Supplemental Benefit Rate per Hour: \$4.37

Effective Period: 1/1/2013 - 6/30/2013
Wage Rate per Hour: \$13.35
Supplemental Benefit Rate per Hour: \$4.54

Security Guard (Unarmed) 13 - 18 months

Effective Period: 7/1/2012 - 12/31/2012
Wage Rate per Hour: \$13.60
Supplemental Benefit Rate per Hour: \$4.37

Effective Period: 1/1/2013 - 6/30/2013
Wage Rate per Hour: \$13.85
Supplemental Benefit Rate per Hour: \$4.54

Security Guard (Unarmed) 19 - 24 months

Effective Period: 7/1/2012 - 12/31/2012
Wage Rate per Hour: \$14.10
Supplemental Benefit Rate per Hour: \$4.37

Effective Period: 1/1/2013 - 6/30/2013
Wage Rate per Hour: \$14.35
Supplemental Benefit Rate per Hour: \$4.54

Security Guard (Unarmed) 25 - 30 months

Effective Period: 7/1/2012 - 12/31/2012
Wage Rate per Hour: \$14.60
Supplemental Benefit Rate per Hour: \$4.73

Effective Period: 1/1/2013 - 6/30/2013
Wage Rate per Hour: \$14.85
Supplemental Benefit Rate per Hour: \$4.90

Security Guard (Unarmed) 31 months or more

Effective Period: 7/1/2012 - 12/31/2012
Wage Rate per Hour: \$14.75
Supplemental Benefit Rate per Hour: \$4.73

Effective Period: 1/1/2013 - 6/30/2013
Wage Rate per Hour: \$15.15
Supplemental Benefit Rate per Hour: \$4.90

Months of employment shall be defined as an Employee's length of service with the Employer or at the Facility, whichever is greater.

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§6-109 PREVAILING WAGE SCHEDULE

Overtime Description

A guard who works a holiday is paid the regular rate plus receives the paid holiday.
Supplemental Benefits shall be paid for each hour paid, up to forty (40) paid hours per week.

Overtime

Time and one half the regular rate after an 8 hour day.
Time and one half the regular hourly rate after 40 hours in any work week.

Paid Holidays

New Year's Day
President's Day
Memorial Day
Independence Day
Labor Day
Thanksgiving Day
Christmas Day

Vacation

Months on payroll	Vacation with Pay
6	3 days
12	5 days
24	10 days
60	15 days
180	20 days
300	25 days

Sick Leave

Employees accrue paid sick leave at the rate of one (1) sick day for every six (6) months worked, up to a maximum of six (6) days a year.

(Local #32B/J)

SERVICES TO PERSONS WITH CEREBRAL PALSY

Services To Person With Cerebral Palsy

'Services to Persons with Cerebral Palsy' means provision of services which enable persons with cerebral palsy and related disabilities to lead independent and productive lives through an agency that provides health care, education, employment, housing and technology resources to such persons under contract with the city or the department of education.

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$10.00

Supplemental Benefit Rate per Hour: \$1.50

(NYC Administrative Code §6-109)

TEMPORARY OFFICE SERVICES

Administrative Assistant

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate per Hour: \$31.02
Supplemental Benefit Rate per Hour: None

Cashier

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate per Hour: \$11.50
Supplemental Benefit Rate per Hour: None

Clerk (various)

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate per Hour: \$14.60
Supplemental Benefit Rate per Hour: None

Computer Assistant

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate per Hour: \$20.61
Supplemental Benefit Rate per Hour: None

Data Entry Operator

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate per Hour: \$15.73
Supplemental Benefit Rate per Hour: None

Receptionist

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate per Hour: \$14.71
Supplemental Benefit Rate per Hour: None

Secretary (various)

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate per Hour: \$18.72
Supplemental Benefit Rate per Hour: None

Word Processor

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate per Hour: \$19.50
Supplemental Benefit Rate per Hour: None

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§6-109 PREVAILING WAGE SCHEDULE

Overtime

Time and one half the regular rate after a 40 hour week.

(Based on data from NYS Department of Labor Occupational Employment Statistics and US Department of Labor Bureau of Labor Statistics or NYC Administrative Code §6-109)

WINDOW CLEANER

Window Cleaner

Effective Period: 7/1/2012 - 12/31/2012

Wage Rate per Hour: \$26.12

Supplemental Benefit Rate per Hour: \$9.13

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate per Hour: \$26.44

Supplemental Benefit Rate per Hour: \$9.51

Power Operated Scaffolds, Manual Scaffolds, and Boatswain Chairs

Effective Period: 7/1/2012 - 12/31/2012

Wage Rate per Hour: \$28.37

Supplemental Benefit Rate per Hour: \$9.13

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate per Hour: \$28.69

Supplemental Benefit Rate per Hour: \$9.51

Window Cleaner Apprentice (0 - 3 months)

Employee must be a registered apprentice with the New York State Department of Labor

Effective Period: 7/1/2012 - 12/31/2012

Wage Rate per Hour: \$19.35

Supplemental Benefit Rate per Hour: \$0.00

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate per Hour: \$19.59

Supplemental Benefit Rate per Hour: \$0.00

Window Cleaner Apprentice (4 - 7 months)

Employee must be a registered apprentice with the New York State Department of Labor

Effective Period: 7/1/2012 - 12/31/2012

Wage Rate per Hour: \$20.92

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§6-109 PREVAILING WAGE SCHEDULE

Supplemental Benefit Rate per Hour: \$9.13

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate per Hour: \$21.18

Supplemental Benefit Rate per Hour: \$9.51

Window Cleaner Apprentice (8 - 11 months)

Employee must be a registered apprentice with the New York State Department of Labor

Effective Period: 7/1/2012 - 12/31/2012

Wage Rate per Hour: \$22.17

Supplemental Benefit Rate per Hour: \$9.13

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate per Hour: \$22.44

Supplemental Benefit Rate per Hour: \$9.51

Window Cleaner Apprentice (12 - 15 months)

Employee must be a registered apprentice with the New York State Department of Labor

Effective Period: 7/1/2012 - 12/31/2012

Wage Rate per Hour: \$23.43

Supplemental Benefit Rate per Hour: \$9.13

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate per Hour: \$23.72

Supplemental Benefit Rate per Hour: \$9.51

Window Cleaner Apprentice (16 - 17 months)

Employee must be a registered apprentice with the New York State Department of Labor

Effective Period: 7/1/2012 - 12/31/2012

Wage Rate per Hour: \$24.70

Supplemental Benefit Rate per Hour: \$9.13

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate per Hour: \$25.01

Supplemental Benefit Rate per Hour: \$9.51

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

Time and one half the regular rate for work on a holiday plus the day's pay.

Paid Holidays

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§6-109 PREVAILING WAGE SCHEDULE

New Year's Day
Martin Luther King Jr. Day
President's Birthday
Good Friday
Memorial Day
Independence Day
Labor Day
Columbus Day
Thanksgiving Day
Day after Thanksgiving
Christmas Day
Personal Day

Vacation

After 7 months but less than 1 year of service.....5 days
1 year but less than 5 years of service.....10 days
5 years of service but less than 15 years of service.....15 days
15 years of service but less than 21 years of service.....20 days
21 years.....21 days
22 years.....22 days
23 years.....23 days
24 years.....24 days
25 years or more of service.....25 days
Plus 1 day per year for medical visit

SICK LEAVE:

10 days after one year worked. Unused sick days to be paid in cash.

(Local #32 B/J)

(NO TEXT ON THIS PAGE)



Leonard A. Mancusi
SENIOR ASSISTANT COMPTROLLER

THE CITY OF NEW YORK
OFFICE OF THE COMPTROLLER
1 CENTRE STREET ROOM 1120
NEW YORK, N.Y. 10007-2341

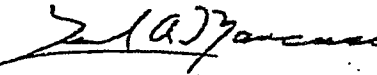
TELEPHONE: (212) 669-3622
FAX NUMBER: (212) 669-8491

ALAN G. HEVESI
COMPTROLLER

MEMORANDUM

November 6, 2000

To Agency Chief Contracting Officers

From: Leonard A. Mancusi 

Re: Security at Construction Sites
.....

Prior to the enactment of Administrative Code §6-109, security guards on construction sites were not subject to prevailing wages. Security guards under the New York State labor law are covered under §230 which provides that prevailing wages are to be paid for security guards in existing buildings. §6-109 of the Administrative Code which was enacted in 1996 closed this loophole by including all security guards working pursuant to a city contract as a prevailing wage trade.

Although some construction contract boilerplate language has been amended to include §6-109, sub-contractors performing security services have advised us that they were not aware of this provision and, since traditionally, security guards were not a covered trade on construction sites, and they were not advised by a prime contractor that they would have to pay prevailing wages, they have not been doing so.

To avoid the possibility of issuing stop payments against prime contractors for the failure of their security service sub-contractors to pay

prevailing wages, we suggest that you write to all your existing security guard sub-contractors and their primes and in the future, upon approval of a security guard sub-contractor, advise the contractors of their obligation to pay prevailing wages under §6-109 of the Administrative Code.

As always, your cooperation is appreciated.

LAM:er
ACCO.SECURITY AT SITES



NEW YORK CITY DEPARTMENT OF
DESIGN + CONSTRUCTION

**INFRASTRUCTURE DIVISION
BUREAU OF DESIGN**

VOLUME 2 OF 3

PROJECT ID: HWXRCPLZ

RECONSTRUCTION OF
ROBERTO CLEMENTE PLAZA

INCLUDING SEWER, WATER MAIN, STREET LIGHTING,
AND TRAFFIC SIGNAL WORK

Together With All Work Incidental Thereto
BOROUGH OF THE BRONX
CITY OF NEW YORK

TRULCOM Construction Corp.
85D2012HW0007C/85D13B0044001 ^{Contractor.}
Dated JUNE 20, 2013

APPROVED AS TO FORM
CERTIFIED AS TO LEGAL AUTHORITY

Acting Corporation Counsel

Dated January 3, 2013





**THE CITY OF NEW YORK
DEPARTMENT OF DESIGN AND CONSTRUCTION
DIVISION OF INFRASTRUCTURE**

30-30 THOMSON AVENUE
LONG ISLAND CITY, NEW YORK 11101-3045
TELEPHONE (718) 391-1000
WEBSITE www.nyc.gov/buildnyc

VOLUME 3 OF 3

**SCHEDULE A
ADDENDA NOS. 1 TO 7**

FOR FURNISHING ALL LABOR AND MATERIALS NECESSARY AND REQUIRED FOR:

PROJECT ID: HWXRCPLZ

**RECONSTRUCTION OF
ROBERTO CLEMENTE PLAZA**

**INCLUDING SEWER, WATER MAIN, STREET LIGHTING,
AND TRAFFIC SIGNAL WORK**

**Together With All Work Incidental Thereto
BOROUGH OF THE BRONX
CITY OF NEW YORK**

FOR THE DEPARTMENT OF TRANSPORTATION

PREPARED BY

WEIDLINGER ASSOCIATES

GARRISON ARCHITECTS

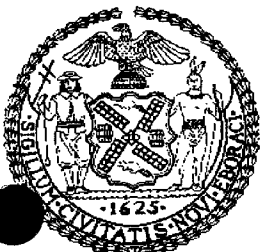
JULY 30, 2012

NYS DOT PIN X550.49

Fed. Aid Project No. _____

Bid Opening 11:00 A.M. on

Location 1st Floor Bid Room, 30-30 Thomson Ave., Long Island City, N.Y. 11101



2-153



SPECIFICATIONS AND STANDARDS OF NEW YORK CITY

The following NYC Department of Transportation reference documents are available on-line at:

http://www.nyc.gov/html/ddc/html/pubs/pubs_infrastdts.shtml or for purchase between 9:00 A.M. and 3:00 P.M. at 55 Water St., Ground Floor, NYC, N.Y. 10041. Contact: Ms Vivian Cruz, Tel. (212) 839-9434

1. New York City Standard Highway Specifications, November 1, 2010
2. New York City Standard Highway Details of Construction, July 1, 2010
3. New York City Division of Street Lighting Specifications
4. New York City Division of Street Lighting Standard Drawings
5. New York City Standard Specifications for Traffic Signals
6. New York City Standard Drawings for Traffic Signals

The following reference documents for Sewer Work are available on-line at:

http://www.nyc.gov/html/ddc/html/pubs/pubs_infrastdts.shtml or for pick up between 8:00 A.M. and 4:00 P.M. at 30-30 Thomson Avenue, 3rd Floor, Division of Infrastructure, Long Island City, N.Y. 11101. Contact: Mr. William Patalano, Tel. (718) 391-2054

1. New York City DEP Standard Sewer Specifications, August 1, 2009
2. New York City DEP Instructions for Concrete Specifications, Jan. 92
3. New York City DEP General Specification 11-Concrete, November 1991
4. New York City DEP Sewer Design Standards, (September 2007) Revised January 2009

The following reference documents for Water Mains Work are available on-line at: http://www.nyc.gov/html/ddc/html/pubs/pubs_infrastdts.shtml or for pick up between 8:00 A.M. and 4:00 P.M. at 30-30 Thomson Avenue, 3rd Floor, Division of Infrastructure, Long Island City, N.Y. 11101.

Contact: Mr. Robert Kuhlmann, Tel. (718) 391-2145

1. New York City Department of Environmental Protection, Standard Water Main Specifications, dated August 1, 2009
2. New York City Department of Environmental Protection Water Main Standard Drawings
3. Specifications for Trunk Main Work, dated February 2010

The water main work material specifications are available at the Department of Environmental Protection, 59-17 Junction Boulevard, 3rd Floor Low-Rise Building, Flushing, N.Y. 11373-5108.

Contact: Mr. Tarlock Sahansra, P.E., Tel. (718) 595-5302
E-mail: TSAHANSRA@DEP.NYC.GOV

Standard Specifications and Drawings for Fire Department Communications facilities of New York City are available at 87 Union Street, Engineering Office, Brooklyn, N.Y. 11231-1416.

Contact: Mr. Ed Durkin, Tel. (718) 624-3752

Tree Planting Standards of the City of New York Parks & Recreation are available at the following Department of Parks & Recreation website:

http://www.nycgovparks.org/sub_permits_and_applications/images_and_pdfs/TreePlantingStandards.pdf

SPECIFICATIONS AND STANDARDS OF PRIVATE UTILITIES

The Following reference document for Private Utility Work is available for pick up between 8:30 A.M. and 4:00 P.M. at 30-30 Thomson Avenue, First Floor Bid Procurement Room, L.I.C., N.Y. 11101.

1. CET SPECIFICATIONS AND SKETCHES dated November 2010

(NO TEXT ON THIS PAGE)

SCHEDULE A

<u>REFERENCE</u>	<u>ITEM</u>	<u>REQUIREMENTS</u>
Section 26 Information for Bidders	Bid Security	See Attachment 1 (page A-1 of the Bid Booklet).
	Performance Security Payment Security	See Attachment 1 (page A-1 of the Bid Booklet).
Article 14 Contract	Date for Substantial Completion	See Page SA-2
Article 15 Contract	Liquidated Damages	For Each Consecutive Calendar Day Over Completion Time: <u>\$1,500.00</u>
Article 17 Contract	Subcontracts	Not to Exceed <u>50%</u> of Contract Price
Article 77 Contract	M/WBE Program	See Subcontract Utilization Plan in the Bid Booklet
Section 6.40 Standard Highway Specifications	Liquidated Damages For Engineer's Field Office	For Each Calendar Day of Deficiency <u>\$250.00</u>
	If the Contractor fails to satisfactorily provide the field office and all equipment specified in Section 6.40 - Engineer's Field Office , and/or if a cited deficiency exceed seventy two (72) hours after notice from the Engineer in writing, or is permitted to recur, liquidated damages will be assessed in the amount specified herein for each subsequent calendar day or part thereof that a cited deficiency resulting in nonpayment, as described in Section 6.40.5 , is not corrected.	
Section 6.70 Standard Highway Specifications	Liquidated Damages For Maintenance and Protection of Traffic	For each instance of failure to comply with the Maintenance and Protection of Traffic requirements within three (3) hours after written notice from the Engineer: <u>\$250.00</u>
		For each and every hour of failing to open the entire width of roadway to traffic the morning following a night/weekend work operation: <u>\$500.00</u>
Section 7.13 Standard Highway Specifications	Liquidated Damages For Maintenance of Site	For Each Calendar Day, For Each Occurrence: <u>\$500.00</u>
	If the Contractor fails to comply, within three (3) consecutive hours after written notice from the Engineer, with the requirements of Section 7.13 - Maintenance of Site , the Contractor shall pay to the City of New York, until such notice has been complied with or rescinded, the sum specified above per calendar day, for each instance of such failure, as liquidated damages and not as a penalty, for such default.	

Date for Substantial Completion (Reference: Article 14)

The Contractor shall substantially complete the Work within the Final Contract Duration determined in accordance with the terms and conditions set forth herein.

The Base Contract Duration for this project is 540 consecutive calendar days ("ccds").

The Final Contract Duration shall be the Base Contract Duration when a check mark is indicated before the word "NO", below, and shall be the Base Contract Duration adjusted by the table set forth below when a check mark is indicated before the word "YES", below.

YES NO

When the Final Contract Duration is indicated above to be adjusted by the table below, the table may increase the Base Contract Duration depending on the date of scheduled substantial completion to avoid a scheduled substantial completion of the Work during the winter months. The date of scheduled substantial completion shall be determined by adding the Base Contract Duration to the date specified to commence work in the written Notice to Proceed. The Final Contract Duration shall then be determined as follows:

- (a) Find the row that corresponds to the month of substantial completion based on the Base Contract Duration added to the date specified to commence work in the written Notice to Proceed.
- (b) Find the number of days to be added to the Base Contract Duration in the table below. Add that number of days to the Base Contract Duration to obtain the Final Contract Duration in consecutive calendar days.

Month of Substantial Completion based on the Base Contract Duration	Number of Days of adjustment
January	150
February	120
March	90
April	60
May	30
June	0
July	0
August	0
September	0
October	0
November –December 15	0
December 16 – December 31	180

In addition, should Item No. 9.30, "Storm Water Pollution Prevention," exist in the Contract and the required Storm Water Pollution Prevention Plan (SWPPP) does not conform to NYSDEC's recommended Standards, an additional 60 ccd shall be added to the above Final Contract Duration.

SCHEDULE A

(RELATING TO ARTICLE 22 – INSURANCE)

PART I. MINIMUM LIMITS AND SPECIAL CONDITIONS

Insurance indicated by a blackened box (■) or by X in a □ to left will be required under this contract

Types of Insurance (per Article 22 in its entirety, including listed paragraph)	Minimum Limits and Special Conditions
<p>■ Commercial General Liability Art. 22.1.1</p>	<p><u>\$3,000,000</u> per occurrence</p> <p><u>\$6,000,000</u> aggregate (applicable separately to this Project)</p> <p>Additional Insureds:</p> <ol style="list-style-type: none"> 1. <u>City of New York, including its officials and employees, and</u> 2. <u>The New York City Transit Authority (NYCTA), Manhattan and Bronx Surface Transit Operation Authority (MaBSTOA), Staten Island Rapid Transit Operation Authority (SIRTOA), Metropolitan Transportation Authority (MTA), its subsidiaries and affiliated companies. The Contractor shall furnish two (2) certificates of insurance to and the policy shall be endorsed to provide thirty (30) days advance notice to the Director, Risk Management, MTA Risk and Insurance Management Standards, Enforcement and Claims Unit, 2 Broadway, 21st Floor, New York, NY 10004, of any material change and/or cancellation.</u> 3. <u>Consolidated Edison</u>

SCHEDULE A

(RELATING TO ARTICLE 22 – INSURANCE)

(PART I CONTINUED)

Insurance indicated by a blackened box (■) or by X in a □ to left will be required under this contract

Types of Insurance (per Article 22 in its entirety, including listed paragraph)	Minimum Limits and Special Conditions
<p>■ Workers' Compensation Art. 22.1.2</p> <p>■ Disability Benefits Insurance Art. 22.1.2</p> <p>■ Employers' Liability Art. 22.1.3</p> <p>□ Jones Act Art. 22.1.4</p> <p>□ U.S. Longshoremen's and Harbor Workers Compensation Act Art. 22.1.4</p>	<p>Workers' Compensation: Statutory per New York State law without regard to jurisdiction</p> <p>Disability Benefits Insurance: Statutory per New York State law without regard to jurisdiction</p> <p>Employers' Liability: \$2,000,000 each accident</p> <p>■ Additional Requirements:</p> <p>(1) <u>Two (2) certificates of such insurance or authority for self-insurance shall be furnished to the Director, Risk Management, MTA Risk and Insurance Management Standards, Enforcement and Claims Unit, 2 Broadway, 21st Floor, New York, NY 10004</u></p>
<p>□ Builders' Risk Art. 22.1.5</p>	<p>_____ % of total value of Work City of New York and the Contractor named as Loss Payee for the Work in order of precedence, as their interests may appear</p>

SCHEDULE A

(RELATING TO ARTICLE 22 – INSURANCE)

(PART I CONTINUED)

Insurance indicated by a blackened box (■) or by X in a □ to left will be required under this contract

Types of Insurance (per Article 22 in its entirety, including listed paragraph)	Minimum Limits and Special Conditions
<input checked="" type="checkbox"/> Comprehensive Business Auto Coverage Art. 22.1.6	<p>\$2,000,000 per accident</p> <p>If vehicles are used for transporting hazardous materials, the Contractor shall provide pollution liability broadened coverage for covered autos (endorsement CA 99 48) as well as proof of MCS 90.</p> <p>Additional Insureds:</p> <p>(1) <u>City of New York, including its officials and employees, and</u></p> <p>(2) <u>The New York City Transit Authority (NYCTA), Manhattan and Bronx Surface Transit Operation Authority (MaBSTOA), Staten Island Rapid Transit Operation Authority (SIRTOA), Metropolitan Transportation Authority (MTA), its subsidiaries and affiliated companies.</u></p>
<input type="checkbox"/> Pollution/Environmental Liability Art. 22.1.7	<p>\$ _____ per occurrence</p> <p>\$ _____ aggregate</p> <p>Additional Insureds:</p> <p>1. City of New York, including its officials and employees, and</p> <p>2. _____</p> <p>3. _____</p>
<input type="checkbox"/> Marine Protection and Indemnity Art. 22.1.8(a)	<p>\$ _____ per occurrence</p> <p>\$ _____ aggregate</p> <p>Additional Insureds:</p> <p>1. City of New York, including its officials and employees, and</p> <p>2. _____</p> <p>3. _____</p>

SCHEDULE A

(RELATING TO ARTICLE 22 – INSURANCE)

(PART I CONTINUED)

Insurance indicated by a blackened box (■) or by X in a to left will be required under this contract

Types of Insurance (per Article 22 in its entirety, including listed paragraph)	Minimum Limits and Special Conditions
<input type="checkbox"/> Ship Repairers Legal Liability Art. 22.1.8(b)	\$ _____ each occurrence [Contracting agency to fill in total value of City vessels involved]
<input type="checkbox"/> Collision Liability/Towers Liability Art. 22.1.8(c)	\$ _____ per occurrence \$ _____ aggregate Additional Insureds: 1. City of New York, including its officials and employees, and 2. _____ 3. _____
<input type="checkbox"/> Marine Pollution Liability Art. 22.1.8(d)	\$ _____ each occurrence Additional Insureds: 1. City of New York, including its officials and employees, and 2. _____ 3. _____

SCHEDULE A

(RELATING TO ARTICLE 22 – INSURANCE)

(PART I CONTINUED)

Insurance indicated by a blackened box (■) or by X in a □ to left will be required under this contract

Types of Insurance (per Article 22 in its entirety, including listed paragraph)	Minimum Limits and Special Conditions
<p>[OTHER] Art. 22.1.9</p> <p>■ Railroad Protection Liability Policy</p> <p>(ISO-RIMA or equivalent form) approved by Permitter covering the work to be performed at the designated site and affording protection for damages arising out of bodily injury or death, physical damage to or destruction of property, including damage to the Insured's own property and conforming to the following:</p> <ul style="list-style-type: none"> • Policy Endorsement CG 28 31 - Pollution Exclusion Amendment is required to be endorsed onto the policy when environmental-related work and/or exposures exist. • Indicate the Name and address of the Contractor to perform the work, the Contract # and the name of the railroad property where the work is being performed and the Agency Permit. • Evidence of Railroad Protective Liability Insurance, must be provided in the form of the <u>Original Policy. A detailed Insurance Binder (ACORD or Manuscript Form) will be accepted pending issuance of the Original Policy, which must be provided within 30 days of the Binder Approval.</u> 	<p><u>\$2,000,000</u> per occurrence</p> <p><u>\$6,000,000</u> annual aggregate</p> <p>Named Insureds:</p> <p><u>1. New York City Transit Authority (NYCTA), the Manhattan and Bronx Surface Transit Operation Authority (MaBSTOA), the Staten Island Rapid Transit Operation Authority (SIRTOA), MTA Capital Construction Co., the Metropolitan Transportation Authority (MTA) including its subsidiaries and affiliates, the City of New York (as Owner) and all other indemnified parties.</u></p>

SCHEDULE A

(RELATING TO ARTICLE 22 – INSURANCE)

(PART I CONTINUED)

Insurance indicated by a blackened box (■) or by X in a □ to left will be required under this contract

Types of Insurance (per Article 22 in its entirety, including listed paragraph)	Minimum Limits and Special Conditions
<p>[OTHER]</p> <p><input type="checkbox"/> Professional Liability</p> <p>A. The Contractor’s Professional Engineer shall maintain and submit evidence of Professional Liability Insurance in the minimum amount of \$1,000,000 per claim. The policy or policies shall include an endorsement to cover the liability assumed by the Contractor under this Contract arising out of the negligent performance of professional services or caused by an error, omission or negligent act of the Contractor’s Professional Engineer or anyone employed by the Contractor’s Professional Engineer.</p> <p>B. Claims-made policies will be accepted for Professional Liability Insurance. All such policies shall have an extended reporting period option or automatic coverage of not less than two (2) years. If available as an option, the Contractor’s Professional Engineer shall purchase extended reporting period coverage effective on cancellation or termination of such insurance unless a new policy is secured with a retroactive date, including at least the last policy year.</p>	<p>Art. 22.1.9</p>
<p>[OTHER]</p> <p>■ Engineer’s Field Office</p> <p>Section 6.40, Standard Highway Specifications</p>	<p>Art. 22.1.9</p> <p>Fire insurance, extended coverage and vandalism, malicious mischief and burglary, and theft insurance coverage in the amount of <u>\$40,000</u></p>

SCHEDULE A

(RELATING TO ARTICLE 22 – INSURANCE)

PART II. BROKER'S CERTIFICATION

[Pursuant to Article 22.3.1(a) of the **Contract**, every Certificate of Insurance must be accompanied by either the following certification by the broker setting forth the following text and required information and signatures or complete copies of all policies referenced in the Certificate of Insurance. In the absence of completed policies, binders are acceptable.]

CERTIFICATION BY BROKER

The undersigned insurance broker represents to the City of New York that the attached Certificate of Insurance is accurate in all material respects, and that the described insurance is effective as of the date of this Certification.

[Name of broker (typewritten)]

[Address of broker (typewritten)]

[Signature of authorized official or broker]

[Name and title of authorized official (typewritten)]

Sworn to before me this
_____ day of _____, 200_

NOTARY PUBLIC

SCHEDULE A

(RELATING TO ARTICLE 22 – INSURANCE)

PART III. ADDRESS OF COMMISSIONER

Wherever reference is made in Article 7 or Article 22 to documents to be sent to the **Commissioner** (e.g., notices, filings, or submissions), such documents shall be sent to the address set forth below or, in the absence of such address, to the **Commissioner's** address as provided elsewhere in this **Contract**.

DDC Director, Insurance Risk Manager

30 – 30 Thomson Avenue, 4th Floor (IDCNY Building)

Long Island City, NY 11101

ATTACH TO CONTRACT DOCUMENTS

THE CITY OF NEW YORK
DEPARTMENT OF DESIGN AND CONSTRUCTION
INFRASTRUCTURE DIVISION
BUREAU OF DESIGN

PROJECT ID: HWXRCPLZ

RECONSTRUCTION OF
ROBERTO CLEMENTE PLAZA

INCLUDING SEWER, WATER MAIN, STREET LIGHTING,
AND TRAFFIC SIGNAL WORK

Together With All Work Incidental Thereto
BOROUGH OF THE BRONX
CITY OF NEW YORK

ADDENDUM NO. 1

DATED: November 26, 2012

THIS ADDENDUM IS HEREBY MADE A PART OF THE CONTRACT DOCUMENTS

The New York City Department of Transportation Standard Highway Specifications, dated November 1, 2010, (which include, but are not limited to, "General Conditions", "Basic Materials of Construction", "Combined Materials of Construction", "Construction Methods", "Inspection and Testing of Materials, Adjustments for Deficiencies, and Maintenance", and "Supplemental Construction Methods"), as modified by addenda issued prior to the opening of bids, shall apply to and become a part of the contract.

All references contained herein are to the New York City Department of Transportation, Standard Highway Specifications, dated November 1, 2010. The said Specifications are hereby revised. Included hereunder are the following REVISIONS:

1. Amendments to Standard Highway Specifications, Volume I
2. Amendments to Standard Highway Specifications, Volume II, including Section 7.88 (Revised)
3. New Sections
4. Special Provisions

1. AMENDMENTS TO STANDARD HIGHWAY SPECIFICATIONS, VOLUME I

The following amendments to the Contract Requirements shall become a part of and apply to the contract:

[Added 12-09-2010]

1. Refer to Page 15, **Subsection 1.06.23.(C) CONFORMANCE WITH FEDERAL, STATE AND CITY AGENCIES;**

Add the following new paragraphs:

"The Contractor is notified that all vehicles that are owned, leased or operated by the Contractor or its subcontractors and used in connection with the Project shall comply with the following requirement:

Every truck, tractor, and tractor-trailer or semitrailer combination, having a gross vehicle weight rating of twenty-six thousand pounds or more, and a conventional cab configuration in which more than half of the engine length is forward of the foremost point of the windshield base, and the steering wheel hub is in the forward quarter of the vehicle length shall be equipped with a convex mirror on the front of such vehicle or combination of vehicles. Such convex mirror shall be adjusted so as to enable the operator of such vehicle or combination of vehicles to see all points on an imaginary horizontal line which is three feet above the road, is one foot directly forward from the midpoint of the front of such vehicle or combination of vehicles, and extends the full width of the front of such vehicle or combination of vehicles.

Any vehicle that does not comply with this provision may be prohibited from entering the Project site and/or supplying equipment or materials to the Project. The Contractor shall not be entitled to any damages as a result of such prohibition."

[Added 01-09-2011]

2. Refer to Page 240, **Subsection 4.16.5.(B) STUMP REMOVAL;**
Delete **Subsection 4.16.5.(B) STUMP REMOVAL**, in its entirety:
Substitute the following revised **Subsection 4.16.5.(B)**:

"(B) STUMP REMOVAL

1. Tree stumps designated to be removed and their roots shall be completely excavated to a minimum depth of three (3) feet below the existing grade. A portable stump cutter may be required in some locations. It may be necessary to remove concrete, asphalt, pavers, and/or other types of material surrounding the base of the stump. All excess debris, including chips from tree stumps, shall be removed and disposed of by the Contractor, away from the site prior to backfilling and the area shall be restored by completion of the workday, to the satisfaction of the Engineer. The disposal of tree stumps by burning in open fires will not be permitted.

2. All voids and excavations left after the removal of the stump and roots shall be backfilled to grade with clean earth fill. Fill shall be placed and compacted to a minimum of 95 percent of Standard Proctor Maximum Density by acceptable methods to the satisfaction of the Engineer. Where paving blocks exist, they are to be reset to the existing grade as directed.

3. Maximum safety and care must be used by Contractor during stump removal. The Contractor shall carefully protect against damage all existing trees, plants, curbs, sidewalks and utilities and other features to remain. The Contractor is responsible for locating and protecting underground utilities from damage during stump removal procedures. During stump grinding operations, plywood must be used to protect adjacent vehicles, real property, and pedestrians. If, when removing stumps, existing sidewalks or curbs are disturbed, the Contractor shall restore and/or reset these sidewalks and curbs, at no additional cost to the City. Restoration work shall be done to match the existing, to the satisfaction of the Engineer. All damaged trees, curbs, sidewalks, real property, vehicles and utilities must be addressed within three (3) days."

[Added 04-18-2011]

3. Refer to Pages 218 and 219, **Subsection 4.13.4.(H) PIGMENT**;
Delete the first three (3) paragraphs on page 219:
Substitute the following revised three (3) paragraphs:

"Where the color of the concrete is required to simulate the color of dark gray bluestone, the concrete shall be integrally pigmented to produce a gray color equivalent to: Davis Colors No. 884-3%; Lansco Color No. 437 "Strong Black" 5 lbs. per 94 lbs. Light Grey Portland Cement and 3 parts sand; L.M. Scofield "Cool Black No. 4"; Bayferrox Limestone 330, 2 lbs. per 94 lbs. Light Gray Portland Cement; or an approved equivalent, unless otherwise specified.

Where the color of the concrete is required to simulate the color of light to medium gray granite, the concrete shall be integrally pigmented to produce a gray color equal to: Davis Colors No. 884-1%; Lansco Color No. 437 "Strong Black" 2.5 lbs. per 94 lbs. Light Grey Portland Cement and 3 parts sand; L.M. Scofield "Cool Black No. 1"; Bayferrox Silver 330, 1 lb. per 94 lbs. Light Gray Portland Cement; or an approved equivalent, unless otherwise specified.

Where the sidewalk is designated to have a saw cut joint finish the color of the concrete shall be integrally pigmented to produce a gray color equivalent to L.M. Scofield "Landmarks Grey" K-157-4; L.M. Scofield "Cool Black No. 4"; Davis Colors No. 884-3%; Lansco Color No. 437 "Strong Black" 5 lbs. per 94 lbs. Light Grey Portland Cement and 3 parts sand; Bayferrox NYC Landmark Commission Gray, 3.5 lbs. per 94 lbs. Light Gray Portland Cement; or an approved equivalent, unless otherwise specified."

[Added 07-01-2011]

4. Refer to Page 14, **Subsection 1.06.23.(A) PERMITS**;
Delete line (b) under the first paragraph;
Substitute the following text:

"(b) Any planned work requiring a DOT Construction Permit that may potentially be within 100 feet of a bridge structure will be placed on a Bridge Hold. If any proposed work is within 100 feet of a bridge structure, permittees must submit a scaled drawing showing the work and exact location, along with the following:

- Plan layout of the project area.
- The scope of work.
- The contractor's means and methods.
- Indicate if work will be done of the bridge itself or its abutments, and the type of work.

If the work is more than 100 feet away from the bridge structure, permittees may send a certification by e-mail stating so. Either response must be sent to the Division of Bridges at bridgeshold@dot.nyc.gov for review and release prior to commencing work. Emergency work will not be placed on hold and shall proceed in accordance with the New York City Highway Rules, section 2-11 (g);

(c) Permits from the Department of Sanitation for use of City landfills;"

[Added 07-27-2011]

5. Refer to Page 37, **Subsection 1.06.46.(A) 6. Sign Graphics;**
Delete article "a." beginning with the words "All visual components of the sign are in an Adobe *.pdf file, . . ." and ending with the words ". . . DDC to the Contractor (on a CD or via E-mail) for printing.", in its entirety;
Substitute the following revised article "a":

"a. All visual components of the sign are in an Adobe *.pdf file, which is provided by the Commissioner's representative. The file is not to be altered for composition, type font or image from the version provided by DDC. The Commissioner's representative shall provide a complete file with data and image. The digital file shall be provided by DDC to the Contractor (on a CD or via E-mail) for printing."

[Added 09-27-2012]

6. Refer to Page 36, **Subsection 1.06.46. Project Sign;**
Delete the words "Unless otherwise specified in the Special Provisions of the contract, the following shall apply:";
Substitute the following revised text:

"The Contractor is notified that he shall be required to furnish, install, maintain, and remove, when directed, Construction Project Information Signs (CPIS) as per Sec. 2-02(c)(4) and (5) of the NYC DOT Highway Rule and the cost shall be deemed included under all scheduled items of the contract. In addition, unless otherwise specified in the Special Provisions of the contract, the following Project Sign shall also apply."

2. AMENDMENTS TO STANDARD HIGHWAY SPECIFICATIONS, VOLUME II

[Added 01-25-2012]

1. Refer to Pages 365 and 366, **Subsection 6.40.2.(C)(c)(1) Personal Computer(s) - Workstation Configuration;**

Delete the text under **Subsections (a), (b), (c), (d), (h), (i), and (m)**, in their entirety;

Substitute the following revised text:

- “(a) Make and Model: Dell; HP; Gateway; Acer; or, an approved equivalent. (Note: an approved equivalent requires written approval of the Assistant Commissioner of ITS.)
- “(b) Processor: i5-2400 (6MB Cache, 3.1GHz) or faster computer - Single Processor.
- “(c) System Ram: Minimum of 4GB (Gigabytes) Dual Channel DDR3 SDRAM at 1333MHz – 2 DIMMS
- “(d) Hard Disk Drive(s): 500 GB (Gigabytes) Serial ATA (7200RPM) w/DataBurst Cache, or larger.”
- “(h) Video Display Card: HD Graphics (VGA, HDMI) with a minimum of 64 MB of RAM.
- “(i) Monitor: 22" W, 23.0 Inch VIS, Widescreen, VGA/DVI LCD Monitor.”
- “(m) Software Requirements: Microsoft Windows 7 Professional SP1, 64 bit; Microsoft Office Professional 2010; Microsoft Project 2010; Adobe Acrobat reader; Anti-Virus software package with 2 year updates subscription; and, either Auto Cad 2012 LT or Microsoft Visio 2010 Standard Edition, as directed by the Engineer.”

2. Refer to Page 366, **Subsection 6.40.2.(C)(c)(2)(b);**
Delete the text under **Subsection (b)**, which begins with the words
“(b) One (1) 600 DPI HP Laser Jet . . .”, in its entirety;
Substitute the following revised text:

- “(b) One (1) 600 DPI HP Color Laser Jet all-in-one Printer/Scanner/Copier/Fax (twelve (12) pages per minute or faster) with one (1) Extra Paper Tray (Legal Size) ~~networked to all office computers.~~”

3. Refer to Page 367, Subsection 6.40.3. SPECIFIC REQUIREMENTS FOR ENGINEERS FIELD OFFICE (TYPE A, B, C, CU, D OR DU), first paragraph;
 Delete the text in the first paragraph of Subsection 6.40.3., in its entirety;
 Substitute the following revised text:

6.40.3. SPECIFIC REQUIREMENTS FOR ENGINEER'S FIELD OFFICE (TYPE A, B, C, CU, D, OR DU). In addition to the general requirements, each type of Field Office shall have the minimum floor area indicated in Table 6.40-I calculated based on usable area only, excluding any loss factors. Loss factors are defined as those areas such as lobby, sidewalk window ledge, elevator shafts and stairways. The Contractor shall provide and maintain furnishings for each type of Field Office in the quantity specified in Table 6.40-I. The furnishings shall be new or used equipment satisfactory to the Engineer:

4. Refer to Page 368, TABLE 6.40-I, ADDITIONAL REQUIREMENTS SPECIFIC REQUIREMENTS;
 Delete the requirements for a Photocopy Machine shown in the 15th row of TABLE 6.40-I, in its entirety;
 Substitute the following revised requirements:

Photocopying Machine – Stand-alone, heavy duty, electric, dry-process color photocopying type with a minimum production rate of 70 pages per minute and an adequate supply of copy paper, toner, etc. The machine shall be capable of duplex copying paper sizes of 8-1/2 x 11 inches, 8-1/2 x 14 inches and 11 x 17 inches, and have separate trays for each paper size. It shall have a document feeder, collator, stapler, and the capability to reduce/enlarge copies between each paper size. The supply of each size copy paper, toner, etc. shall be replenished and the machines shall be maintained for the duration of the contract by the Contractor as required by the Engineer. Make and model can be Minolta, Canon, IBM, Epson, or an approved equivalent, and shall be networked to the office computers.	1	1	1	1	1	1
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5. Refer to Page 368, TABLE 6.40-I, ADDITIONAL REQUIREMENTS SPECIFIC REQUIREMENTS;
 Insert the following two additional requirements:

Heavy duty commercial grade diamond cut shredder with automatic start. The shredder shall be able to receive 8-1/2 inch wide paper and shred a minimum of 15 sheets simultaneously along with CDs and staples.	1	1	1	1	1	1
Projector – 1080p LCD with a min. of 2200 ANSI Lumens, 1920 x 1080, 16:9, 40,000:1 contrast ratio, HDMI, VGA, USB, and a 10 feet diagonal, 16:9 Projection Screen.	-	-	1	1	1	1

6. Refer to Page 496, Subsection **7.20.4. METHODS**, last paragraph beginning with the words "When directed by the Engineer, due to the original conditions . . .";
Add the following sentence to the end of the last paragraph under **Subsection 7.20.4:**

"However, if the owner at his own expense supplies the replacement frame and doors or hatch covers the Contractor shall install the replacement frame and doors or hatch covers under this Item 7.20, as a basement access reset, in lieu of the steel safety closure plate."

[Added 07-16-2012]

7. Refer to Page 365, **Subsection 6.40.2.(C)(c)(1) "Personal Computer(s) - Workstation Configuration"**;
Delete the text under **Subsections (g) and (k)**, in their entirety;
Substitute the following revised text:

"(g) I/O Ports: Must have at least one (1) Serial Port, one (1) Parallel Port, and three (3) USB Ports.

(k) Network Interface: Integrated 10/100/1000 Ethernet card."

8. Refer to Page 366, **Subsection 6.40.2.(C)(c)(2) "All field offices requiring computers shall be provided with the following:"**;
Delete the text under **Subsection (a)**, in its entirety;
Substitute the following revised text:

"(a) One (1) broad-band internet service account. Wideband Internet connectivity at a minimum throughput of 15 Mbps download and 5 Mbps upload is required at each field office location with 1-5 staffers. For larger field offices see table below for minimum required upload speeds. Telephone service should be bundled together with Internet connectivity. Because of throughput requirements Verizon FIOS is the preferred connectivity provider where available.

Office Personnel #	Upload Speeds (Minimum)
1 - 5	5 Mbps
6 - 10	10 Mbps
11 - 15	15 Mbps
16 - 20 ...	20 Mbps

This account will be active for the life of the project. The e-mail name for the account shall be the DDC Field Office/project Id (e.g. FLD K HWK666 McGuinness@earthlink.com)."

[Added 08-09-2012]

9. Refer to Page 366, **Subsection 6.40.2.(C)(c)(2)(b)**, as amended by Article 2 on page A1-2 of this Addendum;
Delete the text under **Subsection (b)**, in its entirety;
Substitute the following words: "**(b) (No Text).**"

10. Refer to Page 368, TABLE 6.40-I, ADDITIONAL REQUIREMENTS SPECIFIC REQUIREMENTS;
Delete the requirements for a Photocopy Machine shown in the 15th row of TABLE 6.40-I, as modified by Article 4 on page A1-2a of this Addendum, in its entirety;
Substitute the following revised requirements:

Photocopying Machine – Stand-alone, heavy duty, electric, dry-process color photocopying type with color scan and send capability via e-mail, a minimum production rate of 70 pages per minute and an adequate supply of copy paper, toner, etc. The machine shall be capable of duplex copying paper sizes of 8-1/2 x 11 inches, 8-1/2 x 14 inches and 11 x 17 inches, and have separate trays for each paper size. It shall have a document feeder, collator, stapler, and the capability to reduce/enlarge copies between each paper size. The supply of each size copy paper, toner, etc. shall be replenished and the machines shall be maintained for the duration of the contract by the Contractor as required by the Engineer. Make and model can be Minolta, Canon, IBM, Epson, or an approved equivalent, and shall be networked to the office computers.	1	1	1	1	1	1
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[Added 11-26-2012]

11. Refer to Pages 504 through 508, **SECTION 7.88 – Rodent and Waterbug Pest Control**;
Delete **Section 7.88**, in its entirety;
Substitute SECTION 7.88 (Revised), as contained on the following pages A1-2d through A1-2i.

SECTION 7.88 (Revised)
Rodent and Waterbug Pest Control

7.88.1. DESCRIPTION. The Contractor shall provide all labor, materials, plant and equipment, and incidentals required to survey and monitor rodent activity and control any infestation or outbreak of rodents and waterbugs (American cockroaches) within the project limit.

7.88.2. MATERIALS. All materials shall be approved by the New York State Department of Environmental Conservation and comply with the New York City Health Code for the intended usage.

Rodenticide weatherproof bait blocks shall be multiple dose anticoagulants such as Chlorophacinone or Dephacinone, or single feed rodenticides such as ContraMeal, ContracBait block, Quintox pellets or TalonG pellets, or an approved equivalent.

Tamper proof bait station boxes shall be designed to exclude other mammals and shall be used with poisoned bait to attract rats. Information on "tamper proof bait station boxes" is available from the NYC Bureau of Regulatory & Environmental Health Services, Pest Control Office (718-956-7103/4).

Live traps shall be of proper dimensions for trapping rats and shall not be used with poisoned bait.

Insecticide bait shall be a residual type such as phenol methyl carbamate (2%) bait or an approved equivalent.

(A) SUBMITTALS

Prior to commencement of construction activities the Contractor shall submit to the Engineer manufacturer's installation instructions for all materials required for rodent and waterbug pest control work and product data which shall include illustrations, catalog data, product characteristics, typical use, performance, and limitation criteria of all rodent and waterbug pest control materials required.

7.88.3. PERSONNEL. The Contractor shall employ two independent licensed exterminators: one to engage in survey and monitoring work to establish the level of infestation of rodents and insects and provide recommendations for specific Integrated Pest Management (IPM) actions, and one to execute the rodent and waterbug pest control work to deal with such infestations. All pest control personnel employed by each exterminator company must be supervised by an exterminator licensed in categories 7A & 8. The Contractor shall submit the names and license credentials of the two exterminator companies to the Engineer for approval prior to the commencement of any work under this section.

7.88.4. METHODS. Application and dosage of all materials shall be done in strict compliance with the manufacturer's recommendations. All surveying, monitoring, baiting, and/or live trapping work shall be performed in the presence of the Engineer, without which no payment will be made under this Section.

(A) GENERAL

The Contractor's construction activity is expected to disturb any established rodent and/or waterbug population that may exist within the project limits, possibly causing their dispersion. The Contractor shall take all appropriate action to eliminate and/or control these populations within the construction corridor: the construction corridor shall be defined as being the full width of streets under the contract and intersecting streets up to the limits of construction, from property line to property line, excluding buildings and under sidewalk building vaults.

Under the Maintenance of Site requirements for the contract, any unsanitary conditions, such as uncollected garbage or debris, resulting from the Contractor's activities which will provide food and shelter to the resident rodent population shall be corrected by the Contractor immediately after notification of such condition by the Engineer. Non-compliance shall be subject to the application of the "Nonconformance" provisions of the Item for Maintenance of Site, and no payment will be made for any additional application of rodenticide or insecticide needed to control resultant infestations.

(B) SURVEY AND MONITORING WORK

(1) Prior to Construction - The Contractor's designated survey and monitoring exterminator shall execute a survey of the project area and estimate the level of rodent (Norway rat, House mouse) infestation and the waterbug population within the construction corridor. An appropriate sample of utility manholes (sewer, electrical, telephone, etc.) and catch basins should be opened and surveyed to the satisfaction of the Engineer. Contractor shall maintain all survey records in the manner described in 7.88.6., Records and Reports.

(2) During Construction - The Contractor shall monitor the rodent activity through trapping (snap, glue traps or live traps), fecal count methods, and inspection of the conditions of all installed baits every week during construction activity or as otherwise directed by the Engineer. Contractor shall maintain all monitoring records in the manner described in 7.88.6., Records and Reports.

(C) RODENT CONTROL WORK

(1) Wetlands, Woodlands and Areas Within Seventy-five (75') feet of a Stream. In wetlands, woodlands and areas adjacent to a stream, special precautions must be taken to protect water quality and to ensure the safety of other wildlife. To prevent poisoned bait from entering streams, no poisoned bait shall be used in areas within seventy-five (75') feet of either streambank. Live traps must be used in these seventy-five (75') feet buffer zone areas and within wetland and woodland areas.

(2) Outside Wetland Areas, Woodland Areas and Beyond Seventy-five (75') feet of a Stream. In areas outside the seventy-five foot zone of protection adjacent to streams, and areas outside wetlands and woodlands, tamper proof bait stations with poisoned bait shall be established during the period of construction and any consumed or decomposed bait shall be replenished as directed.

Rodent control shall be achieved in two stages as follows:

Stage I. At least one month prior to initiation of the construction work, and periodically thereafter, live traps and/or rodenticide bait, as directed above, shall be placed at locations [e.g., burrows, utility manholes (sewer, electrical, phone, etc.), and catch basins] that are inaccessible to pets, human beings, children and other non-target species, particularly wildlife (e.g., birds) in the construction corridor. Locations of initial bait placement and quantities of bait shall be determined by the survey and monitoring exterminator's written report of his survey and monitoring results, or as otherwise directed by the Engineer.

Stage II. During Construction - Infested sites as determined by the survey and monitoring exterminator's monitoring report shall be baited and/or rebaited, and live traps shall be collected and replaced, the rates and quantities of which shall be determined by the written monitoring reports submitted weekly or as otherwise directed by the Engineer in consultation with the City's Office of Pest Control.

The baiting exterminator shall be responsible for collecting and disposing of all trapped and poisoned rodents found in live traps and tamper proof bait stations. The baiting exterminator shall also be responsible for posting and maintaining signs announcing the baiting of each particular location.

The Contractor, under his maintenance of site operations, shall be responsible for the immediate collection and disposal of any visible rodent remains found on streets or sidewalk within the project limits. Any visible remains shall be placed into double plastic bags. No more than five (5) carcasses shall be placed into each bag. Each bag shall be a minimum of 3 mils thick, black plastic. No additional payment will be made for this work.

It is anticipated that public complaints will be addressed to the Engineer's Field Office. The Contractor, where directed by the Engineer, shall take appropriate Integrated Pest Management (IPM) actions, such as baiting, trapping, proofing, etc., to remedy the source of a complaint within the next six (6) hours of normal working time, which is defined herein, for the purposes of this section, as 7 A.M. to 6 P.M. on Mondays through Saturdays.

(D) WATERBUG (AMERICAN COCKROACH) CONTROL

Infested sites (e.g., sewers) shall be baited at least 2 times per month with insecticides, or as directed by the Engineer in consultation with the exterminator monitoring the work and the City's Office of Pest Control.

7.88.5. EDUCATION & TRAINING. The Contractor shall post notices in all Construction Bulletin Boards advising workers, employees, and residents to call the Engineer's Field Office to report rodent and waterbug infestations. The Contractor shall provide and distribute literature pertaining to IPM techniques of rodent control to affected businesses and superintendents of nearby residential buildings to ensure their participation in maintaining their establishments free of unsanitary conditions, harborage removal and rodent proofing.

Prior to application of any chemicals, the Contractor shall furnish copies or sample labels for each pesticide, antidote information, and Material Data Safety Sheets (MSDS) for each chemical used.

7.88.6. RECORDS AND REPORTS.

(A) GENERAL

The Contractor shall be responsible for assigning within the construction corridor an identifying number to each manhole, catch basin, and other location where bait and/or live trap placement and/or waterbug control work is proposed by the survey and monitoring exterminator. The Contractor shall then provide that list of locations and corresponding reference numbers along with a drawing showing the locations, as a reference for the exterminator(s) performing the work, to indicate locations of bait placement and waterbug control work and rodent and waterbug activity (droppings, bait consumed, dead rodents, etc.).

(B) SURVEY AND MONITORING WORK

(1) Prior to Construction – Contractor shall submit to the Engineer, for approval, a written survey report including proposed IPM procedures, including specific materials, quantities, locations, methods, and time schedule for the implementation of the exterminating work. The written report shall also include a survey with a drawing (provided by the Contractor) marked with locations indicating all signs of rodent (Norway rat, House mouse) infestation and waterbug activity discovered during the execution of the survey indicating that rodent and waterbug pest control work is necessary.

(2) During Construction - Based on monitoring results, Contractor shall submit to the Engineer a weekly written monitoring report identifying all locations and conditions of installed bait and/or other rodent control work. The monitoring report shall also include any other recommended IPM techniques, such as baiting, trapping, proofing, etc., proposed for rodent and waterbug pest control.

The survey and monitoring exterminator shall keep a record of all rodent and waterbug infestation surveys s/he has conducted. The Contractor shall be required to submit a copy of all survey and monitoring reports to the Engineer each week, prior to payment.

(C) RODENT AND WATERBUG CONTROL WORK

The baiting exterminator shall maintain records of all locations baited along with the type and quantity of rodenticide and insecticide bait used. These records will be kept by the City Inspector. A weekly report shall be prepared, signed and certified by the approved licensed exterminator, and such reports shall be submitted to the Engineer each week, prior to payment.

7.88.7. NONCONFORMANCE. If the Contractor fails to perform as directed to control the rodent and/or waterbug population at any location within the project limits for a period of more than one week, the Engineer will correct the adverse conditions by any means he deems appropriate, including but not limited to, the use of "outside services" and shall deduct the cost of the corrective work from any monies due to the Contractor. The deducted cost of this work shall be in addition to the non-payment for rodent and waterbug pest control.

7.88.8. MEASUREMENT.

(A) RODENT INFESTATION SURVEY AND MONITORING

The quantity to be measured for payment under Item No. 7.88 AA, RODENT INFESTATION SURVEY AND MONITORING, shall be a Lump Sum measurement.

(B) RODENT BAIT STATIONS

The quantity to be measured for payment under Item No. 7.88 AB, RODENT BAIT STATIONS, shall be the number of tamper-proof rodent bait station boxes and/or live traps satisfactorily installed or reinstalled after inspection within the construction corridor, as approved by the Engineer. However, the initial baiting, and subsequent rebaiting as may be required, of any bait station will be paid for under Item 7.88 AC.

(C) BAITING OF RODENT BAIT STATIONS

The quantity to be measured for payment under Item No. 7.88 AC, BAITING OF RODENT BAIT STATIONS, shall be the number of tamper-proof rodent bait station boxes, utility manholes, catch basins, or other locations approved by the Engineer, satisfactorily baited or rebaited to replenish consumed or decomposed bait within the construction corridor, as approved by the Engineer.

(D) WATERBUG BAIT APPLICATION

The quantity to be measured for payment under Item No. 7.88 AD, WATERBUG BAIT APPLICATIONS, shall be the number of blocks satisfactorily treated with insecticide bait within the construction corridor, as approved by the Engineer. A block shall be defined as the area of street, measured between property lines, from intersection to intersection. Each rebaiting of any block shall be considered as a new block for measurement purposes.

7.88.9. PRICES TO COVER.

(A) RODENT INFESTATION SURVEY AND MONITORING

Payment will be made at the lump sum price bid for RODENT INFESTATION SURVEY AND MONITORING which shall include the cost of furnishing all the labor, materials, plant, equipment (traps, etc.), insurance, and other incidentals required, including but not limited to providing all required maintenance of traffic equipment, to perform a rodent infestation survey of the project area and then monitor the site each week for rodent activity, all in accordance with the specifications and the directions of the Engineer.

Ten (10%) percent of the lump sum price bid will be paid when the initial survey of the project area has been completed and the written survey report has been submitted to the satisfaction of the Engineer. The remainder will be paid in proportion to the percentage of contract completion.

(B) RODENT BAIT STATIONS

The Contract price bid for RODENT BAIT STATIONS shall be a unit price per each tamper proof bait station box and/ or live trap installed or reinstalled after inspection and shall cover the cost of furnishing all labor, materials, plant, equipment (bait stations, etc.), insurance, and other incidentals, including but not limited to providing all required maintenance of traffic equipment, required to control the rodent population found within the project limits in accordance with the specifications and the directions of the Engineer.

In addition to the payment for Rodent Bait Stations installed or reinstalled under this Item 7.88 AB, the Contractor will also be paid for each baiting or rebaiting, when required, of each bait station, under Item No. 7.88 AC.

(C) BAITING OF RODENT BAIT STATIONS

The Contract price bid for BAITING OF RODENT BAIT STATIONS shall be a unit price per each bait station, utility manhole, catch basin or other location approved by the Engineer satisfactorily baited or rebaited, when required, and shall cover the cost of furnishing all labor, materials, plant, equipment (bait), insurance, and other incidentals, in accordance with the specifications and directions of the Engineer. Installation or resetting of the bait station will be paid for under Item 7.88 AB.

(D) WATERBUG BAIT APPLICATION

The Contract price bid for WATERBUG BAIT APPLICATION shall be a unit price per block treated by the exterminator and shall include the cost of furnishing all the labor, materials, plant, equipment (bait, etc.), insurance, and other incidentals, including but not limited to providing all required maintenance of traffic equipment, necessary to control the waterbug population found within the project limits for the duration of the contract in accordance with the specifications and the directions of the Engineer.

Payment will be made under:

Item No.	Item	Pay Unit
7.88 AA	RODENT INFESTATION SURVEY AND MONITORING	L.S.
7.88 AB	RODENT BAIT STATIONS	EACH
7.88 AC	BAITING OF RODENT BAIT STATIONS	EACH
7.88 AD	WATERBUG BAIT APPLICATION	BLOCK

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SECTION 4.05 AXP

High Early Strength Reinforced Concrete Pavement (Bus Stops) (Pigmented)

4.05AXP.1. INTENT. This section describes construction of Pigmented Concrete Pavement.

4.05AXP.2. DESCRIPTION.

(A) Concrete Pavement shall be of High Early Strength Reinforced type.

Pavement shall consist of a pigmented concrete surface course laid on a concrete base course while the base course is still plastic, of the thickness shown on the Contract Drawings, with reinforcement placed between the surface and base courses.

(B) Concrete Pavement shall be of the type, thickness and finish specified, and shall be pigmented as specified.

4.05AXP.3. MATERIALS, EQUIPMENT AND METHODS. All materials and methods shall comply with the requirements of Item No. 4.05 AX, as appropriate, in Section 4.05 of the Standard Highway Specifications, with the following modifications and additions:

The concrete bus pads shall be pigmented with an admixture complying with the requirements of Section 2.19 of the Standard Highway Specifications.

The concrete shall be integrally pigmented to produce a Quarry Red color equivalent to: Federal Standard 595 Color FS 30233, Davis Colors, Brick Red No.160; LM Scofield Quarry Red No. C-22, or an approved equivalent, unless otherwise specified.

Prior to Commencement of Work, the Contractor shall submit the name of its proposed roadway installer upon which his bid is based, along with their respective work history experience in placing pigmented concrete. The installer shall have documented experience in working with pigmented concrete.

Prior to making any field samples and the placing of any pigmented concrete, the Contractor, its concrete supplier, installer, cement producer, laboratory, the pigmented admixture's representative, and the Engineer shall meet and agree on the specifications and methods of handling the pigmented concrete.

All pigmented concrete at different locations shall be identical, unless otherwise directed. Variations in color/tint/hue will not be acceptable. Therefore, the same brand and type of cement and the same source and type of aggregate shall be used throughout the project.

Prior to the mix design being made, the cement intended for use shall be checked to determine that its lightness/darkness is similar to the cement used in the original approved sample. The Pigmented Admixture shall be added in the standard proportion specified by the manufacturer. No fly ash or other admixtures (including, but not limited to, calcium chloride) shall be used except an air-entraining agent complying with ASTM Designation C 260, when directed by the Engineer.

Prior to commencing the placement of concrete, but after acceptance and approval of the pre-construction field sample, the Contractor shall submit properly labeled and identified samples of materials.

These samples shall be stored where directed by the Engineer and shall constitute material standards for the project. During construction, one (1) pint of cement from each load of cement delivered to the plant to be used in this specific job shall be retained and, after comparison with retained master sample, dated and stored with other retained samples. Aggregate source shall also be checked periodically, as directed by the Engineer, and compared with retained samples.

4.05AXP.4. TRAFFIC. No traffic of any kind will be allowed on the new concrete pavement until the concrete has been cured as specified, and until permitted by the Engineer.

4.05AXP.5. DEFECTIVE PAVEMENTS. Such portions of the completed pavement as are defective in finish, compression, composition, or that does not comply with the requirements of these specifications, shall be taken up, removed and replaced with suitable materials, properly laid in accordance with these specifications.

4.05AXP.6. MEASUREMENT. The quantity to be measured for payment shall be the number of cubic yards of Concrete Pavement constructed, measured in place, adjusted for thickness and strength deficiencies in accordance with Section 5.04 of the Standard Highway Specifications.

In determining the quantity of pavement to be paid for, the areas occupied by bases of columns, manhole heads, gate boxes, road boxes, and similar structures will be deducted when they measure more than one (1) square foot and will not be deducted when they measure one (1) square foot or less.

4.05AXP.7. PRICE TO COVER. The contract prices bid per cubic yard of concrete pavement shall cover the cost of all labor, materials, pigments, equipment, insurance, and incidentals required to furnish and lay the pavement complete in place in full compliance with the requirements of the specifications, including, but not limited to: furnishing and installing steel reinforcement, dowel bars and all other steel bars required; preparation and submission of shop drawings and concrete mix design criteria; supports, forms, joint filler and joint sealer; curing; repairs to and replacement of damaged and defective pavement; saw cutting joints; damping of the subgrade; snow fencing; etc.; to furnish such samples and cores for testing and to maintain the pavement in good condition as specified in Section 5.05 of the Standard Highway Specifications; and completing the work in accordance with the Contract Drawings, the specifications and the directions of the Engineer.

Payment will be made under:

Item No.	Item	Pay Unit
4.05 AXP	HIGH EARLY STRENGTH REINFORCED CONCRETE PAVEMENT (BUS STOPS) (PIGMENTED)	C.Y.

SECTION 4.13 DSBS**Embedded Precast Concrete Detectable Warning Pavers for SBS Stations**

4.13DSBS.1. DESCRIPTION. This work shall consist of furnishing and installing embedded precast concrete detectable warning pavers along the edge of SBS station platforms as indicated on the plans or elsewhere in the contract documents. The SBS platforms within two (2') feet of the curb shall be finished with a detectable warning pavers as specified herein.

4.13DSBS.2. MANUFACTURERS.

Precast Concrete Detectable Warning Pavers furnished by the following manufacturers are acceptable for use in this contract provided they are the same manufacturer selected for the non-interlocking concrete pavers furnished under Section 6.47 RCP:

- A. Wausau Tile, Inc., PO Box 1520, Wausau, WI 54402-1520, (800) 388-8728
- B. Hanover Architectural Products, 5000 Hanover Rd, Hanover, PA 17331, (800) 426-4242
- C. Unilock, 301 East Sullivan Road, Aurora, IL 60505, (800) 864-5625
- D. or approved equivalent.

4.13DSBS.3. MATERIALS.

A. **GENERAL REQUIREMENTS:** The Contractor shall supply the Manufacturer's certification that the detectable warning surface material meets the requirements of these specifications, at least 30 calendar days prior to proposed installation. The detectable warning surface material shall:

- Be precast concrete pavers, conforming to the requirements of ASTM C936 and ASTM C67.
- Be 12"x12"x2.75" deep, nominal dimensions for straight runs of detectable warnings.
- Be ADA compliant precast concrete pavers matching "ADA-2 U3008" pavers as manufactured by Wausau Tile, Inc., or approved equal. The color shall be "Black" matching the "ADA-2 U3008" or Federal Standard Color #37056, unless otherwise specified.
- Shall comply with the Americans with Disabilities Act Accessibility Guidelines (ADAAG) Specifications.
- Be uniform in color and texture.
- Have a good appearance, free of cracks or other defects.
- Have clean-cut and well-defined edges.
- Where applicable, the units shall adhere to Hot Mix Asphalt (HMA) or Portland cement concrete (PCC) surfaces at a minimum air temperature of 60°F (16°C), and a minimum substrate temperature of 70°F (21°C).
- Be weather resistant and durable to normal pedestrian wear and maintenance activities.
- Show no appreciable fading, lifting, or shrinkage.
- Have friction characteristics similar to a broomed Portland cement concrete sidewalk surface as determined by the Engineer.

Setting bed material and/or surface preparation materials for installation of detectable warning pavers shall be in accordance with the manufacturer's recommendations.

B. PHYSICAL PROPERTIES:

<u>PROPERTY</u>	<u>REQUIREMENTS</u>
Compressive Strength, Min., 28 days	8 ksi (55 Mpa) Minimum
Freeze-thaw Loss (25 Cycles, one per day, 10% NaCl solution)	1.0% Maximum
Absorption Rate	5.0% Maximum

C. PACKAGING AND SHIPMENT: Embedded detectable warning units shall be shipped in accordance with commercially accepted standards. The following information shall be marked on each package or on the shipping invoice: the name of the product, the name and address of the manufacturer, and the quantity of material.

D. BASIS OF MATERIALS ACCEPTANCE: Acceptance of materials shall be based upon it meeting the criteria listed here in these specifications and being listed in the most current New York State Department of Transportation's Approved List of Embedded Detectable Warning Units.

4.13 DSBS.4. CONSTRUCTION DETAILS. Precast concrete, embedded detectable warning pavers shall be installed in accordance with the manufacturer's specifications and recommendations.

The Contractor shall be required to follow all applicable manufacturer's requirements for environmental conditions, surface preparations, installation procedures, curing procedures, and materials compatibility.

Precast concrete detectable warning pavers (excluding their raised truncated domes) shall be set flush with a top surface elevation tolerance of 1/16" between adjacent units but not more than ±1/32" at perimeters between pavers and adjacent curb or sidewalk surfaces.

4.13 DSBS.5. MEASUREMENT. The quantity of Embedded Precast Concrete Detectable Warning Pavers to be measured for payment shall be the number of square feet, measured to the nearest tenth (0.1) of a square foot, installed to the satisfaction of the Engineer.

4.13 DSBS.6. PRICE TO COVER. The unit price bid per square foot shall include all labor, material, equipment, insurance, and incidentals necessary to complete the work, including but not limited to bedding material, job site sample(s), repairs, and clean up.

Payment for this item, Embedded Precast Concrete Detectable Warning Pavers, shall be in addition to payment for the concrete sidewalk or platform pavement item on which the preformed detectable warning unit is installed.

In addition no adjustment in payment shall be made for concrete removed to accommodate embedded units.

Payment will be made under:

Item No.	Item	Pay Unit
4.13 DSBS	EMBEDDED PRECAST CONCRETE DETECTABLE WARNING PAVERS FOR SBS STATIONS	S.F.

**SECTION 4.18 RB
ROOT BARRIER FABRIC**

4.18RB.1. WORK: Under this section, the Contractor shall furnish and install root barrier fabric in the manner shown on the plans and details. The purpose of the root barrier fabric is to provide a permeable layer which allows water but not soil particles to pass through, and that inhibits growth of roots through the barrier.

4.18RB.2. MATERIALS: The root barrier shall be a permeable, heavy-duty, non-woven geotextile with integral, non-toxic root-inhibiting agent, as "Tex-R® Barrier" manufactured by Texel Inc., St-Elezeur-de-Beauce, PQ, Canada, (800) 463-8929, www.texel.qc.ca; Biobarrier, as supplied by Reemay, Inc., Old Hickory, TN, (800) 284-2780, www.biobarrier.com; Root Shield as supplied by American Wick Drain Corporation, Monroe NC, (800) 242-9425, www.americanwick.com; or an approved equivalent.

Adhesive shall be a heavy-duty, construction-grade, weather-resistant, rubber-based adhesive, such as Liquid Nails for Outdoor Carpet and Turf (AW-40) or approved equal.

4.18RB.3. SUBMITTALS: Provide product data, including catalog cuts and installation instructions for both root barrier fabric and adhesive, and minimum 4"x 4" sample of root barrier fabric material, for approval by the landscape architect.

4.18RB.4. METHODS: Root barrier fabric shall be placed as shown on the Construct Drawings and in accordance with the manufacturer's directions. Fabric shall overlap a minimum of four inches (4"), and shall be secured by a liquid adhesive as specified above. Adhesion shall occur in a continuous line with no gaps in between. Installation shall be supervised by the Resident Engineer.

4.18RB.5. MEASUREMENT: The quantity of Root Barrier Fabric to be measured for payment shall be the number of square yards actually installed in place, computed between the limits shown on the plans or within the limits established in writing by the Engineer prior to performing the work. No quantity will be included for material used for repair of tears or for material used at the overlaps.

4.18RB.6. PRICE TO COVER: The contract unit price bid per square yard for this item shall include the cost of furnishing all labor, materials, plant, equipment, and incidentals necessary to complete the work including the cost of preparing the surface upon which the Root Barrier Fabric is placed, all in accordance with the plans, the specifications and the directions of the Engineer.

Payment will be made under:

Item No.	Item	Pay Unit
4.18 RB	ROOT BARRIER FABRIC	S.Y.

**SECTION 6.02 P
PNEUMATIC EXCAVATION AROUND TREES**

6.02P.1. DESCRIPTION.

Under this Section, the Contractor shall be required to perform pneumatic excavation work at locations where trees exist within the work area and are required to remain. This work requires the Contractor to protect tree roots during excavation and implement, as needed, a temporary excavation support system. Work covered under this section shall be performed at the locations indicated on the Plans, in accordance with the contract documents, and as directed by the Engineer, in consultation with the Tree Consultant (Item 4.21).

6.02P.2. CONSTRUCTION DETAILS.

The work shall be performed where shown on the Plans and as directed by the Engineer. Prior to any pneumatic excavation work, the following shall be performed:

(A) WORK SITE SAFETY

In addition to the Department of Design and Construction's Safety Requirements policy and responsibilities, the pneumatic excavation shall be performed in accordance with the manufacturer's operating instructions. The Contractor shall be responsible to provide adequate equipment and perform pneumatic excavation techniques properly to preclude movement of any air-borne soils onto adjacent roadways or other areas beyond the designated work zone limits. Failure to contain and/or collect the excavated soil will result in the immediate termination of pneumatic excavation until soil containment and/or collection procedures are determined adequate by the Engineer. The Contractor shall keep the public at a safe distance from the work zone at all times by means approved by the Engineer.

(B) OPERATOR QUALIFICATIONS

The Contractor or Subcontractor performing this excavation work shall have at least one year of documented experience operating the pneumatic excavation tool.

(C) TREE CONSULTANT

Unless otherwise directed by the Engineer, all pneumatic excavation work shall be performed under the direction of the Engineer, in consultation with the Tree Consultant (Item 4.21).

(D) PRE-PNEUMATIC EXCAVATION MEETING

Prior to the start of such excavation, the Contractor and its approved Operator for pneumatic excavation shall attend a meeting arranged by the Engineer, with the Tree Consultant (Item 4.21) and other parties as appropriate, to review the requirements of this item including the schedule of operations, the mandatory presence of the Tree Consultant, safety measures, reporting, etc. The Contractor is required to submit a schedule of his anticipated pneumatic excavations at this meeting.

(E) SUBMITTAL OF SHOP DRAWINGS

Where required, the Contractor shall submit design shop drawings for any temporary excavation support system to be used during the pneumatic excavation work. The shop

drawings shall be prepared, signed, and sealed by a Professional Engineer currently licensed in the State of New York. The shop drawings shall be submitted to the Engineer at least two (2) weeks before commencement of excavation. Excavation work may not commence until the shop drawings are approved by the Engineer.

6.02P.3. RESPONSIBILITIES OF THE CONTRACTOR.

Prior to bidding, the Contractor shall examine the site and available information, and formulate methods of construction that will not result in any damage to existing trees during excavation. In any event, the Contractor will be held liable for irreparable and/or irreversible damage to any trees harmed due to the Contractor's methods and shall replace those trees as directed by the Department of Parks and Recreation, at no additional cost to the City.

6.02P.4. MATERIALS.

Materials shall meet the following requirements, as modified by any supplemental landscape specifications or special notes included in the contract documents. Where indicated, reference shall be to the latest revision/edition of Standard Specifications of the New York State Department of Transportation (NYSDOTSS):

(1) PNEUMATIC EXCAVATING TOOL. Excavation shall be performed through the use of a pneumatic excavation tool with the following requirements:

(a) The high air velocity excavation tool shall be specifically designed to fracture, pulverize, and displace porous and semi-porous soils without harming or causing damage to tree roots, existing subsurface utilities or other non-porous objects.

(b) The Contractor shall submit catalog cuts from the manufacturer verifying that the Pneumatic excavation tool meets the following criteria:

Rated Operating Pressure: 6.2 – 7.0 bar

Air Stream Velocity at Cutting Head: 2,200 – 2,500 km/hr

Air Displacement: 4,000 – 5,000 L/min

(2) AIR COMPRESSOR. The air compressor may be either a portable or truck-mounted unit and shall be adequately sized as required to power the pneumatic excavation tool in accordance with the manufacturer's recommendations for the pneumatic excavating tool.

(3) VACUUM TRUCK. A vacuum truck should be used to collect excavated spoil directly from the trench or pit.

(4) CONTAINMENT STRUCTURE. To prevent the spread of excavated soil onto adjacent roadways and areas beyond the designated work zone limits, the Contractor shall provide a mobile structure or barrier to contain the material dislodged by the pneumatic excavation tool from the trench or pit. Timber or corrugated metal shields, tents supported on tubular frames or other structures as approved by the Engineer may be used.

(5) ROOT PROTECTION. The following are required for root protection:

<u>Item</u>	<u>New York State Department of Transportation Standard Specifications, Articles</u>
Quilted Covers	711-02
Burlap	711-06

6.02P.5. EXCAVATION PROCEDURES.

(A) DUST CONTROL

The work area shall be watered thoroughly at least twenty-four (24) hours in advance of, but no more than forty-eight (48) hours, prior to the start of any pneumatic excavation in order to reduce the incidence of airborne dust resulting from the pneumatic excavation operation.

(B) EXCAVATION – GENERAL

All excavation using the pneumatic excavation tool shall be performed in accordance with the manufacturer's recommendations in order to remove soil without causing damage to the roots of trees, buried structures, and/or utilities either in or adjacent to the excavation. The Contractor shall excavate within limits designated for pneumatic excavation shown on the Contract Plans or as directed by the Engineer, in consultation with the Tree Consultant (Item 4.21), using the pneumatic excavating tool. When working near utilities, the Contractor shall be responsible to locate underground facilities as required under 16 NYCRR Part 753 and Section 1.06.28 of the NYCDOT Standard Highway Specifications.

(C) EXCAVATION – TEMPORARY EXCAVATION SUPPORT SYSTEM

Approved sheeting and bracing shall be used where necessary to support the sides of the excavation, in order to: prevent damage to subsurface structures and adjacent buildings; safeguard persons and property; minimize inconvenience to traffic and the public; protect the structure to be installed; support the adjacent tree(s); and, provide suitable and safe working conditions. Except as otherwise provided, deviations from the above will be permitted only where, in the judgment of the Engineer, such exception will not result in any of the hazards described above.

In cases where sheeting and bracing will not adequately protect adjacent structures from damage and settlement, the Contractor will be required to use such measures as are necessary to safely support and maintain adjacent and abutting property and structures, support the tree without causing damage to the tree, and to maintain the work safe to life, limb, and property.

All sheeting and bracing systems that the Contractor elects to use or that are ordered to use by the Engineer shall comply with the requirements of **Section 4.05, "SHEETING AND BRACING,"** of the NYC Department of Environmental Protection, Bureau of Water and Sewer Operations, Standard Sewer Specifications, and must receive the approvals stated therein.

Unless otherwise specified in the Contract Drawings or these Specifications or specifically permitted in writing by the Engineer, the Contractor shall be required to withdraw and remove all sheeting and bracing simultaneously with the backfilling of the excavation.

(D) ROOT PROTECTION

The Contractor shall place wet burlap or cotton mats upon both the fibrous and structural roots immediately after they have been exposed by the pneumatic excavating tool. The burlap or cotton covering may be removed to perform inspection or construction operations, but the Contractor shall be required to keep the burlap or cotton towels wet and the roots moist until backfilling is complete.

The Engineer shall be immediately informed of any damaged tree roots. No tree roots may be pruned except as specifically authorized by the Tree Consultant (Item 4.21). In case the concentration of roots obstructs the placement of utilities, footings or other structures, limited pruning may be necessary as directed by the Tree Consultant (Item 4.21). Tree roots in excess of one (1) inch in diameter, measured at the edge of the excavation, shall be cut cleanly at the edge of excavation using a sharp cutting tool. All root pruning shall be performed under the direction of the Tree Consultant (Item 4.21).

(E) TREE CONDITION REPORT

The Contractor shall supply the Tree Consultant (Item 4.21) with information as needed for the Tree Consultant to prepare periodic reports to the Engineer summarizing the number, type, and condition of trees adjacent to each area of pneumatic excavation. These reports shall also indicate the duration of open excavation and identify any root damage and mitigation actions taken.

6.02P.6. MEASUREMENT.

The quantity to be measured for payment hereunder shall be the number of cubic yards of soil and fill material removed by pneumatic excavation, completed, as described herein and to the satisfaction of the Engineer. The volume to be obtained by vehicle measurement.

In determining the vehicle measurement, only water level loads that have been raked by the Contractor to a flat exposed surface will be accepted by the Engineer and no allowance will be made for any crown or peak of the load.

6.02P.7. PRICE TO COVER.

The contract price for "PNEUMATIC EXCAVATION AROUND TREES" shall be the unit price bid per cubic yard of material excavated as described herein, at the locations and to the limits indicated on the Plans or directed by the Engineer, in consultation with the Tree Consultant (Item 4.21). The unit price bid shall include the cost of all labor, materials, plant, equipment, professional engineering design services, insurance, and all other work incidental thereto needed to perform the excavation work, all in accordance with the Plans, the specifications and the directions of the Engineer. Disposal of excess and unsuitable (excluding contaminated) materials shall also be deemed included in the unit price bid for Item 6.02 PA "PNEUMATIC EXCAVATION AROUND TREES."

No separate payment will be made for replacement trees required by NYCDPR that the Contractor shall acquire and plant as a result of damage to trees caused by the Contractor's excavation methods.

Payment will be made under:

Item No.	Item	Pay Unit
6.02 PA	PNEUMATIC EXCAVATION AROUND TREES	C.Y.

SECTION 6.27 D
DEMOLITION, REMOVAL AND DISPOSAL OF STRUCTURES

6.27D.1. DESCRIPTION. In addition to furnishing all necessary labor, materials, plant, equipment, insurance, and necessary incidentals required, the work shall include the demolition, removal and disposal, away from the site, of planters, concrete barriers, bicycle racks, and benches from locations within the project limits but outside the security work area as indicated on the Contract Drawings.

The Contractor is advised that the removal and disposal of similar materials from within the security work area, as indicated on the Contract Drawings, will be done under other contract items.

6.27D.2. METHODS. All work shall be done in accordance with the applicable requirement of the Section 6.27 - Demolition of Structures, of the Standard Highway Specifications, and as amended below.

Any holes resulting from the demolition and removal work under this section shall be backfilled and cleaned up, in compliance with subsections 6.27.4(E) and (F), such that no trip hazard remains. No additional payment will be made for this work.

- (A) **PLANTERS.** Planters marked for removal under Item No. 6.27 DP, shall be removed and disposed of away from the site along with all appurtenances, as directed by the Engineer.
- (B) **CONCRETE BARRIERS.** Concrete Barriers marked for removal under Item No. 6.27 DB, shall be separated from their anchor bolts, if any, before removal. The concrete barriers shall then be removed and disposed of away from the site along with all appurtenances, as directed by the Engineer. Any remaining anchor bolts shall either be cut flush with the existing pavement or completely removed and any holes left by the removal operation shall be backfilled at no additional cost to the City.
- (C) **BICYCLE RACKS.** Bicycle Racks marked for removal under Item No. 6.27 DBI, shall first be separated from their anchor bolts. The bicycle racks shall then be removed and disposed of away from the site. Any remaining anchor bolts shall either be cut flush with the existing pavement or completely removed and any holes left by the removal operation shall be backfilled at no additional cost to the City.
- (D) **BENCHES.** Benches marked for removal under Item No. 6.27 DBH, shall be first separated their anchor bolts. The benches shall then be removed and disposed of away from the site and then the bench foundations shall be excavated and disposed of as directed by the Engineer. All excavations shall be backfilled to the satisfaction of the Engineer, at no additional cost to the City.

6.27D.3. MEASUREMENT. The quantities to be measured for payment under each item shall be the number of PLANTERS, CONCRETE BARRIERS, BICYCLE RACKS, and BENCHES actually removed from the site, to the satisfaction of the Engineer.

6.27D.4. PRICES TO COVER. The unit prices bid for each Planter, Concrete Barrier, Bicycle Rack and Bench removed from the site shall cover the cost of furnishing all labor, materials, plant, equipment, insurance, and necessary incidentals required and to complete the work in accordance with the Contract Drawings, the specifications and the directions of the Engineer.

Payment will be made under:

Item No.	Item	Pay Unit
6.27 DP	DEMOLITION, REMOVAL AND DISPOSAL OF PLANTERS	EACH
6.27 DB	DEMOLITION, REMOVAL AND DISPOSAL OF CONCRETE BARRIERS	EACH
6.27 DBI	DEMOLITION, REMOVAL AND DISPOSAL OF BICYCLE RACK	EACH
6.27 DBH	DEMOLITION, REMOVAL AND DISPOSAL OF BENCHES	EACH

**SECTION 6.34 A
TEMPORARY CHAIN LINK FENCE, 6'-0" HIGH**

6.34A.1. DESCRIPTION. Under this section, the Contractor shall furnish, erect, maintain, and remove, when directed, Temporary Chain Link Fence as shown on the Contract Drawings and directed by the Engineer.

6.34A.2. MATERIALS AND METHODS. All materials and methods shall be as specified in Section 6.34 of the Standard Highway Specifications, with the following modifications and additions:

Temporary Chain Link Fence to be furnished under Item 6.34 ACTP, shall consist of chain link fence fabric, top and bottom rails for mounting a decorative mesh (to be furnished under another item), gates, posts with steel plate footings, sand bags to hold fence in place, and all necessary incidental in accordance with the Contract Drawings and the directions of the Engineer.

When directed by the Engineer, the Contractor shall remove and dispose of the temporary chain link fence to the satisfaction of the Engineer. The Contractor shall then fill any holes left in the pavement with compacted clean sand to grade.

6.34A.3. MEASUREMENT. The quantities of Temporary Chain Link Fence to be measured for payment shall be the number of linear feet satisfactorily installed, complete, measured in place, from center to center of end posts.

6.34A.4. PRICE TO COVER. The price bid for Temporary Chain Link Fence shall be a unit price per linear foot and shall cover the cost of all labor, materials, plant, equipment, insurance, and necessary incidentals required to furnish, install, maintain, and remove temporary chain link fence; all in accordance with the Contract Drawings, the specifications and the directions of the Engineer. Temporary chain link fence shall also include, but not limited to, any gates as may be required.

Payment will be made under:

Item No.	Item	Pay Unit
6.34 ACTP	TEMPORARY CHAIN LINK FENCE, 6'-0" HIGH, (WITH TOP AND BOTTOM RAILS AND POSTS MOUNTED ON STEEL PLATES)	L.F.

**SECTION 6.47 RCP
NON-INTERLOCKING CONCRETE PAVERS**

6.47RCP.1. DESCRIPTION

This section shall describe the furnishing and installation of precast concrete pavers (non-interlocking) in accordance with the Contract Drawings, the specifications, and the Engineer.

The 7" concrete base for pavers shall be as per Section 4.04 of the NYCDOT Standard Highway Specifications, except that the concrete base shall be reinforced as shown on the Contract Drawings, and shall be paid for under Items 4.04 BP and 4.13 W.

6.47RCP.2. MATERIALS

6.47RCP.2.1. Submittals

Follow the procedures in the General Conditions of Section 1.06.31 of the NYCDOT Standard Highway Specifications. For the work in this section, the Contractor shall submit four sample pavers of each color and shape clearly identified by the manufacturer's name, date of production and contract number and these sample pavers shall represent the range of colors to be produced, the size, shape, intensity and surface texture of the pavers he/she plans to use in the work. Pavers with discoloration, cracks, honeycombs, and extreme surface irregularities shall not be considered acceptable as samples.

The Contractor shall hand deliver samples to Department of Design and Construction, Infrastructure Division, Bureau of Design at 30-30 Thomson Avenue, Long Island City, New York 11101, with transmittal letter and obtain a signed receipted acceptance of delivery. There will be no material delivery to job site without prior written approval from the Engineer; all material delivered to site without such approval shall be rejected. Contractor shall submit samples in sufficient time as to not delay progress of Construction.

6.47RCP.2.2. Ordering, Delivery, Storage and Handling

(A) Advance Ordering: Due to the quantity of pavers involved and the range of colors; Contractor shall place the order for pavers with the manufacturer at least six months in advance of the date that the pavers should be delivered to the site.

(B) Delivery, Storage and Handling shall be as recommended by the manufacturers.

6.47RCP.2.3. Approved Manufacturers

Pavers of the description below and matching the basis of design product shall be manufactured by one of the following manufacturers provided they are the same manufacturer selected for the embedded precast concrete detectable warning pavers furnished under Section 4.13 DSBS:

(A) Hanover Architectural Products 240 Bender Road Hanover, PA 17331; Tel. (717) 637-0500; Fax (717) 637-7145; Email: info@hanoverpavers.com; URL: <http://www.hanoverpavers.com>;

(B) Wasau Tile, Inc. P.O.Box. 1520, Wasau, WI 54402, Tel. (715)359-3121, wasautile.com;

(C) Unilock Products 35 Commerce Drive, Uxbridge, MA 01569 www.unilock.com
508-278-4536;

(D) or approved equivalent.

6.47RCP.2.4. Paver Composition and Materials

(A) Basis of Design Product: Hanover 'Architectural Prest Pavers' in Tudor finish, in colors and textures as indicated on the drawings.

(B) Product Description:

Pavers shall be made from Portland cement, fine and coarse aggregates, and shall be high density, hydraulically pressed concrete paving units, manufactured to +/- (1/16 in.) tolerances. The pavers shall be in two sizes, in the following nominal dimensions: 18in. x 36in. x 3in. thick and 12in. x 24in. x 3in. thick.

The four paver colors shall match the basis of design colors as indicated on the Contract Drawings and be approved by the Engineer, in consultation with the City's Architect, prior to installation. The pattern shall be as indicated on the Contract Drawings and be approved by the Engineer, in consultation with the City's Architect, prior to installation. Paver finish shall match the basis of design finish: gently exposed aggregate with non-slip surface (static coefficient of friction when wet: 0.60in.lb. per ASTM C 1028).

6.47RCP.2.5. Certification

Manufacturer shall certify that concrete pavers, when installed as detailed in the Contract Drawings and these specifications, shall support 600 psf without damage. In addition, pavers shall be certified by the manufacturer as resistant to oil spillage and diesel fuel.

6.47RCP.2.6. Technical Data

Meet or exceed ASTM C 936 specifications for concrete paving stones requiring a minimum compressive strength of 8,000 psi, maximum absorption of 5% or less at 50 cycles of freeze thaw testing per ASTM C 67.

6.47RCP.2.7. Bituminous Setting Bed

Asphalt cement to be used in the bituminous setting bed shall conform to ASTM Designation D 946 with a Penetration Grade of 85 - 100. The fine aggregate to be used in the bituminous setting bed shall be clean, hard sand with durable particles and free from adherent coatings, lumps of clay, alkali salts, and organic matter. It shall be uniformly graded from "coarse" to "fine" and all passing the No. 4 sieve and meet the gradation requirements when tested in accordance with the standard method of test for sieve or screen analysis of fine and coarse aggregates ASTM Designation C 136.

The dried fine aggregate shall be combined with hot asphalt cement, and the mix shall be heated to approximately 300°F at an asphalt plant. The approximate proportion of materials shall be seven and one-half (7-1/2%) percent cement asphalt, eighty-seven and one-quarter (87-1/4%) percent sand, and five and one-quarter (5-1/4%) percent mineral filler. Each ton shall be apportioned by weight in the approximate ratio of 150 lbs. asphalt to 1,745 lbs. sand and 105 lbs. mineral filler. The Contractor shall determine the exact proportions to

produce the best possible mixture for construction of the bituminous setting bed to meet construction requirements.

6.47RCP.2.8. Neoprene-Modified Asphalt Adhesive

Neoprene-Modified Asphalt Adhesive shall consist of two (2) percent neoprene (Grade WM 1) oxidized asphalt with 155 softening point (80 penetration).

6.47RCP.2.9. Sand

Sand shall be Type IA in accordance with Section 2.21 of the Standard Highway Specifications.

6.47 RCP.3. METHODS

6.47RCP.3.1. Placing Bituminous Setting Bed

The preparation for and installation of the bituminous setting bed for the pavers under this section shall comply with the applicable requirements of Subsections 6.47.3(A) in the Standard Highway Specifications.

6.47RCP.3.2. Installation of Pavers

When applied asphalt adhesive is dry to touch, carefully place the pavers by hand, ground finish side up unless otherwise specified, in straight courses, with hand tight joints and uniform top surfaces, keeping full alignment according to the pattern shown on the plans.

Joints between blocks, and blocks and adjacent finishes including steel angles, granite blocks and concrete structures, shall be hand tight. Maximum allowable width is one-eighth inch (1/8").

Pavers of the same color may vary slightly in shade and tone. Installer shall work from at least four (4) pallets at a time in order to create a uniform blend of paver shades. All blocks shall be cleaned when placed on the pavement. In no case shall the bituminous setting bed in front of the pavement be disturbed or walked on during the laying of the blocks.

Newly laid pavers must be protected at all times by panels of plywood on which the paver stands. These panels can be advanced as work progresses; however, the plywood protection must be kept in areas which will be subjected to the continued movement of material and equipment.

6.47RCP.3.3. Pattern

The layout of the pavers shall be subject to approval by the Engineer, in consultation with the City's Architect. Layout patterns and paver designs are as indicated on the plans. All edges, borders, and corners of the paved area shall be finished to true and neat lines. Special cutting, soldier courses, color patterns, various shapes, and variations in size and finish are all to be included in the unit price bid. Incorporate adequate edge restraints as recommended by the manufacturer and as directed by the Engineer. The Engineer, in consultation with the City's Architect, may adjust the percentages of pavers of each color within the pattern in order to achieve the proper contrasts anticipated in the design. Contractor shall include an addition 10% of each color to accommodate this adjustment.

6.47RCP.3.4. Mock-up

Contractor shall install a mock-up area 10 foot by 10 foot square of pavers in a location approved by the Engineer, in consultation with the City's Architect. The mockup must be as approved by the Engineer, in consultation with the City's Architect, prior to installation of the rest of the pavers.

6.47RCP.3.5. Joint Treatment

Upon the completion of the work of laying the blocks in each section to the satisfaction of the Engineer, the surface of the blocks shall be swept clean, and the joints filled with fine sand. All joints shall be filled the same day as the blocks are laid. Filler shall not be applied if the blocks are wet or if the air conditions are such that the fill does not readily enter the joints. Filler shall be well worked into the joints by means of squeegees or other approved devices operating slowly backward and forward. Squeegeeing shall continue until the joints are flush with top surface. Immediately after the joints are filled, the pavement shall be lightly sprayed and cleaned.

6.47RCP.3.6. Defects

Where defects in material or installation appear in the completed work, such areas shall be removed to the full depth of the course and the defective material replaced with new for the required thickness of pavement at the expense of the Contractor for such removing and replacing.

6.47RCP.4. MEASUREMENT

The quantity to be measured for payment shall be the number of square feet of Concrete Pavers actually installed to the satisfaction of the Engineer, measured in place. In determining the area of pavers or slabs to be paid for, the areas occupied by rail heads, bases of columns, manhole heads, gate boxes, road boxes and similar structures will be deducted when their superficial areas measure more than one (1) square foot and will not be deducted when they measure one (1) square foot or less.

6.47RCP.5. PRICE TO COVER

The contract price bid for Non-Interlocking Concrete Pavers shall be a unit price per SQUARE FOOT and shall cover the cost of all labor, materials, plant, equipment, insurance, and incidentals necessary to furnish, deliver and install concrete pavers in designated areas including, but not limited to, the cost of furnishing and installing the bituminous setting bed, neoprene-modified asphalt adhesive, and joint filler; all in accordance with the Contract Drawings, the specifications and the directions of the Engineer.

Payment for the concrete base for pavers and the reinforcement shall be made under Items 4.04 BP and 4.14 W, respectively.

Payment will be made under:

Item No.	Item	Pay Unit
6.47 RCP	NON-INTERLOCKING CONCRETE PAVERS	S.F.

SECTION 6.74 RCP STEEL PLANTER EDGING

6.74RCP.1. INTENT

This section describes the construction and installation of Steel Planter Edging.

6.74RCP.2. DESCRIPTION

Under this section, the Contractor shall fabricate and install steel angle edging for the grade-level planter as shown on the Contract Drawings, and in accordance with specifications and the directions of the Engineer.

6.74RCP.3. MATERIALS

- A) General: The materials for the steel angles and anchors at the edging for the grade-level planter under this section shall be stainless steel as noted below.
- B) Quality: Provide materials which have been selected for their surface flatness, smoothness and freedom from surface blemishes where exposed to view in the finished unit. Exposed to view surfaces which exhibit pitting, seam marks, roller marks, "oil-canning," stains, discolorations or other imperfections on the finished units will not be acceptable.
- C) Reference Standards: Comply with the following standards for the forms and types of stainless steel for the required items of work:
 - 1. Sheet, Strip, Flat Bar and Plate: ASTM A 666, Type 304.
 - 2. Castings: ASTM A 743A, Grade CF 8 or CF 20.
 - 3. Bars and Shapes: ASTM A 276, Type 304.
- D) Welding Electrodes and Filler Metal: Type and alloy of filler metal and electrodes as recommended by producer of the metal to be welded, and as required for color match, strength and compatibility in the fabricated items.
- E) Finishes: Remove or blend tool and die marks and stretch lines into finish. Grind and polish surfaces to produce uniform, directionally textured, polished finish indicated, free of cross scratches. Bead blasted finish with clean fine glass beads, producing an even, matte, non-reflective, non-directional surface finish.
- F) Expansion Anchor for Anchorage to Concrete: Steel stud type, sized as shown, stainless steel anchor body, nut and washer to conform to AISI type 304. Subject to compliance with requirements, products which may be incorporated in the work include, but are not limited to, the following:
 - 1) "Kwik Bolt III," Hilti Corp.
 - 2) "Rawl-Stud," Rawlplug Company
 - 3) "Red-Head Stud Anchor," ITW Ramset/Red-Head Co.

6.74RCP.4. METHODS

- A) Examine the areas and conditions where the edging is to be installed. Notify the Engineer of any conditions detrimental to the proper installation and subsequent use, and timely completion of the work. Do not proceed with the work until

unsatisfactory conditions are corrected to permit proper installation of the work. Verify in writing.

- B) Coordination: Coordinate the work of this Section to accommodate and fit work of other trades. Furnish or obtain, as applicable, templates and drawings to or from applicable trades for proper coordination of this work.
- C) Fabrication: Cut metal by sawing, shearing or blanking. Flame cutting will be permitted only if cut edges are ground back to clean, smooth edges. Make cuts accurate, clean, sharp, square and free of burrs, without deforming adjacent surfaces or metals.

Drill or cleanly punch holes (do not burn), so that holes will be accurate, clean, neat and sharp without deforming adjacent surfaces or metals.

Welding shall be in accordance with recommendations of the American Welding Society and shall be done with electrodes and/or methods recommended by the manufacturers of the metals being welded. Welds shall be continuous, except where spot welding is specifically permitted. Welds exposed to view shall be ground flush and dressed smooth with and to match finish of adjoining surfaces so that joint will not be visible; undercut metal edges where welds are required to be ground flush and dressed smooth. All welds on or behind surfaces which will be exposed to view shall be done so that finished surface will be free of imperfections such as pits, runs, splatter, cracks, warping, dimpling, depressions or other forms of distortion or discoloration. Remove weld splatter and welding oxides from all welded surfaces.

- D) Installation: Install work of this Section square, straight, true to line or radius, accurately fitted and located, with flush, tight hairline joints (except as otherwise indicated or to allow for thermal movement and removal), with provisions for other trades, with provisions to allow for thermal movement and with attachment devices as required for secure and rigid installation. It is the responsibility of the Contractor to assure that shop fabricated items will properly fit the field condition. In cases where the shop fabricated items do not fit the field condition, the item shall be returned to the shop for correction.
- E) Attachments and anchoring: All attachment and anchoring devices shall be of type, size and spacing to suit condition and as approved by Engineer, in consultation with the City's Architect. Do all necessary drilling, tapping, cutting or other preparations of surrounding construction in the field accurately, neatly and as necessary for the attachment and support of work of this Section, but obtain Engineer's approval prior to such preparation to work of others. All frames must be shimmed level and any voids grouted solid to ensure continuous surface contact between concrete and frame. Anchors shall be installed as per manufacturer's instructions.
- F) Adjustment: Where defects in material or installation appear in the completed work, such areas shall be removed and replaced at no cost to the City.
- G) Cleaning: Upon the completion of the work clean stainless steel by washing thoroughly with clean water and soap and rinsing with clean water. Do not use cleaning materials or methods that can damage finish.

- H) Protection : Protect finishes from damage during construction period with temporary protective coverings approved by fabricator. Remove protective covering at the time of Substantial Completion. Restore finishes damaged during construction period so no evidence remains of correction work. Return items that cannot be refinished in the field to the shop; make required alterations and refinish entire unit, or provide new units, at no additional cost to the City.

6.74RCP.5. MEASUREMENT
STEEL PLANTER EDGING

The quantities to be measured for payment shall be the total number of linear feet of steel edging actually installed to the satisfaction of the Engineer.

6.74RCP.6. PRICE TO COVER
STEEL PLANTER EDGING

The contract price bid per LINEAR FOOT of Steel Planter Edging shall include the cost of all labor, material, plant, equipment, insurance, and incidentals required to furnish and install Steel Planter Edging, all in accordance with the Contract Drawings, the Specifications and the directions of the Engineer.

Payment will be made under:

Item No.	Item	Pay Unit
6.74 RCP	STEEL PLANTER EDGING	L.F.

**SECTION 6.77 R-RCP
METAL TRASH RECEPTACLES**

6.77R-RCP.1. DESCRIPTION

Under this section the Contractor shall furnish and install the Decorative Metal Trash Receptacles in accordance with the Contract Drawings, the specifications, and the direction of the Engineer.

6.77R-RCP.2. MATERIALS

6.77R-RCP.2.1. Acceptable Manufacturers

Metal Trash Receptacles matching one of the approved products below shall be manufactured by one of the following:

- (A) Victor Stanley, Inc., Dunkirk, MD;
- (B) DuMor Inc., Mifflintown, PA;
- (C) Custom Fabrication, Inc., Harpursville, NY;
- (D) Keystone Ridge Designs, Butler, PA;
- (E) Or an approved equivalent.

6.77R-RCP.2.2. Materials and Finish

The Metal Trash Receptacle shall be of extra heavy duty steel construction with side door, vertical steel bar design, primed with zinc-rich epoxy or iron phosphate and finished with polyester powder coating. All welds shall be continuous and ground smooth before coating. The color shall be black.

6.77R-RCP.2.3. Liner

The liner shall be the standard supplied plastic or fiberglass basket. Liner shall allow for drainage.

6.77R-RCP.2.4. Acceptable Products

- (A) Victor Stanley, Inc.: Ironsites Series; Model No. SD-42; 36 gal capacity; 280 lbs.; 3/8" x 1" steel strap size; 28" top diameter, 19" bottom diameter; 41-3/4" tall.
- (B) DuMor Inc.: Model No. 157-32-25BT; 32 gal capacity; 288 lbs.; 1/4" x 1- 1/2" steel strap size; 31-1/8" top diameter, 26-13/16" bottom diameter; 40" tall.
- (C) Custom Fabrication, Inc.: Model No. CFTR-003-02; 36 gal capacity; 205 lbs.; 3/8" x 1" steel strap size; 28-1/2" top diameter; 24" bottom diameter; 36" tall.
- (D) Keystone Ridge Designs: Model No. MT3D-32; 32 gal capacity; 250 lbs.; 3/8" x 1" and 3/8" x 2" steel strap size; 31 5/8" top diameter; 25-1/2" bottom diameter; 37-1/2" tall.
- (E) or approved equivalent product by another manufacturer.

6.77R-RCP.3. METHODS

Contractor shall install trash receptacles as per manufacturer's instructions at the locations indicated on the Contract Drawings.

6.77R-RCP.4. MEASUREMENT

The quantity to be measured for payment under this item shall be the actual number of Metal Trash Receptacles that have been satisfactorily installed at the site.

6.77R-RCP.5. PRICE TO COVER

The contract price bid shall be a unit price per EACH Metal Trash Receptacle and shall include the cost of all labor, material, equipment, insurance, and incidentals required to furnish and install the Metal Trash Receptacle including, but not limited to, anchoring the receptacle to the pavement and providing and installing the liner, all in accordance with the Contract Drawings, the specifications and the directions of the Engineer.

Payment will be made under:

Item No.	Item	Pay Unit
6.77 R-RCP	METAL TRASH RECEPTACLES	EACH

SECTION 6.79 A
DUCTILE IRON PIPE CONNECTIONS

6.79A.1. INTENT. This section describes the construction of ductile iron pipe connections between basins, inlets, sewers or manholes, and dry wells.

6.79A.2. DESCRIPTION.

- (A) Ductile iron pipe connections shall be constructed with internally locked "Push-on" joints not requiring thrust blocks or tie rods, and laid on a compacted layer of Broken Stone, or encased in concrete where specified.
- (B) Pipes shall be of the nominal inside diameter shown or specified.
- (C) Dimensions of concrete encasement shall be as shown on the plans.

6.79A.3. MATERIALS.

- (A) Ductile Iron Pipe shall be of the various sizes specified, shall be epoxy lined and in compliance with the requirements of the NYC Department of Environmental Protection, Standard Sewer Specifications, dated August 1, 2009, Section 2.06.
- (B) Broken Stone shall be hard, roughly cubical in shape, unweathered stone uniformly graded from 1/4" to 3/4" in diameter, and shall conform to commercial 1/4" to 3/4" stone.
- (C) All joints for Ductile Iron Pipe shall be "Push-On" joint types, meeting the requirements of ANSI Specification A21.11, latest revision.
 - 1) The joints shall be internally locked, not requiring thrust blocks or tie rods, and shall be made in accordance with manufacturer's instructions for assembling the type of joint furnished.
 - 2) Push-on joints shall be the Super Bell-Tite Joint of Amstead Industries, the Tyton Joint of U.S. Pipe and Foundry Company, the Fastite Joint of the American Cast Iron Company, or such other joint as may be approved as equivalent by the Engineer. For each bell, there shall be furnished a rubber gasket.
- (D) Concrete shall comply with the requirements of Section 3.05 of NYCDOT Highway Specifications.; Class B-32; Type IIA Portland cement; Type 1A sand, and Type 1, Grade B, or Type 2, Size No. 57 coarse aggregate.
- (E) Mortar for joints shall comply with the requirements of Section 3.07 of NYCDOT Highway Specifications, Type 1, Mortar, except that the proportions shall be one (1) part of cement to one and one-half (1-1/2) parts of sand and that the ingredients may be mixed by hand.

6.79A.4. METHODS.

(A) Excavation

Excavation for construction of pipe connections, on a nine (9) inch thick broken stone base, or encased in concrete where specified, shall be made to the widths and depths required in accordance with the Standard Sewers Specifications of the NYC Department of Environmental Protection. No pipe, or the broken stone therefore, or concrete for pipe encasement, shall be laid or placed until the subgrade of the trench shall have been tested and found correct.

(B) Bedding

Unless otherwise directed, the Ductile Iron Pipe Connection shall be laid on a nine (9) inch thick compacted layer of Broken Stone. The nine (9) inch thick layer of Broken Stone shall be placed on the subgrade of the trench for its full width. The subgrade must be prepared to the proper grade so that the ductile iron pipe may be placed on the broken stone base accurately to line and grade in agreement with the plans, specifications and as directed by the Engineer. Broken Stone shall also be placed around the pipe to a depth of one-half (1/2) the outer diameter of the pipe and for the full width of the trench. The rest of the trench shall be backfilled and compacted as specified and directed by the Engineer.

(C) (No Text)

(D) Laying

The pipe shall be laid with male ends toward the outlet. All pipes shall be laid true to line and grade, tightly fitted together and matched so that when laid in the work they will form a drain with a smooth and uniform invert. Unless a shorter length of pipe is required or otherwise permitted, not less than twenty-four (24) feet of piping shall be laid in one operation and the trench for each basin connection shall be fully excavated for its entire length before any pipes are laid therein.

During the progress of the work the interior of the connections shall be cleared of all foreign matter and the exposed ends of pipe shall be provided with approved temporary covers fitted to the pipe so as to exclude such materials. Unconnected dead ends of pipe shall be closed with approved tile or precast concrete plugs or with hand tightening (wing nut type) expandable plugs as manufactured by O.R.H.A. Industries or Jones Manufacturing Co., or approved equal, so as to provide a watertight seal. The threads are to be greased prior to tightening to ensure a proper seal without stripping.

(E) Joints

All joints for Ductile Iron Pipe shall be "Push-On" joints.

(F) Wyes and Tees

The Contractor shall provide ductile iron pipe Wye or Tee connections as required by the field conditions and as directed by the Engineer.

(G) Drainage inlets shall be installed as shown on the plans and in accordance with manufacturer's instructions.

Clear interior of installed piping and structures of dirt and other superfluous material as work progresses. Maintain swab or drag in piping and pull past each joint as it is completed. Place plug in ends of uncompleted pipe at end of each day or when work stops.

After installing drainage course on top of piping, test drain piping with water to ensure free flow before backfilling. Remove obstructions, replace damaged components, and repeat test until results are satisfactory and approved by the Engineer.

(H) Damaged Pipe

Pipe damaged from handling or any cause whatsoever, whether in or out of the trench, shall be replaced and removed from the site of the work by and at the sole expense of the Contractor.

(I) Field Cutting

Ductile iron pipe shall be cut only by means of abrasive saws, hack saws, wheel type cutters, milling type cutters or as approved by the Engineer. The use of "squeeze" type pipe cutters and cutting torches will not be permitted. The use of diamond points and dog chisels will not be permitted. The outside of the cut end shall be beveled about one-quarter (1/4) inch at an angle of about thirty (30) degrees all around the pipe, with a coarse file or a portable grinder.

(J) Fitting Into Reinforced Concrete Structures

Pipe connections shall not enter reinforced concrete structures less than twelve (12) inches from the top or bottom of the structure. The ends of pipes which enter the reinforced concrete structure shall be neatly cut to fit the inner face of the structure. When directed, such cutting shall be done before the pipes are built in.

Wherever the proposed connection is to connect with an existing structure in which there is a branch pipe which is damaged or of unsuitable size or in improper position, such pipe shall be removed and be replaced with a pipe of suitable size or be reset in the proper position.

(K) Backfilling

Immediately after the Engineer has inspected and approved the pipe laid, the trench shall be backfilled.

6.79A.5. MEASUREMENT. The quantity of Ductile Iron Pipe Connections to be measured for payment shall be the number of linear feet of pipe incorporated in the work, complete, measured in place along its axis between the inner faces of the structures or pipe connected, subject to adjustment in accordance with Section 5.04 of NYCDOT Highway Specifications.

6.79A.6. PRICE TO COVER. The contract price per linear foot for Ductile Iron Pipe Connection shall cover the cost of all labor, materials, equipment, insurance, and incidentals required to furnish and incorporate in the work, complete, in place, all ductile iron pipe required including, but not limited to, excavation of all materials of whatever nature encountered, including ledge rock (except where there is a separate contract price for Rock Excavation), furnishing and installing broken stone base, joint materials, special pipes where required, inlets, cleanouts, bulkheads, temporary cover, trimming, fitting and building the pipe into concrete or masonry, connections to sewers, sheeting, bracing and backfilling necessary to complete this work; all in accordance with the plans and specifications, and as directed by the Engineer.

Payment will be made under:

Item No.	Item	Pay Unit
6.79 AA	6" DUCTILE IRON PIPE CONNECTION	L.F.

**SECTION 7.50 RCP
CUSTOM MODULAR BENCHES**

7.50RCP.1. DESCRIPTION

Under this section the Contractor shall furnish and install the custom modular benches in accordance with the Contract Drawings, the Specifications and the directions of the Engineer.

7.50RCP.2. MATERIALS

The materials under this section shall comply with the following:

7.50RCP.2.1. Qualify Assurance

- A) Manufacturer's Qualifications: Work of this section shall be fabricated and installed by an experienced fabricator or manufacturer, who has been engaged in work of equivalent scope and fabrication standards for at least three (3) years. Materials, methods of fabrication, fitting, assembly, supporting, fastening, operating devices and installation shall be in accordance with Contract Drawings and Specifications, approved shop drawings, and be of highest quality practices of the industry, using new and clean materials as specified, having structural properties sufficient to safely sustain or withstand stresses and strains to which materials and assembled work will be subjected. All work shall be accurately and neatly fabricated, assembled and erected.
- B) Field Measurements: Take field measurements prior to preparation of shop drawings and fabrication, where possible, to ensure proper fitting of the work. However, do not delay job progress; allow for adjustments and fitting where taking of field measurements before fabrication might delay the work.
- C) Shop Assembly: Insofar as practicable, fitting and assembly of work shall be done in shop. Work that cannot be permanently shop assembled, shall be completely assembled, marked and disassembled in shop before shipment to insure proper assembly in field. Shop assemble work in largest practical sizes to minimize field work. It is the responsibility of the Contractor to ensure the shop fabricated items will properly fit the field condition. In the event that shop fabricated items do not fit the field condition, the item shall be returned to the shop for correction at no additional cost to the City.

7.50RCP.2.2. Submittals

- A) General: Follow the procedures in the General Conditions of Sections 1.06.13 and 1.06.31 of the NYCDOT Standard Highway Specifications.
- B) Product Data: Submit to the Engineer for approval manufacturer's, fabricator's and finisher's specifications and installation instructions for products used in the work of this Section. Also include finishing materials and methods.
- C) Shop Drawings: Submit for all items of work of this Section, at the appropriate scale, showing locations, layouts, materials, thicknesses, finishes, dimensions, construction, relation to adjoining construction, erection details, profiles, jointing, hardware, anchors, and all other details to fully illustrate the work of this Section. Shop drawings must be as approved by the Engineer, in consultation with the City's Architect, prior to the fabrication of the benches.

D) Samples: Submit four samples each of the following:

- 1) 12" long section of specified wood, with specified finish.
- 2) 6" long section of specified metal, in specified finish.
- 3) Hardware.

Each sample shall be clearly identified by the manufacturer's name, date of production and contract number.

The Contractor shall hand deliver samples to the Engineer with transmittal letter and obtain a signed receipted acceptance of delivery. Samples must be as approved by the Engineer prior to the fabrication of the benches.

- E) Mock-up: Contractor shall fabricate and install a mock-up of two adjacent benches of each type in a location approved by the Engineer. The mock-up must be as approved by the Engineer prior to installation of the rest of the benches. The mock-ups may be used as part of the Work, and may be included in the finished Work, when so approved by the Engineer.
- F) Process: There shall be no material delivery to job site without prior written approval from the Engineer; all material delivered to site without such approval will be rejected. Contractor shall submit samples in sufficient time as to not delay progress of Construction.

7.50RCP.2.3. Delivery, Storage and Handling

- A) Delivery: Deliver all finished materials to the site with sufficient protection and with labels clearly identifying product name, manufacturer and part number.
- B) Storage: Store materials in a clean, dry area and use all means necessary to protect materials of this section before, during and after installation.
- C) Handling: Use all means necessary to protect the materials of this Section before, during and after installation and to protect the installed work and materials of all other trades. In the event of damage, immediately make all repairs and replacements as directed, to the satisfaction of the Engineer, at no additional cost to the City.

7.50RCP.2.4. Warranty

Products shall be free from defects in material and/or workmanship for a period of three (3) years from the date of invoice. The warranty does not apply to damage resulting from accident, alteration, misuse, tampering, negligence, abuse, or normal wear and tear. Thermally-modified wood shall be free from decay, rot and mold for a period of no less than twenty-five (25) years from the date of invoice.

7.50RCP.2.5. Products: Stainless Steel

- A) General: All metal components used in the custom modular benches, including but not limited to bar stock, pipe, plates, tubes, and fasteners shall be stainless steel as noted below.
- B) Quality: Provide materials which have been selected for their surface flatness, smoothness and freedom from surface blemishes where exposed to view in the

finished unit. Exposed to view surfaces which exhibit pitting, seam marks, roller marks, "oil-canning," stains, discolorations or other imperfections on the finished units will not be acceptable.

- C) Reference Standards: Comply with the following standards for the forms and types of stainless steel for the required items of work:
1. Pipe: ASTM A 312, Grade TP 304
 2. Sheet, Strip, Flat Bar and Plate: ASTM A 666, Type 304.
 3. Tubing: ASTM A 554, Grade MT 304.
 4. Castings: ASTM A 743A, Grade CF 8 or CF 20.
 5. Bars and Shapes: ASTM A 276, Type 304.
- D) Welding Electrodes and Filler Metal: Type and alloy of filler metal and electrodes as recommended by producer of the metal to be welded, and as required for color match, strength and compatibility in the fabricated items.

7.50RCP.2.6. Products: Thermally-modified Wood

- A) General: Bench slats shall be fabricated from thermally-modified ('Torried') wood, which is wood of the noted species that has been lignocellulosically modified through a process of torrefaction at a temperature range of 392°F to 464°F.
- B) Wood Species: White Ash (*Fraxinus Americana*)
- C) Standards: All thermally-modified wood shall meet the following standards:
- 1) National Hardwood Lumber Association (NHLA) grading rules shall apply. All wood shall be FAS grade or equivalent: eighty-three and a third percent (83-1/3%) to a hundred percent (100%) clear wood cuttings over the entire surface of the board.
 - 2) Wood slats shall meet or exceed the mechanical properties as defined by U.S. Forest Product Laboratories testing methods (2" standard) as follows:
 - a) Bending Strength: 2,400 psi
 - b) Modulus of elasticity: 1,700,000 psi
 - c) Modulus of rupture: 14,000 psi
 - d) Hardness: 1,300 psi
 - e) Shrinkage: 10.7% (average; green to 6% moisture content)
 - 3) Moisture by weight: three percent (3%) maximum
- D) Quality: Wood shall be solid, free from worm holes, splinters, longitudinal heart cracks, firm of soft sap wood, fungus and deformation (twisting or cupping) which cannot be removed during installation using normal methods and tools. Sound knots (as defined in ASTM D 9) are acceptable. Any slat with unsound knots, natural drying checks greater than one-eighth inch (1/8") in width or other limiting factors as described above shall be rejected and replaced at no additional cost to the City.

E) Manufacturers:

1. Cambia by Northland Forest Products, Kingston, NH, Phone: (866) 960-9663;
2. Bailey Wood Products, 441 Mountain Road, Kempton, PA 19529, Phone: (610) 756-6827;
3. Eco Vantage, 6878 County Road 62, St. Joe, IN 46785, Phone: (260) 337-0338;
4. or approved equal that manufactures the above species.

7.50RCP.2.7. Finishes

- A) Stainless Steel: Remove or blend tool and die marks and stretch lines into finish. Grind and polish surfaces to produce uniform, directionally textured, polished finish indicated, free of cross scratches. Bead blasted finish with clean fine glass beads, producing an even, matte, non-reflective, non-directional surface finish.
- B) Wood Slats: Wood shall be sanded smooth and all surfaces shall be treated with Penofin Verde wood sealer, in clear, as per manufacturer's instructions. Cut surfaces (ends, rabbets, dados, holes) shall receive one additional coat.

7.50RCP.2.8. Hardware

Wood slats shall be through-bolted to the steel frame with stainless steel fasteners as indicated on the Contract Drawings. Fasteners shall be secured with thread sealant manufactured by Henkel Corporation, Rocky Hill, CT; Permatex Industries, Hartford, CT; 3M, St. Paul, MN or approved equal.

7.50RCP.3. METHODS

7.50RCP.3.1. Metal Fabrication

- A) Cutting: Cut metal by sawing, shearing or blanking. Flame cutting will be permitted only if cut edges are ground back to clean, smooth edges. Make cuts accurate, clean, sharp, square and free of burrs, without deforming adjacent surfaces or metals.
- B) Holes: Drill or cleanly punch holes (do not burn), so that holes will be accurate, clean, neat and sharp without deforming adjacent surfaces or metals.
- C) Welding: Welding shall be in accordance with recommendations of the American Welding Society and shall be done with electrodes and/or methods recommended by the manufacturers of the metals being welded. Welds shall be continuous, except where spot welding is specifically permitted. Welds exposed to view shall be ground flush and dressed smooth with and to match finish of adjoining surfaces so that joint will not be visible; undercut metal edges where welds are required to be ground flush and dressed smooth. All welds on or behind surfaces which will be exposed to view shall be done so that finished surface will be free of imperfections such as pits, runs, splatter, cracks, warping, dimpling, depressions, or other forms of distortion or discoloration. Remove weld splatter and welding oxides from all welded surfaces.

7.50RCP.3.2. Wood Fabrication

- A) Cut wood to dimensions and profiles shown, from solid stock.
- B) Make all slats in single lengths; joints will not be permitted.

- C) Machine sand with grain, finish with hand sanding, leave exposed surfaces free from machine or tool marks that will show through the finish.

7.50RCP.3.3. Assembly

- A) General: Assemble work of this Section square, plumb, straight, true to line or radius, accurately fitted and located, with flush, tight hairline joints (except as otherwise indicated or to allow for thermal movement) and with provisions for coordinating with other trades.
- B) Tolerances: All work of this Section shall be plumb, square, level, true to radius and correctly aligned within the following limitations:
 - 1) Offset from true horizontal, vertical and design location shall not exceed 1/8" per ten (10) feet of length for any component, not cumulative.
 - 2) Maximum offset from true alignment between abutting components shall not exceed 1/16".
- C) Do not cut or abrade finishes which cannot be completely restored in the field. Return items with such finishes to the shop for required alterations, followed by complete refinishing, or provide new units at Contractor's option.
- D) Factory finish all items where possible. Defer final touch-up and cleaning until after delivery and installation.

7.50RCP.3.4. Inspection

Examine the areas and conditions where benches are to be installed. Notify the Engineer of any conditions detrimental to the proper installation and subsequent use, and timely completion of the work. Do not proceed with the work until unsatisfactory conditions are corrected to permit proper installation of the work. Verify in writing.

7.50RCP.3.5. Coordination and Layout

- A) Coordination: Coordinate the work of this Section to accommodate and fit work of other trades. Furnish or obtain, as applicable, templates and drawings to or from applicable trades for proper coordination of this work.
- B) Layout: Bench locations are as indicated on the Contract Drawings; however, the final layout of the benches shall be subject to approval by the Engineer, in consultation with the City's Architect.

7.50RCP.3.6. Installation

- A) General: Install work of this Section square, straight, true to line or radius, accurately fitted and located, with flush, tight hairline joints (except as otherwise indicated or to allow for thermal movement), with provisions for other trades, with provisions to allow for thermal movement, with provisions to exclude water where exposed to weather, and with attachment devices as required for secure and rigid installation. It is the responsibility of the Contractor to assure that shop fabricated items will properly fit the field condition. In cases where the shop fabricated items do not fit the field condition, the item shall be returned to the shop for correction at no additional cost to the City.

- B) Attachments: All attachment devices shall be of type, size and spacing to suit condition and as approved by Engineer. Do all necessary drilling, tapping, cutting, or other preparations of surrounding construction in the field accurately, neatly and as necessary for the attachment and support of work of this Section, but obtain Engineer's approval prior to such preparation to work of others.
- C) Adjustment: Where defects in material or installation appear in the completed work, such areas shall be removed and replaced at no cost to the City.

7.50RCP.3.7. Cleaning

Upon the completion of the work clean stainless steel by washing thoroughly with clean water and soap and rinsing with clean water. Clean wood slats in accordance with wood finish manufacturer's instructions. Do not use cleaning materials or methods that can damage finish.

7.50RCP.3.7. Protection

Protect finishes from damage during construction period with temporary protective coverings approved by fabricator. Remove protective covering at the direction of the Engineer. Restore finishes damaged during construction period so no evidence remains of correction work. Return items that cannot be refinished in the field to the shop; make required alterations and refinish entire unit, or provide new units, at no additional cost to the City.

7.50RCP.4. MEASUREMENT

A) **CUSTOM MODULAR BENCHES WITH BACK**

The quantity to be measured for payment shall be the number of actual Custom Modular Benches with Backs that have been installed at the site to the satisfaction of the Engineer

B) **CUSTOM MODULAR BENCHES WITHOUT BACK**

The quantity to be measured for payment shall be the number of actual Custom Modular Benches without Backs that have been installed at the site to the satisfaction of the Engineer.

7.50RCP.5. PRICES TO COVER

A) **CUSTOM MODULAR BENCHES WITH BACK**

The contract price bid shall be a unit price per each Custom Modular Benches with Back and shall include the cost of all labor, material, equipment, insurance, and incidentals necessary to furnish and install the Custom Modular Benches with Back including, but not limited to, anchoring the bench to the planter; all in accordance with the Contract Drawings, the specifications and the directions of the Engineer.

B) **CUSTOM MODULAR BENCHES WITHOUT BACK**

The contract price bid shall be a unit price per each Custom Modular Benches without Back and shall include the cost of all labor, material, equipment, insurance, and incidentals necessary to furnish and install the Custom Modular Benches without Back including, but not limited to, anchoring the bench to the planter; all in accordance with the Contract Drawings, the specifications and the directions of the Engineer.

Payment will be made under:

Item No.	Item	Pay Unit
7.50 RCP-A	CUSTOM MODULAR BENCHES WITH BACK	EACH
7.50 RCP-B	CUSTOM MODULAR BENCHES WITHOUT BACK	EACH

**SECTION 8.32
Bark Chip Mulch**

8.32.1. DESCRIPTION. Under this section, the Contractor shall furnish and place Bark Chip Mulch in accordance with the plans and specifications and as directed by the Engineer.

8.32.2. MATERIAL. Bark Chip Mulch shall be a natural forest product of 98% bark containing less than 2% wood or other debris. It shall be of white or Red Fir and/or Pine bark of a uniform grade with no additives or any other treatment. Size of bark shall be from 5/8" to 1-1/4". The pH factor should range from 5.8 to 6.2.

8.32.3. METHODS. Bark Chip Mulch shall be applied where required on the plans or directed by Engineer as a ground cover to the surface of beds and tree pits after the planting is completed. Mulch shall be applied to a uniform depth of three (3") inches and shall be so distributed as to create a smooth, level cover over the exposed soil. Plants shall not be covered.

8.32.4. MEASUREMENT. The quantity of Bark Chip Mulch to be paid for will be the number of square yards of ground surface area that has been satisfactorily covered with bark chip mulch within the limits of the areas indicated on the plans and where directed by the Engineer.

8.32.5. PRICE TO COVER. The unit price bid per square yard for Bark Chip Mulch shall cover the cost of all labor, materials, plant, equipment, insurance, and incidentals necessary to complete the work under this section in accordance with the plans, the specifications and the directions of the Engineer.

Payment will be made under:

Item No.	Item	Pay Unit
8.32	BARK CHIP MULCH	S.Y.

SECTION 9.07
Non-Woven Geotextile

9.07.2. INTENT. This section describes the installation of the non-woven geotextile that is to be furnished and installed as part of this project.

9.07.2. DESCRIPTION. Under these Items, the Contractor shall furnish and install non-woven geotextile to separate landscape materials in accordance with the plans and specifications, as directed by the Engineer.

9.07.3. MATERIALS. All non-woven geotextile shall be synthetic and rot proof. It shall be manufactured for the purpose of separating two different materials.

- (A) Definition: Separation application is defined as the placement of a flexible porous geotextile between dissimilar materials so that the integrity and functioning of both materials can be maintained or improved.
- (B) Non-woven geotextile used in separation applications shall be US 160NW as manufactured by US Fabrics, FX-60HS manufactured by Carthage Mills, or 160N (non-woven) as manufactured by Mirafi, Inc., or an approved equivalent with the following minimum requirements:

Non-woven geotextile used shall conform to the following AASHTO-M-288 Class 2 properties for separation geotextiles:

	ASTM TEST	TYPE
Application		Separation
Elongation	D 4595	≥50%
Grab Strength	D 4632	157 LBF
Tear Strength	D 4533	56 LBF
Puncture Strength	D 4833	85 LBF
Permittivity (minimum)	D 4491	0.02 sec ⁻¹
Maximum Apparent Opening Sieve Size/Sieve Designation	D 4751	0.0234 in./No. 30

- (C) Submittals: All submittals shall be submitted in accordance with the requirements of the contract. The Contractor shall submit the following for the Engineer's review and approval prior to purchase.
- 1) Manufacturer's Data: The Contractor shall submit manufacturer's data with sufficient detail to demonstrate compliance with the requirements of this specification.

- 2) Samples: The Contractor shall furnish the required number of samples of the non-woven geotextile intended for use in the work for approval by the Engineer. The label shall include the manufacturer's product name, the type of fabric, and the weight of grade of the material. Non-woven geotextile used in the work shall conform to the approved samples.

9.07.4. METHOD.

(A) Delivery, Storage and Handling:

- 1) Delivery: Deliver materials to site in manufacturer's original, unopened packaging, with labels clearly identifying product name and manufacturer.
- 2) Storage: Store materials in clean, dry area in accordance with manufacturer's instructions.
- 3) Handling: Protect materials during handling and installation to prevent damage.

(B) Examination:

Examine subgrade areas to receive non-woven geotextile. Notify Engineer if areas are not acceptable. Do not begin installation until unacceptable conditions have been corrected.

(C) Installation:

- 1) Install non-woven geotextile in accordance with manufacturer's instructions at locations indicated on the Drawings.
- 2) The non-woven geotextile shall be rolled directly on the ground. All seams shall be overlapped a minimum of six (6") inches.
- 3) No equipment, materials or machinery shall be placed on or be transported over exposed geotextile.
- 4) Topsoil as shown on the plans and as directed by the Engineer shall then be carefully placed to prevent dislocation of the fabric. If the fabric is damaged during installation, the rupture shall be removed and the damaged area shall be covered with a patch of new fabric that will overlap the undamaged fabric by at least six (6") inches in all directions. All repaired fabric surface costs shall be done at no additional cost to the City. Cost of the Topsoil shall be pay separately under Item No.4.15.

9.07.5. MEASUREMENT. The quantity of Non-Woven Geotextile to be paid for shall be the number of SQUARE YARDS, measured in its final position, installed to the satisfaction of the Engineer. No additional measurement will be made for overlaps of material.

9.07.6. PRICE TO COVER. The price bid shall be a unit price per SQUARE YARD of Non-Woven Geotextile and shall include the cost of furnishing all labor, material, equipment, insurance, submittals, and incidental expenses necessary to complete the work; all in accordance with the plans and specifications and to the satisfaction of the Engineer.

Payment will be made under:

Item No.	Item	Pay Unit
9.07	NON-WOVEN GEOTEXTILE	S.Y.

SECTION 9.13
HIGH-DENSITY POLYETHYLENE DRAINAGE PIPE

9.13-HD.1 INTENT

This section describes the furnishing and installation of High-Density Polyethylene Pipe (HDPE) and all its components as part of this project, as shown on the Contract Drawings and as directed by the Engineer.

9.13-HD.2 DESCRIPTION

Under this Item, the Contractor shall furnish and install HDPE pipe in accordance with the Contract Drawings, specifications and directions of the Engineer. All work of connecting and joining to other pipes or drainage structures, including connecting pieces, and excavation, bedding and backfill, shall be included under this item.

9.13-HD.3 MATERIALS

- A) Pipe: HDPE pipe shall have a full circular cross-section, with a corrugated exterior wall and a smooth inner wall (waterway). Corrugations may be either annular or spiral. HDPE pipe shall be made from virgin polyethylene compounds that conform to the requirements of cell classification 424420C (ESCR Test Condition B) for 4 through 10 inch diameters as defined and described in ASTM D 3350, except that carbon content should not exceed 4%. All pipe and pipe connections shall be soil-tight and shall be by the same manufacturer to ensure compatibility of materials.

Acceptable manufacturers for HDPE pipe:

- 1) Advanced Drainage Systems, Inc., Ludlow, MA
- 2) ISCO Industries, Louisville, KY
- 3) JM Eagle, Livingston, NJ
- 4) Hancor, New York, NY
- 5) or an approved equivalent

- B) Fittings: Pipe fittings shall not reduce or impair the overall integrity or function of the pipe line. Fittings may be either molded or fabricated. Common corrugated fittings include in-line joint fittings, such as couplers, and branch or complimentary assembly fittings such as tees, and end caps, etc. These fittings may be installed by various methods, such as snap-on, screw on, bell and spigot, and wrap around. Couplings shall provide sufficient longitudinal strength to preserve pipe alignment and prevent separation at the joints. Only fittings supplied or recommended by the pipe manufacturer shall be used to ensure compatibility of materials. Where recommended by manufacturer, a neoprene or rubber gasket shall be supplied for joint fittings. All pipe fittings and pipe connections shall be soil-tight.

Acceptable manufacturers for HDPE pipe fittings:

- 1) Advanced Drainage Systems, Inc., Ludlow, MA.
- 2) ISCO Industries, Louisville, KY.
- 3) JM Eagle, Livingston, N.J.
- 4) Hancor, New York, N.Y.
- 5) or an approved equivalent.

9.13-HD.4 SUBMITTALS

Contractor shall submit for Engineer's approval product data and installation details for HDPE pipe, pipe fittings, and connections.

9.13-HD.5 METHODS

- A) Installation of the pipe shall be in accordance with ASTM Recommended Practice D 2321, unless specified otherwise in the Contract Documents.
- B) Installation:
- 1) Install and maintain proper Erosion and Sediment Control Measures during construction, as directed by the Engineer, to avoid clogging of the pipes. During the progress of the work, the exposed ends of the pipe shall be provided with approved temporary covers fitted to the pipe so as to exclude earth and other materials.
 - 2) Trench excavation shall be to a minimum depth of 6" below the outside bottom of the pipe. Unless otherwise directed, the trench shall be fully excavated for its entire length before any pipes are laid therein. Refer to Contract Drawings for pipe inverts. Where trench bottom is unstable, the Contractor shall excavate to a depth as required by the Engineer and replace with suitable material as specified by the Engineer. Width of trench shall be as per pipe manufacturer's recommendations.
 - 3) Place a 6" minimum depth of bedding material. Bedding material shall be compacted select granular fill; for select granular fill gradation requirements, see Section 4.11.3.(C) of the NYCDOT Standard Highway Specifications.
 - 4) Pipe damaged from handling or any cause whatsoever, whether in or out of the trench, shall be replaced and removed from the site of the work by and at the sole expense of the Contractor.
 - 5) Lay HDPE pipe as per manufacturer's recommendations over bedding material. All pipe shall be laid in reasonably close conformity to line and grade and shall have a full, firm and even bearing at each joint and along the entire length of pipe. Joint misalignment shall not result in offsets, in the interior smooth liner, greater than one-quarter (1/4") inch. Pipe laying shall begin at the downstream end and progress upstream. Any single run of pipe, excluding end sections, shall consist wholly of the same type material unless otherwise directed by the Engineer. No section of pipe used shall be less than three (3') feet in length. Keep trenches dry during pipe laying.
 - 6) Provide for and install all joints, couplings, fittings, rings and connections as per manufacturers' instructions and applicable ASTM and ANSI standards. Clean joint contact surfaces immediately prior to joining. Use lubricants, primers, or adhesives as recommended by the pipe or joint manufacturer.
 - 7) Initial backfill material shall be select granular fill and shall envelope the pipe, under the haunches and around the sides up to a minimum height of six (6") inch above the pipe, and compacted in six inch (6") layers. Trench and backfill width shall be as per manufacturer's recommendations.

- 8) Any sediment which enters pipes during construction shall be removed within 24 hours.
- 9) Prior to project completion, and as directed by Engineer, the Contractor shall clean pipes by removing all accumulated sediment and debris.
- 10) Do not remove Erosion and Sediment Control measures until site is fully stabilized.

9.13-HD.6 MEASUREMENT

The quantity of High-Density Polyethylene Pipe in the diameter noted to be paid for under this Item shall be the number of linear feet (laying length) of HDPE pipe, including fittings, measured in their final position, to the satisfaction of the Engineer.

9.13-HD.6 PRICES TO COVER

The contract price bid shall be a unit price per linear foot of each size High-Density Polyethylene Pipe in the diameter noted, furnished and installed as shown on the Contract Drawings and shall include the cost of all labor, materials, equipment, insurance, and incidentals necessary to complete the work, including, but not limited to, excavation of all materials of whatsoever nature encountered (except the excavation of boulders in open cut and ledge rock), furnishing and installing bedding, sheeting and bracing, backfilling, cleaning up, furnishing and installing pipe and fittings, and connecting and joining pipe to other pipes or drainage structures; all in accordance with the Contract Drawings, the specifications and directions of the Engineer.

Payment will be made under:

Item No.	Item	Pay Unit
9.13 HD	6" HIGH-DENSITY POLYETHYLENE DRAINAGE PIPE	L.F.
9.13 HD8	8" HIGH-DENSITY POLYETHYLENE DRAINAGE PIPE	L.F.

SECTION 9.15 Filter Fabric Silt Fence

9.15.1. INTENT. This section describes the furnishing, installation, maintenance, and removal of silt fence and all its components as part of this project.

9.15.2. DESCRIPTION. The purpose of silt fence is to reduce runoff velocity and effect deposition of transported sediment load. Its intent is to serve as a temporary erosion and sediment control measure during construction. Under this Item, the Contractor shall furnish, install, maintain, and remove silt fence in accordance with the Contract Drawings, specifications, and directions of the Engineer.

9.15.3. MATERIALS. Sedimentation control filter fabric silt fence, as approved by the Engineer, shall be furnished and installed where indicated on the plans or directed by the Engineer, according to the details shown in Appendix B, page 552-554 of NYCDOT Standard Highway Specifications, except without straw bales.

Filter fabric: Filter fabric shall meet NYSDOT specifications and shall be one of the following:

- 1) MUTUAL MISF 1776 as manufactured by Mutual Industries Inc., 707 West Grange Street, Philadelphia, PA 19120, Telephone # (215)927-6000;
- 2) Fabric # GTF190 as manufactured by Linq Industrial Fabric, 2550 West 5th North Street, Sommerville, South Carolina 29483, Telephone # (800) 445-4675;
- 3) Fabric # 2130 as manufactured by Propex, 6025 Lee Highway, Suite 425, Chattanooga, TN 37422, Telephone # (800) 621-1273;
- 4) Or an approved equivalent.

Posts: Posts shall be a minimum height of 8 feet. The nominal outside diameters and minimum weights per linear foot for posts shall be as follows:

- 1) Line posts 2-1/2 @ 3.7 lbs.
- 2) End and corner posts 3 inches @ 5.8 lbs.
- 3) Middle rails 1-5/8 inches @ 2.3 lbs.

Wire fabric: Wire fabric shall be of No. 6 gauge wire with a mesh of approximately 2 inches.

9.15.4. SUBMITTALS. Contractor shall submit for Engineer's approval product data and installation details for silt fence materials.

9.15.5. METHODS. Installation Recommendations:

- 1) Install silt fence as indicated on plans or as directed by Engineer. Locations of silt fences shall be adjusted to avoid interferences with trees, utilities, etc. and to maintain access where necessary.
- 2) Excavate a trench approximately six (6") inches deep and four (4") inches wide along the line of posts and upslope from the barrier.
- 3) Contractor shall drive posts at least four (4') feet below finished grade. Posts shall be spaced not more than six (6') feet on center and shall be set securely into the ground. Adjust spacing as needed to place posts at low points along silt fence line. Post locations shall be adjusted to avoid tree roots as appropriate.
- 4) Secure and fasten wire fabric to vertical line posts and middle rails by means of wire ties. Space wire fabric no more than twelve (12") inches apart on rails and no more than

fourteen (14") inches apart on line posts. The minimum height of the welded wire fabric shall be six (6') feet. The upper edge of the wire fabric shall be twisted and barbed.

- 5) Attach and secure filter fabric to the vertical line posts and wire fabric. The filter fabric shall be purchased and delivered in a continuous roll and cut on-site to the length of the barrier(s) to avoid the use of joints. Dimensions of the roll shall be thirty-six (36") inches by one hundred (100') feet in length. When joints are necessary, filter cloth shall be spliced together at a line post, with a six (6") inch minimum overlap, and securely sealed.
- 6) Embed and extend filter fabric into the trench a minimum of six (6") inches below finished grade, backfill trench, and compact soil over the filter fabric.
- 7) Upon furnishing and installing the approved silt fence but prior to commencing any other work on-site, the Contractor shall notify the Engineer and arrange for an on-site inspection.
- 8) Do not remove silt fence until upslope areas have been permanently stabilized. Silt fence shall be maintained in good condition and repaired as necessary throughout construction until final stabilization of upslope areas.
- 9) Contractor shall inspect silt fences periodically (at least once a week) and after each rainfall event (of 0.5 inches or greater). Any sediment deposit that is found shall be removed promptly to provide adequate capacity for the next rain and reduce pressure on the fence. Take care to not undermine the silt fence during clean out. If the fabric is torn, decomposed, or in any way becomes ineffective, the Contractor shall replace it immediately without additional cost to the City.
- 10) Prior to project completion and the removal of silt fence, the Contractor shall remove all accumulated sediment and debris.
- 11) Upon removal, the Contractor shall remove and dispose of any excess sediment accumulations.

9.15.6. MEASUREMENT. The quantity to be measured for payment will be the number of linear feet of filter fabric silt fence installed to the satisfaction of the Engineer.

9.15.7. PRICE TO COVER. The unit price bid per linear foot for this item shall include the cost of all labor, materials, equipment, insurance, and incidentals necessary to complete the work of furnishing and installing the filter fabric silt fence, maintaining the fence, and removing the fence after work is completed; all in accordance with the Contract Drawings, the specifications, and the direction of the Engineer.

Payment will be made under:

Item No.	Item	Pay Unit
9.15	FILTER FABRIC SILT FENCE	L.F.

**SECTION 9.95 RCP
DIMENSIONED GRANITE MASONRY (BLACK)**

9.95RCP.1. DESCRIPTION

This section describes the furnishing and installation of all dimensioned granite masonry indicated, including but not limited to planter granite bench blocks, sloping granite pavers at planter pass-throughs, granite blocks at the fountain, and the steel supports for all granite work herein, in accordance with the Contract Drawings, the Specifications and the directions of the Engineer.

9.95RCP.2. MATERIALS

The materials under this section shall comply with the following:

9.95RCP.2.1. Qualify Assurance

- A) Subcontractor Qualifications: Subcontract fabrication and installation of stone to a firm or firms which have successfully fabricated and/or installed stone similar to the quality specified and in the quantity shown for a period of not less than three (3) years.
- B) Examination Criteria: All examinations, selections, and acceptances shall be for the purpose of achieving a final appearance of stone with the greatest possible uniformity, and will be based upon the following criteria:
 - 1) Color within pre-selected color ranges and finish.
 - 2) Sequence matching of adjacent stone units.
 - 3) Only one source of each type of stone shall be used throughout the work. Stone shall match the type, pattern, color, texture, and finish of samples available for inspection in the office of Engineer.
 - 4) Conformance to approved shop drawings and details within specified dimensions and tolerances.
 - 5) Other criteria as specified in Subsection 9.95RCP.2.5. – "Products", herein.
- C) Acceptance of Work: Each and every piece of stone shall be subject to the acceptance of the Engineer and any pieces rejected after having been set shall be carefully cut out and replaced with new suitable stone without delay and without cost to the City. Any piece or pieces damaged in the removal and resetting of defective pieces shall also be removed and suitable, approved pieces provided and set. Patching or filling of stone is not permitted. Stone having chipped arises or broken corners shall be rejected. Engineer's inspection of the stone does not relieve the Contractor from his/her responsibility to provide all stonework in accordance with the approved samples and shop drawings.
- D) Field Measurements: Take field measurements prior to preparation of shop drawings and fabrication, where possible, to ensure proper fitting of the work. However, do not delay job progress; allow for adjustments and fitting where taking of field measurements before fabrication might delay the work.

9.95RCP.2.2. Submittals

- A) Product Data: Submit to the Engineer for approval manufacturer's, fabricator's and finisher's specifications and installation instructions for products used in the work of this Section, including finishing materials and methods.

- B) Shop Drawings: Submit shop drawings for all items of work of this Section, at the appropriate scale, showing locations, layouts, materials, thicknesses, finishes, dimensions, construction, relation to adjoining construction, erection details, profiles, jointing, hardware, anchors and all other details to fully illustrate the work of this Section. As part of the shop drawings, the Contractor shall develop a 3D digital model, using software compatible with AutoDesk AutoCAD 2010 or McNeel Rhinoceros 4.0 to be used in the fabrication of the block. The shop drawings and digital model must be as approved by the Engineer prior to the fabrication of the blocks.
- C) Samples: Submit four samples of each of the following:
- 1) Stone: Submit three sets of 1' x 1' x 3/4" samples of each type and each finish of stone. Indicate in each set the full range of exposed color and texture to be expected in the completed work. Sample review by the Engineer will be for color and texture compliance only. Compliance with all other requirements is the exclusive responsibility of the Contractor.
 - 2) Mortar Materials: Submit certification that mortar materials comply with specification requirements.
 - 3) Grouting Materials: Submit color samples.
 - 4) Anchors: Submit each type.
 - 5) Joint sealant and back-up material. Submit 12" long, 1/4" bead samples.

The Contractor shall hand deliver samples to the Engineer with transmittal letter and obtain a signed receipted acceptance of delivery. The samples must be as approved by the Engineer prior to the fabrication of the benches.

- D) Mock-up: Contractor shall fabricate and install a mock-up of approximately 36 sf., including a 10 ft. length of bench block and part of a pass-through, in a location approved by the Engineer, in consultation with the City's Architect. The mock-up must be as approved by the Engineer prior to installation of the rest of the granite. The mock-up may be used as part of the Work, and may be included in the finished Work, when so approved by the Engineer.
- E) Process: There will be no material delivery to job site without prior written approval from the Engineer; all material delivered to site without such approval shall be rejected. Contractor shall submit samples in sufficient time as to not delay progress of Construction.

9.95RCP.2.3. Delivery, Storage and Handling

- A) Protection: Protect stone during storage and construction against moisture, soiling, staining, and physical damage. Protect mortar materials and stonework accessories from weather, moisture and contamination with earth and other foreign materials.
- B) Handling: Handle stone to prevent chipping, breakage, soiling, or other damage. Do not use pinch or wrecking bars without protecting edges of stone with wood or other rigid materials. Lift with wide-belt type slings wherever possible; do not use wire rope or ropes containing tar or other substances which might cause staining. If required, use wood rollers and provide cushion at end of wood slides.
- C) Storage: Store stone on wood skids or pallets, covered with non-staining, waterproof membrane. Place and stack skids and stones to distribute weight

evenly and to prevent breakage or cracking of stones. Protect stored stone from weather with waterproof, non-staining covers or enclosures, but allow air to circulate around stones. In the event of damage, immediately make all repairs and replacements necessary at no additional cost to the City.

9.95RCP.2.4. Job Conditions

- A) Contractor is required to submit for approval, in detail, the methods proposed for hot weather or cold weather curing and protection. Contractor shall also describe methods proposed for monitoring of work when the mean daily air temperature is below 40°F.
- B) Cold Weather Requirements: Do not use frozen materials or materials mixed or coated with ice or frost. Do not build on frozen substrates. Remove any ice or snow formed on stonework bed by carefully applying heat until top surface is dry to touch. Do not use salt to thaw ice in anchor holes or slots. Do not lower the freezing point of mortar by use of admixtures or antifreeze agents, and do not use calcium chloride in mortar or grout. Remove stonework determined to be frozen or damaged by freezing conditions. Comply with cold-weather construction requirements constrained in ACI 530.1/ASCE6/TMS 602.
- C) Cold Weather Cleaning: Use liquid cleaning methods only when mean daily air temperature is 40°F or above and will remain so until masonry has dried, but not less than 7 days after completing cleaning.
- D) Hot Weather Requirements: Comply with hot weather construction requirements constrained in ACI 530.1/ASCE6/TMS 602.

9.95RCP.2.5. Products: Black Granite

- A) Manufacturers: Granite shall be equal to Absolute Black as manufactured by the following:
 - 1) Worldwide Marble & Granite, 234 Banker Street, Brooklyn, NY, Phone: (718) 389-8360;
 - 2) Stone Source, 215 Park Avenue South New York, NY, Phone: (866) 271-8722;
 - 3) LMD Partners, Inc., 41 Box Street, Brooklyn, NY, Phone: (917) 843-4046;
 - 4) or approved equal.
- B) Description:
 - 1) 'Absolute Black' granite shall be a very dark black-colored, fine to close-grained black basalt (dolerite) with equigranular crystalline structure. It shall appear uniform in color with a thin uniformly distributed grain.
 - 2) Granite shall have a polished finish on all exposed surfaces, unless otherwise noted on the drawings. Concealed surfaces may be sawn. Edges to receive grout or sealant shall be sawn.
- C) Thickness: Stone shall be of thickness as shown on Drawings; if not indicated, nominal size shall be 1-1/2", 2", 3" or 6" thick as approved by Engineer.
- D) Quarrying: Quarrying shall be supervised and coordinated by the stone fabricator to insure that the as-quarried block orientations will yield finished material with characteristics as described herein. All stone shall be cut from matched blocks. Matched blocks shall mean blocks extracted from a single bed of stratum in the

quarry. The use of blocks chosen at random, though similar in general character and color to that of the approved stone, shall not be permitted except by written permission of the Engineer.

- E) Examinations: Quarried blocks shall be made available at the quarry for inspection by the Engineer upon request. Production units shall be made available for inspection at the fabrication plant by the Engineer upon request. To this end, the Contractor shall, after approval of final shop drawings, advise the Engineer when production has begun and of the earliest possible opportunity to inspect a representative sampling of production work.
- F) Visual Criteria for Stone: All examinations, selections, and approvals shall be for the purpose of achieving a final appearance of stone with greatest possible uniformity, and will be based upon the following criteria:
- 1) All stone shall be sound stock, and uniform texture, and shall be free from holes, seams, shakes, clay pockets, spalls, stains, starts, and other defects which would impair the strength, durability, and appearance of the work, as determined by the Engineer.
 - 2) Inherent variations characteristic of the stone and the quarry from which the stone is to be obtained shall be brought to the attention of the Engineer at the time the samples are submitted for approval, and shall be subject to acceptance of the Engineer.
 - 3) All stone shall be selected for background color, veining, marking and matching, shall run in even shades, and shall be set accordingly.

9.95RCP.2.6. Accessory Materials for Setting

- A. Grout/Mortar: Materials for installing and grouting stone blocks and panels shall be Portland cement/sand mortar gauged with Latex Setting Liquid and Latex Admixture.
- 1) Portland Cement – as per the New York City Department of Transportation (NYCDOT), Standard Highway Specifications, Section 2.10, Type 1; white.
 - 2) Fine Aggregate for Mortar Bed: Type 2A as per NYCDOT Standard Highway Specifications, Section 2.21.
 - 3) Fine Aggregate for Grout: Type 2A as per NYCDOT Standard Highway Specifications, Section 2.21. Color as required, to match grout color as approved by Engineer.
 - 4) Pigments: Commercial iron oxide, manganese dioxide, ultramarine blue, or chromium oxide, suitably compounded for use in mortar mixes. Do not exceed pigment-to-cement ratios, by weight of 1-to-35 for carbon black and 1-to-7 for other pigments.
 - 5) Latex Additives: As manufactured by Laticrete International or Boiardi, provide Laticrete 4237 or Boiardi 753 Setting Liquid and Laticrete 3701 or Boiardi 150 grout and mortar admixture or approved equal. Installation shall be in strict accordance with manufacturer's instructions.
 - 6) Water: Potable, clear and free of deleterious materials which would impair the quality of the mortar.
- B) Reinforced Mesh: Where required, it shall be 2" x 2" x 16 gage welded galvanized reinforcing mesh.

- C) Sealant: Sealant and related materials shall conform to the following:
- 1) For joint filler provide closed cell extruded neoprene gasket conforming to ASTM C 509, Grade 4, black.
 - 2) Sealant: Two (2) part self-leveling polyurethane sealant complying with ASTM C 920, Type M, Class 25, Grade P&NS, equal to Sikaflex-2c NS/SL made by Sika Chemical Co., or approved equal made by Tremco or Pecora. Color of sealant shall be black, as approved by the Engineer.
 - 3) Back-up rod shall be manufactured by DOW Chemical Company, Midland, MI; DAP Products, Baltimore, MD; Tremco Commercial Sealants and Waterproofing, Beachwood, OH; or approved equal.
 - 4) Select joint primer as recommended by Sealant manufacturer.
- D) Stainless Steel: Stainless steel for anchors, supports, plates and fasteners at curbs and benches:
- 1) Pipe: ASTM A 312, Grade TP 304.
 - 2) Sheet, Strip, Flat Bar and Plate: ASTM A 666, Type 304.
 - 3) Tubing: ASTM A 554, Grade MT 304.
 - 4) Castings: ASTM A 743A, Grade CF 8 or CF 20.
 - 5) Bars and Shapes: ASTM A 276, Type 304.

9.95RCP.3. METHODS

9.95RCP.3.1. Fabrication

- A) All stone shall be well-cured and seasoned before cutting. Cut stone units with bed, unless otherwise approved by the Engineer.
- B) Stone shall be accurately cut to sizes, shapes, profiles and dimensions. There shall be no deviation from jointing.
- C) Exposed surfaces and edges of stone units shall be free from cracks, broken corners, chipped edges, scratches, or other defects affecting appearance. Patching or filling not permitted.
- D) The use of stone with chipped edges or faces shall not be permitted.
- E) Cut stone units full and true on faces, reveals, beds, joint and top, to the full dimensions required by drawings. All edges shall be straight and true with sharp and true arrises. All stone shall fit together accurately.
- F) Make faces of stone units in same plane flush at joints. All finished surfaces shall be true in line and face.
- G) Sawn surfaces and edges shall be cleaned of all rust stains and iron particles.
- H) Cut stone to allow for uniform 1/8" wide joints, or as otherwise noted on the Contract Drawings.
- I) Provide holes and sinkages required to accommodate anchors and other items which connect to or penetrate the stone.
- J) Include all cutting, drilling, and fitting of stonework required to accommodate the work of other trades. In cutting and fitting, carefully cut and grind edges to a

neat tight fit. Do cutting in such a manner so as not to impair strength or appearance of stone. Use physical templates for all cutting and drilling; obtain required templates from proper trades.

9.95RCP.3.2. Inspection and Coordination

- A) Inspection: Examine the areas and conditions where benches are to be installed. Notify the Engineer of any conditions detrimental to the proper installation and subsequent use, and timely completion of the work. Do not proceed with the work until unsatisfactory conditions are corrected to permit proper installation of the work. Verify in writing.
- B) Coordination: Coordinate the work of this Section to accommodate and fit work of other trades. Furnish or obtain, as applicable, templates and drawings to or from applicable trades for proper coordination of this work.

9.95RCP.3.3. Preparation

- A) Etch concrete substrate with 10% solution of muriatic acid as may be required to remove curing compounds or other substances that would interfere with proper bond of mortar. Rinse with water to remove all traces of acid.
- B) Seal substrate with sealer as recommended by manufacturer of mortar.

9.95RCP.3.4. Installation Tolerances

- A) Tolerances: All work of this Section shall be plumb, square, level, true to radius and correctly aligned within the following limitations:
 - 1) Offset from true horizontal, vertical and design location shall not exceed 1/8" per ten (10) feet of length for any component, not cumulative.
 - 2) Maximum offset from true alignment between abutting components shall not exceed 1/16".

9.95RCP.3.5. Control

- A) Mock-up: Prior to general installation of this work, install a section of the stone paving and curbs (used as "control section") in accordance with final approved shop drawings. Engineer shall be informed of time and place of such installation of control section. Obtain Engineer's acceptance of visual qualities of control section before start of general installation. Replace unsatisfactory work, as directed, until acceptable to the Engineer. Retain control section during construction as a standard for judging completed work. Do not alter, move or destroy control section unless directed by the Engineer.

9.95RCP.3.6. Setting of Granite

- A) Application: Preparation of Subbase: Clean concrete subbase to remove dirt, dust, debris, film or curing compound, and loose particles. Saturate concrete subbase with clean water several hours before placing setting bed. About one hour prior to placing mortar bed, remove surface water. Mortar bed shall consist of the following quantities:
 - 1) Mortar Bed
 - a) 1 bag Portland Cement
 - b) 100 lb. Fine Aggregate (Type 2A, per Section 2.21)
 - c) 5 gal. Latex Setting Liquid (adjust quantity to proper consistency)

- 2) Joint Grout Mix
 - a) 1 bag Portland Cement
 - b) 3 cu. ft. Fine Aggregate (Type 2A, per Section 2.21)
 - c) 3 gal. Latex Admix (adjust quantity to proper consistency).
- B) Setting
 - 1) The prepared mortar shall be spread to the desired thickness. The mortar shall be rodded and compacted with a steel trowel.
 - 2) Before placing the stone on a green or wet screed bed, a slurry coat shall be applied to the mortar bed using a flat trowel. Thickness of the bond coat shall be approximately 1/16". In addition, a skim coat shall be applied to the back of each stone, just prior to placing on the bed.
 - 3) Stone shall be placed in the wet slurry coat before the surface dries. Uniform joints shall be maintained with a nominal width of 1/8".
 - 4) After each piece is laid, it shall be beat in with a wooden block or rubber mallet to level the surface and embed the stone. Bearing shall be done before mortar takes initial set.
- C) Mortar Joints: Unless otherwise noted, joints are 1/8" wide typically. After all stone units have been set and setting bed is thoroughly cured, brush all 1/8" wide joints clean. Thoroughly wet raked out portion of joints and then fill solid with joint mortar of approved color to match stone. Mortar shall be placed relatively dry and tooled in layers. Finished profile shall be slightly recessed. Grouting of joints as done in tile work is not permitted. Every effort must be made to keep mortar off stone face including applying masking tape to prevent staining of adjacent stone surfaces in continuous strips in alignment with joint edge. Remove tape immediately upon grout having achieved its finish set.
- D) Joint Treatment for Joints to Receive Sealant
 - 1) All exterior control joints as noted on the drawings and all joints in base work shall receive back-up fillers and sealant as specified herein.
 - 2) General: Install all sealant in strict accordance with manufacturer's recommendations as approved by the Engineer.
 - a) Apply sealant under pressure with a hand or power actuated gun or other appropriate means. Guns shall have nozzle of proper size and provide sufficient pressure to completely fill joints as detailed. Neatly point or tool all joints to provide the contour as indicated on the drawings.
 - b) For application of sealant when air temperature is below 40°F., consult sealant manufacturer for recommendations.
 - 3) Preparation: Thoroughly clean all joints, removing all foreign matter such as dust, oil, grease, water, surface dirt and frost. Sealant must be applied to the base surface. Previously applied paint or film must be entirely removed.

4) Application

- a) Install back-up material and joint filler, of type and size specified, using a blunt instrument so as not to puncture the surface skin, at proper depth in joint to provide sealant dimensions as detailed. Provide back-up material of suitable size and shape so that, when compressed (25 to 50%) it will fit in joints as required. Sealant shall not be applied without back-up materials, and, if necessary, bond breaker strip. When using back-up of rod stock, roll the material into the joint to avoid lengthwise stretching. Rod stock shall not be twisted or braided.
 - b) Apply masking tape, where required, to prevent staining of adjacent stone surfaces, in continuous strips in alignment with joint edge. Remove tape immediately after joints have been sealed and tooled as directed.
 - c) Prime surfaces of all stone to receive sealant.
 - d) Apply, tool and finish sealant as required. When tooling light colored sealants, use dry tool or tooling solution recommended by sealant manufacturer.
 - e) Clean adjacent surfaces free of sealant or soiling resulting from this work as work progresses. Use solvent or cleaning agent as recommended by sealant manufacturer. All finished work shall be left in a neat, clean condition.
 - f) Sealants shall be applied in such a manner as to completely fill the joint.
 - g) All sealants shall be tooled to insure complete filling of the joint to eliminate air pockets and voids and to insure positive adhesion of the sealant with the bonding surfaces.
 - h) All joints shall be neatly finished.
- E) Cleaning: Excess material shall be cleaned from the stone surface with water immediately as the work progresses. Cleaning shall be done while mortar is fresh and before it hardens on the surface. Difficult to clean cement film or mortar shall be removed from the finished work using TC-50 Cleaner made by Laticrete, or approved equal, and a nylon buffing pad.

9.95RCP.3.7. Repairing After Installation

Remove and replace stone units which are broken, chipped, stained, or otherwise damaged. Where directed, remove and replace units which do not match adjoining stonework. Patching or hiding defects in granite will not be permitted. Provide new matching units, install as specified and reseal joints to eliminate evidence of replacement. Reseal defective and unsatisfactory joints to provide a neat, uniform appearance.

9.95RCP.3.8. Protection

- A) After installation and cleaning, protect stonework from damage during subsequent construction activities.
- B) Protect all stonework from other materials that will cause stain. Stone subject to damage after setting shall be properly covered or protected.
- C) At completion of construction work, remove all temporary protection from the work of this Section.

- D) Examine all work and repair all damage. Clean soiled or stained surfaces. In the event damage is irreparable, or soiled or stained surface cannot be cleaned, then remove and replace such items at no additional cost to City.

9.95RCP.4. MEASUREMENT

- A) Black Granite Planter Bench Blocks
The quantity to be measured for payment shall be the number of linear feet of 24" wide new planter block that has been satisfactorily installed at the site, measured in place along the centerline of bench blocks.
- B) Black Granite Fountain Blocks
The quantity to be measured for payment shall be the number of square feet of fountain block that has been satisfactorily installed at the site, measured in place.
- C) Black Granite Pass-through Sloping Pavers
The quantity to be measured for payment shall be the number of square feet of new sloping planter pavers that has been satisfactorily installed at the site, measured in place.

9.95RCP.5. PRICES TO COVER

- A) Black Granite Planter Bench Blocks
The contract price bid shall be a unit price per LINEAR FOOT of new planter bench blocks and shall include the cost of all labor, materials, plant, equipment, insurance, and incidentals to furnish and install new planter blocks including, but not limited to, the cost of furnishing and installing the mortar joints, joint sealant and accessories; all in accordance with the Contract Drawings, Specifications and the direction of the Engineer.
- B) Black Granite Fountain Blocks
The contract price bid shall be a unit price per SQUARE FOOT of new fountain block and shall include the cost of all labor, materials, plant, equipment, insurance, and incidentals to furnish and install new fountain block including, but not limited to, the cost of furnishing and installing the mortar joints, joint sealant and accessories; all in accordance with the Contract Drawings, Specifications and the direction of the Engineer.
- C) Black Granite Pass-through Sloping Pavers
The contract price bid shall be a unit price per SQUARE FOOT of new sloping planter pavers and shall include the cost of all labor, materials, plant, equipment, insurance, and incidentals to furnish and install new sloping planter pavers including, but not limited to, the cost of furnishing and installing the mortar joints, joint sealant and accessories; all in accordance with the Contract Drawings, Specifications and the direction of the Engineer.

Payment will be made under:

Item No.	Item	Pay Unit
9.95 RCP-BB	BLACK GRANITE PLANTER BENCH BLOCKS	L.F.
9.95 RCP-FB	BLACK GRANITE FOUNTAIN BLOCKS	S.F.
9.95 RCP-PP	BLACK GRANITE PASS-THROUGH SLOPING PAVERS	S.F.

**SECTION 9.95 RCP-SGP
SPECIAL GRANITE PAVERS**

9.95RCP-SGP.1. DESCRIPTION

Under this section the Contractor shall furnish and install the special granite pavement on a concrete slab in accordance with the Contract Drawings, the Specifications and the directions of the Engineer.

9.95RCP-SGP.2. MATERIALS

The materials under this section shall comply with the requirements of Subsection 9.95RCP.2. in this Addendum No. 1, with the following modifications:

9.95RCP-SGP.2.1. Qualify Assurance

Quality Assurance under this section shall comply with the applicable requirements of Subsection 9.95RCP.2.1. in this Addendum No. 1.

9.95RCP-SGP.2.2. Submittals

Submittals under this section shall comply with the applicable requirements of Subsection 9.95RCP.2.2. in this Addendum No. 1.

9.95RCP-SGP.2.3. Delivery, Storage and Handling

Delivery, Storage and Handling under this section shall comply with the applicable requirements of Subsection 9.95RCP.2.3. in this Addendum No. 1.

9.95RCP-SGP.2.4. Job Conditions

Job Conditions under this section shall comply with the applicable requirements of Subsection 9.95RCP.2.4. in this Addendum No. 1.

9.95RCP-SGP.2.5. Products: Granite

- A) Manufacturers: Granite shall be equal to Absolute Black as manufactured by the following:
- 1) Worldwide Marble & Granite, 234 Banker Street, Brooklyn, NY, Phone: (718)389-8360;
 - 2) Stone Source, 215 Park Avenue South New York, NY, Phone: (866) 271-8722;
 - 3) LMD Partners, Inc., 41 Box Street, Brooklyn, NY, Phone: (917) 843-4046;
 - 4) or approved equal.
- B) Finish: Granite shall have a 'flamed' finish on all exposed surfaces, unless otherwise noted on the drawings. The finish shall be a non-slip surface (static coefficient of friction when wet: 0.60in.lb. per ASTM C 1028.) Concealed surfaces may be sawn. Edges to receive grout or sealant shall be sawn.
- C) Thickness: Stone shall be 3" thick as approved by Engineer.
- D) Quarrying, Examinations, Visual Criteria for Stone, Physical Properties under this section shall comply with the applicable requirements of Subsections 9.95RCP.2.5.D) through G) in this Addendum No. 1.

9.95RCP-SGP.2.6. Bituminous Setting Bed

The materials for the bituminous setting bed for the pavers under this section shall comply with the applicable requirements of Subsection 6.47RCP.2.7. in this Addendum No. 1.

9.95RCP-SGP.2.7. Neoprene-Modified Asphalt Adhesive

The materials for the neoprene-modified asphalt adhesive for the pavers under this section shall comply with the applicable requirements of Subsections 6.47RCP.2.8. in this Addendum No. 1.

9.95RCP-SGP.2.8. Sand

Sand shall be Type IA in accordance with Section 2.21 of the Standard Highway Specifications.

9.95RCP-SGP.3. METHODS

9.95RCP-SGP.3.1. Fabrication

The methods of fabrication for the pavers under this section shall comply with the applicable requirements of Subsection 9.95RCP.3.1. in this Addendum No. 1.

9.95RCP-SGP.3.2. Inspection and Coordination

The methods of inspection and coordination for the pavers under this section shall comply with the applicable requirements of Subsection 9.95RCP.3.2. in this Addendum No. 1.

9.95RCP-SGP.3.3. Preparation

The methods of preparation for the pavers under this section shall comply with the applicable requirements of Subsection 9.95RCP.3.3. in this Addendum No. 1.

9.95RCP-SGP.3.4. Installation Tolerances

The installation tolerances for the pavers under this section shall comply with the applicable requirements of Subsection 9.95RCP.3.4. in this Addendum No. 1.

9.95RCP-SGP.3.5. Control

The methods of Control for the pavers under this section shall comply with the applicable requirements of Subsection 9.95RCP.3.5. in this Addendum No. 1.

9.95RCP-SGP.3.6. Placing Bituminous Setting Bed

The preparation for and installation of the bituminous setting bed for the pavers under this section shall comply with the applicable requirements of Subsection 6.47RCP.3.1. in this Addendum No. 1.

9.95RCP-SGP.3.7. Installation of Pavers

The methods of installation for the pavers under this section shall comply with the applicable requirements of Subsection 6.47RCP.3.2. in this Addendum No. 1.

9.95RCP-SGP.3.8. Joint Treatment

The methods of joint treatment for the pavers under this section shall comply with the applicable requirements of Subsection 6.47RCP.3.5. in this Addendum No. 1.

9.95RCP-SGP.3.9. Repairing and Protection

The repairing protection after installation of the pavers under this section shall comply with the applicable requirements of Subsections 9.95RCP.3.7. and 9.95RCP.3.8. in this Addendum No. 1.

9.95RCP-SGP.4. MEASUREMENT

FURNISH AND INSTALL SPECIAL GRANITE PAVERS

The quantity to be measured for payment shall be the number of square feet of special granite pavers satisfactorily installed at the site, measured in place.

9.95RCP-SGP.5. PRICES TO COVER

FURNISH AND INSTALL SPECIAL GRANITE PAVERS

The contract price bid to Furnish and Install Special Granite Pavers shall be a unit price per SQUARE FOOT and shall cover the cost of all labor, materials, plant, equipment, insurance, and incidentals necessary to furnish and install special granite pavers including, but not limited to, the cost of furnishing and installing the bituminous setting bed, neoprene-modified asphalt adhesive, and joint filler; all in accordance with the Contract Drawings, the specifications and the directions of the Engineer.

Payment for the concrete base will be made under the Item 4.04 BP.

Payment will be made under:

Item No.	Item	Pay Unit
9.95 RCP-SGP	FURNISH AND INSTALL SPECIAL GRANITE PAVERS	S.F.

SECTION NYC-683.940111 – SERVICE BOX

DESCRIPTION: This work shall consist of furnishing and installing service boxes at the locations designated in the contract documents or as directed by the Engineer with the exact placement to be determined in the field by a Consolidated Edison service representative. Service boxes shall be used as the demarcation point between electrical cabling installed by Consolidated Edison and cabling installed by the Contractor.

MATERIALS: Each service box shall meet the requirements detailed in Consolidated Edison Drawing E0-16736-B Rev 0 as specified in the Consolidated Edison "Blue Book" that is available on-line at <http://www.coned.com/es/specs/electric/Section%20XV%20-%20EO-16736-B.pdf>. In addition to the requirements contained in the drawing, a minimum of four penta-bolts shall be provided for the attachment of the cover to the frame and a means shall be provided for the bonding of the cover in accordance with Article 314.30(D) of the National Electric Code. The cover shall contain the legend specified in these contract documents.

CONSTRUCTION DETAILS: The service box shall be installed at the locations indicated in the contract documents. The Contractor shall, however, coordinate the location with the Consolidated Edison field representative prior to starting work. The Consolidated Edison field representative has the right to request a change in the location. Any requests for relocation shall be confirmed with the Engineer prior to starting work.

Excavations for the service box shall be performed in accordance with the requirements of §206-3, *Construction Details for Trench, Culvert and Structure Excavations* of the NYSDOT Standard Specifications, and the cost shall be deemed included under this Item NYC-683.940111.

Frames and covers shall be furnished and placed on each property line box. A ground rod shall be furnished and installed in accordance with the details on the standard sheets. The frames and covers shall be bonded in accordance with the NEC. Frames and covers that do not fit together, are warped or rock will be rejected by the Engineer. Any material rejected by the Engineer shall be removed from the site by the Contractor.

METHOD OF MEASUREMENT: Service boxes will be measured for payment as the number of units installed to the satisfaction of the Engineer.

PRICE TO COVER: The unit price bid for each service box, consisting of both a frame and cover, shall include the cost of all excavation, backfill, frames, covers, labor, equipment, insurance, and other materials and incidentals necessary to complete the work; all in accordance with the Contract Documents and the directions of the Engineer.

Payment will be made under:

Item No.	Item	Pay Unit
NYC-683.940111	SERVICE BOX	EACH

SECTION PK-124C7
Catch Basin (DPR Type C-7)

PK-124C7.1. INTENT. This section describes the furnishing and installation of NYC Department of Parks and Recreation Standard Catch Basin and all its components as part of this project, as shown on the Contract Drawings and as directed by the Engineer.

PK-124C7.2. DESCRIPTION. Under this Item, the Contractor shall furnish, build, and install a catch basin, including, but not limited to, concrete structures, reinforcement, brick masonry/mortar, ladder rungs, hoods, and connecting pieces; all in accordance with the Contract Drawings, the specifications and directions of the Engineer. All incidental work to complete the structures, including plastering and joining of NYCDPR standard catch basin structures and its components, excavation, backfill, backfill material, and temporary support as required shall be included under this item.

PK-124C7.3. MATERIALS.

Concrete Base: Concrete shall comply with the requirements of NYCDEP General Specification 11 – Concrete, as modified in Section 2.15 of the NYCDEP Standard Sewer Specifications. Concrete shall be Class 40, 4,000 psi, non-air entrained.

Precast Concrete: The use of factory precast concrete drainage structures may be substituted for brick masonry at no additional cost to the City. If precast concrete is to be used, concrete shall be Class 40, and precast unit shall meet or exceed AASHTO HS-20 loading.

Precast concrete structures shall be manufactured by:

- 1) Binghamton Precast, Binghamton, NY
- 2) Oldcastle Precast, Selkirk, NY
- 3) Precast Concrete Sales Company, Valley Cottage, NY
- 4) or approved equivalent.

Brick Masonry: Brick masonry set in cement mortar shall be used to adjust frames to final grades as directed by the Engineer, and shall be used to construct the walls of the catch basin structure as per Contract Drawings if optional precast concrete structure is not to be used. Brick and brick masonry shall comply with the requirements of Section 2.16 of the NYCDEP Standard Sewer Specifications.

Cement mortar: Cement mortar shall comply with the requirements of Section 2.17 of the NYCDEP Standard Sewer Specifications. Mortar shall consist of sand mixed with Portland Cement, water, and additives, when required in definite proportions so as to produce a stiff mixture. Proportions shall be in accordance with General Specification 11 – Concrete, as modified in Section 2.15.

All bricks used in the work shall be new, sound, and hard burned throughout, and of uniform size and quality. If required, the brick shall be culled immediately after they are brought up on the work, and all bricks which are warped, cracked, or of improper quality shall be removed. The proportion of bats permitted will be determined according to the character and location of the work in which they are to be used.

Reinforcement: Steel bar reinforcement and dowels shall be provided as shown on the plans, or as ordered by the Engineer. Rebars shall be Type I Grade 60 and shall conform to Section 2.19 of the NYCDEP Standard Sewer Specifications.

Ladder Rungs: Ladder rungs for catch basins and manholes shall be constructed of wrought iron and shall be hot-dipped galvanized after bending. If precast concrete drainage structure is to be used in lieu of masonry structure, ladder rungs for precast drainage structures may be constructed of copolymer polypropylene plastic, as manufactured by M.A. Industries, (404) 487-7761, or approved equal, at no additional cost to the City.

Hoods: Cast iron hood, hook, and wall plate shall be by Campbell Foundry No. 2561 or approved equal.

Frames: Cast iron frame shall be by Campbell Foundry No. 41260018 or approved equal.

Cast iron ladder rungs, hoods and frames shall be manufactured by:

- 1) Campbell Foundry, Harrison, NJ
- 2) Neenah Foundry, Neenah, WI
- 3) Syracuse Castings, Syracuse, NY
- 4) or approved equivalent.

Grates: Covered under separate pay item, RCP-DG1.

PK-124C7.4. SUBMITTALS. Contractor shall submit the following for Engineer's approval:

- 1) Shop drawings, drill sheets, and submittals for DPR standard catch basins, to include all invert elevations and material meeting the requirements specified.
- 2) Product data and installation details for:
 - a. Ladder rungs
 - b. Hood
 - c. Frame
- 3) Certifications for concrete mix, and masonry bricks meeting or exceeding the specified requirements.

PK-124C7.5. METHOD.

Recommended installation:

- 1) Excavate trench depth to proposed catch basin bottom. Refer to Contract Drawings for structure depth.
- 2) Lay concrete base as indicated on Contract Drawings.
- 3) Lay bricks as per Contract Drawings with 1/2" plaster and 1:2 cement mortar. Bricks shall be satisfactorily wet when being laid, and each brick shall be laid in cement mortar so as to form full bed, end and side joints at one operation. The joints shall not be wider than three-eighth inch (3/8"), except when the bricks are laid radially, in which case the narrowest part of the joint shall not exceed one quarter inch (1/4"). The bricks shall be laid in a workmanlike manner true to line and wherever practicable, the joint shall be carefully struck and pointed on the inside. Brick work shall be laid with a satisfactory bond and as it progresses, shall be racked back in course, unless otherwise permitted. (All fresh brickwork shall be carefully protected from freezing and from drying effects of the sun and wind, and, if required, shall be sprinkled with water at such intervals and for such time as may be directed. Brickwork shall be protected from injuries of all sorts, and

all portions which may become damaged or may be found defective shall be repaired, or if directed, to be removed and rebuilt to the satisfaction of the Engineer.)

- 4) When using precast concrete drainage structure as a substitute for the masonry structure, the Contractor accepts full and complete responsibility for the location of knock-out holes that allow for the entrance of drainage pipes. All pipe invert dimensions shall be verified in the field by the Contractor prior to ordering precast drainage structures. No additional compensation shall be paid by the City of any discrepancies that may occur.
- 5) Provide pipe connections and catch basin hoods as indicated on Contract Drawings.
- 6) Grout bricks in precast slab at the job site as indicated in Contract Drawings.
- 7) Provide full bed of cement mortar and bricks as necessary for frame casting.
- 8) Provide cast iron frame. Frames shall be adjusted to the final grades by the use of cement mortar or brick masonry set in cement mortar as directed by the Engineer.
- 9) The Contractor must coordinate the installation of the custom grating and frame. The custom grate is accounted for in Item RCP-DG1.

PK-124C7.6. MEASUREMENT. The quantity of NYCDPR Standard Catch Basins to be measured for payment under this Item shall be the number of catch basins, as indicated in the Contract Drawings, actually installed, in place, to the satisfaction of the Engineer.

PK-124C7.7. PRICE TO COVER. The price bid shall be a unit price for each NYCDPR Standard Catch Basin furnished and installed as shown on the Contract Drawings and shall include the cost of all labor, materials, equipment, insurance, and incidentals necessary to complete the work, including, but not limited to, furnishing and installing catch basin concrete structures, reinforcement, brick masonry/mortar, ladder rungs, hoods, frame and connecting pieces, the cost of excavation, backfilling, furnishing and placing all backfill material, sheeting and bracing, and temporary support, as required,; all in accordance with the Contract Drawings, the specifications and directions of the Engineer.

The is included in this Item.

Payment will be made under:

Item No.	Item	Pay Unit
PK-124C7	CATCH BASIN (DPR TYPE C-7)	EACH

**SECTION PK-12D
2" DIAMETER WATER TAP**

PK-12D.1 DESCRIPTION: Under this Item, the Contractor shall obtain permits from the New York City Department of Environmental Protection, and install water tap(s) of the size(s) specified at existing New York City water mains where shown on the plans.

PK-12D.2 PERMIT: The Contractor shall employ a licensed Certified Master Plumber to obtain a permit from the New York City Department of Environmental Protection, Bureau of Water Supply and Wastewater Collection, Tapping Division, hereinafter referred to as D.E.P.

PK-12D.3 MATERIALS & EXECUTION: The Contractor shall notify the Engineer and the D.E.P. three (3) days prior to intended date of work. All sawcutting, excavation, installation of water tap, and restoration of street pavement (where applicable) shall be performed in accordance with D.E.P. and New York City Department of Transportation requirements.

Included under this item, the Contractor shall abandon, disconnect, cap, or plug any existing water service from the existing water main in accordance with the regulations of the Bureau of Water Supply, whether or not the existing service is in approximately the same location as the new water service, wet connection, or water tap.

All materials necessary for the installation of the tap(s) will be furnished by the D.E.P. and shall be paid for by the Contractor.

PK-12D.4 MEASUREMENT AND PAYMENT: The quantity of WATER TAP to be paid for shall be the number of water taps installed to the satisfaction of the Engineer.

The price bid shall be a unit price for EACH water tap and shall include the cost of all labor, materials, equipment, insurance, and incidental expenses including, but not limited to, the cost of permits and the amounts paid to the D.E.P. necessary to complete the work; all in accordance with the plans, the specifications and the directions of the Engineer.

No additional payment will be made for disconnection and abandonment of the existing wet connection or water/tap, as may be necessary, the cost of which shall be deemed included under this item.

Excavation, Sawcutting, and Restoration of Street Pavement (where applicable) will be paid under separate items.

Payment will be made under:

Item No.	Item	Pay Unit
PK-12D	WATER TAP, 2" DIAMETER	EACH

**SECTION PK-13
TYPE "K" COPPER TUBING**

PK-13.1. DESCRIPTION: Under this section the Contractor shall furnish, install and connect the water pipe of the size shown in accordance with the plans, specifications and directions of the Engineer.

PK-13.2. MATERIALS.

- (A) PIPE: The water service pipe shall be rigid hard temper type "k" copper tubing in straight lengths meeting the specification for ASTM B 88.
- (B) FITTINGS: Fittings shall be approved wrought copper and bronze solder - joint pressure fittings (ANSI B 16.22), Di-Electric fittings as required.
- (C) JOINTS: Joints shall be made by soldering, using 95-5 tin antimony solder. From the curb valve to the water tap, joints shall be of the "flared" type.

PK-13.3. METHODS.

(A) INSTALLATION:

The pipe shall be laid true to line and grade with a cover as indicated on the plans or as directed by the Engineer. When the foundation is good firm earth, the earth should be pared or molded to give a full support and if necessary a layer of fine sand or other suitable material should be placed. The same means of securing firm foundation should be adopted in case the excavation has been made deeper than necessary, in which case the Contractor shall furnish the gravel at his own expense.

Where the bottom of the trench is in rock, fresh fill, soil of low bearing power or other situations where special foundations are required, the Contractor shall provide such foundation in accordance with the written order of the Engineer. The work shall be paid for at the unit prices bid for the materials used in the work.

(B) TESTS:

The Contractor shall not backfill over any pipe until ordered by the Engineer. The pipe system shall be tight and show no leaks when filled with water, sealed and subjected to an internal hydrostatic pressure of 100 psi for thirty minutes. Temporary caps shall be placed where required to permit making the tests where valves are not available. The tests shall be made in the presence of the Engineer or his representative.

PK-13.4. MEASUREMENT: The quantity of TYPE 'K' COPPER TUBING to be paid for under these items shall be the number of linear feet (laying length) of each size tubing incorporated in the work to the satisfaction of the Engineer, measured along the centerline of the tubing.

PK-13.5. PRICES TO COVER. The price bid for each size of Type K Copper Tubing shall be unit price per linear foot and shall include the cost of all labor, materials, equipment, insurance, and incidental expenses necessary to complete the work including, but not limited to, furnishing and installing tubing, fittings and fine gravel; all in accordance with the plans, the specifications, and the directions of the Engineer.

Excavation, water tap and restoration will be paid for under other items.

Payment will be made under:

Item No.	Item	Pay Unit
PK-13D	TYPE K COPPER TUBING, 1" DIAMETER	L. F.
PK-13F	TYPE K COPPER TUBING, 2" DIAMETER	L. F.

**SECTION PK-143 RCP
TWO REDUCED PRESSURE ZONE DEVICES & ONE WATER METER
WITH REMOTE & STRUCTURE - 2" DIA.**

PK-143 RCP.1 DESCRIPTION

Under this section the Contractor shall provide all labor, materials and equipment necessary or required to furnish and install to the following:

- (A) Two Reduced Pressure Zone (RPZ) devices, also known as a Backflow Preventers; these devices will be installed within ONE enclosure
- (B) One Water Meter W/ Remote Reader shall include Water Meter, Water Meter Strainer and Automatic Reading & Billing System (also known as Remote Reading Device);
- (C) All piping, fittings, valves, test tee, and test tee valve, if required and other incidentals necessary to complete plumbing work and connection to water service and water feed lines in accordance with the plans, specifications, and directions of the Engineer;
- (D) Provide a vandal resistant meter pit and valve boxes;
- (E) Above ground RPZ enclosure (one enclosure for both RPZ devices)
- (F) Coordinate with electrical service to provide proper power supply to controller, valves, heat systems, etc.; and
- (G) Provide labor for winterizing the system for the first winter after the system is operational and accepted by the City.

Note that Pipe Tracing of the water meter, backflow preventer, piping and all equipment are NOT part of this Item. Pipe Tracing is included in Item RCP-PL1 under Section P220700.

PK-143 RCP.2 SUBMITTALS

Shall be submitted in accordance with the requirements of the **General Conditions, Section 1.06.**

- (A) **SHOP DRAWINGS**
The Contractor shall submit Shop Drawings when required, in accordance with the requirements of the **General Conditions, Section 1.06.13**, of the Standard Highway Specifications. A shop drawing is required showing installation of the complete RPZ assembly, water meter, piping, pipe supports, and the precast concrete structures.
- (B) **CATALOG CUTS**
The Contractor shall submit Catalog Cuts of the RPZs, water meter, meter reading system, control valve, and all connected piping for approval prior to installation.
- (C) **CERTIFICATIONS:**
The Contractor shall be responsible for obtaining all certifications necessary to comply with the NYC Bureau of Water Supply & Wastewater Collection, Cross Connection Control Unit & the NYS Dept. of Health (D.O.H.) regulations for R.P.Z.'s (after installation), including Certification by Backflow Prevention Device Tester; Certification of Master Plumber responsible for the R.P.Z. installation, and a Professional Engineer's or Registered Architect's Certification that the installation is in accordance with the approved Plans. The Contractor shall prepare and submit copies of N.Y.S.D.O.H. Form Gen. 215B to the NYS Dept. of Health & NYC Cross Connection Control Unit of the Bureau of Water Supply & Wastewater Collection. Contractor shall provide Engineer with three additional copies of all such submittals for submission to agency responsible for future maintenance. In summation, the Contractor shall be held completely

responsible to ensure that all Work is in compliance with N.Y.S. D.O.H., Form Gen. 215B.

PK-143 RCP.3 MATERIALS.

All materials shall be high quality, industry standard and capable of meeting the performance requirements stated herein. All "or approved equivalent" proposals will be reviewed by the Engineer for acceptability. Submittal of "or approved equivalent" specifications does not guarantee acceptance of the product. All product acceptance will be made in writing.

All materials throughout the system shall be new and in perfect condition, made from corrosion-resistant materials when subjected to weather conditions, and supplied from an "authorized" dealer servicing the Metropolitan New York area, in order to assure prompt warranty repair and/or replacement. After award of the Contract, and prior to beginning the work, the Contractor shall submit for approval two copies of the complete list of materials which he proposes to furnish and install. Quantities of materials and equipment need to be included. No deviations from the specifications shall be allowed.

(A) PRECAST CONCRETE STRUCTURES

Enclosure structures for the water meter shall be as manufactured by one of the following manufacturers, or approved equivalent:

- 1) A.C. Miller Concrete Products Inc., 31 E. Bridge Street, Spring City, PA 19475;
- 2) Kistner Concrete Products Inc., 8713 Read Road, P.O. Box 218, East Pembroke, NY 14056;
- 3) Oldcastle Precast, 114 Rocky Point Road, Middle Island, NY 11953.

(B) CONCRETE

All concrete shall comply with **Section 3.05** of the Standard Highway Specifications, except that compressive strength shall be 5,000 psi at 28 days. All precast concrete shall have a honed finish. The precast concrete shall be well cured, shall be dense and shall have good edges. The cement and aggregate shall be thoroughly mixed in a proportion of one (1) part Portland Cement to not over six (6) or less than four (4) parts of aggregate. The aggregate fine and course shall conform to ASTM C 33. Aggregate shall be free of all deleterious substances which cause reactivity with oxidized hydrogen sulfides. Aggregate shall be graded to produce a homogeneous concrete mix.

(C) REINFORCEMENT

Steel reinforcement shall comply with **Section 4.14** of the Standard Highway Specifications. Reinforcement shall be placed as shown on the drawings.

(D) LADDER RUNGS

Ladder rungs for each water meter structure shall be constructed of copolymer polypropylene plastic, as manufactured by one of the following manufacturers, or approved equivalent:

- 1) M.A. Industries, 303 Dividend Drive, Peachtree City, GA 30269;
- 2) American Step Company, P.O. Box 137, 830 East Broadway, Griffin, GA 30224;
- 3) Parson Environmental Products, Inc., P.O. Box 4474, Reading, PA 19606.

(E) RPZs' ABOVE GROUND ENCLOSURE

RPZs' above ground enclosures shall be as manufactured by one of the following manufacturers, or approved equivalent:

- 1) HotBox, 924 Lane Avenue, Jacksonville, FL 32254;
- 2) Hydrocowl Inc., 2710 Landers Avenue, Nashville, TN 37211;
- 3) Dekorra Products LLC., PO Box, 338, 218 Hwy 16, Rio, WI, 53960.

(F) WATER METER STRUCTURE ACCESS DOOR

Access door shall be 36" x 30" size, heavy duty (H2O loading) high security color (brown) anodized aluminum access doors such as JustSet Doors, as manufactured by one of the following manufacturers, or approved equivalent:

- 1) Pennsylvania Insert Corp., 31 E. Bridge Street, P.O. Box 199 Spring City, PA 19475;
- 2) Babcock-Davis, 9300 73rd Avenue, N. Brooklyn Park, MN 55428;
- 3) The Bilco Company, P.O. Box 1203 New Haven, CT 06505.

Frame shall have integral drain channel, anchor flanges, and neoprene gasket. A one-and-one half inch drain (1-1/2") coupling shall be located on the corner of the frame. Operation shall be spring assisted for easy operation. A hold open arm shall automatically lock the door in the 90 deg. position. Hinge shall be heavy forged brass with a stainless steel pin. Door shall be provided with two locks. Lock shall be "Ford" lifter worm lock with waterworks bronze pentagonal bolt type "LL". All hardware shall be zinc or cadmium plated.

(G) CONSTRUCTION ACCESSORIES

Frames shall be 3/16" x 2" x 2" angle welded with joints ground smooth, after fabrication. Hinges shall be heavy duty and welded to door and frame.

(H) SECURITY BOLTS FOR RPZs' STRUCTURE

Security Bolts for RPZs' Structure shall be NYC DPR pattern # 83 registration # "116183", Part # H11777155, as manufactured by McGard, Orchard Park, N.Y. 14127, or approved equivalent. Threads for security bolts shall be at least one-third (1/3) bolt dia. for proper "bite". Vertical doors shall have two (2) security bolts; 7/16 - 20 x .750. Horizontal door for RPZ structure shall have four (4) security bolts; 7/16 - 20 x .750

(I) SECURITY BOLTS FOR WATER METER STRUCTURE HORIZONTAL DOOR

Security bolts for Water Meter Structure Horizontal Door shall be two (2) pentahead security bolts.

Special Design Criteria for Security Bolts:

- 1) Bolt must be made from alloy steel, heat treated to 150,000 psi tensile strength.
- 2) Head of bolt must be selectively hardened to Rc 60 min. to prevent the use of files, hacksaws, and chisels.
- 3) Bolt is to be made with either a flat or 120° cone seat as required.
- 4) Bolt will be torqued by means of a recessed curvilinear ("Daisy") groove in the top face of bolt head. A special mating key is required to operate in groove for installation and removal of bolt.
- 5) Bolts are to be zinc nickel plated in order to meet an ASTM B 368 C.A.S.S. test for 22 hours.
- 6) Bolt lengths are to be held to +/- .01".
- 7) Bolt threads are to be class UNC-2A.

(J) WATER PIPING

Shall be hard temper type 'K' copper tubing meeting the Department of General Services; Division of Municipal Supplies, Dept. of Purchase, Specification No. 32-T-1.64 and ASTM B 88. Fittings shall be approved wrought copper and bronze solder-joint pressure fittings (ANSI B 16.22).

(K) RPZs (2)

The RPZs (Reduced Pressure Principle Backflow Prevention devices) shall be C; Febco Model #825YA, Wilkins 975XL, Watts, 009QT, or approved equivalent. Size shall be as indicated above and on the Contract Drawings. The RPZ shall meet the requirements of American Society of Sanitary Engineers (ASSE) Standard 1013 & the American Water Works Association (AWWA) Standard Code 506-78.

Note that there are TWO (2) RPZ devices in this scope item. Each should be provided from the same manufacturer.

Each RPZ shall consist of two independently operating center guided, spring loaded, "Y" pattern check valves and one hydraulically dependent differential relief valve. Mainline valve body and caps including relief valve body and cover shall be bronze. Check valve and relief valve components shall be constructed so they may be serviced without removing the valve body from the line. Shut-off valves and test cocks shall be full ported resilient seated ball valves.

(L) METER OUTLET CONTROL VALVE (MOCV)

The MOCV shall be a Class 125, all bronze gate valve, with non-rising stem and solid disc, with screwed bonnet and threaded ends, manufactured by Stockham, Cullman, AL (Catalogue Figure B-103); American Valve, Greensboro, NC; Milwaukee Valve Company, New Berlin, Wisconsin; or approved equivalent. The MOCV shall be capped for testing. For testing the 1" dia. water meter, the first test port on the RPZ may be used.

(M) ELECTRICAL GROUNDING

For continuity of Electrical Grounding (during RPZ Maintenance) the Contractor is to furnish and install one (1) #2 tinned copper ground conductor and copper alloy ground connectors as per O-Z/Gedney, Rosemont, IL Type ABG for 1" & 1-1/2" dia. and CG for 2" dia. pipe. Alternative manufacturers are Penn-Union Corp., Edinboro, PA; Thomas & Bets Corporation, Memphis, TN; or approval equivalent. Ground work is to be done prior to any painting or insulation if needed.

(N) WATER METER

Water Meter shall be Neptune T-10, as manufactured by Schlumberger Industries Water Division, or ABB's C-700 as manufactured by ABB Water Meter, Inc., Oak, Florida, or approved equivalent. All water meters furnished shall conform to the "Standard Specifications for Cold Water Meters", AWWA Standard C700 latest revision.

Water meters shall consist of a bronze maincase with the serial number stamped on the maincase. Only displacement meters of the flat nutating disc type will be accepted for improved operation. The size, capacity and meter lengths shall be as specified in AWWA Standard C700, latest revision. The maximum number of disc nutations is not to exceed those specified in AWWA C700 latest revision to minimize premature wear.

(O) METER MAINCASE

All one (1") inch meter maincase shall be the removable bottom cap type with the bottom cap secured by six (6) bolts. Bottom caps shall be interchangeable, size for size, between frost-protected synthetic polymer or cast iron and non-frost protected (bronze) models. No meters utilizing frost plugs will be accepted. Non-frost protected meters shall have bronze or synthetic polymer bottom caps. The cross section of the bottom shall break clean when subjected to freezing pressure of 600-850 psi. All maincase bolts shall be of 300 series stainless steel to prevent corrosion. Bottom cap bolt lugs shall be enclosed in the maincase and shall not have externally exposed, threaded through holes. All one and one-half (1-1/2") inch and two (2") inch meters shall have a split design secured by bronze or stainless steel bolts.

(P) STRAINER

All meters shall contain removable polypropylene plastic strainer screens. The strainer shall be located near the inlet maincase port, before the measuring chamber and control block assembly.

(Q) REGISTER

The register shall be of the straight reading sealed magnetic drive type and shall contain six (6) numeral wheels. Registers must be sealed and dry. All direct reading register lenses shall be flat, of high strength, and impact resistant glass to prevent breakage. The dial shall be of the center sweep pointer type and shall contain 100 equally divided graduations at its periphery. The register must contain a low flow indicator with a 1:1 disc nutating ratio to provide leak detection. Register boxes shall be bronze.

All meters must be adaptable to digital encoder register without interruption of the customer's service for the purpose of pit, remote, or central meter reading. The registers shall be secured to the maincase by means of a plastic tamperproof seal pin to allow for in-line service replacement. Seal screws are not acceptable.

Register retainer rings shall have an impact resistant design which absorbs register glass lens impact. All registers shall have the size, model, and date of manufacture stamped on the dial plate.

- 1) Measuring Chamber: The measuring chamber shall be a nutating disc type, the flat nutating disc shall be molded of a non-hydrolyzing hard rubber or synthetic polymer and shall contain a type 316 stainless steel spindle. The nutating disc shall be equipped with a synthetic polymer thrust roller with a stainless steel shaft located within the disc slot. The roller head shall roll on the buttressed track provided by the diaphragm in the measuring chamber. The measuring chamber shall be of a 2-piece snap-joint type. The measuring chamber shall be made of non-hydrolyzing synthetic polymer, shall be smoothly and accurately machined and shall contain a removable molded diaphragm of the same material as that of the chamber. No screws shall be used to secure the chamber together. The control block shall be the same material as the measuring chamber and be mounted on the chamber top to provide sand ring protection. The control block assembly shall be removable to facilitate repairing. Control block assemblies shall be designed to allow no magnetic slippage which would result in a loss of revenue. The measuring chamber outlet port shall be sealed to the maincase outlet port by means of an "O" Ring gasket to eliminate chamber leak paths.

- 2) Remote Reader: The Remote Reader shall be Neptune Proread ARB System ® as manufactured by Schlumberger Industries Water Division or Remote Meter Read (RMR) System® as manufactured by ABB, or approved equivalent. The Remote Reader shall be a self-contained encoder register metering system designed to obtain remote simultaneous water meter registration directly from the register odometer. The metering information shall be obtained through a remotely located receptacle using a compatible data capture system. The system shall consist of the Encoder Meter Register and Remotely Mounted Receptacle.
- 3) Encoder Meter Register: The Encoder Meter register shall be direct mounted with encoded odometer wheels and digital data stream. Batteries or pulses are not allowed.
- 4) Registration: The register shall provide a six digit visual registration at the meter. The unit shall, in a digital format, simultaneously encode the four or six most significant digits of the meter reading for transmission through the remotely located receptacle. (The most significant meter registration digits are defined as those digits on the register number wheels that denote the highest recorded values of water consumption.) A quick indexing mechanism shall be employed which shall prevent ambiguous reading. The register shall have a full test sweep and or dial divided into gradients of down to 1/100th of the units of registration. Register test rings shall be available for shop testing. The units of registration shall be in U.S. gallons. These units shall be clearly designated on the face of the register. The month and year of manufacture and other identification information shall appear on the face of the register. The register shall employ a leak detection indicator on the dial face. Registers using pulse generation or conversion of pulses to digital output is not permitted. Batteries shall not be required.
- 5) Mechanical Construction: Materials used in the construction of the register shall be compatible with the normal water meter environment and with each other. The unit shall possess a copper bottom and incorporate a rubber O-ring seal. Where indicated, pit set registers must be provided with moisture protection for all internal components when operating under flooded pit conditions. The register and mounting base shall be integral components and should not allow for disassembly. The register shall be attached to the meter case by a bayonet attachment. Fastening screws or nuts shall not be required. A tamperproof plastic seal pin shall be used to secure the register to the main case. No special tools shall be required to remove the register. The register head must swivel 360 degrees without removing the seal pin to facilitate visual reading and ease of wiring. The register shall be removable from the meter without disassembling the meter body and shall permit field installation and/or removal without taking the meter out of service. Provision shall be made in the register for the use of seal wires to further secure the register. Terminal screws must be accessible on the register for transmission wire connection to the remote receptacle or future connections to a telephone system.
- 6) Electrical Construction: The materials employed for contacts and connectors shall inhibit corrosion and shall suffer minimal effect from environmental conditions to which they are exposed. The number wheels used in the register assembly shall be provided with spring-type bifurcated metal contacts to insure a high probability of information transmission.

Connection shall be made to the register by three screw-type terminals, sonically inserted into the register top. Access to the terminals shall be available to all models of register. A port cover shall be provided to cover the terminals after they have been wired. Digitally formatted data transmitted from the register shall incorporate a check sum character to verify correct information transmission and integrity. Data errors shall be indicated by the reading equipment.

(R) METER READING INFORMATION

The encoder register shall provide up to six digits of information to the reading equipment. A ten digit identification number shall also be provided with each reading. The utility shall have the option to reprogram the internal register identification number an unlimited number of times. The encoder register must have the capability to provide additional custom information to the reader. This information shall be programmed (and reprogrammed at any time) by the utility. Information on programming the register, equipment needed, and encoder meter reading output shall be provided with each proposal.

(S) REMOTE MOUNTED RECEPTACLE

Remote receptacle shall provide a communication link for the transmission of information from the register.

- 1) Mechanical Construction: Where indicated, a remote receptacle must be provided for attachment to a pit meter lid with another unit also designed for attachment by wall mounting. The materials employed shall be corrosion resistant, resist ultraviolet degradation, unaffected by rain or condensation, and compatible with rugged service and long life. The pit mounted receptacle shall be mounted to the water meter access door of the meter concrete structure using two screws to be provided by the utility. The hole size to be drilled in the access door shall not exceed 3/8" each. The pit mounted receptacle shall be provided with a minimum length of ten feet of wire connected and sealed at the receptacle without terminal exposure.
- 2) Electrical Construction: The receptacle construction shall incorporate the function of a cable clamp or strain relief. Design of the unit shall be such that it provides for mechanical and electrical connection between the receptacle and interrogation equipment.
- 3) Cable: The connecting cable shall be of the two-wire conductor type in a sheath which shall be abrasion and moisture resistant. Each conductor shall be color coded.

(T) PIPE TRACING SYSTEM

Pipe Tracing System scope shall NOT be included in this item. The Pipe Tracing System scope is included in Item RCP-PL1 under Section P220700.

PK-143 RCP.4 METHOD.

(A) GENERAL

All plumbing work is to be done by a Licensed Plumber. All on-site plumbing work is to be done by a New York City Master Licensed Plumber. The Contractor shall comply with all rules, regulations, and requirements of all regulatory agencies having jurisdiction.

(B) PERMITS AND FEES

The Contractor shall be required to obtain all permits and pay required fees to any governmental agency having jurisdiction over the work. Inspections required by local ordinances during the course of construction shall be arranged as required. On completion of the work, satisfactory evidence shall be furnished to show that all work has been installed in accordance with rules, regulations, ordinances and code requirements.

(C) APPROVAL

The scope of work shall include, but not be limited to providing a layout drawing of valve boxes, main line piping, water meter pit, two RPZs, RPZ enclosure, electrical wiring, etc., in addition to the labor to install the above and maintain the system including winterizing valves and fixtures. The Contractor shall further provide all catalogue cuts of materials, equipment, and fixtures for approval of all system components.

(D) CONFERENCE

Prior to any work being performed, a pre-construction meeting will be held by NYCDDC. At that meeting, the Contractor shall provide a construction schedule to the Resident Engineer and discuss any concerns and procedures required for obtaining approval of the materials and work under this Contract. Arrangements for this meeting will be made by NYCDDC.

(E) INSPECTION OF SITE

It is mandatory that the Contractor shall acquaint himself with all site conditions. Should utilities not shown on the plans be found during excavations, Contractor shall promptly notify the Resident Engineer for instructions as to further action. Failure to do so will make Contractor liable for any and all damage thereto arising from his operations subsequent to discovery of such utilities not shown in plans. The Contractor shall also be required to determine the available water pressure and gpm delivery available from the site's water source.

Contractor shall make necessary adjustments in the layout as may be required to connect to the City water mains. All coordination with NYCDEP and other agencies is the responsibility of the Contractor.

(F) REJECTION

The City reserves the right to reject material or work which does not conform to the Contract Documents. Rejected work shall be removed or corrected at the earliest possible time.

(G) EXCAVATION

The Contractor shall excavate to the lines as shown in the drawings. All Temporary sheeting as required shall comply with **Section 4.05, SHEETING AND BRACING** of the NYCDEP Standard Water Main Specifications.

(H) SETTING OF PRECAST CONCRETE WATER METER STRUCTURE:

The precast concrete water meter structure shall be set on a six (6) inch thickness of broken stone with additional stone added inside the twelve inch (12") x twelve inch (12") drain sleeve to the top of the bottom slab. The RPZs' Structure shall be set on the Water Meter Structure, as shown on the Contract Drawings.

The Contractor shall install supports for the water meter at the height shown on the Contract Drawings. The meter shall be set so that the dial faces upward and is horizontal. The dial shall not be more than three (3) feet above the floor. The encoder register shall be installed on meter as per manufacturer's instructions. The remote reader receptacle shall be installed in the pit cover as per the manufacturer's directions and recommendations, allowing reading of the meter from above ground level. The Contractor to allow sufficient Water Meter Remote Reader cable slack for manhole cover removal. The RPZs shall be installed as shown on the Contract Drawings and per manufacturer's instructions.

(I) CONNECTIONS

The Contractor shall connect the water piping as shown on the Contract Drawings for complete and satisfactory operating unit to the satisfaction of the Engineer. Connections shall be made to The Water Meter by coupling union or flange union on both inlet and outlet ends of the meter and bored for sealing with holes not less than one-eighth (1/8) of an inch in diameter - solder connections are not permitted. Connections to the RPZs shall be as shown on the Contract Drawings and per manufacturer's instructions.

(J) PIPE TRACING

Pipe Tracing scope shall NOT be included in this item. The Pipe Tracing System scope is included in Item RCP-PL1 under Section P220700.

(K) "AS-BUILT" DRAWINGS

The Contractor shall prepare an "As-Built" drawing as per **Section 1.06.14 of General Requirements** in the Standard Specifications. Drawing shall show all items installed during construction, including the RPZs, water Meter, main line or connection pipe, Precast Structures, all valves, remote equipment, and electrical conduit, wiring. The drawing shall also indicate and show all material of sizes, model numbers, manufacturer's name and catalog name and catalog number. These drawings shall be delivered to the Resident Engineer before final acceptance of work. The Contractor shall also provide operating manuals, maintenance instruction documents and a schedule of maintenance activities for all equipment as well as a guide to troubleshooting system problems. The Contractor shall provide all manufacturers' warranties for installed products and systems in addition to telephone numbers of manufacturers that can supply compatible replacement parts.

(L) SYSTEM FUNCTION AND TESTING

The Contractor shall conduct a pressure test of all plumbing and irrigation connections in the presence of the Resident Engineer.

Upon completion of the work, the Contractor shall clean up the site, remove all unused materials and debris and coordinate with the landscape contractor to complete any outstanding items of work which may include completion of mulch installation.

(M) FINAL ACCEPTANCE

Final acceptance of the work may be obtained from the NYCDDC upon the satisfactory completion of all the work. At the time of final acceptance, the Contractor shall deliver five (5) copies of keys to all locked equipment.

PK-143 RCP.5 MEASUREMENT

The quantity of TWO REDUCED PRESSURE ZONES & ONE WATER METER WITH REMOTE & STRUCTURE – 2" DIA. to be measured for payment shall be the number actually installed to the satisfaction of the Engineer.

PK-143 RCP.6 PRICE TO COVER

The price bid shall be a unit price for each TWO REDUCED PRESSURE ZONES & ONE WATER METER WITH REMOTE & STRUCTURE – 2" DIA. and shall include the cost of all labor, materials, equipment, insurance, and incidentals necessary including, but not limited to, obtaining certifications, all excavation, temporary sheeting, furnishing and placing broken stone, installation of all plumbing work within the structure, connections to the water service at the structure, furnishing and installing precast concrete structure, reinforcing steel, brick masonry, rungs, and access doors; all in accordance with the plans, the specifications, and the directions of the Engineer.

Copper tubing and all water service beyond the exterior face of the concrete structure shall be paid for separately.

Payment will be made under:

Item No.	Description	Pay Unit
PK-143 RCP	TWO REDUCED PRESSURE ZONE DEVICES & ONE WATER METER WITH REMOTE & STRUCTURE – 2" DIA.	EACH

**SECTION PK-14D
CURB GATE VALVE - 2" DIA**

PK-14D.1 DESCRIPTION: Under this Item, the Contractor shall furnish and install CURB GATE VALVES of the size specified, in strict accordance with the plans, the specifications, and directions of the Engineer.

PK-14D.2 CURB VALVES: The curb valves and boxes shall be set in the service pipe in the sidewalk area at the curb or within 2 ft. of the curb. Curb valves shall be of the gate type nonrising stem valve, designed for a minimum of 150 psi wwp. [NYC Building Code: RS16, P107.2(a)9 and NYC DEP Rules and Regs. Section 138]. Valves shall be Stockham No. B-130; Grinnell #3030; Nibco T136; Milwaukee 1141; Powell 2712; or an approved equivalent. Curb Gate Valves shall have bronze body, bronze bonnet, inside screw, non-rising stem, solid wedge disk, and threaded ends.

PK-14D.3 OPERATING KEY: An approved operating key of proper size for each valve shall be furnished by the Contractor. However, the Contractor need not furnish more than two (2) keys for each type of valve, regardless of the quantity of valves called for in the Contract. For valves 2" diameter, the operating key shall be Stockham No. 1V437 for Stockham Valves, or the appropriate key for any approved equivalent valves.

PK-14D.4 SUBMITTALS: Shall be submitted in accordance with the requirements of the NYCDOT Standard Specifications, General Conditions, Subsection 1.06.31.

Shop Drawings: The Contractor shall submit catalog cuts of the curb gate valve for approval.

PK-14D.5 MEASUREMENT: The quantity of CURB GATE VALVE to be paid for under this Item shall be the number of valves of the size specified, actually installed at the site to the satisfaction of the Engineer.

PK-14D.6 PRICE TO COVER: The price bid shall be a unit price for EACH Curb Gate Valve of the size specified, and shall include the cost of all labor, materials, equipment, insurance, and other incidentals necessary to complete the Work; all in accordance with the plans, the specifications and directions of the Engineer.

Payment will be made under:

Item No.	Item	Pay Unit
PK-14D	CURB GATE VALVE, 2" DIA.	EACH

**SECTION PK-17
CAST IRON VALVE BOX, 5-1/4" DIAMETER**

PK-17.1. DESCRIPTION: Under this Item, the Contractor shall furnish and install CAST IRON VALVE BOX, 5-1/4" DIAMETER, in accordance with the plans, specifications, and directions of the Engineer.

PK-17.2. MATERIALS:

Box: 5-1/4" diameter shaft 2-piece sliding type adjustable valve boxes shall be manufactured by Bingham & Taylor, Culpeper, VA (Catalogue Figure No. 4908 with a locking cover as defined on Figure No. 4904 L); Star Pipe Products, Houston, TX; Tyler Utilities Division, Tyler, TX; or approved equal. The cover shall have the designation "WATER" cast thereon. The boxes shall extend within the limits called for on the plans.

Setting: The valve boxes shall be set plumb, as shown on the plans, on a footing of brick laid in cement mortar, supported on a foundation of broken stone.

Brick: The brick shall be made from clay or shale, well burned, of a quality approved by the Engineer. The mortar shall be composed of one part Portland Cement and two parts sand.

Broken Stone: The broken stone shall be clean broken traprock, or other approved stone, all of which shall pass a one-inch square opening screen and retained on a 5/8 inch square opening screen.

PK-17.3. SHOP DRAWINGS: The Contractor shall submit Shop Drawings when required, for Engineer's approval.

PK-17.4. MEASUREMENT: The quantity of CAST IRON VALVE BOXES, 5-1/4" DIAMETER, to be paid for under this item shall be the number of boxes installed at the site to the satisfaction of the Engineer.

PK-17.5. PRICE TO COVER: The price bid shall be a unit price per EACH Cast Iron Valve Box, 5-1/4" Diameter, and shall include the cost of all labor, materials, equipment, insurance, and incidentals necessary to complete the work, including, but not limited to, excavation and restoration, and furnishing and placing brick and broken stone setting bed; all in accordance with the plans, the specifications and the directions of the Engineer.

Payment will be made under:

Item No.	Item	Pay Unit
PK-17	CAST IRON VALVE BOX, 5-1/4" DIAMETER	EACH

**SECTION PK-184-GH1
GROUND HYDRANT - 1" DIA.**

PK-184-GH1.1. INTENT: The Contractor shall furnish and install a ground hydrant, all piping, fittings, and other sundries necessary to connect the water lines, as shown on the plans, to the satisfaction of the Engineer.

PK-184-GH1.2. DESCRIPTION: Under this Section the Contractor shall furnish and install a GROUND HYDRANT - 1" DIA., including, but not limited to, all plumbing work and connection to water service; all in accordance with the plans, the specifications, and directions of Engineer.

PK-184-GH1.3. MATERIALS: Unless otherwise specified herein, all materials and methods of construction shall conform to NYCDOT Standard Highway Specifications.

(A) Equipment: One inch (1") Ground Hydrant shall be Type Z-1360-HD-RK-NB-10 manufactured by Zurn Industries Inc., Hydromechanics Division, Erie, PA or approved equivalent model manufactured by:

- 1) MIFAB, Inc. Chicago, IL
- 2) Jay R. Smith Manufacturing Co., Montgomery, AL
- 3) or approved equivalent.

Hose connection shall be one inch (1") diameter.

(B) Hydrant shall be an encased, ground hydrant for flush-with-grade installation, complete with bronze casing, polished nickel bronze box, all bronze interior parts, bronze seat and replaceable seat washer, non-turning operating rod with free-floating compression closure valve with 1" connection. Polished nickel-bronze box shall have a scoriated heavy-duty cover with operating key lock and the word "Water" cast on cover. Depth of bury is two (2) feet minimum. Four (4) keys are to be supplied to the Engineer.

(C) Brass Garden Hose Adaptor (for one inch Ground Hydrant only): Shall be (1" => 3/4") Model # FM1076 as manufactured by George Taylor Brass and Bronze Works, Huntington, N.Y., or approved equivalent model as manufactured by Jay R. Smith Manufacturing Co., Montgomery AL or Zurn Industries Inc., Hydromechanics Division, Erie, PA; or other approved manufacturer.

(D) Concrete Collar: Class A-40 concrete in accordance with Section 4.06 of NYCDOT Standard Highway Specifications.

(E) Broken Stone: Broken Stone shall consist solely of crushed ledge rock. Stone shall be as designated on the detail and shall be of the approved size and quality specified in NYCDOT Standard Highway Specifications, Division II Basic Materials of Construction, Section 2.02- Aggregate-Coarse (Broken Stone and Gravel).

- (F) Geotextile Filter Fabric: Geotextiles used in drainage applications shall be Class 2 and shall conform to the following AASHTO-M288 properties for drainage geotextiles:

	ASTM Test	TYPE	TYPE
Structure		Woven (Class 2)	Non-Woven (Class 2)
Percent Elongation	ASTM D4595	<50%	≥50%
Grab Strength (Min.)	ASTM D4632	247 lbf	157 lbf
Tear Strength (Min.)	ASTM D4533	90 lbf	56 lbf
Puncture Strength (Min.)	ASTM D4833	90 lbf	56 lbf
Permittivity (Min.)	ASTM D4491	0.21 / sec.	
Apparent Opening Size/ Sieve Designation (Max.)	ASTM D4751	0.0098 inch/ Std. No. 60 sieve	

a. Manufacturers:

- 1) Advanced Drainage Systems, Inc., Hillard, OH.
- 2) Carthage Mills, Cincinnati, OH.
- 3) Mirafi, Inc., Charlotte, NC.
- 4) Approved equivalent.

PK-184-GH1.4. SUBMITTALS:

- (A) Catalog Cuts: The Contractor shall submit Catalog Cuts of the ground hydrant for approval prior to installation.
- (B) Shop Drawings: The Contractor shall submit shop drawings when required by the Engineer, in accordance with the requirements of the NYCDOT Standard Highway Specifications under Division 1- Contract Requirements, Subsection 1.06.13.(G), Submission of Shop and Working Drawings.
- (C) Operating Keys: The Contractor shall furnish four (4) operating keys for each hydrant type/size installed under this item.
- (D) Parts Repair Kit: Contractor shall supply one (1) Parts Repair Kit for each Ground Hydrant type/size installed under this item.

PK-184-GH1.5. MEASUREMENT: The quantity to be measured for payment shall be the actual number of EACH Ground Hydrant, of the size specified, actually installed, complete with all plumbing work, to the satisfaction of the Engineer.

PK-184-GH1.6. PRICE TO COVER: The price bid shall be a unit price for each GROUND HYDRANT of the size specified and shall include the cost of all labor, materials, equipment, insurance, and incidentals necessary to complete the work including, but not limited to, all

plumbing work and connections to water service within five (5') feet of the ground hydrant, furnishing and installing broken stone, geotextile, pvc pipe, concrete collar, hose adapter, and all submittals; all in accordance with the plans, the specifications, and the directions of the Engineer.

Payment will be made under:

Item No.	Item	Pay Unit
PK-184-GH1	GROUND HYDRANT - 1" DIAMETER	EACH

SECTION RCP-DG
CUSTOM DRAIN GRATING AND FRAME

RCP-DG.1. DESCRIPTION

This section describes the furnishing and installation of the custom drain gratings and frames in accordance with the Contract Drawings, the Specifications and the Engineer.

RCP-DG.1.1. Related Sections

Coordinate the Work of this Section with the work in the following related Sections:

4.04 BP	Concrete Base for Pavers, 4" and 7" Thick, Class B-32
PK-124C7	Catch Basin (DPR Type C-7)
RCP-WF1	Exterior Water Feature

RCP-DG.2. MATERIALS

The materials under this section shall comply with the following:

RCP-DG.2.1. Fabrication Tolerances

Fabrication tolerances shall be in accordance with applicable provisions and recommendations of ANSI/NAAMM 531-09 Metal Bar Grating Manual.

RCP-DG.2.2. Submittals

All submittals shall be in accordance with the requirements of the General Conditions, Section 1.06.31 of the Standard Highway Specifications.

- (A) Shop Drawings: Submit Shop Drawings when required, in accordance with the requirements of the **General Conditions, Section 1.06.13**, of the Standard Highway Specifications. Submit shop drawings for all items of work of this Section, at the appropriate scale, showing locations, layouts, materials, thicknesses, finishes, dimensions, construction, relation to adjoining construction, profiles, jointing, hardware, anchors and all other details to fully illustrate the work of this Section. The shop drawings must be as approved by the Engineer prior to the manufacturing of the grating.
- (B) Design Calculations: Submit design calculations, signed and sealed by a Professional Engineer licensed in the State of New York, including loading conditions, support design, and deflection calculations of the stainless steel grating panels.
- (C) Samples: Submit three 12" x 12" samples each of type of grating, and a 12" x 12" corner of the frame. Each sample shall be clearly identified by the manufacturer's name, date of production and contract number.

The Contractor shall hand deliver samples to Department of Design and Construction, Infrastructure Division, Bureau of Design at 30-30 Thomson Avenue, Long Island City, New York 11101, with transmittal letter and obtain a signed receipted acceptance of delivery. The samples must be as approved by the Engineer prior to the fabrication of the grating and frame.

- (D) Process: There will be no material delivery to job site without prior written approval from the Engineer; all material delivered to site without such approval will be rejected. Contractor shall submit samples in sufficient time as to not delay progress of Construction.

RCP-DG.2.3. Delivery, Storage and Handling

- (A) Delivery: Deliver all finished materials to the site with sufficient protection and with labels clearly identifying product name, manufacturer and part number.
- (B) Storage: Store materials in a clean, dry area and use all means necessary to protect materials of this section before, during and after installation.
- (C) Handling: Use all means necessary to protect the materials of this Section before, during and after installation and to protect the installed work and materials of all other trades. In the event of damage, immediately make all repairs and replacements necessary at no additional cost to the City.

RCP-DG.2.4. Grating

- (A) Manufacturer: Grating shall be manufactured by one of the following manufacturers, or approved equal:
 - 1) Hendrick Screen Company, P.O. Box 22075, Owensboro, Kentucky 42304-2075, Phone: (270) 685-5138;
 - 2) Kadee Industries, 7160 Krick Road, Walton Hills, OH, Phone: (800) 321-3827;
 - 3) Construction Specialties, 49 Meeker Ave., Cranford, NJ, Phone: (908) 272-5200;
 - 4) Arden Architectural Specialties, Inc., 9300 73rd Avenue North, Brooklyn Park, MN 55428, Phone: (888) 412-3726.
- (B) Construction: Grating shall consist of precision spaced, mechanically interlocked profile wires and supports from Type 304 stainless steel. The traffic surface shall be of smooth profile bar shape with inwardly enlarging openings to minimize the likelihood of debris entrapment. Profile bars shall be continuous over the length or width of each panel as specified herein. The bars, supports, backing bars, and banding shall be welded to form a single unit as shown on the Contract Drawings.
- (C) Bars and Opening: The surface bars shall be Hendrick Screen Co. No. B-12 Profile Bar (Basis of Design) or approved equal that most closely matches this product. The tread surface opening shall be 0.187 inches. The opening size shall be consistent, controlled and continuously monitored during manufacture.
- (D) Travel Surface Finish: Travel surface shall have a non-slip coating manufactured by Algrip, Leola, PA; Slipnot Metal Safety Flooring, Detroit, MI; American Safety Technologies, Roseland, NJ; or approved equal, to achieve static coefficient of friction when wet of at least 0.60in.lb. per ASTM C 1028.
- (E) Loading: Completed grating shall be designed for AASHTO HS20-44 Highway load rating.
- (F) Tolerances: Panels shall be designed and fabricated so as to ensure that the completed tread panels are within the tolerances specified herein while under a no load condition: panel length and width shall be within 1/8 inch±.

RCP-DG.2.5. Hardware

Drain gratings shall be fastened to opening frame with stainless steel security hardware, concealed from view.

RCP-DG.2.6. Stainless Steel Drain Grating Frames

- (A) General: The materials for the stainless steel angles, ledgers and anchors at drain grating frames under this section shall be stainless steel as noted below.
- (B) Quality: Provide materials which have been selected for their surface flatness, smoothness and freedom from surface blemishes where exposed to view in the finished unit. Exposed to view surfaces which exhibit pitting, seam marks, roller marks, "oil-canning," stains, discolorations or other imperfections on the finished units will not be acceptable.
- (C) Reference Standards: Comply with the following standards for the forms and types of stainless steel for the required items of work.
- 1) Sheet, Strip, Flat Bar and Plate: ASTM A 666, Type 304.
 - 2) Castings: ASTM A 743A, Grade CF 8 or CF 20.
 - 3) Bars and Shapes: ASTM A 276, Type 304.
- (D) Welding Electrodes and Filler Metal: Type and alloy of filler metal and electrodes as recommended by producer of the metal to be welded, and as required for color match, strength and compatibility in the fabricated items.
- (F) Finishes: Remove or blend tool and die marks and stretch lines into finish. Grind and polish surfaces to produce uniform, directionally textured, polished finish indicated, free of cross scratches. Bead blasted finish with clean fine glass beads, producing an even, matte, non-reflective, non-directional surface finish.
- (G) Expansion Anchor for Anchorage to Concrete: Steel stud type, sized as shown, stainless steel anchor body, nut and washer to conform to AISI type 304. Subject to compliance with requirements, products which may be incorporated in the work include, but are not limited to, the following:
- 1) "Kwik Bolt III," Hilti Corp.
 - 2) "Rawl-Stud," Rawlplug Company
 - 3) "Red-Head Stud Anchor," ITW Ramset/Red-Head Co.
 - 4) or approved equal.

RCP-DG.3. METHODS**RCP-DG.3.1. Inspection**

Examine the areas and conditions where custom drain gratings are to be installed. Notify the Engineer of any conditions detrimental to the proper installation and subsequent use, and timely completion of the work. Do not proceed with the work until unsatisfactory conditions are corrected to permit proper installation of the work. Verify in writing.

RCP-DG.3.2. Coordination

- (A) Coordination: Coordinate the work of this Section to accommodate and fit work of other trades. Furnish or obtain, as applicable, templates and drawings to or from applicable trades for proper coordination of this work.
- (B) Layout: Grating locations are as indicated on the Contract Drawings. However, the final layout of the gratings shall be subject to approval by the Engineer, in consultation with the City's Architect.

RCP-DG.3.3. Metal Fabrication

- (A) Cutting: Cut metal by sawing, shearing or blanking. Flame cutting will be permitted only if cut edges are ground back to clean, smooth edges. Make cuts accurate, clean, sharp, square and free of burrs, without deforming adjacent surfaces or metals.
- (B) Holes: Drill or cleanly punch holes (do not burn), so that holes will be accurate, clean, neat and sharp without deforming adjacent surfaces or metals.
- (C) Welding: Welding shall be in accordance with recommendations of the American Welding Society and shall be done with electrodes and/or methods recommended by the manufacturers of the metals being welded. Welds shall be continuous, except where spot welding is specifically permitted. Welds exposed to view shall be ground flush and dressed smooth with and to match finish of adjoining surfaces so that joint will not be visible; undercut metal edges where welds are required to be ground flush and dressed smooth. All welds on or behind surfaces which will be exposed to view shall be done so that finished surface will be free of imperfections such as pits, runs, splatter, cracks, warping, dimpling, depressions or other forms of distortion or discoloration. Remove weld splatter and welding oxides from all welded surfaces.

RCP-DG.3.4. Installation

- (A) General: Install work of this Section square, straight, true to line or radius, accurately fitted and located, with flush, tight hairline joints (except as otherwise indicated or to allow for thermal movement and removal), with provisions for other trades, with provisions to allow for thermal movement and with attachment devices as required for secure and rigid installation. It is the responsibility of the Contractor to assure that shop fabricated items will properly fit the field condition. In cases where the shop fabricated items do not fit the field condition, the item shall be returned to the shop for correction.
- (B) Attachments and anchoring: All attachment and anchoring devices shall be of type, size and spacing to suit condition and as approved by Engineer, in consultation with the City's Architect. Do all necessary drilling, tapping, cutting or other preparations of surrounding construction in the field accurately, neatly and as necessary for the attachment and support of work of this Section, but obtain Engineer's approval prior to such preparation for work to be done under others items. All frames must be shimmed level and any voids grouted solid to ensure continuous surface contact between concrete and frame. Anchors shall be installed as per manufacturer's instructions.

- (C) Adjustment: Where defects in material or installation appear in the completed work, as determined by the Engineer, such areas shall be removed and replaced at no cost to the City.

RCP-DG.3.5. Cleaning

Upon the completion of the work clean stainless steel by washing thoroughly with clean water and soap and rinsing with clean water. Do not use cleaning materials or methods that can damage finish.

RCP-DG.3.6. Protection

Protect finishes from damage during construction period with temporary protective coverings approved by fabricator. Remove protective covering at the time of Substantial Completion. Restore finishes damaged during construction period so no evidence remains of correction work. Return items that cannot be refinished in the field to the shop; make required alterations and refinish entire unit, or provide new units, at no additional cost to the City.

RCP-DG.4. MEASUREMENT

The quantity to be measured for payment shall be the number of each type of Custom Drain Gratings with Frames that have been satisfactorily installed at the site.

RCP-DG.5. PRICES TO COVER

The contract price bid shall be a unit price per EACH type of Custom Drain Grating and Frame and shall include the cost of furnishing and installing the Custom Drain Grating including, but not limited to, anchoring the frame and fastening the grating to the frame, all in accordance with the Contract Drawings, the specifications and the directions of the Engineer.

Payment will be made under:

Item No.	Item	Pay Unit
RCP-DG1	CUSTOM DRAIN GRATING AND FRAME, PLAZA	EACH
RCP-DG2	CUSTOM DRAIN GRATING AND FRAME, WATER FEATURE	EACH

SECTION RCP-RB RETENTION BASIN

RCP-RB.1. INTENT

This section describes the furnishing and installation of the Retention Basin and all its components as part of this project, as shown on the Contract Drawings and as directed by the Engineer.

RCP-RB.2. DESCRIPTION

- A) The retention basin is designed to hold stormwater runoff in a defined area until it is percolated into the subsoil. This retention basin contains an overflow pipe which will allow for stormwater runoff from large rain events to discharge into the City sewers. The intent of the retention basin is to reduce the load on the City sewer system.
- B) Under this item, the Contractor shall furnish and install all components of the retention basin which are to include, but not be limited to, crushed stone aggregate, filter fabric, perforated HDPE pipe, HDPE riser pipes, pipe fittings, and solid covers in accordance with the plans, the specifications, and the direction of the Engineer.

RCP-RB.3. MATERIALS

Materials shall comply with the following requirements:

- A) Crushed Stone Aggregate – Shall be washed, crushed, angular, open-graded and meet ASTM No. 2.

Gradation Requirement for ASTM No. 2 Stone

Sieve Size	Percent Passing
75 mm (3 in.)	100
63 mm (2 1/2 in.)	90 to 100
50 mm (2 in.)	35 to 70
37.5 mm (1 1/2 in.)	0 to 15
19 mm (3/4 in.)	0 to 5

- B) Filter Fabric – Filter fabric shall be Mirafi 160N non-woven geotextile or approved equivalent. Minimum flow rate through filter fabric shall not be less than 95 gal/min/ft². Non-woven geotextile used shall conform to the following AASHTO M-288 Class 2 minimum strength requirements: grab strength equals to 157lbf, tear strength equals to 56lbf and puncture strength equals to 309lbf.

Acceptable manufacturers for filter fabric include:

- (A) Tencate, Latham, NY
 (B) US Fabrics, Inc., Cincinnati, OH
 (C) Ero-tex, Menomonee Falls, WI
 (D) or approved equivalent.
- C) 30" HDPE Perforated Distribution Pipe – Perforated HDPE pipe size 30" diameter shall conform to the requirements of cell classification 435420C (ESCR Test Condition B) as defined and described in ASTM D 3350, except that carbon content should not exceed 4%. Pipe shall be continuously perforated with openings all around. Perforation pattern for HDPE pipe shall be Class II per

AASHTO M294. Couplings shall provide sufficient strength to preserve horizontal alignment and prevent separation at the joints. Only fittings supplied or recommended by the pipe manufacturer shall be used. Where recommended by manufacturer, a neoprene or rubber gasket shall be supplied for joint fittings. All pipes, pipe connections, and fittings shall be soil-tight. Openings for incoming riser pipe connections shall be as recommended by pipe manufacturer. Perforated pipe and pipe fittings shall be by the same manufacturer to ensure compatibility of materials.

Acceptable manufacturers for perforated HDPE pipe and fittings:

- 1) Advanced Drainage Systems, Inc., Ludlow, MA
- 2) ISCO Industries, Louisville, KY
- 3) JM Eagle, Livingston, NJ
- 4) Hancor, New York, NY
- 5) or other approved manufacturer.

- D) 12" Riser Pipe – The riser pipe required for this contract shall be 12" solid corrugated HDPE with smooth interior, as manufactured by 30" HDPE Perforated Distribution Pipe manufacturer. HDPE pipe shall conform to the requirements of cell classification 435420C (ESCR Test Condition B) as defined and described in ASTM D 3350, except that carbon content should not exceed 4%. Fittings may be installed by various methods, such as snap-on, screw on, bell and spigot, or wrap around. Couplings shall provide sufficient strength to preserve vertical alignment and prevent separation at the joints. Tee connections may be required for incoming pipe connections. Only fittings supplied or recommended by the pipe manufacturer shall be used to ensure compatibility of materials. Where recommended by manufacturer, a neoprene or rubber gasket shall be supplied for joint fittings. All pipes, pipe connections, and fittings shall be soil-tight. Openings for incoming pipe connections shall be as recommended by pipe manufacturer.

Acceptable manufacturers for riser pipe and fittings:

- 1) Advanced Drainage Systems, Inc., Ludlow, MA
- 2) ISCO Industries, Louisville, KY
- 3) JM Eagle, Livingston, NJ
- 4) Hancor, New York, NY
- 5) or other approved manufacturer.

- E) Solid Cover: The 8" solid cover shall be ductile iron per ASTM A 536 Grade 70-50-05. The cover fits direction onto Inline Drains. The 8" cover is rated for light duty applications only; no concrete collar needed for light duty rating.

Acceptable manufacturers for riser pipe and fittings:

- 6) Advanced Drainage Systems, Inc., Ludlow, MA
- 7) Campbell Foundry, Harrison, NJ
- 8) Neenah Foundry, Neenah, WI
- 9) or other approved manufacturer.

RCP-RB.4. SUBMITTALS

Contractor shall submit the following for Engineer's approval:

- 1) Shop drawings of the Retention Basin.
- 2) Product data and installation instructions for:

- HDPE pipe and fittings,
 - covers and their locking mechanism,
 - and filter fabric.
- 3) Certified test results from the Contractor's quality control procedures that crushed stone aggregate meets the specified requirements.

RCP-RB.5. METHODS

- A) Protect Retention Basin area from compaction prior to installation. Heavy equipment and foot traffic shall be restricted from traveling over the proposed location of the basin to minimize compaction of the soil.
- B) If possible, install Retention Basin during later phases of site construction to prevent sedimentation and/or damage from construction activity. After installation, protect sediment laden water from entering inlets and pipes.
- C) Install and maintain proper Erosion and Sediment Control Measures during construction to avoid clogging of the retention basin, as directed by the Engineer. During excavation of retention basin, furnish and install silt fence around the perimeter of the excavation following the requirements of Section 9.15, herein this Addendum.
- D) Excavate Retention Basin bottom to the design dimensions. Keep uncompacted subgrade free from rocks and debris. Large tree roots must be trimmed flush with the trench sides in order to prevent fabric puncturing or tearing of the filter fabric during subsequent installation procedures. The side walls of the basin shall be roughened where sheared and sealed by heavy equipment. Do NOT compact subgrade.
- E) Place non-woven geotextile along bottom and sides of basin. The width of the geotextile must include sufficient material to conform to trench perimeter irregularities and to allow for a 12-inch minimum top overlap once stone is backfilled. Stones or other anchoring objects should be placed on the fabric at the edge of the trench to keep the trench open during windy periods. When overlaps are required between rolls, the uphill roll should lap a minimum of 2 feet over the downhill roll in order to provide a shingled effect.
- F) Place 6-inch minimum depth of ASTM No. 2 crushed, angular, open-graded stone bedding in 6-inch lifts, lightly compacting between lifts.
- G) Install continuously perforated pipe as indicated on Contract Drawings. Keep trenches dry during pipe laying.
- H) Provide for and install all joints, couplings, fittings, rings and connections as per manufacturers' instructions and applicable ASTM and ANSI standards. Clean joint contact surfaces immediately prior to joining. Use lubricants, primers, or adhesives as recommended by the pipe or joint manufacturer.
- I) Backfill with ASTM No. 2 crushed, angular, open-graded aggregate in 6-inch lifts, lightly compacting between lifts, up to a depth as specified in plans.
- J) Fold and secure non-woven geotextile over crushed stone aggregate, with a minimum overlap of 12-inches.

- K) Provide 1-foot thick by 1-foot deep, ASTM No. 2 crushed, angular, open-graded aggregate around the base of the 12" riser pipe, as measured from the top of the folded non-woven geotextile.
- L) Backfill material shall be placed as per specification for Item No. 4.11 AS, Earth Excavation for Structures (a separate pay item).
- M) Do not remove Erosion and Sediment Control measures until site is fully stabilized.
- N) Any sediment which enters inlets during construction shall be removed within twenty-four (24) hours.
- O) Prior to project completion, and as directed by the Engineer, the Contractor shall clean all Plaza catch basins by vacuuming out all accumulated sediment and debris.

RCP-RB.6 MEASUREMENT AND PAYMENT

Payment will be made at the lump sum price bid for the Item Retention Basin, which shall include the cost of furnishing all labor, materials, equipment, insurance, and incidentals necessary to complete the work, including, but not limited to, protecting the excavation area, testing, furnishing and installing crushed stone, filter fabric, 12" diameter HDPE pipe and fitting, and 30" diameter Perforated HDPE pipe and fittings, cover, connecting and joining pipe to other pipes or drainage structures, excavation, and backfilling; all in accordance with the Contract Drawings, the specifications and directions of the Engineer.

Cost for Filter Fabric Silt Fence shall be under Item 9.15.

Payment will be made under:

Item No.	Item	Pay Unit
RCP-RB	RETENTION BASIN	L.S.

SECTION RCP-SD
CUSTOM SKATEBOARD DETERRENTS

RCP-SD.1. DESCRIPTION

This section describes the furnishing and installation of the custom skateboard deterrents in accordance with the Contract Drawings, the Specifications and the Engineer.

RCP-SD.2. MATERIALS

The materials under this section shall comply with the following:

RCP-SD.2.1. Quality Control

- A) Manufacturer's Qualifications: Work of this section shall be fabricated and installed by an experienced fabricator or manufacturer, who has been engaged in work of equivalent scope and fabrication standards for at least three (3) years. Materials, methods of fabrication, fitting, assembly, operating devices and installation shall be in accordance with Contract Drawings and Specifications, approved shop drawings, and be of highest quality practices of the industry, using new and clean materials as specified, having structural properties sufficient to safely sustain or withstand stresses and strains to which materials and assembled work will be subjected. All work shall be accurately and neatly fabricated, assembled and installed.
- B) Shop Assembly: Insofar as practicable, fitting and assembly of work shall be done in shop. Work that cannot be permanently shop assembled, shall be completely assembled, marked and disassembled in shop before shipment to insure proper assembly in field. It is the responsibility of the Contractor to ensure the shop fabricated items will properly fit the field condition. In the event that shop fabricated items do not fit the field condition, the item shall be returned to the shop for correction.

RCP-SD.2.2. Submittals

- A) Shop Drawings: Submit for all items of work of this Section, at the appropriate scale, showing locations, layouts, materials, thicknesses, finishes, dimensions, construction, relation to adjoining construction, erection details, profiles, jointing, hardware, anchors and all other details to fully illustrate the work of this Section. The shop drawings must be as approved by the Engineer, in consultation with the City's Architect, prior to fabrication.
- B) Samples: Submit four samples each of type of skateboard deterrent. Each sample shall be clearly identified by the manufacturer's name, date of production and contract number.

The Contractor shall hand deliver samples to Department of Design and Construction, Infrastructure Division, Bureau of Design at 30-30 Thomson Avenue, Long Island City, New York 11101, with transmittal letter and obtain a signed receipted acceptance of delivery. The samples must be as approved by the Engineer, in consultation with the City's Architect, prior to fabrication.

- C) Process: There shall be no material delivery to job site without prior written approval from the Engineer; all material delivered to site without such approval

will be rejected. Contractor shall submit samples in sufficient time as to not delay progress of Construction.

RCP-SD.2.3. Delivery, Storage and Handling

- A) Delivery: Deliver all finished materials to the site with sufficient protection and with labels clearly identifying product name, manufacturer and part number.
- B) Storage: Store materials in a clean, dry area and use all means necessary to protect materials of this section before, during and after installation.
- C) Handling: Use all means necessary to protect the materials of this Section before, during and after installation and to protect the installed work and materials of all other trades. In the event of damage, immediately make all repairs and replacements necessary at no additional cost to the City.

RCP-SD.2.4. Products: Stainless Steel

- A) General: All metal components used in the custom skateboard deterrents shall be Type 304 (ASTM A 666 and ASTM A 276 as applicable) stainless steel.
- B) Quality: Provide materials which have been selected for their surface flatness, smoothness and freedom from surface blemishes where exposed to view in the finished unit. Exposed to view surfaces which exhibit pitting, seam marks, roller marks, "oil-canning," stains, discolorations, or other imperfections on the finished units will not be acceptable.
- C) Finish: Remove or blend tool and die marks and stretch lines into finish. Grind and polish surfaces to produce uniform, directionally textured, polished finish indicated, free of cross scratches. Bead blasted finish with clean fine glass beads, producing an even, matte, non-reflective, non-directional surface finish.
- D) Types: The size and geometry of each Type of skateboard deterrent shall be as indicated on the Contract Drawings.

RCP-SD.2.5. Hardware

Skateboard Deterrents shall be anchored to stone with 1/4" Diameter stainless steel dowels welded to the plate and grouted into predrilled oversized holes in the stone, as indicated on the Contract Drawings. Grout shall comply with Subsection 9.95RCP.2.6. requirements, herein this Addendum.

RCP-SD.3. METHODS

RCP-SD.3.1. Metal Fabrication

- A) Cutting: Cut metal by sawing, shearing or blanking. Flame cutting will be permitted only if cut edges are ground back to clean, smooth edges. Make cuts accurate, clean, sharp, square and free of burrs, without deforming adjacent surfaces or metals.
- B) Holes: Drill or cleanly punch holes (do not burn), so that holes will be accurate, clean, neat and sharp without deforming adjacent surfaces or metals.

RCP-SD.3.2. Inspection

Examine the areas and conditions where custom skateboard deterrents are to be installed. Notify the Engineer of any conditions detrimental to the proper

installation and subsequent use, and timely completion of the work. Do not proceed with the work until unsatisfactory conditions are corrected to permit proper installation of the work. Verify in writing.

RCP-SD.3.3. Coordination and Layout

- A) Coordination: Coordinate the work of this Section to accommodate and fit work of other trades. Furnish or obtain, as applicable, templates and drawings to or from applicable trades for proper coordination of this work.
- B) Layout: Deterrent locations are as indicated on the Contract Drawings; however, the final layout of the deterrents shall be subject to approval by the Engineer, in consultation with the City's Architect.

RCP-SD.3.4. Installation

- A) General: Install work of this Section square, straight, true to line or radius, accurately fitted and located, with flush, tight hairline joints (except as otherwise indicated or to allow for thermal movement), with provisions for other trades, with provisions to allow for thermal movement, with provisions to exclude water where exposed to weather, and with attachment devices as required for secure and rigid installation. It is the responsibility of the Contractor to assure that shop fabricated items will properly fit the field condition. In cases where the shop fabricated items do not fit the field condition, the item shall be returned to the shop for correction.
- B) Attachments: All attachment devices shall be of type, size and spacing to suit condition and as approved by Engineer, in consultation with the City's Architect. Do all necessary drilling, tapping, cutting or other preparations of surrounding construction in the field accurately, neatly and as necessary for the attachment and support of work of this Section, but obtain Engineer's approval prior to such preparation to work of others.
- C) Adjustment: Where defects in material or installation appear in the completed work, such areas shall be removed and replaced at no cost to the City.

RCP-SD.3.5. Cleaning

Upon the completion of the work clean stainless steel by washing thoroughly with clean water and soap and rinsing with clean water. Do not use cleaning materials or methods that can damage finish.

RCP-SD.3.6. Protection

Protect finishes from damage during construction period with temporary protective coverings approved by fabricator. Remove protective covering at the time of Substantial Completion. Restore finishes damaged during construction period so no evidence remains of correction work. Return items that cannot be refinished in the field to the shop; make required alterations and refinish entire unit, or provide new units, at no additional cost to the City.

RCP-SD.4. MEASUREMENT

CUSTOM SKATEBOARD DETERRENTS

The quantity to be measured for payment for each type Custom Skateboard Deterrent shall be the number of Custom Skateboard Deterrents that have been actually installed at the site to the satisfaction of the Engineer.

RCP-SD.5. PRICES TO COVER

CUSTOM SKATEBOARD DETERRENTS

The contract price bid shall be a unit price per EACH type of Custom Skateboard Deterrent and shall include the cost all labor, material, plant, equipment, insurance, and incidentals necessary to furnish and install the Custom Skateboard Deterrent including, but not limited to, anchoring the deterrent to the granite; all in accordance with the Contract Drawings, the specifications and the directions of the Engineer.

Payment will be made under:

Item No.	Item	Pay Unit
RCP-SD 1	CUSTOM SKATEBOARD DETERRENT, TYPE 1	EACH
RCP-SD 2	CUSTOM SKATEBOARD DETERRENT, TYPE 2	EACH

**SECTION T-60000B
Cable Spec. for 120 Volt Power Supply**

T-60000B .1 Cable Name

This cable shall be called 2c-10 B (breakdown 2c-10 B= 2 number 10awg conductors with a third wire for grounding).

T-60000B .2 Intended use

This cable is to be used for 120 volt power systems in NYC. The cable shall be rated for 600 Volts and have a polyethylene-insulated, jacketed cable for use in underground conduit or for aerial use (must have strain relief's built in for aerial use without a messenger cable). The outer jacket shall be a black in color and be UV resistant and made to endure extreme outdoor usage unprotected without deterioration of insulation or outer jacket fading. This cable shall be rated for direct burial without conduit covering or other protection.

T-60000B .3 Construction

The conductors shall be round annealed copper conforming to ASTM designation b-3. This cable shall be a 3 conductor type with two number ten AWG wire size conductors one white solid wire and one black solid wire with the third conductor number 8 AWG bare stranded wire.

T-60000B .4 Insulation

The insulation shall be a heat-stabilized polyethylene conforming to the requirements of ASTM designation D 1248 for type I category 5 grade E4 materials. This insulation shall be concentrically applied about the conductor. This installation shall meet the following requirements when tested in accordance with the procedures of ASTM designation D 2633 and D 1351.

This cable shall meet all other requirements as listed in the NYC DOT traffic specifications 3/95.

Payment will be made under:

Item No.	Description	Pay Unit
T-60000B	FURNISH 2 C #10B (BREAKDOWN=2#10 WITH 3 RD WIRE FOR GROUNDING)	L.F.

**SECTION T-93000
FURNISH AND INSTALL COMPLETE DOME CCTV
CAMERA SYSTEM ON CITY-OWNED UTILITY POLE**

1. Description

1.1. General

Under this Section the Contactor shall be required to furnish and install complete Dome Network IP Camera (s) systems on City-owned utility poles.

The Contractor shall provide a complete, turn-key installation, testing and maintenance for the duration of the contract, including all required electronic devices for the System, all associated mounting hardware, and all associated cabling and integrate those devices into the City's Traffic Management Center. The Contractor shall also furnish and install the associated conduit, cabling, transformers, power supplies, over-current protection devices, uninterruptible power supplies, cabinets, enclosures, mounting racks and other supporting infrastructure elements for all System equipment provided by the Contractor in accordance with the criteria described herein and in other parts of the Contract. The Contractor shall provide design, furnish, install, integrate, start up, test, and maintain all materials, equipment, hardware, software, firmware and all associated training.

1.2. Work Included

The work includes the furnishing and installing of all materials as specified in the attached Sections **65001. "Furnished Dome Camera Specifications"** and **7.87 "Installation"**.

The Contractor shall verify all dimensions and details shown on any Contract Drawings provided by NYCDOT, Quantities, or any other data received from NYCDOT and shall notify the Engineer in writing of all omissions, conflicts, and discrepancies found therein. Notice of such errors shall be given before the Contractor proceeds with the work.

In order to complete the work within the prescribed schedule and to minimize the inconvenience to the motorist, pedestrians, and the public, the Contractor shall adhere to the procedures and as specified in the Contract Documents.

The Contractor shall be required to maintain and protect traffic and furnish all safeguards for the protection of persons and property during the installation of the dome camera system.

1.3. Post-Bid Submittals

The successful low bidder shall be required to submit the following within 30 days of award:

Evidence of meeting the qualifications described in these specifications.

A list of manufacturers, equipment model numbers, catalog cut sheets, and other descriptive materials for all equipment and components proposed by the Contractor. This information shall, in sufficient detail, demonstrate that the Contractor or Subcontractor who will be performing this work fully understands the equipment requirements and nature of the work to be performed under this contract. All submissions made by the Contractor will be subject to review and approval by the Engineer.

1.4. Time of Completion

The Contractor must complete the work under this Section prior to the start of any other work under this project which may restrict the flow of traffic, unless otherwise permitted by the Engineer.

1.5. Interpretation of Apparent Omissions

The apparent silence of the NYCDOT Standard Specifications and these Detail Specifications as to any detail, or the apparent omission from them of a detailed description concerning any work to be done and materials to be furnished, shall be regarded as meaning that only the best general practice is to prevail and that only the best material and workmanship is to be used. Interpretations of the specifications shall be made upon that basis.

1.6. Conflict

Should any conflict occur in or between the Contract Drawings and NYCDOT Standard Specifications, the Contractor shall be deemed to have estimated on the more expensive way of doing the work, unless he or she shall have asked for and obtained a decision in writing from NYCDOT before the submission of bid as to what shall govern.

1.7. Omission of Details

All work called for in the Specifications but not shown in the Contract Drawings in their present form, or vice versa, and work not specified in either the Contract Drawings or in the Specification but involved in carrying out their intent or in the complete and proper execution of the work, is required, and shall be performed by the Contractor as though it were specifically delineated or described.

1.8. Adherence to Laws, Rules & Regulation

All work performed under this contract shall comply with the New York City Highway Rules 34 RCNY Ch. 2 of the New York City Department Of Transportation. The Contractor shall also adhere to all other applicable laws, rules and regulations including the following:

- Sidewalk flags must be fully restored where excavated for the installation of conduit or a foundation.
- On non-protected streets trenches of, or less than, 12" in final restoration require a cut back of 6" of the wearing course on both sides of the trench, so that the cut is a minimum of 18" wide.

1.9. Method of Measurement

The quantity to be measured for payment shall be the number of Dome Camera Systems installed, to the satisfaction of the Engineer.

1.10. Price to Cover

The contract unit price bid per each Complete Dome CCTV Camera System furnished and installed on a City-owned utility pole shall cover the cost of all labor, materials, plant,

equipment, insurance, and incidentals necessary to complete the work under this Section, in accordance with the plans, the specifications and the directions of the Engineer. The unit price also includes the cost of maintenance of the CCTV Camera System throughout the duration of the project.

1.11. Method of Payment

Progress payments for the Dome Network Camera system will be made as follows:

- Upon the complete purchase and field installation, the Contractor shall be paid 50% of the amount bid for each camera satisfactorily installed.
- Upon the complete field inspection and system integration at the Traffic Management Center (TMC), 28-11 Queens Plaza North, and verifying that the system is completely operational, the Contractor shall be paid 20% of the amount bid for each camera.
- Upon completion of the project and successful acceptance, the Contractor shall be paid the remaining 30% of the unit price bid for each camera.

Payment will be made under:

Item No.	Item	Pay Unit
T-93000	FURNISH AND INSTALL COMPLETE DOME CCTV CAMERA SYSTEM ON CITY-OWNED UTILITY POLE	EACH

65001. Furnished Dome Camera Specifications

The following detailed specifications for materials, method of measurement, and basis of payment are provided for work to be performed under this contract.

65001.1. Abbreviations & Definition of Terms

- **Abbreviations**

AASHTO	American Association of State Highway and Transportation Officials
AC	Area Computer
ANSI	American National Standards Institute
ASTC	Advanced Solid State Traffic Controller
ASTM	American Society for Testing and Materials
CPU	Central Processing Unit
DCE	Data Communications Equipment
EMI	Electromagnetic Interference
FCC	Federal Communications Commission
FTP	File Transfer Protocol
ICEA	Insulated Cable Engineers Association
IEEE	Institute of Electrical and Electronic Engineers
ITE	Institute of Transportation Engineers
LAN	Local Area Network
LED	Light Emitting Diode
MCBF	Mean Counts Between Failures
MTBF	Mean Time Between Failures
MTTR	Mean Time To Repair
MURK	NYSDOT's Manual of Uniform Record Keeping
MUTCD	Manual on Uniform Traffic Control Devices
NEC	National Electric Code
NEMA	National Electrical Manufacturers Association
NTCIP	National Transportation Communications for ITS Protocol
NYCDOT	New York City Department of Transportation
NYSDOT	New York State Department of Transportation
OSHA	Occupational Safety and Health Administration
PVC	Polyvinyl Chloride
TCP/IP	Transmission Control Protocol/Internet Protocol
TMC	Traffic Management Center
UCC	Uniform Construction Code
UID	Universal Identification Number
UL	Underwriters' Laboratories
VTCS	Vehicular Traffic Control System
WAN	Wide Area Network

The publications, specifications, test methods and standards of any organizations listed above to which referral or mention is made shall be the latest edition of such publication and any interim modifications in effect on the date the Contract Documents are made available, unless otherwise noted.

65001.2. Instructions & Guarantees

65001.2.1 One set of complete schematics and operations/maintenance manuals of the each component of the camera assembly shall be supplied with each five assemblies furnished. Maintenance manuals shall include complete sub-component parts listing.

65001.2.2 No changes or substitutions in these requirements will be acceptable unless authorized in writing. Inquiries regarding this specification shall be addressed to 34-02 Queens Blvd. / 2nd Floor, Long Island City, NY 11101.

65001.2.3 The complete camera assembly shall carry a one-year guarantee from the date of acceptance against any imperfections in workmanship or materials.

The Contractor shall be responsible for the monthly maintenance charges and operating cost of the communication from service provider until the warranty is over.

65001.2.4 The manufacturer agrees upon the request of the Engineer-in-Charge (E.I.C) to deliver to the Office, a sample of the complete camera assembly to be supplied in compliance with these specifications for inspection and test before acceptance.

65001.2.5 The supplier shall furnish any and all equipment which they deem necessary for safe and reliable field operation of the camera equipment as part of the quoted price for the specified equipment.

65001.2.6 All camera components furnished under this specification must be current production equipment and of recent manufacturer, identical models of which are in field operation in not less than one hundred (100) locations in the United States or Canada. Untried or prototype units shall not be considered for acceptance.

65001.2.7 All major components shall be identified with a metal plate containing the serial number with bar code identification.

65001.2.8 Any repairs made by a manufacturer or representative shall be documented and returned with units when warranty repaired. This documentation shall include an explanation of the exact repairs made and identification of parts replaced by part number and circuit number. All warranty repairs must be completed within thirty (30) days of delivery of the equipment to the designated repair depot.

65001.2.9

The video signals shall be transmitted to the NYCDOT Traffic Management Center; The Contractor shall furnish protocol for communication between the Operations Center and all field equipment installed under this contract. All cameras shall interface with New York City flow map chart and the New York City DOT web site so that the operator at the Traffic Management Center shall have the capability to control the cameras through the transuite system.

65001.3. NTCIP

To ensure compatibility and interchangeability with equipment furnished in previous and future contracts, the Dome Network (IP) Camera Assembly shall be compliant with the latest version of the NTCIP Standards, as defined by AASHTO, ITE, and NEMA. Including the following:

- An optional NTCIP board that converts control signals from NTCIP controllers shall also be available.

- New York State NTCIP specification item number "683.1014 11- DOME TYPE CCTV CAMERA ASSEMBLY", excluding the requirement to provide warranties and guaranties to the State of New York Department of Transportation and both the "METHOD OF MEASUREMENT" and "BASIS OF PAYMENT" provisions of Item No. 683.1014.11.

65001.4. General

65001.4.1 Components

The outdoor Dome Network IP camera system shall be a discreet, pendant Network IP camera dome system consisting of a dome drive with a variable speed/high speed pan/tilt drive unit with continuous 360° rotation; 1/4-inch high resolution color CCD camera; motorized zoom lens with optical and digital zoom; auto focus; and an enclosure consisting of a back box, lower dome, and a quick-install mounting. The Dome Network Camera shall support High Power over Ethernet.

The Contractor is responsible to deliver a working system any device major or minor not listed below that is needed for proper operation shall be supplied.

65001.4.2 Environmental

All CCTV components, while housed in their associated environmental enclosures, shall operate in the ambient temperature range of -60°F to 140°F and shall meet NEMA 4 weatherproof standards.

65001.5. Pendant Dome Network IP Camera

65001.5.1 Configuration

The Camera shall be blemish-free, designed to minimize or eliminate transfer smear and insure acceptable operation during minimal lighting conditions. The camera shall be capable of unattended, continuous 24 hour per day operation in an outside plant environment.

The camera shall be fully integrated with the zoom lens described under Section 65001.6 of this specification. The camera shall accept standard C or CS zoom or fixed lenses and shall be equipped with an auto-iris lens connector with manual override compatible with the zoom lens supplied. The unit shall produce NTSC compatible video utilizing a 1 volt Peak to Peak composite @ 75ohms output, and an input voltage between 22 to 27 VDC. The camera must be fully compliant with all aspects of the NTSC specification.

65001.5.2 Resolution & Sensitivity

At least 470 horizontal TVL lines must be produced by the camera and 724 horizontal x 494 vertical active pixels must be produced by the assembly.

The night sensitivity of the camera is a key concern in that the unit may have to operate in areas with no primary lighting system.

A full video shall be obtainable using an f/1.6 lens and with a minimum illumination of .08 lux at 1/2 sec. Video signal to noise ratio shall exceed 50 decibels. The camera shall be equipped with AGC (Automatic Gain Control). The AGC feature shall be switch selectable (On/Off) and be equipped with a variable peak average control.

65001.5.3 Synchronization & Automatic Control

Synchronization shall be via AC line frequency line-lock with phase adjust using a remote control. Line-lock synchronization utilizes the AC power frequency for the vertical sync reference. An internal Isolation transformer shall be provided to reduce ground loop potential and allow multiple cameras to be powered from a single power supply.

A variable speed electronic shutter shall also be provided. The automatic shutter speeds shall be adjustable from 1/2 to 1/30 000 in 1-stop increments.

The camera shall have continuous automatic (through the lens) white balance control with manual override and black light compensation circuitry to adjust the picture dynamically in response to the varying light conditions encountered in outside environments. In this regard, pictures with an appropriate color balance shall be obtainable within all specified illumination conditions.

65001.6. Zoom Lens

65001.6.1 Basic Configuration

A fully motorized zoom lens fully compatible with the camera specified in Section 65001 is to be supplied. The zoom lens shall be capable of supplying magnification of at least 35x optical and 12x digital zoom with autofocus, providing crisp, clear and rich detail of both zoomed in and zoomed out image. The lens must have an auto-iris capability compatible with the camera and a wide dynamic range of at least 80X.

65001.6.2 Field of View

The camera and associated zoom lens with an Automatic with manual override shall produce the following minimum field of view in the required magnification range of 54° at 3.6 mm wide zoom.

65001.6.3 Remote Control

The zoom magnification shall be fully controllable via the remote PTZ mechanism. The motors controlling the Iris, Zoom, and Focus shall be slip clutch protected to prevent damage due to overload.

65001.7. Environmental Enclosure

65001.7.1 Basic Configuration

The environmental enclosure shall be designed to protect the camera and zoom lens from the outdoor environment which the assembly must be designed to function in. The assembly must be supplied with an integral sun shield.

The housing shall be constructed of aluminum and be finished with white or beige, weatherproof, heat-reflecting paint. The enclosure shall protect the camera and zoom lens from harsh outdoor weather conditions. It shall provide a sealed, marine climate resistant, protective environment meeting NEMA-4 (IP65) weatherproof standards.

65001.7.2 Zoom Lens Clearances

The camera and zoom lens shall be mounted to insure that the enclosure will not obstruct the field of view of the camera. Sufficient clearance between the zoom lens extended to its furthest point of travel and the enclosure face plate shall be provided to insure that mirroring on the window will not be obtained.

65001.7.3 Heater

The enclosure shall be equipped with a heater controlled by a thermostat. The heater shall engage when temperature within the enclosure falls below 41°F. The heater shall disengage when temperatures exceed 50°F. The heater shall minimize internal fogging of the face plate when the assembly is operated in cold weather.

65001.7.4 Cable Entry

Cable entry shall be through 1.5" NPT pendant mount. Sufficient cable lengths shall be provided to reach the Control Receiver Junction Box.

65001.7.5 Mounting to PTZ Mechanism

The mounting assembly of the environmental enclosure shall be attached to the PTZ base assembly by stainless steel circular clamps. Each circular clamp shall be torqued to 13.6 kilograms.

65001.7.6 Lower Dome

Special care shall be taken when installing the lower dome bubble to ensure that an optimal optical relationship between the lens and bubble was achieved, providing crystal clear video at long focal lengths.

65001.8. Dome Drive

Dome Drive Features

- 400°/ second Pan Preset Speed and 220°/ second Tilt Preset Speed.
- 256 presets, ± 1° Preset Accuracy.
- 10 alarm inputs.
- Continuously decreases Pan/Tilt speeds in proportion to depth of zoom.
- Pan motion allows 0.1-150°/sec Pan Speed.
- Digital Position, zoom control and feedback.
- Rotating Discreet Liner with Sealed Fixed Bubble.
- Multiple Park and Power-Up Action.
- Programmable Zoom Speeds.

65001.9. Dome Network IP Camera and Built-in encoder

65001.9.1 General Requirements and System integration

The Dome Network IP Camera shall

- Support Pan/Tilt/Zoom functionalities including Guard tour, tour recording, control queue capability that allow a user with a higher PTZ priority can take control before other users in the queue, on-screen directional indicator
- Be IP66- and NEMA 4x-rated metal casing (aluminum)
- Support and include High Power over Ethernet (PoE) port
- Be equipped with network interface of 10BASE-T/100BASE-TX PoE using standard RJ-45 connectors
- Be equipped with local storage SD/SDHC memory card slot
- Supported by an Open API (Application Programming Interface) for software integration of functionality into a third party applications
- Support intelligent Video motion detection, autotracking, Active Gatekeeper
- Support overlay
- Be equipped with an alarm events feature that can configure up to 10 events type that can be configured via the web interface to trigger actions:

Alarm events can be triggered by:

- Motion Detection
- An upload application
- Autotracking
- Pan Tilt Zoom preset
- Temperature
- Memory card full
- Fan malfunction
- System events such as system boot

Alarm events actions include:

- File upload to an event server via FTP, HTTP and email
 - Notification via email, HTTP and TCP
 - Go to PTZ preset
 - Run Guard Tour
 - Run autotracking
 - Record to local storage
 - Pre-and post-alarm video buffering
- The video shall not require any additional software to operate and the video shall be able to be accessed from web browser:
 - Camera live view
 - Video recording to file (ASF)
 - Customizable HTML pages
 - Windows 7, Windows Vista, Windows XP, Windows Server 2008, Windows Server 2003
 - DirectX 9c or higher
 - Network Security:
 - Multiple users access level control with password protection,
 - Support IP address filtering,
 - Supports encrypted browsing using HTTPS encryption
 - IEEE 802.1X network access control authentication
 - Digest authentication,
 - User access log

65001.9.2 Certifications and standards

The Dome Network IP video camera shall carry the following approvals:

- EN55022 Class B, EN 61000-3-2, EN 61000-3-3, EN 61000-6-1, EN 61000-6-2, EN55024
- FCC Part 15 - Subpart B Class B
- ICES-003 Class B
- VCCI Class B
- C-tick AS/NZS CISPR 22
- KCC Class A
- EN 60950-22
- IEC 60529 IP66
- NEMA 250 Type 4X
- IEC 60068-2-1, IEC 60068-2-2, IEC 60068-2-78, IEC 60068-2-14, IEC 60068-2-30,
- IEC 60068-2-6, IEC 60068-2-27, IEC 60068-2-60
- ISO 4892-2
- Midspan: GS, UL, cUL, UL-AR, CE, VCCI, CB, KCC

65001.9.3 Video

- Compression
 - The built-in video encoder shall provide simultaneous support for H.264 (MPEG-4 Part 10/AVC) and Motion JPEG
 - The H.264 and Motion JPEG implementation shall include support for both constant Bit Rate (CBR) and Variable Bit Rate (VBR), and shall support both unicast over RTP, unicast over RTP over RTSP, unicast over RTP over RTSP over HTTP as well as multicast over RTP.
 - The built-in video encoder shall provide at least 11 different compression levels.
 - The built-in video encoder shall be capable of providing bit rates between 1kbps and 12 Mbps per video stream.
- Video Resolutions

The camera should be able to provide an HDTV 1080p 1920x1080 to 320x180 and an HDTV 720p 1280x720 to 320x180
- Frame Rate
 - The H.264 video compression should be able to provide up to 30 fps in 1080p and 60 fps in 720p
 - The Motion JPEG compression should be able to provide up to 25 fps in 1080p and 50 fps in 720p
- Image enhancement: The built-in video encoder shall contain an embedded de-interlacing filter.

65001.9.4 Functionality

Web encoder:

- The Network IP camera shall contain a built-in web encoder making video and configuration available in a standard browser environment using HTTP, without the need for additional software.
- When accessed from a browser, the web encoder shall provide users with online, context-sensitive help.
- The Network IP camera shall not require any additional software to operate, and shall support full functionality when operating in the following environment:
 - Operating Systems: Windows 2000, Windows XP
 - Browsers: MS Explorer 6.x and higher
- Components such as Active X downloaded from the built-in video encoder shall be signed by an organization providing digital trust services, such as VeriSign, Inc.
- The built-in video encoder's web encoder shall support up to twenty (20) simultaneous unicast clients and unlimited number of clients using multicast MPEG-4.
- The built-in video encoder's integral web encoder shall provide support for defining usernames and passwords for a minimum of three (3) different types of users.

IP addresses:

- The built-in video encoder shall support both fixed IP addresses and dynamically assigned IP addresses provided by a Dynamic Host Control Protocol (DHCP) encoder.
- The built-in video encoder shall allow for automatic detection of the unit based on UPnP and Bonjour when using a PC with an operating system supporting this feature.
- The built-in video encoder shall provide support for both IPv4 and IPv6.

Bandwidth management: The built-in video encoder shall

- Provide the ability to control network traffic by limiting the maximum bandwidth to a selected value.

- Provide the capability to limit the frame rate per viewer to a selected value, as well as the duration of each viewing session.
- Support Quality of Service (QoS) to be able to prioritize traffic.

PTZ functionality: The built-in video encoder shall

- Provide the ability to control PTZ devices from third party manufacturer.
- Provide at least one hundred (100) preset positions.
- Provide a guard tour functionality which allow the PTZ device to automatically move between selected presets using an individual speed and viewing time for each preset.

Event functionality:

- The built-in video encoder shall be equipped with an integrated event functionality, which can be triggered by:
 - External input
 - Video Motion Detection
 - Video loss
 - Schedule
- Response to triggers shall include:
 - Notification, using TCP, SMTP or HTTP
 - Image upload, using FTP, SMTP or HTTP
 - Preset call up
 - Activating external output
- Event functions shall be configurable via the web interface.

Protocol support:

The built-in video encoder shall incorporate support for at least IPv4/v6, HTTP, HTTPS, SSL/TLS, TCP, QoS, SNMPv1/v2c/v3 (MIB-II), RTSP, RTP, UDP, IGMP, RTCP, SMTP, FTP, ICMP DHCP, UPnP, Bonjour, ARP, DNS, DynDNS, SOCKS, IEEE802.1X.

Text overlay:

The video encoder shall

- Provide embedded on-screen text in the video, with support for date & time, and a customer-specific text, camera name, of at least 45 ASCII characters. To ensure accuracy, the video encoder shall accept external time synchronization from an NTP (Network Time Protocol) encoder.
- Provide the ability to apply a privacy mask to the image.
- Allow for the overlay of a graphical image, such as a logotype, into the image.

Security:

Multiple user access levels with password protection, IP address filtering, HTTPS encryption, IEEE 802.1X authentication.

API support:

The built-in video encoder shall be fully supported by an open and published API (Application Programmers Interface), which shall provide necessary information for integration of functionality into third party applications.

Maintenance:

The built-in video encoder shall

- Be supplied with Windows-based management software which allows the assignment of IP addresses, upgrade of firmware and backup of the video encoders' configuration.
- Support the use of SNMP-based management tools according to SNMP v1, 2c & 3 / MIB-2.

- Allow updates of the software (firmware) over the network, using FTP or HTTP. Customer-specific settings, including statically assigned IP address, the local time & date, event functionality and video configuration, shall be stored in a non-volatile memory and shall not be lost during power cuts or soft reset.

65001.9.5 Power requirements: 7-20 VDC, max 8 W.

65001.9.6 Environmental: The Dome network camera built-in video encoder and accessories shall

- Operate in a temperature range of -40°F to 122°F.
- Operate in a humidity range of 20 to 80% RH (non-condensing).

65001.9.7 Installation

- The Contractor shall carefully follow instructions in documentation provided by the manufacturer to insure all steps have been taken to provide a reliable, easy-to-operate system.
- All equipment shall be tested and configured in accordance with instructions provided by the manufacturer prior to installation.
- All firmware found in products shall be the latest and most up-to-date provided by the manufacturer, or of a version as specified by the provider of the Video Management Application (VMA) or Network Video Recorder (NVR).
- All equipment requiring users to log on using a password shall be configured with user/site-specific password/passwords. No system/product default passwords shall be allowed.

65001.10. Cabinet

65001.10.1 Cabinet housing

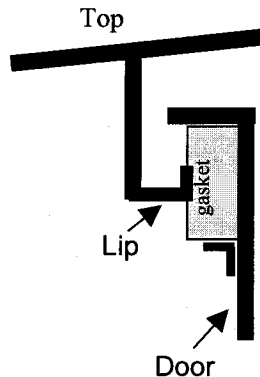
- The cabinet housing shall be weatherproof and rainproof with the top of the enclosure either crowned or sloped to prevent standing water. The cabinet shall be constructed to shield the top of the cabinet door to prevent water from entering between the top door gasket and the cabinet.
- The cabinet housing shall have a single front door, equipped with a three-point latch and lock. The cabinet shall be fabricated for side of pole mounting and shall be suitably re-enforced for both pole mounting.
- All exterior seams and the cabinet as a whole shall meet the requirements for Type 3R enclosures according to NEMA Standards Publication 250-1991.
- The cabinet shall be clean-cut in design and appearance. The maximum exterior dimensions, including the cabinet door (but not including the removable handle) shall be as follows:

23" High x 20" Wide x 15" Deep

65001.10.2 Material

The cabinet housing, doors, and gasket channels shall be fabricated of 0.1875" minimum thickness sheet aluminum, using Grade 5052-H32 aluminum alloy. The sheet aluminum shall be adequately reinforced as necessary. If necessary, reinforcing supports shall be welded to the inside of the door to prevent the warping or twisting of the door. (A minor deviation was allowed for the current cabinet in the form of a lip using 0.125" material at the top of the door to improve water management over the door opening – see figure down).

This deviation to the 0.1875" thickness requirement will be allowed providing all seams for this lip are continuously welded and only the top lip of the door opening is so modified. (Such a deviation must be submitted for approval by the ENGINEER.)



65001.10.3 Construction

- All construction shall be free of dents, scratches, weld burn through and abrasions harmful to the strength and general appearance. All exterior seams for the cabinet housing and door shall be continuously welded and shall be smooth and free of impurities. All exterior corners shall be rounded.
- There shall be no sharp edges or protrusions on the cabinet whether open or closed which might pose a risk of personnel cuts or injury. All sharp edges shall be sanded and deburred before painting.

65001.10.4 Exterior Surfaces

The exterior surface of the controller cabinet shall be powder coated, using medium green to match Federal Specification 595B Color 14062.

65001.10.5 Gasketing

- The housing shall have a door, securely gasket, which shall include substantially the full area of the front of the cabinet. Gasketing shall be provided on all door openings and shall be of dust-tight permanent type that will not peel off or deteriorate. Gaskets shall be 0.25" minimum thickness closed cell neoprene and shall be installed with contact cement for a permanent bond. The mating surface shall be sprayed or otherwise coated with a silicon lubricant to prevent sticking to the mating metal surface.
- The gasket material shall not be damaged by normal cabinet cleaning agents and solvents normally used to remove graffiti from the exterior of the cabinet.
- Gasket material shall be UV resistant.
- The design of the door and gasket shall be such that the integrity of the gasket material shall not be required to ensure that the internal cabinet assemblies are protected from water damage under adverse environmental conditions. Cabinet door assemblies shall be designed in such a way that damaged gaskets do not allow water to enter the cabinet.

Gasket material shall be continuous along the entire top of the cabinet door with no seams or joints in this section.

65001.10.6 Cabinet Door

- (A) The cabinet door shall be hinged on the right side when facing the cabinet. The door hinge shall be continuous and bolted (piano) to the cabinet and door utilizing $\frac{1}{4}$ - 20 stainless steel carriage bolts and NY lock nuts. The hinge shall be made of 0.075"

stainless steel and shall have a 3" open width with a 0.250" diameter stainless steel carriage hinge pin. The hinge pin shall be capped top and bottom by weld to render it tamper proof. The hinge leafs shall not be surface mounted on the outside of the cabinet. They shall be mounted between the door and the cabinet. The cabinet door hinges shall be bolted to the cabinet housing in a manner that prevents unauthorized personnel from removing the door with commonly available tools.

- (B) The cabinet shall be equipped with an automatic, self-engaging catch to hold the door open at 135° (\pm 25°). The catch shall be capable of holding the door open in a 140 Mi/Hr wind coming at an incidence angle of 90 degrees referenced to the plane of the door. A means shall be provided to minimize the accidental release of the doorstop. The catch shall also be easily and reliably disengaged when closing the door so that the door and catch are not damaged.
- (C) The door shall be furnished with a three-point latching mechanism. The latching mechanism shall be a three-point draw roller type. Push rods shall be turned edgewise at the outward supports and shall be 0.250" by 0.750" stainless steel, minimum. Rollers shall have a minimum diameter of 0.875 inch and shall be made of nylon. The center catch shall be fabricated from 0.134" stainless steel minimum. Stainless steel compensating wear guards shall be used at contact point for the three point latching; these shall be pop or blind riveted to the cabinet.
- (D) The three-point locking mechanism shall be fabricated so that it may be actuated by rotating a removable 5/8" hex key door handle. The hex socket and locking cam shall rotate on a 0.5" minimum diameter shaft. The socket, shaft and hex key shall be fabricated from stainless steel, grade 2011P3 aluminum, or other material plated to prevent corrosion. The socket and shaft shall be field-replaceable with common tools. The socket head shall be protected from being rotated with a pipe wrench or similar tool. Designs shall be subject to approval by NYC DOT prior to fabrication. One (1) hex wrench shall be provided with each cabinet.

65001.10.7 Water Management

- The cabinet shall be constructed such that defective, aged, and damaged gasket material shall not allow water to enter the cabinet in any areas that might cause damage to the equipment or wiring mounted inside or the operation of the signals.
- The cabinet shall properly manage any condensation which may occur internally such that moisture cannot damage any of the internal cabinet assemblies, subassemblies, wiring or devices.
- There shall be no holes, seams, or attachments to the top of the cabinet that might cause water to leak for any reason.
- Weep holes approximately 3/16" in diameter shall be drilled in the bottom floor of the cabinet such that water does not accumulate in the cabinet.

65001.10.8 Door Lock

- The lock for the cabinet door shall be of the self-locking, heavy duty, pin tumbler, cylinder rim type. It shall be the Corbin No. 1548RS 7/8, keyed for a DT-9 key, with dust cover. Two DT-9 keys, constructed of brass or stainless steel are to be furnished with each cabinet. When the door is closed and latched, with the key removed, the door shall lock.
- During the installation of the lock, good grade of commercial silicone will be put around the cylinder to form a weather barrier between the front of the lock and the inside of the cabinet door. A stainless steel lock protector plate shall be installed over the rear of the lock to prevent the rear of the lock from being punched out from the front of the cabinet.

65001.10.9 Cabinet Ventilation

- Each cabinet shall be provided with louvered vents in the cabinet door for fresh air. The vents shall be screened against the entrance to remove dust and foreign matter, with a removable and replaceable air filter 16" x 6" x 1" deep to filter incoming air. The filter shall be *Eco Air* type disposable filter or equivalent [reference: Eco-Air Products, Inc., San Diego, CA 92126, 619-271-8111] which is currently used and stocked by the City. The filter shall be a UL classified air filter-Class 2 644N.
- The filter shall overlap the vents by at least 1 inch and shall be held firmly in place with bottom and side brackets and a spring-loaded upper clamp. Provisions shall be made in the design of the vents to prevent snow and rain from being blown through the vents into the cabinet.
- The bottom filter bracket shall be formed into a waterproof sump with drain holes to the outside. The louvered vents shall be designed and constructed so that a stream of water from a pressure head, such as a *Rainbird* sprinkler or other type of water spray test, will not enter the cabinet. The louvered area shall be less than the filtered area.

65001.10.10 Cabinet Mounting

- The cabinet shall be mounted on the side of a pole.
- The mounting area shall include reinforcement angle or other stiffening techniques to prevent the back of the cabinet from deforming when attached to the pole.

65001.10.11 Labeling

- The cabinet shall be furnished with a metal plate embossed with the following two (2) lines of text:

TRAFFIC CONTROL
NEW YORK CITY

Alternatively, the information noted above may be permanently etched or embossed into the cabinet door in such a manner as to be clearly visible on the exterior of the cabinet.

- If a plate is used, it shall be 11" in length and 5" tall and welded the outside of the front door with the center of the plate located at the vertical centerline and midway between the top and the middle of the door. This plate shall be painted with the same green paint as the exterior of the cabinet. The text shall have letters that are 0.875" in height; the information noted above shall be embossed in a manner which allows this information to be read even after several coats of paint have been added to the cabinet. The welding for this plate shall be neat in appearance.
- The controller cabinet shall also be identified by model number, a serial number, and NYC DOT on a metal plate visible on the inside of the cabinet. Consecutive serial numbers shall also be stamped on the metal name identification plate and fastened to the inside of the cabinet by rivets which shall not protrude or otherwise be visible on the exterior of the cabinet.
- NYCDOT requires that each separate procurement contract or construction contract have serial numbers which are unique and identifiable. The Contractor shall work with the City to establish a numbering scheme that allows the City and its maintenance contractors to quickly identify the specific contract which provided the controllers. This requirement shall be true for all subassemblies as well so that the City can identify the origin of the part and determine which contractor is responsible for its maintenance.

65001.11. Modem

65001.11.1 General

The modem shall be used for field communications to Traffic control devices that include Microwave sensors, Variable message signs, cameras, traffic controllers and other intelligent transportation applications within the City of New York. This unit will be used in outdoor applications subject to extreme temperature and humidity housed in a NEMA type 3 R enclosures. The unit shall form the field end of a communications system including all components necessary to establish communications with our Traffic management center including components not addressed in this document.

65001.11.2 Features

- High speed data transfer rate.
- Compatible with the cell service carrier as directed by the Engineer.
- Compact size.
- Remotely manageable and upgradeable.

65001.11.3 Environmental

- Operating ranges: -22°F to 158°F
- Humidity: 5%-95% Non-condensing

65001.11.4 Design

- The modem shall have an input voltage from 9DC to 28DC, and shall also be able to operate from a furnished 110AC power supply that can be plugged directly into a standard power receptacle.
- The modem shall support available data service with dual-band receive diversity with a keep-alive function to ensure persistent connectivity.

65001.11.5 Communications

- The modem shall include an Ethernet or RS-232 ports to be determined by field devise that will interface with the modem or as directed by the Engineer.
- The modem shall be capable of wireless remote management, reconfiguration and firmware and PRL update.
- The modem shall be configurable as an SNMP agent for remote network management and have a software application able to create and save configuration templates and the ability to remotely monitor, update and report statistical data on user defined modem groups.
- Data rates:
 - Downlink-3.1 Mbps max; 450-850 kbps typical
 - Uplink- 1.8 Mbps max; 300-400 kbps typical
- The modem shall have a static IP address.

65001.11.6 Additional Equipment

- A 3db low profile outdoor antenna with a mobile thru sheet metal type of mounting system. The antenna shall be of such a design to be tamper and damage resistance. The unit shall be furnished with all connectors and cabling needed for installation.
- The modem shall be housed in a suitable enclosure meeting NEMA 3R standards for weather resistant enclosures and be of such a construction that it is resistant to corrosion and have provisions for locking with a padlock.
- The modem shall be supplied with all necessary power cables and adapters for either low voltage DC or 110v AC operation.
- The modem shall be warranted for a period of 1 year from the date of acceptance.
- The modem shall be provisioned, programmed and tested prior to shipping.

7.87 Installation

7.87.1 Contractor Responsibilities

- The Contractor is responsible for carrying out the provisions of the contract at all times. Any work or item that is, at any time, found to be in non-conformance with Specifications or not in compliance with the Contract Drawings shall be subject to such corrective measures as directed in writing by the Engineer.
- The Contractor shall designate a duly authorized superintendent whose sole responsibility shall be managing and coordinating the Contract. The superintendent shall give constant personal attention to the work while it is in progress. The superintendent shall be a competent and reliable superintendent who can communicate technically, and have authority to act for the Contractor. It shall be the Engineer's option to require the replacement of the superintendent if that individual is unreliable or does not adequately progress the work. The Contractor shall, at all times, employ labor and equipment, which shall be sufficient and adequate to prosecute the work in a complete and timely manner. All workers must have sufficient skill and experience to properly perform the work assigned to them. The Engineer shall have the ability to have the Contractor remove from this project any person creating a disturbance to the project or deemed by the Engineer unfit to perform the work.
- Under the Contract, the Contractor shall be required to do all work enumerated under the different items of the contract and, in addition to this, shall be required to protect all properties, all utilities and existing facilities within and adjacent to the work and to repair or replace any such properties, utilities and facilities damaged or destroyed by the Contractor's construction operations.
- The Contractor shall be responsible for the coordination of the work of his various subcontractors. Their respective operation shall be arranged and conducted so that delays and conflicts will be avoided. The Contractor shall ultimately bear the responsibility to progress all of the work in an efficient, continuous and workmanlike manner.
- In order to insure compatibility between the components, the camera, environmental enclosure, zoom lens, PTZ mounting, and Receiver Junction Box electronics, must all be integrated by an experienced video system engineering firm.
- The integrator must have at least five (5) full time factory-trained and certified technicians and/or engineers who are rated for the components to be utilized. The video supplier shall be able to provide on-site service anywhere in New York within eight (8) hours notice. The video supplier shall accept full warranty responsibility and regular support service for the complete CCTV package.
- The Contractor shall be responsible for installation of the required system components and communication equipments in the field and on Traffic Management Center (TMC) to provide a fully operational system.

7.87.2 Supplementary Drawings

When, in the opinion of the City's Engineer, it becomes necessary to more fully explain the work to be done, or to illustrate the work further, or to show any changes which may be required, drawings known as supplementary drawings and specifications known as supplementary specifications will be prepared by the Engineer. Four (4) prints of each of these drawings and four sets of these specifications will be furnished to the Contractor. These supplementary drawings and specifications shall be binding upon the Contractor with the same forces as the Contract Drawings and specifications.

7.87.3 Specifications/Drawings

The following NYCDOT documents are hereby made a part of this contract:

The City of New York, Department of Transportation, Division of Traffic Operations, Street Lighting Section, Specifications - 1992 Edition.

The City of New York, Department of Transportation, Division of Traffic Operations, the Chief Transportation Officer Traffic Engineering Section, Specifications - March 1995 Edition. [Also referred to as "Division of Traffic Operations and Signals Standard Specifications ("Traffic Blue Book") which details all the bid items in the contract.]

The City of New York, Department of Transportation, Division of Traffic Operations, Street Lighting Section, Standard Drawings - 1992 Edition.

The City of New York, Department of Transportation, Standard Highway Specifications - November 2010 Edition.

All other specifications and drawings to be provided by the NYCDOT.

At the end of the project and after the final field inspection and for each mounted location, the Contractor shall provide as-built drawings for the use of the City of New York.

7.87.4 Item Quantities

The item quantities indicated in the Distribution of Quantities and the bid schedule are estimates only, subject to final verification by Engineer.

7.87.5 Contractor to Verify Dimensions

The Contractor shall verify all dimensions and details shown on the Contract Drawings or other data received from NYCDOT and shall notify the Engineer in writing of all omissions, conflicts, and discrepancies found therein. Notice of such errors shall be given before the Contractor proceeds with the work.

7.87.6 Record of Work Done

The Contractor shall maintain an accurate record of the work as actually performed during the progress thereof. Before final payment, the contractor shall furnish to the engineer, within thirty (30) consecutive calendar days after completion of the work at each intersection, subject to his approval, one (1) complete set of drawings in ink on tracing cloth showing all of the work and locations thereof as actually installed, except that if signs are installed, the engineer may expect at his discretion tabulation's showing the location and

type of mountings of each sign. Record drawings shall be the same size as the Contract Drawings.

The Contractor may avail himself of the opportunity of securing at his own expense a set of photographic reproductions on cloth made from the tracings of the Contract Drawings, upon which he shall indicate all changes and corrections occurring in the work as actually completed, supplemented by such other drawings made with ink on tracing cloth as may be necessary to indicate all work and locations thereof in detail as actually completed. The Contractor's attention is particularly directed to the necessity of keeping accurate records of all subsurface and concealed work so that the record drawings may contain this information in exact detail and location.

7.87.7 Changed Conditions

If, during the progress of the work, conditions are discovered which make it impossible to produce work in accordance with the best general practice, or shall cause any change in the work from that specified, the Contractor shall refer the matter to the Engineer before proceeding with the work. If the Contractor fails to make such reference to the Engineer the Contractor may proceed at his own risk, and shall such work not be satisfactory to the Engineer the Contractor shall remove and replace it without additional cost to the City.

The City of New York has the right to change the number of locations by up to 10% as needed.

7.87.8 Notice Required for Inspection

The Contractor shall inform the Engineer seventy-two (72) hours in advance of the time and place at which he intends to do work in order that proper arrangement may be made for inspection. The Contractor shall also notify the Director by FAX daily (before 8 am) of the location where crews plan to work.

Monthly meetings with an officer or officers of the company will be set up by the Project Director in order to resolve problems and the scheduling of work, change orders, and equipment deliveries.

7.87.9 Permits

The Contractor shall procure all the necessary permits in the name of NYCDOT for opening sidewalks and pavements. There will be no permit fees charged to the Contractor.

The Contractor at his own expense and in his own name shall obtain all other permits required for this work.

7.87.10 Existing Structures & Utilities

Before doing any work over, under, or near duct lines, vaults, subways, or other subsurface structures, the Contractor shall, at his own expense, make such arrangements for properly removing or protecting such structures during the progress of the work as shall be satisfactory to the owners of the structures. Any damage to such structures shall be immediately reported to the owner and to the Engineer and shall be repaired by the Contractor at his expense to the satisfaction of the owner of the structures.

Location of utilities, public and/or private, indicated as existing and/or to be constructed as shown on the Contract Drawings are approximate only. Their exact location shall be determined in the field. Additional utility lines, whether abandoned or in service, may exist and it shall be the Contractor's responsibility to conduct his operations and take the necessary precautions to prevent interference with or damage to these or other facilities during the course of construction.

In the event the Contractor damages an existing utility service causing an interruption in said service the Contractor shall immediately notify the owner and commence work to restore service and may not cease his work operation until service is restored. All corrective work shall be at the expense of the Contractor and shall be acceptable to the Engineer and the subject utility owner.

It will be the Contractor's responsibility to contact all utility companies that have subsurface installations in the area of work for this contract and direct them to have their facilities marked out prior to commencing excavation.

7.87.11 City Monuments & Marks

The Contractor shall not disturb or excavate within three (3) feet of any City monuments which may be within the limits of, or be disturbed by the work, but shall cease operations at such places until the said monuments have been referenced and reset or otherwise disposed of, except upon special permit from NYCDOT. After permission has been given to remove the monument, the Contractor shall take up and preserve such monuments, and if required, remove same to a point designated by the Engineer.

7.87.12 Cleaning Up

Upon the completion of the work at each location the Contractor shall remove all remaining material and shall leave the area that may have been affected by his operation in a neat condition.

7.87.13 Maintenance of Traffic

The Contractor shall work closely with the Engineer and with City agencies in scheduling construction and equipment installation so as to minimize intersection downtime, uncoordinated traffic signal controller operation, and the attendant inconveniences to both pedestrians and the motoring public. Special permits may be required to be procured by the Contractor that may restrict the times and days that certain work may be performed.

It is incumbent upon the Contractor to schedule his work accordingly. Arrangements shall be made by the Contractor for safe and effective traffic control during the periods that he or she must interrupt normal traffic control provided by the devices installed for that purpose prior to the beginning of his work at a particular intersection.

The Contractor shall use at a minimum, stop signs (furnished by Contractor), traffic enforcement officers (as directed by Engineer and furnished by the City) or temporary controllers and or signals (furnished by contractor) where such action is necessary to maintain safe operation for both pedestrian and vehicular traffic.

The Contractor shall be responsible for obtaining these services. The Contractor shall also be responsible for obtaining from the appropriate City agencies the permission to use these services, and for notifying the agencies about when they will be used.

All city streets used for hauling of materials shall be kept clear of debris and maintained at all times and left in a condition satisfactory to the Engineer. All hauling on city streets shall be subject to the rules and regulations of the City.

The Contractor shall also submit to the Engineer for approval at least two (2) weeks prior to performing the work at the intersection, his plan for maintenance and protection of traffic, including the schedule for downtime of control equipment. Closing sidewalk or travel lanes of the roadway shall be performed by acceptable standard methods compatible with the examples given in the Federal and New York State Manual on Uniform Traffic Control Devices. In preparing the Maintenance and Protection of Traffic plan, the Contractor shall familiarize himself with and shall adhere to all of the rules set forth in the NYCDOT standards, specifications, and other stipulations that may be required by NYCDOT in the performance of this work. The cost of providing maintenance and protection of traffic shall be included in the prices for the individual bid items.

If the Contractor fails over a period of twenty-four (24) hours in adequate maintenance and protection of traffic, the Engineer may order the correction of the adverse conditions by another agency, using hired equipment and personnel for the Contractor's account. These costs shall be deducted from monies due the Contractor on this Contract.

7.87.14 Pole Mount

7.87.14.1 General

- The Contractor shall provide all incidental components, mounting brackets, and cabling required to achieve a fully functional assembly as illustrated in the Contract Drawings and in conformance with NYCDOT standards.
- All equipment and materials used shall be standard components, regularly manufactured, regularly utilized in the manufacturer's system.
- All systems and components shall have been thoroughly tested and proven in actual use.
- All systems and components shall be provided with an explicit manufacturer warranty.

7.87.14.2 Requirements

- The pole mount shall be an outdoor unit.
- It shall have a sufficient load rating to support the camera dome system.
- It shall have a cable access hole and be provided with a liquid tight fitting.
- The wall mount shall have a standard 1-1/2 in. NPT-F pipe thread.

7.87.14.3 Mechanical specifications

- Dimensions:
 - Height: < 12".
 - Depth: < 15".
- Weight: < 5lb.
- Construction: Cast aluminum.
- Color: White polyurethane.

7.87.15 Cables

7.87.15.1 Cable Name

This cable shall be called 2c-10 B (breakdown 2c-10 B = 2 number 10-AWG conductors with a third wire for bonding.)

7.87.15.2 Intended use

This cable is to be used for 120 volt power systems in NYC. The cable shall be rated for 600 volts and have a polyethylene – insulated, jacketed cable for use in underground conduit or for aerial use (must have strain relief's built in for aerial use without a messenger cable). The outer jacket shall be a black in color and be UV resistant and made to endure extreme outdoor usage unprotected without deterioration of insulation or outer jacket fading. This cable shall be rated for direct burial without conduit covering or other protection.

7.87.15.3 Construction

The conductors shall be round annealed copper conforming to ASTM designation B3. This cable shall be a three (3) conductor type with two (2) number ten (10) AWG wire size conductors one (1) white solid wire and one (1) black solid wire with the third conductor number eight (8) AWG bare stranded wire.

7.87.15.4 Insulation

The insulation shall be a heat-stabilized polyethylene conforming to the requirements of ASTM designation D 1248 for type 1 category 5 grade E4 materials. This insulation shall be concentrically applied about the conductor. This installation shall meet the following requirements when tested in accordance with the procedures of ASTM designation D 2633 and D 1351.

This cable shall meet all other requirements as listed in the NYC DOT traffic specifications 3/95.

7.87.16 Testing

All CCTV assemblies shall be subject to factory and prototype testing as subsequently described. The CCTV factory test shall be held at a facility in New York which is fully equipped to operate under various lighting levels. The facility shall be equipped with measurement devices which can be utilized to verify that the assembly is compliant with the specifications. The indoor test shall verify that the camera, zoom lens, environmental enclosure, and PT mounting are fully operational and compliant. The PC based diagnostic facility shall be utilized to fully exercise the remote capability of the system. In addition, the test shall simulate various lighting conditions and demonstrate that the assembly is operable at the minimum lux levels required by the specifications. The factory test shall also demonstrate or provide confirmation that all of the equipment operates over the specified environmental range for each component.

The second part of the test shall exercise the camera in an outdoor environment in close proximity to a busy highway. The test shall be conducted in daylight and nighttime conditions. The supplier shall be responsible for submitting a test plan which has been designed to exercise and monitor the equipment for the purpose of determining compliance with the specifications.

7.87.17 System Description

7.87.17.1 General

- The IP video management system shall consist of an advanced suite of network appliances and software designed to provide high quality delivery and processing of IP based video, control and sensor data using standard Ethernet based networks.
- The IP video surveillance system shall be a proven, successful product line with an installed and operating base of systems as applied to Traffic Management Center applications.

- A suite of intuitive graphical user interface software shall manage all IP based video matrix switching and camera control functions, alarm monitoring and control, as well as recording and archive/retrieval management.
- The system design shall include all necessary, high-performance, dual-stream MPEG2/MPEG4 video codecs.
- All camera site signals shall be efficiently compressed and encoded, and delivered onto the network for processing and control by the IP video management software suite.
- The camera system units shall be ruggedly built, and designed for extreme adverse environments, meeting NEMA TS-2 environmental standards.
- The encoder/decoder combinations shall place video and data into one network stream that can be managed from multiple workstations on the users LAN or WAN.
- All system interconnect cables, workstation PC's, PTZ joysticks, and network intermediate devices shall be supplied as required by this system design.
- The video signals shall be transmitted to traffic management center; all cameras shall interface with New York City flow map chart so that the operator at the traffic management center shall have the capability to control the cameras through the transuite system.
- The encoders are connected to an Ethernet switch that is also connected to one of the servers thereby making all the digitized images available to these servers.
- Upon integration of all cameras at TMC, the operators shall have a full control over the operating system.

7.87.17.2 Minimum System Requirement

Major functions which the IP video surveillance system shall support as a minimum include:

- IP video stream routing and display management. Software and hardware decoding is required.
- IP video recording, playback, and event search/retrieval management
- Provide ability for encoder to decoder persistent connection, allowing point to point connections to be established.
- Manual and automatic camera site PTZ control with camera site programming/setup.
- Alarm device I/O monitoring, event logging, and device state control with programmable alarm event actions.
- Allow USB based CCTV control panel/joystick capability.
- Integrate with video processing applications such as facial recognition, video detection, object tracking, etc.
- Provide a comprehensive system device configuration utility application.
- Allow for a centralized or distributed system database.

The full suite of software applications shall include:

- Configuration application, for system devices configuration, database management, and device testing. Included shall be a desktop player for viewing video while testing.
- Graphical User Application, for full system control and operator management. This application shall allow maps and icons to be present for operator interface and control of all system devices, including alarms, relays, video, NAS recording and serial data connection and management.
- Viewer Application shall provide limited control and operator management. This application shall be used for basic operator viewing, PTZ control functions and local recording.

7.87.17.3 Product Specifications

Control Software Requirements:

- Allow user to select any video source to any video destination for routing and display,
 - Allow connection of any video stream for software decoding on any PC video window with an installed application.
 - Allow connection of any video stream for hardware decoding thru selected video decoder.
- Multiple video decoders shall provide simultaneous decoding of any connected video streams.
- The software shall offer live viewing, storing and retrieving of video sequences.
- Provide group video switching of pre-defined video streams routed to any pre-defined video window(s) and decoders with single command.
- Allow automatic group switching sequences to be performed.

4. SPECIAL PROVISIONS

The following shall become a part of and apply to the Contract:

A. LINES AND GRADES. The Contractor shall furnish lines and grades in accordance with Section 1.06.27 of the Standard Highway Specifications, except that survey controls established for this project may no longer exist and the Contractor shall be required to re-establish the survey control information using official Borough Survey Control Monuments and Bench Marks, where they exist. The Contractor shall check with Topographic Section of the Borough President's Office as to the reliability and accuracy of the data to be used for lines and grades.

B. SPECIFIC TRAFFIC STIPULATIONS. Under this contract, the Contractor shall perform the work in strict accordance with the requirements of Section 6.70 in the Standard Highway Specifications, specific traffic stipulations as called for on the plans, OCMC Traffic Stipulations attached to the end of these Special Provisions, and the directions of the Engineer. In case of a conflict, the Engineer's decision shall be final.

C. HOLIDAY CONSTRUCTION EMBARGO. A special Holiday Construction Embargo shall be in effect on the Friday of the week preceding Thanksgiving Day week from 6:00 AM to 11:59 PM and again from the Monday of Thanksgiving Day week from 6:00 AM through January 2, at 11:59 PM. Roadway and sidewalk construction activities will be restricted during the embargo period on the streets listed below*.

Any permits issued prior to the date of this notice, for work during this embargo period on the streets listed below which do not already have the permit stipulation "410" are hereby suspended for the period noted above. All permittees must comply with this embargo unless a special waiver is granted by OCMC. Waiver requests must be filed at least thirteen days before Thanksgiving Day, in the Permit Office by filing a "Request for Roadway/Sidewalk Permits During Embargo Periods" and submitting supporting documentation. Waiver requests should only be submitted for critical reasons for a specific project.

If a waiver is granted, the applicant will be notified so they can apply for the approved permits. Waivers are not required for ongoing Building Construction Activity Permits which already include the "410" permit stipulation. Waiver request forms may be obtained at any Permit Office or on the Department of Transportation's website at:
<http://www.nyc.gov/html/dot/downloads/pdf/holidayembapp.pdf>

* Please note that this embargo only applies to NYCDOT construction permits.

* List of street and maps of the affected locations are available by borough on the Department of Transportation's website at:
<http://www.nyc.gov/html/dot/html/motorist/trafalrt.shtml>

Prior to this embargo period all necessary measures must be taken so that all roadways and sidewalks are in proper condition to allow for the expeditious and safe movement of vehicular, bicycle and pedestrian traffic. Tool carts, cable reels, containers, and material stored on roadways must be removed during the embargo period.

The opening of utility access covers is prohibited on any of the streets noted below between the hours of 6:00 AM and midnight unless the utility or Contractor files for an Emergency Authorization Number as required by section 2-07 of the Department of Transportation's Highway Rules. The planned opening of utility access covers may occur during the hours of 12:01 AM and 5:59 AM where no authorization number is required.

Temporary restoration of the streets and sidewalks and removal thereof, if required for the Holiday Embargo period, will be paid for under the appropriate scheduled items.

No extension of time due to the shutdown period will be granted to the Contractor for completion of the work.

D. DISPOSAL OF EXCESS EXCAVATED MATERIAL. All excess excavated material, with the exception of contaminated material, shall become the property of the Contractor and shall be properly disposed of away from the site, at the Contractor's expense. Contaminated material shall be disposed of separately in accordance with contract requirements.

E. CONTRACT ITEMS THAT INCLUDE BACKFILL AS A PART OF THEIR WORK. The following shall pertain to all contract items that have backfill as a part of their work: Backfilling shall comply with Subsection 4.11.3 of the Standard Specifications and no additional payment will be made for any Highway or Street Lighting work item requiring Contractor to furnish additional fill material to meet these requirements when backfilling.

F. N.Y.C. TRANSIT INSURANCE. The Contractor (Permittee) shall indemnify and save harmless the City of New York and the New York City Transit (Permitter) in accordance with the following "Insurance Requirements" and proof that the necessary insurance is in effect will be required before work can commence:

NYCT "OUTSIDE CONTRACT" INSURANCE REQUIREMENTS

1. The Permittee at its sole cost and expense shall carry or cause to be carried and shall maintain at all times during the period of performance under this Agreement policies of insurance as herein below set forth below:

- (A) Workers' Compensation Insurance (including Employer's Liability Insurance) with limits as specified in Schedule A, which limit may be met by a combination of primary and excess insurance meeting the statutory limits of New York State. The policy shall be endorsed to include Longshoreman's and Harbor Workers'

Compensation Act/Maritime Coverage Endorsement and/or Jones Act Endorsement when applicable.

- (B) Commercial General Liability Insurance (I.S.O. 2001 Form or equivalent) approved by Permittor in the Permittee's name with limits of liability as specified in Schedule A for each occurrence on a combined single limit basis for injuries to persons (including death) and damages to property. The limits may be provided in the form of a primary policy or combination of primary and umbrella/excess policy. When the minimum contract amounts can only be met when applying the umbrella/excess policy; the Umbrella/Excess Policy must follow form of the underlying policy and be extended to "drop down" to become primary in the event primary limits are reduced or aggregate limits are exhausted. Such insurance shall be primary and non-contributory to any other valid and collectable insurance and must be exhausted before implicating any Permittor/MTA policy available.

Such policy should be written on an occurrence form; and shall include:

- Contractual coverage for liability assumed by the Permittee under this agreement;
- Personal and Advertising Injury Coverage;
- Products-Completed. Operations;
- Independent Contractors Coverage;
- "XCU" coverage (Explosion, Collapse, and Underground Hazards) where necessary;
- Contractual Liability Exclusion, applicable to construction or demolition operations to be performed within 50 feet of railroad tracks, must be voided, where necessary; and,
- Additional Insured Endorsement (I.S.O. Form CG 20 26 07/04 version or equivalent) approved the Permittor naming:

New York City Transit Authority (NYCTA), the Manhattan and Bronx Surface Transit Operating Authority (MaBSTOA), the Staten Island Rapid Transit Operating Authority (SlRTOA), MTA Capital Construction Co., the Metropolitan Transportation Authority (MTA) including its subsidiaries and affiliates, and the City of New York (as Owner).

- (C) Business Automobile Liability Insurance Policy - (I.S.O. Form CA 00 01 10 01 or equivalent) approved by the Permittor is required if Permittee's vehicle enters Permittor property. The insurance must be in the name of the Permittee or its

contractor entering the Permitter property with limits of liability in the amount specified in Scheule "A" for claims for bodily injuries (including death) to persons and for damage to property arising out of the ownership, maintenance or use of any owned, hired or non-owned motor vehicle.

- (D) Railroad Protective Liability Insurance policy shall be required as specified in Schedule A.
- (E) Environmental/Pollution Exposures

In the event environmental or pollution exposures exist, the Permittee shall require the environmental contractor or sub-contractor to provide the applicable insurance covering such exposure. The limits and type of insurance provided shall be satisfactory to the Permitter and will be confirmed to the parties prior to the start of the work.

2. General Requirements Applicable to Insurance Policies

- a) All of the insurance required by this Article shall be with Companies licensed or authorized to do business in the State of New York with an A.M. Best Company rating of not less than A-/VII or better and reasonably approved by the Permitter/MTA and shall deliver evidence of such policies.
- b) Except for Workers Compensation, all references to forms and coverages referred to above shall be the most recent used by the Insurance Services Office, Inc. (ISO) or equivalent forms approved by the Insurance Department of the State of New York, provided, however, that excess coverages may be written on forms reasonably acceptable to Permitter containing provisions other than those contained in ISO forms but otherwise conforming in substance to the requirements of this Article.
- c) The Permittee or its Contractor performing the work shall furnish evidence of all policies before any work is started to the permitter:

For NYCT Contract Inspection
C/O Mr. John Malvasio
Director, MOW Engineering
130 Livingston Street, Room 8044F
Brooklyn, NY 11201
Telephone: (718) 694-1358

These policies must: (i) be written in accordance with the requirements of the paragraphs above, as applicable; (ii) be endorsed in form acceptable to include a provision that the policy will not be canceled, materially changed, or not renewed, unless otherwise indicated herein, at least thirty (30) days prior written notice to the Permitter c/o MTA Risk and Insurance Management (MTA RIM) Department - Standards, Enforcement & Claims Unit, 2 Broadway - 21st floor, New York,

NY 10004; and (iii) state or be endorsed to provide that the coverage afforded under the contractor's policies shall apply on a primary and not on an excess or contributing basis with any policies which may be available to the Permittor/MTA, and also that the contractor's policies, primary and excess, must be exhausted before implicating any Permittor/MTA policy available. (iv) In addition, contractor's policies shall state or be endorsed to provide that, if a subcontractor's policy contains any provision that may adversely affect whether contractor's policies are primary and must be exhausted before implicating any Permittor/MTA policy available, contractor's and subcontractor's policies shall nevertheless be primary and must be exhausted before implicating any Permittor/MTA policy available. Except for Professional Liability, policies written on claims made basis are not acceptable. At least two (2) weeks prior to the expiration of the policies, contractor shall endeavor to provide evidence of renewal or replacement policies of insurance, with terms and limits no less favorable than the expiring policies. Except as otherwise indicated in the detailed coverage paragraphs below, self insured retentions and policy deductibles shall not exceed \$100,000, unless such increased deductible or retention is approved by Permittor/MTA. The Permittee shall be responsible for all claim expense and loss payments within the deductible or self-insured retention. The insurance monetary limits required herein may be met through the combined use of the insured's primary and umbrella/excess policies.

- d) Certificates of Insurance may be supplied as evidence of policies of the above policies, except for Policy (D) Railroad Protective Liability Insurance Policy. However, if requested by the Permittor, the Permittee shall deliver to the Authority, within forty-five (45) days of be request, a copy of such policies, certified by the insurance carrier as being true and complete. The Railroad Protective Liability Insurance Policy must be provided in the form of the Original Policy. A detailed Insurance Binder may be provided, ACORD or Manuscript Form, pending issuance of the Original Policy. The Original Policy must be submitted to MTA RIM within 30 days of the Binder Approval.
- e) If a Certificate of Insurance is submitted, it must: (1) be provided on the Permittor Certificate of Insurance Form or MTA Certificate of Insurance Form for Joint Agency Agreements; (2) be signed by an authorized representative of the insurance carrier or producer and notarized; (3) disclose any deductible, self-insured retention, sub-limit, aggregate limit or any exclusions to the policy that materially change the coverage; (4) indicate the Additional Insureds and Named Insureds as required herein, along with a physical copy of the Additional Insured Endorsement (I.S.O. Form CG 20 26 07/04 version or equivalent), as applicable and the endorsement(s) must include policy number(s); (5) reference the Contract by number on the face of the certificate; and (6) expressly

reference the inclusion of all required endorsements.

- f) The minimum amounts of insurance required in the detail description of policies (A), (B), (C), and (D) above shall not be construed to limit the extent of the Permittee's liability under this Agreement.
- g) If, at any time during the period of this Agreement, insurance as required is not in effect, or proof thereof is not provided to the Permitter, the Permitter shall have the options to: (i) direct the Permittee to suspend work or operation with no additional cost or extension of time due on account thereof; or (ii) treat such failure as an Event of Default.

G. SCHEDULING PRESENTATION. The Contractor shall submit construction schedule in the form of a bar chart using "Microsoft Project 2010" or latest version, or in an approved equivalent program which shall be directly and fully translatable into Microsoft Project 2010 format, within seven days of the initial Pre-Construction Meeting. Each bar in the chart shall show dates the Contractor plans to start and complete each construction activity after the initial Pre-Construction Meeting. Bar chart shall show the order and interdependence of all activities necessary to complete the work and the sequence in which activity is to be accomplished as planned by the Contractor and in accordance with all subcontractors or suppliers whose work shall be shown on the bar chart. The Contractor shall submit the bar chart for the Engineer's review and revise it, if required, until approved by the Engineer.

The Contractor shall submit weekly progress status update reports or as otherwise directed by the Engineer. The Contractor shall submit updated bar chart every month. The revised bar chart shall be made in the same form and detail as the original submittal and shall be accompanied by an explanation of the reasons for the revisions all of which shall be subject to approval by the Engineer.

H. ACCELERATED PROJECT SCHEDULE AND COMBINATION OF STAGES. Contractor shall plan and/or stage his/her work schedule using all hours/days available. Contractor is advised that all applicable unit prices shall include, for the purpose of this contract, all overtime costs, premium time costs, shift differentials required to complete construction within the specified "Time(s) of Completion" stipulated in this contract.

Contractor shall be permitted to accelerate this project, to combine stages and/or work sequences. Any such changes shall be shown in the construction schedule, to be furnished in accordance with the General Provisions of the Standard Specifications and the above "SCHEDULING PRESENTATION" Article, and shall be submitted for approval of the Engineer.

I. NO EXTENSION OF TIME FOR WINTER SHUT-DOWN. Where the Contractor's approved work schedule for installing sidewalk, curb, roadway base and/or pavement falls within the winter period of December 1st through April 1st, the Contractor will NOT be granted an extension of time for completion of this contract due to the winter shut-down period, unless otherwise provided in Schedule A.

J. DUST CONTROL. During the progress of the work under this contract, the Contractor shall be required to furnish and apply water and/or calcium chloride for the purpose of allaying dust conditions. Materials to be used, area to be covered, and time and rate of application shall be as directed by the Engineer.

K. NOISE CONTROL. The Contractor is directed to Title 24, Chapter 2 of the Administration Code of the City of New York, known as the "New York City Noise Code" by the Department of Environmental Protection. The provisions of this code and its most recent additions and revisions shall apply to this contract. In the event of a conflict between the requirements of the New York City Noise Code and the requirements of Noise Control contained in these special notes, the more stringent of the two shall apply.

The Contractor shall plan and carry out work on this Project to ensure that the noise from construction equipment and activities does not exceed the limits specified herein. The noise abatement operations and conditions specified shall be carried out by the Contractor to limit noise in project and adjacent areas. The Contractor shall conduct a continuous educational effort for the workers on the site to ensure that they are aware of their roles in minimizing noise propagating from the site.

In order to monitor noise abatement operations the Contractor shall employ services of "Noise Control Specialist" for the duration of construction activity. The contractor shall submit qualifications and experience of the prospective specialist/firm to the Engineer for prior approval. The specialist/firm must satisfy the eligibility requirements of qualifications and work experience as required by the N.Y.C.D.E.P.

The monitoring protocol shall be as follows:

- (a) There shall be one outdoor and one indoor monitoring station for each work area or 1,000 ft. of street length whichever is less.
- (b) Monitoring of noise level shall be done prior to start of construction and during construction for each station at the same work hours specified in the contract.
- (c) Locations of monitoring stations shall be recommended by the noise control specialist for approval of the Engineer.
- (d) Engineer shall provide indoor station locations to the contractor after ascertaining availability of the said station from the Community Board.

Should the Contractor fail to carry out the noise abatement operations and conditions specified herein, the Engineer shall have the authority to suspend all work until such time as the Engineer deems that the Contractor has complied with the requirements.

The following additional requirements for noise control shall apply to this contract:

1. Noise Level Requirements for Construction Equipment

- (a) The Contractor shall ensure that all Contractor and Subcontractor equipment, of the types listed in Table A to be used on-site for a total duration greater than 5 days, shall be tested for compliance with the stated noise emission limits during the first day of use on the construction site or at an alternative site acceptable to the Engineer.
- (b) All equipment as described in (a) above shall be re-tested at 6 month intervals while in use on site.
- (c) All compliance tests shall be performed by the Contractor.
- (d) For each piece of equipment tested, the Contractor shall provide a noise report to the Engineer as shown in Figure A.
- (e) Equipment of the types listed in Table A, as described above, shall not be used on-site without valid certificates of noise compliance.
- (f) The Contractor shall provide to the Engineer two noise meters meeting the requirements of Section 2(d) herein. Two acoustic calibrators of the type recommended by the meter manufacturer shall also be provided.

TABLE A

CONSTRUCTION EQUIPMENT NOISE EMISSION LIMITS:
MEASURED AT 50 FEET FROM CONSTRUCTION EQUIPMENT

<u>Equipment Category</u>	<u>Noise Level, dBA(SLOW)</u>
Auger	83
Backhoe	80
Bar Bender	80
Cherry Picker	80
Chain Saw	86
Compactor	80
Compressor	70
Concrete Mixer	86
Concrete Pump	82
Concrete or Diamond Saw	90
Crane	86
Crawler Miller	90
Dozer	86
Front End Loader	80
Generator	82
Gradall	86
Grader	86
Jackhammer	88
Man Lift	80
Mounted Impact Hammer	95
Paver	86
Pneumatic Tools	86
Roller	80
Scraper	86
Shotcrete Liner (tire-mounted)	79
Striper (walk-behind)	80
Tractor	84
Traffic Line Remover	80
Truck (including truck-mounted equipment)	84
Vibrator	80
Vibratory Pile Driver	95
All Other Equipment with Engines Larger than 3750W	86
Impact Pile Driver	105 dBC (FAST)

FIGURE A

CERTIFICATE OF EQUIPMENT NOISE COMPLIANCE

Contractor Name: _____
Contract Name & Number: _____

Equipment Type: _____
Manufacturer & Model Number: _____
Identification Number: _____
Rated Power & Capacity: _____
Operating Condition During Test: _____

Measured Sound Levels at 6 to 15 meters:

Measured Values and Distance:

Engine-Powered or Concrete-Breaking Equipment:
Right Side: _____ dBA (SLOW), at _____ meters
Left Side: _____ dBA (SLOW), at _____ meters

Impact Pile Driving Equipment:
Right Side: _____ dBC (FAST), at _____ meters
Left Side: _____ dBC (FAST), at _____ meters

Equivalent Values at 50 Feet Distance:

Engine-Powered or Concrete-Breaking Equipment:
Right Side: _____ dBA (SLOW).
Left Side: _____ dBA (SLOW).

Impact Pile Driving Equipment:
Right Side: _____ dBC (FAST).
Left Side: _____ dBC (FAST).

Maximum Values Allowed for this Equipment: _____ dBA (SLOW) at 15 meters
_____ dBC (FAST) at 15 meters

If equipment sound level exceeds maximum value allowed, indicate action taken to achieve compliance:

Name, Work Address & Phone No. _____
of NYSDOT Inspector

Authorized Signature: _____ Date: _____

CONTRACTOR'S ACCEPTANCE: _____ Date: _____

2. Noise Level Test Procedures of Construction Equipment

- (a) All engine-powered equipment shall be operated by the Contractor or Contractor's representative at high idle (maximum governed rpm) under full load conditions during the tests.
- (b) Portable and mounted impact hammers, such as hoe rams and jackhammers to be used to concrete breaking, shall be tested during the first day of actual operation at the construction site under maximum load conditions as rated by the equipment manufacturer.
- (c) Pile driving equipment shall be tested at the construction site under maximum load conditions as rated by the manufacturer.
- (d) All noise certification measurements shall be performed with an instrument that is in compliance with the criteria for a Type 1 (Precision) or Type 2 (General Purpose) Sound Level Meter as defined in the current revision of ANSI Standard S1.4. An acoustic calibrator of the type recommended by the sound level meter manufacturer shall be used prior to all measurements.
- (e) If possible, measurements shall be made at 50 feet (± 1.5 feet) from the right and left sides of the equipment casing, at a height of 5 feet above ground level, with the equipment operating as indicated in items (a), (b) or (c) above for a minimum period of 1 minute. Measurements made at less than 50 feet, because of space limitations at the test site, shall be reduced by the values given in Table B to estimate the 50-foot sound level.

TABLE BADJUSTMENTS FOR CLOSE-IN EQUIPMENT NOISE MEASUREMENTS

Measurement Values to be Subtracted from Measured Sound Level
Distance (Feet) to Estimate Sound Level at 50 Feet (dBA)

20 to under 21	8
21 to under 23	7
23 to under 26	6
26 to under 29	5
29 to under 33	4
33 to under 37	3
37 to under 41	2
41 to under 47	1
47 to under 50	0

3. Compliance with Equipment Noise Level Requirements

- (a) The Engineer shall retain a copy of the noise report from the Contractor with each piece of equipment used on the project of the types listed in Table A. The report shall be on the form shown in Figure A with certification by the noise control specialist hired by the contractor that equipment noise emissions do not exceed those prescribed.
- (b) If the noise levels obtained during the tests exceed those specified in Table A the Contractor shall promptly modify or alter such equipment and retest, or substitute other equipment to meet the noise level requirements.
- (c) Upon compliance, (including the certification date and equipment identification number) the Engineer will keep the noise reports readily available on file in the Construction field office for inspection upon request.
- (d) The Certification of Noise Compliance will remain valid for a period of 6 months only. Delays caused by certification refusal or by time lost in improving the rejected equipment or finding alternate acceptable equipment shall not be a basis for any monetary or time delay claims or for avoidance of late completion penalties.
- (e) All equipment shall be subject to spot noise level testing by the Engineer at his discretion as necessary to determine that the equipment in use meets the requirements specified in Table A. For this purpose, the Contractor shall furnish noise-measurement instrumentation that complies with the standards specified in paragraph 2. (d). If such tests are requested by the Engineer, the Contractor shall locate and operate the equipment as directed by the Engineer so as to facilitate the measurements. The Engineer shall provide the Contractor with a copy of the results of the measurements. If such tests demonstrate that any equipment does not comply with the requirements specified in Table A, its Certificate of Noise Compliance shall be revoke and equipment shall be taken out of use until compliance is achieved. A new Certificate of Noise Compliance will then be issued.

4. Construction Noise Level Exposure Limits

- (a) In no case shall the public be exposed to construction noise levels exceeding 100 dBA (SLOW) or to impulsive noise levels exceeding 125 dBC (FAST).
- (b) Construction activities shall be conducted in such a manner that the equivalent noise level (L_{eq}) over any one-hour period does not exceed 85 dBA at any noise-sensitive locations (e.g. residence and hotels).

5. Construction Noise Level Exposure Test Procedures

- (a) All noise exposure measurements will be performed with an integrating sound level meter. An acoustic calibrator will be used prior to all measurements.
- (b) The measurement microphone of the sound level meter shall be fitted with an appropriate windscreen, and will be located 1.5 meters above the ground and at least 5 feet away from the nearest sound-reflective surface for the tests.
- (c) Noise exposure measurements will be taken at noise-sensitive locations closest to the construction activities at least once each week and as dictated by construction activities. Measurement periods at each location shall be a minimum of one hour.
- (d) Construction noise exposure measurements will coincide with periods of maximum noise-generating construction activity, and will be performed during the construction phase or activity that the greatest potential to create annoyance or to exceed the noise exposure limits.

6. Compliance with Construction Noise Level Exposure Limits

- (a) Construction noise exposure data will be collected by the Contractor on a weekly basis. The noise report will include (1) a sketch indicating the locations of the measurements and of all nearby construction equipment operating during the measurement period, (2) the measured maximum A-weighted noise level at each location, in terms of dBA (SLOW), (3) the measured maximum C-weighted noise level, in terms of dBC (FAST) and (4) the measured one-hour Leq (in dBA).
- (b) In the event that the measured noise levels exceed the limits specified in paragraph 4 above, the Engineer will immediately notify the Contractor and the Contractor shall implement corrective actions as directed by the Engineer.
- (c) All construction activities will be subject to spot noise level testing by the Engineer at his discretion as necessary to determine that the noise levels meet the exposure limits specified in paragraph 4 above. If such tests demonstrate that the noise levels exceed the specified limits, the Contractor shall implement corrective actions as directed by the Engineer.

7. General Requirements for Construction Equipment Noise Control

- (a) The Contractor shall minimize the use of impact devices, such as jackhammers, pavement breakers, and hoe rams. Where possible, concrete crushers or pavement saws shall be used rather than hoe rams for tasks such as grillage removal and pavement demolition.

- (b) All pneumatic impact tools and equipment used at the construction site shall have intake and exhaust mufflers recommended by the manufacturers thereof, to meet relevant noise ordinance limitations.
- (c) All impact devices (i.e. jackhammers and pavement breakers) shall be equipped with acoustically attenuating shields or shrouds recommended by the manufacturers thereof, to meet relevant noise ordinance limitations.
- (d) Hoppers, conveyors transfer points, storage bins, and chutes shall be lined or covered with sound-deadening material.
- (e) The Contractor shall minimize the use of air or gasoline-driven hand tools.
- (f) All other equipment, including internal combustion engines, shall have mufflers and shield paneling recommended by the manufacturers thereof.

8. General Operational Requirements for Construction Noise Control

- (a) The Contractor shall operate equipment so as to minimize banging, clattering, buzzing, and other annoying types of noises, especially near noise-sensitive locations.
- (b) The Contractor, to the extent feasible, shall configure the construction site in a manner that keeps noisier equipment and activities as far as possible from noise-sensitive locations and nearby buildings.
- (c) The Contractor shall minimize noise from the use of backup alarms near residential buildings by using self-adjusting, ambient noise-sensitive backup alarms that meet OSHA regulations.
- (d) In no case shall the above restrictions limit the Contractor's responsibility for compliance with all applicable Federal, state and local safety ordinances and regulations and other sections of these construction specifications.

9. Acoustic Shed Requirements

- (a) All noise-generating mechanical equipment that is operated by the Contractor at any time other than weekdays between the hours of 7:00 a.m. and 6:00 p.m. shall be enclosed within an acoustic shed. Such equipment includes, but is not limited to, generators for traffic sign boards and lighting.
- (b) Acoustic sheds shall consist of three-sided, closed-top enclosures, oriented such that the open end of the shed faces away from residential or hotel buildings.

- (c) The shed shall be constructed of 0.5 inch plywood sheeting, or other acceptable material weighing at least 1.5 pounds per square foot, on timber framing with no gaps at joints or corners. Gaps between the bottom edge of the shed panels and the ground shall not exceed 1 inch in width and shall be closed off with solid strips of rubber, neoprene or other suitably dense material.
- (d) The inside of the shed shall be lined with glass fiber or mineral wool type sound-absorbing material at least 2 inches thick, protected by wire mesh or perforated sheets that have at least 30 percent open area.

10. Cost of Work

- (a) The cost of all labor, materials, equipment, insurance necessary for noise abatement measures as described in this section, any necessary modifications of construction methods or equipment and any delays to construction due to work suspension due to non-compliance with noise control requirements or due to necessary modifications to construction methods for compliance with the noise control requirements is deemed included in the prices bid for the items of work for which the equipment is used.

Equipment used shall be capable of a uniform application over the surface to be covered. There will be no separate measurement or payment for this work but the cost thereof is deemed to be included in the other various items of work.

L. START OF CONTRACT WORK. The Contractor is notified that it is the intent of this Agency to commence work promptly after registration of the contract and to order the Contractor to commence work within two (2) months after registration.

M. PRICES TO INCLUDE. No direct payment will be made for costs incurred in complying with the foregoing Special Provisions, unless otherwise provided. Said costs will be deemed to have been included in the prices bid for all the scheduled contract items.



Department of Transportation

JANETTE SADIK-KHAN, Commissioner

OCMC TRAFFIC STIPULATIONS

06/03/2011

OCMC FILE NO: BXEC-11-143
CONTRACT NO: HWXRCP LZ
PROJECT: RECONSTRUCTION OF ROBERTO CLEMENTE PLAZA
LOCATION(S): INTERSECTION OF EAST 149TH STREET, THIRD AVENUE, MELROSE AVENUE, AND WILLIS AVENUE.

PERMISSION IS HEREBY GRANTED TO THE NYCDDC AND ITS DULY AUTHORIZED AGENT, TO ENTER UPON AND RESTRICT THE FLOW OF TRAFFIC AT THE ABOVE LOCATION AND ITS LOCAL ADJACENT STREETS FOR THE PURPOSE OF CARRYING OUT THE ABOVE NOTED PROJECT, SUBJECT TO THE STIPULATIONS, AS NOTED BELOW:

A. SPECIAL STIPULATIONS

1. **EMBARGOES** – A CONSTRUCTION EMBARGO WILL APPLY TO THOSE LOCATIONS BELOW WHICH FALL WITHIN THE **HOLIDAY EMBARGO** OR ANY OTHER SPECIAL EVENT EMBARGOES AS PUBLISHED BY THE BUREAU OF PERMIT MANAGEMENT AND CONSTRUCTION CONTROL.
2. **BIKE LANES** – IF WORK IS IN OR AFFECTING A BIKE LANE, THE CONTRACTOR MUST POST ADVANCE WARNING SIGNS 350 FEET AND 200 FEET PRIOR TO THE WORK ZONE STATING "CONSTRUCTION IN BIKE LANE AHEAD PROCEED WITH CAUTION", AND ALSO POST A SIGN AT THE WORK ZONE STATING "CONSTRUCTION IN BIKE LANE PROCEED WITH CAUTION". SUCH SIGNS SHALL BE ORANGE, 3' x 3', DIAMOND-SHAPED WITH 4" BLACK LETTERING. SIGNS SHALL BE POSTED IN ACCORDANCE WITH THE FEDERAL MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
3. **BUS STOPS** – THE CONTRACTOR SHALL PROVIDE WRITTEN NOTICE TO NYC DOT OCMC AND NEW YORK CITY TRANSIT (NYCT) A MINIMUM OF FIVE (5) WEEKS IN ADVANCE FOR LANE/STREET CLOSURES THAT AFFECT BUS ROUTES/BUS STOPS.
4. **METERS** – THE CONTRACTOR MAY NOT REMOVE OR RELOCATE PARKING METERS WITHOUT FIRST OBTAINING APPROVAL FROM NYCDOT PARKING METER DIVISION AT 718-894-8651.
5. **ACCESS TO ABUTTING PROPERTIES** – THE CONTRACTOR SHALL COORDINATE ALL ACTIVITIES WITH ABUTTING PROPERTY OWNERS TO ENSURE ACCESS IS PROVIDED TO/FROM ENTRANCES/DRIVEWAYS AT ALL TIMES.
6. **AUTHORIZED PARKING** – PRIOR TO PERFORMING WORK WHICH IMPACTS AUTHORIZED PARKING, THE CONTRACTOR SHALL SUBMIT IN WRITING, AND COPY OCMC-STREETS, A REQUEST TO OCCUPY SPACE CURRENTLY USED BY AUTHORIZED VEHICLES. APPROVAL MUST BE RECEIVED FROM AUTHORIZED PARKING PRIOR TO OCCUPYING THESE AREAS.
7. **NOTIFICATION** – THE CONTRACTOR MUST AT LEAST TWO (2) WORKING DAYS BEFORE THE START OF CONSTRUCTION NOTIFY THE NYC FIRE DEPARTMENT, NYC POLICE DEPARTMENT, NYC EMS, LOCAL COMMUNITY BOARD, BOROUGH PRESIDENT'S OFFICE-CHIEF ENGINEER, NYCDOT OCMC OFFICE, AND ALL ABUTTING PROPERTY OWNERS.
8. **ENHANCED MITIGATIONS**
 - o **NYPD TRAFFIC AGENTS** ARE REQUIRED FOR THIS PROJECT: 3 POSTS PER SHIFT PLUS RELIEF. SHIFTS ARE: 7:00AM-6:00PM AND 10:00PM-6:00AM
 - o **ENHANCED MITIGATIONS FOR PEDESTRIAN FLOW**, INCLUDING METAL FENCING, SHALL BE PROVIDED TO ENSURE PEDESTRIANS STAY WITHIN THEIR DESIGNATED PATH/ROUTE. FLAGGERS SHALL BE PROVIDED TO ASSIST WITH PEDESTRIANS AT THE DESIGNATED CROSSWALK AREAS. THESE FLAGGERS SHALL BE ASSIGNED TO THIS FUNCTION ONLY.
 - o **VARIABLE MESSAGE SIGNS (VMS)** SHALL BE PROVIDED FOR THIS PROJECT. THE LOCATIONS AND MESSAGES SHALL BE RECOMMENDED BY NYCDDC AND THEIR CONTRACTOR A MINIMUM OF TWO (2) WEEKS PRIOR TO WORK COMMENCING, FOR OCMC REVIEW AND APPROVAL.
 - o **"NO STANDING ANYTIME-TEMPORARY CONSTRUCTION" SIGNS** AND TEMPORARY PAVEMENT MARKINGS SHALL BE INSTALLED AND MAINTAINED AS WARRANTED BY THE MAINTENANCE AND PROTECTION OF TRAFFIC (MPT) REQUIRED TO FACILITATE TRAFFIC MOVEMENTS THROUGH THE WORK ZONE. ALL TEMPORARY SIGNS AND PAVEMENT MARKINGS SHALL BE REMOVED UPON COMPLETION OF THE PROJECT.
 - o **COMMUNITY OUTREACH** SHALL BE PROVIDED FOR THE DURATION OF THE PROJECT.
 - o **MUST COORDINATE WITH MTA-NYCT** AND OBTAIN THE APPROPRIATE APPROVALS FOR BUS STOPS RELOCATIONS PRIOR TO STARTING WORK. APPROVED MPT DRAWINGS FROM MTA SHALL BE SUBMITTED TO NYCDOT-OCMC STREETS DIVISION PRIOR TO STARTING WORK. PRIOR TO BUS DETOURS GOING INTO EFFECT, IT WILL BE THE RESPONSIBILITY OF NYCDDC AND ITS CONTRACTOR TO SUBMIT MPT PLANS INDICATING ANY PARKING REGULATION THAT RESTRICTS THE MOVEMENTS OF THE BUSES.

NYC Department of Transportation
 Bureau of Permit Management and Construction Control
 55 Water Street - 7th Floor, New York, NY 10041
 T: 212.839.9621 F: 212.839.8970
 www.nyc.gov/dot

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 PROJECT: RECONSTRUCTION OF ROBERTO CLEMENTE PLAZA

B. MAINTENANCE AND PROTECTION OF TRAFFIC

1. Northbound Third Avenue, between East 148th Street and Westchester Avenue/East 150th Street (Night time, Phase 1)

- Work hours shall be as follows: 10:00PM-6:00AM
- Maintain two 12ft lanes for traffic, one lane in each direction.
- Full width of roadway shall be opened to traffic when site is unattended.
- Maintain a minimum 5 foot clear sidewalk.
- Full width of sidewalk shall be opened to pedestrians when site is unattended.

2. East 149th Street, between Bergen Avenue and Courtlandt Avenue (Night time, Phase 1)

- Work hours shall be as follows: 10:00PM-6:00AM
- Full street closure will be in effect during work hours for the removal of trolley tracks only
- Full width of roadway shall be opened to traffic when site is unattended
- Maintain a minimum 5 foot clear sidewalk.
- Full width of sidewalk shall be opened to pedestrians when site is unattended.
- Local and emergency access must be provided from each end of the block at the intersection with the use of flaggers and signage.

3. Melrose Avenue, between East 150th Street and East 149th Street (Night time, Phase 1)

- Work hours shall be as follows: 10:00PM-6:00AM
- Full street closure will be in effect during work hours
- Full width of roadway shall be opened to traffic when site is unattended
- Maintain a minimum 5 foot clear sidewalk
- Full width of sidewalk shall be opened to pedestrians when site is unattended.
- Local and emergency access must be provided from each end of the block at the intersection with the use of flaggers and signage.

4. Southbound Third Avenue, between Courtlandt Avenue and Westchester Avenue/East 150th Street (Night time, Phase 2)

- Work hours shall be as follows: 10:00PM-6:00AM
- Maintain one 12ft lane for the northbound traffic only.
- Full width of roadway shall be opened to traffic when site is unattended
- Maintain a minimum 5 foot clear sidewalk
- Full width of sidewalk shall be opened to pedestrians when site is unattended.

5. Intersection of Third Avenue and East 148th Street (Night time, Phase 2)

- Work hours shall be as follows: 10:00PM-6:00AM
- Maintain one 12ft lane for the northbound traffic only on Third Avenue and apply full street closure on East 148th Street between Courtlandt Avenue and Third Avenue.
- Full width of roadway shall be opened to traffic when site is unattended
- Post signs for directing pedestrians to opposite sidewalk.
- Full width of sidewalk shall be opened to pedestrians when site is unattended.

6. Intersection of Third Avenue and East 147th Street (Night time, Phase 2)

- Work hours shall be as follows: 10:00PM-6:00AM
- Maintain one 12ft lane for the northbound traffic only on Third Avenue and apply full street closure on East 147th Street, between Willis Avenue and Third Avenue.
- Full width of roadway shall be opened to traffic when site is unattended
- Maintain a minimum 5 foot clear sidewalk
- Full width of sidewalk shall be opened to pedestrians when site is unattended.

7. Intersection of Third Avenue and Courtlandt Avenue (Night time, Phase 2)

- Work hours shall be as follows: 10:00PM-6:00AM
- Maintain one 12ft lane for the northbound traffic only on Third Avenue and one 12ft lane on Courtlandt Avenue.
- Full width of roadway shall be opened to traffic when site is unattended
- Post signs for directing pedestrians to opposite sidewalk
- In phase 5 maintain a 5 ft clear pedestrian walkway on the roadway.
- Full width of sidewalk shall be opened to pedestrians when site is unattended.

8. Courtlandt Avenue, between East 149th Street and East 148th Street (Day time, Phase 2)

- Work hours shall be as follows: 7:00AM-6:00PM, Monday-Friday
- Maintain one 12ft lane for traffic.
- Full width of roadway shall be opened to traffic when site is unattended
- Maintain a minimum 5 foot clear sidewalk
- Full width of sidewalk shall be opened to pedestrians when site is unattended.

9. Courtlandt Avenue, between East 148th Street and East 146th Street (Day time, Phase 2, 3, 4, 5, 6, 7)

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- Work hours shall be as follows: 9:00AM-2:00PM Monday-Friday and Saturdays 8:00AM-6:00PM
 - Maintain one 12ft lane for traffic.
 - Full width of roadway shall be opened to traffic when site is unattended
 - Maintain a minimum 5 foot clear sidewalk in phase 2, 4 and 5. Maintain a 5ft clear pedestrian walkway in roadway in phase 3 and post signs for directing pedestrians to opposite sidewalk in phase 6
 - Full width of sidewalk shall be opened to pedestrians when site is unattended.
 - Must coordinate with school prior to starting work
- 10. Intersection of East 148th Street and Courlandt Avenue (Day time, Phase 2)**
- Work hours shall be as follows: 7:00AM-6:00PM, Monday-Friday.
 - Maintain one 12ft lane for traffic on both roadways.
 - Full width of roadway shall be opened to traffic when site is unattended
 - Post signs for directing pedestrians to opposite sidewalk
 - Full width of sidewalk shall be opened to pedestrians when site is unattended.
- 11. East 148th Street, between College Avenue and Courlandt Avenue (Day time Phase 2)**
- Work hours shall be as follows: 7:00AM-6:00PM, Monday-Friday.
 - Maintain one 12ft lane for traffic.
 - Full width of roadway shall be opened to traffic when site is unattended
 - Maintain a minimum 5 foot clear sidewalk
 - Full width of sidewalk shall be opened to pedestrians when site is unattended.
- 12. East 147th Street, between Willis Avenue and Third Avenue (Day time, Phase 2)**
- Work hours shall be as follows: 7:00AM-6:00PM, Monday-Friday.
 - Maintain one 12ft lane for traffic.
 - Full width of roadway shall be opened to traffic when site is unattended
 - Post signs for directing pedestrians to opposite sidewalk
 - Full width of sidewalk shall be opened to pedestrians when site is unattended.
- 13. Intersection of East 147th Street and Willis Avenue (Day time Phase 2)**
- Work hours shall be as follows: 7:00AM-6:00PM, Monday-Friday.
 - Maintain one 12ft lane for traffic on East 147th Street and two lanes on Willis Avenue, including the bus lane..
 - Full width of roadway shall be opened to traffic when site is unattended
 - Post signs for directing pedestrians to opposite sidewalk
 - Full width of sidewalk shall be opened to pedestrians when site is unattended.
- 14. East 147th Street, between Willis Avenue and Brook Avenue (Day time, Phase 2)**
- Work hours shall be as follows: 7:00AM-6:00PM, Monday-Friday.
 - Maintain one 12ft lane for traffic.
 - Full width of roadway shall be opened to traffic when site is unattended
 - Maintain a minimum 5 foot clear sidewalk
 - Full width of sidewalk shall be opened to pedestrians when site is unattended.
- 15. Bergen Avenue, between East 147th Street and East 148th Street (Night time, Phase 2)**
- Work hours shall be as follows: 10:00PM-6:00AM
 - Full street closure will be in effect during work hours
 - Full width of roadway shall be opened to traffic when site is unattended
 - Maintain a minimum 5 foot clear sidewalk
 - Full width of sidewalk shall be opened to pedestrians when site is unattended.
- 16. Intersection of East 147th Street and Bergen Avenue (Night time, Phase 2)**
- Work hours shall be as follows: 10:00PM-6:00AM
 - Maintain one 12ft lane for traffic on east 147th Street and full street closure on Bergen Avenue.
 - Full width of roadway shall be opened to traffic when site is unattended
 - Post signs for directing pedestrians to opposite sidewalk
 - Full width of sidewalk shall be opened to pedestrians when site is unattended.
- 17. Willis Avenue, between East 147th Street and East 148th Street (Night time, Phase 2)**
- Work hours shall be as follows: 10:00PM-6:00AM
 - Maintain a minimum 5 foot clear sidewalk
 - Full width of sidewalk shall be opened to pedestrians when site is unattended.
- 18. East 148th Street, between Courlandt Avenue and Third Avenue (Day time, Phase 3)**
- Work hours shall be as follows: 9:00AM-4:00PM Monday-Friday
 - Full street closure will be in effect during work hours

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- Full width of roadway shall be opened to traffic when site is unattended
- Maintain a minimum 5 foot clear sidewalk
- Full width of sidewalk shall be opened to pedestrians when site is unattended.

19. Intersection of East 148th Street and Courtlandt Avenue (Day time, Phase 3)

- Work hours shall be as follows: 9:00AM-2:00PM Monday-Friday and Saturdays 8:00AM-4PM
- Full street closure will be in effect during work hours on East 148th Street and maintain one 12ft lane on Courtlandt Avenue.
- Full width of roadway shall be opened to traffic when site is unattended
- Post signs for directing pedestrians to opposite sidewalk
- Full width of sidewalk shall be opened to pedestrians when site is unattended.

20. Willis Avenue (bus lane only), between East 147th Street and Third Avenue (Phase 3, 4, 6)

- Full street closure will be in effect 24/7
- Maintain a minimum 5 foot clear sidewalk in phase 3 and post signs for directing pedestrians to opposite sidewalk in phase 4.
- Full width of sidewalk shall be opened to pedestrians when site is unattended.
- Bus detour shall be implemented.
- Must coordinate with MTA Surface Planning prior to implementing the bus detour.
- The contractor must provide proper turning radius for all types of buses and must apply for temporary construction signs if the current parking regulation creates hardship to the buses for safe turns.

21. Intersection of Willis Avenue and Third Avenue (Day time, Phase 3)

- Work hours shall be as follows: 7:00AM-4:00PM Monday-Friday
- Post signs for directing pedestrians to opposite sidewalk
- Full width of sidewalk shall be opened to pedestrians when site is unattended.

22. Intersection of Willis Avenue and East 148th Street (Day time, Phase 3)

- Work hours shall be as follows: 7:00AM-6:00PM Monday-Friday
- Maintain one 16ft lane on both roadways
- Full width of roadway shall be opened to traffic when site is unattended
- Post signs for directing pedestrians to opposite sidewalk
- Full width of sidewalk shall be opened to pedestrians when site is unattended.

23. East 148th Street, between Willis Avenue and Bergen Avenue (Day time, Phase 3)

- Work hours shall be as follows: 7:00AM-6:00PM Monday-Friday
- Maintain one 16ft lane for traffic
- Full width of roadway shall be opened to traffic when site is unattended
- Maintain a minimum 5 foot clear sidewalk
- Full width of sidewalk shall be opened to pedestrians when site is unattended.

24. Melrose Avenue, between East 149th Street and East 150th Street (Day time, Phase 2, 3, 4, 5, 6, 7)

- Work hours shall be as follows: 7:00AM-6:00PM, Monday-Friday.
- Maintain one 12ft lane for traffic.
- Full width of roadway shall be opened to traffic when site is unattended
- Maintain a minimum 5 foot clear sidewalk in phases 2 and 3 and post signs for directing pedestrians to opposite sidewalk in phase 4 and 5.
- Full width of sidewalk shall be opened to pedestrians when site is unattended.

25. Intersection of Bergen Avenue and East 147th Street (Day time, Phase 3)

- Work hours shall be as follows: 7:00AM-6:00PM Monday-Friday.
- Maintain one 12ft lane on both roadways
- Full width of roadway shall be opened to traffic when site is unattended
- Maintain a minimum 5 foot clear sidewalk
- Full width of sidewalk shall be opened to pedestrians when site is unattended.

26. Third Avenue, between East 148th Street and Courtlandt Avenue (Day time, Phase 3)

- Work hours shall be as follows: 7:00AM-6:00PM, Monday-Friday.
- Maintain a 5ft clear pedestrian walkway in roadway
- Full width of sidewalk shall be opened to pedestrians when site is unattended.

27. Third Avenue, between East 147th Street and East 149th Street (Night time, Phase 3)

- Work hours shall be as follows: 10:00PM-6:00AM.
- Maintain two 12ft lanes for traffic, one lane in each direction.
- Full width of roadway shall be opened to traffic when site is unattended.

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- Maintain a minimum 5 foot clear sidewalk.
- Full width of sidewalk shall be opened to pedestrians when site is unattended.

28. Intersection of Third Avenue and Courlandt Avenue (Day time, Phase 3,4)

- Work hours shall be as follows: 9:00AM-2:00PM, Monday-Friday and Saturdays 8:00AM-4PM.
- Maintain one 12 ft lane on Courlandt Avenue and two 12ft lanes on Third Avenue (one in each direction).
- Full width of roadway shall be opened to traffic when site is unattended
- Maintain a 5 ft clear pedestrian walkway on the roadway
- Full width of sidewalk shall be opened to pedestrians when site is unattended

29. East 146th Street, between Third Avenue and College Avenue (Day time, Phase 3)

- Work hours shall be as follows: 7:00AM-6:00PM Monday-Friday
- Maintain one 12ft lane for traffic
- Full width of roadway shall be opened to traffic when site is unattended
- Maintain a 5 foot clear pedestrian walkway on the roadway.
- Full width of sidewalk shall be opened to pedestrians when site is unattended.

30. Westchester Avenue, between Third Avenue and Bergen Avenue (Day time, Phase 4)

- Work hours shall be as follows: 9:00AM-4:00PM Monday-Friday
- Maintain two lanes for traffic, one lane in each direction
- Full width of roadway shall be opened to traffic when site is unattended
- Post signs for directing pedestrians to opposite sidewalk
- Full width of sidewalk shall be opened to pedestrians when site is unattended.

31. Third Avenue, between East 148th Street and East 149th Street (Night time, Phase 4)

- Work hours shall be as follows: 10:00PM-6:00AM
- Maintain two 12ft lanes for traffic, one lane in each direction.
- Full width of roadway shall be opened to traffic when site is unattended.
- Post signs for directing pedestrians to opposite sidewalk
- Full width of sidewalk shall be opened to pedestrians when site is unattended.

32. East 149th Street, between Third Avenue and Morris Avenue (Night time, Phase 4)

- Work hours shall be as follows: 10:00PM-6:00AM
- Maintain two lanes in the westbound direction and one lane in the eastbound direction for traffic
- Full width of roadway shall be opened to traffic when site is unattended
- Maintain a 5 foot clear pedestrian walkway on the roadway.
- Full width of sidewalk shall be opened to pedestrians when site is unattended.

33. Intersection of Melrose Avenue, East 149th Street and Third Avenue (Night time, Phase 4)

- Work hours shall be as follows: 10:00PM-6:00AM
- Maintain three lanes on east 149th Street, two lanes (one lane in each direction) on Third Avenue, and one 12 ft lane on Melrose avenue
- Full width of roadway shall be opened to traffic when site is unattended
- Maintain a 5 foot clear pedestrian walkway on the roadway.
- Full width of sidewalk shall be opened to pedestrians when site is unattended.

34. Willis Avenue (Non-bus lane only), between East 147th Street and East 148th Street (Phase 5)

- Full street closure shall be applied 24/7.
- Maintain a 5 foot clear pedestrian walkway on the roadway.

35. Intersection of Willis Avenue and East 148th Street (Phase 5)

- Full street closure shall be applied 24/7.
- Maintain a 5 foot clear pedestrian walkway on the roadway.

36. Intersection of Willis Avenue and East 147th Street (Phase 5)

- Maintain three lanes on Willis Avenue (south side of the intersection), including the bus lane and one lane on East 147th Street.

37. Intersection of Bergen Avenue and East 147th Street (Phase 5)

- Maintain a 5 foot clear pedestrian walkway on the roadway.

38. East 149th Street, between Third Avenue and Courlandt Avenue (Night time, Phase 5)

- Work hours shall be as follows: 10:00PM-6:00AM
- Maintain a minimum of two 12ft lanes for traffic
- Full width of roadway shall be opened to traffic when site is unattended

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39. Third Avenue, between East 150th Street and East 149th Street (Night time, Phase 5)

- Work hours shall be as follows: 10:00PM-6:00AM
- Maintain two 12ft lanes for traffic, one lane in each direction.
- Full width of roadway shall be opened to traffic when site is unattended.
- Maintain a minimum 5 foot clear sidewalk.
- Full width of sidewalk shall be opened to pedestrians when site is unattended.

40. Third Avenue, between East 148th Street and East 150th Street (Night time, Phase 6)

- Work hours shall be as follows: 10:00PM-6:00AM
- Maintain one lane in the southbound direction only for traffic.
- Full width of roadway shall be opened to traffic when site is unattended.

41. East 149th Street, between Third Avenue and Courlandt Avenue (Night time, Phase 6)

- Work hours shall be as follows: 10:00PM-6:00AM
- Street closure shall be applied on the eastbound direction only.
- Full width of roadway shall be opened to traffic when site is unattended.

42. East 149th Street, between Third Avenue and Bergen Avenue (Night time, Phase 6)

- Work hours shall be as follows: 10:00PM-6:00AM
- Full street closure shall be applied during work hours only.
- Full width of roadway shall be opened to traffic when site is unattended.

43. Third Avenue, between East 148th Street and East 150th Street (Night time, Phase 7)

- Work hours shall be as follows: 10:00PM-6:00AM
- Maintain two 12ft lanes for traffic, one lane in each direction
- Full width of roadway shall be opened to traffic when site is unattended.
- Post signs for directing pedestrians to opposite sidewalk
- Full width of sidewalk shall be opened to pedestrians when site is unattended.

44. East 149th Street, between Third Avenue and Courlandt Avenue (Night time, Phase 7)

- Work hours shall be as follows: 10:00PM-6:00AM
- Maintain a minimum of two 12ft lanes for traffic
- Full width of roadway shall be opened to traffic when site is unattended
- Post signs for directing pedestrians to opposite sidewalk
- Full width of sidewalk shall be opened to pedestrians when site is unattended.

45. Melrose Avenue, between East 149th Street and East 150th Street (Night time, Phase 7)

- Work hours shall be as follows: 10:00PM-6:00AM
- Full street closure shall be applied during work hours only.
- Full width of roadway shall be opened to traffic when site is unattended.
- Post signs for directing pedestrians to opposite sidewalk
- Full width of sidewalk shall be opened to pedestrians when site is unattended.

46. Intersection of Third Avenue and East 149th Street (Night time, Phase 7)

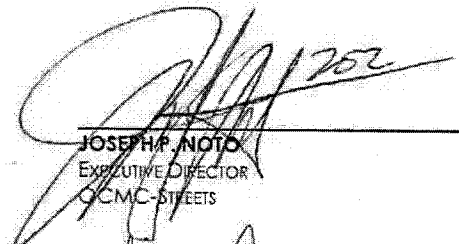
- Work hours shall be as follows: 10:00PM-6:00AM
- Maintain a minimum of two 12ft lanes on both roadways
- Full width of roadway shall be opened to traffic when site is unattended.

C. GENERAL NOTES

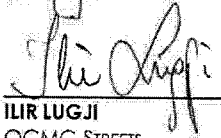
1. **THIS IS NOT A PERMIT.** THIS STIPULATION SHEET MUST BE SUBMITTED WITH ALL REQUESTS FOR PERMITS PERTAINING TO THE ABOVE CONTRACT AND PRESENT AT THE WORK SITE ALONG WITH ALL ACTIVE CONSTRUCTION PERMITS WHEN THE APPROVED WORK IS BEING PERFORMED.
2. ALL RELOCATION WORK BY THE UTILITIES SUCH AS; CON EDISON, TELEPHONE, GAS AND CABLE COMPANIES SHALL PRECEDE THE CONTRACTORS' START OF WORK ON ALL AFFECTED ROADWAYS IN THE IMPACTED CONTRACT AREA.
3. THE CONTRACTOR IS ADVISED THAT OTHER CONTRACTORS MAY BE WORKING IN THE GENERAL AREA DURING THE TERM OF THIS STIPULATION. IN WHICH EVENT, THE CONTRACTOR MAY REQUIRE MODIFICATIONS BY THE OCMC-STREETS.
4. THE PERMITEE IS NOT AUTHORIZED TO ENTER, OCCUPY OR USE ANY PUBLICLY-OWNED OR PRIVATELY OWNED, NON-PAVED, LANDSCAPE OR NON-LANDSCAPED LOCATION WITHOUT SPECIFIC WRITTEN PERMISSION. WHEN THE LOCATION IS WITHIN THE RIGHT-OF-WAY OF A LIMITED-ACCESS ARTERIAL HIGHWAY, **WRITTEN** APPROVAL FROM THE NYCDOT OCMC-HIGHWAYS IS REQUIRED. WHEN THE LOCATION IS WITHIN THE RIGHT-OF-WAY OF A PUBLIC STREET OR PUBLIC PARK, **WRITTEN** APPROVAL FROM THE NEW YORK CITY DEPARTMENT OF TRANSPORTATION OR NEW YORK CITY DEPARTMENT OF PARKS AND RECREATION IS REQUIRED. WHEN THE LOCATION IS WITHIN THE RIGHT-OF-WAY OF ANY OTHER JURISDICTION SUCH AS PRIVATE PROPERTY, STATE, FEDERAL ETC., IT IS THE PERMITEE'S RESPONSIBILITY TO DETERMINE THE PROPERTY OWNER AND OBTAIN THE WRITTEN APPROVAL.

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CONTRACT NO: HWXRCPLZ
PROJECT: RECONSTRUCTION OF ROBERTO CLEMENTE PLAZA

5. THE PERMITEE SHALL ADHERE TO THE NYCDOT BUREAU OF BRIDGES' SPECIAL PROVISIONS FOR LANDSCAPE PROTECTION, MAINTENANCE AND RESTORATION, ITEMS 1.18.15 THROUGH 1.18.19, WHENEVER AND WHEREVER ANY OF THE PERMITEE'S ACTIVITIES OCCUR WITHIN A LIMITED ACCESS ARTERIAL HIGHWAY RIGHT - OF - WAY.
6. NO DEVIATION OR DEPARTURE FROM THESE STIPULATIONS WILL BE PERMITTED WITHOUT THE PRIOR WRITTEN APPROVAL FROM THE OCMC-STREETS. REQUEST FOR SUCH MODIFICATIONS SHALL BE SUBMITTED TO THE OFFICE OF THE OCMC-STREETS, NEW YORK CITY DEPARTMENT OF TRANSPORTATION, A MINIMUM OF TWENTY (20) DAYS IN ADVANCE FOR CONSIDERATION.
7. FOR THIS PROJECT THE CONTRACTOR SHALL FURNISH, INSTALL AND MAINTAIN ALL NECESSARY ADVANCE WARNING AND DETOUR SIGNS, TEMPORARY CONTROL DEVICES, BARRICADES, LIGHTS AND FLASHING ARROW BOARDS IN ACCORDANCE WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES," THE TYPICAL SCHEMES INCLUDED IN THIS SPECIFICATION; AND AS ORDERED BY THE ENGINEER-IN-CHARGE AND THE OCMC-STREETS.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IDENTIFYING HIS CONSTRUCTION SIGNAGE. THE IDENTIFICATION SHALL INCLUDE THE CONTRACTOR'S NAME, SPONSORING AGENCY NAME AND THE CONTRACT NUMBER. THE IDENTIFICATION SHALL BE PLACED ON THE BACK OF THE SIGN. THE LETTERING SHALL BE THREE (3) INCHES HIGH.
9. THE OCMC-STREETS RESERVES THE RIGHT TO VOID OR MODIFY THESE STIPULATIONS SHOULD CONSTRUCTION FAIL TO COMMENCE WITHIN TWO (2) YEARS OF THE SIGNED DATE OF THESE STIPULATIONS.
10. THE CONTRACTOR MUST COMPLY WITH ALL CONSTRUCTION EMBARGOS ISSUED BY THE NYCDOT INCLUDING THE HOLIDAY EMBARGO.



JOSEPH P. NOTO
EXECUTIVE DIRECTOR
OCMC-STREETS



ILIR LUGJI
OCMC-STREETS

JPN/II



Department of Transportation

JANETTE SADIK-KHAN, Commissioner

OCMC TRAFFIC STIPULATIONS - AMENDMENT #1

08/9/2011

OCMC FILE NO: BXEC-11-143
 CONTRACT NO: HWXRCPLZ
 PROJECT: RECONSTRUCTION OF ROBERTO CLEMENTE PLAZA

LOCATION(S): INTERSECTION OF EAST 149TH STREET, THIRD AVENUE, MELROSE AVENUE, AND WILLIS AVENUE.

STIPULATIONS ORIGINALLY DATED 6/3/2011 GRANTING PERMISSION TO THE N.Y.C. DEPARTMENT OF TRANSPORTATION AND ITS DULY AUTHORIZED AGENT, TO ENTER UPON AND RESTRICT THE FLOW OF TRAFFIC AT THE ABOVE LOCATION AND ITS LOCAL ADJACENT STREETS FOR THE PURPOSE OF CARRYING OUT THE ABOVE NOTED PROJECT, IS HEREBY AMENDED AS FOLLOWS:

A. SPECIAL STIPULATIONS

1. **EMBARGOES** – A CONSTRUCTION EMBARGO WILL APPLY TO THOSE LOCATIONS BELOW WHICH FALL WITHIN THE **HOLIDAY EMBARGO** OR ANY OTHER SPECIAL EVENT EMBARGOES SUCH AS THE **(OTHER EMBARGOES IF APPLICABLE)** AS PUBLISHED BY THE BUREAU OF PERMIT MANAGEMENT AND CONSTRUCTION CONTROL.
2. **BIKE LANES** – IF WORK IS IN OR AFFECTING A BIKE LANE, THE CONTRACTOR MUST POST ADVANCE WARNING SIGNS 350 FEET AND 200 FEET PRIOR TO THE WORK ZONE STATING "**CONSTRUCTION IN BIKE LANE AHEAD PROCEED WITH CAUTION**", AND ALSO POST A SIGN AT THE WORK ZONE STATING "**CONSTRUCTION IN BIKE LANE PROCEED WITH CAUTION**". SUCH SIGNS SHALL BE ORANGE, 3' x 3', DIAMOND-SHAPED WITH 4" BLACK LETTERING. SIGNS SHALL BE POSTED IN ACCORDANCE WITH THE FEDERAL MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
3. **BUS STOPS** – THE CONTRACTOR SHALL PROVIDE WRITTEN NOTICE TO NYC DOT OCMC AND NEW YORK CITY TRANSIT (NYCT) A MINIMUM OF FIVE (5) WEEKS IN ADVANCE FOR LANE/STREET CLOSURES THAT AFFECT BUS ROUTES/BUS STOPS.
4. **METERS** – THE CONTRACTOR MAY NOT REMOVE OR RELOCATE PARKING METERS WITHOUT FIRST OBTAINING APPROVAL FROM NYCDOT PARKING METER DIVISION AT 718-894-8651.
5. **ACCESS TO ABUTTING PROPERTIES** – THE CONTRACTOR SHALL COORDINATE ALL ACTIVITIES WITH ABUTTING PROPERTY OWNERS TO ENSURE ACCESS IS PROVIDED TO/FROM ENTRANCES/DRIVEWAYS AT ALL TIMES.
6. **AUTHORIZED PARKING** – PRIOR TO PERFORMING WORK WHICH IMPACTS AUTHORIZED PARKING, THE CONTRACTOR SHALL SUBMIT IN WRITING, AND COPY OCMC-STREETS, A REQUEST TO OCCUPY SPACE CURRENTLY USED BY AUTHORIZED VEHICLES. APPROVAL MUST BE RECEIVED FROM AUTHORIZED PARKING PRIOR TO OCCUPYING THESE AREAS.
7. **NOTIFICATION** – THE CONTRACTOR MUST AT LEAST TWO (2) WORKING DAYS BEFORE THE START OF CONSTRUCTION NOTIFY THE NYC FIRE DEPARTMENT, NYC POLICE DEPARTMENT, NYCEMS, LOCAL COMMUNITY BOARD, BOROUGH PRESIDENT'S OFFICE-CHIEF ENGINEER, NYCDOT OCMC OFFICE, AND ALL ABUTTING PROPERTY OWNERS.
8. **ENHANCED MITIGATIONS**
 - o **NYPD TRAFFIC AGENTS** ARE REQUIRED FOR THIS PROJECT: NONE
 - o **CLOSED-CIRCUIT TELEVISION (CCTV) CAMERAS** MUST BE PLACED CLOSE TO AND WITHIN THE WORKSITE PROJECT LIMITS TO CAPTURE PEDESTRIAN AND VEHICULAR TRAFFIC FLOW. INSTALLATION OF THESE CAMERAS MUST BE COORDINATED WITH THE NYCDOT TRAFFIC MANAGEMENT CENTER.
 - o **ENHANCED MITIGATIONS FOR PEDESTRIAN FLOW**, INCLUDING METAL FENCING, SHALL BE PROVIDED TO ENSURE PEDESTRIANS STAY WITHIN THEIR DESIGNATED PATH/ROUTE. FLAGGERS SHALL BE PROVIDED TO ASSIST WITH PEDESTRIANS AT THE DESIGNATED CROSSWALK AREAS. THESE FLAGGERS SHALL BE ASSIGNED TO THIS FUNCTION ONLY.
 - o **VARIABLE MESSAGE SIGNS (VMS)** SHALL BE PROVIDED FOR THIS PROJECT. THE LOCATIONS AND MESSAGES SHALL BE RECOMMENDED BY NYCDOT AND THEIR CONTRACTOR A MINIMUM OF TWO (2) WEEKS PRIOR TO WORK COMMENCING, FOR OCMC REVIEW AND APPROVAL.
 - o **"NO STANDING ANYTIME-TEMPORARY CONSTRUCTION" SIGNS** AND TEMPORARY PAVEMENT MARKINGS SHALL BE INSTALLED AND MAINTAINED AS WARRANTED BY THE MAINTENANCE AND PROTECTION OF TRAFFIC (MPT) REQUIRED TO FACILITATE TRAFFIC MOVEMENTS THROUGH THE WORK ZONE. ALL TEMPORARY SIGNS AND PAVEMENT MARKINGS SHALL BE REMOVED UPON COMPLETION OF THE PROJECT.
 - o **COMMUNITY OUTREACH** SHALL BE PROVIDED FOR THE DURATION OF THE PROJECT.

NYC Department of Transportation
 Bureau of Permit Management and Construction Control
 55 Water Street - 7th Floor, New York, NY 10041
 T: 212.839.9621 F: 212.839.8970
 www.nyc.gov/dot

OCMC FILE NO: BXEC-11-143
 CONTRACT NO: HWXRCPLZ
 PROJECT: INTERSECTION OF EAST 149TH STREET, THIRD AVENUE, MELROSE AVENUE, AND WILLIS AVENUE

B. MAINTENANCE AND PROTECTION OF TRAFFIC

1. Melrose Avenue, between East 149th Street and 150th Street (Day time, Phase 2)

- Work hours shall be as follows: 7:00AM-6:00PM, Monday-Friday.
- Maintain one 12ft lane for traffic.
- Full width of roadway shall be opened to traffic when site is unattended

2. Intersection of East 147th Street and Willis Avenue (Night time Phase 2)

- Work hours shall be as follows: 10:00PM-6:00AM.
- Maintain one 12ft lane for traffic on East 147th Street and two lanes on Willis Avenue, including the bus lane.
- Full width of roadway shall be opened to traffic when site is unattended
- Post signs for directing pedestrians to opposite sidewalk
- Full width of sidewalk shall be opened to pedestrians when site is unattended.

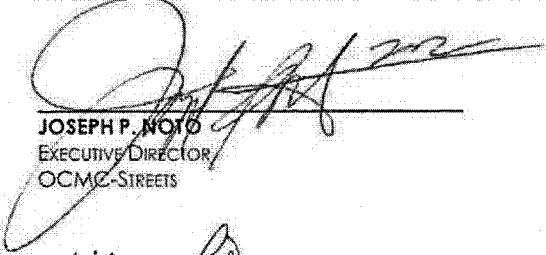
3. Intersection of Third Avenue and Courtlandt Avenue (Night time, Phase 3)

- Work hours shall be as follows: 10:00PM-6:00AM.
- Maintain one 12 ft lane on Courtlandt Avenue and one 12 ft lane for two way street on Third Avenue.
- Flagmen must be provided to assist the traffic.
- Full width of roadway shall be opened to traffic when site is unattended
- Maintain a 5 ft clear pedestrian walkway on the roadway
- Full width of sidewalk shall be opened to pedestrians when site is unattended

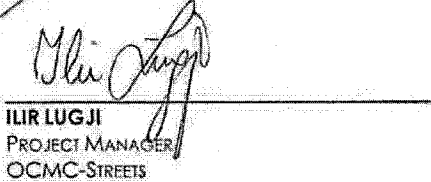
C. GENERAL NOTES

1. **THIS IS NOT A PERMIT.** THIS STIPULATION SHEET MUST BE SUBMITTED WITH ALL REQUESTS FOR PERMITS PERTAINING TO THE ABOVE CONTRACT AND PRESENT AT THE WORK SITE ALONG WITH ALL ACTIVE CONSTRUCTION PERMITS WHEN THE APPROVED WORK IS BEING PERFORMED.
2. **All other stipulations under original NYCDOT stipulations sheet BXEC-11-143 dated 8/9/2011 and its amendments which have not been changed by this amendment remain in effect.**
3. ALL RELOCATION WORK BY THE UTILITIES SUCH AS; CON EDISON, TELEPHONE, GAS AND CABLE COMPANIES SHALL PRECEDE THE CONTRACTORS' START OF WORK ON ALL AFFECTED ROADWAYS IN THE IMPACTED CONTRACT AREA.
4. THE CONTRACTOR IS ADVISED THAT OTHER CONTRACTORS MAY BE WORKING IN THE GENERAL AREA DURING THE TERM OF THIS STIPULATION. IN WHICH EVENT, THE CONTRACTOR MAY REQUIRE MODIFICATIONS BY THE OCMC-STREETS.
5. THE PERMITEE IS NOT AUTHORIZED TO ENTER, OCCUPY OR USE ANY PUBLICLY-OWNED OR PRIVATELY OWNED, NON-PAVED, LANDSCAPE OR NON-LANDSCAPED LOCATION WITHOUT SPECIFIC WRITTEN PERMISSION. WHEN THE LOCATION IS WITHIN THE RIGHT-OF-WAY OF A LIMITED-ACCESS ARTERIAL HIGHWAY, **WRITTEN** APPROVAL FROM THE NYCDOT OCMC-HIGHWAYS IS REQUIRED. WHEN THE LOCATION IS WITHIN THE RIGHT-OF-WAY OF A PUBLIC STREET OR PUBLIC PARK, **WRITTEN** APPROVAL FROM THE NEW YORK CITY DEPARTMENT OF TRANSPORTATION OR NEW YORK CITY DEPARTMENT OF PARKS AND RECREATION IS REQUIRED. WHEN THE LOCATION IS WITHIN THE RIGHT-OF-WAY OF ANY OTHER JURISDICTION SUCH AS PRIVATE PROPERTY, STATE, FEDERAL ETC., IT IS THE PERMITEE'S RESPONSIBILITY TO DETERMINE THE PROPERTY OWNER AND OBTAIN THE WRITTEN APPROVAL.
6. THE PERMITEE SHALL ADHERE TO THE NYCDOT BUREAU OF BRIDGES' SPECIAL PROVISIONS FOR LANDSCAPE PROTECTION, MAINTENANCE AND RESTORATION, ITEMS 1.18.15 THROUGH 1.18.19, WHENEVER AND WHEREVER ANY OF THE PERMITEE'S ACTIVITIES OCCUR WITHIN A LIMITED ACCESS ARTERIAL HIGHWAY RIGHT - OF - WAY.
7. NO DEVIATION OR DEPARTURE FROM THESE STIPULATIONS WILL BE PERMITTED WITHOUT THE PRIOR WRITTEN APPROVAL FROM THE OCMC-STREETS. REQUEST FOR SUCH MODIFICATIONS SHALL BE SUBMITTED TO THE OFFICE OF THE OCMC-STREETS, NEW YORK CITY DEPARTMENT OF TRANSPORTATION, A MINIMUM OF TWENTY (20) DAYS IN ADVANCE FOR CONSIDERATION.
8. FOR THIS PROJECT THE CONTRACTOR SHALL FURNISH, INSTALL AND MAINTAIN ALL NECESSARY ADVANCE WARNING AND DETOUR SIGNS, TEMPORARY CONTROL DEVICES, BARRICADES, LIGHTS AND FLASHING ARROW BOARDS IN ACCORDANCE WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES," THE TYPICAL SCHEMES INCLUDED IN THIS SPECIFICATION; AND AS ORDERED BY THE ENGINEER-IN-CHARGE AND THE OCMC-STREETS.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IDENTIFYING HIS CONSTRUCTION SIGNAGE. THE IDENTIFICATION SHALL INCLUDE THE CONTRACTOR'S NAME, SPONSORING AGENCY NAME AND THE CONTRACT NUMBER. THE IDENTIFICATION SHALL BE PLACED ON THE BACK OF THE SIGN. THE LETTERING SHALL BE THREE (3) INCHES HIGH.
10. THE OCMC-STREETS RESERVES THE RIGHT TO VOID OR MODIFY THESE STIPULATIONS SHOULD CONSTRUCTION FAIL TO COMMENCE WITHIN TWO (2) YEARS OF THE SIGNED DATE OF THESE STIPULATIONS.
11. THE CONTRACTOR MUST COMPLY WITH ALL CONSTRUCTION EMBARGOS ISSUED BY THE NYCDOT INCLUDING THE HOLIDAY EMBARGO.
12. THIS AMENDMENT HAS BEEN ISSUED AS A RESULT OF THE CHANGES IN THE SCOPE OF WORK.

OCMC FILE NO: Bxec-11-143
CONTRACT NO: HWXRCPLZ
PROJECT: INTERSECTION OF EAST 149TH STREET, THIRD AVENUE, MELROSE AVENUE, AND WILLIS AVENUE



JOSEPH P. NOTO
EXECUTIVE DIRECTOR
OCMC-STREETS



ILIR LUGJI
PROJECT MANAGER
OCMC-STREETS



THE CITY OF NEW YORK Department of Sanitation

S. ELIZABETH SEARLE
Assistant Commissioner
for Legal Affairs

Department of Sanitation Rules and Regulations Governing Non-Putrescible Solid Waste Transfer Stations

Bureau of Legal Affairs
44 Beaver Street
New York, NY 10004
Telephone (212) 837-8110
FAX (212) 837-8243

INTERPRETIVE MEMORANDUM # 2 February 14, 1995

*Subject: Temporary Storage and Processing of Construction and Demolition Debris
by New York City Agency Contractors*

Contractors performing construction work for New York City agencies may be required to excavate dirt, concrete, rock, gravel and similar materials ("construction materials") from a contract site or to remove from a contract site construction materials resulting from construction, demolition, alteration, repair or renovation of structures, streets or buildings. On street construction projects, construction materials required to be excavated or removed may also include asphalt. The purpose of this Interpretive Memorandum is to (a) define the circumstances under which the Department of Sanitation (the "Department") will not deem its Rules and Regulations Governing Non-Putrescible Solid Waste Transfer Stations (the "Rules") to apply to the temporary storage, processing and/or stockpiling (collectively, "stockpiling") of such construction materials and (b) the procedure for ensuring such exemption. It is the responsibility of the contracting agency to oversee its contractors' compliance with the Rules and with this Interpretive Memorandum.

1. When No Transfer Station Permit is Required

Where a City contractor has:

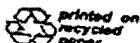
- (a) set aside an area of a contract site for stockpiling construction materials excavated from and/or intended for that site; or
- (b) received written approval from the contracting agency for an off-site stockpiling location,

the Department will not deem such stockpiling location a transfer station and will not require the contractor to obtain a transfer station permit so long as:

- (c) no construction materials or debris from off the contract site are received at the designated location for subsequent transfer to another location (other than the contract site); and
- (d) the temporary stockpiling location is clearly described as such in the contract or clearly approved by the construction agency and designated as such in writing to the Department by the agency; and
- (e) the construction agency represents in writing to the Department that such agency will monitor the temporary stockpiling location and ensure its clean-up and restoration pursuant to the procedures set out in this memorandum.



Help Reduce
New York's Waste.



Example: Street Construction Projects

As part of a contract for street construction, the contractor may be working at one end of a street and using an area at the other end of the street for the temporary stockpiling of construction materials. Both ends of the street are part of the construction contract site. In addition, the contractor may have leased an off-site location for temporary stockpiling of materials, which, following processing, will be reincorporated into the contract site, with some portion of the remainder designated for delivery to a Department disposal facility. Neither location will be regulated by the Department as a transfer station so long as the procedures set out in this memorandum are followed.

2. Procedure for Exception.

Upon a City construction agency's approval of any location to be designated as a temporary processing, storage or stockpiling area, that agency must determine that (a) its contract with the contractor provides for clean-up and restoration of such area by, for example, the contractor's posting of a restoration bond and/or by contractual set-off and (b) the agency has adequate procedures for monitoring the designated area to ensure that it does not violate the provisions set forth in this memorandum and that such location is cleaned up and restored at the completion of the contract work.

The City construction agency must submit an official letter to the Department acknowledging compliance with both (a) and (b) immediately above and representing that the agency will ensure the contractor's compliance. The letter to be submitted must be in substantially the following form, addressed to the Director, Bureau of Waste Disposal, Department of Sanitation, 125 Worth Street, Room 726, New York, NY 10013:

"The New York City Department of _____ (the "Agency")
has awarded a construction contract to _____ (Contractor)
_____ (the "Contractor") for work to be performed at _____ (Contract
Site) _____.

a. This Agency has approved the following locations to be used by the Contractor for the temporary storage, processing and/or stockpiling of construction materials (the "Stockpiling Locations") excavated from the construction site or intended for the construction site:

b. The terms of the contract require the Contractor to clean up and restore the Stockpiling Locations, whether on or off the contract site, at or before the completion of the contract work.

c. This Agency assumes responsibility for the monitoring of Stockpiling Locations to ensure that only materials received from and/or intended for the construction site are stockpiled at such locations and we will enforce clean-up and restoration of such Locations at the end of their use for temporary stockpiling or at the termination of the contract, whichever occurs earlier, through restoration

bonding requirements and/or contractual set-off provisions such that the costs of clean-up and restoration will not become a charge to the Department or the City. "

3. When a Transfer Station Permit is Required

A transfer station permit will be required under any circumstances other than those outlined above. Except in the specifically defined circumstances set forth in this memorandum, any operator of a location or facility which receives, processes, stores or stockpiles construction and demolition debris or fill material for purposes of transfer to another location, including to a New York City Department of Sanitation facility, and whether or not under contract to the Department for the delivery of such materials, will be fully subject to the Department's transfer station rules and liable for enforcement for violations.

ATTACH TO CONTRACT DOCUMENTS

THE CITY OF NEW YORK
DEPARTMENT OF DESIGN AND CONSTRUCTION
INFRASTRUCTURE DIVISION
BUREAU OF DESIGN

PROJECT ID: HWXRCPLZ

RECONSTRUCTION OF
ROBERTO CLEMENTE PLAZA

INCLUDING SEWER, WATER MAIN, STREET LIGHTING,
AND TRAFFIC SIGNAL WORK

Together With All Work Incidental Thereto
BOROUGH OF THE BRONX
CITY OF NEW YORK

ADDENDUM NO. 2

DATED: November 1, 2012

THIS ADDENDUM IS HEREBY MADE A PART OF THE CONTRACT DOCUMENTS

1. Any substantial modification of the Contract shall be subject to approval by the State Commissioner of Transportation and the Federal Highway Administration, in addition to the City agencies involved.
2. The Contractor shall be responsible for compliance with all the provisions of the following Schedules of Federal and State requirements which are hereby made a part of the original contract documents and are annexed hereto:

- Attachment "A" - Required Contract Provisions for Federal-Aid Projects - FHWA 1273
- Attachment "B" - New York State Contract Requirements - including Worker's Compensation and Liability Insurance, Labor and Employment, Non-Assignment of Agreement, Non-Collusive Bidding Certifications, Debarment History Certification, Lobbying Activity Certifications, and Appendix C (Disclosure of Lobbying Activities)
- Attachment "C" - Federal-Aid Contracts - Notice to All Prospective Bidders
- Attachment "D" - Provisions Relating to the NYS Labor Law, Prevailing Wages, and the Use of Convict Labor, Etc.
- Attachment "E" - "Buy America" Requirements & Waivers
- Attachment "F" - Equal Opportunity Requirements for Federal Aid Contracts
- Attachment "G" - NO TEXT
- Attachment "H" - Disadvantaged Business Enterprises Utilization Requirements
- Attachment "I" - Training Special Provision
- Attachment "J" - NO TEXT
- Attachment "K" - Changed Conditions, Disputed Resolution and Disputed Work Provisions
- Attachment "L" - Contractor Initiated Value Engineering Change Proposals (CIVEC)
- Attachment "M" - NO TEXT
- Attachment "N" - Itemized Proposal
- Attachment "O" - US DOT Hotline / NYS Inspector General Hotline
- Attachment "P" - Prompt Payments by the Contractor / Civil Rights Monitoring and Reporting
- Attachment "Q" - Iran Divestment Act

In addition to compliance with the above Federal and State requirements, the Contractor shall also be required to comply with all City requirements as depicted in the Information for Bidders and Standard Construction Contract herein. Wherever a conflict may exist, the Federal Regulations shall take precedence.

3. The Contractor shall not pay less than the highest minimum hourly rates as set forth by Federal, State or City laws.
4. The Contractor shall maintain his records in conformity with the current NYSDOT "Manual for Uniform Record Keeping", referred to as MURK, copies of which are available on line at the NYSDOT website www.dot.state.ny.us, Construction division, manuals. A copy of the manual can also be purchased from the NYSDOT Plan Sales Office at 518-457-2124. The entire manual or individual parts can be purchased by personal or business check or money order.

Part A Contract Administration Manual
Part B Construction Inspection Manual
Part C Safety & Health Program Manual
Part D Construction Consultant Manual

5. In accordance with FHPM 1-6-2, (23U.S.C.315) dated July 2, 1979, the construction work performed under this Contract shall be available to be subject to inspection at all times by the New York State Department of Transportation and the Federal Highway Administration.
6. Amendments to Information for Bidders:
 - a) Refer to Page 6, SECTION 20. Low Tie Bids;
Delete Article 20 in its entirety and substitute the words
"20. (NO TEXT)."
 - b) Refer to Pages 6 and 7, Subsection 21.(C), Rejection of All
Bids and Negotiation With All Responsible Bidders;
Delete Sub-Article 21.(C) in its entirety and substitute the
words "(C) NO TEXT."
 - c) Refer to Pages 8 and 9, SECTION 26. Bid, Performance and
Payment Security;
Add the following:

"(F) Bidders are hereby advised that the apparent low Bidder, as determined at the bid opening or subsequently notified that its firm is the low Bidder, will be required to submit within seven (7) days a complete DBE Pre-Award Utilization Package in compliance with SECTION 102-12H of the NEW YORK STATE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS using their approved civil rights reporting software called EBO. For EBO software see Attachment "P", CIVIL RIGHTS MONITORING AND REPORTING."

- d) Refer to Page 9, SECTION 27. Failure to Execute Contract, 6th, 7th and 8th lines;
Delete the sentence beginning with the words: "No plea of mistake in such..." in its entirety.
- e) Refer to Page 10, SECTION 30. Labor Law Requirements, Sub-Article (A) General;
Add the following at the end of the Section: "This provision shall apply to subcontractors also."
- f) Refer to Page 11, Subsection 33.(B), Variations from Engineer's Estimate;
Delete Subsection 33.(B) in its entirety. See Attachment "K", Page A2-K2 and A2-K3, Significant Changes in the Character of Work, Sub-Article 3.(iv)(B).
- g) Refer to Pages 12 and 13, SECTION 37. Locally Based Enterprise Requirements (LBE);
Delete the SECTION, in its entirety. See Attachment "H" Disadvantaged Business Enterprise Utilization Requirements.

7. Amendments to Standard Construction Contract:

- a) Refer to Pages 10 and 11, ARTICLE 7. PROTECTION OF WORK AND OF PERSONS AND PROPERTY; NOTICES AND INDEMNIFICATION;
Add the following:

"7.7 In addition to the requirements stipulated herein, all work performed under this Contract shall comply with the safety and health standards of the Occupational Safety and Health Administration (OSHA) of the U.S. Department of Labor."

- b) Refer to Page 12, Sub-Article 9.3;
Delete the first sentence starting with the words: "If the Contractor..." and ending with the words "...progress schedule."
- c) Refer to Page 18, ARTICLE 16. OCCUPATION OR USE PRIOR TO COMPLETION;
Delete Sub-Article 16.1.4, in its entirety.
- d) Refer to Pages 18 and 19, ARTICLE 17. SUBCONTRACTS;
Delete Sub-Article 17.9.1, in its entirety;
Substitute the following revised Article 17.9.1:

"17.9.1 **Payment to Subcontractors:** The agreement between the **Contractor** and its **Subcontractors** shall contain the same terms and conditions as to method of payment for **Work**, labor and materials, as are contained in this **Contract.**"

- e) Refer to Pages 18 and 19, ARTICLE 17. SUBCONTRACTS;
Delete Sub-Articles 17.11 and 17.12, in their entirety;
Substitute the following revised Articles 17.11 and 17.12:

"17.11 On **Contracts** where 100% performance bonds and payment bonds are executed, the **Contractor** shall include on each requisition for payment the following data: **Subcontractor's** name, value of the subcontract, total amount previously paid to **Subcontractor** for **Work** previously requisitioned, and the amount to be paid to the **Subcontractor** for **Work** included in the requisition.

17.12 On **Contracts** where performance bonds and payment bonds are not executed, the **Contractor** shall include with each requisition for payment submitted hereunder, a signed statement from each and every **Subcontractor** and/or **Materialman** for whom payment is requested in such requisition. Such signed statement shall be on the letterhead of the **Subcontractor** and/or **Materialman** for whom payment is requested and shall (i) verify that such **Subcontractor** and/or **Materialman** has been paid in full for all work performed and/or material supplied to date, exclusive of any amount retained and any amount included on the current requisition, and (ii) state the total amount of retainage to date, exclusive of any amount retained on the current requisition."

- f) Refer to Page 20, ARTICLE 19. SECURITY DEPOSIT;
Delete Sub-Article 19.1, in its entirety;
Substitute the following Sub-Article 19.1:

"19.1 The bid deposit, if required, shall be retained by the **Comptroller** as security for the **Contractor's** faithful performance of the **Contract** and will be returned to the **Contractor** subject to the other provisions of this **Contract**. If performance and payment bonds are required, any bid security posted shall be returned within a reasonable time after posting of such bonds and execution of this **Contract** by the **City**. When no partial payments are provided, the bid deposit will be released when final payment is certified to the **Comptroller** for payment."

- g) Refer to Page 22, ARTICLE 21. RETAINED PERCENTAGE;
Delete Article 21, in its entirety;
Substitute the following:

"ARTICLE 21. (NO TEXT)"

- h) Refer to Pages 28 and 29, ARTICLE 24. MAINTENANCE AND GUARANTY;
Delete the Article in its entirety, except for the last
Paragraph 24.9;
Substitute the following:

"ARTICLE 24. WARRANTIES AND GUARANTEES

24.1 On any contract which requires the furnishing and/or installing of electrical or mechanical equipment, the Contractor shall provide the following:

- (1) manufacturers' warranties or guarantees on all electrical and mechanical equipment, consistent with those provided as customary trade practice.
- (2) contractors' warranties or guarantees providing for satisfactory in-service operation of the mechanical and electrical equipment and related components for a period not to exceed 6 months following project acceptance.

The Contractor shall obtain all manufacturers' warranties and guarantees of all equipment and materials required by this Contract in the name of the City and shall deliver same to the Commissioner. All of the City's rights and title and interest in and to said manufacturers' warranties and guarantees may be assigned by the City to any subsequent purchasers or lessees of the premises.

24.2 through 24.8 (NO TEXT)"

- i) Refer to Page 29 and 30, ARTICLE 25. CHANGES;
Add the following paragraph:

"25.5 Extra Work: It is anticipated that the preliminary engineering and the preparation of plans, specifications and contract documents have been performed with sufficient thoroughness, accuracy and care, and that changes and extra work during the construction can be held to a minimum and limited almost exclusively to revisions and additions necessitated by conditions that could not reasonably be anticipated before the project was advertised for bids or force account operations commenced."

- j) Refer to Pages 40, 41 and 42, ARTICLE 36. NO DISCRIMINATION;
Change in Paragraph 36.1.1, 4th line, "citizen of the State of New York" to "person";
Delete Paragraphs 36.1.3, 36.1.4, 36.2.2 and 36.2.4 in their entireties;
Add "or sex or age" to the expression "race, creed, color, sex or national origin", and "or sex or age" to the expression "race, color or creed", wherever these expressions appear in Article 36.

- k) Refer to Page 48 and 49, ARTICLE 43. PROMPT PAYMENT;
Add the following sentence to the end of Sub-Article 43.5:

"The Contractor shall not hold any retainage, but may deduct an amount necessary to satisfy any claims, liens or judgements against a Subcontractor or materialman which have not been fully discharged."

- l) Refer to Pages 49 and 50, ARTICLE 44. SUBSTANTIAL COMPLETION PAYMENT;
Delete Sub-Articles 44.3 and 44.4, in their entirety;
Substitute the following:

"44.3 The **Commissioner** shall issue a voucher calling for payment of any part or all of the balance due for **Work** performed under the **Contract**, less any and all

deductions authorized to be made by the **Commissioner**, under this **Contract** or by **Law**, and less twice the amount the **Commissioner** considers necessary to ensure the completion of the balance of the **Work** by the **Contractor**. Such a payment shall be considered a Partial and not a Final Payment. No **Substantial Completion** payment shall be made under this article where the **Contractor** shall fail to complete the **Work** within the time fixed for such completion in the Schedule A of the General Conditions, or within the time to which completion may have been extended, until an extension or extensions of time for the completion of **Work** have been acted upon pursuant to Article 13.

44.4 No further partial payments shall be made to the **Contractor** after the **Commissioner** issues a Certificate of **Substantial Completion**, except the **Substantial Completion** payment and **Contractor's** requisition that were properly filed with the **Commissioner** prior to the date of **Substantial Completion**; however, the **Commissioner** may grant a waiver for further partial payments after the date of **Substantial Completion** to permit payments for change order **Work**. Such waiver shall be in writing."

- m) Refer to Pages 50 and 51, ARTICLE 45. FINAL PAYMENT;
Delete Sub-Article 45.1, in its entirety;
Substitute the following:

"45.1 After completion and **Final Acceptance** of the **Work**, the **Contractor** shall submit all required certificates and documents, together with a requisition for the balance claimed to be due under the **Contract**. A verified statement similar to that required in connection with applications for partial payments shall also be submitted to the **Commissioner**."

- n) Refer to Page 55 and 56, ARTICLE 59. SERVICES OF NOTICES;
Delete in the 3rd, 4th and 5th lines of Sub-Article 59.1, the
words: ", or depositing it in a postpaid wrapper addressed thereto in any
post office box (P.O. Box) regularly maintained by the United States Postal
Service,".

- o) Refer to Pages 59, 60 and 61, ARTICLE 64. TERMINATION BY THE
CITY;
Delete the text of the 1st paragraph;
Substitute the following:

"64.1 In addition to termination pursuant to Article 63, the **Commissioner** may, by written notice, terminate the **Contract** or any portion thereof after determining that for reasons beyond either Department or **Contractor** control it is not feasible to proceed with or complete the work as originally contracted for, and that termination would therefore be in the public interest. Such reasons for termination may include, but need not be necessarily limited to, executive orders of the President relating to prosecution of war or national defense, national emergency which creates a serious shortage of materials, orders from duly constituted authorities relating to energy conservation, and restraining

orders or injunctions obtained by third-party citizen action resulting from national or local laws or regulations, or where the issuance of such order or injunction is primarily caused by acts or omissions of persons or agencies other than the Contractor, or where the orderly progression of a project is interfered with or delayed by acts or omissions of persons or agencies other than the Contractor. The Contractor specifically understands that the issuance of such notice by the Commissioner shall be conclusive as to its necessity. In such event the Contractor shall upon receipt of such notice:"

- p) Refer to Page 63, ARTICLE 67. LOCALLY BASED ENTERPRISE PROGRAM;
Delete Article 67, in its entirety. See Attachment "H" Disadvantaged Business Enterprise Utilization Requirements.
- q) Refer to Page 66, ARTICLE 75. COMPENSATION TO BE PAID TO CONTRACTOR;
Delete Article 75, in its entirety and Substitute the following "ARTICLE 75. (NO TEXT)".
- r) Add the following to Pages 77, 78, 79, 80, 81, 82, 83, and 84, PERFORMANCE BOND:

"Prior to or at the time of execution of the contract, successful bidder must deliver to the City of New York an executed bond equal to one hundred percent (100%) of the contract price, to secure the faithful performance of the contract, and an executed bond in an amount equal to one hundred percent (100%) of the contract price, as security for the payment of all persons performing labor or furnishing materials in connection with this contract, prepared on the forms of bonds authorized by The City of New York, and made a part of the contract documents, copies of which are annexed hereto, and having as surety thereunder such surety company or companies as are approved by The City of New York and are authorized to do business in the State of New York. Premium of such bonds shall be included in the base bid.

In lieu of a performance and completion bond and labor and material bond, a contractor may deposit with the Comptroller, money or obligations of The City of New York which the Comptroller shall approve as of equal value with the amount of the performance and completion bond required.

Whenever a contractor deposits obligations of The City of New York, in lieu of a performance and completion bond and a labor and material bond, it shall be with the understanding that the Comptroller of the City of New York, or his successors, may sell and use the proceeds thereof, for any purpose for which the principal or surety on such bond would be liable under the terms of the contract. If money is deposited with the Comptroller, the Contractor shall not be entitled to receive interest on such money from The City of New York.

If the bidder to whom the contract is awarded refuses to execute it, or fails to furnish the required security and insurance within ten (10) days after receipt of notice to him of the award, the amount of his deposit, or as much thereof as may be applicable to the amount of the award made to him, shall be forfeited and shall be retained by the City as liquidated damages. See Page A2-3 for change relating to requirements to submit proof of bondability within 10 days after bid opening."

8. Amendments to General Conditions of the Standard Highway Specifications:

- a) Refer to Page 14 of the Standard Highway Specifications, Article 1.06.23. Rules, Laws, and Requirements;
Add the following:

"Certain items of work are to be performed in accordance with the general specifications of the following departments of the City of New York:

Bureau of Traffic Operations
Police Department
Fire Department
Department of Environmental Protection
Bureau of Water Supply
Street Lighting

Copies of these specifications may be examined at their offices."

- b) Refer to Pages 16 and 17 of the Standard Highway Specifications, Article 1.06.23.(G) Rules Governing Navigation, last paragraph;
Delete the word "asbestos" wherever it occurs.

- c) Refer to Pages 36, 37 and 38, of the Standard Highway Specifications, Article 1.06.46. Project Sign;
Delete the Article 1.06.46, in its entirety;
Substitute the following:

"1.06.46. Project Sign. No project signs will be required on this project."

- d) Refer to Page 40 of the Standard Highway Specifications, Sub-Article 1.06.48.(C) Access Ramps, 2nd paragraph, 1st line;
Change the maximum grade from "one (1) vertical on three (3) horizontal" to "one (1) vertical on six (6) horizontal".

9. Amendments to the Standard Highway Specifications:

- a) Refer to Page 83, Subsection 2.18.3(A), 4th paragraph;
Change "." to "," after "... and Appeals";
Add the following words: "and the health standards of OSHA of the U.S. Department of Labor."

- b) Refer to Page 187, Subsection 4.06.12;
Delete the Subsection 4.06.12, in its entirety and substitute the words "4.06.12. (NO TEXT)." The use of rubble aggregate will not be permitted.

10. The Contractor is hereby notified that this is a City contract funded through apportionment available under Title 23, U.S. Code, as amended, and that the contract will be awarded by the City of New York, subject to the approval of the Commissioner of the New York State Department of Transportation and the Federal Highway Administration. Furthermore, no extensions in time for completion or other changes affecting the contract work can be granted by the City of New York without concurrence of the State of New York and approval of the Federal Highway Administration.
11. All reference to the delivery of salvageable materials to a designated City-owned yard do not apply to this Contract. All salvageable materials designated by the Engineer shall be stored on site for pick-up by City forces.
12. Wherever references are made within these specifications to "race, creed, color, national origin or sex," they shall be construed to include "sexual orientation and marital status".

REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS

- I. General
- II. Nondiscrimination
- III. Nonsegregated Facilities
- IV. Davis-Bacon and Related Act Provisions
- V. Contract Work Hours and Safety Standards Act Provisions
- VI. Subletting or Assigning the Contract
- VII. Safety: Accident Prevention
- VIII. False Statements Concerning Highway Projects
- IX. Implementation of Clean Air Act and Federal Water Pollution Control Act
- X. Compliance with Governmentwide Suspension and Debarment Requirements
- XI. Certification Regarding Use of Contract Funds for Lobbying

ATTACHMENTS

A. Employment and Materials Preference for Appalachian Development Highway System or Appalachian Local Access Road Contracts (included in Appalachian contracts only)

I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under Title 23 (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services). The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in bid proposal or request for proposal documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract).

2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.

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3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors.

II. NONDISCRIMINATION

The provisions of this section related to 23 CFR Part 230 are applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR 60, 29 CFR 1625-1627, Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding \$10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR 60, and 29 CFR 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), and Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The following provision is adopted from 23 CFR 230, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

1. Equal Employment Opportunity: Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630, 29 CFR 1625-1627, 41 CFR 60 and 49 CFR 27) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under this contract. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR 35 and 29 CFR 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

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a. The contractor will work with the contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract.

b. The contractor will accept as its operating policy the following statement:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, pre-apprenticeship, and/or on-the-job training."

2. EEO Officer: The contractor will designate and make known to the contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active EEO program and who must be assigned adequate authority and responsibility to do so.

3. Dissemination of Policy: All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minorities and women.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

4. Recruitment: When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minorities and women in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minorities and women. To meet this requirement, the contractor will identify sources of

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potential minority group employees, and establish with such identified sources procedures whereby minority and women applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.

c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such applicants will be discussed with employees.

5. Personnel Actions: Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of their avenues of appeal.

6. Training and Promotion:

a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency

may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of employees who are minorities and women and will encourage eligible employees to apply for such training and promotion.

7. Unions: If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. Actions by the contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:

a. The contractor will use good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.

b. The contractor will use good faith efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, national origin, age or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the contracting agency and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin, age or disability; making full efforts to obtain qualified and/or qualifiable minorities and women. The failure of a union to provide sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the contracting agency.

8. Reasonable Accommodation for Applicants / Employees with Disabilities: The contractor must be familiar with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established there under. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.

9. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment: The contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.

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- a. The contractor shall notify all potential subcontractors and suppliers and lessors of their EEO obligations under this contract.
- b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.

10. Assurance Required by 49 CFR 26.13(b):

- a. The requirements of 49 CFR Part 26 and the State DOT's U.S. DOT-approved DBE program are incorporated by reference.
- b. The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the contracting agency deems appropriate.

11. Records and Reports: The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.

- a. The records kept by the contractor shall document the following:
 - (1) The number and work hours of minority and non-minority group members and women employed in each work classification on the project;
 - (2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women; and
 - (3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women;
- b. The contractors and subcontractors will submit an annual report to the contracting agency each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on Form FHWA-1391. The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more.

The contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, or national origin cannot result. The

contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location, under the contractor's control, where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

IV. DAVIS-BACON AND RELATED ACT PROVISIONS

This section is applicable to all Federal-aid construction projects exceeding \$2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size). The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. Contracting agencies may elect to apply these requirements to other projects.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 "Contract provisions and related matters" with minor revisions to conform to the FHWA-1273 format and FHWA program requirements.

1. Minimum wages

a. All laborers and mechanics employed or working upon the site of the work, will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph 1.d. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph 1.b. of this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

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b. (1) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(ii) The classification is utilized in the area by the construction industry; and

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(3) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. The Wage and Hour Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(4) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs 1.b.(2) or 1.b.(3) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

c. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

d. If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

2. Withholding

The contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor under this contract, or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the contracting agency may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

3. Payrolls and basic records

a. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

b. (1) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the contracting agency. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g. , the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at <http://www.dol.gov/esa/whd/forms/wh347instr.htm> or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the contracting agency for transmission to the State DOT, the FHWA or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses

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and social security numbers to the prime contractor for its own records, without weekly submission to the contracting agency..

(2) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(i) That the payroll for the payroll period contains the information required to be provided under §5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under §5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;

(ii) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(3) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 3.b.(2) of this section.

(4) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

c. The contractor or subcontractor shall make the records required under paragraph 3.a. of this section available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the FHWA may, after written notice to the contractor, the contracting agency or the State DOT, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4. Apprentices and trainees

a. Apprentices (programs of the USDOL).

Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of

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Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice.

The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

b. Trainees (programs of the USDOL).

Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration.

The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration.

Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program

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shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

c. Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

d. Apprentices and Trainees (programs of the U.S. DOT).

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

5. Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

6. Subcontracts. The contractor or subcontractor shall insert Form FHWA-1273 in any subcontracts and also require the subcontractors to include Form FHWA-1273 in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

7. Contract termination: debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

9. Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10. Certification of eligibility.

a. By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

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b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

c. The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

The following clauses apply to any Federal-aid construction contract in an amount in excess of \$100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

1. Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

2. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (1.) of this section, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1.) of this section, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1.) of this section.

3. Withholding for unpaid wages and liquidated damages. The FHWA or the contacting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2.) of this section.

4. Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (1.) through (4.) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1.) through (4.) of this section.

VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System.

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1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the contracting agency. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635.116).

a. The term "perform work with its own organization" refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions:

(1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;

(2) the prime contractor remains responsible for the quality of the work of the leased employees;

(3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and

(4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract.

2. The contract amount upon which the requirements set forth in paragraph (1) of Section VI is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. The contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the contracting agency has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

5. The 30% self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements.

VII. SAFETY: ACCIDENT PREVENTION

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract.
2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).
3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C.3704).

VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, Form FHWA-1022 shall be posted on each Federal-aid highway project (23 CFR 635) in one or more places where it is readily available to all persons concerned with the project:

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

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Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 1, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined under this title or imprisoned not more than 5 years or both."

IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

By submission of this bid/proposal or the execution of this contract, or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any person who is or will be utilized in the performance of this contract is not prohibited from receiving an award due to a violation of Section 508 of the Clean Water Act or Section 306 of the Clean Air Act.
2. That the contractor agrees to include or cause to be included the requirements of paragraph (1) of this Section X in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements.

X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost \$25,000 or more – as defined in 2 CFR Parts 180 and 1200.

1. Instructions for Certification – First Tier Participants:

a. By signing and submitting this proposal, the prospective first tier participant is providing the certification set out below.

b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective first tier participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective first tier participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction.

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c. The certification in this clause is a material representation of fact upon which reliance was placed when the contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default.

d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

f. The prospective first tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.

g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.

i. Nothing contained in the foregoing shall be construed to require the establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of the prospective participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph (f) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this

transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

* * * * *

2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:

a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:

(1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency;

(2) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

(3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (a)(2) of this certification; and

(4) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

2. Instructions for Certification - Lower Tier Participants:

(Applicable to all subcontracts, purchase orders and other lower tier transactions requiring prior FHWA approval or estimated to cost \$25,000 or more - 2 CFR Parts 180 and 1200)

a. By signing and submitting this proposal, the prospective lower tier is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR

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Parts 180 and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

* * * * *

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-- Lower Tier Participants:

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency.

2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

* * * * *

XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts which exceed \$100,000 (49 CFR 20).

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

3. The prospective participant also agrees by submitting its bid or proposal that the participant shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such recipients shall certify and disclose accordingly.

ATTACHMENT A - EMPLOYMENT AND MATERIALS PREFERENCE FOR APPALACHIAN DEVELOPMENT HIGHWAY SYSTEM OR APPALACHIAN LOCAL ACCESS ROAD CONTRACTS

This provision is applicable to all Federal-aid projects funded under the Appalachian Regional Development Act of 1965.

1. During the performance of this contract, the contractor undertaking to do work which is, or reasonably may be, done as on-site work, shall give preference to qualified persons who regularly reside in the labor area as designated by the DOL wherein the contract work is situated, or the subregion, or the Appalachian counties of the State wherein the contract work is situated, except:

a. To the extent that qualified persons regularly residing in the area are not available.

b. For the reasonable needs of the contractor to employ supervisory or specially experienced personnel necessary to assure an efficient execution of the contract work.

c. For the obligation of the contractor to offer employment to present or former employees as the result of a lawful collective bargaining contract, provided that the number of nonresident persons employed under this subparagraph (1c) shall not exceed 20 percent of the total number of employees employed by the contractor on the contract work, except as provided in subparagraph (4) below.

2. The contractor shall place a job order with the State Employment Service indicating (a) the classifications of the laborers, mechanics and other employees required to perform the contract work, (b) the number of employees required in each classification, (c) the date on which the participant estimates such employees will be required, and (d) any other pertinent information required by the State Employment Service to complete the job order form. The job order may be placed with the State Employment Service in writing or by telephone. If during the course of the contract work, the information submitted by the contractor in the original job order is substantially modified, the participant shall promptly notify the State Employment Service.

3. The contractor shall give full consideration to all qualified job applicants referred to him by the State Employment Service. The contractor is not required to grant employment to any job applicants who, in his opinion, are not qualified to perform the classification of work required.

4. If, within one week following the placing of a job order by the contractor with the State Employment Service, the State Employment Service is unable to refer any qualified job applicants to the contractor, or less than the number requested, the State Employment Service will forward a certificate to the contractor indicating the unavailability of applicants. Such certificate shall be made a part of the contractor's permanent project records. Upon receipt of this certificate, the contractor may employ persons who do not normally reside in the labor area to fill positions covered by the certificate, notwithstanding the provisions of subparagraph (1c) above.

5. The provisions of 23 CFR 633.207(e) allow the contracting agency to provide a contractual preference for the use of mineral resource materials native to the Appalachian region.

6. The contractor shall include the provisions of Sections 1 through 4 of this Attachment A in every subcontract for work which is, or reasonably may be, done as on-site work.

WORKER'S COMPENSATION AND LIABILITY INSURANCE

The CONTRACTOR agrees to procure and maintain, until final acceptance by the City of the work covered by this Agreement, insurance of the kinds and in amounts hereinafter provided in insurance companies authorized to do business in the State of New York, covering all operations under this Agreement whether performed by him or subcontractors. Before commencing the work, the CONTRACTOR shall furnish to the COMMISSIONER and to the City of New York a certificate or certificates, in form satisfactory to the COMMISSIONER and to the CITY, showing that he has complied with this requirement, which certificate or certificates, shall provide that the policies shall not be changed or cancelled until thirty (30) days written notice has been given to the COMMISSIONER and to the City of New York. The kinds and amounts of insurance required are as specified in Schedule "A" shown on Pages SA-1 to SA-10, in Volume 3 of 3.

This Agreement shall be void and of no force and effect unless the Contractor shall provide coverage for the benefit of, and keep covered during the life of this agreement, such employees as are required to be covered by the provisions of the Worker's Compensation Law. (State Finance Law Section 142)

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Appendix "A"
STANDARD CLAUSES FOR ALL NEW YORK STATE CONTRACTS

The parties to the attached contract, license, lease, amendment or other agreement of any kind (hereinafter, "the contract" or "this contract") agree to be bound by the following clauses which are hereby made a part of the contract (the word "Contractor" herein refers to any party other than the State, whether a contractor, licensor, licensee, lessor, lessee or any other party):

1. EXECUTORY CLAUSE. In accordance with Section 41 of the State Finance Law, the State shall have no liability under this contract to the Contractor or to anyone else beyond funds appropriated and available for this contract.

2. NON-ASSIGNMENT CLAUSE. In accordance with Section 138 of the State Finance Law, this contract may not be assigned by the Contractor or its right, title or interest therein assigned, transferred, conveyed, sublet or otherwise disposed of without the previous consent, in writing, of the State and any attempts to assign the contract without the State's written consent are null and void. The Contractor may, however, assign its right to receive payment without the State's prior written consent unless this contract concerns Certificates of Participation pursuant to Article 5-A of the State Finance Law.

3. COMPTROLLER'S APPROVAL. In accordance with Section 112 of the State Finance Law (or, if this contract is with the State University or City University of New York, Section 355 or Section 6218 of the Education Law), if this contract exceeds \$15,000 (or the minimum thresholds agreed to by the Office of the State Comptroller for certain S.U.N.Y. and C.U.N.Y. contracts), or if this is an amendment for any amount to a contract which, as so amended, exceeds said statutory amount, or if, by this contract, the State agrees to give something other than money when the value or reasonably estimated value of such consideration exceeds \$10,000, it shall not be valid, effective or binding upon the State until it has been approved by the State Comptroller and filed in his office. Comptroller's approval of contracts let by the Office of General Services is required when such contracts exceed \$30,000 (State Finance Law Section 163.6.a).

4. WORKERS' COMPENSATION BENEFITS. In accordance with Section 142 of the State Finance Law, this contract shall be void and of no force and effect unless the Contractor shall provide and maintain coverage during the life of this contract for the benefit of such employees as are required to be covered by the provisions of the Workers' Compensation Law.

5. NON-DISCRIMINATION REQUIREMENTS. To the extent required by Article 15 of the Executive Law (also known as the Human Rights Law) and all other State and Federal statutory and constitutional non-discrimination provisions, the Contractor will not discriminate against any employee or applicant for employment because of race, creed, color, sex, national origin, sexual orientation, age, disability, genetic predisposition or carrier status, or marital status. Furthermore, in accordance with Section 220-e of the Labor Law, if this is a contract for the construction, alteration or repair of any public building or public work or for the manufacture, sale or distribution of materials, equipment or supplies, and to the extent that this contract shall be performed within the State of New York, Contractor agrees that neither it nor its Subcontractors shall, by reason of race, creed, color, disability, sex or national origin: (a) discriminate in hiring against any New York State citizen who is qualified and available to perform the work; or (b) discriminate against or intimidate any employee hired for the performance of work under this contract. If this is a building service contract as defined in Section 230 of the Labor Law, then, in accordance with Section 239 thereof, Contractor agrees that neither it nor its Subcontractors shall, by reason of race, creed, color, national origin, age, sex or disability: (a) discriminate in hiring against any New York State citizen who is qualified and available to perform the work; or (b) discriminate against or intimidate any employee hired for the performance of work under this contract. Contractor is subject to fines of \$50.00 per person per day for any violation of Section 220-e or Section 239 as well as possible termination of this contract and forfeiture of all moneys due hereunder for a second or subsequent violation.

6. WAGE AND HOURS PROVISIONS. If this is a public work contract covered by Article 8 of the Labor Law or a building service contract covered by Article 9 thereof, neither Contractor's employees nor the employees of its Subcontractors may be required or permitted to work more than the number of hours or days stated in said statutes, except as otherwise provided in the Labor Law and as set forth in prevailing wage and supplement schedules issued by the State Labor Department. Furthermore, Contractor and its Subcontractors must pay at least the prevailing wage rate and pay or provide the prevailing supplements, including the premium rates for overtime pay, as determined by the State Labor Department in accordance with the Labor Law.

7. NON-COLLUSIVE BIDDING REQUIREMENT. In accordance with Section 139-d of the State Finance Law, if this contract was awarded based upon the submission of bids, Contractor warrants, under penalty of perjury, that its bid was arrived at independently and without collusion aimed at restricting competition. Contractor further warrants that at the time Contractor submitted its bid, an authorized and responsible person executed and delivered to the State a non-collusive bidding certification on Contractor's behalf.

Appendix "A" (cont.)

8. INTERNATIONAL BOYCOTT PROHIBITION. In accordance with Section 220-f of the Labor Law and Section 139-h of the State Finance Law, if this contract exceeds \$5,000, the Contractor agrees, as a material condition of the contract, that neither the Contractor nor any substantially owned or affiliated person, firm, partnership or corporation has participated, is participating, or shall participate in an international boycott in violation of the Federal Export Administration Act of 1979 (50 USC App. Sections 2401 et seq.) or regulations thereunder. If such Contractor, or any of the aforesaid affiliates of Contractor, is convicted or is otherwise found to have violated said laws or regulations upon the final determination of the United States Commerce Department or any other appropriate agency of the United States subsequent to the contract's execution, such contract, amendment or modification thereto shall be rendered forfeit and void. The Contractor shall so notify the State Comptroller within five (5) business days of such conviction, determination or disposition of appeal (2 NYCRR 105.4).

9. SET-OFF RIGHTS. The State shall have all of its common law, equitable and statutory rights of setoff. These rights shall include, but not be limited to, the State's option to withhold for the purposes of setoff any moneys due to the Contractor under this contract up to any amounts due and owing to the State with regard to this contract, any other contract with any State department or agency, including any contract for a term commencing prior to the term of this contract, plus any amounts due and owing to the State for any other reason including, without limitation, tax delinquencies, fee delinquencies or monetary penalties relative thereto. The State shall exercise its set-off rights in accordance with normal State practices including, in cases of set-off pursuant to an audit, the finalization of such audit by the State agency, its representatives, or the State Comptroller.

10. RECORDS. The Contractor shall establish and maintain complete and accurate books, records, documents, accounts and other evidence directly pertinent to performance under this contract (hereinafter, collectively "the Records"). The Records must be kept for the balance of the calendar year in which they were made and for six (6) additional years thereafter or three (3) years after final payment, whichever is later. The State Comptroller, the Attorney General and any other person or entity authorized to conduct an examination, as well as the agency or agencies involved in this contract, shall have access to the Records during normal business hours at an office of the Contractor within the State of New York or, if no such office is available, at a mutually agreeable and reasonable venue within the State, for the term specified above for the purposes of inspection, auditing and copying. The State shall take reasonable steps to protect from public disclosure any of the Records which are exempt from disclosure under Section 87 of the Public Officers Law (the "Statute") provided that: (i) the Contractor shall timely inform an appropriate State official, in writing, that said records should not be disclosed; and (ii) said records shall be sufficiently identified; and (iii) designation of said records as exempt under the Statute is reasonable. Nothing contained herein shall diminish, or in any way adversely affect, the State's right to discovery in any pending or future litigation.

11. IDENTIFYING INFORMATION AND PRIVACY NOTIFICATION:**(A) Federal Employer Identification Number And/or Federal Social Security Number.**

All invoices or New York State standard vouchers submitted for payment for the sale of goods or services or the lease of real or personal property to a New York State agency must include the payee's identification number, i.e., the seller's or lessor's identification number. The number is either the payee's Federal employer identification number or Federal social security number, or both such numbers when the payee has both such numbers. Failure to include this number or numbers may delay payment. Where the payee does not have such number or numbers, the payee, on his invoice or New York State standard voucher, must give the reason or reasons why the payee does not have such number or numbers.

(B) Privacy Notification.

(1) The authority to request the above personal information from a seller of goods or services or a lessor of real or personal property, and the authority to maintain such information, is found in Section 5 of the State Tax Law. Disclosure of this information by the seller or lessor to the State is mandatory. The principal purpose for which the information is collected is to enable the State to identify individuals, businesses and others who have been delinquent in filing tax returns or may have understated their tax liabilities and to generally identify persons affected by the taxes administered by the Commissioner of Taxation and Finance. The information will be used for tax administration purposes and for any other purpose authorized by law.

(2) The personal information is requested by the purchasing unit of the agency contracting to purchase the goods or services or lease the real or personal property covered by this contract or lease. The information is maintained in New York State's Central Accounting System by the Director of State Accounts, Office of the State Comptroller, 110 State Street, Albany, New York 12236.

Appendix "A" (cont.)

12. EQUAL EMPLOYMENT OPPORTUNITIES FOR MINORITIES AND WOMEN: In accordance with Section 312 of the Executive Law, if this contract is: (i) a written Agreement or purchase order instrument, providing for a total expenditure in excess of \$25,000.00, whereby a contracting agency is committed to expend or does expend funds in return for labor, services, supplies, equipment, materials or any combination of the foregoing, to be performed for, or rendered or furnished to the contracting agency; or (ii) a written Agreement in excess of \$100,000.00 whereby a contracting agency is committed to expend or does expend funds for the acquisition, construction, demolition, replacement, major repair or renovation of real property and improvements thereon; or (iii) a written Agreement in excess of \$100,000.00 whereby the owner of a State assisted housing project is committed to expend or does expend funds for the acquisition, construction, demolition, replacement, major repair or renovation of real property and improvements thereon for such project, then:

(a) The Contractor will not discriminate against employees or applicants for employment because of race, creed, color, national origin, sex, age, disability or marital status, and will undertake or continue existing programs of affirmative action to ensure that minority group members and women are afforded equal employment opportunities without discrimination. Affirmative action shall mean recruitment, employment, job assignment, promotion, upgrading, demotion, transfer, layoff, or termination and rate of pay or other forms of compensation;

(b) At the request of the contracting agency, the Contractor shall request each employment agency, labor union, or authorized representative of workers with which it has a collective bargaining or other Agreement or understanding, to furnish a written statement that such employment agency, labor union or representative will not discriminate on the basis of race, creed, color, national origin, sex, age, disability or marital status and that such union or representative will affirmatively cooperate in the implementation of the Contractor's obligations herein; and

(c) The Contractor shall state, in all solicitations or advertisements for employees, that, in the performance of the State contract, all qualified applicants will be afforded equal employment opportunities without discrimination because of race, creed, color, national origin, sex, age, disability or marital status.

Contractor will include the provisions of "a", "b" and "c", above, in every subcontract over \$25,000.00 for the construction, demolition, replacement, major repair, renovation, planning or design of real property and improvements thereon (the "Work") except where the Work is for the beneficial use of the Contractor. Section 312 does not apply to: (i) work, goods or services unrelated to this contract; or (ii) employment outside New York State; or (iii) banking services, insurance policies or the sale of securities. The State shall consider compliance by a Contractor or Subcontractor with the requirements of any Federal law concerning equal employment opportunity which effectuates the purpose of this section.

The contracting agency shall determine whether the imposition of the requirements of the provisions hereof duplicate or conflict with any such Federal law and if such duplication or conflict exists, the contracting agency shall waive the applicability of Section 312 to the extent of such duplication or conflict. Contractor will comply with all duly promulgated and lawful rules and regulations of the NYS Department of Economic Development's Division of Minority- and Women-Owned Business Development pertaining hereto.

13. CONFLICTING TERMS. In the event of a conflict between the terms of the contract (including any and all attachments thereto and amendments thereof) and the terms of this subsection, the terms of this subsection shall control.

14. GOVERNING LAW. This contract shall be governed by the laws of the State of New York except where the Federal supremacy clause requires otherwise.

15. LATE PAYMENT. Timeliness of payment and any interest to be paid to Contractor for late payment shall be governed by Article XI-A of the State Finance Law to the extent required by law.

16. NO ARBITRATION. Disputes involving this contract, including the breach or alleged breach thereof, may not be submitted to binding arbitration (except where statutorily authorized) but must, instead, be heard in a court of competent jurisdiction of the State of New York.

17. SERVICE OF PROCESS. In addition to the methods of service allowed by the State Civil Practice Law & Rules ("CPLR"), Contractor hereby consents to service of process upon it by registered or certified mail, return receipt requested. Service hereunder shall be complete upon Contractor's actual receipt of process or upon the State's receipt of the return thereof by the United State Postal Service as refused or undeliverable. Contractor must promptly notify the State, in writing, of each and every change of address to which service of process can be made. Service by the State to the last known address shall be sufficient. Contractor will have thirty (30) calendar days after service hereunder is complete in which to respond.

18. CONTRACT TERMINATION PROVISION. Refer to the City of New York Standard Construction Contract (in Volume 2 of 3), Article 64.

LABOR AND EMPLOYMENT

The provisions of NYS Labor Law, as amended, and referred to in §102-08, *Standard Clauses for All New York State Contracts*, shall be applicable. On contracts financed with Federal-Aid, any provisions of NYS Labor Law that are in conflict with mandatory Federal-Aid construction contract compliance requirements, as contained in 23 CFR 635.117 are superseded. Any provisions of NYS Labor Law that are not in conflict with mandatory Federal-Aid construction contract compliance requirements or the Davis-Bacon Act, but are more restrictive, shall apply.

The Contractor shall directly employ those members of its own organization. Employee leasing and other similar arrangements under which workers are employed by another organization will only be considered under a subcontract approved in accordance with §108-05, *Subletting or Assigning the Contract*.

A. Wages. The Department will provide the Contractor with prevailing wage rate schedules. When both State and Federal wage rate schedules are provided, the Contractor shall pay the higher of the two wages and supplemental (fringe) benefits. If prevailing wage rate schedules are attached, all onsite work shall be paid prevailing wages. The Contractor shall ensure that workers are paid the appropriate wages and supplemental (fringe) benefits. The Contractor shall obtain periodic wage rate schedule updates from the NYS Department of Labor (NYSDOL). Wage rate amendments and supplements are available on the NYSDOL web site at www.labor.state.ny.us. All changes or clarification of labor classification(s) and applicability of prevailing wage rates shall be obtained in writing from the Office of the Director, NYSDOL Bureau of Public Work. The Contractor shall include the cost of changes in wage rate schedules and supplements (fringes) over the contract duration in the contract bid prices.

On-site Contractor or Subcontractor employees shall be paid prevailing wages required under the Davis-Bacon Act. In accordance with 29 CFR 5.2(l), "site of the work" is defined as the physical place or places where the construction called for in the contract will remain when work on it has been completed. Facilities such as fabrication plants, mobile factories, batch plants, borrow pits, etc. are part of the site of the work provided that they are dedicated exclusively to the performance of the contract. Not included in the site of the work are facilities whose continuance in operation are determined wholly without regard to a particular contract. Such permanent, previously established facilities are not a part of the "site of the work," even where the operations for a period of time may be dedicated exclusively to the performance of a contract.

In accordance with NYS Labor Law, Sections 220 and 220-d:

1. No laborer, worker, or mechanic, in the employ of the Contractor, Subcontractor or other person doing or contracting to do the whole or any part of the work contemplated by the contract shall be permitted or required to work more than eight (8) hours in any one calendar day or more than five days in any one week, except in the emergencies set forth in the Labor Law.
2. The wages paid for a legal day's work shall be not less than the prevailing rate of wages as defined by law.
3. The minimum hourly rate of wages to be paid shall not be less than that stated in the contract documents, and any redetermination of the prevailing rate of wages after the contract is approved shall be deemed to be incorporated herein by reference as of the effective date of redetermination and shall form a part of these contract documents.
4. The contract may be forfeited and no sum paid for any work done thereunder on a second conviction for willfully paying less than:
 - a. the stipulated wage scale as provided in Labor Law, §220 (3), as amended, or;
 - b. the stipulated minimum hourly wage scale as provided in Labor Law, §220-d, as amended.

B. Overtime Dispensation. All bidders, in submitting their bids, should base their bids and work progression on the assumption that Overtime Dispensation pursuant to Article 8 of the New York State Labor Law, for any workers, laborers, and mechanics to work more than 8 hours in any one calendar day or more than 5 days in any one week will not be granted for any operation for the contract duration. Regardless of approval or disapproval of overtime by the NYSDOL, no adjustment will be made in any bid prices.

ATTACHMENT "B"

Subsequent to award, where the contract proposal has imposed specific scheduling and/or phasing requirements or where it is determined by the Department to be in the best interest of the public, the Department may process, for approval by the NYSDOL, requests for overtime dispensation on certain specific operations

The Contractor shall submit requests for overtime dispensation to the Department on Form PW- 30, Application for Dispensation for Hours, which will be provided by the Engineer upon request. The Department will review applications for overtime dispensation submitted by the Contractor associated with contracts subject to (A+B) Bidding, Incentive/Disincentive (I/D) or Lane Rental work favorably, but the application should not request more than 60 hours per week. The 60 hours per week may be either 6 - 10 hour days or 5 - 12 hour days. Overtime dispensations will be supported by the Department to advance Department goals and priorities, subject to specific circumstances and conditions associated with each contract.

The Department cannot guarantee that the NYSDOL will grant dispensation from restrictions pursuant to the provisions of Article 8 of the State Labor Law, however with the Department's certification, it is anticipated that they will act favorably, provided that the Contractor is in compliance with Labor Law requirements at the time of application.

C. Payrolls. The Contractor shall furnish the Engineer, each week, a certified payroll and statement of compliance with respect to the wages paid each of its employees, (including apprentices, trainees, watch persons and guards) and a certified payroll from each Subcontractor engaged on work during the preceding weekly payroll period.

Certified payrolls shall contain work class, hours worked, wage rate, payroll taxes and withholdings. Certified payrolls shall be annotated by race and gender, and shall be submitted on Form WH-347 or Form HC-231-1 for Federal-Aid contracts, and on HC-231-1 for non Federal-Aid contracts. At the Contractor's option, computer printed payroll records, which supply the required data and certifications may be used.

D. Training. An apprentice is defined as an individual who is enrolled in an apprenticeship training program that is registered with the NYS Department of Labor. A trainee is defined as an individual who is enrolled in an On-the-Job Training (OJT) program that is approved by the Federal Highway Administration (FHWA).

A number of sources to obtain training for apprentices/trainees are available. These include:

- A NYSDOL-approved apprenticeship program sponsored by a union or a temporary project level agreement with a union which has a NYSDOL approved apprenticeship program.
- A NYSDOL-approved apprenticeship program sponsored by a contractor.
- A NYSDOL-approved apprenticeship program sponsored by a contractor signatory with an apprenticeship sponsor consortium for certain services.
- An FHWA-approved OJT program (where applicable).

Approved OJT Programs are currently limited to apprenticeable occupations as determined by NYSDOL or USDOL. A list of approved OJT programs can be found in the On-the-Job Training and Apprenticeship Program Construction Catalogue which is available through the Department's Office of Equal Opportunity Development and Compliance.

Training under Training Special Provisions, if required, will be shown in the contract documents. In order to fulfill training requirements required under Training Special Provisions and/or §102-11 *Equal Employment Opportunity Requirements*, training should begin as early as possible during a construction contract. The Department recommends that all bidders have an approved apprenticeship or OJT program prior to bidding.

The Contractor shall furnish the apprentice/trainee a copy of the program to be followed in providing the training. The Contractor shall provide each apprentice/trainee with a certification showing the type and length of training satisfactorily completed.

ATTACHMENT "B"

When training is required under Training Special Provisions and/or §102-11 *Equal Employment Opportunity Requirements*, the Contractor shall designate to the Engineer, at the preconstruction meeting, a person (or persons) from its existing workforce as the Trainer and Training Coordinator for any apprentice(s)/ trainee(s).

The Trainer shall:

1. Be located on the contract site generally on a daily basis; and
2. Be responsible for the day-to-day supervision and training of persons on the contract; and
3. Be responsible for the preparation and submission of a monthly training progress report, after consultation with designated apprentices/trainees.

The Training Coordinator shall:

1. Be knowledgeable about the contract and the Apprenticeship/OJT programs to be used; and
2. Be responsible for ensuring on-the-job orientation of apprentice/trainees; and
3. Be responsible for ensuring meaningful and effective training for the duration of training.

E. Public Notices. Before commencing any work on the site, the Contractor shall provide a satisfactory weather resistant surface, and post, in a location accessible to all workers, a copy of the NYSDOL schedules of prevailing wages and supplements for this contract, a copy of all redeterminations of such schedules for the contract, the Workers' Compensation Law notice, required safety notices, and all other notices required by law to be posted at the site. The Contractor shall maintain such notices in a legible manner and shall replace any notice or schedule which is damaged, defaced, illegible or removed for any reason. The Notices shall be maintained until all work on the site is complete.

F. Federal-Aid Requirements. No procedures or requirement shall be imposed by any state which will operate to discriminate against the employment of labor from any other state, possession or territory of the United States, in the construction of a Federal-Aid project. The selection of labor to be employed by the Contractor on any Federal-Aid project shall be of its choosing.

The Contractor shall not use convict labor unless performed by convicts who are on parole, supervised release, or probation for construction, maintenance or any other purpose at the site or within the contract limits of any Federal-Aid highway construction project from the time of contract award or the start of work on force account until final acceptance of the work by the Department.

NON-ASSIGNMENT OF AGREEMENT

In accordance with Section 138 of the State Finance Law, the Contractor agrees not to assign, transfer, convey, sublet or otherwise dispose of this agreement or any part thereof, or of its right, title or interest therein or its power to execute such agreement to any person, company or corporation without the previous consent in writing of the City and of the Commissioner of the Department of Design and Construction and any attempts to assign the agreement without the City's written consent are null and void.

No further Text on This Page

BID DEPOSIT

Accompanying this proposal is a bid bond, certified check or bank cashier's check for the specified amount of deposit required. In the event this proposal is accepted by the Department of Transportation and the undersigned shall fail to execute the contract and in all respects comply with the provisions of Section 38 of the Highway Law, as amended, or where applicable, Section 30 of the Canal Law, as amended, the moneys represented by such bid bond, certified check or Bank cashier's check shall be regarded as liquidated damages and shall be forfeited and become the property of the State of New York; otherwise to be returned to the depositor in accordance with the provisions of said Section 38 of the Highway Law, as amended, or where applicable with Section 30 of the Canal Law, as amended.

On acceptance of this proposal for said work the undersigned does or do hereby bind herself/himself or itself/themselves to enter into written contract, within ten days of date of notice of award, with the said Department of Transportation, and comply in all respects with § 38(6) of the Highway Law, as amended, or where applicable with §30 (7) of the Canal Law, as amended, in relation to security for the faithful performance of the terms of said contract.

NON-COLLUSIVE BIDDING CERTIFICATIONS

REQUIRED BY SECTION 139-D, STATE FINANCE LAW and
SECTION 103-D OF GENERAL MUNICIPAL LAW

"Section 139-d, SFL and Section 103-d, GML, 'Statement of non-collusion in bids to the state.'

1. Every bid hereafter made to the state or any public department agency or official thereof, where competitive bidding is required by statute, rule or regulation, for work or services performed or to be performed or goods sold or to be sold, shall contain the following statement subscribed by the bidder and affirmed by such bidder as true under the penalties of perjury:

Non-collusive bidding certification.

(a) By submission of this bid, each bidder and each person signing on behalf of any bidder certifies, and in the case of joint bid, each party thereto certifies as to its own organization, under penalty of perjury, that to the best of his knowledge and belief:

(1) The prices of this bid have been arrived at independently, without collusion, consultation, communication, or agreement, for the purposes of restricting competition, as to any matter relating to such prices with any other Bidder or with any competitor;

(2) Unless otherwise required by law, the prices which have been quoted in this bid have not been knowingly disclosed by the Bidder and will not knowingly be disclosed by the Bidder prior to opening, directly or indirectly, to any other Bidder or to any competitor; and

(3) No attempt has been made or will be made by the Bidder to induce any other person, partnership or corporation to submit or not to submit a bid for the purpose of restricting competition.

(b) A bid shall not be considered for award nor shall any award be made where (a)(1)(2)(3) above have not been complied with; provided however, that if in any case the bidder cannot make the foregoing certification, the bidder shall so state and shall furnish with the bid a signed statement which sets forth in detail the reasons therefore. Where (a)(1)(2) and (3) above have not been complied with, the bid shall not be considered for award nor shall any award be made unless the head of the purchasing unit of the state, public department or agency to which the bid is made, or his designee, determines that such disclosure was not for the purpose of restricting competition.

The fact that a bidder (a) has published price lists, rates, or tariffs covering items being procured, (b) has informed prospective customers of proposed or pending publication of new or revised price lists for such items or (c) has sold the same items to other customers at the same prices being bid, does not constitute, without more, a disclosure within the meaning of subparagraph 1(a).

2. Any bid hereafter made to the state or any public department, agency or official thereof by a corporate bidder for work or services performed or to be performed or goods sold or to be sold, where competitive bidding is required by statute, rule or regulation, and where such bid contains the certification referred to in subdivision one of this section, shall be deemed to have been authorized by the board of directors of the bidder and such authorization shall be deemed to include the signing and submission of the bid and the inclusion therein of the certificates as to non collusion as the act and deed of the corporation."

(A)2

"By submission of this bid, the bidder does hereby tender to the Owner this sworn statement pursuant to Section 1128 of Title 23, U. S. Code-Highways and does hereby certify, in conformance with said Section 112 of Title 23, U. S. Code-Highways that the said Contractor has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in connection with the above contract."

NON COLLUSIVE BIDDING CERTIFICATION (49 CFR, 29)

The Contractor to whom the above identified contract is to be awarded does hereby tender to the New York State Department of Transportation this sworn statement pursuant to Section 112(c) of Title 23 U.S. Code *Highway* and does hereby certify, in conformance with said 23 USC 112(c) that the said Contractor has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in connection with the above identified contract.

The signatory to this proposal, being duly sworn, certifies that, **EXCEPT AS NOTED BELOW**, its company and any person associated therewith in then capacity of owner, Partner, director, officer, or major stockholder (five percent or more ownership):

- 1) is not currently suspension, debarment, voluntary exclusion, or determination of ineligibility by any federal agency;
- 2) has not been suspended, debarred, voluntarily excluded or determined ineligible by any federal agency within that past three years;
- 3) does not have a proposed debarment pending; and
- 4) has not been indicted, convicted, or had a civil judgment rendered against it by a court of competent Jurisdiction in any matter involving fraud or official misconduct within the past three years.

EXCEPTIONS – List any relevant information, attaching additional sheets if necessary. (Exceptions will not necessarily result in disapproval, but will be considered in determining responsibility. For any exception noted, indicate below to whom it applies, the initiating agency, and dates of actions. Providing false information may result in criminal prosecution or administrative sanctions.)

Lobbying Activity Certification [For Federal-Aid Contracts Only]

The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying", in accordance with its instructions. (See Exhibit 1 annexed hereto)

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, Title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

The prospective participant also agrees by submitting his or her bid or proposal that he or she shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such subrecipients shall certify and disclose accordingly.

CONTRACTOR MUST COMPLETE THE FORM BELOW

OFFERER DISCLOSURE OF PRIOR NON-RESPONSIBILITY DETERMINATIONS

1. Has any Governmental Entity made a finding of non-responsibility regarding the individual or entity seeking to enter into the Procurement Contract in the previous four years? (Please circle):

No Yes

If yes, please answer questions 2-4. If no, skip to question 5.

2. Was the basis for the finding of non-responsibility due to a violation of State Finance Law §139-j (Please circle):

No Yes

3. Was the basis for the finding of non-responsibility due to the intentional provision of false or incomplete information to a Governmental Entity? (Please circle):

No Yes

4. If you answered yes to any of the above questions, please provide details regarding the finding of non-responsibility below.

Governmental Entity: _____

Date of Finding of Non-responsibility: _____

Basis of Finding of Non-Responsibility: _____

(Add additional pages as necessary)

5. Has any Governmental Entity or other governmental agency terminated or withheld a Procurement Contract with the individual or entity seeking to enter into the Procurement Contract due to the intentional provision of false or incomplete information? (Please circle):

No Yes

6. If yes, please provide details below.

Governmental Entity: _____

Date of Termination or Withholding of Contract: _____

Basis of Termination or Withholding: _____

(Add additional pages as necessary)

NON COLLUSIVE BIDDING

BY SIGNING ONE OF THESE CERTIFICATIONS, THE CONTRACTOR CERTIFIES THAT HE UNDERSTANDS AND AGREES TO BE BOUND BY THE PROVISIONS OF THE FOLLOWING LAWS:

- 1. NEW YORK STATE FINANCE LAW, ARTICLE 9, SECTION 139-d
- 2. TITLE 49, CFR, PART 29
- 3. TITLE 23, U.S. CONE-HIGHWAYS, SECTION 112

THE CONTRACTOR SHOULD CHOOSE THE APPROPRIATE NOTARIZATION WHICH CORRESPONDS TO THE TYPE OF COMPANY (SOLE PROPRIETORSHIP, PARTNERSHIP, OR CORPORATION) THAT HE/SHE REPRESENTS OR IS AFFILIATED WITH. ALL BIDDERS SHOULD FILL OUT THE APPROPRIATE SECTION OF THE BIDDER INFORMATION SHEET.

BY EXECUTING THIS PROPOSAL, THE CONTRACTOR AGREES TO:

- 1. Perform all work listed in accordance with the Contract Documents at the unit prices bid; subject to the Changed conditions provisions if applicable;
- 2. All the terms and conditions of the non-collusive bidding certifications required by §139-d of the State Finance Law, and Section 112, Title 23, U.S. Code;
- 3. Certification of Specialty Items category selected, if contained in this proposal;
- 4. Certification of any other clauses required by this proposal and contained herein;
- 5. Certification, under penalty of perjury, as to the current history regarding suspensions, debarments, voluntary exclusions, determinations of ineligibility, indictments, convictions, or civil judgments required by 49 CFR, Part 29.
- 6. Contractor affirms that all information provided to the Department with respect to the requirements contained in State Finance Law §139j and §139k is complete, true and accurate.

Dated: _____, 20_____

(Legal Name of Person, Corporation, or Firm
Which is Submitting Bid or Proposal)

BY: _____
(Signature of Person Representing Above)

AS: _____
(Official Title of Signator in Above Firm)

ATTACHMENT "B"

(Acknowledgment by Individual Contractor, if a Corporation)

STATE OF NEW YORK)
) SS:
COUNTY OF _____)

On this _____ day of _____, 20 _____, before me personally came _____, to me known and known to me to be the person who executed the above instrument, who being duly sworn by me, did depose and say that he/she resides at _____, and that he/she is the _____ of the corporation described in and which executed the above instrument, and that he/she signed his/her name thereto on behave of said Corporation by order of the Board of Directors of said Corporation.

Notary Public

(Acknowledgment by Co-Partnership Contractor)

STATE OF NEW YORK)
) SS:
COUNTY OF _____)

On this _____ day of _____, 20 _____, before me personally came _____, to me known and known to me to be the person described in and who executed the above instrument, who, being duly sworn by me, did for himself/herself depose and say that he/she is a member of the firm of _____, consisting of himself/herself and _____, and that he/she executed the foregoing instrument in the firm name of _____ and that he/she had authority to sign same, and did duly acknowledge to me that he/she executed same as the act and deed of said firm of _____ for the uses and purposes mentioned therein.

Notary Public

(Acknowledgment by Individual Contractor)

STATE OF NEW YORK)
) SS:
COUNTY OF _____)

On this _____ day of _____, 20 _____, before me personally came _____, to me known and known to me to be described in and who executed the foregoing instrument, and that he/she acknowledged that he/she executed the same.

Notary Public

NON-COLLUSIVE BIDDING CERTIFICATION BIDDER INFORMATION

Bidder to provide information listed below:

Bidder Address: _____
Street or P.O. Box No.

City

State Zip Code

Federal Identification No.: _____

Name of Contact Person: _____

Phone No. of Contact Person: (____) _____

If Bidder is a Corporation:

President's Name & Address:

Secretary's Name & Address:

Treasurer's Name & Address:

If Bidder is a Partnership:

Partner's Name & Address:

Partner's Name & Address:

If Bidder is a Sole Proprietorship:

Owner's Name & Address:

MA 2A (03-09-33)
NYCDOT

**NEW YORK CITY DEPARTMENT OF DESIGN AND CONSTRUCTION
DEBARMENT HISTORY CERTIFICATION
CONTRACT NO. _____**

I, _____, being duly sworn, certifies that,
(PRESIDENT OF AUTHORIZED OFFICIAL)
except as noted herein, _____ or any person
(THE COMPANY)

associated therewith in the capacity of owner, partner, director, officer, principal investigator, project director, manager, auditor, or any position involving the administration of Federally Aided Projects:

is not currently under suspension, debarment, voluntary exclusion, or determination of ineligibility by any governmental entity;

has not been suspended, debarred, voluntarily excluded or determined ineligible by any governmental entity within the past three (3) years;

does not have a proposed debarment pending; and

has not been indicted, convicted, or had a civil judgement rendered against it by a court of competent jurisdiction in any matter involving fraud or official misconduct within the past three (3) years.

(INSERT EXCEPTIONS HERE. ATTACH SUPPLEMENTAL SHEETS AS NECESSARY)

Exceptions will not necessarily result in denial of approval, but will be considered in determining responsibility. For any exception noted herein, indicate to whom it applies, initiating governmental entity and dates of action. A material false statement willfully or fraudulently made in connection with this certification may result in rendering the company not responsible for the project and any future projects, and in addition may subject the person making the false statement to criminal charges.

(PRINT NAME)

(SIGNATURE)

(TITLE)

(DATE)

Subscribed and sworn to before me this _____ day of _____, 20_____.

MA 2A (03-09-33)
NYCDOT

NEW YORK CITY DEPARTMENT OF DESIGN AND CONSTRUCTION
DEBARMENT HISTORY CERTIFICATION
CONTRACT NO. _____

GOVERNMENTAL ENTITY:

Governmental Entities shall include any/all city, state and federal public agencies, quasi-public agencies, authorities and corporations, public development corporations, and local development corporations.

COMPANY:

Companies shall include the persons or affiliates for which a suspension or debarment decision has been rendered, and shall include all subsidiaries, divisions and other organizational elements thereof unless said decision is limited by its terms to one or more specifically identified individuals or organizational elements or to specific types of transactions.

PERSON:

Persons shall include any individual, corporation, partnership, association or legal entity however organized, including any subsidiary of the foregoing.

SUBSIDIARY:

Subsidiaries shall include any corporation, partnership, association or legal entity however organized, which is owned or controlled by another person.

AFFILIATE:

Persons are affiliates of one another if, directly or indirectly, one owns, controls, or has the power to control the other, or a third person owns, controls, or has the power to control both.

CONTROL:

Control shall be taken to mean the power to exercise, either directly or indirectly, a controlling influence over management, policies or activities of a person, whether through ownership of voting securities, through one or more intermediary persons, or otherwise. Indications of control shall include, but not be limited to: a person who owns or has the power to vote more than 25 percent of the voting securities of another person, or 25 percent of the total equity if the other person has no voting securities; interlocking management or ownership; identity of interests among family members; shared facilities and equipment; common use of employees; and establishment, following debarment, suspension or other exclusion decision, of any organization or entity which is to operate in the same business or activity and is to have substantially the same management, ownership or principal employees as the debarred, suspended or excluded person.

APPENDIX C

LOBBYING ACTIVITY CERTIFICATION
[FOR FEDERAL-AID CONTRACTS ONLY]

The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying", in accordance with its instructions. (See Exhibit 1 annexed hereto)

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, Title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

The prospective participant also agrees by submitting his or her bid or proposal that he or she shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such subrecipients shall certify and disclose accordingly.

APPENDIX C

INSTRUCTIONS FOR COMPLETION OF SF-LLL DISCLOSURE OF LOBBYING ACTIVITIES

This disclosure form shall be completed by the reporting entity, whether subawardee or prime Federal recipient, at the initiation or receipt of a covered Federal action, or a material change to a previous filing, pursuant to title 31 U.S.C. section 1352. The filing of a form is required for each payment or agreement to make payment to any lobbying entity for influencing or attempting to influence an officer or employee of any agency, Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with a covered Federal action. Complete all items that apply for both the initial filing and material change report. Refer to the implementing guidance published by the Office of Management and Budget for additional information.

1. Identify the type of covered Federal action for which lobbying activity is and/or has been secured to influence the outcome of a covered Federal action.
2. Identify the status of the covered Federal action.
3. Identify the appropriate classification of this report. If this is a follow-up report caused by a material change to the information previously reported, enter the year and quarter in which the change occurred. Enter the date of the last previously submitted report by this reporting entity for this covered Federal action.
4. Enter the full name, address, city, state and zip code of the reporting entity. Include Congressional District, if known. Check the appropriate classification of the reporting entity that designates if it is, or expects to be, a prime or subaward recipient. Identify the tier of the subawardee, e.g., the first subawardee of the prime is the 1st tier. Subawards include but are not limited to subcontracts, subgrants, and contract awards under grants.
5. If the organization filing the report in item 4 checks "Subawardee", then enter the full name, address, city, State and zip code of the prime Federal recipient. Include Congressional District, if known.
6. Enter the name of the Federal agency making the award or loan commitment. Include at least one organizational level below agency name, if known. For example, Department of Transportation, United States Coast Guard.
7. Enter the Federal program name or description for the covered Federal action (item 1). If known, enter the full Catalog of Federal Domestic Assistance (CFDA) number for grants, cooperative agreements, loans, and loan commitments.
8. Enter the most appropriate Federal identifying number available for the Federal action identified in item 1 (e.g., Request for Proposal (RFP) number; Invitation for Bid (IFB) number; grant announcement number; the contract, grant, or loan award number; the application/proposal control number assigned by the Federal agency). Include prefixes, e.g., "RFP-DE-90-001".
9. For a covered Federal action where there has been an award or loan commitment by the Federal agency, enter the Federal amount of the award/loan commitment for the prime entity identified in item 4 or 5.
10. (a) Enter the full name, address, city, state and zip code for the lobbying registrant under the Lobbying Disclosure Act of 1995 engaged by the reporting entity identified in item 4 to influence the Federal covered action.
 (b) Enter the full names of the individual(s) performing services, and include full address if different from 10(a). Enter Last Name, First Name, and Middle Initial (MI).
11. The certifying official shall sign and date the form; print his/her name, title, and telephone number.

According to the Paperwork Reduction Act, as amended, no persons are required to respond to a collection of information unless it displays a valid OMB Control Number. The valid OMB Control Number for this information collection is OMB No. 0348-0046. Public reporting burden for this collection of information is estimated to average 10 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Management and Budget, Paperwork Reduction Project (0348-0046), Washington D.C. 20503.

APPENDIX C

DISCLOSURE OF LOBBYING ACTIVITIES

Complete this form to disclose lobbying activities pursuant to 31 U.S.C. 1352
(See reverse for public burden disclosure.)

Approved by OMB
0348-0046

1. Type of Federal Action: <input type="checkbox"/> a. contract <input type="checkbox"/> b. grant <input type="checkbox"/> c. cooperative agreement <input type="checkbox"/> d. loan <input type="checkbox"/> e. loan guarantee <input type="checkbox"/> f. loan insurance	2. Status of Federal Action: <input type="checkbox"/> a. bid/offer/application <input type="checkbox"/> b. initial award <input type="checkbox"/> c. post-award	3. Report Type: <input type="checkbox"/> a. initial filing <input type="checkbox"/> b. material change For Material Change Only: year _____ quarter _____ date of last report _____
4. Name and Address of Reporting Entity: <input type="checkbox"/> Prime <input type="checkbox"/> Subawardee Tier _____, if known: Congressional District, if known: 4c	5. If Reporting Entity in No. 4 is a Subawardee, Enter Name and Address of Prime: Congressional District, if known:	
6. Federal Department/Agency:	7. Federal Program Name/Description: CFDA Number, if applicable: _____	
8. Federal Action Number, if known:	9. Award Amount, if known: \$ _____	
10. a. Name and Address of Lobbying Registrant (if individual, last name, first name, MI):	b. Individuals Performing Services (including address if different from No. 10a) (last name, first name, MI):	
11. Information requested through this form is authorized by title 31 U.S.C. section 1352. This disclosure of lobbying activities is a material representation of fact upon which reliance was placed by the tier above when this transaction was made or entered into. This disclosure is required pursuant to 31 U.S.C. 1352. This information will be available for public inspection. Any person who fails to file the required disclosure shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.	Signature: _____ Print Name: _____ Title: _____ Telephone No.: _____ Date: _____	
Federal Use Only:		Authorized for Local Reproduction Standard Form LLL (Rev. 7-97)

DISCLOSURE OF LOBBYING ACTIVITIES
CONTINUATION SHEET

ATTACHMENT "B"

APPROVED BY OMB
0346-0046

REPORTING ENTITY: _____ PAGE _____ OF _____

Authorized for Local Reproduction - Standard form LLL

**NOTICE TO ALL PROSPECTIVE BIDDERS
FEDERAL-AID CONTRACTS**

ASSURANCE OF NON-DISCRIMINATION

The New York State Department of Transportation, in accordance with Title VI of the Civil Rights Act of 1964, 78 Stat. 252, 42 U.S.C. 2000d to 2000d-4 and Title 49, Code of Federal Regulations, Department of Transportation, Subtitle A, Office of the Secretary, Part 21, Nondiscrimination in Federally-assisted programs of the Department of Transportation and Title 23 Code of Federal Regulations, Part 200, Title VI Program and Related Statutes, as amended, issued pursuant to such Acts, hereby notifies all bidders that it will affirmatively ensure that in any contract entered into pursuant to this advertisement, disadvantaged business enterprises will be afforded full opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, national origin, sex, age, disability/handicap and income status in consideration for an award.

1/17/79
5/1/79
6/3/81
5/9/85

L8/3/2010

SUBCONTRACTS

The attention of the Contractor is directed to the requirement that the standard contract clauses, as set forth in the Proposal and in the Labor Compliance Manual (Federal-aid Construction, Appendix D-2, 3) must be physically incorporated in all subcontracts.

Copies of the Labor Compliance Manual referred to above may be examined in the office of the Regional Director.

Rev. 2/27/70
4/20/72
8/30/73
12/7/76

APPENDIX 1

To be included in all contracts

During the performance of this contract, the contractor, for itself, its assignees and successors in interest (hereinafter referred to as the "contractor") agrees as follows:

- (1) **Compliance with Regulations:** The contractor shall comply with the Regulation relative to nondiscrimination in Federally assisted programs of the Department of Transportation of the United States, Title 49, Code of Federal Regulations, Part 21, and the Federal Highway Administration (hereinafter "FHWA") Title 23, Code of Federal Regulations, Part 200 as they may be amended from time to time, (hereinafter referred to as the Regulations), which are herein incorporated by reference and made a part of this contract.
- (2) **Nondiscrimination:** The Contractor, with regard to the work performed by it during the contract, shall not discriminate on the grounds of race, religion, age, color, sex or national origin, sex, age, and disability/handicap in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor shall not participate either directly or indirectly in the discrimination prohibited by 49 CFR, section 21.5 of the Regulations, including employment practices when the contract covers a program set forth in Appendix B of the Regulations.
- (3) **Solicitations for Subcontractors, Including Procurements of Materials and Equipment:** In all solicitations either by competitive bidding or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials or leases of equipment, each potential subcontractor or supplier shall be notified by the contractor of the contractor's obligations under this contract and the Regulations relative to nondiscrimination on the grounds of race, color, or national origin, sex, age, and disability/handicap.
- (4) **Information and Reports:** The contractor shall provide all information and reports required by the Regulations or directives issued pursuant thereto, and shall permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by NYSDOT or the FHWA to be pertinent to ascertain compliance with such Regulations, orders and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish this information the contractor shall so certify to NYSDOT's Office of Civil Rights or FHWA, as appropriate, and shall set forth what efforts it has made to obtain the information.
- (5) **Sanctions for Noncompliance:** In the event of the contractor's noncompliance with the nondiscrimination provisions of this contract, NYSDOT shall impose such contract sanctions as it or the FHWA may determine to be appropriate, including, but not limited to:
 - a) Withholding of payments to the contractor under the contract until the contractor complies; and/or
 - b) Cancellation, termination or suspension of the contract, in whole or in part.
- (6) **Incorporation of Provisions:** The contractor shall include the provisions of paragraphs (1) through (6) in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Regulations, or directives issued pursuant thereto.

The contractor shall take such action with respect to any subcontract or procurement as NYSDOT or the FHWA may direct as a means of enforcing such provisions including sanctions for non-compliance: Provided, however, that, in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or supplier as a result of such direction, the contractor may request NYSDOT to enter into such litigation to protect the interests of NYSDOT, and, in addition, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

APPENDIX 2

*To be included in all written solicitations,
requests for proposals
or invitations for bid*

The New York State Department of Transportation, in accordance with Title VI of the Civil Rights Act of 1964, 78 Stat. 252, 42 U.S.C 2000d to 2000d-4 and Title 49, Code of Federal Regulations, Department of Transportation, Subtitle A, Office the Secretary, Part 21, Nondiscrimination in Federally-assisted programs of the Department of Transportation and Title 23 Code of Federal Regulations, Part 200, Title VI Program and Related Statutes, as amended, issued pursuant to such Act, hereby notifies all who respond to a written Department solicitation, request for proposal or invitation for bid that it will affirmatively insure that in any contact entered into pursuant to this advertisement, disadvantaged business enterprises will be afforded full opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, national origin, sex, age, disability/handicap and income status in consideration for an award.

APPENDIX 3

- To be included in deeds, leases, permits,
licenses, U&O Agreements, or similar agreements that provide for:*
- (a) the subsequent transfer of property that the Department acquired or improved; or
(b) the construction, use of, or access to space on, over or under such real property;
where the property will continue to be used for transportation purposes*

The (grantee, licensee, lessee, permittee, etc., as appropriate) for himself, his heirs; personal representatives, successors in interest, and assigns, as a part of the consideration hereof, does hereby covenant and agree as a covenant running with the land, that in the event improvements are made, over or under such land and the furnishing of services thereon and/or facilities are constructed, maintained, or otherwise operated on the said property described in this (deed, license, lease, permit, etc.) for a purpose for which a New York State Transportation program or activity is extended or for another purpose involving the provision of similar services or benefits, the (grantee, licensee, lessee, permittee, etc.) shall construct such improvements and maintain and operate such facilities and services such that: (1) no person on the ground of race, color, or national origin, sex, age, and disability/handicap, shall be excluded from participation in, denied the benefits of, or be otherwise subjected to discrimination in the use of said facilities, (2) that in the construction of any improvements on, over or under such land and the furnishing of services thereon, no person on the ground of, race, color, or national origin, sex, age, and disability/handicap, shall be excluded from participation in, denied the benefits of, or otherwise be subjected to discrimination, (3) that the (grantee, licensee, lessee, permittee, etc.) shall use the premises in compliance with all other requirements imposed by or pursuant to Title 49, Code of Federal Regulations, Department of Transportation, Subtitle A, Office of the Secretary, Part 21, Nondiscrimination in Federally-assisted programs of the Department of Transportation-Effectuation of Title VI of the Civil Rights Act of 1964), Title 23 Code of Federal Regulations, Part 200, Title VI Program and Related Statutes - Implementation and Review Procedures, and as said Regulations may be amended.

Where a Reverter clause necessary to effectuate the purposes of Title VI of the Civil Rights Act of 1964, as amended, is included in a license, lease, permit or other transfer not requiring a deed, the following applies:

That in the event of breach of any of the above nondiscrimination covenants, the New York State Department of Transportation shall have the right to terminate the (license, lease, permit, etc.) and to re-enter and repossess said land and the facilities thereon, and hold the same as if said (license, lease, permit, etc.) had never been made or issued.

Where a deed transferring property interests includes a covenant running with the land, the following applies:

That in the event of breach of any of the above nondiscrimination covenants, The New York State Department of Transportation shall have the right to re-enter said lands and facilities thereon, and the above described lands and facilities shall thereupon revert to and vest in and become the absolute property of the New York State Department of Transportation and its assigns.

APPENDIX 4

*To be included in deeds for
property acquired directly from the United States*

The following clauses shall be included in any and all deeds effecting or recording the transfer of real property, structures or improvements thereon, or interest therein from the United States to the New York State Department of Transportation.

(GRANTING CLAUSE)

NOW, THEREFORE, the Department of Transportation, as authorized by law, and upon the condition that the New York State Department of Transportation will accept title to the lands and maintain the project constructed thereon, in accordance with The Surface Transportation Assistance Act of 1982, the Surface Transportation and Uniform Relocation Assistance Act of 1987, the Intermodal Surface Transportation Efficiency Act of 1991, and/or the Transportation Equity Act of the 21st Century, as well as the Regulations for the Administration of Transportation Programs and the policies and procedures prescribed by the Federal Highway Administration, also in accordance with and in compliance with all requirements imposed by or pursuant to Title 49, Code of Federal Regulations, Department of Transportation, Subtitle A, Office of the Secretary, Part 21, Nondiscrimination in Federally-assisted programs of the Department of Transportation and Title 23 Code of Federal Regulations, Part 200, Title VI Program and Related Statutes (hereinafter referred to as the Regulations) pertaining to and effectuating the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252; 42 U.S.C. 2000d to 2000d-4), does hereby remise, release, quitclaim and convey unto the New York State Department of Transportation all the right, title and interest of the Department of Transportation in and to said, lands described in Exhibit "A" attached hereto and made a part hereof.

(HABENDUM CLAUSE)

TO HAVE AND TO HOLD said lands and interests therein unto the New York State Department of Transportation and its successors forever, subject, however, to the convenient, conditions, restrictions and reservations herein contained as follows, which will remain in effect for the period during which the real property or structures are used for a purpose for which Federal financial assistance is extended or for another purpose involving the provision of similar services or benefits and shall be binding on the New York State Department of Transportation, its successors and assigns.

The New York State Department of Transportation, in consideration of the conveyance of said lands and interests in lands, does hereby covenant and agree as a covenant running with the land for itself, its successors and assigns, that (1) no person shall on the grounds of race, color, or national origin, sex, age, and disability/handicap, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination with regard to any facility located wholly or in part on over or under such lands hereby conveyed, and (2) that the New York State Department of Transportation shall use the lands and interests in lands and interests in lands so conveyed, in compliance with all requirements imposed by or pursuant to Title 49, Code of Federal Regulations, Department of Transportation, Subtitle A, Office of the Secretary, Part 21, Nondiscrimination in Federally-assisted programs of the Department of Transportation-Effectuation of Title VI of the Civil Rights Act of 1964, Title 23 Code of Federal Regulations, Part 200, Title VI Program and Related Statutes - Implementation and Review Procedures, and as said Regulations may be amended.

(REVERTER CLAUSE)

When it is determined by the United States that a Reverter clause is necessary in order to effectuate the purposes of Title VI of the Civil Rights Act of 1964, as amended, the following applies:

That in the event of breach of any of the above-mentioned nondiscrimination conditions, the Department shall have a right to re-enter said lands and facilities on said land, and the above described land and facilities shall thereon revert to and vest in and become the absolute property of the Department of Transportation and its assigns as such interest existed prior to this instruction.

**PROVISIONS RELATING TO THE NEW YORK STATE LABOR LAW,
PREVAILING WAGES, AND THE USE OF CONVICT LABOR AND
MATERIALS ON FEDERAL & STATE CONTRACTS**

GENERAL PROVISIONS. All projects funded with Federal aid and let to contract in New York State shall conform to the provisions of the New York State Labor Law, except that in accordance with the authorization in Article 4, Section 85 of the New York State Highway Law, any provisions of the above referenced Labor Law which are in conflict with the following enumerated mandatory Federal Aid highway construction compliance requirements, as contained in Section 635 of the Code of Federal Regulations, Title 23-Highways, and other Federal legislation, rules, and regulations, as referenced below, are superseded:

CONVICT LABOR. No convict labor, unless performed by convicts who are on parole, supervised release, or probation, shall be employed in construction or used for maintenance or any other purposes at the site or within the limits of any Federal Aid highway construction project from the time of award of the contract or the start of work on force account until final acceptance of the work by the Owner.

SELECTION OF LABOR. No procedures or requirements shall be imposed by any state or municipal subdivision thereof which will operate to discriminate against the employment of labor from any other state, possession, or territory of the United States, in the construction of a Federal Aid project. The selection of labor to be employed by the Contractor on any Federal Aid project shall be of his/her own choosing.

WAGE RATES ON FEDERAL AID PROJECTS. Attention is directed to the statutory provisions governing the prevailing rates of wages for workmen, mechanics, and laborers who are employed on this project. Section 220 of the New York State Labor Law, as amended, requires that the wages paid for a legal day's work shall be not less than the rate of wages plus the supplements prevailing at the time the work is performed, the current schedules of which shall be included in the contract documents. Such schedules may be amended or supplemented from time to time, and such amendments or supplements shall be forwarded to the Contractor.

The Federal Aid Highway Act of 1968 provides for the payment of wages at rates not less than those determined in accordance with the Davis-Bacon Act (40 USC, Section 276-a), the schedule of which shall also be included in the contract documents.

On-site materials suppliers, in addition to all subcontractors, are subject to the provisions of the Davis-Bacon Act. This will not necessarily be construed as causing the on-site material suppliers to be classified as subcontractors as part of the 50% limitation on the subcontracting of this project.

In case of a variance between (1) the schedules of prevailing rates of wages and supplements as determined under Section 220 of the New York State Labor Law, and (2) the schedule of rates of wages as determined pursuant to the Davis-Bacon Act, the Contractor shall accept and use the schedule or schedules that establish the higher rate of wages as the minimum for the workmen who are employed on the project.

CONSTRUCTION BY FEDERAL AGENCIES. When construction on Federal Aid highways is being performed by any Federal agency under its procedures and by Federal contract, the labor standards relating to direct federal contracts shall be applicable.

NON-DISCRIMINATION. Employment shall be provided without regard to race, color, religion, sex, or national origin.

CONVICT-PRODUCED MATERIALS. The use of convict-produced materials on any Federal or Federally-assisted contract must comply with the following requirements:

- a. Materials produced by convict labor may only be incorporated in a Federal Aid highway construction project if such materials have been:
 1. Produced by convicts who are on parole, supervised release, or probation from a prison; or
 2. Produced in a qualified prison facility and the cumulative annual production amount of such materials for use in Federal Aid highway construction does not exceed the amount of such materials produced in such facility for use in Federal Aid highway construction during the 12-month period ending July 1, 1987.
- b. "Qualified prison facility" means any prison facility in which convicts, during the 12-month period ending July 1, 1997, produced materials for use in Federal Aid highway construction projects.
- c. Standard State and Federal Aid contract procedures may be used to assure compliance with the requirements of this paragraph.

FEDERAL WAGE RATES

(NO TEXT ON THIS PAGE)

General Decision Number: NY120003 11/09/2012 NY3

Superseded General Decision Number: NY20100003

State: New York

Construction Types: Building, Heavy, Highway and Residential

Counties: Bronx, Kings, New York, Queens and Richmond
Counties in New York.

BUILDING & RESIDENTIAL CONSTRUCTION PROJECTS (includes single family homes and apartments up to and including 4 stories),
HEAVY AND HIGHWAY CONSTRUCTION PROJECTS

Modification Number	Publication Date
0	01/06/2012
1	01/13/2012
2	02/10/2012
3	02/17/2012
4	03/16/2012
5	03/23/2012
6	04/06/2012
7	05/04/2012
8	05/11/2012
9	05/25/2012
10	06/01/2012
11	06/15/2012
12	06/29/2012
13	07/06/2012
14	07/20/2012
15	08/03/2012
16	09/14/2012
17	10/05/2012
18	10/26/2012
19	11/09/2012

ASBE0012-001 01/02/2012

	Rates	Fringes
Asbestos Workers/Insulator Includes application of all insulating materials, protective coverings, coatings and finishes to all types of mechanical systems.....	\$ 61.08	26.59
HAZARDOUS MATERIAL HANDLER.....	\$ 30.00	9.10

BOIL0005-001 01/01/2012

	Rates	Fringes
BOILERMAKER.....	\$ 47.98	32%+21.75+a

FOOTNOTE:

mhtml:file://W:\Wage Rates\ny3_dvb 11-14-2012.mht

11-14-2012

a. PAID HOLIDAYS: New Year's Day, Thanksgiving Day, Memorial Day, Independence Day, Labor Day and Good Friday, Friday after Thanksgiving, Christmas Eve Day and New Year's Eve

BRNY0001-001 07/01/2011

	Rates	Fringes
BRICKLAYER.....	\$ 51.54	22.19
MASON - STONE.....	\$ 58.86	25.61

BRNY0001-002 06/01/2011

	Rates	Fringes
Pointer, cleaner and caulker.....	\$ 37.55	26.10

BRNY0004-001 01/01/2011

	Rates	Fringes
MARBLE MASON.....	\$ 51.53	25.60

BRNY0007-001 01/01/2011

	Rates	Fringes
TERRAZZO FINISHER.....	\$ 42.86	28.55
TERRAZZO WORKER/SETTER.....	\$ 44.39	28.55

BRNY0020-001 01/01/2011

	Rates	Fringes
MARBLE FINISHER.....	\$ 42.20	24.93

BRNY0024-001 07/01/2012

	Rates	Fringes
BRICKLAYER MARBLE POLISHERS.....	\$ 38.03	20.90

BRNY0052-001 12/05/2011

	Rates	Fringes
Tile Layer.....	\$ 49.64	26.91

BRNY0088-001 12/05/2011

	Rates	Fringes
TILE FINISHER.....	\$ 39.28	23.91

CARP0001-009 07/01/2008

Rates	Fringes
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Carpenters:

Carpenters & Soft floor
layers.....\$ 43.02 35.96

CARP0740-001 07/01/2010

Rates Fringes

MILLWRIGHT.....\$ 46.19 44.93

CARP1456-004 01/01/2011

Rates Fringes

Dock Builder & Piledrivermen
DOCKBUILDERS.....\$ 46.21 38.36

CARP1456-005 01/01/2011

Rates Fringes

Diver Tender.....\$ 41.16 38.46
Diver.....\$ 58.01 38.46

CARP1536-001 10/01/2010

Rates Fringes

Carpenters:

TIMBERMEN.....\$ 42.63 31.32

ELEC0003-001 11/09/2011

Rates Fringes

ELECTRICIAN

Electricians.....\$ 51.00 23.672
Jobbing, and maintenance
and repair work.....\$ 25.30 15.13+a

PAID HOLIDAYS:

a. New Years Day, Martin Luther King, Jr.'s Birthday,
Washington's Birthday, Memorial Day, Independence Day,
Labor Day, Columbus Day, Election Day, Thanksgiving Day,
the day after Thanksgiving Day, and Christmas Day

ELEC1049-001 04/06/2008

QUEENS COUNTY

Rates Fringes

Line Construction (Substation
and Switching structures pipe
type cable installation and
maintenance jobs or projects;
Railroad electrical
distribution/transmission
systems maintenance (when

work is not performed by
railroad employees) Overhead
and Underground
transmission/distribution
line work. Fiber optic,
telephone cable and equipment)

Groundman.....	\$ 24.83	17.91
Heavy Equipment Operator....	\$ 33.10	17.91
Lineman and Cable Splicer...	\$ 41.38	17.91
Tree Trimmer.....	\$ 23.06	9.84

ELEV0001-002 03/17/2012

	Rates	Fringes
ELEVATOR MECHANIC		
Elevator Constructor.....	\$ 55.20	26.105+a+b
Modernization and Repair....	\$ 43.79	25.955+a+b

FOOTNOTE:

a. PAID HOLIDAYS: New Year's Day, Good Friday, President's Day, Memorial Day, Independence Day, Labor Day, Columbus Day, Veteran's Day, Thanksgiving Day, Friday after Thanksgiving, and Christmas Day.

b. PAID VACATION: An employee who has worked less than 5 years shall receive vacation pay credit on the basis of 4% of his hourly rate for all hours worked; an employee who has worked 5 to 15 years shall receive vacation pay credit on the basis of 6% of his hourly rate for all hours worked; an employee who has worked 15 or more years shall receive vacation pay credit on the basis of 8% of his hourly rate for all hours worked.

ENGI0014-001 07/01/2012

	Rates	Fringes
Pavement equipment operator		
Asphalt Plants.....	\$ 51.32	25.88+a
Asphalt roller.....	\$ 60.85	25.88+a
Asphalt spreader.....	\$ 62.51	25.88+a
Power Equipment Operator (HEAVY & HIGHWAY)		
GROUP 1.....	\$ 81.09	25.88
GROUP 10.....	\$ 58.43	25.88
GROUP 11.....	\$ 54.50	25.88
GROUP 12.....	\$ 55.73	25.88
GROUP 13.....	\$ 56.19	25.88
GROUP 14.....	\$ 42.11	25.88
GROUP 15.....	\$ 39.03	25.88
GROUP 2.....	\$ 66.70	25.88
GROUP 3.....	\$ 68.86	25.88
GROUP 4.....	\$ 67.21	25.88
GROUP 5.....	\$ 65.86	25.88
GROUP 6.....	\$ 63.18	25.88
GROUP 7.....	\$ 64.38	25.88
GROUP 8.....	\$ 62.51	25.88
GROUP 9.....	\$ 61.14	25.88

Steel erector		
Compressors, Welding		
Machines.....	\$ 39.86	24.15
Cranes, Hydraulic Cranes,		
2 drum derricks,		
Forklifts, Boom Trucks.....	\$ 67.71	24.15
Three drum derricks.....	\$ 70.50	24.15
Utility Laborer		
Horizontal Boring Rig.....	\$ 56.24	24.15
Off shift compressors.....	\$ 46.38	24.15
Utility Compressors.....	\$ 36.37	24.15

POWER EQUIPMENT OPERATOR CLASSIFICATIONS

GROUP 1: Tower crane

GROUP 2: Backhoes, power shovel, Hydraulic clam shells, moles and machines of a similar type

GROUP 3: Mine hoists and crane, etc. used as mine hoists

GROUP 4: Gradalls, keystones, cranes (with digging buckets), bridge cranes, trenching machines, vermeer cutter and machines of a similar nature

GROUP 5: Piledrivers, derrick boats, tunnel shovels

GROUP 6: All drills, and machines of a similar nature

GROUP 7: Back filling machines, cranes, mucking machines, dual drum pavers

GROUP 8: Mixers (concrete w/loading attachments), concrete pavers, cableways, land derricks, power house (low pressure units), concrete pumps

GROUP 9: Concrete plants, well drilling machines, stone crushers double drum hoist, power house (other than above)

GROUP 10: Concrete mixers

GROUP 11: Elevators

GROUP 12: Concrete breaking machine, Hoists (single drum), load masters, locomotive and dinkies over 10 tons

GROUP 13: Vibratory console

GROUP 14: Compressors (portable 3 or more in battery), tugger machine (caissons), well point pumps, chum drill

GROUP 15: Boilers, (high pressure, compressors (portable, single, or 2 in battery, not over 100' apart), pumps (river cofferdam and welding machines (except where arc is operated by members of local 15) push button machines, all engines irrespective of power (power pac) used to drive auxilliary equipment, air, hydraulic etc.

PREMIUMS ON CRANES (Crawler or Truck):
100' to 149' boom - add .50

150' to 249' boom - add .75
 250' to 349' boom - add 1.00
 350' to 450' boom - add 1.50

Premiums for Cranes on Steel Erection:

100' to 149' boom - add 1.75
 150' to 249' boom - add 2.00
 250' to 349' boom - add 2.25
 350' to 450' boom - add 2.75
 Tower crane - add 2.00

FOOTNOTE:

a. Paid Holidays: New Year's Day; Lincoln's Birthday; Washington's Birthday; Memorial Day; Independence Day; Labor Day; Veterans Day; Columbus Day; Election Day; Thanksgiving Day; and Christmas Day; provided the employee works one day the payroll week in which the holiday occurs.

 ENGI0014-002 07/01/2012

	Rates	Fringes
Power Equipment Operator		
BUILDING & RESIDENTIAL		
GROUP 1.....	\$ 58.57	24.15
GROUP 2.....	\$ 62.15	24.15
GROUP 3.....	\$ 61.06	24.15
GROUP 4.....	\$ 55.46	24.15
GROUP 5.....	\$ 41.32	24.15

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

GROUP 1: Double drum

GROUP 2: Stone derrick, cranes, hydraulic cranes, boom trucks

GROUP 3: 4 pole Hoist, Single Drum Hoists

GROUP 4: Fork lift, house cars, plaster (platform machine), plaster bucket, concrete pump and all other equipment used for hoisting material

GROUP 5: Compressors, welding machines (cutting concrete work), paint spraying, sand blasting, pumps (with the exclusion of concrete pumps), house car (settlement basis only), all engines irrespective of power (power pac) used to drive auxiliary equipment, air, hydraulic, etc., boilers

Premiums for Cranes:

100'-149' boom - add 1.75
 150'-249' boom - add 2.00
 250'-349' boom - add 2.25
 350'-450' boom - add 2.75
 Tower cranes add 2.00

FOOTNOTE:

a. PAID HOLIDAYS: New Year's Day, Lincoln's Birthday, Memorial Day, Independence Day, Labor Day, Veteran's Day, Columbus Day, Election Day, Thanksgiving Day, and Christmas

Day, provided the employee works one day in the payroll week in which the holiday occurs

IRON0040-002 07/01/2012

BRONX, NEW YORK, RICHMOND

	Rates	Fringes
IRONWORKER, STRUCTURAL.....	\$ 45.55	49.15

IRON0046-003 07/01/2011

	Rates	Fringes
IRONWORKER METALLIC LATHERS AND REINFORCING IRONWORKERS.....	\$ 40.00	24.97

IRON0197-001 07/01/2012

	Rates	Fringes
IRONWORKER STONE DERRICKMAN.....	\$ 40.50	35.93

IRON0361-002 07/01/2012

	Rates	Fringes
KINGS, QUEENS Ironworkers: (STRUCTURAL).....	\$ 45.55	49.15

IRON0580-001 07/01/2012

	Rates	Fringes
IRONWORKER, ORNAMENTAL.....	\$ 41.50	40.62

LABO0006-001 07/01/2011

	Rates	Fringes
Laborers: BUILDING CONSTRUCTION CEMENT AND CONCRETE WORKERS.....	\$ 38.98	26.08

LABO0029-001 07/01/2012

	Rates	Fringes
Laborers: Heavy Blasters (hydraulic trac drill).....	\$ 41.30	29.25
Blasters.....	\$ 40.55	29.25
Hydraulic Trac Drill.....	\$ 29.92	29.25

Jackhammers, Chippers, Spaders, Concrete Breakers, All Other Pneumatic Tools, Walk Behind Self-Propelled Hydraulic Asphalt and Concrete Breaker.....\$ 34.64	29.25
Powder Carriers.....\$ 31.08	29.25
Wagon; Airtrac; Quarry Bar Drill Runners.....\$ 35.07	28.00

LABO0078-001 12/01/2011

	Rates	Fringes
LABORERS		
BUILDING CONSTRUCTION		
ASBESTOS (Removal, Abatement, Encapsulation or Decontamination of asbestos); LEAD; & HAZARDOUS WASTE LABORERS (Hazardous Waste, Hazardous Materials, Biochemical and Mold Remediation, HVAC, Duct Cleaning, Re-spray Fireproofing, etc).....\$ 35.10		
		14.85

LABO0079-001 07/01/2012

	Rates	Fringes
Laborers Building Construction		
Demolition Laborers		
Tier A.....\$ 33.37		17.97
Tier B.....\$ 22.67		12.18
Mason Tenders.....\$ 32.99		20.56

CLASSIFICATIONS

TIER A: Responsible for the removal of all interior petitions and structural petitions that can consist of sheet rock, block or masonry. Also, all structural slab openings for ducts, mechanical, shafts, elevators, slab openings and exterior walls where the building is not being completely demolished.

TIER B: Responsible for shoveling of debris into containers, pushing containers from the inside to the outside of the building.

LABO0147-001 07/01/2003

	Rates	Fringes
LABORERS (FREE AIR & TUNNEL).....\$ 28.86		30.51

Maintenance Men, Inside Muck Lock Tenders, Pump Men,
Electricians, Cement Finishers, Caulkers, Hydraulic Men,

Shield Men, Monorail Operators, Motor Men, Conveyor Men, Powder Carriers, Pan Men, Riggers, Chuck Tenders, Track Men Painters, Nippers, Brakemen, Cable Men, Hose Men, Grout Men, Gravel Men, Form Workers, Concrete Workers, Tunnel Laborers, Mole Nipper (one (1) Mole Sipper per Working Shaft per Shift for up to and including Two (2) Moles

LABO0731-001 07/01/2011

	Rates	Fringes
Laborers:		
Building, Heavy and Residential Construction		
UNSKILLED.....	\$ 38.20	30.27
UTILITY LABORER.....	\$ 38.05	30.27
Heavy & Highway Construction		
LABORER/EXCAVATION (Asbestos, Lead, Hazardous Waste Removal (including soil).....	\$ 36.64	26.21

Paid Holidays: Labor Day and Thanksgiving Day

LABO1010-001 07/01/2011

	Rates	Fringes
Laborers:		
HIGHWAY CONSTRUCTION		
Fence Installer & Repairer.....	\$ 38.34	30.25
FORMSETTERS.....	\$ 42.21	30.25
LABORERS.....	\$ 38.34	30.25
Landscape Planting & Maintenance.....	\$ 38.34	30.25
Maintenance Safety Surface.....	\$ 38.34	30.25
Slurry/Sealcoater/Play Equipment Installer.....	\$ 38.34	30.25
Small Equipment Operator (Not Operating Engineer).....	\$ 28.94	15.55+a
Small Equipment Operator (Not Operating Engineer)...	\$ 38.34	30.25
Small Power Tools Operator.....	\$ 38.34	30.25

FOOTNOTES:

a. PAID HOLIDAYS: Memorial Day, Fourth of July, Labor Day, Columbus Day, Election Day and Thanksgiving Day, provided the employee has worked one (1) day in the calendar week in which the said holiday occurs.

LABO1010-002 07/01/2011

	Rates	Fringes
Laborers-Asphalt Construction:		
Micro Paver.....	\$ 44.86	30.25
Raker.....	\$ 44.37	30.25

Screedperson.....	\$ 44.86	30.25
Shoveler (Production Paving Only).....	\$ 41.08	30.25
Small Equipment Operator (Asphalt).....	\$ 41.08	30.25

* PAIN0009-001 11/01/2012

	Rates	Fringes
GLAZIER.....	\$ 40.00	32.89
Painters:		
Painters, Drywall Finishers, Lead Abatement Worker.....	\$ 36.00	20.87
Spray, Scaffold and Sandblasting.....	\$ 39.00	20.87

PAIN0806-001 10/01/2012

	Rates	Fringes
Painters:		
Structural Steel and Bridge.	\$ 47.00	32.08

PAIN1974-001 06/27/2012

	Rates	Fringes
Painters:		
Drywall Tapers/Pointers.....	\$ 43.32	22.01

PLAS0262-001 02/01/2012

BRONX, NEW YORK AND RICHMOND COUNTIES:

	Rates	Fringes
PLASTERER.....	\$ 40.78	26.80

PLAS0262-002 02/01/2012

KINGS AND QUEENS COUNTIES

	Rates	Fringes
PLASTERER.....	\$ 40.78	26.80

PLAS0530-001 08/03/2005

	Rates	Fringes
PLASTERER		
DRYWALL PLASTERERS.....	\$ 37.03	18.30

PLAS0780-001 07/01/2012

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER....	\$ 44.63	38.95

 PLUM0001-001 10/01/2012

	Rates	Fringes
PLUMBER		
MECHANICAL EQUIPMENT AND SERVICE		
Any repair and/or replacement of the present plumbing system that does not change the existing roughing.....	\$ 33.21	16.05
PLUMBERS:.....	\$ 52.36	37.06

 PLUM0638-001 06/27/2012

	Rates	Fringes
PLUMBER		
SERVICE FITTERS.....	\$ 26.30	2.55
SPRINKLER FITTERS, STEAMFITTERS.....	\$ 51.25	49.54

Service Fitter work shall consist of all repair, service and maintenance work on domestic, commercial and industrial refrigeration, air conditioning and air cooling, stoker and oil burner apparatus and heating apparatus etc., including but not exclusively the charging, evacuation, leak testing and assembling for all machines for domestic, commercial and industrial refrigeration, air conditioning and heating apparatus. Also, work shall include adjusting, including capacity adjustments, checking and repairing or replacement of all controls and start up of all machines and repairing all defects that may develop on any system for domestic, commercial and industrial refrigeration and all air conditioning, air cooling, stoker and oil burner apparatus and heating apparatus regardless of size or type.

 ROOF0008-003 06/01/2010

	Rates	Fringes
ROOFER.....	\$ 37.75	28.86

 SHEE0028-002 09/15/2011

	Rates	Fringes
SHEET METAL WORKER		
BUILDING CONSTRUCTION.....	\$ 48.90	36.00
RESIDENTIAL CONSTRUCTION....	\$ 27.22	16.48

 TEAM0282-001 07/01/2012

	Rates	Fringes
Truck drivers:		
TRUCK DRIVERS:		
Asphalt.....	\$ 37.47	38.5525+a

Euclids & Turnapulls.....\$ 37.57	38.5525+a
High Rise.....\$ 42.00	36.9125+a

FOOTNOTES:

PAID HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Columbus Day, Election Day, Veterans' Day (Armistice Day), Thanksgiving Day, Day after Thanksgiving and Christmas Day. Employees working two (2) days in the calendar week in which a holiday falls are to be paid for such holiday, provided that they shape each remaining workday during such calendar week.

 TEAM0813-001 12/01/1998

	Rates	Fringes
Truck drivers:		
GROUP 1.....	\$ 19.49	3.61+a
GROUP 2.....	\$ 19.76	3.61+a
GROUP 3.....	\$ 19.90	3.61+a
GROUP 4.....	\$ 20.23	3.61+a
GROUP 5.....	\$ 20.40	3.61+a
GROUP 6.....	\$ 21.29	3.61+a
GROUP 7.....	\$ 22.40	3.61+a
GROUP 8.....	\$ 19.90	3.61+a

FOOTNOTE:

a. PAID HOLIDAYS: New Year's Day, Martin Luther King, Jr.'s Birthday, Presidents' Day, Memorial Day, Independence Day, Labor Day, Columbus Day, Thanksgiving Day, Christmas Day, Employee's Birthday, Two (2) Personal Days, and any holiday or day of mourning proclaimed as such by the State or Federal Government.

TRUCK DRIVER CLASSIFICATIONS

GROUP 1: Closed body trucks with self contained loading unit up to and including 22 yard capacity

GROUP 2: Open trucks, rack body or trucks with no self contained mechanical loading device, up to 22 yard capacity. One-container tractor hoist

GROUP 3: 10 wheel, open trucks, container loaders, dino-master, over-cab loaders, rack body trucks, or any trucks 22 yards to and including 25 yards capacity

GROUP 4: Rubbish and garbage trucks, 26 yards to and including 31 yards

GROUP 5: Single axle working non-compactor containers up to 15 yards capacity on rubbish and garbage removal

GROUP 6: Roll-off trucks up to and including 42 yard capacity

GROUP 7: Roll-off truck with more than 42 yard capacity or any tractor trailer trucks

GROUP 8: One-container tractor hoist on construction and alteration debris removal

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is union or non-union.

Union Identifiers

An identifier enclosed in dotted lines beginning with characters other than "SU" denotes that the union classification and rate have found to be prevailing for that classification. Example: PLUM0198-005 07/01/2011. The first four letters, PLUM, indicate the international union and the four-digit number, 0198, that follows indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. The date, 07/01/2011, following these characters is the effective date of the most current negotiated rate/collective bargaining agreement which would be July 1, 2011 in the above example.

Union prevailing wage rates will be updated to reflect any changes in the collective bargaining agreements governing the rate.

0000/9999: weighted union wage rates will be published annually each January.

Non-Union Identifiers

Classifications listed under an "SU" identifier were derived from survey data by computing average rates and are not union rates; however, the data used in computing these rates may include both union and non-union data. Example: SULA2004-007 5/13/2010. SU indicates the rates are not union rates, LA

indicates the State of Louisiana; 2004 is the year of the survey; and 007 is an internal number used in producing the wage determination. A 1993 or later date, 5/13/2010, indicates the classifications and rates under that identifier were issued as a General Wage Determination on that date.

Survey wage rates will remain in effect and will not change until a new survey is conducted.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION

(NO TEXT ON THIS PAGE)

"BUY AMERICA" REQUIREMENTS & WAIVERS

GENERAL BUY AMERICA BID REQUIREMENTS AND DEFINITION. In accordance with New York State Department of Transportation Official Order No. 1511 establishing consistency for application of Section 146 of the State Finance Law, and Section 165 of the U. S. Surface Transportation Act of 1982, as amended, the Bidder must submit a bid based on permanently incorporating only domestic steel and/or iron in the construction of this contract.

The Bidder may also submit a bid based upon being allowed to permanently incorporate foreign steel and/or iron into the work of the contract. If the Bidder chooses to submit such a bid, the Bidder should purchase an additional proposal for this contract and legibly print the following in ink on the proposal cover and at the bottom of the proposal sheet which contains the phrase "Total gross sum written in words": TOTAL BID BASED UPON USING FOREIGN STEEL AND/OR IRON.

When bids are submitted based upon domestic and foreign steel and/or iron, both bids are to be submitted in the same envelope.

To qualify as domestic, all manufacturing processes (including the fabrication of any product containing steel and/or iron) must have been performed in the United States. To further define the coverage, a domestic product is a manufactured steel and/or iron construction material that was produced in one of the 50 States, the District of Columbia, Puerto Rico, or in the territories and possessions of the United States. Raw material used in the steel and/or iron may be imported. All manufacturing processes to produce steel and/or iron products must occur domestically. Raw materials are materials such as iron ore, limestone, waste products, etc., which are used in the manufacturing process to produce the steel and/or iron products. Waste products would include scrap; i.e., steel and/or iron no longer useful in its present form from old automobiles, machinery, pipe, railroad tracks, and the like. Also, steel and/or iron trimmings from mills or product manufacturing are considered waste. Extracting, crushing, and handling the raw material which is customary to prepare them for transporting are exempt from Buy America.

AWARD OF CONTRACT. Award of this contract will be made to the lowest bidder who submits the lowest total bid based upon furnishing domestic steel and/or iron unless such total bid exceeds the lowest total bid based upon furnishing foreign steel and/or iron by more than 25 percent, in which case award will be made to the lowest responsible bidder based upon furnishing foreign steel and/or iron.

CONTROL OF MATERIALS. All items, regardless of origin, shall comply with their individual specification requirements. In the event the contract is awarded based upon using only domestic steel and/or iron, the Contractor must supply only domestic steel and/or iron and will be paid the domestic steel and/or iron bid prices. The Contractor will be responsible for ensuring that the domestic steel and/or iron is supplied in conformance with the above referenced laws. Such responsibility extends to informing all affected subcontractors and material suppliers of these specific requirements and ascertaining that steel and/or iron being supplied is in conformance with the standard specifications.

In the event that the contract is awarded based upon being allowed to permanently incorporate foreign steel and/or iron in the work, the Contractor may supply either domestic or foreign steel and/or iron and will be paid the foreign steel and/or iron bid prices. If the contract is awarded based upon the domestic steel and/or iron bid, the Contractor may permanently incorporate in the construction of this contract a minimal amount of foreign steel and/or iron if the combined cost of such materials does not exceed one-tenth of one percent (0.1 percent) of the total contract cost or \$2,500.00, whichever is greater. The combined cost of foreign steel and/or iron will be that shown to be the value of the steel and/or iron products as they are delivered to the project.

BUY AMERICA WAIVERS. In addition to the award of a bid based on foreign steel and/or iron materials, waivers to the Buy America requirement may be requested by the State to the Division Federal Highway Administration if it can be demonstrated that the use of domestic steel and/or iron materials would be inconsistent with the public interest, such materials and products are not produced in the United States in sufficient and reasonably available quantities and of satisfactory quality provided one or more of the above requirements are met, the Contractor may submit a request for a waiver to the Engineer. The request shall include copies of all documentation verifying the unavailability of the material or product, and/or justification of the application for a waiver. For Federally Aided contracts, final approval of the Buy America Waiver request will be made by the Division Federal Highway Administration and concurred with by the Director, Construction Division. For non-Federally Aided contracts, upon final approval of the affected Department program areas, notification and approval of the Buy America Waiver request will be made by the Director, Construction Division.

Note: The following is a list of materials or products which have been granted waivers or exclusions from the "BUY AMERICA" provisions:

1. Hollow "I"-shaped steel extrusions
2. NYCDEP Water Main castings such as valves, mechanical joint fittings and hydrants. However, this does not release the remainder of the contract from "Buy America" requirements, including all steel pipe, straight full length ductile iron pipes, frames and grates for catch basins, and street lighting.

CERTIFICATIONS AND TRACKING OF FOREIGN STEEL/IRON. In order to ensure compliance with this contract requirement, all manufacture's certifications for steel and/or iron and items including steel and/or iron must contain a statement of domestic origin, and material suppliers must certify that what they provide is the same material certified by the manufacturer. If the material or product certification does not properly identify conformance to the specification the product will be rejected and must be removed from the project site. If however the manufacturer and/or material supplier requests to leave the product in place and provide a revised certification only, the revised certification must be accompanied with a letter of explanation to the satisfaction of the Resident Engineer. The explanation shall indicate the basis for using the revised certification rather than the original supplied. The letter shall also include corrective action to assure that future certifications will be representative of the material or product supplied. The letter must be signed by a company representative that can legally bind the firm.

If the Contractor proposes to use foreign steel/iron in small amounts under the threshold, the amount allowed will be based on the material price to the Contractor, as verified by invoice and approved by the Resident Engineer. The amount is cumulative for the entire contract, so subsequent requests will have to be added to any previous requests before comparison to the allowable threshold.

The "Buy America" contract specification does not apply to iron or steel that is to be used for temporary means which will be removed during or at the end of the project.

DEFINITIONS:

Steel - Steel material of any type, including welding rod.

Iron - Iron material of any type, including cast and ductile iron, but not pig iron.

Domestic - The 50 States, the District of Columbia, Puerto Rico and territories/possessions of the US.

Foreign - Any location other than those defined as Domestic.

Manufacturing Processes - Steel and/or iron manufacturing processes must be domestic; e.g. manufacture, fabrication, grinding, drilling, welding, finishing and coating of steel. Ore, scrap, and pig iron may be foreign or domestic; however, transformation into steel and/or iron and all subsequent processes and fabrication must be domestic. The fabrication of composite items using domestic steel (e.g. casting reinforced concrete box culvert using reinforcing cut and bent to final shapes) is not considered a manufacturing process, and the composite item is acceptable.

Fabricated Product Containing Steel and/or Iron - Items, products or materials containing any amount of steel and/or iron materials; e.g., a metal pipe may be steel or iron, a reinforced concrete pipe contains steel, a prestressed beam contains steel, iron castings are iron, a steel beam is steel and steel laminated bridge bearings contain steel.

(NO TEXT ON THIS PAGE)

EQUAL EMPLOYMENT OPPORTUNITY REQUIREMENTS

**[SEE SECTION 102-11 OF THE
NEW YORK STATE
DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS]**

GOALS FOR MINORITY PARTICIPATION IN THE CONSTRUCTION INDUSTRY

COUNTY	% GOAL	COUNTY	% GOAL	COUNTY	% GOAL
Albany	3.2	Herkimer	2.1	Richmond	*
Allegany	6.3	Jefferson	2.5	Rockland	22.6
Broome	1.1	Kings	*	St Lawrence	2.5
Bronx	*	Lewis	2.5	Saratoga	3.2
Cattaraugus	6.3	Livingston	5.3	Schenectady	3.2
Cayuga	2.5	Madison	3.8	Schoharie	2.6
Chautauqua	6.3	Monroe	5.3	Schuyler	1.2
Chemung	2.2	Montgomery	3.2	Seneca	5.9
Chenango	1.2	Nassau	5.8	Steuben	1.2
Clinton	2.6	New York	*	Suffolk	5.8
Columbia	2.6	Niagara	7.7	Sullivan	17.0
Cortland	2.5	Oneida	2.1	Tioga	1.1
Delaware	1.2	Onondaga	3.8	Tompkins	1.2
Dutchess	6.4	Ontario	5.3	Ulster	17.0
Erie	7.7	Orange	17.0	Warren	2.6
Essex	2.6	Orleans	5.3	Washington	2.6
Franklin	2.5	Oswego	3.8	Wayne	5.3
Fulton	2.6	Otsego	1.2	Westchester	22.6
Genesee	5.9	Putnam	22.6	Wyoming	6.3
Greene	2.6	Queens	*	Yates	5.9
Hamilton	2.6	Rensselaer	3.2		

* The following goal ranges are applicable to the indicated trades in the counties of Bronx, Kings, New York, Queens, and Richmond:

Electricians.....	9.0 to 10.2
Carpenters.....	27.6 to 32.0
Steam Fitters.....	2.2 to 13.5
Metal Lathers.....	26.0 to 28.6
Operating Engineers.....	25.6 to 26.0
Plumbers.....	12.0 to 14.5
Iron Workers (Structural).....	25.9 to 32.0
Elevator Constructors.....	5.5 to 6.5
Bricklayers.....	13.4 to 15.5
Asbestos Workers.....	22.8 to 28.0
Roofers.....	6.3 to 7.5
Iron Workers (Ornamental).....	22.4 to 23.0
Cement Masons.....	23.0 to 27.0
Glaziers.....	16.0 to 20.0
Plasterers.....	15.8 to 18.0
Teamsters.....	22.0 to 22.5
Boilermakers.....	13.0 to 15.5
All Others.....	16.4 to 17.5

GOALS FOR WOMEN

Female Goals -6.9%

Goals for the utilization of women by Federal and Federally assisted construction contractors were last published on April 7, 1978 (43 CFR 4988, 149000). That April 7, 1978 publication included a 6.9% goal for the period from April 1, 1980 until March 31, 1981. Pursuant to 41 CFR 60-4.6, the 6.9% goal for female utilization is extended until further notice

THESE MUST BE INCLUDED IN EACH BID ROPOSAL REGARDLESS OF WHOSE SPECIFICATIONS ARE USED.

NO TEXT

ATTACHMENT "H"

**GOALS FOR DISADVANTAGED/MINORITY/WOMEN'S BUSINESS ENTERPRISE
(D/M/WBE) PARTICIPATION**

The Department has established the following utilization goal(s) for this contract, expressed as a percentage of the total contract bid amount. For clarification of Disadvantaged Business Enterprise (DBE) Utilization, Minority Business Enterprise (MBE) Utilization or Women's Business Enterprise (WBE) Utilization requirements refer to §102-12 *D/M/WBE Utilization* of the Standard Specifications.

Disadvantaged Business Enterprise (DBE) Utilization Goal	<u>13</u> % (Federal-Aid Only)
Minority Business Enterprise (MBE) Utilization Goal	<u>0</u> % (Non Federal-Aid Only)
Women's Business Enterprise (WBE) Utilization Goal	<u>0</u> % (Non Federal-Aid Only)

Directories and/or Information related to the current certification status of Disadvantaged Business Enterprises can be obtained from the NYS Unified Certification Program website at:
<http://biznet.nysucp.net>

Direct questions concerning Disadvantaged Business Enterprise Utilization to:

NYS Department of Transportation
Office of Construction
50 Wolf Road Pod 51
Albany, New York 12232
(518) 457-6472

Direct questions concerning Disadvantaged Business Enterprise Certification to:

NYS Department of Transportation
Contract Audit Bureau
DBE Certification
50 Wolf Road, 6th Floor
Avenue F, 1st Street
Albany, New York 12232
(518) 457-3180

Directories and/or information related to the current certification status of Minority and Women's Business Enterprises, can be obtained by contacting the:

Empire State Development Corporation
Office of Minority and Women's Business Development
30 S. Pearl Street
Albany, NY 12245
(518) 292-5250
<http://www.empire.state.ny.us/MWBE.html>

**DISADVANTAGED BUSINESS ENTERPRISE REQUIREMENTS
FOR FEDERAL AID CONTRACTS**

**[SEE SECTION 102-12 OF THE
NEW YORK STATE
DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS]**

Contract Requirements

REQUIREMENTS REGARDING TRAINING IN FEDERAL AID CONTRACTS TRAINING SPECIAL PROVISION

GENERAL. The primary objective of this Training Special Provision is to provide training opportunities to minority and disadvantaged¹ persons and women in construction trades for two purposes:

1. To maintain a pool of qualified minority and disadvantaged persons and women to replace those journeyworkers² who, to the natural course of events, will leave the workforce; and
2. To provide minority and disadvantaged persons and women as Indentured apprentices or trainees in those geographic areas where shortages in minority and women journeyworkers are recognized because the Contractor's inability to meet the Equal Employment Opportunity (EEO) goals set forth in this contract.

This work shall consist of the employment and meaningful and effective training of minority and disadvantaged persons and women in training programs approved by the N.Y.S. Department of Transportation leading to their qualifications as journeyworkers in the skilled trades required in highway construction. This Training Special Provision supplements the Equal Employment Opportunity requirements included elsewhere in this Proposal entitled either "Standard Federal Equal Employment Opportunity Construction Contract Specifications (Executive Order 11246) or "Equal Employment Opportunity Requirements." Each of the foregoing prescribe specific percentage goals for utilization of minorities and women in the performance of work for the geographic area location of the Contract.

Each contract which contains this Training Special Provision shall require the training of at least one minority or woman indentured apprentice or trainee. Such individual shall be either approved or selected by the Owner with concurrence by the Department of Transportation. Other than this initial training obligation, to be undertaken and provided by the Contractor, no additional training obligations will exist under this Training Special Provision unless the goals for minority and women employment and training in the skilled workforce (exclusive of laborers) are not continuously met on the contract and generally distributed amongst the trades. In the five counties of New York City, the goals specified for each trade are applicable. Whenever the goals are not met, additional minority and/or women indentured apprentices and/or trainees will be assigned or approved in numbers necessary to meet the goals. Data necessary to determine if goals are being met will be provided on Contractor and Subcontractor Monthly Employment Utilization Reports (Form AAP 33LL) submitted by the Contractor on a monthly basis to the Engineer-in-Charge of construction contract, or other agent of the Owner responsible for administering the contract, or other forms approved by the Department of Transportation.

The data will be verified by the visual observance of the Engineer-in-Charge, or designated project inspectors, or other agent of the Owner, and hours of employment reported on Contractor and Subcontractor certified weekly payrolls. The number of minority and women indentured apprentices and trainees required to be trained under this Item shall not exceed the equivalent of 12 1/2% of the total journeyworker workforce on the contract (counted in hours worked), i.e., no more than 1 in 8 of the skilled workforce is required to be a minority or woman Indentured apprentice or trainee. This limitation applies regardless of minority or women representation in the trades. However, this limit on required training in no way absolves the Contractor of the responsibility to comply with the EEO contract requirements.

¹ Disadvantaged means a person who is either. (a) a member of a family the receives public assistance, or (b) a member of a family whose income during the previous six (6) months or an annualized basis, was such that (1) the family would have qualified for public assistance, if it had applied for such assistance; or (2) it does not exceed the poverty level. NOTE: The name, address, and social security number of candidates to be trained under the disadvantaged criteria must be submitted to the Owner accompanied by related economic documentation for approval prior to commencing training.

² Journeyworker means a person who is capable of performing all the duties within a trade or a given work classification of a trade approval prior to commencing training, subject to concurrence by the Department of Transportation.

Contract Requirements

REQUIREMENTS REGARDING TRAINING ON FEDERAL AID CONTRACTS

PRECONSTRUCTION MEETING. Before the Contractor will be allowed to begin work, the Contractor shall attend a Preconstruction Meeting and shall submit for the Owner's use and acceptance, a Manpower and Training Utilization Schedule (Form AAP 35LL) which shall be correlated to the Contractor's work schedule. The Schedule shall include at least the following information:

1. A work schedule for the entire contract,
2. An estimate of the work force required to conform to the work schedule on a monthly basis including an estimate of the work force in each trade and/or work classification projected to be used,
3. Separate estimates of the number of minority and women indentured apprentices or trainees that would be required in each skilled trade to meet the contract EEO employment goals for that trade assuming no minority or women journeyworkers in the workforce,
4. The approved training programs to be used and the proposed starting dates for training in each trade and/or work classification,
5. An estimate of the availability of minority and women journeyworkers in numbers sufficient to meet the EEO contract goals, and
6. Any proposal by the Contractor to use trainees or indentured apprentices to make up for anticipated EEO goal shortfalls. Such proposals shall include the name and craft of any individual proposed by the Contractor as the required trainee or indentured apprentice. In the case of an indentured apprentice, evidence of indentureship and registration of the approved apprenticeship program must be included.

No contract work may be undertaken until the Owner has accepted the Schedule and obtained the concurrence of the Department of Transportation. The Contractor shall submit a revised Manpower and Training Utilization Schedule at such times as major changes in the contract work schedule or a significant workforce buildup occurs which substantially affect the previously submitted Schedule.

RECRUITMENT. Although the training requirements of this Training Special Provision are not intended, and shall not be used to discriminate against any applicant for training, whether a member of a protected class or not, it is recognized that non-minority males have traditionally been and continue to be trained, either formally or on-the-job in an informal manner, for in the trades utilized in construction work. Therefore, until such time that representative numbers of minorities and women complete training and their utilization as journeyworkers is demonstrated to the extent of the participation goals set forth in the Department of Transportation's construction contracts, training required under this Training Special Provision will be primarily limited to minorities, women, and disadvantaged individuals.

Thus, the Contractor shall demonstrate compliance with the intent of this Training Special provision by affording the Owner, with the concurrence of the Department of Transportation's appropriate Regional Compliance Specialist (RCS), the opportunity to:

1. First, approve the use of a minority or woman indentured apprentice known to the Contractor through an existing Joint Apprenticeship Training Program, or
2. Second, provide a partially-trained minority or woman trainee who is currently enrolled in a New York State Department of Transportation approved training program, or
3. Third, work cooperatively with the Contractor in recruitment of new minority or women trainees, when needed.

In conformance with the foregoing, the Contractor should submit a Department of Transportation Form AAP-17, Request for Personnel, to the Owner at the Preconstruction Meeting, and the Owner should seek concurrence of that from Department of Transportation's Regional Compliance Specialist. The Contractor is responsible for ensuring that on-the-job orientation for approved indentured apprentices or assigned trainees is provided to such individuals within their first month of employment.

Contract Requirements

WORK HISTORY. No individual shall be employed as a trainee or indentured apprentice in any trade and/or work classification in which such person has successfully completed a training course providing journeyworker status in the same trade or work classification, or in which such person has been gainfully employed as a journeyworker by virtue of informal on-the-job training. Detection of individuals in the above categories may be accomplished by including appropriate questions on employee application forms, inquiries to the Department of Transportation Regional Compliance Specialist, checking personal references, or by other suitable means. Regardless of the method used, the Contractor shall document the findings for each indentured apprentice or trainee provided training under this requirement. A copy of the findings shall be given to the Owner's Engineer or agent in charge of the project, who shall request concurrence of the Department of Transportation. In the case of indentured apprentices, evidence of indentureship in a registered approved apprenticeship program shall also be provided.

SUBCONTRACTING. In the event the Contractor subcontracts a portion of the contract work, the Contractor shall ensure that the requirements of this Training Special Provision are physically incorporated into such subcontracts to ensure that the workforce utilized by the Subcontractor meets the goals for minority and women employment and training, either independently or in combination with the Contractor's workforce. The Contractor must determine the hours of training, if any, and in which trade or work classifications, minority or women indentured apprentices or trainees are to be trained by the Subcontractor(s). However, the Contractor shall retain the primary responsibility for meeting the training requirements of this Training Special Provision. Subcontractors are herewith advised that disregard of these requirements may result in the Department of Transportation either rescinding approval or disapproving their use on subsequent contracts let by the Department of Transportation or on contracts let by other agencies under agreement to the Department of Transportation.

TRAINING AND APPRENTICESHIP PROGRAMS. The minimum length, type of training, and rate of pay for the trade or the work classification of the trade will be specified in the training program approved or sanctioned by the New York State Department of Transportation with the concurrence of the Federal Highway Administration. Both of these agencies shall approve or sanction a training program if it meets the Equal Employment Opportunity obligation of the Contractor and qualifies the trainee for journeyworker status in the trade or work classification concerned by the end of the training period. Furthermore apprenticeship programs registered with the U. S. Department of Labor, Office of Manpower Development, Apprentice Training Section, and training programs approved, but not necessarily sponsored, by the U. S. Department of Labor, Manpower Administration, Bureau of Apprenticeship and Training, shall also be considered acceptable provided they are administered in a manner consistent with the Equal Employment Opportunity obligations of New York State Department of Transportation construction contracts. A copy of the training programs approved by the NYSDOT will be made available by the NYSDOT upon request by the Owner or the Contractor. The Contractor shall provide a copy of the approved apprenticeship or training program to the indentured apprentice or trainee.

Where training is to be provided under this Training Special Provision, the Contractor shall obtain acceptance or approval of the training or apprenticeship program to be used, and the starting time for training, prior to commencing training. The Contractor shall provide on-the-job training directed toward developing journeyworkers in the trade, or work classification(s) of the trade, involved. To the extent that the work involved on the contract permits, such training should include all phases and facets of a trade, or work classification of a trade, to satisfy usual construction industry requirements for continued or future employment therein. Additionally, the Contractor shall provide a minimum of 144 hours per calendar year of related classroom training at an approved facility for each individual so enrolled, in accordance with Article 23 of the New York State Labor Law, Section 815.3.

WAGES. Indentured apprentices will be paid at least 60 percent of the appropriate prevailing wage rate specified in the contract for the same trade or work classification for which they are being trained for the first half of the training period, 75 percent for the third quarter of the training period, and 90 percent for the last quarter of the training period. Trainees will be paid the appropriate prevailing wage specified in the contract for the same trade or work classification for which they are being trained.

Indentured apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits apprentices must be paid the full amount of fringe benefits listed on the wage determinations for the applicable classification. On-the-job (OJT) trainees shall be paid fringe benefits in accordance with the provisions of the prevailing wage rates.

If the trainee program does not mention fringe benefits trainees shall be paid the full amount of fringe benefits listed on the wage determinations unless the Administrator of Wage and Hour Division determines that there is an

Contract Requirements

apprenticeship program associated with the corresponding journeyworker wage rate on the wage determination which provides for less than full benefits for apprentices.

DURATION OF TRAINING. Once an indentured apprentice is approved or a trainee is assigned to the contract under this Training Special Provision, that individual shall be trained in the designated trade throughout the duration of the contract whenever such trade is in use on the contract until the trainee or indentured apprentice has completed the approved training program. Where training is provided under a multi-phase apprenticeship or training program, it is expected that training will be provided continually through all phases to the extent that opportunities for such training exist in the work under contract. Upon satisfactory completion of a phase of training under a multi-phase apprenticeship or training program, if training in the remaining phases is not available and work in the completed phase is available, the minority or woman indentured apprentice or trainee shall continue employment, and be compensated at the prevailing journeyworker wage rate for such work. Hours of employment as a journeyworker described above will not be credited toward training hours required by the approved training or apprenticeship program.

A trainee may be terminated at any time during training for excessive absenteeism, lack of punctuality accident-proneness, lack of interest, poor attitude and continued failure to conduct his/herself in a professional manner. However, termination will not occur prior to proper counseling, documentation, and notification in writing to the Owner's Engineer or agent in charge of the project, and to the Department of Transportation's Regional Compliance Specialist, and subsequently the concurrence of the Owner's engineer or agent and the NYSDOT Regional Compliance Specialist, with that termination.

REQUIRED RECORDS. The Contractor shall provide each minority or woman trained under this provision with a certification showing the type and length of training satisfactorily completed. In addition, the Contractor shall keep records on the job site indicating the nature and hours of training provided to each trainee or indentured apprentice documenting performance under this Training Special Provision to the Owner's Engineer or agent in charge of the project and to the Department of Transportation's Regional Compliance Specialist Form AAP-42a, Training Report will be submitted once the trainee or indentured apprentice commences training, competes training, or is terminated and each December 31st that individual is in training. Form AAP 26LL, Monthly Training Progress Report, will be submitted every month after the individual commences training. No measurement will be made of training provided to indentured apprentices or trainees for whom no work history has been provided to the Owner's Engineer or agent in charge of the project. In addition, no measurement will be made of the training provided to apprentices for whom no evidence of indentureship in a registered program has been provided to the Owner's Engineer or agent in charge of the project.

NO PAYMENT FOR TRAINING. No payment will be made to the Contractor for the training required by this Training Special Provision. The required training is a labor cost which is included in the unit prices bid by the Contractor for the items of work comprising the contract.

LISTS OF OJT & REGISTERED APPRENTICESHIP PROGRAMS. Effective April 1, 1992, the New York State Department of Transportation commenced a demonstration program in NYSDOT Regions 2, 3, 5, and 11 requiring the exclusive use of apprenticeship training to fulfill the Training Special Provision and supplement EEO goal attainment. The remaining NYSDOT Regions, contractors will be allowed to use on-the-job training (OJT) programs during the period of the demonstration project. However, only OJT programs for crafts that have been deemed as apprenticeable occupations will be approved. In order to ease the transition from OJT to apprenticeship, it is required that all OJT will participants receive related classroom instruction.

It is the policy of the New York State Department of Transportation to afford equal employment opportunity to traditionally socially and economically disadvantaged persons by providing training opportunities to minority and disadvantaged persons and women to improve their potential for construction employment. NYSDOT, therefore, provides training as a contract requirement on selected construction contracts, including those let by other agencies and local governments under an agreement with NYSDOT.

When OJT is to be provided under this Training Special Provision, the Contractor shall obtain acceptance from the Owner and NYSDOT for the OJT Program to be utilized and the starting time frame for training, prior to commencing training. Accordingly, the following is a listing of OJT programs which have been approved by the NYSDOT and the Federal Highway Administration (FHWA) for utilization in NYSDOT Regions 1, 4, 6, 7, 8, and 10.

NOTE: A contractor in these Regions may opt to use either OJT or apprenticeship programs. However, the use of apprenticeship programs is strongly encouraged.

Contract Requirements

**FOR LISTS OF CURRENTLY APPROVED APPRENTICESHIP PROGRAMS
SEE THE FOLLOWING
NEW YORK STATE
DEPARTMENT OF LABOR'S WEB SITE:**

<http://www.labor.ny.gov/apprenticeship/sponsor/index.asp>

NO TEXT

CHANGED CONDITIONS AND DISPUTED WORK PROVISIONS:

It is the goal of the Department to resolve disputes that may arise under the contract in a timely, just and fair manner consistent with the terms of the contract. Towards this goal, the Department is specifying the dispute resolution and disputed work provisions of this Section. This dispute resolution process may be undertaken at any time from the contract award to the submission of the final estimate for payment by the Department. The process recognizes and will take into consideration the risks and controls inherent in construction which the Contractor or the Department have agreed to assume pursuant to the terms of the contract.

If the Contractor considers its disputes unresolved after following the requirements of this Section then at any time prior to the submission of the final agreement for payment to the Department, the Contractor may request in writing a meeting with the Department, or its designated representative, to review any outstanding dispute or items of a dispute that have not been previously resolved to the satisfaction of the Contractor through the dispute resolution process. If the contractor fails to comply with the requirements of this section, any claim of the Contractor with respect thereto shall be deemed waived.

A. **TIME RELATED DISPUTES.** Whenever the Contractor believes that it is or will be entitled to additional compensation for time related disputes, whether due to delay, extra work, disputed work, breach of contract, or other causes, the Contractor shall follow the procedures set forth in this Section. All subcontracts, supply or equipment contracts shall incorporate these provisions of Dispute Resolution and Disputed Work Provisions. If such subcontracts or supply or equipment contracts do not have similar provisions, then the Department's payments to the Contractor for such subcontract or supply or equipment work shall be limited to only that which are provided by the provisions of this Section as if it were in effect for such subcontract or supply or equipment contract.

1.
 - a. The term 'dispute' shall mean a matter of contract performance or contract compensation, including granting of extensions of time, in which there is or may be disagreement between the Contractor and the Department and which may involve adjustment of contract items or the addition of new items to the contract, extension of time for performance and/or adjustments in compensation necessitated by the resolution of such disagreement.
 - b. The term 'time related dispute' shall mean any dispute arising from any event not within the Contractor's control, performance, action, force, or factor which affects the scheduled time of performance depicted in the Contractor's most recent Department approved progress schedule submitted to the Department. This Subsection is intended to cover all such events which include termination, major deductions or increases to quantities of work, Contingencies, Extra Work, Deductions, and suspension of work and cancellation of contract, Right to Suspend Work and Cancel Contract, as well as actions, forces or factors, whether they be termed 'delay', 'disruption', 'interference', 'inefficiencies', 'impedance', 'hindrance', 'acceleration', or otherwise. This subsection shall cover all such applicable events under Differing Site Conditions, Suspensions of Work, Significant Changes in the Character of the Work Provisions. Notwithstanding the foregoing, for time related compensation requests, the Department will compensate the Contractor for only those instances arising out of the issuance by the Department of a stop work order relative to a substantial portion of the work, or arising out of the unavailability of critical rights of way parcels, either of which are determined by the Department to significantly affect the scheduled completion of the work.

ATTACHMENT "K"

2. Strict compliance with the notice provisions of this Section and compliance with the record keeping provisions of this section and Extra, Force Account Work, Dispute Compensation and Record Keeping, shall be an essential precedent condition under the contract provisions to any recovery of time related damages by the Contractor whether it be under the contract provisions, court actions and proceedings or otherwise.
3. Except for situations that come within the terms of Differing Site Conditions, Suspensions of Work, Significant Changes in the Character of the Work Provisions, subsection (2), Suspensions of Work, within ten work days after the Contractor has knowledge or should have had knowledge of an event, matter or occasion, that will result in time related damages, the Contractor must provide the Engineer with written notice of a dispute for time related damages.

The Department shall have no liability and no adjustment will be made for any time related damages which accrued more than ten work days prior to the filing of such a notice with the Engineer. Failure of the Contractor to give such written notice in a timely fashion will be grounds for denial of the dispute and the Department does not have to show prejudice to its interest before such denial is made. In the event the Contractor fails to provide the required written notice within the ten work day period and the Contractor demonstrates justifiable excuse or cause as determined by the Department for not providing the required written notice, then said 10 day notice period may be lengthened but only if the Contractor has maintained and submits the specified records set forth in these provisions and the Department has knowledge of the matter or occasion that may result in time related damages. In the event the Contractor fails to maintain and submit such specified records, or fails to demonstrate justifiable excuse or cause if such notice is not given, or demonstrates such justifiable excuse or cause but fails to maintain and continue to maintain and submit such specified records, the Contractor hereby agrees to waive the dispute for compensation, notwithstanding the fact that the Department may have actual notice of the facts and circumstances which comprise such dispute and is not prejudiced by said failure.

As directed by the Engineer, the work shall continue during the pendency of the dispute. The Engineer shall make the initial determination in writing on the dispute and the Contractor, if it considers the issue unresolved, shall promptly notify, within ten (10) work days after receipt of the Engineer's decision, notify the Department, in writing with copies to the Engineer of its contentions relative to the dispute, indicating the substance of previous communication on the issue with the Engineer and its rebuttal of his or her previous findings or determinations. The Department, or its designee, shall make a finding thereon and notify the Contractor of same in writing.

Adjustments of contract items, or adjustments to the time of performance, or the addition of new items to the contract necessitated by such dispute determination may be made until the time the final agreement is submitted for payment to the Department, provided that the requirements of this Section are complied with.

4. If time related damages are presumed to have been incurred and after giving the Department notice of a dispute for time related damages, the Contractor must keep daily records of all labor, material, and equipment costs and hours incurred for the affected operations. These daily records must identify each operation affected and the specific locations where work is affected. On a "weekly basis," beginning the week following the date of giving notice of a dispute for time related damages, the Contractor shall meet with the Engineer and present the daily records for the preceding week. If

ATTACHMENT "K"

the Engineer disagrees with the accuracy, applicability, or reasonableness of any portion of the Contractor's submission, he/she shall promptly notify the Contractor who shall correct its records. If there is a dispute as to records, the Contractor must follow the requirements of this specification, Part C. The dispute shall first be submitted to the Regional Director and if unresolved will be submitted in writing to the Department or his/her designee whose decision shall be final and conclusive subject to the Contractor's right to assert a claim in New York State Court of Claims. Lack of substantial compliance with the requirements to attend weekly meetings or present its records will constitute a waiver by the Contractor of said dispute for time related damages.

5. After giving notice of a dispute for time related damages, the Contractor shall prepare and submit to the Engineer, if requested, weekly written reports until complete resolution of the dispute, which shall be available at the next scheduled job meeting, providing the following information:
 - a. Potential effect to the Contractor's schedule caused by the time related dispute;
 - b. Identification of all operations that have been affected or delayed, or are or may be affected or delayed;
 - c. Explanation of how the Department's act or omission affected or delayed each operation, and estimation of how much more time is required to complete the project;
 - d. Itemization of all extra costs being incurred, including:
 - (1) An explanation as to how those extra costs relate to the effect or delay and how they are being calculated and measured.
 - (2) Identification of all project employees for whom costs are being compiled.
 - (3) Identification of all manufacturers' numbers of all items of equipment for which costs are being compiled.
6. In addition, after submitting the required notice specified in this section, the contractor shall complete its dispute submission by complying with Extra Force Account Work, Dispute Compensation and Record Keeping, Part (E), Required Content of Dispute Submission, when such information is ascertainable by the contractor and Part (F), Required Certification of Disputes.

B. **ACCELERATION DISPUTES.** The Contractor may not maintain a dispute for costs associated with acceleration of the work unless the Department has given prior express written direction by the Engineer to the Contractor to accelerate its effort. The Contractor shall always have the basic obligation to complete the work in the time frames set forth in the contract. For purposes of this Subsection, lack of express written direction on the part of the Department shall never be construed as assent.

If the Contractor does accelerate its work efforts pursuant to a written order or express written approval by the Department, the Contractor shall be compensated for its effort, in the same manner and as limited by Extra Force Account Work, Dispute Compensation and Record Keeping, Part (D). The Department, in determining whether or not any compensation under this Section is warranted, will evaluate the facts and circumstances which led to the acceleration to determine whether they were in the Contractor's control.

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If the Contractor is claiming a "constructive acceleration," it must follow the requirements of this section, Part A.

C. **DISPUTED WORK.** If the Contractor is of the opinion that any work ordered by the Engineer to be done as contract work is extra work and not contract work, or that any order of the Engineer exceeds the work requirements of the provisions of the contract, the Contractor shall promptly, within ten work days of receipt of the order or direction, notify the Engineer in writing of its contentions thereto. The Contractor must progress the work as required and ordered. In the meantime, the Contractor, if it considers the issue unresolved, shall promptly, within ten work days of receipt of the Engineer's written decision, notify the Department in writing with copies to the Engineer, of its contentions relative to the dispute, indicating the substance of previous communication on the issue with the Engineer and its rebuttal of their previous findings. The Department, or its designated representative, shall make a finding thereon and notify the Contractor of same in writing. If such work is determined by the Department or its designee to be extra work pursuant to the provisions of this Section, compensation will be made pursuant to Extra Force Account Work, Dispute Compensation and Record Keeping, Part (B). In addition, after submitting the required notice specified in this section, the contractor shall complete its dispute submission by complying with Extra Force Account Work, Dispute Compensation and Record Keeping, Part (E), Required Content of Dispute Submission, when such information is ascertainable by the contractor and Part (F), Required Certification of Disputes. This subsection shall cover all such applicable extra work under Differing Site Conditions, Suspensions of Work, Significant Changes in the Character of the Work Provisions. During the progress of such disputed work, the Contractor and Engineer shall keep daily records and make reports of all labor, material and equipment used in connection with such work and the cost thereof as specified in Extra Force Account Work, Dispute Compensation and Record Keeping, Part (C), Force Account Reports.

If the Department or its designated representative determines that the work in question is contract work and not extra work, or that the order complained of is proper, he/she shall again direct the Contractor to continue the disputed work and the Contractor must promptly comply. The Contractor's right to pursue a dispute under this Section for extra compensation or damages will not be affected in any way by the Contractor's complying with the directions of the Department or Engineer to proceed with the work, provided the Contractor continues to keep and furnish the Engineer with Force Account Reports as specified in Extra Force Account Work, Dispute Compensation and Record Keeping, Part (C), Force Account Reports.

If the Department, or its designated representative, determines that such work is extra work and not contract work, or that the order complained of is not proper, then the Department or his/her designated representative shall have prepared, if necessary, an order on contract covering such work as soon as is practical after the determination is made. Payment will be made for such work via agreed price or force account pursuant to Extra Force Account Work, Dispute Compensation and Record Keeping, Part (B), New Item Charges. The Department, or its designee, will notify the Contractor in writing of the date upon which the Department has approved the order on contract. Performance of work until receipt of the order on contract by the Contractor shall be considered disputed work. The Contractor must progress the work of the contract, including the work covered by any such order on contract, as directed by the Engineer. Adjustments to contract items, or adjustments to the time of performance, or the addition of new items to the contract necessitated by such determination may be made up until the time the final agreement is submitted for payment to the Department, provided that all the requirements of Extra Force Account Work, Dispute Compensation and Record Keeping are complied with. In addition, documented, additional, actual and reasonable costs incurred by the Contractor pursuant to following a written order to perform work (that was subsequently contained in an order on contract which was disapproved) will be considered as reimbursable.

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This work will be considered disputed work for which the Contractor will be compensated. Eligibility for compensation shall cease upon notification of the order on contract's disapproval. Failure by the Contractor to promptly notify, in writing, the Engineer and the Department of its contentions relative to any dispute or to maintain and furnish force account reports for disputed work shall constitute a waiver of the disputed work claim.

D. AUDITING OF RECORDS. The Contractor who has filed a dispute must have the following records available for audit at any time following the filing of such dispute, whether or not such dispute is part of a suit pending in the courts of this State. If a dispute is filed on behalf of a subcontractor or supplier, such subcontractor or supplier must also have substantially the following records available for audit any time following the filing of such dispute, whether or not such dispute is part of a suit pending in the courts of this State. The audit may be performed by employees of the Department or by an independent auditor appointed by the Department. The audit may begin on ten days' notice to the Contractor, subcontractor, or supplier as is appropriate. The Contractor, subcontractor, or supplier shall cooperate with the auditors. The Department will maintain the audit, its backup, reports, schedules and conclusions as confidential material. Failure of the Contractor, subcontractor, or supplier to maintain and retain sufficient records shall constitute a waiver of that portion of such dispute that cannot be verified and shall bar recovery thereunder.

Without limiting the generality of the foregoing, the auditors shall have available to them and the Contractor agrees to provide access to substantially the following documents:

1. Daily time sheets, job superintendent diaries or log sheets and foreman's daily reports.
2. Union agreements and reports, if any.
3. Insurance policies, welfare and benefits records or plans for union and non-union personnel.
4. Payroll register.
5. Individual employee earnings records.
6. Payroll tax returns.
7. Material invoices, purchase orders, and all material and supply acquisition contracts.
8. Material cost distribution work sheet.
9. Equipment records (list of company equipment, rates, depreciation schedules, daily equipment reports or logs, fueling logs or records, equipment lease purchase agreements, and equipment purchase invoices).
10. Vendor rental agreements, subcontractor invoices, agreements and back charge records.
11. Subcontractor payment certificates.
12. Canceled checks (payroll and vendors).

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13. Job cost ledger or report.
14. Job payroll ledger, petty cash journal and supporting vouchers.
15. General ledger, general journal (if used), and all subsidiary ledgers and journals together with all supporting documentation pertinent to entries made in these ledgers and journals.
16. Cash receipts, cash disbursements journal, and purchase journal.
17. Audited and unaudited financial statements for all years reflecting the operation on this project.
18. Depreciation records on all company equipment whether such records are maintained by the company involved, its accountant, or others.
19. If a source other than depreciation records is used to develop costs for the Contractor's internal purposes in establishing the actual cost of owning and operating equipment, all such other source documents.
20. All documents which reflect the Contractor's actual overhead during the years this Project was being performed.
21. All documents related to the preparation of the Contractor's bid including the final calculations on which the bid was based.
22. All documents which relate to each and every dispute together with all documents which support the amount of damages as to each dispute.
23. Work sheets used to prepare the dispute establishing the cost components for items of the dispute including, but not limited to, labor, benefits, insurance, materials, equipment, subcontractors, and all documents which establish the time periods, individuals involved, the hours and the rates for the individuals.

In the event the Contractor fails to substantially furnish the above required reports and accounting records, such failure shall constitute a waiver of the dispute for payment other than for payment at contract unit prices for the work performed.

E. **CONTRACTOR'S RESPONSIBILITY FOR WORK.** The Contractor is responsible for carrying out the provisions of the contract at all times, regardless of whether an authorized inspector is present or not. Any work or item that is, at any time, found to be out of specification or not in compliance with the plans shall remain the responsibility of the Contractor and shall be subject to such corrective measures that are approved in writing by the Engineer.

EXTRA FORCE ACCOUNT WORK, DISPUTE COMPENSATION AND RECORD KEEPING

(A) **CONTRACT ITEM CHARGES.** When an order-on-contract provides for similar items of work or materials which increase or decrease the itemized quantity provided for in the primary contract, the price to be paid therefor shall not exceed the unit bid price in the primary contract for such items.

(B) **NEW ITEM CHARGES.**

1. **Agreed Prices.** Agreed prices for new items of work or materials may be incorporated in the order-on-contract as the Department may deem them to be just and fair and beneficial to the Department. These prices must be supported by a complete price analysis in the order-on-contract or, by reference to average bid prices for similar type and quantity of work from other recent contracts. The price analysis will be based on an estimated breakdown of charges listed in the following paragraph 2. "Force Account Charges," unless some other basis is approved by the Department.

2. **Force Account Charges**

3. **Contractor Charges.** Where there are no applicable unit prices for extra work ordered and agreed prices cannot be readily established or substantiated, the Contractor shall be paid the actual and reasonable cost of the following:

(1) **Necessary Materials (including transportation to the site.)** Materials is defined to include all products incorporated in the temporary or permanent work. The following items consumed in progressing the work are also considered to be materials for which reimbursement with an allowance for profit and overhead will be made. These are oxygen, acetylene, propane, welding rods, grinding wheels, and saw blades. Separate reimbursement will not be made for all other products which may be consumed in progressing the work and reimbursement for these items is considered to be included in the reimbursement for overhead. Material used, if acquired by direct purchase, must be documented by bills or acceptable invoices. All prices on used material incorporated in either temporary or permanent work shall be billed at a fair value, less than the original cost when new. A reasonable salvage credit shall be given for substantial salvageable material recovered. Salvage value of substantial material recovered shall be determined by the Engineer-in-Charge in coordination with the Contractor.

(2) **Necessary labor costs including supplemental benefit payments.** Each class of labor shall be billed separately at actual payroll rates. Average rates based on different classes of labor will not be accepted.

(3) **Necessary payroll taxes and insurance payments and other such reasonable charges that are paid by the Contractor pursuant to existing written agreements with its employees and/or labor organizations.**

(4) **Sales taxes, if any, required to be paid on materials not permanently incorporated into the work under the order-on-contract.**

(5) **Equipment, truck and plant rentals, other than small tools.** The Contractor shall be reimbursed for the number of hours that the equipment truck or plant is actually used on a specified force account job. Equipment used

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by the Contractor shall be specifically described by the manufacturer, model number and date of manufacture and be of suitable size and suitable capacity required for the work to be performed. In the event the Contractor elects to use equipment of a higher rental rate than the equipment suitable for the work, payment will be made at the rate applicable to the suitable equipment. The equipment actually used and the suitable equipment upon which the rental rate is based will be recorded as a part of the record for force account work. The Engineer shall determine the suitability of the equipment. If there is a differential in the rate of pay of the operator of oversize or higher rate equipment, the rate paid for the operator will likewise be related to the suitable equipment.

(a) Contractor Owned Equipment, Trucks and Plant -- Contractor shall be reimbursed for its ownership costs and for its operating costs for self owned equipment at the rates listed in the Rental Rate Blue Book published by the Dataquest, Inc. applied in the following manner as modified by the 'Rate Adjustment Table'.

- [1.0] Ownership Costs -- It is mutually understood that the rates for ownership costs reimburse the Contractor for all nonoperating costs of owning the equipment, truck or plant including depreciation on the original purchase, insurance, applicable taxes, interest on investment, storage, overhead, repairs, moving the equipment onto and away from the project or work site, and profit. Reimbursement will be made for the hours of actual use as described below:
 - [1.1] Less than 8 hours of actual use, the product of the actual number of hours used or fraction thereof multiplied by the hourly rate, or the daily rate, whichever is less.
 - [1.2] Between 8 hours and 40 hours of actual use, the product of the actual number of hours used divided by 8 multiplied by the daily rate, or the weekly rate, whichever is less.
 - [1.3] Between 40 and 176 hours of actual use, the product of the actual number of hours used divided by 40 multiplied by the weekly rate, or the monthly rate, whichever is less.
 - [1.4] Over 176 hours of actual use, the product of the actual number of hours used divided by 176 multiplied by the monthly rate.
- [2.0] Operating Costs -- the rate for operating costs includes fuel, lubricants, other operating expendables, and preventative and field maintenance. Operating cost does not include the operator's wages. The Contractor shall be reimbursed the product of the number of hours of actual use multiplied by the Estimated Operating Cost/Hour.
- [3.0] The rates used shall be those in effect at the time the force account work is done as reflected in the then current publication of the Rental Rate Blue Book. When force account type analysis are used to establish agreed prices in accordance with Section

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(B)1 above, the rates used shall be those in effect when the agreed price is developed by the Contractor and submitted to the Engineer-in-Charge.

[4.0] The geographic Area Adjustment Factor shown on the map at the beginning of each section of the Rental Rate Blue Book shall not be applied to the equipment rates subsequently listed in each section, and shall not be used as a basis for payment.

[5.0] In the event that a rate is not established in the Rental Rate Blue Book for Construction Equipment for a particular piece of equipment, truck or plant, the Owner shall establish rates for ownership costs and operating costs for that piece of equipment, truck or plant that is consistent with its cost and expected life.

(b) Rented Equipment, Trucks and Plant --

[1.0] In the event that the Contractor does not own a specific type of equipment and must obtain it by rental, it shall be paid the actual rental rate for the equipment for the time that the equipment is used to accomplish the work or is required by the Engineer-in-Charge to be present, not to exceed the adjusted rental rate in the Rental Rate Blue Book, plus the reasonable cost of moving the equipment onto and away from the project site.

[2.0] The Contractor shall also be reimbursed for the operating cost of the equipment unless reflected in the rental price. Such operating cost shall be determined in the same manner as specified for Contractor Owned Equipment above.

[3.0] In the event that area practice dictates the rental of fully manned or fueled and maintained equipment, truck or plants, payment will be made on the basis of an invoice for the rental of the fully manned, fueled and/or maintained equipment, trucks or plants including all costs incidental to its use, including costs of moving to and from the site, provided the rate is substantiated by area practice.

(c) Maximum Amount Payable -- The maximum amount of reimbursement for the ownership costs of Contractor owned or the rental cost of rented equipment, trucks or plant is limited to the original purchase price of the equipment, truck or plant for any force account work as listed in the Green Guide for Construction Equipment published by the Dataquest, Inc. In the specific event when the ownership or rental reimbursement is limited by the original purchase price, the Contractor shall, nevertheless, be reimbursed for the Operating Cost/Hour for each hour of actual use.

(6) Profit and Overhead. Profit and overhead cost shall be computed at 20 percent of the following:

(a) Total Direct Labor Cost (actual hours worked multiplied by the basic hourly wage rate) plus supplemental benefits payments, payroll

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taxes, insurance payments and other labor related fringe benefits payments, payroll taxes, insurance payments and other related fringe benefit payments as defined in (2) and (3) above, but not including the overtime additive payments. Profit and overhead shall not be paid on the premium portion of overtime.

(b) Total Cost of Materials as defined in (1) above including the cost of transportation to the project site.

(7) Overhead shall be defined to include the following:

(a) Premium on bond;

(b) Premium on insurance required by the owner other than Workers Compensation Insurance, premium on public liability and property damage insurance, unemployment insurance, Federal old-age benefits, other payroll taxes and such reasonable charges that are paid by the Contractor pursuant to written agreement with its employee;

(c) All salary and expenses of executive officers, supervising officers or supervising employees;

(d) All clerical or stenographic employees;

(e) All charges for minor equipment such as small tools, including shovels, picks, axes, saws, bars, sledges, lanterns, jacks, cables, pails, wrenches, etc, and other miscellaneous supplies and services;

(f) All drafting room accessories such as paper, tracing cloth, reproduction costs, etc.

(8) Subcontractor Charges. When the work is performed by a subcontractor, the Contractor shall be paid the actual and reasonable cost of such subcontracted work as outlined above in items (1) through (5) under 3, Contractor Charges, but profit and overhead shall be figured at (25%) unless some other basis is approved by the Owner.

(9) Service Charges. When work is performed by, or a fee is paid to, a service provider, the contractor shall be paid the actual cost of the service fee plus a maximum five percent (5%) for contract supervision, overhead and profit. This 5% shall be applied once to the service fee regardless of who makes direct payments to the service provider.

(C) FORCE ACCOUNT REPORT. Payment for force account work will be made on the basis of the following reports.

1. The Contractor will deliver to the Engineer-in-Charge a daily summary of FORCE ACCOUNT WORK done on the contract. This summary on 8-1/2" x 11" paper will be delivered to the Engineer-in-Charge not later than closing time on the day following that for which the work is reported.

The summary shall contain:

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- a. A list of materials used indicating the amount and nature of each material. The cost (if known) should also be included. This must be documented later by proper receipts.
 - b. A list of equipment used indicating the number of hours used and the kind, type, and size of equipment.
 - c. A list of personnel by name, including the hours worked, and labor classification at which they were used on the force account work and the location by station or station of the work proposed.
 - d. A statement of the work accomplished by force account for that day.
 - e. This summary will be dated and signed by the Contractor's authorized representative and the Engineer-in-Charge.
 - f. The contract number and other identification as well as the name of the Contractor shall appear on the statement.
 - g. The Engineer-in-Charge will make any notations, remarks or comments on this form that may assist in final payments.
2. Within 5 calendar days after the end of each pay period, the Contractor shall deliver to the Engineer-in-Charge a FORCE ACCOUNT SUMMARY OF LABOR used on the work which shall include the name, hourly rate of pay, hours worked, fringe benefits, and/or other items as shown on the actual payroll.
3. On completion of the specific force account work, the Contractor shall within 10 calendar days, deliver to the Engineer-in-Charge a Force Account Summation wherein all materials, equipment, and labor charges are shown and totaled together with such other expenditures as are concerned with the force account item. This summation shall be dated and signed by the Contractor's authorized representative and the Engineer-in-Charge.
4. In the event the contractor fails to deliver the required force account documentation to the EIC within the time period specified in subsection (C), of these General specifications, and as a result the Order-on-Contract for the force account work is not fully approved at the date of final acceptance, the number of calendar days of the time period between final acceptance and the issuance of this force account Order-on-Contract, attributable to the Contractor's late force account submissions will extend the required payment data by an equal period of time.
- (D) TIME RELATED DISPUTE COMPENSATION.
1. As limited by Differing Site Conditions, Suspensions of Work, Significant Changes in the Character of the Work Provisions, the following elements of damage, and only the following elements, will be recoverable by the Contractor as "time related dispute damages" provided that they are actual and reasonable:
 - a. Documented additional or escalated job site labor expenses;
 - b. Documented additional or escalated costs for materials;

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- c. Documented additional or escalated equipment costs less appropriate credits, as such are determined in accordance with this Section;
 - d. Documented costs of extended job-site overhead (field costs, including field supervision); job-site overhead would include job superintendent, office engineer and clerical staff, but would not include working foremen;
 - e. An additional 10 percent of the total of items a, b, c and d for home office overhead and 10% for profit thereon except for the differing site conditions or significant change in character of the work clauses (Differing Site Conditions, Suspensions of Work, Significant Changes in the Character of the Work Provisions, Part A (1) and (3)) apply, no anticipated profits shall be allowed and where the suspension of work clause (Part A (2)) applies, no profit or anticipated profits shall be allowed;
 - f. Documented additional or escalated insurance and bond costs;
 - g. When the work is performed by a subcontractor, the Contractor shall be paid the actual and reasonable cost of such subcontracted work as outlined above in paragraphs 1(a) through 1(d) and the Contractor's main office overhead and profit shall be figured at 15% and 10% respectively, except for where the differing site conditions or significant change in character of the work clauses (Part A (1) and (3)) apply, no anticipated profits shall be allowed and where the suspension of work clause (Part A (2)) applies, no profit or anticipated profits shall be allowed;
 - h. The phrase "additional expenses" shall include expenses above or below those normally incurred in the performance of the work, less any appropriate credit. The phrase "escalation expenses" shall include unanticipated higher or lower costs and expenses attributable, with appropriate credits, to the performance of work or portions of work in a different time period than that which was indicated on the Owner approved progress schedule.
2. Equipment, truck or plant rentals, other than small tools:
- a. Equipment used by the Contractor shall be specifically described by the manufacturer, model number and date of manufacture and be of suitable size and capacity required for the work to be performed. In the event the Contractor elects to use equipment of a higher cost than the equipment suitable for the work, payment will be made at the actual cost rate applicable to the suitable equipment unless otherwise provided for in this section. The Engineer shall determine the suitability of equipment.

For purposes of computing Contractor's self-owned equipment, truck or plant costs, the rate used shall be based on the rate listed in the Rental Rate Blue Book published by Dataquest, Inc., with the appropriate adjustments noted in this specification, Part (B) (2).

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- b. In the event that a rate is not established in the Rental Rate Blue Book for Construction Equipment for a particular piece of equipment, truck or plant, the Owner shall establish a rate for ownership costs and operating costs for that piece of equipment, truck or plant that is consistent with its cost and expected life.
 - c. The Contractor shall be reimbursed for its operating costs for self-owned equipment based on actual cost data. Operating costs shall include fuel, lubricants, other operating expendables and preventive and field maintenance. Operating costs do not include the operator's wages. In the event, after documented and demonstrated due diligence, actual operating costs are not ascertainable, then the Contractor will be compensated utilizing not more than 50% of the operating costs set forth in the "Rental Rate Blue Book" and the Contractor shall be reimbursed the product of the number of hours of actual use multiplied by the operating cost per hour.
 - d. The rate for idle equipment and stand-by equipment, shall be based upon the rate of depreciation specified in the Contractor's books and records, or 50% of the rate set forth in the "Rental Rate Blue Book," published by Dataquest, Inc. with the appropriate adjustments noted in this specification, whichever is greater. In the event the equipment is fully depreciated, the Department will pay the actual ownership costs based upon Department audit of the Contractor's books and records.
 - e. The maximum amount of reimbursement for the ownership costs of Contractor owned or the rental cost of rented equipment, trucks or plant is limited to the original purchase price of the equipment, truck or plant as listed in the Green Guide for Construction Equipment published by the Dataquest, Inc. In the specific event when the ownership or rental reimbursement is limited by the original purchase price, the Contractor shall, nevertheless, be reimbursed for the operating cost per hour for each hour of actual use.
 - f. For purposes of rented equipment, the provisions of this specification, Part (B), New Item Charges, are controlling.
3. The parties agree that, in any dispute for time related damages, the Department will have no liability for the following items and the Contractor further agrees it shall make no claim for the following items:
- a. Profit, in excess of that provided in this specification, Part (D) (1)(e) and (g);
 - b. Loss of anticipated or unanticipated profit;
 - c. Labor inefficiencies and loss of productivity;
 - d. Home office overhead in excess of that provided in this specification, Part (D) (1)(e) and (g);
 - e. Consequential damages, including but not limited to interest on monies in dispute, including interest which is paid on such monies, loss of

bonding capacity, bidding opportunities, or interest on retainage or investment, or any resultant insolvency;

- f. Indirect costs or expenses of any nature;
- g. Direct or indirect costs attributable to performance of work where the Contractor, because of situations or conditions within its control, has not progressed in a manner satisfactory to the Engineer.
- h. Attorneys fees, or claims preparation expenses.

4. **REMEDIES EXCLUSIVE:** With respect to time related dispute compensation provisions, the parties agree that the Department shall have no liability to the Contractor for expenses, costs, or items of damage other than those which are specifically identified as payable under this specification, Part (D). In the event any legal action is instituted against the Department by the Contractor on account of any such dispute for additional compensation, whether on account of time related dispute, delay, acceleration, breach of contract, or otherwise, the Contractor agrees that the Department's liability will be limited to those items which are specifically identified as compensable under this specification, Part (D). The Contractor further agrees to make no claim for expenses other than those which are specifically identified as compensable under this specification, Part (D). Nothing in this Section is intended to create any liability of the Department not existing at common law or pursuant to the terms of this contract or to prevent the Contractor from filing a claim in a court of law.

(E) **REQUIRED CONTENT OF DISPUTE SUBMISSION.** All disputes must be submitted in writing to the Engineer, and must be in sufficient detail to enable the Engineer to ascertain the basis and the amount of each dispute. If requested and as a minimum, the following information must be provided when such information is ascertainable by the Contractor:

1. **TIME RELATED DISPUTE SUBMISSIONS.**

- a. A description of the operations that were delayed, the reasons for the delay, how they were delayed, including the report of all scheduling experts or other consultants, if any.
- b. An as-built chart, "Critical Path Method" scheme or other diagram or chart depicting in graphic form how the operations were or are presumed to be adversely affected.
- c. The date on which actions resulting in the dispute occurred or conditions resulting in the dispute became evident.
- d. A copy of the notice of dispute required as per Dispute Resolution and Disputed Work Provisions, Part A(3) for the specific dispute by the Contractor.
- e. To the extent known, the name, function, and activity of each Department official, or employee or agent, involved in, or knowledgeable about facts that gave rise to such dispute.
- f. The name, function, and activity of each Contractor or subcontractor official, or employee, involved in, or knowledgeable about facts that gave rise to such dispute.

- g. The identification of any pertinent documents, and the substance of any material oral communication relating to such dispute.
- h. A statement as to whether the additional compensation or extension of time if requested is based on the provisions of the contract or is an alleged breach of contract.
- i. The amount of additional compensation sought and a breakdown of that amount into the categories specified as payable under this specification, Part (D) above.
- j. If an extension of time is also requested, the specific days for which it is sought and the basis for such request as determined by an analysis of the construction progress schedule.

2. FOR OTHER DISPUTES INCLUDING ACCELERATION DISPUTES.

- a. A detailed factual statement of the dispute providing all necessary dates, locations and items of work affected by the dispute.
- b. The date on which actions resulting in the dispute occurred or conditions resulting in the dispute became evident.
- c. A copy of the "notice of dispute" required for the specific dispute by the contract pursuant to Dispute Resolution and Disputed Work Provisions, Parts B or C.
- d. The name, function, and activity of each Department official or employee or agent involved in, or knowledgeable about facts that gave rise to such dispute.
- e. The name, function and activity of each Contractor or subcontractor official, employee or agent involved in or knowledgeable about facts that gave rise to such dispute.
- f. The specific provisions of the contract which support the dispute and a statement of the reasons why such provisions support the dispute.
- g. The identification of any pertinent documents and the substance of any material oral communications relating to such dispute.
- h. A statement as to whether the additional compensation or extension of time requested is based on the provisions of the contract or an alleged breach of contract.
- i. If an extension of time is also requested, the specific days for which it is sought and the basis for such request as determined by an analysis of the construction schedule.
- j. The amount of additional compensation sought and a breakdown of that amount shall conform to the requirements of this specification, Part (B) except for acceleration disputes which shall conform to the requirements and categories specified in Part (D) above.

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(F) **REQUIRED CERTIFICATION OF DISPUTES.** When submitting any dispute over \$50,000, the Contractor must certify in writing, under oath and in accordance with the formalities required by the contract, as to the following:

1. That supportive data is accurate and complete to the Contractor's best knowledge and belief;
2. That the amount of the dispute and the dispute itself accurately reflects what the Contractor in good faith believes to be the Department's liability;
3. If the Contractor is an individual, the certification shall be executed by that individual. If the Contractor is not an individual, the certification shall be executed by:
 - (1) Senior company official in charge at the Contractor's plant or location involved;or
 - (2) An officer or general partner of the Contractor having overall responsibility for the conduct of the Contractor's affairs.

(G) **CONTRACTOR'S COST RECORDS.** The Contractor shall maintain records of all required payrolls, and of the details that comprise its total cost pursuant to any and all records maintained pursuant to Dispute Resolution and Disputed Work Provisions and Extra Force Account Work, Dispute Compensation and Recordkeeping, and it shall, at any time within six years following the date of final payment of the project, make such records available, upon request therefor, to the Department for review and audit, if deemed necessary by the Department. In case all or a part of such records are not made so available, the Contractor understands and agrees that any items not supported by reason of such unavailability of the records shall be disallowed, or if payment therefor has already been made, the Contractor shall, upon demand in writing by the Department, refund to the Department the amount so disallowed.

DIFFERING SITE CONDITIONS, SUSPENSIONS OF WORK, SIGNIFICANT CHANGES IN THE CHARACTER OF THE WORK PROVISIONS.

The following provisions shall apply to this contract:

A.(1) Differing site conditions.

- (i) During the progress of the work, if subsurface or latent physical conditions are encountered at the site differing materially from those indicated in the contract or if unknown physical conditions of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in the work provided for in the contract, are encountered at the site, the party discovering such conditions shall promptly notify the other party in writing of the specific differing conditions before the site is disturbed and before the affected work is performed.
- (ii) Upon written notification, the Engineer will investigate the conditions and if it is determined that the conditions materially differ and cause an increase or decrease in the cost or time required for the performance of any work under the contract, an adjustment, excluding anticipated profits, will be made and the contract modified in writing accordingly. The Engineer will notify the Contractor of the determination whether or not an adjustment of the contract is warranted.
- (iii) No contract adjustment which results in a benefit to the Contractor will be allowed unless the Contractor has provided the required written notice.
- (iv) The aforesaid differing site condition clause (Part A.(1)) shall be governed by the notice provisions set forth above, and the recordkeeping and other requirements of Dispute Resolution and Disputed Work Provisions, and additional compensation via order on contract(s), if any, shall be made pursuant to Extra Force Account Work, Dispute Compensation and Recordkeeping, Part (B), New Item Charges, 1 (Agreed Prices) or 2 (Force Account Charges) and (E), Required Content of Dispute Submission (2) and (F), Required Certification of Dispute. However, the equipment compensation provisions shall be governed and controlled by the provisions of Part (D) (2).

(2) Suspensions of Work ordered by the Engineer.

- (i) If the performance of all or any portion of the work is suspended or delayed by the Engineer in writing for an unreasonable period of time (not originally anticipated, customary, or inherent to the construction industry) and the Contractor believes that additional compensation and/or contract time is due as a result of such suspension or delay, the Contractor shall submit to the Engineer in writing a request for adjustment within 7 calendar days of receipt of the notice to resume work. The request shall set forth the reasons and support for such adjustment. The record keeping requirements of Section 10.02 must be complied with in connection with any requests for reimbursement.
- (ii) Upon receipt, the Engineer will evaluate the Contractor's request. If the Engineer agrees that the cost and/or time required for the performance of the contract has increased as a result of such suspension and the suspension was caused by conditions beyond the control of and not the fault of the Contractor, its suppliers, or subcontractors at any approved tier, and not caused by weather, the Engineer will make an adjustment (excluding profit) and modify the

ATTACHMENT "K"

contract in writing accordingly. The Contractor will be notified of the Engineer's determination whether or not an adjustment of the contract is warranted.

- (iii) No contract adjustment will be allowed unless the Contractor has submitted the request for adjustment within the time prescribed.
 - (iv) No contract adjustment will be allowed under this clause to the extent that performance would have been suspended or delayed by any other cause, or for which an adjustment is provided for or excluded under any other term or condition of this contract.
 - (v) The aforesaid suspension of work clause (Part A.(2)) shall be governed by the notice provisions set forth above, and the recordkeeping and other requirements of Dispute Resolution and Disputed Work Provisions, and additional compensation via order on contract(s), if any, shall be made pursuant to Extra Force Account Work, Dispute Compensation and Recordkeeping, Part (D), Time Related Dispute Compensation, (E), Required Content of Dispute Submission and (F), Required Certification of Disputes.
- (3) Significant changes in the character of work.
- (i) The Engineer reserves the right to make, in writing, at any time during the work, such changes in quantities and such alterations in the work as are necessary to satisfactorily complete the project. Such changes in quantities and alterations shall not invalidate the contract nor release the surety, and the Contractor agrees to perform the work as altered.
 - (ii) If the alterations or changes in quantities significantly change the character of the work under the contract, whether such alterations or changes are in themselves significant changes to the character of the work, or by affecting other work, cause such other work to become significantly different in character, an adjustment excluding anticipated profit, will be made to the contract. The basis for the adjustment shall be agreed upon prior to the performance of the work. If a basis cannot be agreed upon, then an adjustment will be made either for or against the Contractor in such amount as the Engineer may determine to be fair and equitable.
 - (iii) If the alterations or changes in quantities do not significantly change the character of the work to be performed under the contract, the altered work will be paid for as provided elsewhere in the contract.
 - (iv) The term "significant change" shall be construed to apply only to the following circumstances:
 - (A) When the character of the work as altered differs materially in kind or nature from that involved or included in the original proposed construction; or
 - (B) When a major item of work, as defined elsewhere in the contract, is increased in excess of 125 percent or decreased below 75 percent of the original contract quantity. Any allowance for an increase in quantity shall apply only to that portion in excess of 125 percent of original contract item quantity, or in case of a decrease below 75 percent, to the actual amount of work performed.

ATTACHMENT "K"

- (C) The term "major item" of work shall mean any item for which the original bid price multiplied by the original contract quantity exceeds \$50,000 or 2% of the total contract bid price, whichever is less.
 - (D) Certain items of work may be "fixed quantity" items. That is, payment will be restricted to the quantity stated in the Estimate of Quantities. If, during the progress of the work the stated quantity is determined to be in error, the terms of Dispute Resolution and Disputed Work Provisions, Part (3)(iv)(B) shall apply with the following alterations:
 - 1. The major item of work requirement shall not apply.
 - 2. Significant change shall be defined as an actual quantity in excess of 125 percent of the stated quantity, or less than 75 percent of the stated quantity.
 - (v) The aforesaid significant change in character of work clause (Part (A)(3)) shall be governed by the notice, recordkeeping and other requirements of Dispute Resolution and Disputed Work Provisions, and additional compensation via order on contract(s) shall be made for time related costs, if any, pursuant to Extra Force Account Work, Dispute Compensation and Recordkeeping, Parts (D) and (E) and (F) and for increased costs, if any, pursuant to Part (B), New Item Charges, 1 (Agreed Price) or 2 (Force Account Charges) and (E)2, Required Content of Dispute Submission and (F), Required Certification of Dispute, but, the equipment compensation shall be governed and controlled by the provisions of Part (D)2.
 - (vi) With respect to the aforesaid significant changes in the character of work clause (this specification, Part (A)(3)), the contractor or the Department, as the case may be, must make written notification to the other party of the existence of the 'significant change'. This notice shall be given in a timely manner with respect to the date that either party had, or should have had, knowledge of an event, matter, occurrence of work order which results in a significant change in the work. If the affected work is in progress, notice shall be given within 3 days of knowledge of the change. If the affected work is not in progress, notice shall be given within 10 days of knowledge of the change. The timely issuance of a notice of 'significant change' shall be a necessary requirement for consideration of contract alterations as provided in this section.
- (4) Definitions.
- (a) "Commissioner" and "Engineer" are defined in Article 2 of the Agreement.
 - (b) See Paragraph 1 (i) above – Subsurface or latent physical conditions "differing materially" from those "originally encountered" and "generally recognized" are defined as conditions at the site materially differing from any shown on the contract plans or indicated in the specifications, or such conditions as could not reasonably have been anticipated by the Contractor and were not anticipated by the City, which conditions will materially affect the cost of the work to be done under the contract.
 - (c) See paragraph 1 (ii) above – "written notification" is defined as written notice sent by the Contractor by Registered Mail addressed to the Commissioner, Department of Design and Construction, City of New York, 30-30 Thomson Avenue, Long Island City, NY 11101.

- (d) See paragraph 2 (i) above –
1. "Unreasonably period of time" is defined as a period of time not anticipated in the Contract Documents and beyond the control of the Contractor.
 2. "Not originally anticipated" is defined as it relates to delay in completing the work caused solely by the acts or omissions of The City, its officers, agents or employees; or the acts or omissions of other contractors on this project; or supervening conditions entirely beyond the control of either the Contractor or the City (such as but not limited to: Acts of God, the public enemy, excessive inclement weather, war or other national emergency making performance temporarily impossible or illegal, or strikes or labor disputes not brought about by any act or omission of the Contractor).
- (e) See paragraphs 3 (ii) and 3 (iii) above – "significantly change the character of the work" is defined as it relates to alterations or changes in quantities in a manner which materially affected the substances of the contract, or increase the price to be paid by more than ten percent (10%) of the price bid on a lump sum contract; ten percent (10%) of the total bid cost, determined by summing the products of each of the Engineer's estimated quantities and their respective unit bid price on a unit price contract; and determined by multiplying the Engineer's Estimate of Total cost by the Contractor's bid percentage on a Percentage-Bid Contract.
- (f) See paragraph 3 (iv) (B) above – "major item of work" is defined as any scheduled item for which the original bid with the bidding quantities exceed 2% of the total contract bid price.

B. If the Department determines that as a result of the aforesaid differing site condition, suspension of work clauses and significant change in the character of work clauses, that an adjustment in the contract price is warranted, the Department shall first attempt to arrive at an agreed price with the contract. If unsuccessful, the Department may make such adjustments to the contract as is determined to be fair and equitable utilizing Owner estimates. Commencing with the issuance of notice, and through the date of agreement between the Department and the contractor, all work subject to these provisions shall be treated as Disputed Work, with daily recordkeeping in accordance with the provisions of Dispute Resolution and Disputed Work Provisions.

C. If any of the notice or other provisions of this specification, Part A are in conflict with any other of the provisions of the Standard Specifications, then the provisions of this specification, Part (A) shall prevail and take precedence and be of force over and against any said conflicting provision of said contract.

D. Solely for purposes of the aforesaid specification, Parts A(1),(2) and (3), and solely for purposes of disputes as to records pursuant to Dispute Resolution and Disputed Work Provisions, Part (A)(4), the Engineer shall be the Engineer-in-Charge.

**CONTRACTOR INITIATED VALUE ENGINEERING CHANGE PROPOSAL
(CIVEC)**

A. Purpose and Scope

The term "proposal" as used in this Subsection is construed to mean a Contractor Initiated Value Engineering Change (CIVEC) Proposal submitted by the Contractor for changing the Plans, Specifications, or other requirements of the Contract. The Value Engineering Change Proposal shall conform with the following:

It is the intent of this provision to share with the Contractor any cost savings which may be generated on this Contract as the result of CIVEC proposals offered by the Contractor and approved by the Department. The purpose is to encourage the use of the Contractor's ingenuity and experience in arriving at a lower cost alternative with any time-saving construction methods other than those reflected in the Contract Documents, by the sharing of savings resulting therefrom. The proposals contemplated are those that could produce a savings to the Department, without, in the sole judgment of the Deputy Chief Engineer, impairing the essential functions and characteristics of the Project or a portion of the Work involved. They include, but are not limited to: safety, service, life, stage construction, economy of operation, ease of maintenance and desired appearance.

B. Submittal of CIVEC Proposal

The Contractor may submit a CIVEC only after Award of the Contract. The CIVEC may be accepted within 30 (thirty) days after Award of Contract and should be approved by the New York State Department of Transportation.

B-1. Submittal of Initial CIVEC Proposal

An initial proposal is required for all CIVEC proposals and shall outline the general technical concepts associated with the proposal and the estimated savings which will result. The initial proposal will be reviewed by the Department and, if found to be conceptually acceptable, approval to submit a Final Proposal will be granted by the Department. A finding of "conceptual acceptability" of the initial proposal however, in no way obligates the Department to approve the final proposal. Further, the Contractor shall have no claim against the City as a result of the rejection of any such initial or final proposal.

B-2. Submittal of Final CIVEC Proposal

At a minimum, the following materials and information shall be submitted with each CIVEC proposal, plus any additional information requested by the Department.

- a) A statement that the CIVEC is submitted as the "Final Value Engineering Change Proposal," as per Department approval of the Initial CIVEC Proposal.
- b) A description of the difference between the existing contract requirements and the proposed change, and the comparative advantages of each, including considerations of service life, economy of operation, ease of maintenance, desired appearance and safety.
- c) Complete plans and specifications showing the proposed revisions relative to the original contract features and requirements.
- d) A complete cost analysis indicating the Final Estimate costs and quantities to be replaced by the CIVEC proposal, the new costs and quantities generated by the CIVEC proposal, and the cost effects of the proposed changes on operational, maintenance and other considerations.
- e) Pursuant to Article 25 of the Agreement, Value Engineering Change Proposals are considered Change Orders, therefore, a statement of the time, by which adopting of the proposal must be executed so as to obtain the maximum benefit during the remainder of the Contract, is required. The date must be selected to allow the Department ample time for review and processing of the Change Order, but without affecting the Contractor's schedule. Should the Department find that insufficient time is available for review and processing, it may reject the CIVEC proposal solely on such basis. If the Department fails to respond by the date specified, the Contractor shall consider the CIVEC proposal rejected unless otherwise notified in writing by the Department; and shall in any event have no claims against the City as a result thereof.
- f) A statement as to the effect the CIVEC proposal will have on the time for completion of the contract.
- g) A description of any previous use or testing of the CIVEC proposal on another Department project, indicate the date, contract number and the action taken by the Department.

C. Conditions

CIVEC proposals will not be considered in determining the lowest responsible bidder. CIVEC proposals will only be considered after award, and only when all of the following conditions are met:

1. The Contractor is cautioned not to base any bid prices on the anticipated approval of the CIVEC proposal and to recognize that such proposal may be rejected and that the Contractor will thus, be required to complete the Contract in accordance with the plans and specifications bid.
2. All CIVEC proposals, whether or not approved by the Department for use in this contract, apply only to the on-going Contract or Contracts referenced in the CIVEC proposal and become the property of the Department without restriction as may otherwise be imposed by the Contractor, on their use and disclosure. The Department shall have the right to use, duplicate and disclose in whole or in part any data necessary for the utilization of the proposal. The Department retains the right to utilize any accepted CIVEC proposal or part thereof, on any subsequent project without any obligation to the Contractor submitting the same.
3. If the Department already has under consideration certain revisions to the Contract or has approved certain changes in specifications or standards for general use which are then subsequently incorporated in a CIVEC proposal submitted by the Contractor, the Department shall reject the Contractor's proposal and proceed with such revisions if it so desires without any obligation to the Contractor.
4. The Contractor shall have no claim against the City for any costs or delays incidental to the Department's rejection or approval of a CIVEC proposal, including but not limited to development costs, anticipated profits, or increased material and labor costs resulting from delays in the review of such CIVEC proposal.
5. The Department shall be the sole judge as to whether a CIVEC proposal qualifies for consideration and evaluation. It may reject, at will, any CIVEC proposal that requires excessive time or costs for review, evaluation and/or investigations, or which is not consistent with the Department's design policies and basic design criteria for the project; as well as, for any other reason the Department deems appropriate, without explanation.

6. The Engineer may reject all or any portion of the work performed pursuant to an approved CIVEC proposal if it is believed that unsatisfactory results are being obtained. The Engineer may direct the removal of such rejected work and require the Contractor to proceed in accordance with the original Contract requirements without reimbursement for any work performed under the CIVEC proposal, or for its removal. Where modifications to the CIVEC are approved in order to adjust to field or other conditions, reimbursement will be limited to the total amount payable for the work at the Contract bid prices as if it were constructed in accordance with the original Contract requirements. Such rejection or limitation of reimbursement shall not constitute the basis of any claim against the City for delay or for any other costs.
7. The CIVEC proposal shall not be experimental in nature but shall have been proven to the Department's satisfaction under similar or acceptable conditions on another Department project or at another location acceptable to the Department.
8. CIVEC Proposals shall be considered only if equivalent options are not already provided in the Contract documents.
9. The savings generated by the CIVEC proposal must be of sufficient significance, in the sole judgment of the Department, to warrant review and processing.
10. A CIVEC proposal changing the types and or thickness of the pavement structure will not be considered.
11. If additional information is deemed necessary by the Engineer to evaluate the CIVEC proposal, this information must be provided in a timely manner to allow sufficient time for review. Failure to do so will result in rejection of the CIVEC proposal. Such additional information should include but not be limited to design changes, field investigation and survey results, design computations, and field change sheets.
12. No changes to the work shall be considered as CIVEC eligible, if they are the result of design errors or omissions which would have needed correction notwithstanding any CIVEC provision in the specification; even if the need for such correction is first brought to the Engineer's attention by the Contractor.

D. Payment

If the CIVEC proposal is accepted by the Department, the changes and payments will be made in accordance with the applicable sections of the Procurement Policy Board (PPB) Rules and this contract. Reimbursement to the Contractor shall be made as follows:

1. The changes will be incorporated into the original Contract proposal as submitted by the Contractor via changes in the quantity of unit bid items, changes in the amounts of lump sum items and new agreed priced items, as appropriate.
2. The cost of the revised work as determined from the aforementioned changes in quantities, or new items will be paid directly. In addition to such payment, the Department will pay to the Contractor, via a separate item, 50 percent of the savings to the Department as reflected by the difference between the above payment and the cost of the related construction required by the original Contract plans and specifications computed at Contract bid prices.
3. The Contractor's costs for development, design and implementation of the CIVEC proposal are not eligible for reimbursement.
4. **The Contractor may submit CIVEC proposals on behalf of an approved subcontract, provided that reimbursement is made by the Department to the Contractor and that the terms of the pass through to the subcontractor are satisfactorily negotiated and accepted by the Contractor and Subcontractor before the CIVEC proposal is submitted to the Department. Subcontractors may not otherwise submit a CIVEC proposal, except through the prime Contractor.**

NO TEXT

ITEMIZED PROPOSAL

To the State Department of Transportation:

In submitting this bid the undersigned declares to be the only person or persons interested in the said bid; that it is made without any connection with any person making another bid for the same contract; that the bid is in all respects fair and without collusion, fraud or mental reservation; and that no official of the State, or any person in the employ of the State is directly or indirectly interested in said bid or in the supplies or work to which it relates, or in any portion of the profits thereof.

The undersigned also hereby declares to have carefully examined the plans, specifications and form of contract, and to have personally inspected the actual location of the work together with the local sources of supply, to be satisfied as to all the quantities and conditions, and understands that in signing this proposal waives all right to plead any misunderstanding regarding the same.

The undersigned further understands and agrees to furnish and provide for the respective item price bid all the necessary material, machinery, implements, tools, labor services and other items of whatever nature, and to do and perform all the work necessary under the aforesaid conditions, to complete the improvement of the aforementioned project in accordance with the plans and specifications for said improvement, which plans and specifications it is agreed are a part of this proposal, and to accept in full compensation therefore the amount of the summation of the products of the approximate quantities multiplied by the unit prices bid. This summation will hereinafter be referred to as the gross sum bid.

The undersigned further agrees to accept the aforesaid unit bid prices as compensations for any additions or deductions caused by variation in quantities due to more accurate measurement, and for use in the computation of the value of the work performed for monthly estimates.

The undersigned further agrees that at any time during the progress of work the State adds, alters or omits portions of the work it shall so perform such work and accept compensation in accordance with the Standard Specifications.

The undersigned further understands and agrees not to start any work until the contract agreement is signed by the Commissioner or the Commissioner's duly authorized representative. In case the undersigned voluntarily undertakes to start work, other than that expressly prohibited in this Subsection, after the contract agreement is signed by the Commissioner but prior to approval by the State Comptroller, the undersigned does so entirely at its own risk and without obligation or responsibility on the part of the State unless and until the awarded contract becomes effective pursuant to Section 112 of the State Finance Law by approval of the State Comptroller and filing in the Office of the State Comptroller; and hereby agrees and warrants that, as a prerequisite to the start of any such voluntary work, accepts, assumes and undertakes all of the provisions of this proposal and of the plans and specifications of the proposed contract, including all of the provisions and responsibilities thereof relative to (1) damage, indemnification and holding the State harmless as set forth in said contract documents, and (2) actually furnishing in advance of any contract operations, the required insurance policies of each and every kind and amount as called for in said contract documents, particularly with relation to workers compensation and liability insurance policies as set forth in the related specifications; and also agrees and warrants that all of such policies will be in force and effect on the date of the start of any such contract operations, whether or not the contract documents have been executed and filed as aforesaid. In no event shall the undersigned start any contract work which involves a disturbance of the contract site prior to execution of the contract by the Comptroller.

UNITED STATES DEPARTMENT OF TRANSPORTATION HOTLINE

Persons with knowledge of bid collusion (i.e. contractors, suppliers, workpersons, etc.), or other questionable contract related practices (inadequate materials, poor workmanship, theft of materials, etc.), are encouraged to report such activities by calling the **U.S. D.O.T. HOTLINE**. The **HOTLINE** number is 1-800-424-9071 and calls will be answered from 8:00 A.M. to 5:00 P.M. EST, Monday through Friday.

This **HOTLINE** is under the direction of the U.S.D.O.T.'s Inspector General. All information will be treated confidentially and the caller's anonymity will be respected.

NEW YORK STATE INSPECTOR GENERAL HOTLINE

Reports of New York State Governmental Misconduct may be made in strict confidence to the New York State Inspector General on the Toll Free Statewide **HOTLINE** or by writing to the Office of the Inspector General. The Toll Free Statewide **HOTLINE** telephone number is 1-800-367-4448 and calls will be answered between 8:00 A.M. and 4:30 P.M., Monday through Friday. The address of the Office of the State Inspector General is the State Capital, Executive Chamber, Albany, New York 12224.

ATTACHMENT "P"

PROMPT PAYMENTS BY THE CONTRACTOR. In accordance with Section 139-f(2) of the State Finance Law, the Contractor shall pay each Subcontractor and materialman for the value of work performed pursuant to contract no later than seven (7) calendar days from the receipt of each payment the Contractor receives from NYC Department of Design and Construction (NYCDDC). Payment by the Contractor to Subcontractors or materialmen shall reflect the quantities or percentage of work completed by the Subcontractor or materials furnished by the materialmen, and paid by NYCDDC; and such payment shall be based upon the actual conditions of the subcontract or purchase order. The Contractor shall not hold any retainage, but may deduct an amount necessary to satisfy any claims, liens or judgments against a Subcontractor or materialman which have not been fully discharged.

The Contractor shall maintain an accounting system acceptable to the NYCDDC to track payments made by the City to the Contractor and payments made by the Contractor to each Subcontractor, Manufacturer, Fabricator or Material Supplier by item and by date.

CIVIL RIGHTS MONITORING AND REPORTING.

SEE SECTION 105-21 OF THE
NEW YORK STATE
DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS

The Contractor shall use the current version of NYS Department of Transportation approved Construction Civil Rights Reporting Software (EBO) which is available at the following website:

<https://ebo.dot.ny.gov>

The software is free. Prime contractors, vendors (subcontractors, suppliers, etc.), and agency compliance staff will have access to the software. The prime contractor shall be required to print reports from EBO for submission to the Resident Engineer each month, not later than the 15th of the following month. Data shall be current through the end of the last full payroll week for that month, or as otherwise approved by the Engineer to coordinate with contract payment submittals.

**APPENDIX 2
IRAN DIVESTMENT ACT**

As a result of the Iran Divestment Act of 2012 (Act), Chapter 1 of the 2012 Laws of New York, a new provision has been added to the State Finance Law (SFL), § 165-a, effective April 12, 2012. Under the Act, the Commissioner of the Office of General Services (OGS) will be developing a list (prohibited entities list) of "persons" who are engaged in "investment activities in Iran" (both are defined terms in the law). Pursuant to SFL § 165-a(3)(b), the initial list is expected to be issued no later than 120 days after the Act's effective date, at which time it will be posted on the OGS website.

By entering into this Contract, Contractor (or any assignee) certifies that once the prohibited entities list is posted on the OGS website, it will not utilize on such Contract any subcontractor that is identified on the prohibited entities list. Additionally, Contractor agrees that after the list is posted on the OGS website, should it seek to renew or extend the Contract, it will be required to certify at the time the Contract is renewed or extended that it is not included on the prohibited entities list. Contractor also agrees that any proposed Assignee of the Contract will be required to certify that it is not on the prohibited entities list before the New York State Department of Transportation (NYSDOT) may approve a request for Assignment of Contract

During the term of the Contract, should NYSDOT receive information that a person is in violation of the above-referenced certification, NYSDOT will offer the person an opportunity to respond. If the person fails to demonstrate that it has ceased its engagement in the investment which is in violation of the Act within 90 days after the determination of such violation, then NYSDOT shall take such action as may be appropriate including, but not limited to, imposing sanctions, seeking compliance, recovering damages, or declaring the Contractor in default.

NYSDOT reserves the right to reject any request for assignment for an entity that appears on the prohibited entities list prior to the award of a contract, and to pursue a responsibility review with respect to any entity that is awarded a contract and appears on the prohibited entities list after contract award.

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ATTACH TO CONTRACT DOCUMENTS

**THE CITY OF NEW YORK
DEPARTMENT OF DESIGN AND CONSTRUCTION
INFRASTRUCTURE DIVISION
BUREAU OF DESIGN**

PROJECT ID: HWXRCPLZ

**RECONSTRUCTION OF
ROBERTO CLEMENTE PLAZA**

**INCLUDING SEWER, WATER MAIN, STREET LIGHTING,
AND TRAFFIC SIGNAL WORK**

Together With All Work Incidental Thereto

**BOROUGH OF THE BRONX
CITY OF NEW YORK**

ADDENDUM NO. 3

DATED: March 23, 2009

This Addendum is issued for the purpose of amending the requirements of the Contract Documents and is hereby made part of said Contract Documents to the same extent as if it was originally included therein.

GAS COST SHARING (EP-7) STANDARD SPECIFICATIONS

EP-7 GAS COST SHARING STANDARD SPECIFICATIONS

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I - NOTICE TO ALL BIDDERS; GAS COST SHARING WORK

All prospective bidders are hereby advised that, pursuant to the "Gas Facility Cost Allocation Act", ("the Act"), the City of New York has entered into an agreement ("the Agreement") with the gas companies (Con Edison or National Grid (formerly KeySpan Energy Delivery)) operating in their respective areas of the City to "share" the cost of facility relocation and/or support and protection of facilities disturbed by proposed water and/or sewer and related City work specified in this contract. Therefore, bid items, specifications and estimated quantities for the incremental costs of support and protection of certain gas facilities have been included in this contract. The low bid for this contract shall be determined by examining each bid for all work to be performed under this contract including any work of support and protection of gas facilities to be performed. The Contractor shall not seek additional compensation from gas companies except as specifically set forth in its contract.

II - GENERAL PROVISIONS; GAS COST SHARING WORK

1. General:

The Contractor shall perform City work with interferences from existing live and abandoned gas facilities. This shall be defined as utility work. Therefore, this contract include bid items, specifications and estimated quantities designed to fully compensate him/her for the incremental costs of supporting, protecting, provide accommodations and, avoid disturbing gas facilities located in the streets shown on the contract drawings. In the event that any other provisions of this contract related to gas facilities (or private utilities) conflict with these provisions, these provisions shall supersede and govern all work related to gas facilities owned by the companies operating in the project area. All utility work, as defined in these specifications, including changes and additions thereto shall be paid solely by the City except when specified otherwise in this contract. Contractor hereby agrees that the facility operator shall not be liable to pay him/her for any work performed including extra utility work. Contractor agrees that its bid prices include all compensation for loss of productivity and efficiency, idle time, delays (including any delays occasioned by negotiation of a contract change), change in operations, mobilization, demobilization, remobilization, added cost or expense, lost of profit, other damages or impact costs that may be suffered by or because of utility work, or the presence of gas facilities in the proximity of City work and that it will not seek additional compensation for these items. All disputes shall be resolved as specified in the contract.

Pursuant to the Act, Agreement, and the New York City Administrative Code, the gas company(ies) has been directed by the Commissioner and is required to perform all maintenance, repairs, replacement, shifting, alteration, relocation, and/or removal work that are not part of this contract. By having bid on this contract, the Contractor understands and agrees that the Commissioner has preasserted any right the City has to require, including the issuance of any directives or so called "order outs" under the New York City Administrative Code, any or all gas companies to maintain, repair, replace, protect, support, shift, alter, relocate, and/or remove all gas facilities that are about to be disturbed by the City contract work. The issuance of additional such directives during the performance of the contract work, where necessary in the sole judgment of the Commissioner, shall be initiated by such Commissioner as set forth in the relevant sections of the Act and Agreement. Contractor further agrees to insert such requirements as set forth herein above into any contracts with its approved subcontractors so that its subcontractors also understand and agree to such contract requirements.

2. Gas Interferences And Accommodations:

During the performance of sewer and water main work funded by the New York City Department of Environmental Protection (NYCDEP), as instructed by the Engineer, the use of any applicable contract bid item is allowed in order to resolve and accommodate all gas facilities interferences with such City work, including the removal of contaminated soil in associated trench excavation. This is in addition to the specified EP-7 bid items in the contract. Payment for such accommodation shall be funded by EP-7 bid item "UTL-GCS-2WS - GAS INTERFERENCES AND ACCOMMODATIONS" (F.S. Fixed Sum). The value of such accommodation shall be computed by multiplying the appropriate unit prices bid to the quantity of work performed, as determined by the Engineer, and applying the total amount thus to be paid

to EP-7 bid item "UTL-GCS-2WS - GAS INTERFERENCES AND ACCOMMODATIONS". When EP-7 bid item "UTL-GCS-2WS - GAS INTERFERENCES AND ACCOMMODATIONS" does not exist, such additional accommodation work shall be at no cost to the City but shall be a matter of adjustment between gas facility operator and Contractor. Private facilities, other than gas, that become in interference due to gas interferences accommodations shall also be accommodated, if so directed by the Resident Engineer, at no additional cost to the City and, provided that its owner agrees to be responsible for all additional costs to Contractor, otherwise, such facility shall be ordered by the City to be maintained, shifted, relocated or replaced by its owner at his/her expenses.

2a. Water Main Accommodations:

When water main construction is to be performed in this contract, Contractor shall be required, if warranted by field conditions, and at locations designated by the Resident or Borough Engineer, to change the vertical or horizontal alignment of water mains including but not limited to all additional labor, material, work method accommodations, furnishing, delivering and laying offset fittings and pipes, etc., necessary in order to complete water main installation and, avoid gas interferences in the project area, including street intersections. Typical work method accommodations shall include, but not be limited to, pier and plate, installation of filter fabric and select fill, etc. Such work shall be performed as directed by the Engineer and in accordance with contract specifications and latest edition of water mains standards and specifications.

2b. Sewer Accommodations:

When sewer construction is to be performed in this contract, Contractor shall be required, if warranted by field conditions, and at locations designated by the Resident or Borough Engineer, to change the horizontal alignment of sewer facilities (if possible) including but not limited to all additional labor, material, work method accommodations, furnishing, delivering and construction of additional manholes or modification of manholes/catch basins, extending chute connections, house connections, using alternate materials and methods, poured-in-place structures, etc., necessary in order to complete sewer installation and, avoid gas interferences in the project area, including street intersections. The term sewer facility shall include, but not be limited to, all sewer pipe and appurtenances, manholes, catch basins, catch basin chutes, etc. Such work shall be performed as directed by the Engineer and in accordance with contract specifications and latest edition of sewer standards and specifications.

3. Quantity Overruns, EP-7 Funded Bid Items:

No quantity overrun, in excess of one hundred twenty five (125) percent, shall be permitted for EP-7 funded bid items (gas) included in this contract, except when Resident Engineer determines that such overruns are caused by field modifications to planned City work, or approved construction methods, or contract scope changes. Overruns not paid by City shall be negotiated and paid to Contractor by gas facility operator who then shall be entitled to reimbursement by NYCDEP under established cost sharing procedures.

4. Changes And Extra Work:

This section is not applicable to work defined under "Emergency Reconstruction Contracts" or so-called "Where and When Contracts" since these projects, by definition, inherently encounter unanticipated gas facilities and cannot be pre-engineered. In all other cases, any contract changes proposed for City work shall also cover and include all associated changes to support and protection of gas facilities affected by such changes to City work. In all other cases where the Contractor finds that City work cannot be performed as planned and specified and/or, as approved because of a need to support, protect and/or alleviate interferences from gas facilities that were not listed and/or shown, or incorrectly shown in contract plans and specifications, he shall immediately notify the Resident Engineer and the facility operators' representative of his findings. Resident Engineer shall promptly examine such claims and determine whether or not such work is covered by contract bid items and /or specifications (contract bid items and specifications shall include city contract items as well as EP-7 items). The Resident Engineer shall also examine the claim to determine if the application of EP-7 bid item "UTL-GCS-2WS - GAS INTERFERENCES AND ACCOMMODATIONS" is appropriate to resolve the claim. If upon examination, the Engineer determines that such field conditions were unanticipated (not shown and/or listed, or incorrectly shown in contract documents) and are not covered by bid items and contract specifications, he shall then direct the Contractor and the affected facility operator to negotiate the cost of supporting and

protecting, and/or alleviating the impact on City work caused by such unanticipated gas facilities with each other with the understanding that the performance of City work shall continue during negotiations. If a cost agreement is reached, the Contractor and facility operator shall adjust such costs between themselves at no additional costs to the City contract. If the Contractor and affected facility operator do not reach an agreement concerning the price to be paid for the extra work within five (5) business days of the Engineer's directive to engage into such negotiations and, after considering: public safety and inconvenience, requirements of laws and regulations applicable to private utilities, integrity of all utility systems, including but not limited to sewer and water, gas, electric, telephone and, cable TV facilities, sound engineering practices, cost (long and short term) to all affected parties, and potential City work delays, then the Resident Engineer, depending on nature and severity of interferences with City work, shall either, direct the facility operator to relocate or replace its facilities at its own discretion and cost, reimbursable by NYCDEP under established gas cost sharing procedures or, direct the Contractor to perform the utility work on actual time, material and equipment costs basis pursuant to relevant contract requirements and amendments. Contract bid prices for any applicable items of work involved shall be applied, or converted to an allowance for time and material charges. Changes shall be for affected portions of utility work and, shall be processed with EP-7 funds.

5. Excavation:

All excavators shall notify the NYC/LI One Call Center at 1-800-272-4480 at least two (2) working days, not including the day of the call, but not more than ten (10) working days in advance of the start of any excavation work. The gas company(ies) will mark out its facilities within the project limits and provide Construction Inspector(s) during all excavation work in close proximity (within twelve (12) inches) to gas facilities. The Contractor shall exercise extreme caution when excavating in the vicinity of any gas facilities. Hand excavation shall be performed within twelve (12) inches of gas facilities. The Contractor prior to excavating underneath these facilities shall adequately support all gas facilities. Standard support details for gas facilities have been included in the specifications. Any damage to gas facilities shall be reported immediately to the gas company(ies). The Contractor shall be responsible for all cost associated with repairs made necessary by damages caused by his operations.

6. Backfilling And Street Restoration:

Backfilling operations and street restorations shall be in accordance with contract requirements.

7. Non-Responsive Bids:

Every gas (EP-7) bid item has a suggested "Not less than" value per unit indicated on contract bid sheet. Bids resulting in cost of less than suggested for EP-7 items are hereby prohibited and if submitted shall be considered NON-RESPONSIVE.

8. Minimum Clearances:

Clearance requirements for City work shall govern and supersede any clearance requirement of gas facility operator. Therefore, a minimum of twelve (12) inches clearance between private utilities and City water mains, sewers or related structures to be installed in this contract shall be maintained. When this clearance is not attainable, the Resident Engineer may allow a minimum of four (4) inches clearance. With less than twelve (12) inches clearance a neoprene/polyethylene shield (to be provided by facility operator) shall be installed as part of all work item specifications. However, if Resident Engineer determines that City work cannot be performed within allowable clearance and no reasonable City accommodation (no-cost change to City work) is possible, the City shall direct the facility operator to remove, relocate, shift, or alter their facility(ies) pursuant to the New York City Administrative Code.

9. Work By Facility Operator:

The facility operator may find it necessary to perform the following types of work during performance of City work: accommodating a contractor's request for gas facilities modifications (in order to facilitate City contractor's proposed construction method) or, remedial and emergency work on gas facilities proper with their own resources and materials if an approved method of construction for City work causes unanticipated disturbances to gas facilities or, replacing defective gas facilities when they are exposed by the Contractor and their actual conditions are observable by the facility operator. Also included in the above category of defective gas facilities are: the presence of environmental contaminants attributable to

the gas facility in or around gas facilities. If such work is deemed required by the facility operator or if facility operator is directed by the City to address such deficiencies at any time during the course of construction, the Contractor shall modify the construction schedule at no cost to the City and allow the facility operator five (5) business days to perform such work without interferences. Additional costs to the facility operator (in cases of accommodations) or, Contractor (in cases of defective gas facilities) due to such gas work, if any, shall be the responsibility of the parties involved and not of the City. Such costs shall be a matter of adjustment between the Contractor and the facility operator.

10. Materials Furnished By Facility Operator:

It shall be the Contractor's responsibility to inspect material to be installed by him immediately upon delivery and advise the facility operator through its authorized representative, of all damaged materials. The Contractor at no additional costs to the City or the facility operator shall replace any material that is damaged or lost after the Contractor's inspection.

11. Liability And Insurance:

Notwithstanding the provisions of this contract, the existing division of liabilities to third parties shall remain the same as between the City and the company. Therefore, it is specifically agreed by the City, company and Contractor (by bidding on this contract) that for the purpose of any liabilities to third parties, that the City contractor performing work directly and physically relating to gas company facilities in this project, shall be deemed an agent of the company and not an agent of the City, the New York City Municipal Water Finance Authority, or the New York City Water Board. Contractor shall include the company as an additional insured on all insurance policies maintained to comply with the City's insurance requirements.

12. Width And Depth Of Excavation:

Contractor shall not be authorized to deliberately change trench or excavation widths and/or depth specified without Engineer's approval. Enlargement of any side of excavation up to eighteen (18) inches beyond pay limits (or inside face of sheeting) requested by the Contractor for the installation of certain types of sheeting may be granted. However, such enlargements or those greater than allowable shall not be approved when, in the sole judgment of the City, field conditions allow the water mains and sewer work to be performed within the limits specified and, the sole purpose of such enlargement request is to impact adjacent utilities (public or private) whose support and protection are part of this contract. Any approval shall be given at no additional cost to the City contract, including EP-7 funding, and all costs associated with unauthorized enlargements shall be the sole responsibility of the Contractor.

13. Depth And Crossing Angles Of Gas Facilities:

Where gas facilities are shown (or specified as) crossing proposed alignment of sewers, water mains, catch basins and chute connections or any other proposed excavations at specific angles (as measured off plans or sketches or specified in contract), it shall be understood that actual field measurements may deviate (plus or minus) forty-five (45) degrees from those shown or specified. The cover, or depth from street surface to top of facilities, shall be as shown or specified in contract documents, no deviation is to be assumed. Where gas facilities are not shown on contract documents, but their support and protection are otherwise included in this contract then, all references to facilities crossing at "various angles and depth" in the gas sections shall mean that such facilities are crossing sewer, water, catch basin and, catch basin chute, and other excavations at a ninety (90) degree angle to the proposed sheeting line or side of excavation (for unsheeted trenches) with an allowable deviation of forty-five (45) degrees in any direction, except for catch basin chute excavation where the allowable deviation shall be sixty (60) degrees. Where the cover is not noted or specified, the bottom face of such facilities shall be assumed to be crossing catch basin chutes at a depth of three (3) foot eight (8) inches or less from the street surface. Paragraph No. 2 above shall apply in cases of distribution water main construction. Appropriate bid items and specifications are provided for cases where angle and depth are greater than stated above. This section also applies to work defined in "Emergency Reconstruction Contracts" or so-called "Where and When Contracts". These contracts are not pre-engineered and consequently have no drawings, sketches or determined locations and so, gas facilities encountered will be crossing existing and proposed sewer, water, catch basin/catch basin chutes and all appurtenances at various angles and depths.

14. Maintenance Of Traffic For Gas Work:

All work pertaining to gas bid items and specifications shall be performed within the contract maintenance of traffic plan as specified in the contract document. The bid price for the Maintenance and Protection of Traffic shall cover all work pertaining to gas items. The City shall make compensation for additional maintenance and protection of traffic items in connection with gas item of work only when such additional work is deemed reasonable and necessary by the Resident Engineer and is approved by him prior to its performance.

15. Relocated Gas And Temporary Systems Installation:

In cases where the Contractor is allowed to select the location for temporary construction such as, installation of dewatering headers, wells, well points, etc., he shall not disturb any gas facilities shown on sketches provided in this section. The only exception shall be, if the affected gas company agrees to such relocation and provided that the cost of such relocation is a matter of adjustment between the company and Contractor, and at no cost to the City.

16. Role Of Company Inspector:

In any case in which the City elects to perform some or all support and protection work with its own employees, personnel or contractors, the facility operator shall provide onsite inspectors to approve and certify such support and protection work (exclusive of City accommodations) performed by the City's own employees, personnel, and contractors. Facility operator's inspectors are not authorized to direct City contractor during the performance of contract work. They shall act through the City Resident Engineer and provide him/her required approvals and certifications, prior to preparing partial payments of EP-7 items, in a format and frequency to be prescribed by the appropriate City Head of Construction.

17. Coordination With Gas Company:

The Contractor shall be required to notify the gas company(ies), in writing, at least two (2) weeks prior to the start of final paving in order to allow companies to complete any unfinished gas work located within the area to be paved. Every effort shall be made to maintain gas service with minimum inconvenience to the public.

III - TECHNICAL SECTION

SECTION 6.01 - Trench Crossings; Support And Protection Of Gas Facilities And Services.

1. Description:

Under this section, the Contractor shall provide all labor, materials, equipment, and incidentals required to support and/or protect the integrity of gas mains, services and appurtenances of any sizes, configurations, and operating pressures crossing trench excavations above subgrade for planned construction of sewers and water mains facilities. A gas service shall be defined as a gas pipe of three (3) inches in diameter or less branching from the main to a customer pick up point or property valve box. A gas main may be any size pipe that is part of a distribution or transmission network other than services described above. Crossings shall be defined as gas facilities spanning the width of excavation (one side to the other side). These crossings may be at various angles and depth as shown on "Gas Cost Sharing Work Standard Sketches Nos. 1 and 1A", and as specified in "General Provisions; Gas Cost Sharing Work Paragraph No. 13" and, at the locations shown or listed in contract documents. The gas company operating in the area, (facility operator), owns these facilities. The work shall be performed in accordance with contract specifications, plans, and at the directions of the Resident Engineer in consultation with the authorized representatives of the facility operator.

2. Method Of Construction:

- A. Protection: In general, the gas facilities shall be protected as required by New York State Industrial Code 753. In particular, the Contractor shall use hand excavation methods (pick and shovel or hand held power tools) directly below the pavement base to expose the gas facilities (marked out by facility operators) and to ascertain the clearances and cover of the facilities with respect to the proposed excavation. Upon exposing the affected facilities sufficiently, at the discretion of the Resident Engineer, to ascertain the foregoing, Contractor shall be permitted to proceed with a combination of hand and machine excavation, as appropriate, outside a zone of protection whose limit shall be defined as a perimeter located twelve (12) inches from the outside face of each gas facility crossings (See "Gas Cost Sharing Work Standard Sketch No. 2"). If the facilities are in direct interference with City work, meaning that "Minimum Clearances" described in "General Provisions; Gas Cost Sharing Work Paragraph No. 8" cannot be maintained, and excavation has to be temporarily or permanently abandoned then this particular location shall become a test pit and dealt with as specified in Section 6.07, and "General Provisions; Gas Cost Sharing Work Paragraphs Nos. 2 and 8".
- B. Support: Gas mains or services crossing excavations equal or less than four (4) feet wide are generally self supporting, unless field conditions as determined by the Resident Engineer require otherwise. The support requirements for gas mains and services crossing excavations greater than four (4) feet wide shall be as shown on the attached "Gas Cost Sharing Work Standard Sketch No. 1" and Contractor shall use sheeting methods that permit the maintenance of gas facilities in their existing locations and configurations. Alternate methods equivalent to those shown on the sketch or accommodations by the facility operator proposed by the Contractor in order to facilitate the execution of the specified work shall be allowable, provided that prior approval is obtained by the Contractor from the Engineer and the facility operator. The support and protection of gas facilities crossings shown on plans, drawings, listings or otherwise identified in this contract shall not be circumvented with the issuance of so called "order outs".

3. Method Of Measurement:

The Contractor shall be paid for supporting and/or protecting gas facilities crossing trench excavations under the appropriate bid items covered by this section. The Contractor shall be directly responsible to the facility operator for the total cost of using any alternate method requiring the use of resources owned by the facility operator. Regardless of the method used, the City shall pay the bid price for the appropriate support and/or protect item of work. The average rate charged by the facility operator for alternate support and protection work such as, disconnecting and reconnecting gas services is listed in attached "Schedule GCS-A".

4. Payment Restrictions:

This item shall not be paid for: gas services crossing unsheeted water main trench excavation; abandoned gas main/services identified by facility operator; gas mains/services crossing trench excavations for fire hydrant branch connections pipes, catch basins and/or chutes (sewer drain pipe), house sewer and/or water services; gas facilities encroaching any face of excavation for sewer and/or water construction, all of which are covered under other contract sections. Also this item shall not be paid for new gas mains and services crossing water trenches when trenching for such new facilities has been performed by the Contractor in common with trench excavation for City work (overlapping trench limits). The cost of supporting and protecting such gas facilities crossings shall be deemed included in the cost of trench excavation for the new gas facilities. This payment restriction shall apply even if such common trench gas excavation is not part of the contract. The prices bid for items covered by this section represent full compensation to Contractor to completely perform the work described. No other bid items shall be combined with these items in order to pay for gas main and/or services crossing excavations specified herein.

5. Method Of Payment:

Each (Ea.) gas facility crossing trench excavation as described in these specifications shall be counted for payment.

6. Price To Cover:

The cost of timber/steel supports installed for gas facilities shall be included in the bid price. The bid price for each crossing shall also cover all additional supervision, labor, material (except those provided by the facility operator), equipment and insurance necessary to completely maintain the gas facilities without disruption of service to the customers and in accordance with contract plans, specifications and facility operator standards. The price shall also include: changes of method of operations; sheeting modifications where necessary to accommodate the gas facilities crossings; installation and removal of water pipe under gas facilities (so called "snaking"); extra care during excavation (including hand excavation under existing single and multiple gas facilities); extra backfilling and compaction around, over and under gas facilities; installation and removal of sheeting around gas facilities; associated maintenance and protection of traffic; barricades; and traffic plates that may be required to temporarily close and/or complete the work.

SECTION 6.02 - Extra Excavation For The Installation Of Catch Basin Sewer Drain Pipes With Gas Interferences.

1. Description:

Under this item, the Contractor shall provide all labor, materials, equipment, insurance, and incidentals for the extra excavation associated with the installation of catch basin sewer drain pipes (chute) under gas facilities of various sizes crossing the trench excavation at various angles and depth at the locations shown in the contract documents and also, for the support and protection of these facilities during associated excavation and backfill operations. The gas company operating in the area, (facility operator), owns these facilities.

2. Method Of Measurement:

The bid price shall be per location (Each) where extra excavation is required when catch basin sewer drain pipes are installed at an upstream invert depth lower than four (4) feet (up to a maximum of six (6) feet) from the proposed pavement grade because the bottom faces of interfering gas mains and appurtenances are located at a depth greater than three (3) foot eight (8) inches from proposed pavement surface (See "Gas Cost Sharing Work Standard Sketch No. 4").

3. Method Of Construction:

Incremental cost responsibility for chute excavation is determined by the first private facility encountered starting from catch basin structure proper and that prevents the installation of the chute connection at an upstream cover less than or equal to three (3) feet or any other minimum cover required to avoid City facilities (e.g. water, sewer, etc.) as directed by the Resident Engineer.

4. Payment Restrictions:

This item shall not apply and related bid item shall not be paid in cases where:

- A. Upstream invert chute is more than six (6) feet deep because of gas facilities.
- B. Chute cannot be installed above existing gas facilities because of interferences with other private facilities that are not otherwise covered under this contract, regardless of upstream invert depth.

The above cases shall be at no cost to the City, but shall be a matter of adjustment between the Contractor and the facility operator(s).

5. Price To Cover:

The bid price shall cover the additional cost of all additional supervision, labor, materials, equipment and insurance, to complete the installation of catch basins and associated sewer connections in accordance with the contract plans and specifications. The price shall include: excavation by hand around and under single and multiple gas facilities; locating, supporting and protecting gas facilities; backfilling and all other items necessary to perform all work incidental thereto including: installation and removal of drain pipe under gas facilities ("snaking"); widening of trenches to facilitate the above work; subsequent additional

backfill and pavement restoration; modifying precast catch basin window to accommodate connection; changing sheeting method and configuration to accommodate gas facility crossings; maintenance and protection of traffic; barricades; and installation of traffic plates that may be required to temporarily close and/or complete the work. The price shall not include removal of ledge rock and/or excavation of boulders in open cut.

SECTION 6.02.1 - Extra Excavation For The Installation Of Catch Basin Sewer Drain Pipes With Upstream Inverts Greater Than Six (6) Feet.

1. Description:

Under this item, the Contractor shall provide all labor, materials, equipment, insurance and incidentals for the extra excavation of catch basin chutes where the upstream invert is greater than six (6) feet under gas facilities of various sizes crossing the trench excavation at various angles and depth at the locations shown in the contract documents or as determined by field conditions and also, for the support and protection of these facilities during the associated excavation, sheeting and backfilling operations.

2. Method Of Measurement:

The bid price shall be per location (Each) where extra excavation and sheeting is required when the catch basin chute installed at an upstream invert depth lower than six (6) feet from the proposed pavement grade because the bottom faces of the interfering gas mains and appurtenances are located at a greater depth than three foot eight inches from the proposed pavement surface only.

3. Method Of Construction:

Incremental cost responsibility for chute excavation is determined by the first private facility encountered during such excavation when initiated from catch basin structure and that prevents the installation of the chute at an upstream cover less than or equal to three (3) feet or any other cover required to avoid City facilities as directed by the Resident Engineer.

4. Payment Restriction:

This item shall not apply and related bid item shall not be paid in cases where:

Upstream invert chute is less than or equal to six (6) feet deep because of gas facilities. Section 6.02 shall be paid.

5. Price To Cover:

The bid price shall cover the additional cost of all supervision, labor, materials, equipment and insurance to complete the installation of catch basin and associated sewer connections in accordance with the contract plans and specifications. The price shall include: excavation by hand around and under single and multiple gas facilities; locating, supporting and protecting gas facilities incidental thereto; widening of trenches to facilitate the above work; subsequent additional backfilling and pavement restoration; modifying pre-cast basin window to accommodate connection; the installation of catch basin with deeper sumps as specified; additional sheeting and changes in sheeting method and configuration to accommodate gas facility crossings; maintenance and protection of traffic; barricades; and installation of traffic plates that may be required to Temporarily close and/or complete the work.

SECTION 6.03 - Removal Of Abandoned Gas Facilities. All Sizes.

1. Description:

Under this section the Contractor shall provide all labor, materials, equipment, insurance and, incidentals required for the removal of abandoned gas mains, services, or appurtenances thereof, located within the street shown on the contract plans, owned by gas company operating in the project area (facility operator), used or to be used for or in connection with or to facilitate the conveying, transportation, distribution or

furnishing of gas (natural or manufactured or mixture of both) for light, heat, or power, but does not include property used solely for or in connection with business of selling, distributing or furnishing of gas in enclosed containers. Such removal shall include only abandoned gas facilities that interfere with (i.e. cause additional work) City work.

2. Determination Of Operating Status Of Gas Facilities:

The Contractor shall notify facility operator, as required by New York State Industrial Code 753. Gas facilities shall not be removed without the approval of the facility operator whose authorized representative shall certify in writing (specific facility or area wide facilities certification) and in a timely manner acceptable to the Resident Engineer that abandoned facilities are free of combustible gas and any other environmental contaminants prior to removal. The Resident Engineer shall rely on facility operator's certification. The facility operator may request the excavation of test pits (See Section 6.07) for this determination ahead of City work and, Contractor shall provide safe access, facilitate and permit facility operator to enter test pit excavations for the purpose of testing gas facilities to be removed by the Contractor. However, facility operator may prefer to make this test during performance of City work, in order to issue the above certification. This shall be permitted provided that it is agreed that additional costs, if any resulting from this choice shall be a matter of adjustment between the Contractor and facility operator only, and at no cost to the City.

3. Restrictions:

The facility operator shall be solely responsible for its contaminated gas facilities, surrounding contaminated soil and their disposal and abatement procedures, unless contract bid items are applicable and provided for such work. In such cases, the quantity removed shall be charged to EP-7 bid item "UTL-GCS-2WS - GAS INTERFERENCES AND ACCOMMODATIONS" at the City bid prices.

4. Method Of Measurement:

Abandoned gas pipeline removal shall be measured for payment per linear foot of pipe and appurtenances removed.

5. Price To Cover:

The price shall cover all additional cost of supervision, labor, materials, equipment, and insurance necessary to complete this work in accordance with the contract plans and specifications, including excavation by hand around and under other City and facility operator owned properties and, where necessary, support and protection of such properties. The price shall also cover breaking, cutting, and/or burning of abandoned gas pipes and their disposal from the site; sealing open ends remaining in the excavation with concrete or caps (caps to be provided by the facility operator) and backfilling of the area where the pipeline has been removed with clean backfill. The price shall also include any required dump charges. This item does not include any type of extra excavation, backfilling, compaction, pavement removal and restoration associated with abandoned gas facilities removal, all of which are covered under Section 6.06.

**SECTION 6.03.1 - Removal Of Abandoned Gas Facilities With Possible Coal Tar Wrap.
All Sizes. (For National Grid Work Only)**

1. Description:

Under this section the Contractor shall provide all labor, materials, equipment, insurance and, incidentals required for the removal of abandoned gas mains, services or appurtenances thereof, located within the street shown on the contract plans, owned by the gas company operating in the project area (facility operator), used or to be used for or in connection with or to facilitate the conveying, transportation, distribution or furnishing of gas (natural or manufactured or mixture of both) for light, heat, or power, but does not include property used solely for or in connection with business of selling, distributing or furnishing of gas in enclosed containers. Such removal shall include only abandoned gas facilities that interfere with (i.e. cause additional work) City work. These gas facilities may be coated with Coal Tar Wrap and so, may require special handling and disposal methods as specified in National Grid Standard Operating Procedure 12-2, Coal Tar Wrap Handling and 12NYCRR56.

2. Determination Of Operating Status Of Gas Facilities:

The Contractor shall notify facility operator, as required by New York State Industrial Code 753. Gas facilities shall not be removed without the approval of the facility operator whose authorized representative shall certify in writing (specific facility or area wide facilities certification) and in a timely manner acceptable to the Resident Engineer that abandoned facilities are free of combustible gas and any other environmental contaminants prior to removal. The Resident Engineer shall rely on the facility operator's certification. The facility operator may request the excavation of test pits (See Section 6.07) for this determination ahead of City work and, the Contractor shall provide safe access, facilitate and permit facility operator to enter test pit excavations for the purpose of testing gas facilities to be removed by the Contractor. However, the facility operator may prefer to make this test during performance of City work, in order to issue the above certification. This shall be permitted provided that it is agreed that additional costs, if any, resulting from this choice shall be a matter of adjustment between the Contractor and the facility operator only, and at no cost to the City contract. Should such investigation result in the determination that the abandoned gas facilities do not contain Coal Tar Wrap then the removal of said facilities shall be covered under separate item (See Section 6.03).

3. Requirements:

The City Contractor shall excavate abandoned gas facility sufficiently, either in its entirety, or at locations determined by Contractor to allow the removal of Coal Tar Wrap (if present on the abandoned gas facility) and to facilitate the safe extraction of manageable lengths of abandoned pipe without damage to adjacent facilities, utilities or City structures either parallel to or crossing above or below abandoned gas facility. The Contractor is to allow access to the designated cutting points within the Contractor's trench by authorized National Grid personnel who will remove the Coal Tar Wrap as per National Grid procedures. This work by National Grid personnel shall be performed in a timely fashion and shall not unduly impede the Contractor's progress and/or productivity. Upon completion of the coating removal, the Contractor shall be allowed to cut, burn or grind the gas facility and remove the section of abandoned pipe. The Contractor at a site designated by the Contractor shall stockpile the removed pipe. The facility operator will be responsible to provide trucking and disposal services with its own personnel and shall remove the stockpiled pipes during off hours or during such time as agreed to by the Contractor. Since the pipe removed will remain the property of the facility operator and is to be disposed of by the facility operator, the facility operator shall be responsible for any required notifications, filings, dump charges and incidentals associated with the disposal of abandoned gas facilities found to contain Coal Tar Wrap.

4. Method Of Measurement:

Abandoned gas pipeline removal shall be measured for payment per linear foot of pipe and appurtenances removed.

5. Price To Cover:

The price shall cover all additional cost of supervision, labor, materials, equipment and insurance necessary to complete this work in accordance with the contract plans and specifications, including excavation by hand around and under other City and facility operator owned properties and, where necessary, the support and protection of such properties. The cost shall also include hand excavation in the area(s) of proposed abandoned pipe cut(s), cutting and/or burning of abandoned gas pipes and stockpile of removed sections of abandoned pipe and associated maintenance and protection of traffic, blocking and temporary fencing if required. The unit price shall also cover sealing open ends remaining in the excavation with concrete or end caps (end caps to be provided by the facility operator) and backfilling of the area where the abandoned pipeline has been removed with clean backfill material. This item does not include any type of extra excavation, backfilling, compaction, pavement removal and/or restoration (temporary and permanent) associated with abandoned pipe removal ("lost trench"), all of which are covered under separate Section 6.06. The price shall also include allowance for any loss of productivity by the Contractor due to required facility operator work to remove pipe coating and prepare pipe for cutting as well as any change in Contractor's excavation method, additional trucking and/or stockpiling costs.

**SECTION 6.03.1a - Removal Of Abandoned Gas Facilities With Possible Coal Tar Wrap.
All Sizes. (For Con Edison Work Only)**

1. Description:

Under this section the Contractor shall provide all labor, material, equipment, insurance and, incidentals required to prepare abandoned gas mains, services and appurtenances thereof located within the street shown on contract plans, owned by the gas company operating in the project area (facility operator), for removal due to interference with proposed City work. These abandoned gas facilities were, at one time, used for or in connection with or to facilitate the conveying, transportation, distribution or furnishing of gas (natural, manufactured or a combination of both) for light, heat, or power, but does not include property used solely for or in connection with business of selling, distribution or furnishing of gas in enclosed containers. Such preparation for removal shall include only abandoned gas facilities that interfere with (i.e. cause additional work) City work. These gas facilities may be coated with Coal Tar Wrap which may contain asbestos or PCB's and so, may require special handling and disposal methods as specified in Con Edison - ASBESTOS MANAGEMENT MANUAL, CHAPTER 6 - ASBESTOS WORK PROCEDURES, SECTION 06.04 - COAL TAR WRAP REMOVAL. For under 25' (feet) in length and an approved NYC-DEP variance for over 25' (feet).

2. Determination Of Operating Status Of Gas Facilities:

The Contractor shall notify facility operator, as required by New York State Industrial Code 753. Gas Facilities shall not be removed without the approval of the facility operator whose authorized representative shall certify in writing (specific facility or area wide facilities certification) and in a timely manner acceptable to the Resident Engineer that abandoned facilities are free of combustible gas and any other environmental contaminants prior to removal. The Resident Engineer shall rely on the facility operator's certification. The facility operator may request the excavation of test pits (See Section 6.07) for this determination ahead of City work and Contractor shall provide safe access, facilitate and permit facility operator to enter test pit excavations for the purpose of testing gas facilities. However, the facility operator may prefer to make this test during performance of City work in order to issue the above certification. This shall be permitted provided that it is agreed that additional costs, if any, resulting from this choice shall be a matter of adjustment between the Contractor and the facility operator only, and at no cost the City contract. Should such investigation result in the determination that the abandoned gas facilities do not contain Coal Tar Warp then the removal of said facilities shall be covered under separate item (See Section 6.03).

3. Requirements:

The Contractor shall excavate abandoned gas facility sufficiently, either in it's entirety, or at locations determined by Contractor to allow the removal of Coal Tar Wrap (if present on the abandoned gas facility) and to facilitate the safe extraction of manageable lengths of abandoned pipe without damage to adjacent facilities, utilities or city structures either parallel to or crossing above or below abandoned gas facility. The Contractor is to allow access to the designated cutting points within the Contractors trench by authorized Con Edison personnel who will remove the Coal Tar Wrap as per Con Edison and/or NYC-DEP approved procedures. This access shall conform to all applicable codes, rules & regulations. This work by Con Edison personnel shall be performed in a timely fashion and shall not unduly impede the Contractors progress and/or productivity. Upon completion of the coating removal, the Contractor shall be allowed to cut, burn or grind the gas facility and remove the section of abandoned pipe. Contractor shall designate a specific site to stockpile those removed pipes. The facility operator will be responsible to provide trucking and disposal services with its own personnel and shall remove the stockpiled pipes during off hours or during such time as agreed to by the Contractor. Since the pipe removed will remain the property of the facility operator and is to be disposed of by the facility operator, the facility operator shall be responsible for any required notifications, filings, dump charges and incidentals associated with the disposal of abandoned gas facilities found to contain Coal Tar Wrap.

4. Method Of Measurement:

Abandoned gas facility removal shall be measured for payment per linear foot of pipe and appurtenances removed.

5. Price To Cover:

The price shall cover all additional cost of supervision, labor, materials, equipment and insurance necessary to complete this work in accordance with the plans and specifications, including, but not limited to, excavation by hand around and under other City and facility operator owned properties and, where necessary, the support and protection of such properties. The cost shall also include hand excavation in the area(s) of proposed abandoned pipe cut(s), cutting and/or burning of abandoned gas pipes and stockpile of removed sections of abandoned pipe and associated maintenance of traffic, blocking and temporary fencing if required. The unit price shall also cover sealing open ends remaining in the excavation with concrete or end caps (end caps to be supplied by facility operator) and backfilling of the area where the abandoned pipeline has been removed with clean backfill material. This item does not include any type of extra excavation, backfilling, compaction, pavement removal and/or restoration (temporary and permanent) associated with abandoned pipe removal ("lost trench"), all of which are covered under separate Section 6.06. The price shall also include allowance for any loss of productivity by the Contractor due to required facility operator work to remove pipe coating and prepare pipe for cutting as well as any change in Contractor excavation method, additional trucking and/or stockpiling costs.

SECTION 6.04 - Adjust Hardware To Grade Using Spacer Rings/Adaptors. (Street Repaving.)

1. Description:

Under this section, the Contractor shall provide all labor, supervision, materials, equipment, insurance and incidentals required to adjust to final grade gas street surface hardware located within the contract area boundaries shown on the plans. The gas company operating in the area, (facility operator), owns these facilities. The work shall be performed in accordance with the contract plans, specifications and at the directions of the Resident Engineer in concurrence with authorized representative of the facility operator.

2. Materials:

The facility operator shall furnish and deliver all prefabricated hardware parts required. These include adaptors for the grade adjustment proper and new street hardware if existing ones are found to be defective, all in accordance with the facility operator standards and City rules and regulations. The Contractor shall notify the facility operator of the installation schedule at least three (3) business days before materials are required on the site. Should the facility operator fail to deliver the necessary material according to any schedule mutually agreed upon by the Contractor and facility operator, the City shall not be responsible for any delays attributable thereto, nor for the failure of delivery of such materials. On project where material storage is not permitted on site, the facility operator shall deliver the required material to the Contractor's yard and it shall be the Contractor's responsibility to transport the material to the work site when needed for installation. It shall also be the Contractor's responsibility to inspect the materials to be installed by him immediately upon delivery and advise the facility operator through its authorized representative, of all damaged materials. The Contractor at no additional expense to the City or the facility operator shall replace any material that is damaged or lost after the Contractor's inspection.

3. Method Of Measurement:

The Contractor shall be paid for each six (6) inch round box and/or nine (9) inch square box adjusted to grade regardless of adjustment height requirements.

4. Price To Cover:

The unit price bid for this item shall include all additional labor, supervision, insurance, equipment and material (except those to be provided by the facility operator), required to adjust each box to grade as required in the contract plans and specifications. The bid price shall also include the removal of existing frames and covers from existing facilities to be salvaged and returned to the facility operator and, all material transportation from the Contractor's material storage yard to the work site. In addition the bid price shall include "chipping" around existing box using appropriate means and methods where grinding is required.

SECTION 6.05 - Adjust Hardware To Grade By Resetting. (Road Reconstruction.)

1. Description:

Under this item, the Contractor shall provide all labor, supervision, materials, equipment, insurance and incidentals required to adjust to the proposed grade gas street surface hardware located within the contract area boundaries shown on the plans. The gas company operating in the area, (facility operator), owns these facilities. The work shall consist of either building up or lowering or resetting the casting by removing the existing frame and cover building up or decreasing the existing installation, replacing the frame and/or cover if damaged or worn out, as determined by the Resident Engineer, with a new frame and/or cover furnished by the owner, and setting the frame and cover to new elevation. The work shall be performed in accordance with the contract plans, specifications and at the directions of the Resident Engineer.

2. Materials:

The facility operator shall furnish and deliver all new hardware parts required. The Contractor shall furnish materials such as mortar, bricks and concrete in compliance with contract requirements. At locations where high-early strength concrete is required under this contract to be placed adjacent to gas facilities, then the requirement for concrete shall be high-early strength complying with the current New York State Department of Transportation, Standard Specifications for Class F concrete. Existing castings may be replaced as required and deemed necessary by the Engineer and by City rules and regulations. The Contractor shall install the new castings of various sizes furnished by the facility operator. The Contractor shall notify the facility operator of the installation schedule at least three (3) business days before materials are required on the site and, shall provide off-loading services to the facility operator. Should the facility operator fail to deliver the necessary material according to any schedule mutually agreed upon by the Contractor and facility operator, the City shall not be responsible for any delays attributable thereto, nor for the failure of delivery of such materials. Such delays shall be a matter of adjustment between the Contractor and the facility operator. On project where material storage is not permitted on site, the facility operator shall deliver the required material to the Contractor's yard and it shall be the Contractor's responsibility to transport the material to the work site when needed for installation. It shall also be the Contractor's responsibility to inspect the materials to be installed by him, immediately upon delivery and advise the facility operator through its authorized representative, of all damaged materials. The Contractor at no additional expense to the City or the facility operator shall replace any material that is damaged or lost after the Contractor's inspection.

3. Methods Of Construction:

The Contractor shall remove and reinstall existing castings or install new castings to the proposed grade. Setting and resetting the castings shall be done with mortar and brick according to the standards of the facility operator. Work shall be performed in a workmanlike manner. Castings that are deemed unacceptable for resetting shall remain the property of the facility operator and he shall be responsible for their removal and proper disposal from site. No traffic shall be allowed on adjusted street hardware until permitted by the Engineer.

4. Method Of Measurement:

The Contractor shall be paid for each gas hardware adjusted to grade regardless of size or adjustment height requirements (up or down).

5. Price To Cover:

The unit price bid for this item shall include all additional labor, supervision, insurance, equipment and material (except those to be provided by the facility operator), required to adjust each gas hardware to grade as required in the contract plans and specifications. The bid price shall also include the removal of existing frames and covers from existing facilities; building up the existing installations with bricks and mortar, or lowering the existing installation by removing bricks and mortar; replacing damaged frames and/or covers with new frames and/or covers furnished by the facility operator; setting the frames and covers to the new elevations; protect existing installations; repair minor structural damages to existing installations prior to resetting frames; unloading of furnished castings at the Contractor's yard and transporting castings from the Contractor's yard to the job site as required; completing the work in

accordance with the contract plans, specifications and, at the directions of the Engineer. In addition the bid price shall include "chipping" around existing gas facilities using appropriate means and methods where grinding is required.

SECTION 6.06 - Special Care Excavation And Backfilling.

1. Description:

Under this section, the Contractor shall provide all labor, materials, equipment, insurance and incidentals required to support and protect the integrity of live gas facilities including mains, services, related structures and appurtenances during excavations. The gas company operating in the area, (facility operator), owns these facilities. The work shall be performed in accordance with the contract plans, specifications and at the directions of the Resident Engineer in consultation with authorized representatives of the facility operator.

2. Applicability Of Section:

This section shall apply to live gas facilities of various sizes located within two (2) feet of any face of unsheeted excavation, (unsheeted excavation refers to any excavation performed for city work and includes excavations performed that are to be subsequently sheeted using approved methods) and paralleling or, encroaching any face of excavation. Also, for crossings greater than forty-five (45) degrees and/or located at a cover depth greater than five (5) feet from existing street surface. Parallel facilities are not exposed at any time during excavation (See "Gas Cost Sharing Work Standard Sketch No. 5"). Encroaching facilities are partially exposed inside the limit of excavation (See "Gas Cost Sharing Work Standard Sketch No. 5"). This section shall also apply to gas facilities crossing catch basins excavation, and catch basins sewer connections (chutes) trench excavation only when extra depth (covered in other section), is not required for chutes installations because of such utilities interferences (See "Gas Cost Sharing Work Standard Sketch No. 3"). This section shall also apply to gas services (if shown or otherwise listed in contract documents) crossing unsheeted excavations for water mains, gas facilities crossing fire hydrant branch connections, house sewer and/or water service connections excavations. This section shall also apply for so called "loss trench", as described further, and for additional excavation (pavement and/or soil), backfilling, compaction, roadway base and pavement restoration due to abandoned gas facilities, only if removed by Contractor. If operating status of gas facilities cannot be determined prior to excavation then such facilities shall be considered live and this section shall fully apply. The excavation around fully exposed live gas facilities along and within limits of excavation (not crossings) shall be covered by this section also (not shown on "Gas Cost Sharing Work Standard Sketch No. 5"), however the support requirement, if any is required, of such facilities is beyond the scope of these specifications and therefore shall be the responsibility of facility operator to determine and prescribe, at no cost to the City contract, but shall be a matter of adjustment between the Contractor and facility operator.

3. Payment Restriction:

No special care excavation shall be paid for abandoned gas facilities paralleling and/or encroaching excavation and therefore are not in direct interference with City work. Except as allowed in this section, the bid item specified under this section shall not be used in combination with items covered under other sections for work done due to a particular gas facility. This item shall not be paid for new gas facilities when trenching for such new facilities has been performed by the Contractor of record in common with trench excavation for City Work (overlapping trench limits). The cost of excavating with care as defined in this section shall be deemed included in the cost of trench excavation for the new gas facilities. This restriction shall apply even if such gas common trench excavation is not part of the contract. If facilities are in direct interference with City work, meaning that "Minimum Clearances" described in "General Provisions; Gas Cost Sharing Work Paragraph No. 8" cannot be maintained and excavation has to be temporarily or permanently abandoned then this particular location shall become a test pit and dealt with as specified in Section 6.07 and "General Provisions; Gas Cost Sharing Work Paragraphs Nos. 2 and 8".

4. Method Of Construction:

All excavation in the vicinity of gas facilities shall be as required by NYS Industrial Code 753. Where these facilities are paralleling and located two (2) feet or less from the limits of the proposed excavation, the Contractor shall use hand excavation methods (pick and shovel or hand held power tools) to ascertain

the clearances of these facilities with respect to the proposed excavation. Once the location of these facilities with respect to the proposed excavation is verified to the satisfaction of the Resident Engineer, the Contractor shall then proceed with a combination of hand and machine excavation as required preserving the integrity of the facilities. The installation of timber supports or underpinning, when soil foundation cannot fully support partially exposed pipes, may be required to prevent pipe movement as directed by the Resident Engineer.

5. Method Of Payment:

The unit price for this work item shall be based on cubic yard (CY) of average excavation with care and, is to be considered as an incremental cost for performing City work with gas facilities interferences.

6. Method Of Measurement:

- A. For Paralleling Facilities: Volume calculated as: Depth as measured from existing street surface to the bottom of unsheeted trench excavation allowable by OSHA regulations, multiplied by, the width measured as one (1) foot from the face of excavation toward the center of excavation, multiplied by the length of parallel facility, divided by twenty-seven (27) cubic feet per cubic yard (See "Gas Cost Sharing Work Standard Sketch No. 5"). The gas facility is no longer considered to be in interference once sheeting has been installed, therefore no further compensation for paralleling facilities as described above will be made.
- B. For Encroaching Facilities: Volume calculated as: Depth of trench excavation multiplied by, the width of partially exposed pipe plus one (1) foot, multiplied by the length of facility encroachment, divided by twenty-seven (27) cubic feet per cubic yard (See "Gas Cost Sharing Work Standard Sketch No. 5").
- C. Fully Exposed Gas Facilities: (Not shown on "Gas Cost Sharing Work Standard Sketch No. 5") along and inside trench and/or crossing trench at an angle greater than forty-five (45) degrees and/or a cover depth greater than five (5) feet from the existing street surface. The volume shall be measured as the depth of trench excavation multiplied by the distance measured along the sheeting line between two (2) points of intersections of the gas facilities and the sides of trench excavation, multiplied by the width of trench excavation.
- D. For Additional Excavation And Restoration Due To So Called "Loss Trench", When The Integrity Of Pavement And Soil Above And Around Existing Live Gas Facilities Cannot Be Maintained Due To Its Lack Of Cohesiveness: Volume shall be calculated as: Depth of unsheeted trench excavation multiplied by width measured as distance of facility from closest edge of unsheeted excavation plus, width of facility proper plus, one (1) foot or a maximum width of three (3) feet multiplied by length of facility fully exposed divided by, twenty-seven (27) cubic feet per cubic yard (not shown on "Gas Cost Sharing Work Standard Sketch No. 5").
- E. For Facilities Crossing Excavation For Catch Basins, Or Chutes Installations (When NYCDEP Funded) Or Fire Hydrant Branch Connections, Or Unsheeted Water Main Trench, Or House Sewer And/Or Water Services: Volume calculated as: Depth as defined above multiplied by, the width taken as the outside diameter of pipe or the width of structure plus one (1) foot on either side (two (2) feet), multiplied by, the length of exposed facility crossing the trench, divided by twenty-seven (27) cubic feet per cubic yard (not shown on "Gas Cost Sharing Work Standard Sketch No. 5").

Overlapping volume dimensions measured as described above may occur when multiple facilities are paralleling excavations, encroaching excavations or crossing catch basins and catch basin chute installations. In such cases, all such facilities shall be counted as one limited by the extreme pipes, faces (See "Gas Cost Sharing Work Standard Sketch No. 2"). The volume shall then be calculated as described above.

7. Price To Cover:

The bid price shall also cover all additional supervision, labor, material, equipment and insurance necessary to excavate while protecting and maintaining (excluding supports for fully exposed live gas) gas facilities without disruption of service to the public and in accordance with contract specifications. The price shall also include, changes of sheeting method and excavation width configuration where necessary to accommodate gas facilities in their existing locations; difficulties during the installation of catch basins,

chute connections, hydrant branch, and house sewer and water connections under or over gas facilities; loss of productivity due to slower rate of excavation (special care) during excavation, including the use of such methods as: hand excavation around existing single and multiple facilities, extra excavation and backfilling due to lost trench because of existing and adjacent gas facilities, compaction, removal of sheeting from the facilities, extra roadway base restoration and temporary pavement, associated maintenance and protection of traffic, barricades, and traffic plates that may be required to temporarily close and/or complete the work.

SECTION 6.07 - Test Pits For Gas Facilities.

1. Description:

Under this section, the Contractor shall furnish all labor, materials, insurance, equipment and appliances necessary to excavate, sheet and, maintain test pits at locations approved by the Resident Engineer in consultation with the facility operator. Test pits shall be dug in order to ascertain exact locations, cover and invert elevations, clearances, alignment and operating status (live or dead) of existing gas facilities. The Contractor shall inspect jointly with the Resident Engineer and facility operator, gas facilities and other structures uncovered, take all relevant measurements and elevations as directed by the Resident Engineer. Tests to determine operating status of gas facilities shall be performed by facility operator. The pits shall be covered with steel plates during daytime nonworking hours, and uncovered, as required, until the inspection work is completed. Testing of gas facilities may require a maximum of four (4) hours. Then, the pits shall be backfilled with clean fill, and resurfaced with temporary pavement. All traffic shall be maintained and all safety measures as stipulated shall be complied with.

2. Methods Of Construction:

A. Excavation: Existing pavement to be removed shall be neatly cut along lines of removal with a saw or other approved equipment which leaves a neat straight joint line along the juncture with subsequently replaced pavement. Excavation in the vicinity of utilities and other structures shall be performed using hand tools. Use of hand operated pneumatic and electric jackhammers will be permitted only for breaking pavement and removal of masonry, concrete and boulders, or as otherwise directed by the Resident Engineer. The Contractor shall properly dispose of all materials excavated from test pits away from site. Test pits shall be excavated at locations shown on the contract drawings or as directed by the Resident Engineer. Additional test pits may be required and shall be excavated where required, as ordered by the Resident Engineer. All test pits shall be excavated to a depth and size necessary to locate the existing facilities. Shheeting shall be used when depth of excavation exceeds five (5) feet. The sheeting required shall be furnished and installed in full compliance with the State of New York and Federal Safety Codes requirements and as specified in contract, whichever is more stringent. Care shall be taken that no existing gas facilities or other structures are broken or damaged. All broken or damaged facilities shall be reported immediately to facility operator who shall decide whether such facilities shall be repaired or replaced by company forces or by City contractor and in conformance with "General Provisions; Gas Cost Sharing Work Paragraph No. 9". Contractor shall excavate all material encountered, including large masses of concrete, cemented masonry and boulders, as directed by the Resident Engineer. Any type of excavation protection used, shall satisfy the following:

(a) Industrial Code Rule 753.

(b) Prevent injury to workers and the public, and avoid damage to existing water, sewer, and gas pipes or other structures, and to pavements and their foundations, through caving or sliding of the banks of the excavation.

Should it become necessary, as determined by the Resident Engineer, to enlarge any test pit in any dimension after sheeting has been placed, the Contractor shall remove portions of the sheeting, as necessary, enlarge the test pits as directed, and replace the sheeting without additional compensation for this work other than for the additional volume of material excavated.

B. Maintenance Of Test Pits: Excavated test pits shall be maintained free of debris and kept dry by the Contractor in order to permit the inspection and measurements and to determine the locations of facilities. In order to accomplish this, Contractor shall, upon completion of excavation and placement of sheeting (if depth greater than five (5) feet), furnish and install adequate steel plates and posting

over the excavated pits and shall temporarily remove all equipment debris and workers, and relocate barricades in order to open the full width of street to traffic during nonworking hours. The Contractor shall then, at no additional cost, relocate such barricades, barrels, cones and other warning devices and remove steel plates, as and when directed by the Resident Engineer to facilitate the inspection of exposed facilities. When work is being performed and the pits are not covered with steel plates, the Contractor shall provide complete and safe access to the test pits as may be required, and he shall provide construction barricades and maintain traffic at all times as shown or as directed by the Resident Engineer. Upon completion of test pit inspection by the Resident Engineer, the pit shall be backfilled by the Contractor as specified in contract, except that backfill material shall conform to contract specifications for such purpose.

- C. Pavement And Sidewalk Restoration: After backfilling is completed, the Contractor shall construct a temporary pavement consisting of a minimum of four (4) inches thick asphaltic concrete mixture in roadway areas or a two (2) inches thick asphaltic concrete mixture in sidewalk areas in order to maintain existing pedestrian and vehicular traffic. This temporary pavement shall be maintained until permanent pavement and sidewalk replacement is constructed as specified in contract.

3. Measurements:

The quantity to be measured for payment shall be the number of cubic yards of material removed from within the limits of the pit dimensions as directed by the Resident Engineer. The volume occupied by existing pipes or other structures remaining within the maximum payment lines will not be deducted from the total volume measured except, where the cross sectional area of these facilities exceeds four (4) square feet. As determined by the Resident Engineer, the quantity measured for payment may be proportionate to a fair and reasonable estimate of gas responsibility in the total volume excavated.

4. Price To Cover:

The contract price bid per cubic yard for test pits shall cover all additional costs of labor, material, insurance, equipment, appliances and incidentals required to excavate test pits, including removal and disposal of excavated materials, sheeting, steel plating, backfill, compaction and temporary pavement and sidewalk restoration all in accordance with the specifications and as direction of the Resident Engineer. The price shall also include the cost of providing safe access to the excavation by facility operator for the performance of certain test to determine operating status of gas facilities prior to City work. The price shall also include support and protection of all gas facilities crossing excavation, paralleling and/or encroaching any face of excavation.

GAS COST SHARING STANDARD SPECIFICATIONS
SCHEDULE GCS-A

Average rate charged by utility companies to Disconnect and Reconnect Gas Services:

1. National Grid - \$586.90 per Service/and Visit
2. Con Edison - \$524.00 per Service/and Visit

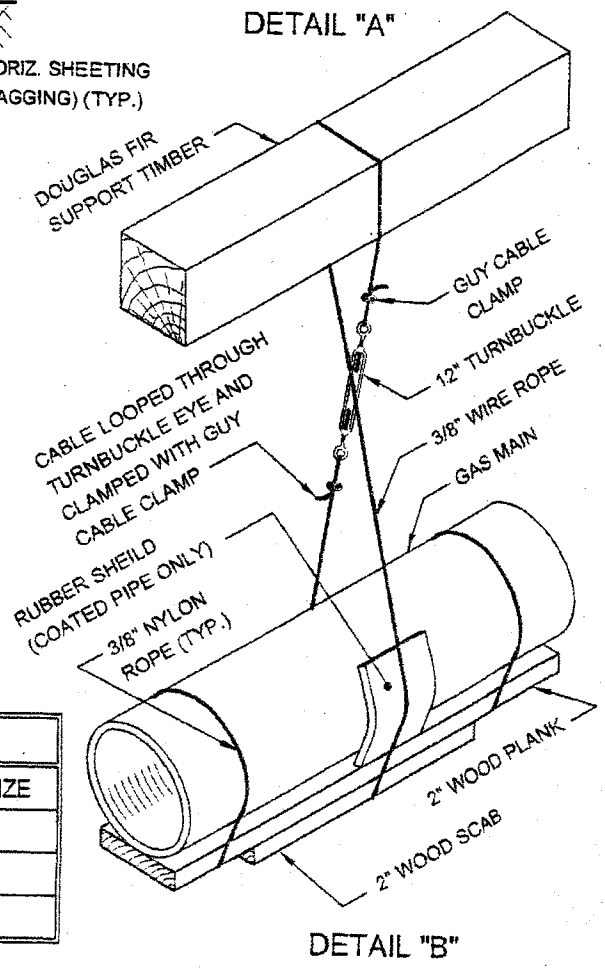
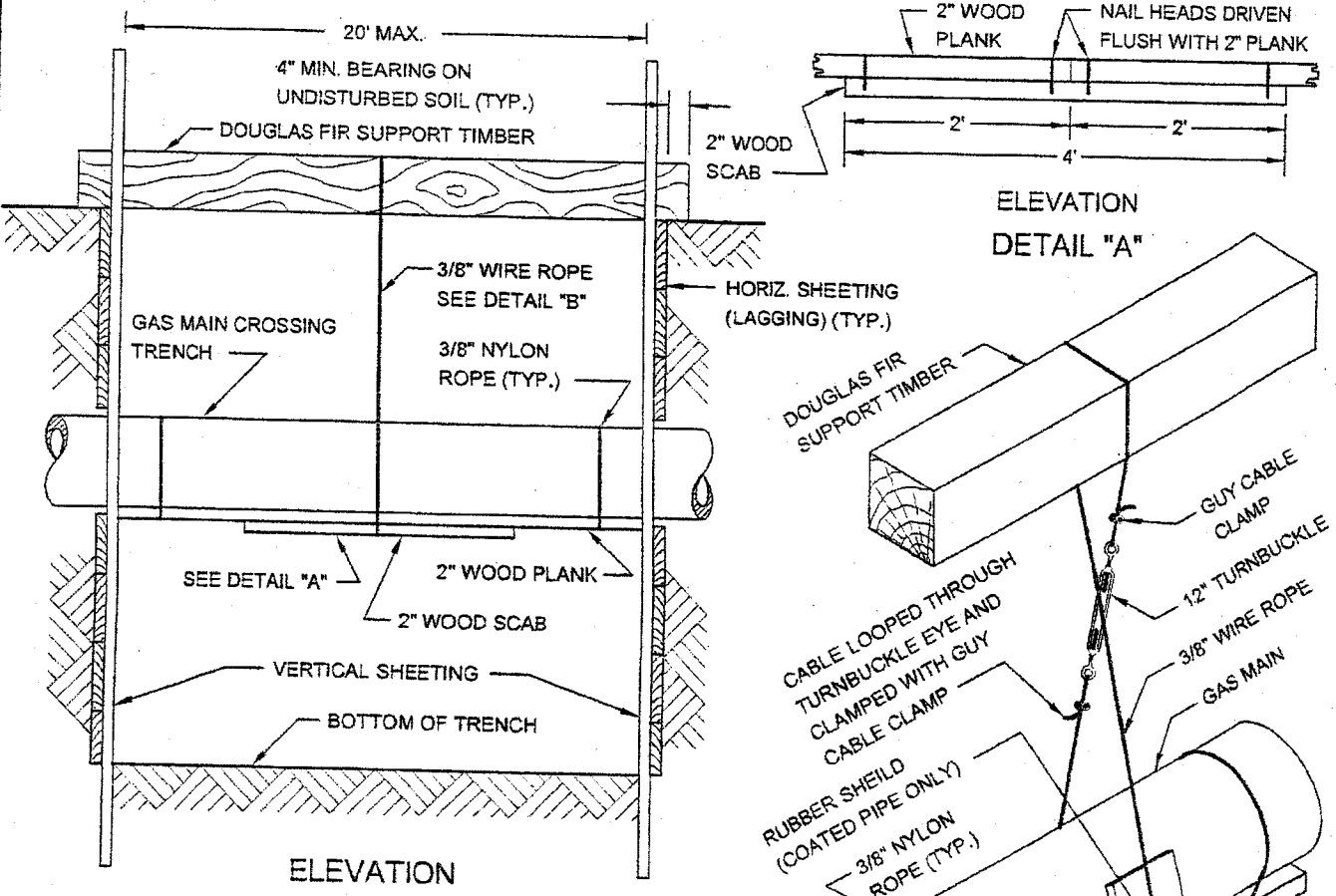
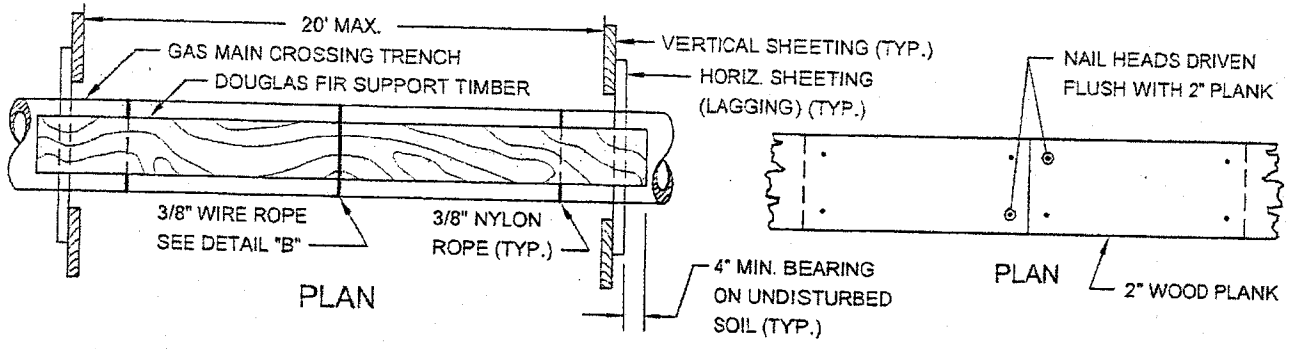
IV - STANDARD SKETCHES; GAS COST SHARING WORK

Hereinafter attached are the following Standard Sketches for Gas Cost Sharing Work:

- Sketch No. 1 - Support Requirements For Gas Mains And Services Crossing Excavation Greater Than 4' - 0" Wide At Any Angle
- Sketch No. 1A - Support Requirements For Gas Mains Over 16" Diameter Up To And Including 48" Diameter Crossing Excavation At Any Angle
- Sketch No. 2 - Typical Methods Of Measurement For Gas Crossings
- Sketch No. 3 - Utility Crossings During Catch Basin Chute Connection Pipe Installation
- Sketch No. 4 - Utility Crossings During Catch Basin Chute Connection Pipe Installation (Extra Depth)
- Sketch No. 5 - Gas Main Encroachment On And/Or Parallel To Excavation Of Unsheeted Trench

GAS COST SHARING WORK (SKETCH NO. 1)

SUPPORT REQUIREMENTS FOR GAS MAINS AND SERVICES CROSSING EXCAVATION GREATER THAN 4'-0" WIDE AT ANY ANGLE

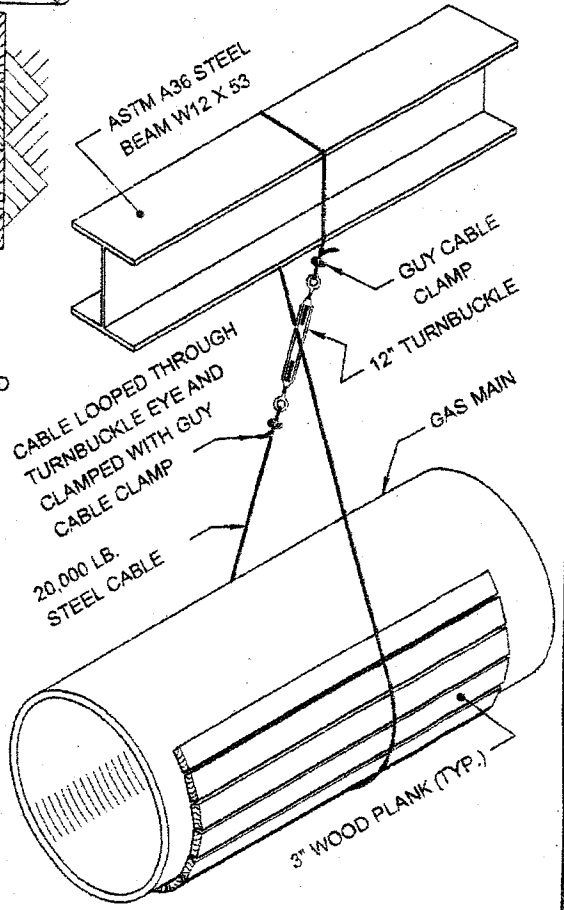
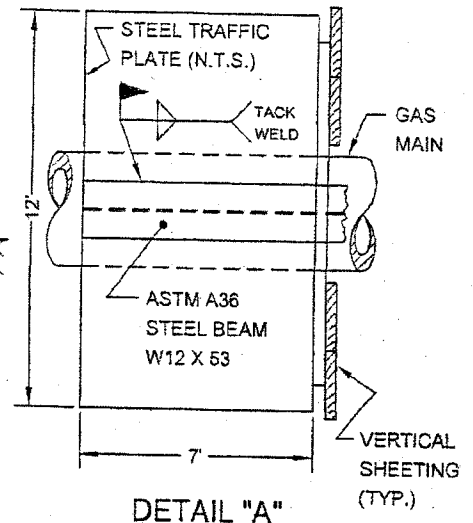
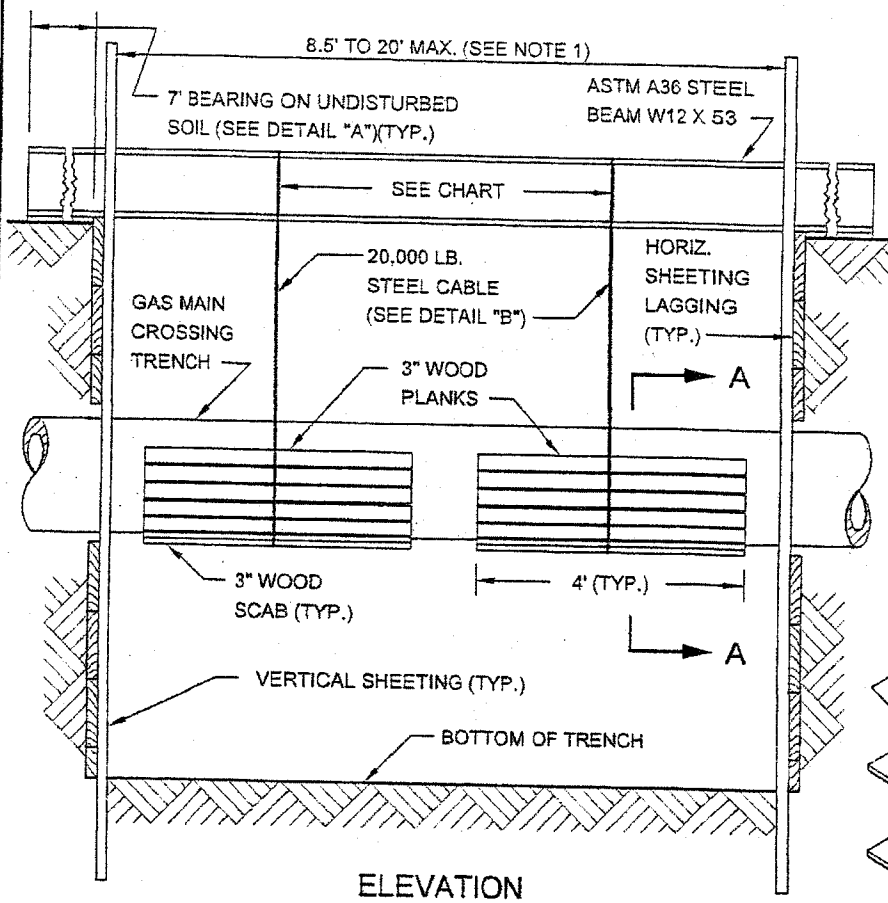


CABLE SUPPORT		TIMBER SUPPORT	
MAIN TYPE	SPACING	MAIN SIZE	TIMBER SIZE
CAST IRON	4' O.C. MAX.	UP TO 6"	6" X 6"
STEEL	10' O.C. MAX.	8" TO 10"	8" X 8"
PLASTIC	10' O.C. MAX.	12" TO 16"	10" X 10"

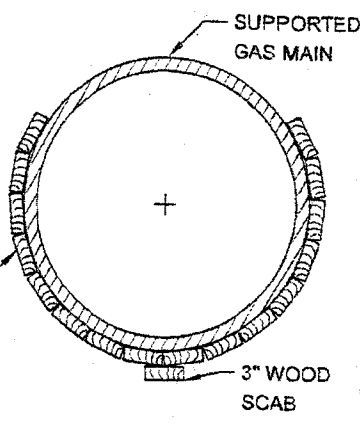
REVISED OCT. 2004 - L. ADRIEN
 REVISED JUNE 1988 - J. WONG, W. PATAKANOOP, MOY

GAS COST SHARING WORK (SKETCH NO. 1A)

SUPPORT REQUIREMENTS FOR GAS MAINS OVER 16" DIAMETER UP TO AND INCLUDING 48" DIAMETER CROSSING EXCAVATION AT ANY ANGLE



CABLE SUPPORT	
MAIN TYPE	SPACING
CAST IRON	4' O.C. MAX.
STEEL	10' O.C. MAX.

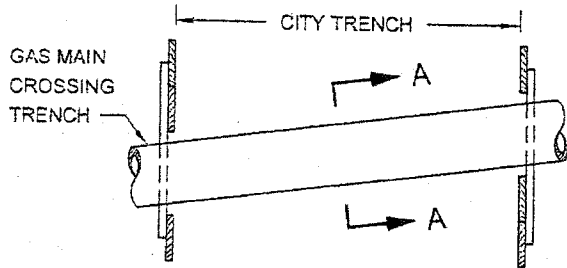


- NOTES:**
- (1) NO SUPPORT IS REQUIRED FOR GAS MAINS OVER 16" DIA. UP TO AND INCLUDING 48" DIA. CROSSING TRENCHES LESS THAN 8.5' WIDE.
 - (2) UNDERMINE A MAXIMUM OF 8.5 L.F. OF CAST IRON GAS MAIN AT A TIME.
 - (3) SET STEEL CABLE OVER 3" WOOD PROTECTIVE PLANKS AND PLACE AN ADDITIONAL 3" SCAB ON THE BOTTOM OF THE GAS MAIN.
 - (4) ADJUST STEEL CABLE UNTIL DEAD WEIGHT OF THE UNDERMINED GAS MAIN HAS BEEN TAKEN UP BY THE OVERHEAD STEEL BEAM SUPPORT.
 - (5) ALL SUPPORTS AND STEEL CABLES CAN BE REMOVED ONLY AFTER THE REQUIRED BACKFILL (AROUND AND BELOW GAS MAIN) HAS BEEN COMPACTED IN ACCORDANCE WITH NEW YORK CITY STANDARDS AND AT THE DIRECTIONS OF THE ENGINEER.

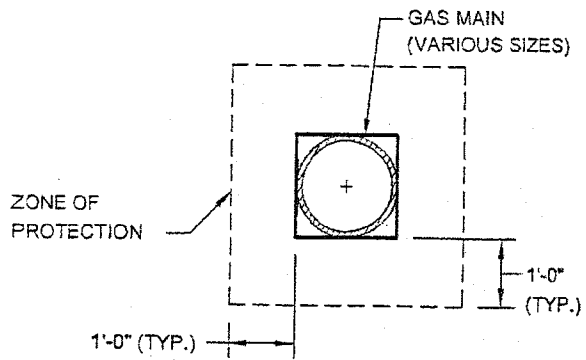
REVISED JUNE 1988 - J. WONG / W. PATALANOR, MDY
REVISED JUNE 2004 - L. ADRIEN

GAS COST SHARING WORK (SKETCH NO. 2)

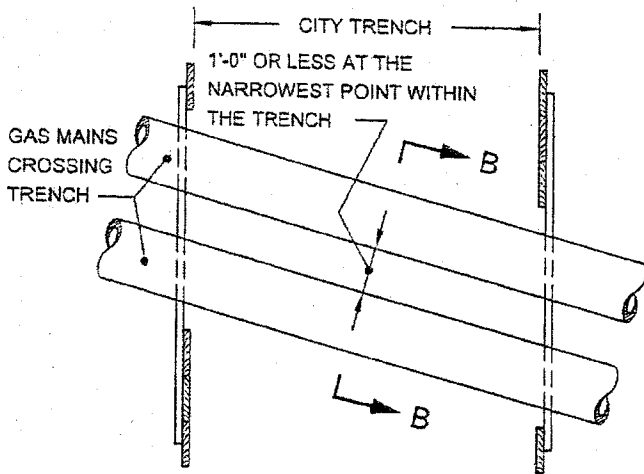
TYPICAL METHODS OF MEASUREMENT FOR GAS CROSSINGS



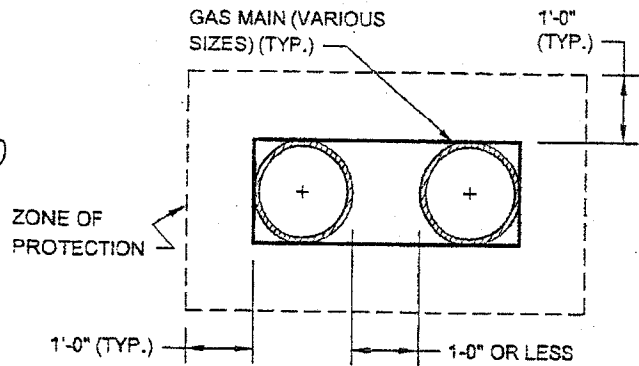
SINGLE FACILITY CROSSING



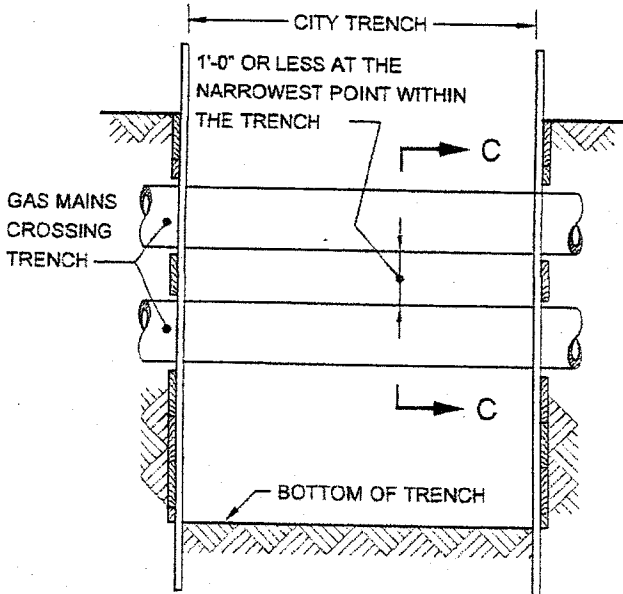
SECTION A-A



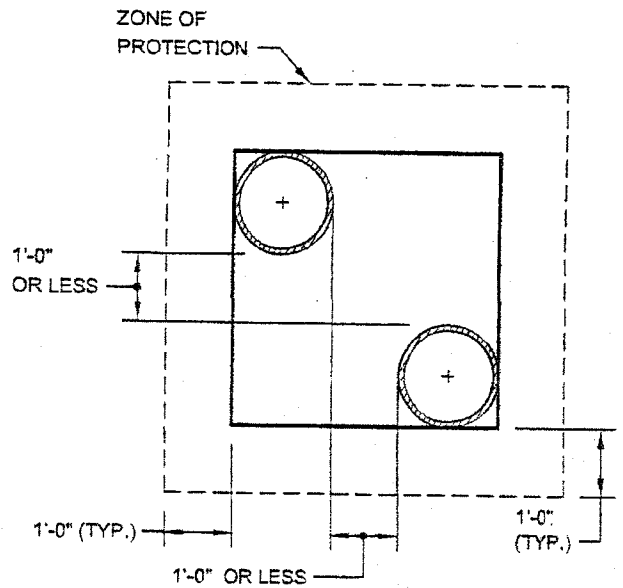
**MULTIPLE FACILITIES
(GAS MAINS AT SAME ELEVATION)**



SECTION B-B



**MULTIPLE FACILITIES
(ONE CROSSING AT DIFFERENT ELEVATIONS)**



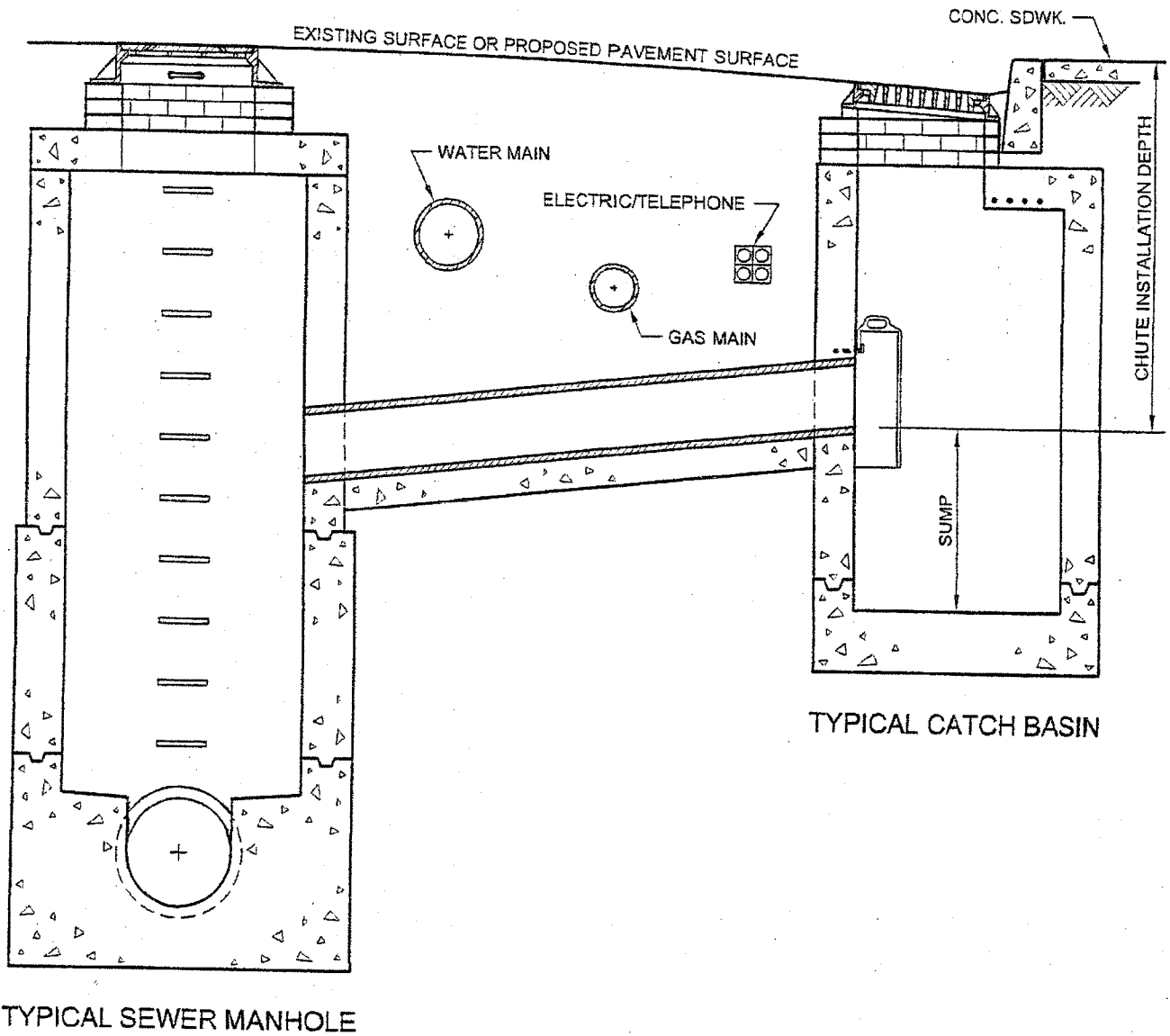
SECTION C-C

NOTE:

GAS MAINS MAY OR MAY NOT BE PARALLEL TO EACH OTHER.

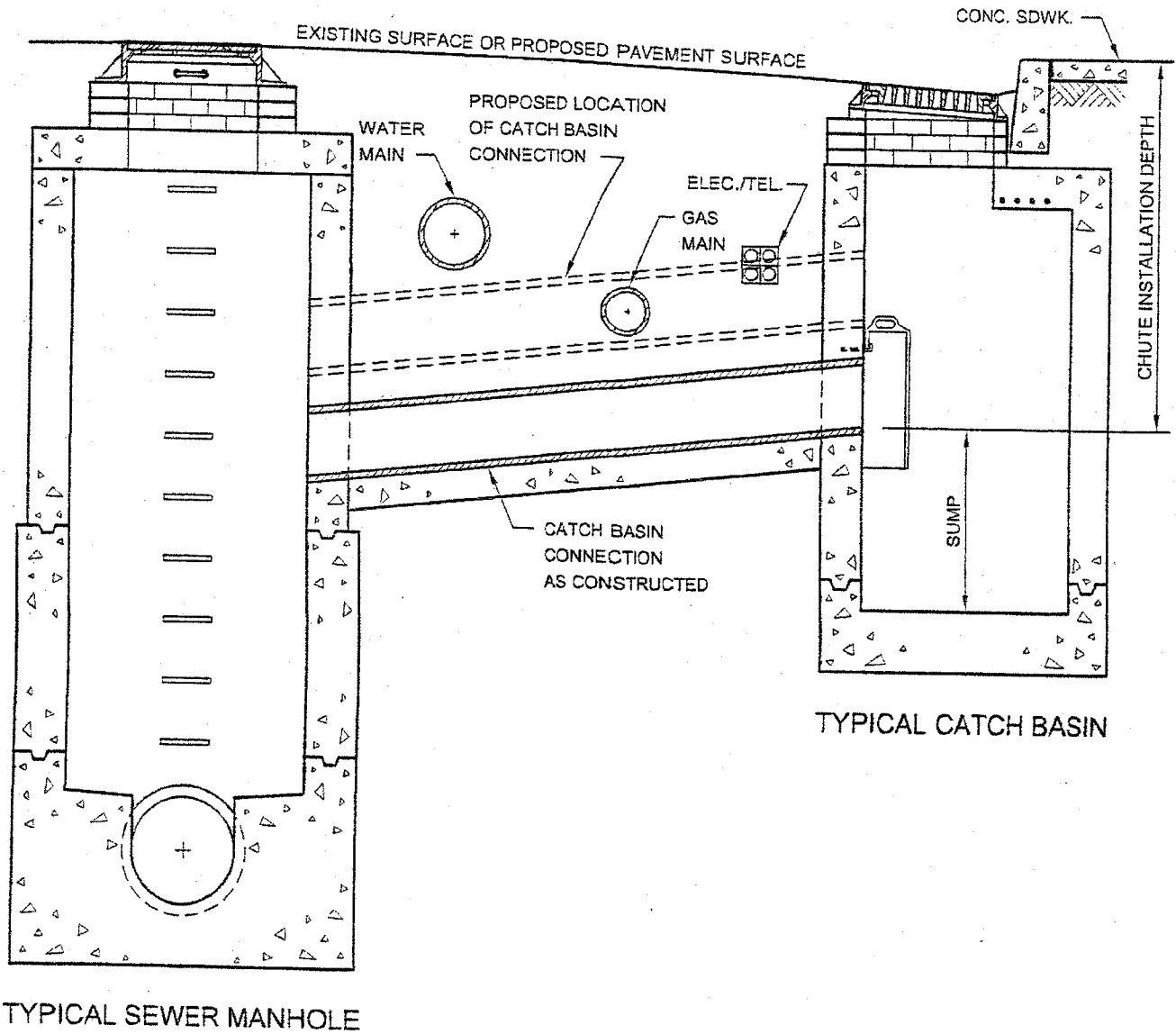
REVISED SEPT. 2004 - L. ADRIEN
REVISED SEPT. 2004 - J. WONG/W. PATLANO/P. MOY

GAS COST SHARING WORK (SKETCH NO. 3)
UTILITY CROSSINGS DURING CATCH BASIN CHUTE
CONNECTION PIPE INSTALLATION



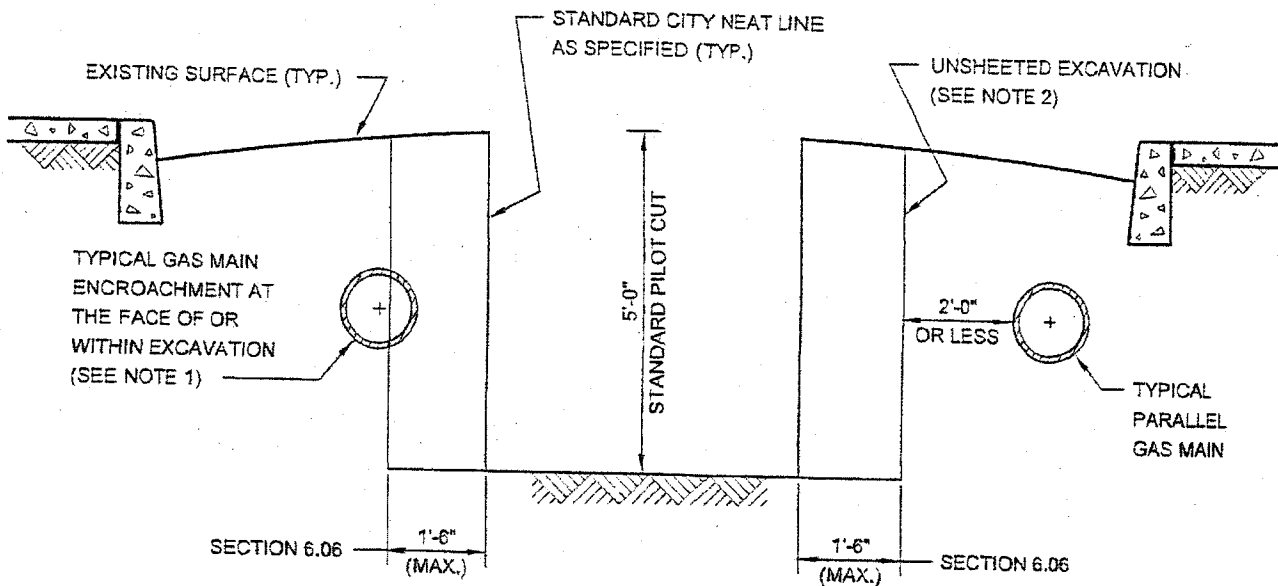
REVISED OCT. 2004 - J. ADRIEN
REVISED OCT. 1998 - J. WONGW. FATALANOP. MOY

GAS COST SHARING WORK (SKETCH NO. 4)
 UTILITY CROSSINGS DURING CATCH BASIN CHUTE
 CONNECTION PIPE INSTALLATION (EXTRA DEPTH)



REVISED OCT. 2004 - L. ABBRIEN
 REVISED OCT. 1998 - J. WONG/M. PATALANO/P. MOY

GAS COST SHARING WORK (SKETCH NO. 5)
GAS MAIN ENCROACHMENT ON AND/OR PARALLEL
TO EXCAVATION OF UNSHEETED TRENCH



NOTES:

- (1) GAS MAIN LOCATED AS SHOWN MAY HAVE TO BE REMOVED BY THE FACILITY OPERATOR PRIOR TO THE START OF CITY EXCAVATION, OTHERWISE, THE CONTRACTOR WILL BE PAID UNDER SECTION 6.06 FOR THE SAID WORK. IF GAS MAIN IS ABANDONED THEN SECTION 6.03 SHALL APPLY.
- (2) EIGHTEEN (18) INCHES FROM STANDARD NEAT LINE IS THE MAXIMUM ALLOWABLE WIDTH OF AREA THAT MAY BE DISTURBED OR EXCAVATED DURING INSTALLATION OF CERTAIN TYPES OF SHEETING SYSTEMS THAT MEET THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS OF THE DEPARTMENT OF DESIGN AND CONSTRUCTION OF THE CITY OF NEW YORK.

**V - PRELIMINARY GAS WORK TO BE PERFORMED BY
FACILITY OPERATOR**

APPLICABLE TO ALL GAS DRAWINGS:

- ALL RELOCATION WORK SHOWN IN THIS ADDENDUM IS TO BE PERFORMED BY FACILITY OPERATOR.
- ALL SUPPORT AND PROTECTION WORK TO BE PERFORMED BY CITY CONTRACTOR
- IF ADDITIONAL INFORMATION IS NEEDED REGARDING THE FACILITY OPERATOR RELOCATION WORK, THE CONTRACTOR IS ADVISED TO CONTACT THE GAS COMPANY REPRESENTATIVE:

DONALD SOLDIVIERO
CONSOLIDATED EDISON
4 IRVING PLACE, ROOM 275S
NEW YORK, NY 10003
TEL.: 212-460-4834

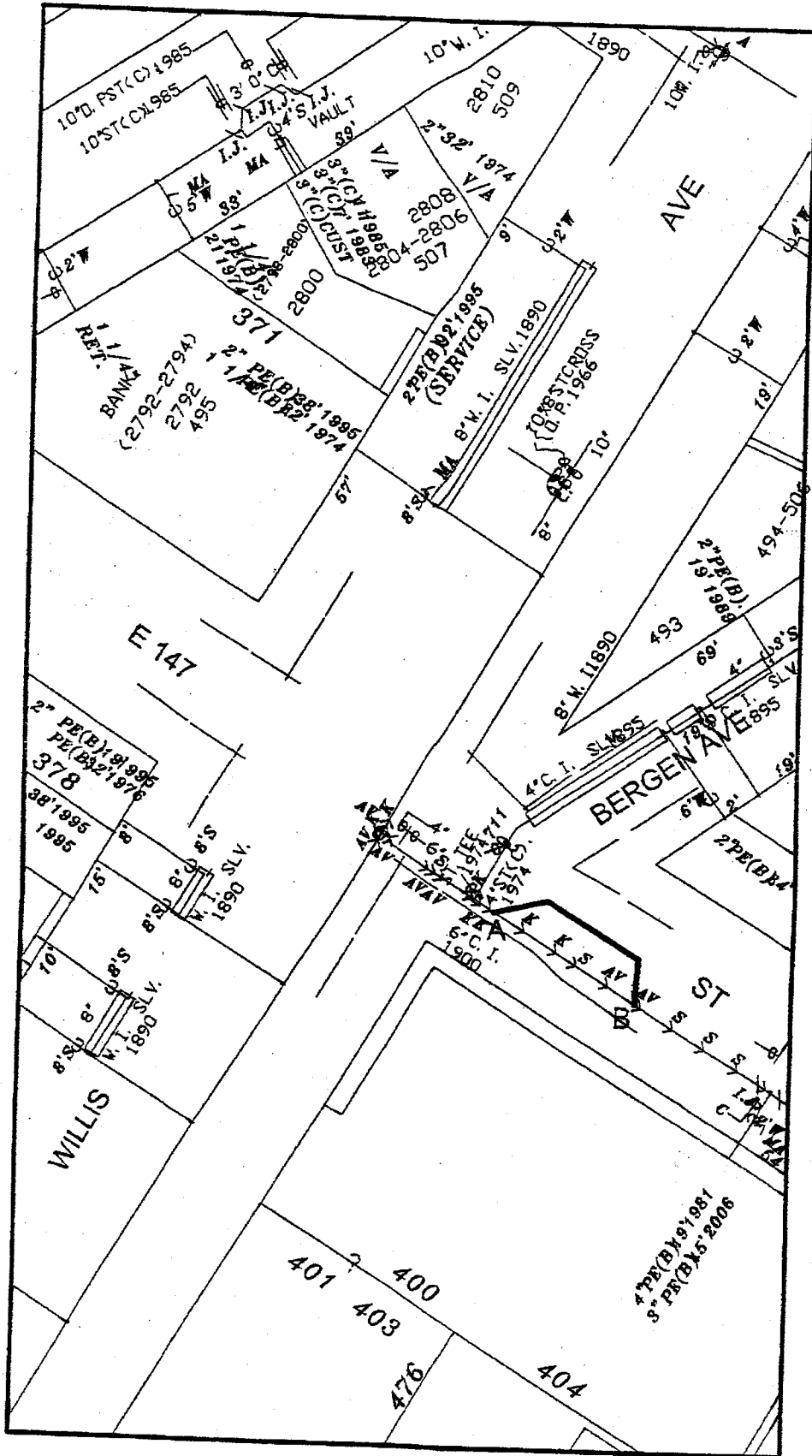
(NO TEXT IN THIS AREA, TURN PAGE)

GAS FACILITY COST ALLOCATION AGREEMENT
 PROJECT NO. HWXRCPLZ
 CAPITAL GAS MAIN INSTALLATION

SHEET #	LOC.	ON STREET	FROM	TO	ITEM	SIZE	TYPE	LENGTH	REIMB LENGTH	REMARKS
1	A-B	E 147 ST	BERGEN AVE	BROOK AVE	82i	8	PE	30	30	RETIRE 30'± 6" C.I.
2	A-B	WILLIS AVE	E 148 ST	E 149 ST	82k	12	PE	30	30	RETIRE 30'± 10" W.I.
3	A-B	E 148 ST	COURTLAND AVE	THIRD AVE	82i	8	PE	91	91	RETIRE 91'± 6" C.I.
4	A-B	MELROSE AVE	E 150 ST		82i	8	PE	8	8	RETIRE 8'± 8" C.I.
5	A-B	THIRD AVE	E 148 ST		82i	8	PE	30	30	RETIRE 30'± 4'6" C.I.

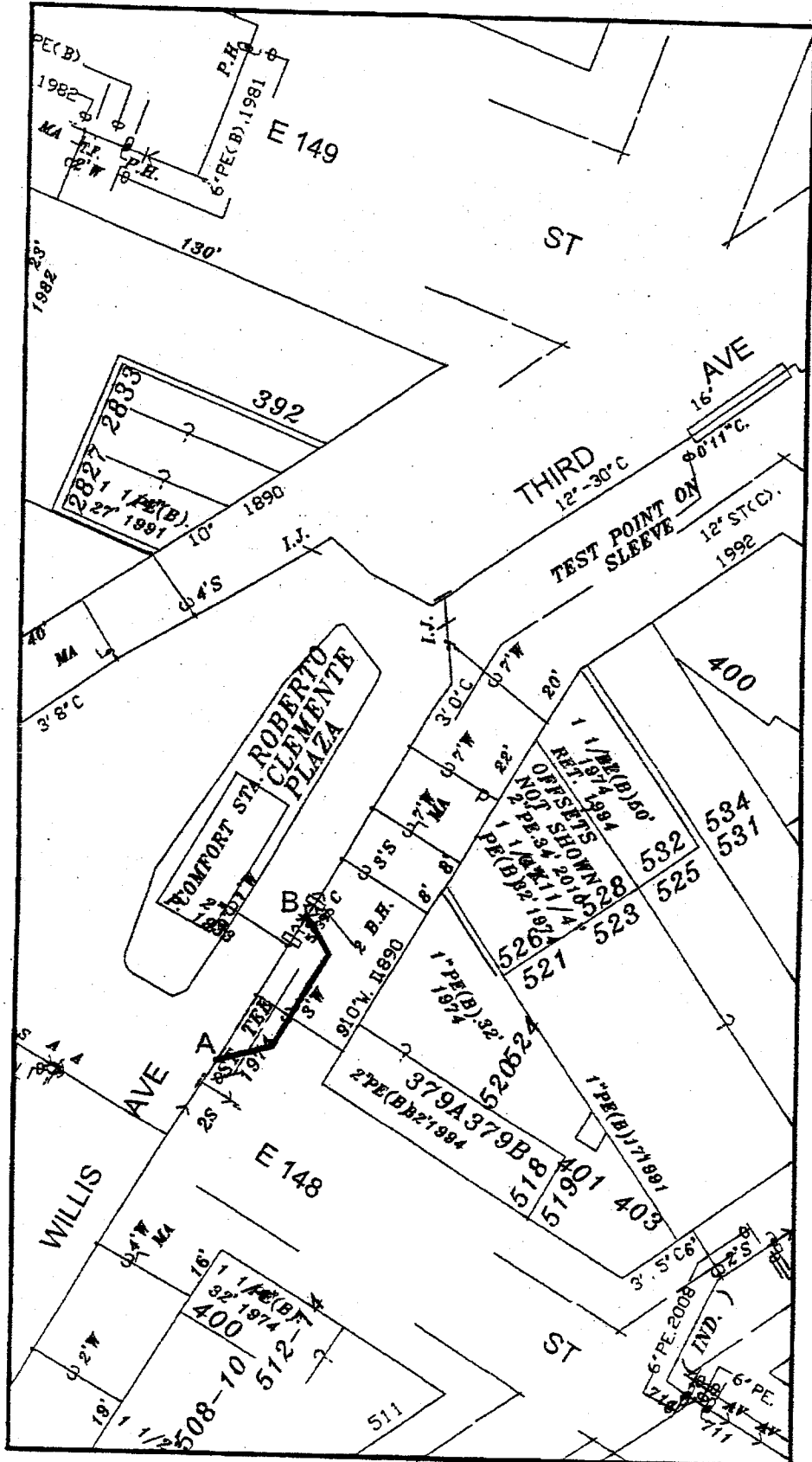
A3-22A

1" = 50'



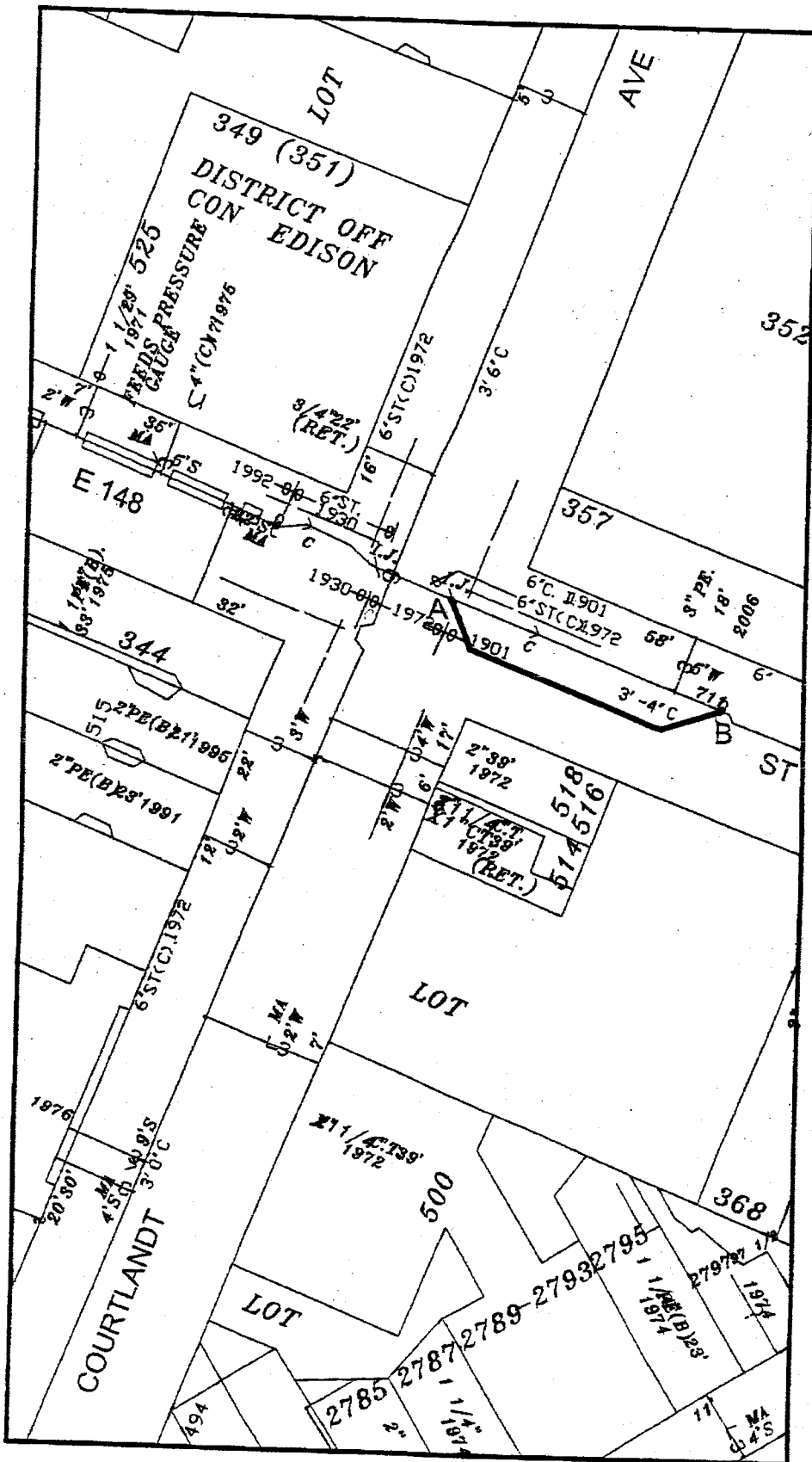
A3-22B

1" = 50'



A3-22C

1" = 50'

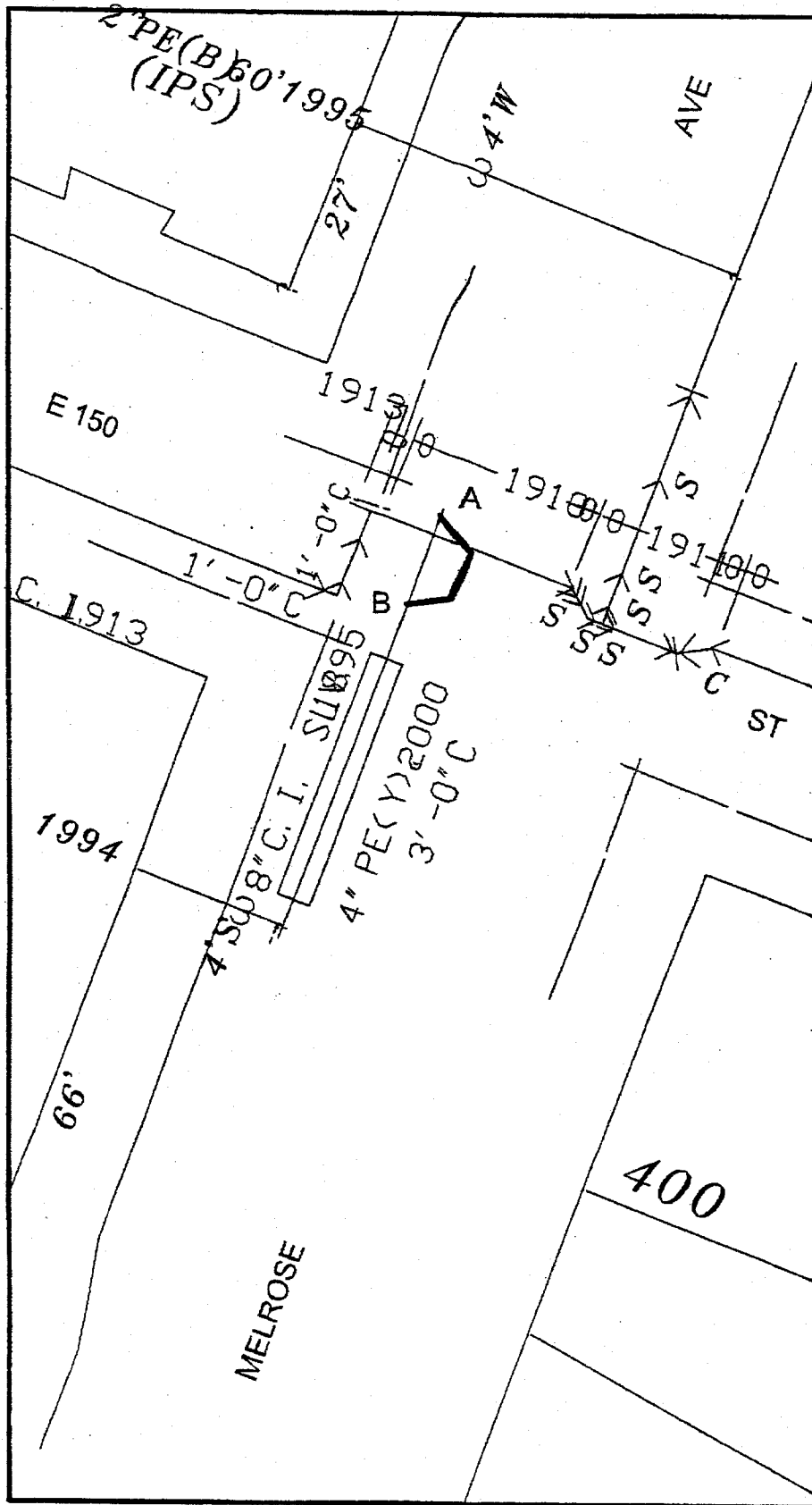


HWXRCPLZ

A3-22D

SHT 3

1" = 25'

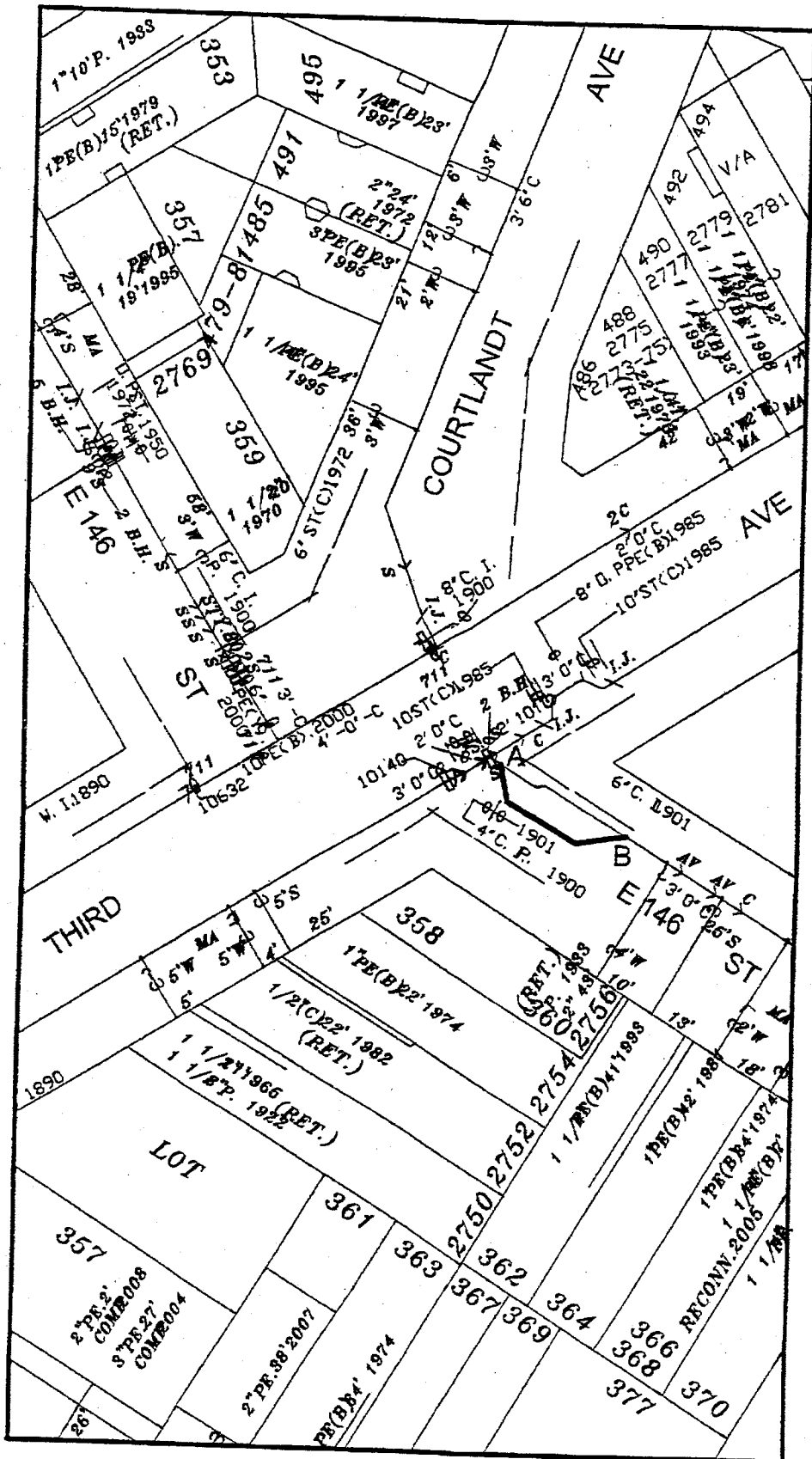


HWXRCPLZ

A3-22E

SHT 4

1" = 50'



**VI - LISTING OF APPROXIMATE LOCATIONS OF EP-7 BID
ITEMS QUANTITIES**

(NO TEXT IN THIS AREA, TURN PAGE)

**SCOPE OF WORK
SUPPORT AND PROTECTION
FOR CONTRACT NUMBER HWXRCPLZ**

The City of New York Department of Design and Construction is planning to install sewers and/or water mains and all appurtenances in various locations in The City of New York along with all work incidental thereto.

- 6.01.8 - Support & Protect Gas Services Crossing Trenches And/Or Excavations (Ea.)**
5 in Various Locations As Required.
- 6.01.9 - Support & Protect Gas Main Crossing Water Main Up To 20" In Diameter (Ea.)**
1 in E 147 St. @ Bergen Avenue
3 in Willis Ave. @ E 148 St.
1 in Third Ave. @ E149 St.
1 in Third Ave. @ E 148 St.
1 in Third Ave. @ E 147 St.
1 in Third Ave. @ E146 St.
1 in Third Ave. @ Courtlandt Ave.
2 in Melrose Ave. @ E 150 St.
2 in Courtlandt Ave. @ E149 St.
- 6.02 - Extra Excavation For The Installation Of Catch Basin Sewer Drain Pipes With Gas Interferences (Ea.)**
10 in Various Locations As Required
- 6.03 - Removal Of Abandoned Gas Facilities. All Sizes (L.F.)**
300 in Various Locations As Required
- 6.03.1A - Removal Of Abandoned Gas Facilities With Possible Coal Tar Wrap. All Sizes. (For Con Edison Work Only) (L.F.)**
100 in Various Locations As Required
- 6.04 - Adjust Hardware To Grade Using Spacer Rings / Adaptor (Street Repaving) (Ea.)**
20 in Various Locations As Required
- 6.05 - Adjust Hardware To Grade By Resetting (Road Reconstruction) (Ea.)**
10 in Various Locations As Required

**SCOPE OF WORK
SUPPORT AND PROTECTION
FOR CONTRACT NUMBER HWXRCPLZ**

The City of New York Department of Design and Construction is planning to install sewers and/or water mains and all appurtenances in various locations in The City of New York along with all work incidental thereto.

6.06 - Special Care Excavation & Backfilling (C.Y.)

200 CY In Various Locations As Required, Including But Not Limited
To All Gas Services Crossing Unsheeted Water Main Trenches And The Following
Locations:

E 147 St. @ Bergen Ave.
Willis Ave. @ E 147 St.
Willis Ave. @ E 148 St.
E 148 St. @ Willis Ave.
E 148 St. @ Third Ave.
Third Ave. @ E 148 St.
Third Ave. @ Melrose Ave.
E 149 St. @ Courtlandt Ave.
Courtlandt Ave. @ Third Ave.

6.07 - Test Pits For Gas Facilities (C.Y.)

30 in Various Locations As Required.

END OF ADDENDUM NO. 3

This Addendum Consists of Thirty Seven (37) Pages

(NO TEXT ON THIS PAGE)

ATTACH TO CONTRACT DOCUMENTS

**THE CITY OF NEW YORK
DEPARTMENT OF DESIGN AND CONSTRUCTION
INFRASTRUCTURE DIVISION
BUREAU OF DESIGN**

PROJECT ID: HWXRCPLZ

**RECONSTRUCTION OF
ROBERTO CLEMENTE PLAZA**

**INCLUDING SEWER, WATER MAIN, STREET LIGHTING,
AND TRAFFIC SIGNAL WORK**

Together With All Work Incidental Thereto

**BOROUGH OF THE BRONX
CITY OF NEW YORK**

ADDENDUM NO. 4

DATED: July 15, 2012

This Addendum is issued for the purpose of amending the requirements of the contract documents and is hereby made part of said contract documents to the same extent as if it was originally included therein.

The Standard Sewer Specifications of the Department of Environmental Protection (dated August 1, 2009), Sewer Design Standards of the Department of Environmental Protection (dated September 2007) Revised January 2009), Standard Water Main Specifications of the Department of Environmental Protection (dated August 1, 2009), Water Main Standard Drawings of the Department of Environmental Protection (latest revisions), and the Standard Highway Specifications (Volumes I and II) of the Department of Transportation (dated November 1, 2010) of The City of New York, shall be included as part of the contract documents. These said specifications and standard drawings are hereby revised under the following section headings:

- A. NOTICE TO BIDDERS
- B. AMENDMENTS TO THE STANDARD HIGHWAY SPECIFICATIONS
- C. AMENDMENTS TO THE STANDARD SEWER SPECIFICATIONS
- D. AMENDMENTS TO THE STANDARD WATER MAIN SPECIFICATIONS

A. NOTICE TO BIDDERS

- (1) (A) The Contractor is advised that copies of the Standard Sewer Specifications (dated August 1, 2009), Sewer Design Standards (dated (September 2007) Revised January 2009), Standard Water Main Specifications (dated August 1, 2009), Specifications For Trunk Main Work (dated March 2012) and Water Main Standard Drawings (latest revisions) are available to all prospective bidders at no cost upon presentation of receipt of purchase of Bid Package at the following location:

Department of Design and Construction
Division of Infrastructure
Design Services, Specifications, 3rd Floor
30-30 Thomson Avenue
Long Island City, NY 11101

- (B) The Contractor is advised that copies of the Standard Highway Specifications (Volume I and II) (dated November 1, 2010), Standard Highway Details of Construction (latest revisions), Division of Street Lighting Specifications (latest revisions), Division of Street Lighting Standard Drawings (latest revisions), Standard Specifications for Traffic Signals (latest revisions), and Standard Drawings for Traffic Signals (latest revisions) are available to all prospective bidders for a fee at the following location:

Department of Transportation
55 Water Street, Ground Floor
New York City, NY 10041

- (2) The Contractor is notified that it is the intent of this Agency to commence work promptly after registration of the contract and to order the Contractor to commence work within two (2) months after registration.
- (3) The Contractor shall furnish, install, maintain and subsequently remove temporary Protective Tree Barriers. Protective Tree Barriers shall be Type B, unless otherwise directed by the Engineer, and shall be constructed and installed as shown on the Protective Tree Barrier sketch in Department of Transportation, Standard Highway Details Of Construction, Drawing No. H-1046A, as directed by the Engineer, and in accordance with Department of Parks and Recreation requirements.
- (4) All utility locations and invert elevations are not guaranteed, nor is there any guarantee that all existing utilities, whether functional or abandoned within the project area are shown.
- (5) All existing house connections shall be maintained and supported during construction. The Contractor shall replace any existing house connection damaged as a result of the Contractor's construction operations as ordered by the Engineer at no cost to the City.
- (6) The Contractor is notified that Victaulic Style 77 Coupling is no longer acceptable for use in any steel water main work. All reference to Victaulic Style 77 Coupling within the Standard Water Main Specifications of the Department of Environmental Protection (dated August 1, 2009), the Water Main Standard Drawings of the Department of Environmental Protection (latest revisions), the Specifications For Trunk Main Work (dated March 2012), and the contract drawings, shall be replaced with Bolted Split-Sleeve Restrained Coupling.
- (7) The Contractor is responsible for any damage to the existing street and traffic signal equipment, including underground conduits and the safety of both pedestrian and vehicular traffic for the duration of the contract.

Should any conduits, cables or foundations need repair due to the Contractor's negligent operations during construction, all work shall be performed according to NYCDOT Bureau of Traffic's Standard Drawings and Specifications at the sole expense of the Contractor.

It is the Contractor's responsibility to secure an approved electrical contractor to perform all traffic signal work (if any). For list of approved electrical contractors, contact Mr. Michael R. LeFosse of New York City Department of Transportation at (718) 786-2236.

- (8) The Contractor is advised that where the existing roadway pavement is designated to be replaced from curb to curb, then no full depth saw cutting of pavement for sewer and water main trenches will be required, except at the limits of full width pavement restoration.
- (9) The Contractor is notified that the NYCDEP-Certified Site Connection Proposal Form SCX-102/12 for sanitary connection of fountain discharge flow to the existing combined sewer located at Roberto Clemente Plaza is attached to the end of this addendum. (This attachment consists of four (4) pages.)
- (10) The Contractor shall exercise extreme caution and take all necessary precautions in placing sheeting and excavating to prevent any damage to the existing NYC TRANSIT'S subway structures and its appurtenances during construction work throughout the project area. The Contractor shall take full responsibility to protect the said NYC TRANSIT'S subway structures and its appurtenances and any damage caused by the Contractor's operations shall be made good by the Contractor to the satisfaction of the Engineer at no additional cost to the City.
- (11) The Contractor shall submit shop drawings to NYC Transit Authority showing all the details and methods of construction, such as, sheeting and bracing, including the Contractor's procedure and sequence of construction, supporting and/or protection of the existing TA's structures and its appurtenances, with necessary design calculations for approval prior to starting of the construction. The design shall be made by a New York State Licensed Professional Engineer skilled in this type of construction and as further evidenced by the imprint of Professional Engineer's seal and signature on all drawings. The cost of this work shall be deemed included in the price bid for all items of work under this contract.

B. AMENDMENTS TO THE STANDARD HIGHWAY SPECIFICATIONS

(NO TEXT)

C. AMENDMENTS TO THE STANDARD SEWER SPECIFICATIONS

- (1) **Refer** to Subsection 1.06.3 - Hours Of Work, Page I-4:

Add the following to Subsection 1.06.3:

- (A) **HOLIDAY CONSTRUCTION EMBARGO** - A special Holiday Construction Embargo shall be in effect on the Friday of the week preceding Thanksgiving Day week from 6:00 AM to 11:59 PM and again from the Monday of Thanksgiving Day week from 6:00 AM through January 2, at 11:59 PM. Roadway and sidewalk construction activities will be restricted during the embargo period on the streets listed below*.

Any permits issued prior to the date of this notice, for work during this embargo period on the streets listed below which do not already have the permit stipulation "410" are hereby suspended for the period noted above. All permittees must comply with this embargo unless a special waiver is granted by OCMC. Waiver requests must be filed at least thirteen (13) days before Thanksgiving Day, in the Permit Office by filing a "Request for Roadway/Sidewalk Permits During Embargo Periods" and submitting supporting documentation. Waiver requests should only be submitted for critical reasons for a specific project. If a waiver is granted, the applicant will be notified so they can apply for the approved permits. Waivers **are not** required for ongoing Building Construction Activity Permits which already include the "410" permit stipulation. Waiver request forms may be obtained at any Permit Office or on the Department of Transportation's website at:

<http://www.nyc.gov/html/dot/downloads/pdf/holidayembapp.pdf>

Prior to this embargo period all necessary measures must be taken so that all roadways and sidewalks are in proper condition to allow for the expeditious and safe movement of vehicular, bicycle and pedestrian traffic. Tool carts, cable reels, containers, and material stored on roadways must be removed during the embargo period.

The opening of utility access covers is prohibited on any of the streets noted below between the hours of 6:00 AM and midnight unless the utility or contractor files for an Emergency Authorization Number as required by section 2-07 of the Department of Transportation's Highway Rules. The planned opening of utility access covers may occur during the hours of 12:01 AM and 5:59 AM where no authorization number is required.

Temporary restoration of the streets and sidewalks and removal thereof, if required for the Holiday Embargo period, will be paid for under the appropriate scheduled items.

No extension of time due to the shutdown period will be granted to the Contractor for completion of the work.

* Please note that this embargo only applies to NYCDOT construction permits. List of street and maps of the affected locations are available by borough on the Department of Transportation's website at: <http://www.nyc.gov/html/dot/html/motorist/trafalrt.shtml>

- (2) **Refer** to Subsection 1.06.14 - Notice To Utility Companies, Etc., To Remove Structures Occupying Place Of Sewers, Water Mains Or Appurtenances, Page I-10:

Add the following to Subsection 1.06.14:

- (1) CONSOLIDATED EDISON COMPANY OF NEW YORK (CON EDISON)

There are CON EDISON facilities in the area of construction. The Contractor shall notify CON EDISON at least seventy-two (72) hours prior to the start of construction by contacting Mr. Brenton Balfour at (212) 460-6142.

- (2) VERIZON

There are VERIZON facilities in the area of construction. The Contractor shall notify VERIZON at least seventy-two (72) hours prior to the start of construction by contacting Mr. George Dinisi at (718) 861-5090.

(3) CABLEVISION

There are CABLEVISION facilities in the area of construction. The Contractor shall notify CABLEVISION at least seventy-two (72) hours prior to the start of construction by contacting Mr. Simon Gomez at (718) 861-7353.

(3) **Refer to Subsection 1.06.20 - Contractor To Notify City Departments**, Page I-12:
Add the following to **Subsection 1.06.20**:

(1) N.Y.C. D.E.P., BUREAU OF WATER AND SEWERS OPERATIONS

The Contractor shall notify Mr. James Garin, P.E., Director, Engineering at the Department of Environmental Protection, 59-17 Junction Blvd., 3rd floor low rise, Corona N.Y. 11368, at least thirty (30) days prior to the start of construction.

(2) NEW YORK CITY FIRE DEPARTMENT

The Contractor shall notify the Bureau of Fire Communications at least thirty (30) days prior to the start of construction by contacting Mr. Nick Varone at (718) 624-4194.

(3) N.Y.C. DEPARTMENT OF TRANSPORTATION

The Contractor shall notify Mr. Steve Galgano, P.E. Chief of Signal/Street Lighting Operations, 34-02 Queens Blvd., Long Island City, N.Y. 11101 at (718) 786-3550, at least seventy-two (72) hours prior to the start of construction.

(4) N.Y.C. DEPARTMENT OF PARKS AND RECREATION

The Contractor shall notify the Parks Department at least seventy-two (72) hours prior to the start of construction by contacting Mr. Thomas Russo at (718) 699-0873.

(5) N.Y.C. TRANSIT AUTHORITY

- (a) The Contractor shall notify Outside Projects at least seven (7) days prior to the start of construction.

The Contractor shall contact:

Mr. Mohamed Adam, P.E.
Project Engineer-Outside Projects
New York City Transit
2 Broadway, 7th Floor
New York, N.Y. 10004
Attention Ms. Alina Avadanei
Telephone No. (646) 252-3641

- (b) The Contractor is advised that bus routes as well as bus stops, within the scope of this project may be affected during construction operations. The Contractor shall notify the Transit Authority at least two (2) weeks prior to the start of construction, in order to make the necessary arrangements as required under the NYC TRANSIT GENERAL NOTES included in **Section 1.06.24A**, **Section 1.06.24B** and **Section 1.06.24C** of this addendum.

Arrangements shall be made through:

Ms. Sarah Wyss
 Director Of Short Range, Bus Service Planning (SRB)
 New York City Transit
 2 Broadway, Room B17.50
 New York, N.Y. 10004
 Telephone No. (646) 252-5517
 sarah.wyss@nyc.com

(c) In addition, the Contractor is advised that construction operations might affect subway lines and stations; and NYCT facilities (i.e. manholes, ducts, etc.). The Contractor shall notify the Transit Authority as required and specified in **Section 1.06.24A**, **Section 1.06.24B** and **Section 1.06.24C** of this addendum.

(4) **Refer to Subsection 1.06.24 - Contractor To Carry Out Agreement Between City And Railroad Company Or Property Owner(s)**, Page I-14:

Add the following to **Subsection 1.06.24**:

1.06.24A - NYC TRANSIT GENERAL NOTES AND REQUIREMENTS

For NYC TRANSIT notes see the contract drawings.

1.06.24B - NYC TRANSIT REQUIREMENTS

N.Y.C. TRANSIT INSURANCE: The Contractor (Permittee) shall indemnify and save harmless the City of New York and the New York City Transit (Permitter) in accordance with the following "Insurance Requirements" and proof that the necessary insurance is in effect will be required before work can commence:

NYCT "OUTSIDE CONTRACT" INSURANCE REQUIREMENTS

(1) The Permittee at its sole cost and expense shall carry or cause to be carried and shall maintain at all times during the period of performance under this Agreement policies of insurance as herein below set forth below:

(A) **Workers' Compensation Insurance** - (including Employer's Liability Insurance) with limits as specified in Schedule "A", which limit may be met by a combination of primary and excess insurance meeting the statutory limits of New York State. The policy shall be endorsed to include Longshoreman's and Harbor Workers' Compensation Act/Maritime Coverage Endorsement and/or Jones Act Endorsement when applicable.

(B) **Commercial General Liability Insurance** - (I.S.O. 2001 Form or equivalent) approved by Permitter in the Permittee's name with limits of liability as specified in Schedule "A" for each occurrence on a combined single limit basis for injuries to persons (including death) and damages to property. The limits may be provided in the form of a primary policy or combination of primary and umbrella/excess policy. When the minimum contract amounts can only be met when applying the umbrella/excess policy; the Umbrella/Excess Policy must follow form of the underlying policy and be extended to "drop down" to become primary in the event primary limits are reduced or aggregate limits are exhausted. Such insurance shall be primary and non-contributory to any other valid and collectable insurance and must be exhausted before implicating any Permitter/MTA policy available.

Such policy should be written on an occurrence form; and shall include:

- Contractual coverage for liability assumed by the Permittee under this agreement;

- Personal and Advertising Injury Coverage;
- Products-Completed. Operations;
- Independent Contractors Coverage;
- "XCU" coverage (Explosion, Collapse, and Underground Hazards) where necessary;
- Contractual Liability Exclusion, applicable to construction or demolition operations to be performed within 50 feet of railroad tracks, must be voided, where necessary; and,
- Additional Insured Endorsement (I.S.O. Form CG 20 26 07/04 version or equivalent) approved the Permittor naming:

New York City Transit Authority (NYCTA), the Manhattan and Bronx Surface Transit Operating Authority (MaBSTOA), the Staten Island Rapid Transit Operating Authority (SIRTOA), MTA Capital Construction Co., the Metropolitan Transportation Authority (MTA) including its subsidiaries and affiliates, and the City of New York (as Owner).

(C) Business Automobile Liability Insurance Policy - (I.S.O. Form CA 00 01 10 01 or equivalent) approved by the Permittor is required if Permittee's vehicle enters Permittor property. The insurance must be in the name of the Permittee or its contractor entering the Permittor property with limits of liability in the amount specified in Schedule "A" for claims for bodily injuries (including death) to persons and for damage to property arising out of the ownership, maintenance or use of any owned, hired or non-owned motor vehicle.

(D) Railroad Protective Liability Insurance policy shall be required as specified in Schedule "A".

(E) Environmental/Pollution Exposures:

In the event environmental or pollution exposures exist, the Permittee shall require the environmental contractor or sub-contractor to provide the applicable insurance covering such exposure. The limits and type of insurance provided shall be satisfactory to the Permittor and will be confirmed to the parties prior to the start of the work.

(2) General Requirements Applicable To Insurance Policies:

- (a) All of the insurance required by this Article shall be with Companies licensed or authorized to do business in the State of New York with an A.M. Best Company rating of not less than A-/VII or better and reasonably approved by the Permittor/MTA and shall deliver evidence of such policies.
- (b) Except for Workers Compensation, all references to forms and coverages referred to above shall be the most recent used by the Insurance Services Office, Inc. (ISO) or equivalent forms approved by the Insurance Department of the State of New York, provided, however, that excess coverages may be written on forms reasonably acceptable to Permittor containing provisions other than those contained in ISO forms but otherwise conforming in substance to the requirements of this Article.
- (c) The Permittee or its Contractor performing the work shall furnish evidence of all policies before any work is started to the permittor:

For NYCT Contract Inspection
 C/O Mr. John Malvasio
 Director, MOW Engineering
 130 Livingston Street, Room 8044F
 Brooklyn, NY 11201
 Telephone: (718) 694-1358

These policies must: (i) be written in accordance with the requirements of the paragraphs above, as applicable; (ii) be endorsed in form acceptable to include a provision that the policy will not be canceled, materially changed, or not renewed, unless otherwise indicated herein, at least thirty (30) days prior written notice to the Permittee c/o MTA Risk and Insurance Management (MTA RIM) Department - Standards, Enforcement & Claims Unit, 2 Broadway - 21st floor, New York, NY 10004; and (iii) state or be endorsed to provide that the coverage afforded under the contractor's policies shall apply on a primary and not on an excess or contributing basis with any policies which may be available to the Permittee/MTA, and also that the contractor's policies, primary and excess, must be exhausted before implicating any Permittee/MTA policy available. (iv) In addition, contractor's policies shall state or be endorsed to provide that, if a subcontractor's policy contains any provision that may adversely affect whether contractor's policies are primary and must be exhausted before implicating any Permittee/MTA policy available, contractor's and subcontractor's policies shall nevertheless be primary and must be exhausted before implicating any Permittee/MTA policy available. Except for Professional Liability, policies written on claims made basis are not acceptable. At least two (2) weeks prior to the expiration of the policies, contractor shall endeavor to provide evidence of renewal or replacement policies of insurance, with terms and limits no less favorable than the expiring policies. Except as otherwise indicated in the detailed coverage paragraphs below, self-insured retentions and policy deductibles shall not exceed \$100,000, unless such increased deductible or retention is approved by Permittee/MTA. The Permittee shall be responsible for all claim expense and loss payments within the deductible or self-insured retention. The insurance monetary limits required herein may be met through the combined use of the insured's primary and umbrella/excess policies.

- (d) Certificates of Insurance may be supplied as evidence of policies of the above policies, except for Policy (D) Railroad Protective Liability Insurance Policy. However, if requested by the Permittee, the Permittee shall deliver to the Authority, within forty-five (45) days of request, a copy of such policies, certified by the insurance carrier as being true and complete. The Railroad Protective Liability Insurance Policy must be provided in the form of the Original Policy. A detailed Insurance Binder may be provided, ACORD or Manuscript Form, pending issuance of the Original Policy. The Original Policy must be submitted to MTA RIM within thirty (30) days of the Binder Approval.
- (e) If a Certificate of Insurance is submitted, it must: (1) be provided on the Permittee Certificate of Insurance Form or MTA Certificate of Insurance Form for Joint Agency Agreements; (2) be signed by an authorized representative of the insurance carrier or producer and notarized; (3) disclose any deductible, self-insured retention, sub-limit, aggregate limit or any exclusions to the policy that materially change the coverage; (4) indicate the Additional Insureds and Named Insureds as required herein, along with a physical copy of the Additional Insured Endorsement (I.S.O. Form CG 20 26 07/04 version or equivalent), as applicable and the endorsement(s) must include policy number(s); (5) reference the Contract by number on the face of the certificate; and (6) expressly reference the inclusion of all required endorsements.
- (f) The minimum amounts of insurance required in the detail description of policies (A), (B), (C), and (D) above shall not be construed to limit the extent of the Permittee's liability under this Agreement.
- (g) If, at any time during the period of this Agreement, insurance as required is not in effect, or proof thereof is not provided to the Permittee, the Permittee shall have the options to: (i) direct the Permittee to suspend work or operation with no additional cost or extension of time due on account thereof; or (ii) treat such failure as an Event of Default.

1.06.24C - NYC TRANSIT CURRENT AND FUTURE PROJECTS

The Contractor is notified of the following:

- (1) The following subway lines are within the area of this project:

- (a) The IRT No.2 and No. 5 Trains are running along White Plains Road
- (2) The Contactor can obtain NYC Transit Structural Drawings by contacting Mr. Vasanth K. Battu at (646) 252-4473.

The Contractor shall also obtain from Mr. Vasanth K. Battu the following Drawing showing Power Engineering Activities for the area of this project:

- Drawing No. P-548 - Duct Assignment - Vicinity of 149th Street - 3rd Avenue Station - Westchester - White Plains Line - IRT - The Bronx
 - Drawing No. P-519 - Duct Assignment - Vicinity of 149th Street - Grand Concourse Station - White Plains Line - IRT - The Bronx
- (3) For tables showing NYC Transit's current and planned projects that may impact and/or interfere with this project might require the Contractor to coordinate construction work with NYCT contractors see the contract drawings. These tables are for information only.

- (5) **Refer** to Standard Sewer Specifications (August 1, 2009), **Subsection 1.06.29 - Contractor To Provide For Traffic**, Page I-15:

Add the following to **Subsection 1.06.29**:

- (1) Traffic Stipulations:

The Contractor shall refer to Traffic Stipulations identified in the maintenance of traffic requirements under Highway Contract No. HWXRCPLZ.

- (6) **Refer** to **Section 1.08 - Miscellaneous Provisions**, Page I-19:

Delete Subsection 1.08.2 - Vendors in its entirety:

Substitute the following new **Subsection 1.08.2**:

1.08.2 VENDORS

Prior to starting work, the Contractor shall submit in writing to the Engineer the names of all vendors and manufacturers the Contractor intends to use. Unless otherwise specified in the contract documents or a written exception is granted by NYCDDC, the Contractor shall submit only one (1) vendor or manufacturer for each product that is to be incorporated in the contract. The use of multiple vendors or manufacturers to supply the same product will be prohibited, unless otherwise specified in the contract documents or a written exception is granted by NYCDDC. If the vendor or manufacturer is not approved, the Contractor will be notified to either submit another vendor or manufacturer, or have their proposed vendor or manufacturer submit a request for approval from NYCDDC. The Contractor will be prohibited from using the vendor or manufacturer until approval of the vendor or manufacturer has been acquired from NYCDDC.

- (7) **Refer** to **Section 1.08 - Miscellaneous Provisions**, Page I-20:

Add the following new **Subsection 1.08.7**:

1.08.7 SUBMITTAL OF SCHEDULE LOG

The Contractor's attention is directed to **Article 9 - Progress Schedule** of the Contract. The Contractor shall submit along with the proposed progress schedule the following: A schedule log in Excel Format (tied to the proposed progress schedule) indicating a description of and the schedule submission dates for all required submittals, shop drawings, approval requests, design mixes, reports, samples, etc., as required by the specifications and the terms of the contract.

- (8) **Refer** to Section 2.05 - Precast Reinforced Concrete Pipe, Subsection 2.05.4 - Materials, Workmanship And Finish, Page II-10:

Delete from Subsection 2.05.4, paragraph (A) CONCRETE in its entirety:

Substitute the following:

(A) CONCRETE - The Concrete shall comply with the requirements of **General Specification 11 - Concrete, as modified in Section 2.15**, and be a homogeneous mixture of such proportions and quality that the pipe will conform to the design and test requirements of these specifications.

- (9) **Refer** to Section 2.15 - Concrete, Subsection 2.15.3 - Modifications, Page II-23:

Delete from Subsection 2.15.3, Reference Number D 3.2.1 together with its paragraphs in their entirety:

Substitute the following:

D 3.2.1 **DELETE** 3.2.1 to 3.2.9 of GS11 and **SUBSTITUTE** the following:

All concrete mix designs shall be subject to approval by DDC's Quality Assurance and Construction Safety (QACS) Bureau and in accordance with their "MIX DESIGN, LABORATORY AND PLANT APPROVAL PROTOCOL". Copies of this protocol may be obtained at the preconstruction meeting or from the Engineer. Before the Contractor begins to manufacture concrete, the Contractor shall secure DDC's QACS approval of the mix design the Contractor proposes to use.

The Contractor shall submit for this purpose a statement, in writing, of the sources of all ingredient materials, the type and brand of the cement and the number of pounds of each of the materials in a saturated surface-dry condition making up one (1) cubic yard of concrete. The range of water-cement ratios within which the concrete will be manufactured and the method of mixing to be employed shall also be stated. The mix design submittal shall include gradation of aggregates, specific gravities of ingredients, unit weight, mix proportion for each batch (a minimum of four (4) batches except in case of precast plants where one specific mix may be proposed), compressive strength test results for each mix at 7-days, 28-days (high-early strength mixes may require 6-hours, 24-hours, 3-days and shrinkage test as per the requirements), and graphical representation of strength vs. W/C projected in hours/days.

The Contractor may submit for approval concrete mixes that (within one (1) year of the contract) have been previously approved and used on other jobs with any Bureau of the Department of Environmental Protection or the Department of Design and Construction. Such submittals shall contain evidence that the concrete mix was approved within one (1) year of this contract and shall show that the concrete will be produced at the same mix plant, that the cement and admixtures are the same type (though not necessarily the same brand), that the water/cement ratio is the same and that adjustments have been made in the mix for air content, specific gravity and gradation of the aggregates.

If the Contractor elects to submit a concrete mix that was not previously approved, the Contractor shall submit the new concrete mix in accordance with Chapters 2 and 3 of General Specification 11 as modified herein.

- (10) **Refer** to Section 2.15 - Concrete, Subsection 2.15.3 - Modifications, Page II-26:

Add to Subsection 2.15.3, before Reference Number D 8.2 the following:

D 7.3.3 **ADD** the following to Subsection 7.3.3 of GS11:

Each Portland cement concrete batching plant shall be subject to approval by DDC's Quality Assurance and Construction Safety (QACS) Bureau and in accordance with their "MIX DESIGN, LABORATORY AND PLANT APPROVAL PROTOCOL". Copies of this

protocol may be obtained at the preconstruction meeting or from the Engineer. The minimum requirement for approval is that the proposed Portland cement concrete batching plant must be on the New York State Department of Transportation (NYSDOT) approved list for the current construction season.

The minimum requirement for approval of a precast concrete plant is that the proposed plant must be on the NYSDOT approved list. A waiver for this requirement may be granted by the DDC's Quality Assurance and Construction Safety (QACS) Director for special products that no NYSDOT approved plant is capable of producing.

Each Portland cement concrete batching plant shall also be subject to auditing and approval of the DDC's Director of Quality Assurance and Construction Safety (QACS). The Director of QACS may at any time discontinue the use of any previously approved equipment if nonconformance with the specifications results during the progress of the work. When the Director of QACS discontinues the use of the plant, production will not be acceptable for Department work until corrective measures satisfactory to the Director are carried out.

(11) Refer to Section 2.15 - Concrete, Subsection 2.15.3 - Modifications, Page II-26:

Delete from **Subsection 2.15.3, Reference Number D 16.3** together with its paragraphs in their entirety:

Substitute the following:

D 16.3 Testing Service - **ADD** the following:

The Contractor shall retain the services of an independent testing laboratory to provide for the services outlined in 16.3.1.4 to 16.3.1.11 of GS11, with the exception of those tests specified herein to be performed by the Engineer and the City Retained Laboratory.

All laboratories shall be subject to approval by DDC's Quality Assurance and Construction Safety (QACS) Bureau and in accordance with their "MIX DESIGN, LABORATORY AND PLANT APPROVAL PROTOCOL". Copies of this protocol may be obtained at the preconstruction meeting or from the Engineer. The minimum requirement for approval is that the laboratory must have the current AMRL/AASHTO R-18 accreditation in the category of service proposed and must be currently licensed by the NYC Department of Buildings (DOB).

(12) Refer to Section 2.15 - Concrete, Subsection 2.15.3 - Modifications, Page II-26:

Delete from **Subsection 2.15.3, Reference Number D 16.8** together with its paragraphs in their entirety:

Substitute the following:

D 16.8 Responsibilities and Duties of Contractor - **ADD** the following:

The Contractor may, if the Contractor so desires, take cylinders corresponding to those taken by the Engineer for the City Retained Laboratory. However, determination of payment will be based solely on the cylinders taken by the Engineer for the City Retained Laboratory.

CONCRETE TEST CYLINDERS

The Contractor will be responsible for safe delivery of concrete cylinders to the Department of Design and Construction Laboratory, within two (2) days after molding, where they will be properly stored and cured until the date of test, and tested by others, upon removal from the curing room. The Department of Design and Construction testing laboratory will provide the services for the curing and breaking of the test cylinders.

The Contractor shall provide empty cylinder molds and facilities for the proper care of these cylinders while on the site, and shall safeguard them against injury and protect them from the elements.

The Engineer will be responsible for the preparation, documentation and labeling of the cylinders and for notifying the Contractor, at least twenty-four (24) hours in advance, when a shipment of cylinders is ready for delivery, so that cylinders can be tested for the standard twenty-eight (28) day and seven (7) day tests. Cylinders are to be delivered by the Contractor to a designated area near 30-30 Thomson Avenue, Long Island City, New York, or where otherwise directed within the City of New York.

The Contractor shall make arrangements to protect all cylinders from damage during loading, transport to, and unloading at a Department of Design and Construction designated testing laboratory, and shall obtain a receipt for delivered cylinders, which shall be submitted to the Engineer.

(13) Refer to **Section 4.06 - Backfilling, Subsection 4.06.3 - Method Of Depositing All Backfill, Page IV-18:**

(A) Add the following paragraph to beginning of **Subsection 4.06.3:**

At the preconstruction meeting, the Contractor shall submit for approval a full description of the Contractor's proposed methods to be used for all backfilling operations including, but not limited to, equipment, backfill material, depth of compaction layers, and trench locations where each is to be employed. In the field, the Contractor shall be required to demonstrate that the Contractor's methods of backfilling and compaction shall obtain a minimum of ninety-five (95) percent of Standard Proctor Maximum Dry Density.

(B) Delete from **Subsection 4.06.3**, the fourth paragraph in its entirety:
Substitute the following:

Unless otherwise approved in writing by the Engineer, backfilling of the remainder of the trenches and excavations from a point not less than two (2) feet above the top of the sewer conduit (i.e. sewer pipes on cradles or encasements, reinforced concrete sewers, basin and house connections, culverts, etc.) to the underside of the pavement shall be progressively deposited in uniform and successive horizontal layers not exceeding twelve (12) inches in depth for the entire width of the trench or excavation and each successive layer shall be solidly compacted by mechanical tamping or other approved means so as to achieve the required density. In deep trenches defined as those requiring sheeting, the Contractor may submit to the Engineer, for approval, an alternate backfill method (i.e. jetting, deeper deposited layers not exceeding twenty-four (24) inches, etc.) for depositing and compacting the backfill from two (2) feet above the top of the sewer conduit to a plane five (5) feet below final surface elevation. However, approval of any alternate backfill method shall not relieve the Contractor from obtaining a minimum of ninety-five (95) percent of Standard Proctor Maximum Dry Density. Should the Engineer determine that the specified density is not being obtained, the area must be re-excavated and backfilled at the Contractor's own cost until the required compaction density is achieved.

(C) Delete from **Subsection 4.06.3**, the seventh paragraph in its entirety:
Substitute the following:

Backfill shall proceed simultaneously with the withdrawal of sheeting but at no time shall the withdrawal of sheeting exceed a height of six (6) inches above the deposited backfill. Withdrawal of sheeting below levels previously backfilled and compacted is prohibited.

(14) **Refer** to **Section 5.01 - Reinforced Concrete Sewers, Subsection 5.01.4 - Precast Reinforced Concrete Sewer**, Paragraph (C) - Details, second paragraph, first line, Page V-4:
Change the words "C789 or C850 (as required)", to "C1433":

(15) **Refer** to **Section 5.05C - Reconstruction Of Existing Sewers Using D.E.P. Approved Cured-In-Place-Pipe (CIPP) Lining Method, Subsection 5.05C.6 - Separate Payment**, third paragraph, second line, Page V-49
Change the word, "nine", to "eleven":

(16) **Refer** to **Section 5.11 - Outfall Structures, Subsection 5.11.2 - Materials**, Page V-95:
Delete from **Subsection 5.11.1**, paragraph (A) in its entirety:
Substitute the following:

(A) Concrete used for outfall structure (including headwalls, reinforced concrete sewer outfalls, cradles and encasements, chambers, manholes and catch basins) shall comply with the requirements of **General Specification 11 - Concrete, as modified in Section 2.15**; and, shall contain entrained air of six percent (6%), and a corrosion inhibitor. The corrosion inhibitor shall consist of a calcium nitrite solution, containing $30 \pm 2\%$ calcium nitrite solids by weight and having a specific gravity of 1.27 ± 0.02 . The corrosion inhibitor when used in the manufacturing process shall not produce a significant amount of chloride ions in the final product (less than 1,000-ppm). The ph shall be greater than 8. The admixture shall not contain chemicals that produce a condition injurious to the quality and durability of the concrete or reinforcing steel. Calcium nitrite, which acts as an accelerator, may be used in conjunction with compatible retarding admixtures to control setting time and workability of the concrete; consult the manufacturer of the product. The corrosion inhibitor must be added to the mix immediately after air entraining and retarding admixtures have been introduced into the batch. Acceptance of calcium nitrite based corrosion inhibitor shall be based upon it being listed in the most current New York State Department of Transportation's "Approved List Of Calcium Nitrite Based Corrosion Inhibitors".

(17) **Refer** to **Section 5.18A - Sewer Cleaning, Subsection 5.18A.3 - Disposal**, Page V-124:
Delete from **Subsection 5.18A.3**, the first paragraph in its entirety:
Substitute the following:

All material removed from the sewers and sewer portions through the manholes under this contract shall become the property of the Contractor and shall be properly disposed of away from the site, at the Contractor's expense.

(18) **Refer** to **Section 5.23 - Decking, Subsection 5.23.1 - Description**, Page V-161:
Delete from **Subsection 5.23.1**, the third paragraph in its entirety:
Substitute the following:

Steel plates that are resting on pavement, that are not part of a decking system, and are used to temporarily span trenches and excavations for vehicular traffic and for pedestrian crossings and walkways shall not be included for payment under this decking section. The cost of all labor, materials, equipment, insurance and incidentals necessary to furnish, place, anchor and ramp these temporary steel plates, when and where directed, in order to comply with the requirements of the NYCDOT Office of Construction Mitigation and Coordination (OCMC) traffic stipulations, the directions of the Engineer, and the Contractor's construction operations shall be deemed included in the prices bid for all contract items of work.

(19) **Refer** to **Section 5.23 - Decking, Subsection 5.23.4 - Design Criteria**, Page V-162:
Add the following to **Subsection 5.23.4**:

(C) The Contractor may substitute skid resistant steel plates for timber mats, subject to approval in accordance with **Subsection 4.05.5**. These steel plates shall be placed flush with the existing roadway and shall be installed in compliance with the requirements of **Subsection 4.05.6(G)**.

(20) Refer to **Subsection 5.32.4 - Specific Pavement Restoration Provisions**, Page V-185:

Add the following to **Subsection 5.32.4**:

(E) Specific Pavement Restoration Provisions:

- (1) Within the limits of the highway rehabilitation the restoration shall be accomplished and paid for in accordance with Highway Construction Plans, Details and Specifications for Highway Project ID. HWXRCPLZ.
- (2) In street areas requiring sewer and water main work outside the limits of highway reconstruction the restoration shall be as follows:
 - (a) The permanent restoration over the **trench width and cutbacks only** shall consist of a top course of one and one-half (1-1/2) inches of asphaltic concrete wearing course on a minimum of one and one-half (1-1/2) inches of binder mixture on a base course of a minimum of six (6) inches of high-early strength concrete, to match the existing pavement as directed by the Engineer.
- (3) The following requirements apply to the areas specified in subsection (2) above:
 - (a) Before the top course is installed, an additional width of asphalt beyond the edge of new base course shall be saw-cut and removed from all edges of trenches to a depth to accommodate the specified top course and the entire area restored. This additional removal shall be in accordance with paragraph (b) below.
 - (b) Pavement excavation along with saw cutting of pavements for sewer and water main trenches shall be in accordance with **Section 5.30 - Pavement Excavation** of both the Standard Sewer Specifications and the Standard Water Main Specification.
 - (c) At locations requiring the installation of a concrete base course, a reflective cracking membrane shall be installed over joints prior to restoration. Payment for the reflective cracking membrane shall be made under Item No. 6.91 - REFLECTIVE CRACKING MEMBRANE (18" WIDE). Additionally, appropriate pavement keys as described below shall be used.
 - (d) Pavement keys **Type B-1** shall be used to insure a desired four (4) inch curb reveal (two and one-half (2-1/2) inch absolute minimum). Pavement key **Type A** shall be used in all intersections. Both keys are to be per Bureau of Highways Operations Specifications and Standard Details of Construction.
 - (e) Unless otherwise specified, the cost for tack coating, eradication of temporary roadway markings and adjustment of city-owned castings shall be deemed included in the prices bid for all pavement restoration items.
 - (f) Payment for placement of temporary pavement marking shall be made under Item No. 6.49 - TEMPORARY PAVEMENT MARKINGS (4" WIDE).
 - (g) Payment for removal of existing pavement markings shall be made under Item No. 6.53 - REMOVE EXISTING LANE MARKINGS (4"WIDE).
 - (h) Payment for removal and permanent placement of pavement marking with thermoplastic reflectorized pavement markings (crosswalk and lane dividers) shall be

made under Item No. 6.44 - THERMOPLASTIC REFLECTORIZED PAVEMENT MARKINGS (4" WIDE).

- (i) Payment for stripping or milling of the pavement shall be made under Item No. 6.75 – GRINDING EXISTING ASPHALTIC CONCRETE WEARING COURSE.
- (j) Payment for pavement restoration shall be made under the following items:

<u>Item No.</u>	<u>Item</u>	<u>Payment Description</u>
4.02 AB-R	Asphaltic Concrete Wearing Course, 1-1/2" Thick	(For asphaltic concrete wearing course top course when <u>no</u> overlay is required.)
4.02 CB	Asphaltic Concrete Mixture	(For binder mixture base course over trenches and cutbacks; binder mixture top filler course under asphaltic concrete wearing course when <u>no</u> overlay is required; and binder mixture in Type A and B Keys.)
4.04 H	Concrete Base For Pavement, Variable Thickness For Trench Restoration, (High-Early Strength)	(For concrete base course over trenches and cutbacks.)

(21) Refer to Section 5.36 - Additional Earth Excavation Including Test Pits, Subsection 5.36.4 - Price To Cover, Paragraph (3), fifth line, Page V-195: Change 16", to 16'.

D. AMENDMENTS TO THE STANDARD WATER MAIN SPECIFICATIONS

- (1) **Refer** to **Subsection 1.06.3 - Hours Of Work**, Page I-4:

Add the following to **Subsection 1.06.3**:

- (A) **HOLIDAY CONSTRUCTION EMBARGO** - A special Holiday Construction Embargo shall be in effect on the Friday of the week preceding Thanksgiving Day week from 6:00 AM to 11:59 PM and again from the Monday of Thanksgiving Day week from 6:00 AM through January 2, at 11:59 PM. Roadway and sidewalk construction activities will be restricted during the embargo period on the streets listed below*.

Any permits issued prior to the date of this notice, for work during this embargo period on the streets listed below which do not already have the permit stipulation "410" are hereby suspended for the period noted above. All permittees must comply with this embargo unless a special waiver is granted by OCMC. Waiver requests must be filed at least thirteen (13) days before Thanksgiving Day, in the Permit Office by filing a "Request for Roadway/Sidewalk Permits During Embargo Periods" and submitting supporting documentation. Waiver requests should only be submitted for critical reasons for a specific project. If a waiver is granted, the applicant will be notified so they can apply for the approved permits. Waivers **are not** required for ongoing Building Construction Activity Permits which already include the "410" permit stipulation. Waiver request forms may be obtained at any Permit Office or on the Department of Transportation's website at:

<http://www.nyc.gov/html/dot/downloads/pdf/holidayembapp.pdf>

Prior to this embargo period all necessary measures must be taken so that all roadways and sidewalks are in proper condition to allow for the expeditious and safe movement of vehicular, bicycle and pedestrian traffic. Tool carts, cable reels, containers, and material stored on roadways must be removed during the embargo period.

The opening of utility access covers is prohibited on any of the streets noted below between the hours of 6:00 AM and midnight unless the utility or contractor files for an Emergency Authorization Number as required by section 2-07 of the Department of Transportation's Highway Rules. The planned opening of utility access covers may occur during the hours of 12:01 AM and 5:59 AM where no authorization number is required.

Temporary restoration of the streets and sidewalks and removal thereof, if required for the Holiday Embargo period, will be paid for under the appropriate scheduled items.

No extension of time due to the shutdown period will be granted to the Contractor for completion of the work.

* **Please note that this embargo only applies to NYCDOT construction permits. List of street and maps of the affected locations are available by borough on the Department of Transportation's website at: <http://www.nyc.gov/html/dot/html/motorist/trafalrt.shtml>**

- (2) **Refer** to Standard Water Main Specifications (August 1, 2009), **Subsection 1.06.29 - Contractor To Provide For Traffic**, Page I-15:

Add the following to **Subsection 1.06.29**:

See amended Standard Sewer Specifications (August 1, 2009) **Subsection 1.06.29 - Contractor To Provide For Traffic** of this addendum.

- (3) **Refer** to **Section 1.08 - Miscellaneous Provisions**, Page I-19:

Delete Subsection 1.08.2 - Vendors in its entirety:

Substitute the following new **Subsection 1.08.2**:

1.08.2 VENDORS

Prior to starting work, the Contractor shall submit in writing to the Engineer the names of all vendors and manufacturers the Contractor intends to use. Unless otherwise specified in the contract documents or a written exception is granted by NYCDDC, the Contractor shall submit only one (1) vendor or manufacturer for each product that is to be incorporated in the contract. The use of multiple vendors or manufacturers to supply the same product will be prohibited, unless otherwise specified in the contract documents or a written exception is granted by NYCDDC. If the vendor or manufacturer is not approved, the Contractor will be notified to either submit another vendor or manufacturer, or have their proposed vendor or manufacturer submit a request for approval from NYCDDC. The Contractor will be prohibited from using the vendor or manufacturer until approval of the vendor or manufacturer has been acquired from NYCDDC.

- (4) **Refer** to Section 1.08 - Miscellaneous Provisions, Page I-20:
Add the following new Subsection 1.08.7:

1.08.7 SUBMITTAL OF SCHEDULE LOG

The Contractor's attention is directed to **Article 9 - Progress Schedule** of the Contract. The Contractor shall submit along with the proposed progress schedule the following: A schedule log in Excel Format (tied to the proposed progress schedule) indicating a description of and the schedule submission dates for all required submittals, shop drawings, approval requests, design mixes, reports, samples, etc., as required by the specifications and the terms of the contract.

- (5) **Refer** to Section 2.15 - Concrete, Subsection 2.15.3 - Modifications, Page II-11:
Delete from Subsection 2.15.3, Reference Number D 3.2.1 together with its paragraphs in their entirety:
Substitute the following:

- D 3.2.1 **DELETE** 3.2.1 to 3.2.9 of GS11 and **SUBSTITUTE** the following:

All concrete mix designs shall be subject to approval by DDC's Quality Assurance and Construction Safety (QACS) Bureau and in accordance with their "MIX DESIGN, LABORATORY AND PLANT APPROVAL PROTOCOL". Copies of this protocol may be obtained at the preconstruction meeting or from the Engineer. Before the Contractor begins to manufacture concrete, the Contractor shall secure DDC's QACS approval of the mix design the Contractor proposes to use.

The Contractor shall submit for this purpose a statement, in writing, of the sources of all ingredient materials, the type and brand of the cement and the number of pounds of each of the materials in a saturated surface-dry condition making up one (1) cubic yard of concrete. The range of water-cement ratios within which the concrete will be manufactured and the method of mixing to be employed shall also be stated. The mix design submittal shall include gradation of aggregates, specific gravities of ingredients, unit weight, mix proportion for each batch (a minimum of four (4) batches except in case of precast plants where one specific mix may be proposed), compressive strength test results for each mix at 7-days, 28-days (high-early strength mixes may require 6-hours, 24-hours, 3-days and shrinkage test as per the requirements), and graphical representation of strength vs. W/C projected in hours/days.

The Contractor may submit for approval concrete mixes that (within one (1) year of the contract) have been previously approved and used on other jobs with any Bureau of the Department of Environmental Protection or the Department of Design and Construction. Such submittals shall contain evidence that the concrete mix was approved within one (1) year of this contract and shall show that the concrete will be produced at the same mix plant, that the cement and admixtures are the same type (though not necessarily the

same brand), that the water/cement ratio is the same and that adjustments have been made in the mix for air content, specific gravity and gradation of the aggregates.

If the Contractor elects to submit a concrete mix that was not previously approved, the Contractor shall submit the new concrete mix in accordance with Chapters 2 and 3 of General Specification 11 as modified herein.

- (6) **Refer** to Section 2.15 - Concrete, Subsection 2.15.3 - Modifications, Page II-13:
Add to Subsection 2.15.3, before Reference Number D 8.2 the following:

D 7.3.3 **ADD** the following to Subsection 7.3.3 of GS11:

Each Portland cement concrete batching plant shall be subject to approval by DDC's Quality Assurance and Construction Safety (QACS) Bureau and in accordance with their "MIX DESIGN, LABORATORY AND PLANT APPROVAL PROTOCOL". Copies of this protocol may be obtained at the preconstruction meeting or from the Engineer. The minimum requirement for approval is that the proposed Portland cement concrete batching plant must be on the New York State Department of Transportation (NYSDOT) approved list for the current construction season.

The minimum requirement for approval of a precast concrete plant is that the proposed plant must be on the NYSDOT approved list. A waiver for this requirement may be granted by the DDC's Quality Assurance and Construction Safety (QACS) Director for special products that no NYSDOT approved plant is capable of producing.

Each Portland cement concrete batching plant shall also be subject to auditing and approval of the DDC's Director of Quality Assurance and Construction Safety (QACS). The Director of QACS may at any time discontinue the use of any previously approved equipment if nonconformance with the specifications results during the progress of the work. When the Director of QACS discontinues the use of the plant, production will not be acceptable for Department work until corrective measures satisfactory to the Director are carried out.

- (7) **Refer** to Section 2.15 - Concrete, Subsection 2.15.3 - Modifications, Page II-14:
Delete from Subsection 2.15.3, Reference Number D 16.3 together with its paragraphs in their entirety:
Substitute the following:

D 16.3 Testing Service - **ADD** the following:

The Contractor shall retain the services of an independent testing laboratory to provide for the services outlined in 16.3.1.4 to 16.3.1.11 of GS11, with the exception of those tests specified herein to be performed by the Engineer and the City Retained Laboratory.

All laboratories shall be subject to approval by DDC's Quality Assurance and Construction Safety (QACS) Bureau and in accordance with their "MIX DESIGN, LABORATORY AND PLANT APPROVAL PROTOCOL". Copies of this protocol may be obtained at the preconstruction meeting or from the Engineer. The minimum requirement for approval is that the laboratory must have the current AMRL/AASHTO R-18 accreditation in the category of service proposed and must be currently licensed by the NYC Department of Buildings (DOB).

- (8) **Refer** to Section 2.15 - Concrete, Subsection 2.15.3 - Modifications, Page II-14:
Delete from Subsection 2.15.3, Reference Number D 16.8 together with its paragraphs in their entirety:

Substitute the following:

D 16.8 Responsibilities and Duties of Contractor - **ADD** the following:

The Contractor may, if the Contractor so desires, take cylinders corresponding to those taken by the Engineer for the City Retained Laboratory. However, determination of payment will be based solely on the cylinders taken by the Engineer for the City Retained Laboratory.

CONCRETE TEST CYLINDERS

The Contractor will be responsible for safe delivery of concrete cylinders to the Department of Design and Construction Laboratory, within two (2) days after molding, where they will be properly stored and cured until the date of test, and tested by others, upon removal from the curing room. The Department of Design and Construction testing laboratory will provide the services for the curing and breaking of the test cylinders.

The Contractor shall provide empty cylinder molds and facilities for the proper care of these cylinders while on the site, and shall safeguard them against injury and protect them from the elements.

The Engineer will be responsible for the preparation, documentation and labeling of the cylinders and for notifying the Contractor, at least twenty-four (24) hours in advance, when a shipment of cylinders is ready for delivery, so that cylinders can be tested for the standard twenty-eight (28) day and seven (7) day tests. Cylinders are to be delivered by the Contractor to a designated area near 30-30 Thomson Avenue, Long Island City, New York, or where otherwise directed within the City of New York.

The Contractor shall make arrangements to protect all cylinders from damage during loading, transport to, and unloading at a Department of Design and Construction designated testing laboratory, and shall obtain a receipt for delivered cylinders, which shall be submitted to the Engineer.

(9) **Refer** to Section 4.06 - Backfilling, Subsection 4.06.3 - Method Of Depositing All Backfill, Page IV-18:

(A) **Add** the following paragraph to beginning of Subsection 4.06.3:

At the preconstruction meeting, the Contractor shall submit for approval a full description of the Contractor's proposed methods to be used for all backfilling operations including, but not limited to, equipment, backfill material, depth of compaction layers, and trench locations where each is to be employed. In the field, the Contractor shall be required to demonstrate that the Contractor's methods of backfilling and compaction shall obtain a minimum of ninety-five (95) percent of Standard Proctor Maximum Dry Density.

(B) **Delete** from Subsection 4.06.3, the fourth paragraph in its entirety:
Substitute the following:

Unless otherwise approved in writing by the Engineer, backfilling of the remainder of the trenches and excavations from a point not less than twelve (12) inches above the top of the barrel of the water main pipe to the underside of the pavement shall be progressively deposited in uniform and successive horizontal layers not exceeding twelve (12) inches in depth for the entire width of the trench or excavation and each successive layer shall be solidly compacted by mechanical tamping or other approved means so as to achieve the required density. In deep trenches defined as those requiring sheeting, the Contractor may submit to the Engineer, for approval, an alternate backfill method (i.e. jetting, deeper deposited layers not exceeding twenty-four (24) inches, etc.) for depositing and compacting the backfill from twelve (12) inches above the top of the barrel of the water main pipe to a

plane five (5) feet below final surface elevation. However, approval of any alternate backfill method shall not relieve the Contractor from obtaining a minimum of ninety-five (95) percent of Standard Proctor Maximum Dry Density. Should the Engineer determine that the specified density is not being obtained, the area must be re-excavated and backfilled at the Contractor's own cost until the required compaction density is achieved.

(C) Delete from **Subsection 4.06.3**, the seventh paragraph in its entirety:

Substitute the following:

Backfill shall proceed simultaneously with the withdrawal of sheeting but at no time shall the withdrawal of sheeting exceed a height of six (6) inches above the deposited backfill. Withdrawal of sheeting below levels previously backfilled and compacted is prohibited.

(10) Refer to **Section 5.02 - Laying Ductile Iron Pipe And Fittings, Subsection 5.02.3(F) - Bedding And Foundation Of Pipes**, Page V-8:

Delete from **Subsection 5.02.3(F)**, Paragraph (5) - Pier And Plate, in its entirety:

Substitute the following new Paragraph (5):

(5) Shallow Cover: Where mains 24-inches and smaller are laid with covers of 2'-0" or less, the Contractor shall provide protection in accordance with **Standard Drawing No. 42063-Y** or as directed by the Engineer.

Where mains 24-inches and smaller are laid with covers between 2'-6" and 2'-0", the Contractor shall provide steel plates only over the main with dimensions as shown on **Standard Drawing No. 46464-Z** or as directed by the Engineer.

Where mains 30-inches and larger are laid with covers of 2'-6" or less, the Contractor shall provide protection in accordance with **Standard Drawing No. 46464-Z** or as directed by the Engineer.

Covers over the new mains shall not be less than 1'-6".

(11) Refer to **Section 5.02 - Laying Ductile Iron Pipe And Fittings, Subsection 5.02.3 - Construction Methods, Paragraph (M) - Laying Temporary Connections**, Page V-12:

Delete Paragraph (M), in its entirety:

Substitute the following:

(M) LAYING TEMPORARY CONNECTIONS - When new water mains are laid and it becomes necessary to provide a temporary connection between the existing main and new mains laid under this contract (regardless of whether the new and existing water mains are in the same trench or are offset in two different trenches), the Contractor shall, if ordered, provide all labor, equipment and facilities for laying, maintaining and removing when directed, temporary connections and appurtenances. If City forces do laying of temporary connections, the Contractor shall make all required equipment and facilities available to them. No payment will be made for providing temporary house services which may be required when making a temporary connection between the existing and new main.

(12) Refer to **Section 5.02 - Laying Ductile Iron Pipe And Fittings, Subsection 5.02.5 - Price To Cover, Paragraph (10)**, Page V-16:

Delete Paragraph (10), in its entirety:

Substitute the following:

(10)(a) No payment will be made to the Contractor for furnishing, delivering, installing and removing temporary caps for water mains as ordered by the Engineer. Payment shall be deemed included in the prices bid for all items of the contract.

- (b) Payment for temporary valves (i.e. construction valves) and its associated fittings ordered by the Engineer during the course of the work to be installed will be paid for at the same rates as for valves and fittings permanently installed.
- (c) If ordered by the Engineer, removal of valves (i.e. construction valves) and its associated fittings, including their transfer and disposal shall be deemed included in the prices bid for all items of the contract. No separate or additional payment will be made for this work.
- (d) Payment For Temporary Connections: When new mains are laid and it becomes necessary to provide a temporary connection between the existing and new mains the following method of payment shall apply – The Contractor shall be paid once for furnishing and delivering pipes and fittings used in temporary connections. The Contractor shall also be paid for laying the temporary pipe connection and fitting using the appropriate pipe laying item for each time that the Contractor is directed to use them throughout the project as directed by the Engineer.

(13) Refer to **Subsection 5.04.4 - Furnishing, Delivering And Installing Steel Tee**, Paragraph (5), Item Numbers list, Page V-23:

Delete Item No. "60.23ST20T48", together with Description "FURNISHING, DELIVERING AND INSTALLING 48-INCH X 20-INCH STEEL TEE", and Pay Unit "EACH":

(14) Refer to **Section 5.05 - Furnishing And Delivering Gate Valves**, Page V-35:

(A) Delete from **Subsection 5.05.1 - Description**, the first paragraph in its entirety:
Substitute the following:

This specification describes furnishing and delivering of double disc 3-inch to 20-inch gate valves, resilient seated 3-inch to 20-inch gate valves and resilient seated 3-inch to 12-inch tapping valves.

Unless otherwise specified in the contract documents or ordered in writing by the Engineer, only resilient seated gate valves and tapping valves shall be furnished and delivered by the Contractor on the contract.

(B) Delete from **Subsection 5.05.2 - Materials**, second paragraph, first line, the words, "6-inch hydrant":

Substitute the following words, "3-inch to 20-inch":

(15) Refer to **Section 5.06 - Setting Gate Valves**, Page V-38:

(A) Delete from **Subsection 5.06.1 - Description**, the first paragraph in its entirety:
Substitute the following:

This specification describes the installation of double disc 3-inch to 20-inch gate valves, resilient seated 3-inch to 20-inch gate valves and resilient seated 3-inch to 12-inch tapping valves. It also describes the installing of manhole frames (skirts and heads) and covers.

Unless otherwise specified in the contract documents or ordered in writing by the Engineer, only resilient seated gate valves and tapping valves shall be installed by the Contractor on the contract.

(B) Delete from **Subsection 5.06.2 - Materials**, second paragraph, first line, the words, "6-inch hydrant":

Substitute the following words, "3-inch to 20-inch":

(16) Refer to **Section 5.23 - Decking, Subsection 5.23.1 - Description**, Page V-73:

Delete from **Subsection 5.23.1**, the third paragraph in its entirety:
Substitute the following:

Steel plates that are resting on pavement, that are not part of a decking system, and are used to temporarily span trenches and excavations for vehicular traffic and for pedestrian crossings and walkways shall not be included for payment under this decking section. The cost of all labor, materials, equipment, insurance and incidentals necessary to furnish, place, anchor and ramp these temporary steel plates, when and where directed, in order to comply with the requirements of the NYCDOT Office of Construction Mitigation and Coordination (OCMC) traffic stipulations, the directions of the Engineer, and the Contractor's construction operations shall be deemed included in the prices bid for all contract items of work.

(17) **Refer** to **Section 5.23 - Decking, Subsection 5.23.4 - Design Criteria**, Page V-74:
Add the following to **Subsection 5.23.4**:

(C) The Contractor may substitute skid resistant steel plates for timber mats, subject to approval in accordance with **Subsection 4.05.5**. These steel plates shall be placed flush with the existing roadway and shall be installed in compliance with the requirements of **Subsection 4.05.6(G)**.

(18) **Refer** to Standard Water Main Specifications (August 1, 2009), **Section 5.32 - Final Restoration Of Pavements**, Page V-99:
Add the following to **Subsection 5.32.4 - Specific Pavement Restoration Provisions**:

See amended Standard Sewer Specifications (August 1, 2009) **Subsection 5.32.4 - Specific Pavement Restoration Provisions** of this addendum.

(19) **Refer** to **Section 5.36 - Additional Earth Excavation Including Test Pits, Subsection 5.36.4 - Price To Cover**, Paragraph (3), fifth line, Page V-114:
Change 16", to 16'.

END OF ADDENDUM NO. 4

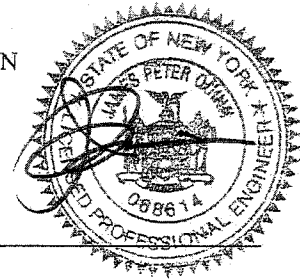
This Addendum consists of twenty three (23) pages and four (4) pages of attachments.

NO TEXT ON THIS PAGE



DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER & SEWER OPERATIONS

SITE CONNECTION PROPOSAL FORM
VALID FOR TWO (2) YEARS
[SCX-102 / 12]



A. PROJECT DATA:

Borough of the Bronx Building Dept. No (s) N/A
Tax Block N/A Lot (s) N/A Zoning C4-4 Map No. 6a
Project Location Roberto Clemente Plaza at 3rd Ave between E 148 St and E 149 St, NY 10455
Applicant Weidlinger Associates Inc / James P. Quinn, P.E.
Address 375 Hudson Street, 12th Fl, New York Zip 10014 Phone (212) 367-3000
Owner Lourdes Zapata
Address 555 Bergen Avenue, Bronx, NY Zip 10455 Phone (718) 292-3113

B. PROJECT USE:

TYPE: 1, 2, 3, Family Multiple Dwelling Commercial Plaza
Number of Buildings N/A Total Number of Dwelling Units N/A
Ownership: Fee Simple Condominium Home Owner Association

C. SITE CONNECTIONS REQUESTED:

Total Developed Site Storm Flow N/A cfs
Allow. Storm Flow to the Sewers N/A cfs

Detention Retention

	Sanit.	Storm	Comb.	Dry Wells
No. Requested	<u>1</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
Size	<u>6"</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
Material (s)	<u>DIP</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
Total Q (s)	<u>0.136</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>

NO SUBSTITUTION OF MATERIAL IS PERMITTED.

D. CONNECTION INFO:

- Conn. To Exist. Spur, Riser, or Curb Connection
- Proposed New Riser
- Fold Spur in
- Drill in for storm connection
- M.H. Conn Exist Prop
- Reuse Plugged Connections

E. SEWER DATA:

- P.D. Plan No. N/A Date Approved _____ Expiration Date _____
- Date Construction Permit Was Issued N/A
- Date Sewer Was Accepted By DEP N/A
- Sanitary Discharge Tributary to: 15" combined sewer

		Location
Private Sewage Treatment Plant	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes _____	
Private Pumping Station	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes _____	
Private Sewer	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes _____	

F. LOCATION PLAN:

As shown below See Attached Location Plan Attachment "F"

G. SUPPORT DOCUMENTS:

- *1. Site Plan - 6 copies with hydraulic calculations - Attached Not Applicable _____
- *2. Survey - 3 copies with watercourse stamp - Attached _____
- *3. Tentative Lot Number Request Form - _____ Not Applicable X
- *4. Owners Consent for STP/PS Connection - _____ Not Applicable X
- 5. Department of Health Approval - _____ Not Applicable X
- 6. Department of Building Amendment Request - _____ Not Applicable X
- *7. Condo/HOA Prospectus or Affidavit - _____ Not Applicable X
- 8. Industrial Waste Approval - _____ Not Applicable X
- 9. Associated Mapping/Demapping Action - _____ Not Applicable X
- 10. Builders Pavement Plan - _____ Not Applicable X
- 11. Boring Logs - _____ Not Applicable X
- 12. Other (Specify) zoning map, tax map - Attached

* Requires PE/RA Stamp and Original Signature (L.S. for Survey)

Must Be Notarized

Must Be Notarized and have Corporate Seal Imposed

SEWER INFORMATION CERTIFIED BY D.E.P.

- | | | | |
|---|------|---------------|----------------|
| | | <u>PUBLIC</u> | <u>PRIVATE</u> |
| 1. There <input checked="" type="checkbox"/> (is not) a sanitary sewer fronting the property available for connections. | SIZE | _____ | _____ |
| 2. There <input checked="" type="checkbox"/> (is not) a storm sewer fronting the property available for connections. | SIZE | _____ | _____ |
| 3. There <input checked="" type="checkbox"/> (is) (is not) a combined sewer fronting the property available for connections. | SIZE | 15" | ✓ |

4. Sanitary discharge tributary to:

Location

City Treatment Plant -

Private Sewage Treatment Plant -

Private Pumping Station -

<input type="checkbox"/>	NO
<input checked="" type="checkbox"/>	NO
<input checked="" type="checkbox"/>	NO

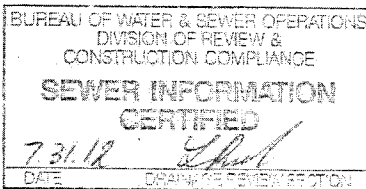
<input checked="" type="checkbox"/>	YES
<input type="checkbox"/>	YES
<input type="checkbox"/>	YES

Wards Island

5. Distance to, and location of nearest allowable drainage plan sewer:

- a) Sanitary Outlet _____ N/A
- b) Storm Outlet _____ "
- c) Combined Outlet _____ "

CERTIFICATION, RESTRICTIONS, SPECIAL CONDITIONS:

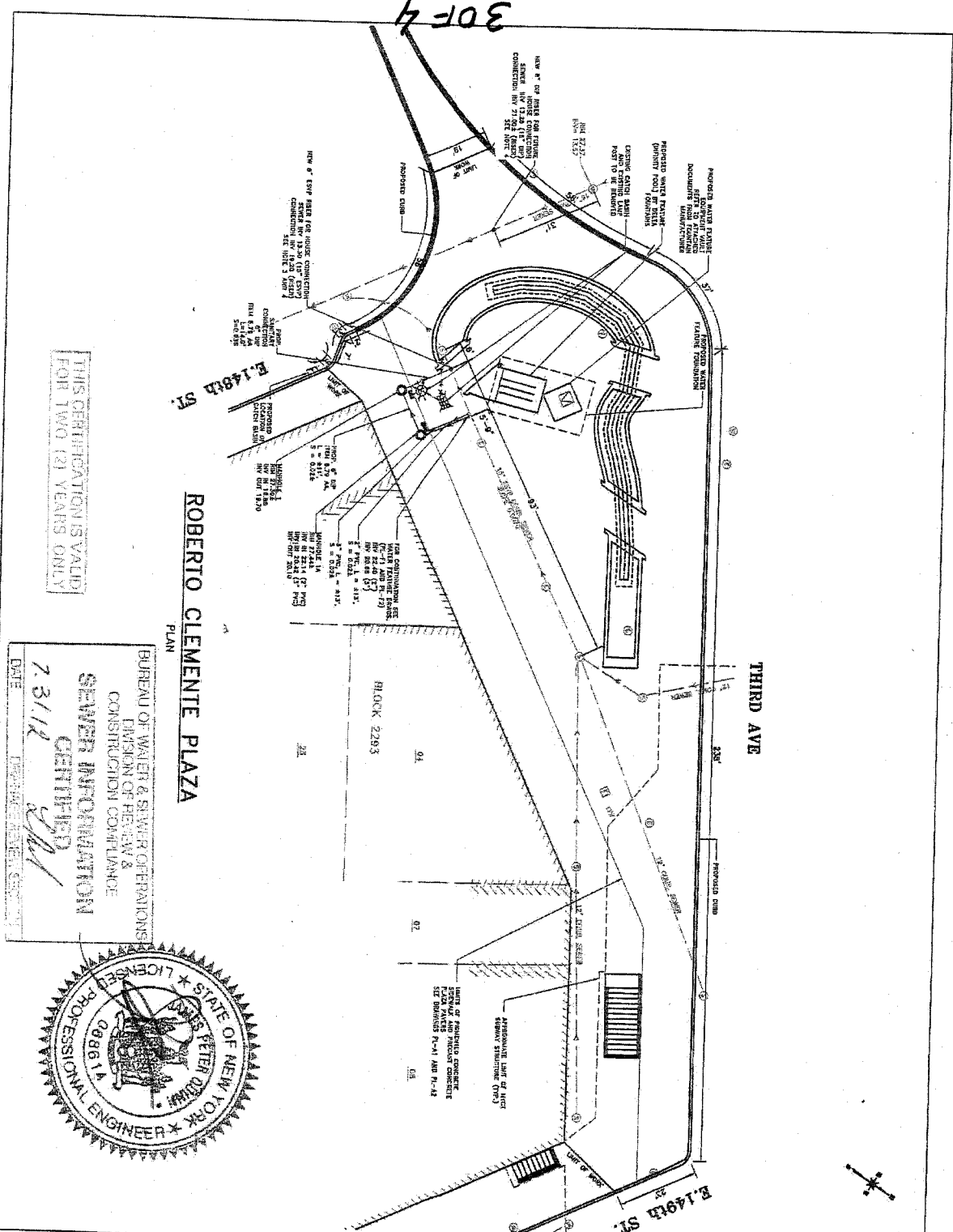


THIS CERTIFICATION IS VALID FOR TWO (2) YEARS ONLY

SCX-102/12

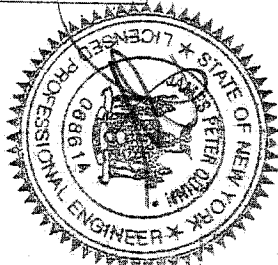
ADDITIONAL INFORMATION, COMMENTS BY D.E.P. OFFICE:

- 1. Topo Map No. _____ Watercourse shown: YES NO
- 2. Comments:



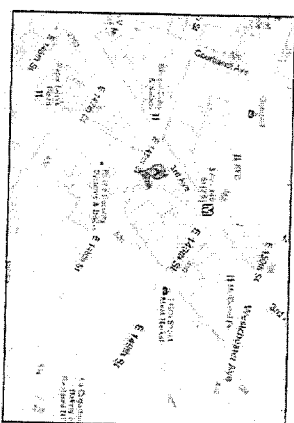
THIS CERTIFICATION IS VALID FOR TWO (2) YEARS ONLY

BUREAU OF WATER & SEWER OPERATIONS
 DIVISION OF HEALTH &
 CONSTRUCTION COMPLIANCE
SEWER INFORMATION
CERTIFIED
 DATE 7/31/12



ROBERTO CLEMENTE PLAZA

PLAN



OWNER:

LOURDES ZAPATA
 656 BERGEN AVE. BRONX, NY 10465
 PHONE: (718) 282-5113

LOCATION:

ROBERTO CLEMENTE PLAZA AT THIRD AVE BETWEEN E 148 STREET AND E 149 STREET, BRONX, NEW YORK 10465

BLOCK: N/A

LOT: N/A

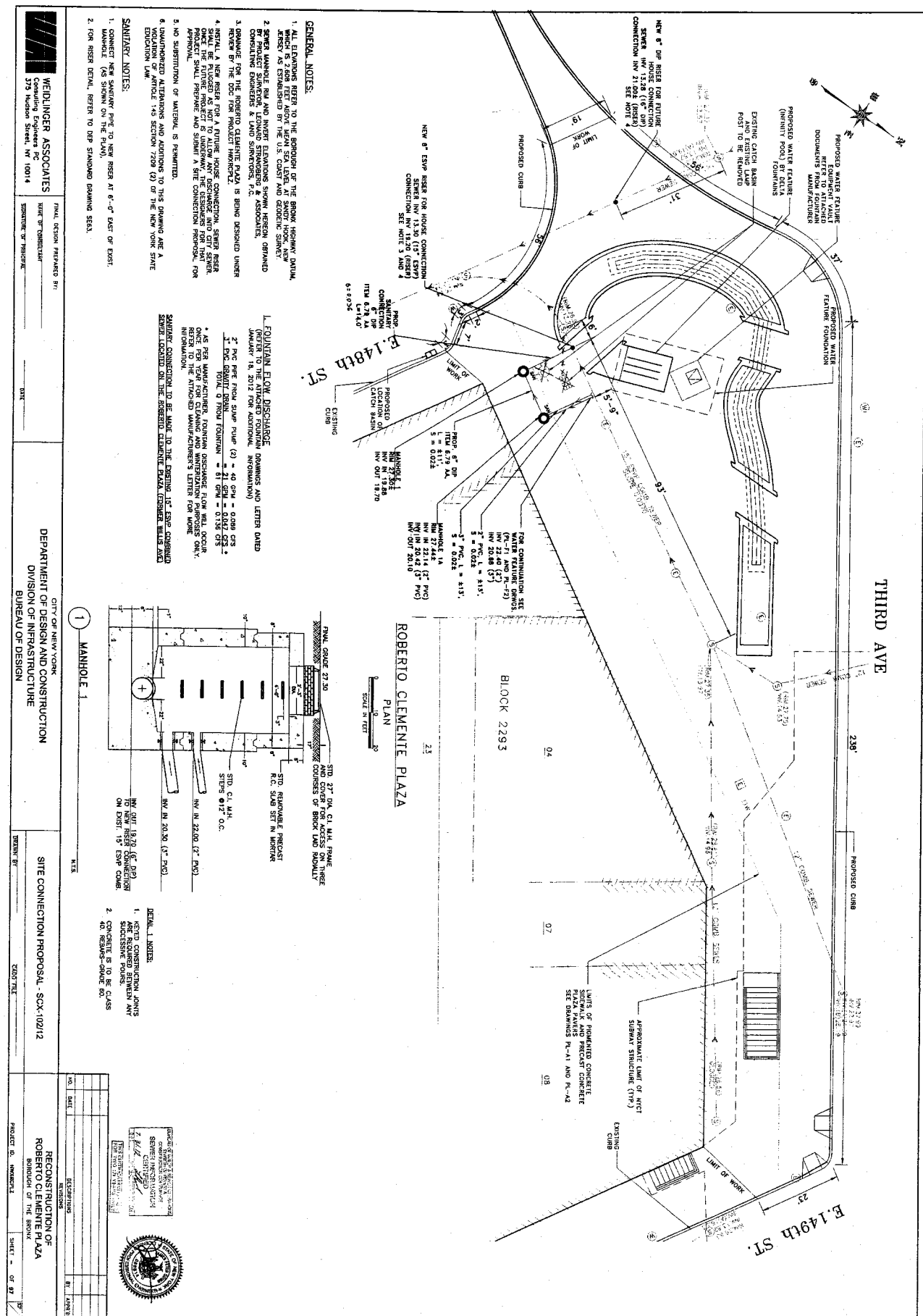
ZONING: C4-4

NOTES:

1. ZONING FOR THE ENTIRE SITE IS C4-4. FOR DOMESTIC FLOW IN PARK AREAS, USE 2,000 GALLONS PER ACRE PER DAY.
2. AS PER MANUFACTURER, PUMP/RAIN DISCHARGE FLOW WILL OCCUR ONCE PER YEAR FOR CLEANING AND WINTERIZATION PURPOSES ONLY. REFER TO THE ATTACHED MANUFACTURER'S LETTER FOR MORE INFORMATION.
3. SANITARY CONNECTION TO BE MADE TO THE EXISTING 16" ESVP COMBINED SEWER LOCATED ON THE ROBERTO CLEMENTE PLAZA (FORMER WILLS AVE)
4. NO SUBSTITUTION OF MATERIALS IS ALLOWED.
5. DRAWING IS NOT TO SCALE.

ROBERTO CLEMENTE PLAZA

SCX-102/12
 ATTACHMENT "F"



GENERAL NOTES:

1. ALL ELEVATIONS REFER TO THE BENCHMARK OF THE BROOK HOLLOW DAM, N.Y. STATE ENGINEERING DIVISION, 1985 (1985) AS ESTABLISHED BY THE N.Y. STATE AND FEDERAL GOVERNMENTS.
2. SWEET WAREHOUSE RIM AND INSERT ELEVATIONS SHOWN WERE OBTAINED BY PROJECT SURVEYOR, LEONARD STRANDBERG & ASSOCIATES, CONSULTING ENGINEERS & LAND SURVEYORS, P.C.
3. DRAWING FOR THE ROBERTO CLEMENTE PLAZA IS BEING DESIGNED UNDER REVIEW BY THE DEP FOR PROJECT WORKSHEET.
4. ALL NEW PLUMBING WORK SHALL BE INSTALLED UNDER PERMITS AND SHALL BE PLACED AS NOTED ON THIS DRAWING. THE DESIGNER FOR THIS PROJECT SHALL PROVIDE AND SIGNIFY A SITE CONNECTION PROPOSAL FOR APPROVAL.
5. NO SUBSTITUTION OF MATERIAL IS PERMITTED.
6. UNAPPROVED ALTERATIONS AND ADDITIONS TO THIS DRAWING ARE A VIOLATION OF ARTICLE 145 SECTION 7009 (2) OF THE NEW YORK STATE EDUCATION LAW.

SANITARY NOTES:

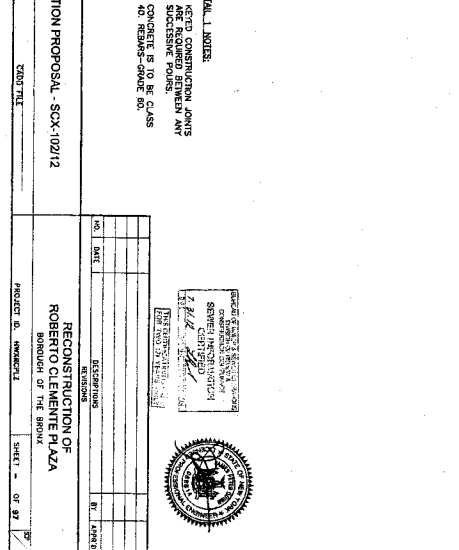
1. CONNECT NEW SANITARY PIPE TO NEW RISER AT 6'-0" EAST OF EXIST. MANHOLE (18) SHOWN ON THIS PLAN.
2. FOR RISER DETAIL, REFER TO DEP STANDARD DRAWING S834.

L. FOUNTAIN FLOW DISCHARGE
 REFER TO THE ATTACHED FOUNTAIN DRAWINGS AND LETTER DATED JANUARY 18, 2012 FOR ADDITIONAL INFORMATION.)

2" PVC PER FEET FROM SLURP PUMP (2) = 49 GPM = 0.009 CFS
 1" PVC PER FEET FROM FOUNTAIN (2) = 21 GPM = 0.002 CFS
 4" PVC PER FEET FROM FOUNTAIN (2) = 81 GPM = 0.133 CFS

* ALL PERMITTED FOUNTAIN DISCHARGE FLOW WILL OCCUR ONCE PERMITTED FOUNTAIN DISCHARGE IS INSTALLED. REFER TO THE ATTACHED MANUFACTURER'S LETTER FOR MORE INFORMATION.

SANITARY CONNECTION TO BE MADE TO THE EXISTING 12" EAST CONCRETE RISER, LOCATED IN THE EXISTING EXTERIOR WALL, SOUTH WALL.



ATTACH TO CONTRACT DOCUMENTS

THE CITY OF NEW YORK
DEPARTMENT OF DESIGN AND CONSTRUCTION
INFRASTRUCTURE DIVISION
BUREAU OF DESIGN

PROJECT ID: HWXRCPLZ

RECONSTRUCTION OF
ROBERTO CLEMENTE PLAZA

INCLUDING SEWER, WATER MAIN, STREET LIGHTING,
AND TRAFFIC SIGNAL WORK

Together With All Work Incidental Thereto

BOROUGH OF THE BRONX
CITY OF NEW YORK

ADDENDUM NO. 5

DATED: July 15, 2012

THIS ADDENDUM IS HEREBY MADE A PART OF THE CONTRACT DOCUMENTS

Included herein are the Specifications for the Electrical and
Plumbing Work.

ELECTRICAL AND PLUMBING ITEMSTABLE OF CONTENTS

SECTION	DESCRIPTION	PAGE
16.02	Conduit Systems	A5-3
E 16.01-RCP	Furnish and Install Electric Meter, Cabinet, Panel Board, Distribution and Receptacles	A5-10
E260100	Basic Electrical Requirements	A5-11
E260500	Common Work Result for Electrical	A5-18
E260519	Low Voltage Electrical Power Conductors and Cables	A5-21
E260526	Grounding and Bonding for Electrical System	A5-27
E260529	Hangers and Supports for Electrical Systems	A5-32
E260533	Raceways and Boxes for Electrical Systems	A5-36
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P220523	General-Duty Valves for Plumbing Piping	A5-91
P220529	Hangers and Supports for Plumbing Piping and Equipment	A5-93
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P220553	Identification for Plumbing Piping and Equipment	A5-103
P220700	Plumbing Insulation	A5-105
RCP-WF1	Exterior Water Feature	A5-118

SECTION 16.02 CONDUIT SYSTEMS

16.02.1. DESCRIPTION. This specification section covers common conduit systems, boxes, sleeves, and firestopping. Where other methods are specified under separate sections for specific applications, the specific application requirements shall govern.

16.02.2. MATERIALS

A) Conduit Type - Application (Use only conduit types listed)

1. Conduit - Rigid or Intermediate Grade Galvanized Threaded.

Applications:

- a. Exposed Outdoors.
- b. Poured concrete.
- c. Within block and / or masonry walls.

Restrictions - (Not to be used in):

- d. Direct buried in corrosive soils.
- e. Corrosive atmospheres.

2. Conduit - Thin wall EMT (Electrical Metallic Tubing).

Applications:

- a. Above hung, lay-in or plaster ceilings.
- b. Within hollow partitions.

Restrictions - (Not to be used in):

- c. Outdoors.
- d. Direct buried in corrosive soils.
- e. Corrosive atmospheres.
- f. Exposed in areas subject to mechanical abuse.
- g. Poured concrete.
- h. Underground.
- i. Hazardous or corrosive atmospheres.
- j. In utility tunnels.

3. Conduit - PVC Type 40 (Schedule 40) rigid (Electrical Non-Metallic Tubing (ENT)), conforming to ANSI, NEMA specifications and each length UL labeled.

Application: (Use limited to)

- a. In or under concrete slabs on grade where permitted by electric legend and as indicated in plans.
- b. Exterior use when encased in minimum of 3" concrete.
- c. In duct banks.

4. Conduit - Flexible Metal (Greenfield type), galvanized steel.

Application: (Use limited to)

- a. Connection to lighting fixtures and not over 6 ft. in length.
- b. Connections to controls on dynamic equipment (except motors) and transformers.

5. Conduit - Liquidtight Flexible Metal.

Application: (Use limited to)

- a. Connections to all motors. Length not less than 12 times the trade size diameter but in no case less than 12 inches.
- b. Connections to controls on dynamic equipment, transformers, etc., outdoors and indoors in wet locations.
- c. Use not permitted underground or where subject to physical damage.

6. Plastic jacketed rigid steel conduit shall be used in corrosive atmospheres including swimming pool areas, pool equipment rooms, chlorine storage areas, etc.

7. Conduit sizes

- a. Conduits shall be 3/4" minimum size except 1/2" size may be used for flexible connections to lighting fixtures.

B) Conduit Fittings

1. Fittings and workmanship shall assure electrical continuity. All conduit systems in poured concrete shall be concrete tight.
2. Application of bushings, locknuts and insulated fittings shall comply with NEC requirements.
3. Use conduit fittings as manufactured by Efcor, Steel City, Raco, Midwest, Appleton, ETP / O-Z / Gedney, Thomas & Betts, or an approved equivalent manufacturer, equivalent to the following catalog

numbers:

a. Rigid conduit

- (1) All fittings, couplings and connectors shall be threaded type.
- (1) Grounding bushings, malleable iron; insulated; Steel City BG-801; Midwest Series GLL.

b. EMT

- (1) Fittings shall be all steel, set-screw or compression type, concrete tight.
- (2) Setscrew type couplings; Midwest Series 460; Steel City TK-121; Appleton TW-50S.
- (3) Compression type couplings; Midwest series 660S; Steel City TK111; Appleton TWC50CS.
- (4) Setscrew type connectors; Midwest Series 450; Steel City TC-121; Appleton TWC-50S.
- (5) Compression type connectors; Midwest Series 650; Steel City TC111; Appleton TW50CS.

c. Flexible conduit

- (1) Malleable iron, "squeeze" type, non-insulated; Midwest series 1708; Steel City XC-901; Appleton 7481V. (For lighting fixture whips only - all steel or die-cast screw-in connector; Midwest 771; Steel City XC-241; Appleton SGC-50DC).

d. Liquid-tight conduit

- (1) Steel or malleable iron; Midwest Series LT; Steel City LT-100; Appleton ST.

C) Boxes

- 1. Junction boxes and pull boxes shall be code gauge galvanized steel, fully gasketed, with multiple screw fasteners and covers.
- 2. Boxes not otherwise accessible in ceilings and walls shall be made accessible by installation of hinged door access panels.
- 3. Outlet boxes all steel construction with galvanized or plated finish or otherwise all metal, by Steel City, Appleton, Crouse Hinds, R&S, Raco, or other equivalent approved manufacturer.

- a. Lighting fixture outlet boxes 4" square or octagonal, 2.125" deep, with 0.375" fixture studs. Equivalent to Steel City Series 54171; Series 52171 with FE-421 stud. Fixtures weighing more than 50 lbs. shall be supported independently of the outlet box.
 - b. Flush mounted device outlet boxes shall be minimum 4" square. Provide extension rings as required. Use Caddy No. H2-3 mounting support plate where metal studs are used.
 - c. Device rings in finished masonry or tile walls shall be square corner masonry type with no extended ears, to allow flush mounting of plates.
 - d. Floor boxes shall be UL listed for its application as manufactured by Hubbell, Steel City, Walker, or Raco.
 - e. Surface mounted device boxes shall be cast "FS" type or special surface mounted boxes for use with surface raceway systems.
4. Provide watertight boxes, slip expansions and bonding jumpers where dictated by construction conditions.
 5. Terminations at boxes shall be secured by locknuts or approved bushings.

D) Sleeves and Openings

1. Sleeves and formed openings shall be placed in walls, partitions, floor slabs, and poured concrete roof decks for the passage of conduit, cable, wireway, and cable tray. Sleeves and formed openings are not required:
 - a. In floor slabs on grade.
 - b. Where conduit is installed before the wall, partition or slab is constructed.
 - c. Openings are cut for conduit passage and patched with equivalent or comparable material to close the space around the conduit.
 - d. In stud and gypsum board or plaster walls and partitions, which are not fire-rated.
 - e. For conduit passing thru masonry walls and partitions and stud and gypsum board or plaster walls and partitions. Sleeves are required however, for which expansion, contraction and other movement can be expected.
 - f. In core drilled openings in solid concrete not requiring water

protection. Sleeves are required, however, at core drilling thru hollow pre-cast slabs and concrete block walls, to facilitate containment of required firestopping material.

2. Sleeves for passage of conduit and cables shall be schedule 40 black steel pipe or galvanized rigid conduit. Rectangular sleeves for cables, wireway and cable tray shall be 18 gauge galvanized steel in poured concrete floors, walls and roof decks; 26 gauge galvanized sheet steel in other than poured concrete.
 3. Sleeves shall be sized to afford 0.25" to 0.75" clearance space.
- E) In areas having special membrane waterproofing in or on the floor slab, a Josam 26420, or equivalent approved by the Engineer in consultation with the City's Architect, riser sleeve with clamping ring and auxiliary conduit sleeve extending 4 inches above finished floor or 8 inches above finished roof shall be used. Waterproofing membrane for roof floor construction shall be secured by the clamping ring. These are to be used in areas having special membrane waterproofing in or on the floor slab and at roof decks.
- F) Escutcheon plates shall be split-ring chromium plated pressed steel. Plates shall be sized to cover the surface penetration and sleeve. Plates shall be installed on exposed piping in finished rooms and areas where conduits penetrate walls, floors, ceilings or overhead structure.

16.02.3. INSTALLATION

- A) Conduit shall be run concealed in all finished areas of new construction and elsewhere unless specifically indicated or upon specific written permission by the Engineer.
- B) Where permitted in concrete slabs, limit conduit size to 1" maximum. Place metallic conduits above vapor barrier when slab is on grade. Where feeders are permitted to be run below floor slab on grade, they shall be installed in non-metallic conduit encased in 3" concrete using galvanized rigid steel elbows. Where not required to be run overhead, branch circuits may be installed in Schedule 40 PVC conduit below the vapor barrier without concrete encasing the PVC. This PVC conduit shall not stub-up more than 18" above the finished floor and shall be concealed in walls. The 90-degree elbow and stub-up shall be galvanized rigid steel.
- C) Conduit crossing building expansion joints shall have expansion provisions with grounding continuity; use special expansion fittings or other National Electrical Code (NEC) approved method.
- D) Work shall be so planned as to:
1. Minimize the number of offsets and junction boxes. For feeder conduits, use all long radius conduit bends or accessibly located large junction boxes with screw covers.
 2. Running conduits promiscuously at various levels and directions will

not be acceptable.

3. Coordinate activity in advance to avoid interference with other trades.
 4. Provide access to all junctions and pull boxes.
- E) Secure feeder conduit to basic structural elements with galvanized straphangers and clamps; use of trapeze type hangers is encouraged for multiple conduits where space will permit. Galvanized metal clamps and screws may be used for attaching and supporting branch circuit conduit. Non-metallic fasteners shall not be used except plastic inserts may be used in concrete for small conduits. Vertical conduits shall be supported at each floor by clamps.
- F) During construction temporarily cap open ends of conduit. Caution trades to take special care of runs in concrete slabs during pouring.
- G) Empty conduit installed for communications use or for future systems shall have an insulated pull wire or heavy nylon cord inserted for use in pulling wires.
- H) Pull mandrel or large swab thru conduit to assure freedom from debris before pulling wires. Use pulling lubricants sparingly.
- I) Sleeves for passage of conduit, cables, wireway, cable tray and bus duct shall be placed in the initial stages of construction before concrete, masonry and other general construction activity. Means shall be taken to assure that the sleeve will not move during or after construction. Beams, columns and other structural members shall not be sleeved except upon approval of the Engineer, in consultation with the City's Architect.
- J) Length of wall sleeves shall be such that the sleeve ends are substantially flush with both sides of the wall or partition. Floor sleeves shall be flush with the bottom and top of the floor slab except, in mechanical rooms and other areas which might have water on the floor, sleeves shall project a minimum of 1 inch above finished floor. Refer to the following paragraph for qualifications and exceptions relating to firestopping.
- K) Sleeves, which are a part of firestopping assemblies, shall conform to the requirements of the assembly with particular emphasis regarding size, annular space, length, passage or non-passage of insulation and the installation of the sleeves.
- L) Where firestopping is not required, the annular space between the sleeve, core drilling or opening and the conduit, cable, cable tray, bus duct and raceway shall be closed with caulking to retard the passage of smoke.
- M) Where conduits requiring no pipe sleeves pass thru floor, wall or partition, the annular space shall be closed with materials and methods compatible with the wall or partition material (Type M masonry grout, drywall joint compound, plaster, etc.).

- N) Conduits, wire and cables entering from outside the building shall be sealed water and moisture tight. Seal between conduit and sleeves, conduits and core-drilled holes and around conductors inside conduits. Provide cast iron pipe or schedule 40 galvanized steel conduit sleeves in exterior walls below grade, with intermediate wall stop and anchor collar set in place before concrete pouring. Sleeve shall be a part of the sealing assembly. When the wall opening is core drilled the wall sleeve may be omitted. A mechanically compressed rubber sealing assembly equivalent to Thunderline Corp. "Link-Seal" shall be placed in the annular space between conduit and sleeve or core drilling.
- O) Conduits extending through the roof shall be made watertight by means compatible with the roofing system and as directed by the Roofing Contractor (the company who presently holds the warranty on the roof) and approved by the Engineer.
- P) Contractor shall record carefully on a set of "as built" prints the exact location of all feeder conduits.
- Q) Unless noted otherwise on the drawings, a maximum of 8 conductors shall be installed in a branch circuit conduit. This maximum is a count of all phase and neutral conductors only - ground conductors are not counted when determining maximum fill for this purpose.

16.02.4. MEASUREMENT. The quantity to be measured for payment shall be the actual number of linear feet of each size, number and kind of conduit, complete, as shown, specified or required, to the satisfaction of the Engineer, measured along the center line of each run of the SBS fare machine conduit measured from the utility pole to the SBS machine post or between SBS machine posts.

16.02.5. PRICES TO COVER. The price bid shall be a unit price for furnishing and installing electrical conduits with pull wires, and shall include the cost of all labor, materials, and equipment required to complete the work including, but not limited to, all excavation and backfilling, and necessary accessories, all in accordance with the plans and specifications, to the satisfaction of the Engineer.

Payment will be under:

Item No.	Item	Pay Unit
16.02 LN-01	PVC SCH 40 ENT CONDUIT - 1" NOM. DIA.	L.F.
16.02 LN-02	PVC SCH 40 ENT CONDUIT - 2" NOM. DIA.	L.F.
16.02 LN-03	PVC SCH 40 ENT CONDUIT - 3" NOM. DIA.	L.F.
16.02 LN-04	PVC SCH 40 ENT CONDUIT - 4" NOM. DIA. WITH 3/8" NYLON ROPE	L.F.
16.02 LN-05	RIGID GALVANIZED STEEL CONDUIT - 1" NOM. DIA.	L.F.

SECTION E 16.01-RCP FURNISH AND INSTALL ELECTRIC METER, CABINET, PANEL BOARD, DISTRIBUTION AND RECEPTACLES

E16.01-RCP.1. DESCRIPTION

- A) Under this section the Contractor shall be required to complete the work of installing and energizing all electrical components within the project limits.
- B) Drawings and the general provisions of the NYCDOT Standard Highway Specifications apply to this Section.
- C) Related Sections: The following sections contain the scope of work that relate to this section:
 - 1) Section E260100, Basic Electrical Requirements
 - 2) Section E260500, Common Work Results for Electrical
 - 3) Section E260519, Low-voltage Electrical Power Conductors and Cables
 - 4) Section E260526, Grounding and Bonding for Electrical Systems
 - 5) Section E260529, Hangers and Supports for Electrical Systems
 - 6) Section E260533, Raceways and Boxes for Electrical Systems
 - 7) Section E260553, Identification for Electrical Systems
 - 8) Section E262416, Panel Boards
 - 9) Section E262713, Electricity Metering
 - 10) Section E262726, Wiring Devices
 - 11) Section E262813, Fuses
 - 12) Section E262816, Enclosed Switches
- D) Refer to Section RCP-WF1.2.1.B) for a list of abbreviations for Standards and References.

E16.01-RCP.2. PRICE TO COVER

The lump sum price bid shall cover the cost of all labor, materials, plan equipment, insurance, permits, inspection certificates, and incidentals required to install all electrical components included, but not limited to, cables, conduits, meter, meter cabinet, panel boards, distribution to all electrical components indicate on the drawings, receptacles, and all other incidentals necessary for completing the work; all in accordance with NYC Electrical Code, Contract Drawings, the specifications and the direction of the Engineer.

The cost of all of the Sections noted in E16.01-RCP.1.C), above, shall be deemed included in the cost of this Item. Payment will be made at the Lump Sum Price bid for Item E 16.01-RCP herein, and will be paid in proportion to the percentage of Item E 16.01-RCP completed.

Payment will be made under:

Item No.	Item	Pay Unit
E 16.01-RCP	FURNISH AND INSTALL ELECTRIC METER, CABINET, PANEL BOARD, DISTRIBUTION, AND RECEPTACLES	L.S.

SECTION E260100 BASIC ELECTRICAL REQUIREMENTS
(NOT A BID ITEM)

E260100.1. INTENT

- A) This Section includes general requirements for electrical installations. These requirements are applicable to all Electrical work. The following requirements are included in this Section to expand the requirements specified in the General Conditions of the NYCDOT Standard Highway Specifications:
- 1) Submittals.
 - 2) Coordination drawings.
 - 3) Record documents.
 - 4) Maintenance manuals.
 - 5) Rough-ins.
 - 6) Electrical installations.
 - 7) Cutting and patching.
 - 8) Codes, Permits and Inspections.
 - 9) Separation of Work between Trades.
 - 10) Definitions and Interpretations.
- B) Related Sections: The following sections contain requirements that relate to this section:
- 1) Section E260500, Common Work Results for Electrical, for materials and methods common to the remainder of Electrical specifications, plus general related specifications including:
 - Excavation and backfill and concrete work.

E260100.2. DEFINITIONS

- (A) As used in the drawings and specifications for electrical work, certain non-technical words shall be understood to have specific meanings as follows regardless of indications to the contrary in the General Conditions or other documents governing the electric work.
1. "Furnish" -- Purchase and deliver to the project site complete with every necessary appurtenance and support, all as part of the electrical work. Purchasing shall include payment of all sales taxes and other surcharges as may be required to assure that purchased items are free of all liens, claims or encumbrances. Payment of sales taxes is, however, specifically excluded.
 2. "Install" -- Unload at the delivery point at the site and perform every operation necessary to establish secure mounting and correct operation at the proper location in the project, all as part of the electrical work.
 3. "Provide" -- "Furnish" and "install."
 4. "New" -- Manufactured within the past two years and never before used.
 5. Regardless of their usage in codes or other industry standards, certain words as used in the drawings or specifications for the electrical work, shall be understood to have the specific meanings ascribed to them in the following list:
 6. "Circuitry" -- Any electric work (not limited to light and power distribution) which consists of wires, cables, raceways, and/or specialty wiring method assemblies taken all together complete with associated junction boxes, pull boxes, outlet

boxes, joints, couplings, splices and connections except where limited to a lesser meaning by specific description.

7. "Wiring" -- Same as Circuitry.
8. "Circuit" -- Any specific run of circuitry.
9. "Branch Circuit" -- Any light and power distribution system circuit which, at its load end, is directly connected to one or more electrical energy consuming items with no overcurrent protection devices interposed, other than (where required) those protecting the energy a consuming items from overloading or overheating.
10. "Appliance Panel" -- Any panel, used in a light and power distribution system, containing single pole and/or multipole branches rated in various sizes.
11. "Lighting Panel" -- Any panel used in a light and power distribution system, having all (or the majority) of its branches single pole and rated the same.
12. "Lighting and Appliance Branch Circuitry" -- All or any portion of branch circuits outgoing from a lighting or appliance panel.
13. "Feeder" -- Any item of light and power circuitry used in a distribution system which is not lighting and appliance branch circuitry.
14. "Main Feeder" -- Any feeder which, at its supply end, is connected through its own overcurrent protection (and switching) device, and none other, directly to a main service or a main service overcurrent protection (and switching) device.
15. "Branch Feeder" -- A feeder, other than a main feeder, which complies with the definition of a branch circuit.
16. "Submain Feeder" -- Any feeder which is neither a main feeder nor a branch feeder.
17. "Distribution Panel" -- Any panel, used in a light and power distribution system, containing only multi-pole branches and with all (or the majority) of its branches used for feeders supplying other panels.
18. "Power Panel" -- Same as distribution panel, except with all (or the majority) of its branches used for feeders which do not supply other panels.
19. "Motor Power Circuit" -- Any circuit which operates nominally at 100 volts or more, and which carries electrical input energy to a motor.
20. "Motor Control Circuit" (used in conjunction with a motor for which a magnetic starter is supplied) -- Any circuit (other than a motor power circuit), which operates nominally at 100 volts or more, and which carries current intended for directing or indicating the performance of a motor starter.
21. "Motor Control Circuit" (used in conjunction with a motor for which a manual starter is supplied) -- Any circuit containing an extension of power circuit wires, other than those constituting the direct connection between source of supply, starter and motor.
22. "Motor Control Actuating Device" -- Any device which performs a switching function in a motor control circuit (pushbuttons, automatic contacting devices, etc.).

23. "Motor Control Actuated Device" -- Any device which functions in response to voltage received from a motor control circuit (pilot lights, solenoids, etc.)
 24. "Package Unit" -- An item of equipment having one or more motors or other electric energy consuming elements integrally factory mounted on a single base, complete with all associated control devices and interconnecting wiring.
 25. "Grade Slab" -- A building floor slab which is in contact with or directly over grade (earth).
 26. "Building Confines" -- The extent of a building, as defined by the outside surfaces of its peripheral walls, the top surface of its roof, and the underside surface of its grade slab.
 27. "Distribution Switch" -- Any switch used in a light and power system other than a tumbler, toggle or specialty switch in the "wiring device" category.
 28. "Normal Electric Work Conditions" -- Locations within building confines which are neither damp, wet nor hazardous and which are not used for air handling.
 29. "Underground" -- Subsurface and exterior to building foundations.
 30. "At Underside of Grade Slab" -- Under a grade slab and integrated into it.
 31. "Below Grade Slab" -- Under a grade slab but not integrated into it.
 32. "Standard" (as applied to wiring devices) -- Not of a separately designated individual type.
 33. "Raceway" -- Any pipe, duct, extended enclosure, or conduit (as specified for a particular system) which is used to contain wires, and which is of such nature as to require that the wires be installed by a "pulling in" procedure.
 34. "Concealed" (as applied to circuitry) -- Covered completely by building materials, except for penetrations (by boxes and fittings) to a level flush with the surface as necessitated by functional or specified accessibility requirements.
 35. "Exposed" (as applied to circuitry) -- Not covered in any way by building materials.
 36. "Subject to Mechanical Damage" -- Exposed within seven feet of the floor in mechanical rooms, manufacturing spaces, vehicular spaces, or other spaces where heavy items (over 44.6 kg or 100 pounds) are moved around or rigged as a common practice or as required for replacement purposes.
 37. "Assembly" -- A defined set of elements of electric work.
- (B) Where the word "conduit" is used without specific reference to type, it shall be understood to mean "raceway."
- (C) Except where modified by a specific notation to the contrary, it shall be understood that the indication and/or description of any electrical item in the drawings and specifications for electrical work carries with it the instruction to furnish, install and connect the item as part of the electrical work regardless of whether or not this instruction is explicitly stated.

- D) It shall be understood that the specifications and drawings are complementary and are to be taken together for a complete interpretation of the work. Where there are conflicts between the drawings and specifications or within the specifications or drawings themselves, the items of higher standard shall govern.
- E) To the extent that they govern the basic work, the specifications also govern 'change order' work if any.
- F) No exclusion from or limitation in, the symbolism used on the drawings for electrical work or the language used in the specifications for electrical work shall be interpreted as a reason for omitting the appurtenances or accessories necessary to complete any required system or item of equipment.
- G) The drawings for electrical work utilize symbols and schematic diagrams which have no dimensional significance. The work shall, therefore, be installed to fulfill the diagrammatic intent expressed on the electrical drawings, but in conformity with the dimensions indicated -on the final working drawings, field layouts and shop drawings of all trades. In particular, information as to the exact size, location and electrical connection points for mechanical equipment shall be derived by reference to mechanical documents.
- H) Certain details appear on the drawings for electrical work which are specific with regard to the dimensioning and positioning of the work. These are intended only for general information purposes. They do not obviate field coordination for individual items of the indicated work.
- I) The use of words in the singular shall not be considered as limiting where other indications denote that more than one item is referred to.
- J) Ratings of devices, materials and equipment specified without reference to specific performance criteria shall be understood to be nominal or nameplate ratings established by means of industry standard procedures.

E260100.3. SUBMITTALS

- A) General: Follow the procedures specified in the General Conditions of Section 1.06.31 in the NYCDOT Standard Highway Specifications.
- B) Additional copies may be required by individual sections of these Specifications.

E260100.4. RECORD DOCUMENTS

- A) Prepare record documents in accordance with the requirements in the General Conditions of Section 1.06.31 in the NYCDOT Standard Highway Specifications. In addition to the requirements specified in Standard Construction Contract comply with the following:
 - 1) A complete set of "as-built" or record electric drawings shall be made up and delivered to the Engineer.
 - 2) The drawings shall show:
 - a) All electric work installed exactly in accordance with the original design.
 - b) All electric work installed as a modification or addition to the original design.
 - c) The dimensional information necessary to delineate the exact location of all circuitry and wiring runs (other than lighting and appliance branch circuitry and small control, signal and communications runs) which are so buried or

- concealed as to be untraceable by inspection through the regular means of access established for inspection and maintenance.
- d) The numbering information necessary to correlate all electrical energy consuming items (or outlets for same) to the panel or switchboard circuits from which they are supplied.
- 3) The drawings shall be produced using AutoCad software. "As-built" information shall be submitted as follows:
 - a) CAD drawing files on 4 compact discs (CD's) in AutoCad format.
 - b) Four (4) copies of drawings.
 - 4) The quantity of design drawings which are made available shall in no way be interpreted as setting a limit to the number of drawings necessary to show the required "as-built" information.
 - 5) Progress prints of record drawings shall be submitted monthly during the construction period for the Engineer's approval.

E260100.5. MAINTENANCE MANUALS

- A) Prepare maintenance manuals as specified herein, include the following information for major equipment items such as panel boards, lighting fixtures and other items as specified elsewhere.
 - 1) Description of function, normal operating characteristics and limitations, performance curves, engineering data and tests, and complete nomenclature and commercial numbers of replacement parts.
 - 2) Manufacturer's printed operating procedures to include start-up, break-in, and routine and normal operating instructions; regulation, control, stopping, shutdown, and emergency instructions.
 - 3) Maintenance procedures for routine preventative maintenance and troubleshooting; disassembly, repair, and reassembly; aligning and adjusting instructions.
 - 4) Servicing instructions.

E260100.6. DELIVERY, STORAGE AND HANDLING

- (A) Deliver products to the project properly identified with names, model numbers, types, grades, compliance labels, and other information needed for identification.

E260100.7. CODES, PERMITS AND INSPECTIONS

- (A) All work shall meet or exceed the latest requirements of the NEC, NY State, NY City, and other authorities exercising jurisdiction over electrical construction work and the project.
- (B) All required permits and inspection certificates shall be obtained, paid for, and made available at the completion of the work.
- (C) Any portion of the work which is not subject to the requirements of an electric code published by a specific authority having jurisdiction shall be governed by the National Electrical Code and other applicable sections of the National Fire Code, as published by the National Fire Protection Association.

- (D) Equipment, material, layout and installation provided as part of the electrical work shall conform to the requirements of the Department of Transportation and other agencies having jurisdiction. Include as part of the electrical work all required filings and submissions for approval. Equipment furnished separate from - but installed as part of - the electrical work, which does not have all necessary approvals, shall not be installed until approvals are obtained by the parties furnishing the equipment.
- (E) Installation procedures, methods and conditions shall comply with the latest requirements of the Federal Occupational Safety and Health Administration (OSHA).

E260100.8. ROUGH-IN

- (A) Verify final locations for rough-ins with field measurements and with the requirements of the actual equipment to be connected.
- (B) Refer to equipment specifications contained herein this Addendum for rough-in requirements.

E260100.9. ELECTRICAL INSTALLATIONS

- (A) General: Sequence, coordinate, and integrate the various elements of electrical systems, materials, and equipment. Comply with the following requirements:-
 - 1) Coordinate electrical systems, equipment, and materials installation with other building components.
 - 2) Verify all dimensions by field measurements.
 - 3) Sequence, coordinate, and integrate installations of electrical materials and equipment for efficient flow of the Work. Give particular attention to large equipment requiring positioning prior to backfill or finish.
 - 4) Coordinate connection of electrical systems with exterior underground and overhead utilities and services. Comply with requirements of governing regulations, franchised service companies, and controlling agencies. Provide required connection for each service.
 - 5) Install systems, materials, and equipment to conform with approved submittal data to greatest extent possible. Conform to arrangements indicated by the Contract Documents, recognizing that portions of the Work are shown only in diagrammatic form. Where coordination requirements conflict with individual system requirements, refer conflict to the Engineer. Install systems, materials, and equipment level and plumb, parallel and perpendicular to other building systems and components, where installed exposed in finished spaces.
 - 6) Install electrical equipment to facilitate servicing, maintenance, and repair or replacement of equipment components. As much as practical, connect equipment for ease of disconnecting, with minimum of interference with other installations.

E260100.10. CUTTING AND PATCHING

- (A) General: Perform cutting and patching in accordance with the following requirements:
 - 1. Perform cutting, fitting, and patching of electrical equipment and materials required to:
 - a) Uncover Work to provide for installation of ill-timed Work.

- b) Remove and replace defective Work.
 - c) Remove and replace Work not conforming to requirements of the Contract Documents.
 - d) Upon written instructions from the Engineer, uncover and restore Work - to provide for Engineer observation of concealed Work.
2. Protection of Installed Work: During cutting and patching operations; protect adjacent installations.
 3. Patch finished surfaces and building components using new materials specified for the original installation and experienced installers.

E260100.11. MEASUREMENT AND PRICE TO COVER

No separate payments will be made for compliance with this Section. Any work required to comply with this section shall be deemed included in the unit price bid Item No. E 16.01-RCP.

SECTION E260500 COMMON WORK RESULTS FOR ELECTRICAL
(NOT A BID ITEM)

E260500.1. INTENT

This Section includes the following

- 1) Electrical equipment coordination and installation.
- 2) Sleeves for raceways and cables.
- 3) Sleeve seals.
- 4) Grout.
- 5) Common electrical installation requirements.

E260500.2. RELATED WORK AND REQUIREMENTS

The following requirements are included in this Section to expand the requirements specified in the General Conditions of the NYCDOT Standard Highway Specifications.

E260500.3. DEFINITIONS

EPDM: Ethylene-propylene-diene terpolymer rubber.

E260500.4. SUBMITTALS

Product Data: For sleeve seals.

E260500.5. COORDINATION

- A) Coordinate arrangement, mounting, and support of electrical equipment:
 - 1) To provide for ease of disconnecting the equipment with minimum interference to other installations.
 - 2) To allow right of way for piping and conduit installed at required slope.
 - 3) So connecting raceways, cables, wireways, cable trays, and busways will be clear of obstructions and of the working and access space of other equipment.
- B) Coordinate installation of required supporting devices and set sleeves in cast-in-place concrete, masonry walls, and other structural components as they are constructed.
- C) Coordinate location of access panels and doors for electrical items that are behind finished surfaces or otherwise concealed.

E260500.6. MATERIALS

A) SLEEVES FOR RACEWAYS AND CABLES

- 1) Steel Pipe Sleeves: ASTM A 53/A 53M, Type E, Grade B, Schedule 40, galvanized steel, plain ends.
- 2) Sleeves for Rectangular Openings: Galvanized sheet steel. Minimum Metal Thickness:
 - a) For sleeve cross-section rectangle perimeter less than 50 inches (1270 mm) and no side more than 16 inches (400 mm), thickness shall be 0.052 inch (1.3 mm).
 - b) For sleeve cross-section rectangle perimeter equal to, or more than, 50 inches (1270 mm) and 1 or more sides equal to, or more than, 16 inches (400 mm), thickness shall be 0.138 inch (3.5 mm).

B) SLEEVE SEALS

- 1) Description: Modular sealing device, designed for field assembly, to fill annular space between sleeve and raceway or cable.
 - a) Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - i) Advance Products & Systems, Inc.
 - ii) Calpico, Inc.
 - iii) Metraflex Co.
 - iv) Pipeline Seal and Insulator, Inc.
 - b) Sealing Elements: EPDM interlocking links shaped to fit surface of cable or conduit. Include type and number required for material and size of raceway or cable.
 - c) Pressure Plates: Stainless steel. Include two for each sealing element.
 - d) Connecting Bolts and Nuts: Stainless steel of length required to secure pressure plates to sealing elements. Include one for each sealing element.

C) GROUT

- 1) Nonmetallic, Shrinkage-Resistant Grout: ASTM C 1107, factory-packaged, nonmetallic aggregate grout, noncorrosive, nonstaining, mixed with water to consistency suitable for application and a 30-minute working time.

E260500.7. METHODS**A) COMMON REQUIREMENTS FOR ELECTRICAL INSTALLATION**

- 1) Comply with NECA 1-210 Standard Practice of Good Workmanship in Electrical Construction.
- 2) Measure indicated mounting heights to bottom of unit for suspended items and to center of unit for wall-mounting items.
- 3) Headroom Maintenance: If mounting heights or other location criteria are not indicated, arrange and install components and equipment to provide maximum possible headroom consistent with these requirements.
- 4) Equipment: Install to facilitate service, maintenance, and repair or replacement of components of both electrical equipment and other nearby installations. Connect in such a way as to facilitate future disconnecting with minimum interference with other items in the vicinity.
- 5) Right of Way: Give to piping systems installed at a required slope.

B) SLEEVE INSTALLATION FOR ELECTRICAL PENETRATIONS

- 1) Electrical penetrations occur when raceways, cables, or busways penetrate concrete slabs, concrete or masonry walls, or fire-rated floor and wall assemblies.
- 2) Concrete Slabs and Walls: Install sleeves for penetrations unless core-drilled holes or formed openings are used. Install sleeves during erection of slabs and walls.
- 3) Use pipe sleeves unless penetration arrangement requires rectangular sleeved opening.

- 4) Cut sleeves to length for mounting flush with both surfaces of walls.
- 5) Extend sleeves installed in floors 2 inches above finished floor level.
- 6) Size pipe sleeves to provide 1/4-inch annular clear space between sleeve and raceway or cable, unless indicated otherwise.
- 7) Seal space outside of sleeves with grout for penetrations of concrete and masonry
- 8) Promptly pack grout solidly between sleeve and wall so no voids remain. Tool exposed surfaces smooth; protect grout while curing.
- 9) Aboveground, Exterior-Wall Penetrations: Seal penetrations using steel pipe sleeves and mechanical sleeve seals. Select sleeve size to allow for 1-inch (25-mm) annular clear space between pipe and sleeve for installing mechanical sleeve seals.
- 10) Underground, Exterior-Wall Penetrations: Install cast-iron pipe sleeves. Size sleeves to allow for 1-inch (25-mm) annular clear space between raceway or cable and sleeve for installing mechanical sleeve seals.

C) SLEEVE-SEAL INSTALLATION

- 1) Install to seal exterior wall penetrations.
- 2) Use type and number of sealing elements recommended by manufacturer for raceway or cable material and size. Position raceway or cable in center of sleeve. Assemble mechanical sleeve seals and install in annular space between raceway or cable and sleeve. Tighten bolts against pressure plates that cause sealing elements to expand and make watertight seal.

E260500.8. MEASUREMENT AND PAYMENT

No separate payments will be made for this work. Any work completed under this section shall be deemed included in the unit price bid for Item No. E 16.01-RCP.

SECTION E260519 LOW VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES
(NOT A BID ITEM UNLESS REQUIRED FOR SBS FARE MACHINES)

E260519.1. INTENT

This Section includes the following:

- 1) Building wires and cables rated 600 V and less.
- 2) Connectors, splices, and terminations rated 600 V and less.
- 3) Sleeves and sleeve seals for cables.

E260519.2. RELATED WORK AND REQUIREMENTS

The following requirements are included in this Section to expand the requirements specified in the General Conditions of the NYCDOT Standard Highway Specifications.

E260519.3. DEFINITIONS

XLPE: Cross-Linked Polyethylene

EPDM: Ethylene-propylene-diene terpolymer rubber.

E260519.4. SUBMITTALS

- A) Product Data: For each type of product indicated.
- B) Qualification Data: For testing agency.
- C) Field quality-control test reports.

E260519.5. QUALITY CONTROL

- (a) Testing Agency Qualifications: An independent agency, with the experience and capability to conduct the testing indicated, that is a member company of the International Electrical Testing Association (NETA) or is a nationally recognized testing laboratory (NRTL) as defined by OSHA in 29 CFR 1910.7, and that is acceptable to authorities having jurisdiction.
 - (i) Testing Agency's Field Supervisor: Person currently certified by the International Electrical Testing Association (NETA) or the National Institute for Certification in Engineering Technologies to supervise on-site testing specified in Subsection E260519.8.G).
- (b) Electrical Components, Devices, and Accessories: Listed and labeled as defined in (National Fire Protection Association) NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
- (c) Comply with NFPA 70.

E260519.6. COORDINATION

- A) Set sleeves and conduit in cast-in-place concrete, masonry walls, and other structural components as they are constructed.

E260519.7. MATERIALS

A) CONDUCTORS AND CABLES

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1) Alcan Products Corporation; Alcan Cable Division.
 - 2) American Insulated Wire Corp.; a Leviton Company.
 - 3) General Cable Corporation.
 - 4) Senator Wire & Cable Company.
 - 5) Southwire Company.
 - 6) or approved equivalent.
- (ii) Copper Conductors: Comply with NEMA WC 70.
- (iii) Conductor Insulation: Comply with NEMA WC 70 for Types THHN-THWN and RHH/RHW-2/USE-2-XLPE.

B) CONNECTORS AND SPLICES

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a) AFC Cable Systems, Inc.
 - b) Hubbell Power Systems, Inc.
 - c) O-Z/Gedney; EGS Electrical Group LLC.
 - d) 3M; Electrical Products Division.
 - e) Tyco Electronics Corp.
 - f) or approved equivalent.
2. Description: Factory-fabricated connectors and splices of size, ampacity rating, material, type, and class for application and service indicated.

C) SLEEVES FOR CABLES

- 1) Steel Pipe Sleeves: ASTM A 53/A 53M, Type E, Grade B, Schedule 40, galvanized steel, plain ends.
- 2) Cast-Iron Pipe Sleeves: Cast or fabricated "wall pipe," equivalent to ductile-iron pressure pipe, with plain ends and integral waterstop, unless otherwise indicated.
- 3) Sleeves for Rectangular Openings: Galvanized sheet steel with minimum 0.052- or 0.138-inch (1.3- or 3.5-mm) thickness as indicated and of length to suit application.

D) SLEEVE SEALS

- 1) Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a) Advance Products & Systems, Inc.
 - b) Calpico, Inc.
 - c) Metraflex Co.
 - d) Pipeline Seal and Insulator, Inc.
 - e) or approved equal.
- 2) Description: Modular sealing device, designed for field assembly, to fill annular space between sleeve and cable.

- a) Sealing Elements: EPDM interlocking links shaped to fit surface of cable or conduit. Include type and number required for material and size of raceway or cable.
- b) Pressure Plates: Stainless steel. Include two for each sealing element.
- c) Connecting Bolts and Nuts: Stainless steel of length required to secure pressure plates to sealing elements. Include one for each sealing element.

E260519.8. METHODS**A) CONDUCTOR MATERIAL APPLICATIONS**

- 1) Feeders: Copper. Stranded for No. 8 AWG and larger.
- 2) Branch Circuits: Copper. Solid for No. 12 AWG and No. 12 AWG; stranded for No. 8 AWG and larger.

B) CONDUCTOR INSULATION APPLICATIONS AND WIRING METHODS

- 1) Service Entrance: Type THHN-THWN, single conductors in raceway.
- 2) Exposed Feeders: Type THHN-THWN, single conductors in raceway.
- 3) Concealed Feeders in Vaults: Type THHN-THWN, single conductors in raceway.
- 4) Feeders Concealed in Concrete, below Slabs-on-Grade, and Underground: Type THHN-THWN, single conductors in raceway.
- 5) Exposed Branch Circuits, Including in Crawlspace: Type THHN-THWN, single conductors in raceway.
- 6) Branch Circuits Concealed in Concrete, below Slabs-on-Grade, and Underground: Type THHN-THWN, single conductors in raceway.
- 7) Class 1 Control Circuits: Type THHN-THWN, in raceway.
- 8) Class 2 Control Circuits: Type THHN-THWN, in raceway.
- 9) Wiring for TA SBS Fare Machines to be RHH/RHW-2/USE-2 XLPE.

C) INSTALLATION OF CONDUCTORS AND CABLES

- 1) Use manufacturer-approved pulling compound or lubricant where necessary; compound used must not deteriorate conductor or insulation. Do not exceed manufacturer's recommended maximum pulling tensions and sidewall pressure values.
- 2) Use pulling means, including fish tape, cable, rope, and basket-weave wire/cable grips that will not damage cables or raceway.
- 3) Install exposed cables parallel and perpendicular to surfaces of exposed structural members, and follow surface contours where possible.
- 4) Support cables according to Section E260529 "Hangers and Supports for Electrical Systems."

- 5) Identify and color-code conductors and cables according to Section E260553 "Identification for Electrical Systems."

D) CONNECTIONS

- 1) Tighten electrical connectors and terminals according to manufacturer's published torque-tightening values. If manufacturer's torque values are not indicated, use those specified in UL 486A and UL 486B.
- 2) Make splices and taps that are compatible with conductor material and that possess equivalent or better mechanical strength and insulation ratings than spliced conductors.
- 3) Wiring at Outlets: Install conductor at each outlet, with at least 12 inches (300 mm) of slack.

E) SLEEVE INSTALLATION FOR ELECTRICAL PENETRATIONS

- 1) Concrete Slabs and Walls: Install sleeves for penetrations unless core-drilled holes or formed openings are used. Install sleeves during erection of slabs and walls.
- 2) Use pipe sleeves unless penetration arrangement requires rectangular sleeved opening.
- 3) Rectangular Sleeve Minimum Metal Thickness:
 - a) For sleeve rectangle perimeter less than 50 inches (1270 mm) and no side greater than 16 inches (400 mm), thickness shall be 0.052 inch (1.3 mm).
 - b) For sleeve rectangle perimeter equal to, or greater than, 50 inches (1270 mm) and 1 or more sides equal to, or greater than, 16 inches (400 mm), thickness shall be 0.138 inch (3.5 mm).
- 4) Size pipe sleeves to provide 1/4-inch (6.4-mm) annular clear space between sleeve and cable unless sleeve seal is to be installed.
- 5) Seal space outside of sleeves with grout for penetrations of concrete and masonry.
- 6) Aboveground Exterior-Wall Penetrations: Seal penetrations using sleeves and mechanical sleeve seals. Size sleeves to allow for 1-inch (25-mm) annular clear space between pipe and sleeve for installing mechanical sleeve seals.
- 7) Underground Exterior-Wall Penetrations: Install cast-iron "wall pipes" for sleeves. Size sleeves to allow for 1-inch (25-mm) annular clear space between cable and sleeve for installing mechanical sleeve seals.

F) SLEEVE-SEAL INSTALLATION

- 1) Install to seal underground exterior-wall penetrations.
- 2) Use type and number of sealing elements recommended by manufacturer for cable material and size. Position cable in center of sleeve. Assemble mechanical sleeve seals and install in annular space between cable and sleeve. Tighten bolts against pressure plates that cause sealing elements to expand and make watertight seal.

G) FIELD QUALITY CONTROL

- 1) Testing Agency: Engage a qualified testing agency to perform tests and inspections and prepare test reports where applicable.
- 2) Tests and Inspections:
 - a) After installing conductors and cables and before electrical circuitry has been energized, test service entrance and feeder conductors, and conductors feeding the following critical equipment and services for compliance with requirements.
 - i) Fountain control panel
 - b) Perform each visual and mechanical inspection and electrical test stated in InterNational Electrical Testing Association (NETA) Acceptance Testing Specification. Certify compliance with test parameters.
 - c) Infrared Scanning: After Substantial Completion, but not more than 60 days after Final Acceptance, perform an infrared scan of each splice in cables and conductors No. 3 AWG and larger. Remove box and equipment covers so splices are accessible to portable scanner.
 - i) Follow-up Infrared Scanning: Perform an additional follow-up infrared scan of each splice 11 months after date of Substantial Completion.
 - ii) Instrument: Use an infrared scanning device designed to measure temperature or to detect significant deviations from normal values. Provide calibration record for device.
 - iii) Record of Infrared Scanning: Prepare a certified report that identifies splices checked and that describes scanning results. Include notation of deficiencies detected, remedial action taken, and observations after remedial action.
- 3) Test Reports: Prepare a written report to record the following:
 - a) Test procedures used.
 - b) Test results that comply with requirements.
 - c) Test results that do not comply with requirements and corrective action taken to achieve compliance with requirements.
 - d) Remove and replace malfunctioning units and retest as specified above.

E260519.9. MEASUREMENT AND PAYMENT

Except for the Low-Voltage Electrical Power Conductors and Cables (No. 8 AWG Wire) work that is used for wiring the SBS fare machines, under Item E 260519 E, and the Low-Voltage Electrical Power Conductors and Cables (No. 10 AWG Wire) work that is used for wiring the SBS fare machines, under Item E 260519 G, no separate payment will be made for all other work under this Section which may also include, but not limited to, Low-Voltage Electrical Power Conductors and Cables (No. 8 AWG Wire) and Low-Voltage Electrical Power Conductors and Cables (No. 10 AWG Wire). The cost of all other work under this Section, excluding Item E 260519 E and Item E 260519 G used for wiring the SBS fare machines, shall be deemed to be included in the cost of Items E16.01-RCP.

(A) MEASUREMENT

The quantity of Conductors and Cables to be paid for under Items E 260519 E and E 260519 G used for wiring SBS fare machines only shall be the actual number of linear feet of each size conductors and cables actually installed, to the satisfaction of the Engineer. When multiple lengths of conductors and cables are used, each length of shall be measured separately.

(B) PRICES TO COVER

The unit price bid per linear foot of each size conductor and cable used for wiring the SBS fare machines shall cover the cost of furnishing all labor, materials, equipment, insurance, and incidentals to complete the work of wiring the SBS fare machines and shall include, but not be limited to, furnishing and installing all associated connectors and splices; all in accordance with the Contract Drawings, the specifications and the directions of the Engineer.

All other work under this Section which may include, but not limited to, furnishing and installing Low-Voltage Electrical Power Conductors and Cables (No. 8 AWG Wire) and Low-Voltage Electrical Power Conductors and Cables (No. 10 AWG Wire) shall be deemed to be included in the cost of Item E 16.01-RCP.

Payment will be made under:

Item No.	Item	Pay Unit
E 260519 E	LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES (NO. 8 AWG WIRE)	L.F.
E 260519 G	LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES (NO. 10 AWG WIRE)	L.F.

SECTION E260526 GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS
(NOT A BID ITEM)

E260526.1. INTENT

This Section includes methods and materials for grounding systems and equipment.

1. Underground distribution grounding.

E260526.2. RELATED WORK AND REQUIREMENTS

The following requirements are included in this Section to expand the requirements specified in the General Conditions of the NYCDOT Standard Highway Specifications.

E260526.3. SUBMITTALS

- A) Product Data: For each type of product indicated.
- B) Other Informational Submittals: Plans showing dimensioned as-built locations of grounding features specified in Subsection E260526.6.E) "FIELD QUALITY CONTROL" herein, including the following:
 - 1) Test wells.
 - 2) Ground rods.
 - 3) Ground rings.
 - 4) Grounding arrangements and connections for separately derived systems.
- C) Qualification Data: For testing agency and testing agency's field supervisor.

E260526.4. QUALITY CONTROL

- A) Testing Agency Qualifications: An independent agency, with the experience and capability to conduct the testing indicated, that is a member company of the International Electrical Testing Association (NETA) or is a Nationally Recognized Testing Laboratory (NRTL) as defined by OSHA in 29 CFR 1910.7, and that is acceptable to authorities having jurisdiction.
 - 1) Testing Agency's Field Supervisor: Person currently certified by the International Electrical Testing Association to supervise on-site testing specified in Part 3.
- B) Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
- C) Comply with UL 467 for grounding and bonding materials and equipment.
- D) Comply with New York City Electrical Code.

E260526.5. MATERIALS

- A) CONDUCTORS
 - 1) Insulated Conductors: Copper wire or cable insulated for 600 V unless otherwise required by applicable Code or authorities having jurisdiction.
 - 2) Bare Copper Conductors:
 - a) Solid Conductors: ASTM B 3.

- b) Stranded Conductors: ASTM B 8.
- c) Tinned Conductors: ASTM B 33.
- d) Bonding Cable: 28 kcmil, 14 strands of No. 17 AWG conductor, 1/4 inch (6 mm) in diameter.
- e) Bonding Conductor: No. 4 or No. 6 AWG, stranded conductor.
- f) Bonding Jumper: Copper tape, braided conductors, terminated with copper ferrules; 1-5/8 inches (41 mm) wide and 1/16 inch (1.6 mm) thick.
- g) Tinned Bonding Jumper: Tinned-copper tape, braided conductors, terminated with copper ferrules; 1-5/8 inches (41 mm) wide and 1/16 inch (1.6 mm) thick.

- 3) Grounding Bus: Rectangular bars of annealed copper, 1/4 by 2 inches (6 by 50 mm) in cross section, unless otherwise indicated; with insulators.

B) CONNECTORS

- 1) Listed and labeled by a nationally recognized testing laboratory acceptable to authorities having jurisdiction for applications in which used, and for specific types, sizes, and combinations of conductors and other items connected.
- 2) Bolted Connectors for Conductors and Pipes: Copper or copper alloy, bolted pressure-type, with at least two bolts.
 - a) Pipe Connectors: Clamp type, sized for pipe.
- 3) Welded Connectors: Exothermic-welding kits of types recommended by kit manufacturer for materials being joined and installation conditions.

C) GROUNDING ELECTRODES

- 1) Ground Rods: Copper-clad; 3/4 inch by 10 feet (19 mm by 3 m) in diameter.

E260526.6. METHODS

A) APPLICATIONS

- 1) Conductors: Install solid conductor for No. 8 AWG and smaller, and stranded conductors for No. 6 AWG and larger, unless otherwise indicated.
- 2) Underground Grounding Conductors: Install bare copper conductor, No. 2/0 > AWG minimum.
 - a) Bury at least 24 inches (600 mm) below grade.
- 3) Conductor Terminations and Connections:
 - a) Pipe and Equipment Grounding Conductor Terminations: Bolted connectors.
 - b) Underground Connections: Welded connectors, except at test wells and as otherwise indicated.
 - c) Connections to Ground Rods at Test Wells: Bolted connectors.

B) GROUNDING UNDERGROUND DISTRIBUTION SYSTEM COMPONENTS

- 1) Comply with IEEE C2 grounding requirements.
- 2) Grounding Manholes and Handholes: Install a driven ground rod through manhole or handhole floor, close to wall, and set rod depth so 4 inches (100 mm)

will extend above finished floor. If necessary, install ground rod before manhole is placed and provide No. 1/0 AWG bare, tinned-copper conductor from ground rod into manhole through a waterproof sleeve in manhole wall. Protect ground rods passing through concrete floor with a double wrapping of pressure-sensitive insulating tape or heat-shrunk insulating sleeve from 2 inches (50 mm) above to 6 inches (150 mm) below concrete. Seal floor opening with waterproof, nonshrink grout. Final grounding requirements for manholes/handholes shall be as required by Con Edison.

- 3) Grounding Connections to Manhole Components: Bond exposed-metal parts such as inserts, cable racks, pulling irons, ladders, and cable shields within each manhole or handhole, to ground rod or grounding conductor. Make connections with No. 4 AWG minimum, stranded, hard-drawn copper bonding conductor. Train conductors level or plumb around corners and fasten to manhole walls. Connect to cable armor and cable shields as recommended by manufacturer of splicing and termination kits. Final grounding connections to manhole components shall be as required by Con Edison.

C) EQUIPMENT GROUNDING

- 1) Install insulated equipment grounding conductors with all feeders and branch circuits.
- 2) Water Heater, Heat-Tracing, and Antifrost Heating Cables: Install a separate insulated equipment grounding conductor to each electric water heater and heat-tracing cable. Bond conductor to heater units, piping, connected equipment, and components.
- 3) Isolated Equipment Enclosure Circuits: For designated equipment supplied by a branch circuit or feeder, isolate equipment enclosure from supply circuit raceway with a nonmetallic raceway fitting listed for the purpose. Install fitting where raceway enters enclosure, and install a separate insulated equipment grounding conductor. Isolate conductor from raceway and from panel board grounding terminals. Terminate at equipment grounding conductor terminal of the applicable derived system or service, unless otherwise indicated.

D) INSTALLATION

- 1) Grounding Conductors: Route along shortest and straightest paths possible, unless otherwise indicated or required by Code. Avoid obstructing access or placing conductors where they may be subjected to strain, impact, or damage.
- 2) Ground Rods: Drive rods until tops are 2 inches (50 mm) below finished floor or final grade, unless otherwise indicated.
 - a) Interconnect ground rods with grounding electrode conductor below grade and as otherwise indicated. Make connections without exposing steel or damaging coating, if any.
 - b) For grounding electrode system, install at least three rods spaced at least one-rod length from each other and located at least the same distance from other grounding electrodes, and connect to the service grounding electrode conductor.
- 3) Test Wells: Ground rod driven through drilled hole in bottom of handhole. Handholes shall be at least 12 inches (300 mm) deep, with cover.

- a) Test Wells: Install at least one test well for each service, unless otherwise indicated. Install at the ground rod electrically closest to service entrance. Set top of test well flush with finished grade or floor.
- 4) Bonding Straps and Jumpers: Install in locations accessible for inspection and maintenance, except where routed through short lengths of conduit.
 - a) Bonding to Structure: Bond straps directly to basic structure, taking care not to penetrate any adjacent parts.
 - b) Bonding to Equipment Mounted on Vibration Isolation Hangers and Supports: Install so vibration is not transmitted to rigidly mounted equipment.
 - c) Use exothermic-welded connectors for outdoor locations, but if a disconnect-type connection is required, use a bolted clamp.
- 5) Grounding and Bonding for Piping:
 - a) Metal Water Service Pipe: Install insulated copper grounding conductors, in conduit, from main service equipment, or grounding bus, to main metal water service. Connect grounding conductors to main metal water service pipes, using a bolted clamp connector or by bolting a lug-type connector to a pipe flange, using one of the lug bolts of the flange. Where a dielectric main water fitting is installed, connect grounding conductor on street side of fitting. Bond metal grounding conductor conduit or sleeve to conductor at each end.
 - b) Water Meter Piping: Use braided-type bonding jumpers to electrically bypass water meters. Connect to pipe with a bolted connector.
 - c) Bond each aboveground portion of gas piping system downstream from equipment shutoff valve.

E) FIELD QUALITY CONTROL

- 1) Testing Agency: Engage a qualified testing and inspecting agency to perform the following field tests and inspections and prepare test reports:
 - a) After installing grounding system but before permanent electrical circuits have been energized, test for compliance with requirements.
 - b) Test completed grounding system at each location where a maximum ground-resistance level is specified, at service disconnect enclosure grounding terminal. Make tests at ground rods before any conductors are connected.
 - i) Measure ground resistance not less than two full days after last trace of precipitation and without soil being moistened by any means other than natural drainage or seepage and without chemical treatment or other artificial means of reducing natural ground resistance.
 - ii) Perform tests by fall-of-potential method according to (Institute of Electrical and Electronic Engineers) IEEE 81.
 - iii) Prepare dimensioned drawings locating each test well, ground rod and ground rod assembly, and other grounding electrodes. Identify each by letter in alphabetical order, and key to the record of tests and observations. Include the number of rods driven and their depth at each location, and include observations of weather and other phenomena that may affect test results.
- 2) Report measured ground resistances that exceed the following values:

- a) Power and Lighting Equipment or System with Capacity 500 kVA and Less:
10 ohms.
 - b) Manhole Grounds: 10 ohms.
- 3) Excessive Ground Resistance: If resistance to ground exceeds specified values, notify Engineer promptly and include recommendations to reduce ground resistance.

E260519.7. MEASUREMENT AND PAYMENT

No separate payments will be made for this work. Any work completed with this section shall be deemed included in the unit price bid for Item No. E 16.01-RCP.

SECTION E260529 HANGERS AND SUPPORTS FOR ELECTRICAL SYSTEMS
(NOT A BID ITEM)

E260529.1. INTENT

This Section includes the following:

- 1) Hangers and supports for electrical equipment and systems.
- 2) Construction requirements for concrete bases.

E260529.2. RELATED WORK AND REQUIREMENTS

The following requirements are included in this Section to expand the requirements specified in the General Conditions of the NYCDOT Standard Highway Specifications.

E260529.3. PERFORMANCE REQUIREMENTS

- A) Delegated Design: Design supports for multiple raceways, including comprehensive engineering analysis by a qualified professional engineer, using performance requirements and design criteria indicated.
- B) Design supports for multiple raceways capable of supporting combined weight of supported systems and its contents.
- C) Design equipment supports capable of supporting combined operating weight of supported equipment and connected systems and components.

E260529.4. QUALITY CONTROL

- A) Welding: Qualify procedures and personnel according to American Welding Society (AWS) D1.1/D1.1M, "Structural Welding Code - Steel."
- B) Comply with National Fire Protection Association (NFPA) 70.

E260529.5. MATERIALS

A) SUPPORT, ANCHORAGE, AND ATTACHMENT COMPONENTS

- 1) Steel Slotted Support Systems: Comply with MFMA-4, factory-fabricated components for field assembly.
 - a) Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - i) Allied Tube & Conduit.
 - ii) Cooper B-Line, Inc.; a division of Cooper Industries.
 - iii) ERICO International Corporation.
 - iv) GS Metals Corp.
 - v) Thomas & Betts Corporation.
 - vi) Unistrut; Tyco International, Ltd.
 - vii) Wesanco, Inc.
 - viii) or approved equal.
 - b) Metallic Coatings: Hot-dip galvanized after fabrication and applied according to Metal Framing Manufacturers Association (MFMA)-4.
 - c) Nonmetallic Coatings: Manufacturer's standard PVC, polyurethane, or polyester coating applied according to MFMA-4.

- d) Painted Coatings: Manufacturer's standard painted coating applied according to MFMA-4.
 - e) Channel Dimensions: Selected for applicable load criteria.
- 2) Raceway and Cable Supports: As described in the National Electrical Contractors Association NECA 1-2010 and NECA 101-2006.
 - 3) Conduit and Cable Support Devices: Steel hangers, clamps, and associated fittings, designed for types and sizes of raceway or cable to be supported.
 - 4) Support for Conductors in Vertical Conduit: Factory-fabricated assembly consisting of threaded body and insulating wedging plug or plugs for non-armored electrical conductors or cables in riser conduits. Plugs shall have number, size, and shape of conductor gripping pieces as required to suit individual conductors or cables supported. Body shall be malleable iron.
 - 5) Structural Steel for Fabricated Supports and Restraints: ASTM A 36/A 36M, steel plates, shapes, and bars; black and galvanized.
 - 6) Mounting, Anchoring, and Attachment Components: Items for fastening electrical items or their supports to building surfaces include the following:
 - a) Powder-Actuated Fasteners: Threaded-steel stud, for use in hardened portland cement concrete, steel, or wood, with tension, shear, and pullout capacities appropriate for supported loads and building materials where used.
Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - i) Hilti Inc.
 - ii) ITW Ramset/Red Head; a division of Illinois Tool Works, Inc.
 - iii) MKT Fastening, LLC.
 - iv) Simpson Strong-Tie Co., Inc.; Masterset Fastening Systems Unit.
 - b) Mechanical-Expansion Anchors: Insert-wedge-type, zinc-coated steel, for use in hardened portland cement concrete with tension, shear, and pullout capacities appropriate for supported loads and building materials in which used.
Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - i) Cooper B-Line, Inc.; a division of Cooper Industries.
 - ii) Empire Tool and Manufacturing Co., Inc.
 - iii) Hilti Inc.
 - iv) ITW Ramset/Red Head; a division of Illinois Tool Works, Inc.
 - v) MKT Fastening, LLC.
 - c) Concrete Inserts: Steel or malleable-iron, slotted support system units similar to MSS Type 18; complying with MFMA-4 or MSS SP-58.
 - d) Clamps for Attachment to Steel Structural Elements: MSS SP-58, type suitable for attached structural element.
 - e) Through Bolts: Structural type, hex head, and high strength. Comply with ASTM A 325.
 - f) Toggle Bolts: All-steel springhead type.
 - g) Hanger Rods: Threaded steel.

B) FABRICATED METAL EQUIPMENT SUPPORT ASSEMBLIES

- 1) Description: Welded or bolted, structural-steel shapes, shop or field fabricated to fit dimensions of supported equipment.
- 2) Materials: Comply with requirements in NYCDOT Standard Highway Specifications for steel shapes and plates.

E260529.6. METHODS

A) COORDINATION

- 1) Coordinate size and location of concrete bases. Cast anchor-bolt inserts into bases. Concrete, reinforcement, and formwork requirements as per Section 4.06 and Section 4.14 of the NYCDOT Standard Highway Specifications.

A) APPLICATION

- 1) Comply with NECA 1 and NECA 101 for application of hangers and supports for electrical equipment and systems except if requirements in this Section are stricter.
- 2) Maximum Support Spacing and Minimum Hanger Rod Size for Raceway: Space supports for Rigid Metal Conduit (RMC) as required by NFPA 70. Minimum rod size shall be 1/4 inch (6 mm) in diameter.
- 3) Multiple Raceways or Cables: Install trapeze-type supports fabricated with steel slotted support system, sized so capacity can be increased by at least 25 percent in future without exceeding specified design load limits.
 - a) Secure raceways and cables to these supports with two-bolt conduit clamps.
- 4) Spring-steel clamps designed for supporting single conduits without bolts may be used for 1-1/2-inch (38-mm) and smaller raceways serving branch circuits and for fastening raceways to trapeze supports.

B) SUPPORT INSTALLATION

- 1) Comply with NECA 1 and NECA 101 for installation requirements except as specified in this Article.
- 2) Raceway Support Methods: In addition to methods described in NECA 1, Rigid Metal Conduit (RMC) may be supported by openings through structure members, as permitted in NFPA 70.
- 3) Strength of Support Assemblies: Where not indicated, select sizes of components so strength will be adequate to carry present and future static loads within specified loading limits. Minimum static design load used for strength determination shall be weight of supported components plus 200 lb (90 kg).
- 4) Mounting and Anchorage of Surface-Mounted Equipment and Components: Anchor and fasten electrical items and their supports to building structural elements by the following methods unless otherwise indicated by code:
 - a) To Wood: Fasten with lag screws or through bolts.
 - b) To New Concrete: Bolt to concrete inserts.
 - c) To Masonry: Approved toggle-type bolts on hollow masonry units and expansion anchor fasteners on solid masonry units.

- d) To Existing Concrete: Expansion anchor fasteners.
 - e) Instead of expansion anchors, powder-actuated driven threaded studs provided with lock washers and nuts may be used in existing standard-weight concrete 4 inches (100 mm) thick or greater. Do not use for anchorage to lightweight-aggregate concrete or for slabs less than 4 inches (100 mm) thick.
 - f) To Steel: Welded threaded studs complying with AWS D1.1/D1.1M, with lock washers and nuts or beam clamps (MSS Type 19, 21, 23, 25, or 27) complying with MSS SP-69.
 - g) To Light Steel: Sheet metal screws.
 - h) Items Mounted on Hollow Walls and Nonstructural Building Surfaces: Mount cabinets, panel boards, disconnect switches, control enclosures, pull and junction boxes, transformers, and other devices on slotted-channel racks attached to substrate.
- 5) Drill holes for expansion anchors in concrete at locations and to depths that avoid reinforcing bars.

C) INSTALLATION OF FABRICATED METAL SUPPORTS

- 1) Cut, fit, and place miscellaneous metal supports accurately in location, alignment, and elevation to support and anchor electrical materials and equipment.
- 2) Field Welding: Comply with AWS D1.1/D1.1M.

E260529.7. MEASUREMENT AND PAYMENT

No separate payments will be made for this work. Any work completed with this section shall be deemed included in the unit price bid for Item No. E 16.01-RCP.

SECTION E260533 RACEWAYS AND BOXES FOR ELECTRICAL SYSTEMS
(NOT A BID ITEM)

E260533.1. INTENT

- A) This Section includes raceways, fittings, boxes, enclosures, and cabinets for electrical wiring.

E260533.2. RELATED WORK AND REQUIREMENTS

The following requirements are included in this Section to expand the requirements specified in the General Conditions of the NYCDOT Standard Highway Specifications.

E260533.3. DEFINITIONS

- A) EPDM: Ethylene-propylene-diene terpolymer rubber.
- B) FMC: Flexible Metal Conduit.
- C) LFMC: Liquidtight Flexible Metal Conduit.
- D) IMC: Intermediate Metal Conduit
- E) RNC: Rigid Nonmetallic Conduit

E260533.4. SUBMITTALS

- A) Product Data: For surface raceways, hinged-cover enclosures, and cabinets.
- B) Shop Drawings: For the following raceway components. Include plans, elevations, sections, details, and attachments to other work.
- C) Samples for Verification: For each type of exposed finish required for surface raceways, 3" sample size, and samples of each device exposed to view.
- D) Coordination Drawings: Conduit routing plans, drawn to scale, on which the following items are shown and coordinated with each other, based on input from installers of the items involved:
 - 1) Structural members in the paths of conduit groups with common supports.
 - 2) Plumbing items and architectural features in the paths of conduit groups with common supports.
- E) Qualification Data: For professional engineer and testing agency.
- F) Source quality-control test reports.

E260533.5. QUALITY CONTROL

- A) Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
- B) Comply with NFPA 70.

E260533.6. MATERIALS

A) METAL CONDUIT AND TUBING

- 1) Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a) AFC Cable Systems, Inc.
 - b) Alflex Inc.
 - c) Allied Tube & Conduit; a Tyco International Ltd. Co.
 - d) Anamet Electrical, Inc.; Anaconda Metal Hose.
 - e) Electri-Flex Co.
 - f) Manhattan/CDT/Cole-Flex.
 - g) Maverick Tube Corporation.
 - h) O-Z Gedney; a unit of General Signal.
 - i) Wheatland Tube Company.
- 2) Rigid Steel Conduit: ANSI C80.1.
- 3) Intermediate Metal Conduit: ANSI C80.6.
- 4) PVC-Coated Steel Conduit: PVC-coated rigid steel conduit.
 - a) Comply with NEMA RN 1.
 - b) Coating Thickness: 0.040 inch (1 mm), minimum.
- 5) Flexible Metal Conduit: Zinc-coated steel or aluminum.
- 6) Liquidtight Flexible Metal Conduit: Flexible steel conduit with PVC jacket.
- 7) Fittings for Conduit (Including all Types and Flexible and Liquidtight), and Cable: NEMA FB 1; listed for type and size raceway with which used, and for application and environment in which installed.
 - a) Conduit Fittings for Hazardous (Classified) Locations: Comply with UL 886.
 - b) Coating for Fittings for PVC-Coated Conduit: Minimum thickness, 0.040 inch (1 mm), with overlapping sleeves protecting threaded joints.
- 8) Joint Compound for Rigid Steel Conduit: Listed for use in cable connector assemblies, and compounded for use to lubricate and protect threaded raceway joints from corrosion and enhance their conductivity.

B) SURFACE RACEWAYS

- 1) Surface Metal Raceways: Galvanized steel with snap-on covers. Manufacturer's standard enamel finish in color selected by Engineer in consultation with the Architect.
- 2) Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a) Thomas & Betts Corporation.
 - b) Walker Systems, Inc.; Wiremold Company (The).
 - c) Wiremold Company (The); Electrical Sales Division.
 - d) Approved Equal.

C) WEATHERPROOF RECEPTACLE BOXES

- 1) Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a) HUBBELL, Bell
 - b) RACO
 - c) Cooper Industries
 - d) Approved Equal

D) WEATHERPROOF RECEPTACLE BOX COVERS

- 1) Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a) Intermatic
 - b) RACO
 - c) Cooper Industries
 - d) Approved Equal

E) BOXES, ENCLOSURES, AND CABINETS

- 1) Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a) Cooper Crouse-Hinds; Div. of Cooper Industries, Inc.
 - b) EGS/Appleton Electric.
 - c) Erickson Electrical Equipment Company.
 - d) Hoffman.
 - e) Hubbell Incorporated; Killark Electric Manufacturing Co. Division.
 - f) O-Z/Gedney; a unit of General Signal.
 - g) RACO; a Hubbell Company.
 - h) Robroy Industries, Inc.; Enclosure Division.
 - i) Scott Fetzer Co.; Adalet Division.
 - j) Spring City Electrical Manufacturing Company.
 - k) Thomas & Betts Corporation.
 - l) Walker Systems, Inc.; Wiremold Company (The).
 - m) Woodhead, Daniel Company; Woodhead Industries, Inc. Subsidiary.
 - n) Approved Equal
- 2) Sheet Metal Outlet and Device Boxes: NEMA OS 1.
- 3) Cast-Metal Outlet and Device Boxes: NEMA FB 1, ferrous alloy Type FD, with gasketed cover.
- 4) Small Sheet Metal Pull and Junction Boxes: NEMA OS 1.
- 5) Cast-Metal Access, Pull, and Junction Boxes: NEMA FB 1, galvanized, cast iron with gasketed cover.
- 6) Hinged-Cover Enclosures: NEMA 250, Type 1, with continuous-hinge cover with flush latch, unless otherwise indicated.
 - a) Metal Enclosures: Steel, finished inside and out with manufacturer's standard enamel.
- 7) Cabinets:
 - a) NEMA 250, Type 1, galvanized-steel box with removable interior panel and removable front, finished inside and out with manufacturer's standard enamel.

- b) Hinged door in front cover with flush latch and concealed hinge.
- c) Key latch to match panel boards.
- d) Metal barriers to separate wiring of different systems and voltage.
- e) Accessory feet where required for freestanding equipment.

F) HANDHOLES AND BOXES FOR EXTERIOR UNDERGROUND WIRING

- 1) Description: Comply with Society of Cable Telecommunications Engineers (SCTE) 77.
 - a) Color of Frame and Cover: Gray.
 - b) Configuration: Units shall be designed for flush burial and have open bottom, unless otherwise indicated.
 - c) Cover: Weatherproof, secured by tamper-resistant locking devices and having structural load rating consistent with enclosure.
 - d) Cover Finish: Nonskid finish shall have a minimum coefficient of friction of 0.50.
 - e) Cover Legend: Molded lettering, "ELECTRIC."
 - f) Conduit Entrance Provisions: Conduit-terminating fittings shall mate with entering ducts for secure, fixed installation in enclosure wall.
 - g) Handholes 12 inches wide by 24 inches long (300 mm wide by 600 mm long) and larger shall have inserts for cable racks and pulling-in irons installed before concrete is poured.

- 2) Polymer-Concrete Handholes and Boxes with Polymer-Concrete Cover: Molded of sand and aggregate, bound together with polymer resin, and reinforced with steel or fiberglass or a combination of the two.
Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a) Armorcast Products Company.
 - b) Carson Industries LLC.
 - c) CDR Systems Corporation.
 - d) NewBasis.
 - e) Approved Equal.

- 3) Fiberglass Handholes and Boxes with Polymer-Concrete Frame and Cover: Sheet-molded, fiberglass-reinforced, polyester-resin enclosure joined to polymer-concrete top ring or frame.
Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a) Armorcast Products Company.
 - b) Carson Industries LLC.
 - c) Christy Concrete Products.
 - d) Synertech Moulded Products, Inc.; a division of Oldcastle Precast.
 - e) Approved Equal.

- 4) Fiberglass Handholes and Boxes: Molded of fiberglass-reinforced polyester resin, with covers of polymer concrete.
Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a) Carson Industries LLC.
 - b) Christy Concrete Products.
 - c) Nordic Fiberglass, Inc.
 - d) Approved Equal.

G) SLEEVES FOR RACEWAYS

- 1) Steel Pipe Sleeves: ASTM A 53/A 53M, Type E, Grade B, Schedule 40, galvanized steel, plain ends.
- 2) Sleeves for Rectangular Openings: Galvanized sheet steel with minimum 0.052- or 0.138-inch (1.3- or 3.5-mm) thickness as indicated and of length to suit application.

H) SLEEVE SEALS

- 1) Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a) Advance Products & Systems, Inc.
 - b) Calpico, Inc.
 - c) Metraflex Co.
 - d) Pipeline Seal and Insulator, Inc.
 - e) Approved Equal.
- 2) Description: Modular sealing device, designed for field assembly, to fill annular space between sleeve and cable.
 - a) Sealing Elements: EPDM interlocking links shaped to fit surface of cable or conduit. Include type and number required for material and size of raceway or cable.
 - b) Pressure Plates: Stainless steel. Include two for each sealing element.
 - c) Connecting Bolts and Nuts: Stainless steel of length required to secure pressure plates to sealing elements. Include one for each sealing element.

I) SOURCE QUALITY CONTROL FOR UNDERGROUND ENCLOSURES

- 1) Handhole and Pull-Box Prototype Test: Test prototypes of handholes and boxes for compliance with SCTE 77. Strength tests shall be for specified tier ratings of products supplied.
 - a) Strength tests of complete boxes and covers shall be by either an independent testing agency or manufacturer. A qualified registered professional engineer shall certify tests by manufacturer.
 - b) Testing machine pressure gages shall have current calibration certification complying with ISO 9000 and ISO 10012, and traceable to NIST standards.

E260533.7. METHODS

A) RACEWAY APPLICATION

- 1) Outdoors: Apply raceway products as specified below, unless otherwise indicated:
 - a) Exposed Conduit: Rigid steel conduit.
 - b) Concealed Conduit, Aboveground: Rigid steel conduit.
 - c) Underground Conduit: Rigid Nonmetallic Conduit (RNC), Type EPC-80-PVC, direct buried.
 - d) Connection to Vibrating Equipment (Including Transformers and Hydraulic, Pneumatic, Electric Solenoid, or Motor-Driven Equipment): LFMC.
 - e) Boxes and Enclosures, Aboveground: NEMA 250, Type 4.
 - f) Application of Handholes and Boxes for Underground Wiring:

- i) Handholes and Pull Boxes in Driveway, Parking Lot, and Off-Roadway Locations, Subject to Occasional, Nondeliberate Loading by Heavy Vehicles: Polymer concrete, SCTE 77, Tier 15 structural load rating.
 - ii) Handholes and Pull Boxes in Sidewalk and Similar Applications with a Safety Factor for Nondeliberate Loading by Vehicles: Polymer-concrete units, SCTE 77, Tier 8 structural load rating.
 - iii) Handholes and Pull Boxes Subject to Light-Duty Pedestrian Traffic Only: Fiberglass-reinforced polyester resin, structurally tested according to SCTE 77 with 3000-lbf (13 345-N) vertical loading.
- 2) Comply with the following indoor applications (i.e. vaults) unless otherwise indicated:
 - a) Exposed, Not Subject to Physical Damage: Rigid Steel Conduit
 - b) Connection to Vibrating Equipment (Including Transformers and Hydraulic, Pneumatic, Electric Solenoid, or Motor-Driven Equipment): FMC, except use LFMC in damp or wet locations.
 - c) Damp or Wet Locations: Rigid steel conduit.
 - d) Boxes and Enclosures: NEMA 250, Type 1, except use NEMA 250, Type 4, stainless steel in damp or wet locations.
 - 3) Minimum Raceway Size: 3/4-inch (21-mm) trade size.
 - 4) Raceway Fittings: Compatible with raceways and suitable for use and location.
 - a) Rigid and Intermediate Steel Conduit: Use threaded rigid steel conduit fittings, unless otherwise indicated.
 - b) PVC Externally Coated, Rigid Steel Conduits: Use only fittings listed for use with that material. Patch and seal all joints, nicks, and scrapes in PVC coating after installing conduits and fittings. Use sealant recommended by fitting manufacturer.
 - 5) Do not install aluminum conduits in contact with concrete.

B) INSTALLATION

- 1) Comply with NECA 1 for installation requirements applicable to products specified in Section E260533.6 Materials, except where requirements on Drawings or in this Article are stricter.
- 2) Keep raceways at least 6 inches (150 mm) away from parallel runs of flues and steam or hot-water pipes. Install horizontal raceway runs above water and steam piping.
- 3) Complete raceway installation before starting conductor installation.
- 4) Support raceways as specified in Section E260529 "Hangers and Supports for Electrical Systems," herein.
- 5) Arrange stub-ups so curved portions of bends are not visible above the finished slab.
- 6) Raceways Embedded in Slabs:
 - a) Run conduit larger than 1-inch trade size, parallel or at right angles to main reinforcement. Where at right angles to reinforcement, place conduit close to slab support.

- b) Arrange raceways to cross building expansion joints at right angles with expansion fittings.
 - 7) Threaded Conduit Joints, Exposed to Wet, Damp, Corrosive, or Outdoor Conditions: Apply listed compound to threads of raceway and fittings before making up joints. Follow compound manufacturer's written instructions.
 - 8) Raceway Terminations at Locations Subject to Moisture or Vibration: Use insulating bushings to protect conductors, including conductors smaller than No. 4 AWG.
 - 9) Install pull wires in empty raceways. Use polypropylene or monofilament plastic line with not less than 200-lb tensile strength. Leave at least 12 inches of slack at each end of pull wire.
 - 10) Install raceway sealing fittings at suitable, approved, and accessible locations and fill them with listed sealing compound. For concealed raceways, install each fitting in a flush steel box with a blank cover plate having a finish similar to that of adjacent plates or surfaces. Install raceway sealing fittings at the following points:
 - a) Where conduits pass from warm to cold locations, such as boundaries of refrigerated spaces.
 - b) Where otherwise required by NFPA 70.
 - 11) Expansion-Joint Fittings for RNC: Install in each run of aboveground conduit that is located where environmental temperature change may exceed 30 deg F (17 deg C), and that has straight-run length that exceeds 25 feet (7.6 m).
 - a) Install expansion-joint fittings for each of the following locations, and provide type and quantity of fittings that accommodate temperature change listed for location:
 - i) Outdoor Locations Not Exposed to Direct Sunlight: 125 deg F temperature change.
 - ii) Outdoor Locations Exposed to Direct Sunlight: 155 deg F temperature change.
 - iii) Indoor Spaces: Connected with the Outdoors without Physical Separation: 125 deg F temperature change.
 - iv) Attics: 135 deg F temperature change.
 - b) Install fitting(s) that provide expansion and contraction for at least 0.00041 inch per foot of length of straight run per deg F of temperature change.
 - c) Install each expansion-joint fitting with position, mounting, and piston setting selected according to manufacturer's written instructions for conditions at specific location at the time of installation.
 - 12) Flexible Conduit Connections: Use maximum of 72 inches of flexible conduit for recessed and semi-recessed lighting fixtures, equipment subject to vibration, noise transmission, or movement; and for motors.
 - a) Use LFMC in damp or wet locations subject to severe physical damage.
 - b) Use LFMC in damp or wet locations not subject to severe physical damage.
- C) INSTALLATION OF UNDERGROUND CONDUIT
- 1) Direct-Buried Conduit:

- a) Install in excavated trench bottom. Prepare trench bottom for pipe less than 6 inches in nominal diameter.
- b) After installing conduit, backfill and compact. Start at tie-in point, and work toward end of conduit run, leaving conduit at end of run free to move with expansion and contraction as temperature changes during this process. Firmly hand tamp backfill around conduit to provide maximum supporting strength. After placing controlled backfill to within 12 inches (300 mm) of finished grade, make final conduit connection at end of run and complete backfilling with normal compaction as specified for Item 4.11 CA in the NYCDOT Standard Highway Specifications.
- c) Install manufactured duct elbows for stub-ups at poles and equipment, unless otherwise indicated. Encase elbows for stub-up ducts throughout the length of the elbow.
 - i) Couple steel conduits to ducts with adapters designed for this purpose, and encase coupling with 3 inches of concrete.
 - ii) For stub-ups at equipment mounted on outdoor concrete bases, extend steel conduit horizontally a minimum of 60 inches from edge of equipment pad or foundation. Install insulated grounding bushings on terminations at equipment.
- d) Warning Planks: Bury warning planks approximately 12 inches above direct-buried conduits, placing them 24 inches o.c. Align planks along the width and along the centerline of conduit.

D) INSTALLATION OF UNDERGROUND HANDHOLES AND BOXES

- 1) Install handholes and boxes level and plumb and with orientation and depth coordinated with connecting conduits to minimize bends and deflections required for proper entrances.
- 2) Unless otherwise indicated, support units on a level bed of crushed stone or gravel, graded from 1/2-inch sieve to No. 4 sieve and compacted to same density as adjacent undisturbed earth.
- 3) Elevation: In paved areas, set so cover surface will be flush with finished grade. Set covers of other enclosures 1 inch above finished grade.
- 4) Install handholes and boxes with bottom below the frost line, below grade.
- 5) Field-cut openings for conduits according to enclosure manufacturer's written instructions. Cut wall of enclosure with a tool designed for material to be cut. Size holes for terminating fittings to be used, and seal around penetrations after fittings are installed.

E) INSTALLATION OF RECEPTACLE WEATHERPROOF BOXES

- 1) Install boxes a minimum of 3" above the soil within the planter.
- 2) The portion of conduit where the conduit bend occurs to the weatherproof box shall be encased within concrete, below the planter soil, as required by the Engineer.
- 3) Field-cut openings for conduits according to enclosure manufacturer's written instructions. Cut wall of enclosure with a tool designed for material to be cut. Size

holes for terminating fittings to be used, and seal around penetrations after fittings are installed.

F) INSTALLATION OF LED STRIP LIGHT POWER SUPPLY (L2-D1 TO L2-D7) WEATHERPROOF BOXES

- 1) Box shall be NEMA 3R, stainless steel sized in accordance with the electrical drawings.
- 2) Box shall be installed under the planter soil at a depth which allows its incoming and outgoing conduits to be 1-foot below the planter soil measured to the top of the conduit.
- 3) Field-cut openings for conduits according to enclosure manufacturer's written instructions. Cut wall of enclosure with a tool designed for material to be cut. Size holes for terminating fittings to be used, and seal around penetrations after fittings are installed.

G) SLEEVE INSTALLATION FOR ELECTRICAL PENETRATIONS

- 1) Concrete Slabs and Walls: Install sleeves for penetrations unless core-drilled holes or formed openings are used. Install sleeves during erection of slabs and walls.
- 2) Use pipe sleeves unless penetration arrangement requires rectangular sleeved opening.
- 3) Rectangular Sleeve Minimum Metal Thickness:
 - a) For sleeve cross-section rectangle perimeter less than 50 inches and no side greater than 16 inches, thickness shall be 0.052 inch.
 - b) For sleeve cross-section rectangle perimeter equal to, or greater than, 50 inches and 1 or more sides equal to, or greater than, 16 inches, thickness shall be 0.138 inch.
- 4) Cut sleeves to length for mounting flush with both surfaces of walls.
- 5) Extend sleeves installed in floors 2 inches above finished floor level.
- 6) Size pipe sleeves to provide 1/4-inch annular clear space between sleeve and raceway unless sleeve seal is to be installed.
- 7) Seal space outside of sleeves with grout for penetrations of concrete and masonry.
- 8) Aboveground, Exterior-Wall Penetrations: Seal penetrations using sleeves and mechanical sleeve seals. Select sleeve size to allow for 1-inch annular clear space between pipe and sleeve for installing mechanical sleeve seals.
- 9) Underground, Exterior-Wall Penetrations: Install cast-iron "wall pipes" for sleeves. Size sleeves to allow for 1-inch annular clear space between raceway and sleeve for installing mechanical sleeve seals.

H) SLEEVE-SEAL INSTALLATION

- 1) Install to seal underground, exterior wall penetrations.

- 2) Use type and number of sealing elements recommended by manufacturer for raceway material and size. Position raceway in center of sleeve. Assemble mechanical sleeve seals and install in annular space between raceway and sleeve. Tighten bolts against pressure plates that cause sealing elements to expand and make watertight seal.

I) PROTECTION

- 1) Provide final protection and maintain conditions that ensure coatings, finishes, and cabinets are without damage or deterioration at time of Substantial Completion.
 - a) Repair damage to galvanized finishes with zinc-rich paint recommended by manufacturer.
 - b) Repair damage to PVC or paint finishes with matching touchup coating recommended by manufacturer.

E260533.8. MEASUREMENT AND PAYMENT

No separate payments will be made for this work. Any work completed with this section shall be deemed included in the unit price bid for Item No. E 16.01-RCP.

SECTION E260553 IDENTIFICATION FOR ELECTRICAL SYSTEMS
(NOT A BID ITEM)

E260553.1. INTENT

This Section includes the following:

- (i) Identification for raceways.
- (ii) Identification of power and control cables.
- (iii) Identification for conductors.
- (iv) Underground-line warning tape.
- (v) Warning labels and signs.
- (vi) Instruction signs.
- (vii) Equipment identification labels.
- (viii) Miscellaneous identification products.

E260553.2. RELATED WORK AND REQUIREMENTS

The following requirements are included in this Section to expand the requirements specified in the General Conditions of the NYCDOT Standard Highway Specifications.

E260553.3. SUBMITTALS

- A) Product Data: For each electrical identification product indicated.
- B) Samples: For each type of label and sign to illustrate size, colors, lettering style, mounting provisions, and graphic features of identification products.
- C) Identification Schedule: An index of nomenclature of electrical equipment and system components used in identification signs and labels.

E260553.4. QUALITY CONTROL

- A) Comply with ANSI A13.1.
- B) Comply with NFPA 70.
- C) Comply with 29 CFR 1910.144 and 29 CFR 1910.145.
- D) Comply with ANSI Z535.4 for safety signs and labels.
- E) Adhesive-attached labeling materials, including label stocks, laminating adhesives, and inks used by label printers, shall comply with UL 969.

E260553.5. COORDINATION

- (a) Coordinate identification names, abbreviations, colors, and other features with requirements in other Sections requiring identification applications, Drawings, Shop Drawings, manufacturer's wiring diagrams, and the Operation and Maintenance Manual; and with those required by codes, standards, and 29 CFR 1910.145. Use consistent designations throughout Project.
 - a. Coordinate installation of identifying devices with completion of covering and painting of surfaces where devices are to be applied.
 - b. Coordinate installation of identifying devices with location of access panels and doors.

- c. Install identifying devices before installing acoustical ceilings and similar concealment.

E260553.6. MATERIALS

A) POWER RACEWAY IDENTIFICATION MATERIALS

- 1) Comply with ANSI A13.1 for minimum size of letters for legend and for minimum length of color field for each raceway size.
- 2) Colors for Raceways Carrying Circuits at 600 V or Less:
 - a) Black letters on an orange field.
 - b) Legend: Indicate voltage.
- 3) Self-Adhesive Vinyl Labels for Raceways Carrying Circuits at 600 V or Less: Preprinted, flexible label laminated with a clear, weather- and chemical-resistant coating and matching wraparound adhesive tape for securing ends of legend label.
- 4) Snap-Around Labels for Raceways Carrying Circuits at 600 V or Less: Slit, pretensioned, flexible, preprinted, color-coded acrylic sleeve, with diameter sized to suit diameter of raceway or cable it identifies and to stay in place by gripping action.
- 5) Snap-Around, Color-Coding Bands for Raceways Carrying Circuits at 600 V or Less: Slit, pretensioned, flexible, solid-colored acrylic sleeve, 2 inches (50 mm) long, with diameter sized to suit diameter of raceway or cable it identifies and to stay in place by gripping action.
- 6) Metal Tags: Brass or aluminum, 2 by 2 by 0.05 inch, with stamped legend, punched for use with self-locking cable tie fastener.
- 7) Write-On Tags: Polyester tag, 0.015 inch thick, with corrosion-resistant grommet and cable tie for attachment to conductor or cable.
 - a) Marker for Tags: Permanent, waterproof, black ink marker recommended by tag manufacturer.

B) POWER AND CONTROL CABLE IDENTIFICATION MATERIALS

- 1) Comply with ANSI A13.1 for minimum size of letters for legend and for minimum length of color field for each raceway and cable size.
- 2) Self-Adhesive Vinyl Labels: Preprinted, flexible label laminated with a clear, weather- and chemical-resistant coating and matching wraparound adhesive tape for securing ends of legend label.
- 3) Metal Tags: Brass or aluminum, 2 by 2 by 0.05 inch, with stamped legend, punched for use with self-locking cable tie fastener.
- 4) Write-On Tags: Polyester tag, 0.015 inch thick, with corrosion-resistant grommet and cable tie for attachment to conductor or cable.
 - a) Marker for Tags: Machine-printed, permanent, waterproof, black ink marker recommended by printer manufacturer.

- 5) Snap-Around Labels: Slit, pretensioned, flexible, preprinted, color-coded acrylic sleeve, with diameter sized to suit diameter of raceway or cable it identifies and to stay in place by gripping action.
- 6) Snap-Around, Color-Coding Bands: Slit, pretensioned, flexible, solid-colored acrylic sleeve, 2 inches (50 mm) long, with diameter sized to suit diameter of raceway or cable it identifies and to stay in place by gripping action.

C) CONDUCTOR IDENTIFICATION MATERIALS

- 1) Color-Coding Conductor Tape: Colored, self-adhesive vinyl tape not less than 3 mils thick by 1 to 2 inches wide.
- 2) Self-Adhesive Vinyl Labels: Preprinted, flexible label laminated with a clear, weather- and chemical-resistant coating and matching wraparound adhesive tape for securing ends of legend label.
- 3) Snap-Around Labels: Slit, pretensioned, flexible, preprinted, color-coded acrylic sleeve, with diameter sized to suit diameter of raceway or cable it identifies and to stay in place by gripping action.
- 4) Snap-Around, Color-Coding Bands: Slit, pretensioned, flexible, solid-colored acrylic sleeve, 2 inches long, with diameter sized to suit diameter of raceway or cable it identifies and to stay in place by gripping action.
- 5) Marker Tapes: Vinyl or vinyl-cloth, self-adhesive wraparound type, with circuit identification legend machine printed by thermal transfer or equivalent process.
- 6) Write-On Tags: Polyester tag, 0.015 inch thick, with corrosion-resistant grommet and cable tie for attachment to conductor or cable.
 - a) Marker for Tags: Machine-printed, permanent, waterproof, black ink marker recommended by printer manufacturer.

D) FLOOR MARKING TAPE

- 1) 2-inch-wide, 5-mil pressure-sensitive vinyl tape, with black and white stripes and clear vinyl overlay.

E) UNDERGROUND-LINE WARNING TAPE

- 1) Tape:
 - a) Recommended by manufacturer for the method of installation and suitable to identify and locate underground electrical utility lines.
 - b) Printing on tape shall be permanent and shall not be damaged by burial operations.
 - c) Tape material and ink shall be chemically inert, and not subject to degrading when exposed to acids, alkalis, and other destructive substances commonly found in soils.
- 2) Color and Printing:
 - a) Comply with ANSI Z535.1 through ANSI Z535.5.
 - b) Inscriptions for Red-Colored Tapes: ELECTRIC LINE, HIGH VOLTAGE.
- 3) Tag: Type ID:

- a) Detectable three-layer laminate, consisting of a printed pigmented polyolefin film, a solid aluminum-foil core, and a clear protective film that allows inspection of the continuity of the conductive core, bright-colored, compounded for direct-burial service.
- b) Overall Thickness: 5 mils.
- c) Foil Core Thickness: 0.35 mil.
- d) Weight: 28 lb/1000 sq. ft.
- e) 3-Inch Tensile According to ASTM D 882: 70 lbf, and 4600 psi.
- f) 3-Inch (75-mm) Tensile According to ASTM D 882: 300 lbf, and 12,500 psi.

F) WARNING LABELS AND SIGNS

- 1) Comply with NFPA 70 and 29 CFR 1910.145.
- 2) Self-Adhesive Warning Labels: Factory-printed, multicolor, pressure-sensitive adhesive labels, configured for display on front cover, door, or other access to equipment unless otherwise indicated.
- 3) Metal-Backed, Butyrate Warning Signs:
 - a) Weather-resistant, nonfading, preprinted, cellulose-acetate butyrate signs with 0.0396-inch galvanized-steel backing; and with colors, legend, and size required for application.
 - b) 1/4-inch grommets in corners for mounting.
 - c) Nominal size, 10 by 14 inches.
- 4) Warning label and sign shall include, but are not limited to, the following legends:
 - a) Multiple Power Source Warning: "DANGER - ELECTRICAL SHOCK HAZARD - EQUIPMENT HAS MULTIPLE POWER SOURCES."
 - b) Workspace Clearance Warning: "WARNING - OSHA REGULATION - AREA IN FRONT OF ELECTRICAL EQUIPMENT MUST BE KEPT CLEAR FOR 36 INCHES (915 MM)."

G) INSTRUCTION SIGNS

- 1) Engraved, laminated acrylic or melamine plastic, minimum 1/16 inch thick for signs up to 20 sq. inches and 1/8 inch thick for larger sizes.
 - a) Engraved legend with black letters on white face.
 - b) Punched or drilled for mechanical fasteners.
 - c) Framed with mitered acrylic molding and arranged for attachment at applicable equipment.
- 2) Adhesive Film Label: Machine printed, in black, by thermal transfer or equivalent process. Minimum letter height shall be 3/8 inch.
- 3) Adhesive Film Label with Clear Protective Overlay: Machine printed, in black, by thermal transfer or equivalent process. Minimum letter height shall be 3/8 inch. Overlay shall provide a weatherproof and UV-resistant seal for label.

H) EQUIPMENT IDENTIFICATION LABELS

- 1) Adhesive Film Label: Machine printed, in black, by thermal transfer or equivalent process. Minimum letter height shall be 3/8 inch.

- 2) Adhesive Film Label with Clear Protective Overlay: Machine printed, in black, by thermal transfer or equivalent process. Minimum letter height shall be 3/8 inch. Overlay shall provide a weatherproof and UV-resistant seal for label.
- 3) Self-Adhesive, Engraved, Laminated Acrylic or Melamine Label: Adhesive backed, with white letters on a dark-gray background. Minimum letter height shall be 3/8 inch.
- 4) Engraved, Laminated Acrylic or Melamine Label: Punched or drilled for screw mounting. White letters on a dark-gray background. Minimum letter height shall be 3/8 inch.
- 5) Stenciled Legend: In nonfading, waterproof, black ink or paint. Minimum letter height shall be 1 inch.

I) CABLE TIES

- 1) General-Purpose Cable Ties: Fungus inert, self-extinguishing, one piece, self-locking, Type 6/6 nylon.
 - a) Minimum Width: 3/16 inch.
 - b) Tensile Strength at 73 deg F, According to ASTM D 638: 12,000 psi.
 - c) Temperature Range: Minus 40 to plus 185 deg F.
 - d) Color: Black except where used for color-coding.
- 2) UV-Stabilized Cable Ties: Fungus inert, designed for continuous exposure to exterior sunlight, self-extinguishing, one piece, self-locking, Type 6/6 nylon.
 - a) Minimum Width: 3/16 inch.
 - b) Tensile Strength at 73 deg F, According to ASTM D 638: 12,000 psi.
 - c) Temperature Range: Minus 40 to plus 185 deg F.
 - d) Color: Black.
- 3) Plenum-Rated Cable Ties: Self-extinguishing, UV stabilized, one piece, self-locking.
 - a) Minimum Width: 3/16 inch.
 - b) Tensile Strength at 73 deg F, According to ASTM D 638: 7000 psi.
 - c) UL 94 Flame Rating: 94V-0.
 - d) Temperature Range: Minus 50 to plus 284 deg F.
 - e) Color: Black.

J) MISCELLANEOUS IDENTIFICATION PRODUCTS

- 1) Paint: Select paint system applicable for surface material and location (exterior or interior), subject to Engineer's approval.
- 2) Fasteners for Labels and Signs: Self-tapping, stainless-steel screws or stainless-steel machine screws with nuts and flat and lock washers.

E260553.7. METHODS

A) INSTALLATION

- 1) Verify identity of each item before installing identification products.

- 2) Location: Install identification materials and devices at locations for most convenient viewing without interference with operation and maintenance of equipment.
- 3) Apply identification devices to surfaces that require finish after completing finish work.
- 4) Self-Adhesive Identification Products: Clean surfaces before application, using materials and methods recommended by manufacturer of identification device.
- 5) Attach signs and plastic labels that are not self-adhesive type with mechanical fasteners appropriate to the location and substrate.
- 6) Aluminum Wraparound Marker Labels and Metal Tags: Secure tight to surface of conductor or cable at a location with high visibility and accessibility.
- 7) Cable Ties: For attaching tags. Use general-purpose type, except as listed below:
 - a) Outdoors: UV-stabilized nylon.
 - b) In Spaces Handling Environmental Air: Plenum rated.
- 8) Underground-Line Warning Tape: During backfilling of trenches install continuous underground-line warning tape directly above line at 6 to 8 inches below finished grade. Use multiple tapes where width of multiple lines installed in a common trench or concrete envelope exceeds 16 inches overall.
- 9) Painted Identification: Comply with requirements in Division 09 painting Sections for surface preparation and paint application.

B) IDENTIFICATION SCHEDULE

- 1) Accessible Raceways and Metal-Clad Cables, 600 V or Less, for Service, Feeder, and Branch Circuits More Than 30A, and 120V to ground: Identify with self-adhesive vinyl label or self-adhesive vinyl tape applied in bands. Install labels at 10-foot maximum intervals.
- 2) Install instructional sign including the color-code for grounded and ungrounded conductors using adhesive-film-type labels.
- 3) Auxiliary Electrical Systems Conductor Identification: Identify field-installed alarm, control, and signal connections.
 - a) Identify conductors, cables, and terminals in enclosures and at junctions, terminals, and pull points. Identify by system and circuit designation.
 - b) Use system of marker tape designations that is uniform and consistent with system used by manufacturer for factory-installed connections.
 - c) Coordinate identification with Project Drawings, manufacturer's wiring diagrams, and the Operation and Maintenance Manual.
- 4) Locations of Underground Lines: Identify with underground-line warning tape for power, lighting, communication, and control wiring and optical fiber cable.
 - a) Limit use of underground-line warning tape to direct-buried cables.
 - b) Install underground-line warning tape for both direct-buried cables and cables in raceway.

- 5) **Workspace Indication:** Install floor marking tape to show working clearances in the direction of access to live parts. Workspace shall be as required by NFPA 70 and 29 CFR 1926.403 unless otherwise indicated. Do not install at flush-mounted panel boards and similar equipment in finished spaces.
- 6) **Warning Labels for Indoor Cabinets, Boxes, and Enclosures for Power and Lighting:** Self-adhesive warning labels.
 - a) Comply with 29 CFR 1910.145.
 - b) Identify system voltage with black letters on an orange background.
 - c) Apply to exterior of door, cover, or other access.
 - d) For equipment with multiple power or control sources, apply to door or cover of equipment including, but not limited to, the following:
 - i) Controls with external control power connections.
- 7) **Operating Instruction Signs:** Install instruction signs to facilitate proper operation and maintenance of electrical systems and items to which they connect. Install instruction signs with approved legend where instructions are needed for system or equipment operation.
- 8) **Equipment Identification Labels:** On each unit of equipment, install unique designation label that is consistent with wiring diagrams, schedules, and the Operation and Maintenance Manual. Apply labels to disconnect switches and protection equipment, central or master units, control panels, control stations, terminal cabinets, and racks of each system. Systems include power, lighting, and control, unless equipment is provided with its own identification.
 - a) **Labeling Instructions:**
 - i) **Indoor Equipment:** Adhesive film label. Unless otherwise indicated, provide a single line of text with 1/2-inch- (13-mm-) high letters on 1-1/2-inch- (38-mm-) high label; where two lines of text are required, use labels 2 inches (50 mm) high.
 - ii) **Outdoor Equipment:** Engraved, laminated acrylic or melamine label.
 - iii) **Elevated Components:** Increase sizes of labels and letters to those appropriate for viewing from the floor.
 - iv) Unless provided with self-adhesive means of attachment, fasten labels with appropriate mechanical fasteners that do not change the NEMA or NRTL rating of the enclosure.
 - b) **Equipment to Be Labeled:**
 - i) Identification labeling of some items listed below may be required by individual Sections or by NFPA 70.
 - ii) **Panel boards:** Typewritten directory of circuits in the location provided by panel board manufacturer. Panel board identification shall be self-adhesive, engraved, laminated acrylic or melamine label.
 - iii) Enclosures and electrical cabinets.
 - iv) Access doors and panels for concealed electrical items.
 - v) Enclosed switches.
 - vi) Enclosed controllers.
 - vii) Remote-controlled switches, dimmer modules, and control devices.

E260553.8. MEASUREMENT AND PAYMENT

No separate payments will be made for this work. Any work completed with this section shall be deemed included in the unit price bid for Item No. E 16.01-RCP.

SECTION E262416 PANEL BOARDS
(NOT A BID ITEM)

E262416.1. INTENT

This Section includes the following:

- i. Lighting and appliance branch-circuit panel boards
- ii. Power and distribution panel boards.

E262416.2. RELATED WORK AND REQUIREMENTS

The following requirements are included in this Section to expand the requirements specified in the General Conditions of the NYCDOT Standard Highway Specifications.

E262416.3. DEFINITIONS

- A) SVR: Suppressed voltage rating.
- B) TVSS: Transient voltage surge suppressor.
- C) Overcurrent Protective Device (OCD) (OCPD): A device operative on excessive current that causes and maintains the interruption of power in the circuit it protects.

E262416.4. SUBMITTALS

- A) Product Data: For each type of panel board, switching and overcurrent protective device, transient voltage suppression device, accessory, and component indicated. Include dimensions and manufacturers' technical data on features, performance, electrical characteristics, ratings, and finishes.
- B) Shop Drawings: For each panel board and related equipment.
 - 1) Include dimensioned plans, elevations, sections, and details. Show tabulations of installed devices, equipment features, and ratings.
 - 2) Detail enclosure types and details for types other than NEMA 250, Type 1.
 - 3) Detail bus configuration, current, and voltage ratings.
 - 4) Short-circuit current rating of panel boards and overcurrent protective devices.
 - 5) Detail features, characteristics, ratings, and factory settings of individual overcurrent protective devices and auxiliary components.
 - 6) Include wiring diagrams for power, signal, and control wiring.
- C) Qualification Data: For qualified testing agency.
- D) Field Quality-Control Reports:
 - 1) Test procedures used.
 - 2) Test results that comply with requirements.

- 3) Results of failed tests and corrective action taken to achieve test results that comply with requirements.
- E) Panel board Schedules: For installation in panel boards. Submit final versions after load balancing.
- F) Operation and Maintenance Data: For panel boards and components to include in operation and maintenance manuals. Include the following:
 - 1) Manufacturer's written instructions for testing and adjusting overcurrent protective devices.
 - 2) Time-current curves, including selectable ranges for each type of overcurrent protective device that allows adjustments.

E262416.5 QUALITY CONTROL

- A) Testing Agency Qualifications: Member company of NETA or an NRTL.
 - 1) Testing Agency's Field Supervisor: Currently certified by NETA to supervise on-site testing.
- B) Source Limitations: Obtain panel boards, overcurrent protective devices, components, and accessories from single source from single manufacturer.
- C) Product Selection for Restricted Space: Drawings indicate maximum dimensions for panel boards including clearances between panel boards and adjacent surfaces and other items. Comply with indicated maximum dimensions.
- D) Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
- E) Comply with NEMA PB 1.
- F) Comply with NFPA 70.
- G) Comply with New York City Electrical Code.

E262416.6 DELIVERY, STORAGE, AND HANDLING

- A) Remove loose packing and flammable materials from inside panel boards; install temporary electric heating (250 W per panel board) to prevent condensation
- B) Handle and prepare panel boards for installation according to NECA 407.

E262416.7 PROJECT CONDITIONS

- A) Environmental Limitations:
 - 1) Do not deliver or install panel boards until enclosure is installed and weathertight, wet work in surrounding spaces is complete and dry.
 - 2) Rate equipment for continuous operation for Outdoor year-round use in ambient exterior temperature consistent with NYC climate.

E262416.8. COORDINATION

- A) Coordinate layout and installation of panel boards and components with other construction, including electrical and other types of equipment, raceways, piping, encumbrances to workspace clearance requirements, and adjacent surfaces. Maintain required workspace clearances and required clearances for equipment access doors and panels
- B) Coordinate sizes and locations of concrete bases with actual equipment provided. Cast anchor-bolt inserts into bases. Concrete, reinforcement, and formwork requirements are specified in Section 4.06 and Section 4.14 of the NYCDOT Standard Highway Specifications.

E262416.9. WARRANTY

- A) Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace transient voltage suppression devices that fail in materials or workmanship within specified warranty period.
 - 1) Warranty Period: Five years minimum from date of Substantial Completion.

E262416.10. EXTRA MATERIALS

- A) Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
 - 1) Keys: Two spares for panel board cabinet lock.
 - 2) Circuit Breakers: Two spares for each type.
 - 3) Fuses for Fused Switches: Equal to 10 percent of quantity installed for each size and type, but no fewer than three of each size and type.
 - 4) Fuses for Fused Power-Circuit Devices: Equal to 10 percent of quantity installed for each size and type, but no fewer than three of each size and type.
- B) No extra payment shall be made for the aforementioned extra items.

E262416.11. MATERIALS

- A) GENERAL REQUIREMENTS FOR OUTDOOR PANEL BOARD
 - 1) Enclosures: Stainless steel , NEMA 4X.
 - a) Rated for environmental conditions at installed location.
 - i) Outdoor Locations: NEMA Type 4X, Stainless Steel.
 - b) Hinged Front Lockable Cover: Entire front trim hinged to box and with standard door within hinged trim cover.
 - c) Finishes:
 - i) Panels and Trim: Stainless steel.
 - ii) Back Boxes: Stainless steel.
 - iii) Fungus Proofing: Permanent fungicidal treatment for overcurrent protective devices and other components.

- d) Directory Card: Inside panel board door, mounted in metal frame with transparent protective cover.
 - 2) Incoming Mains Location: Top and bottom.
 - 3) Phase, Neutral, and Ground Buses:
 - a) Material: Hard-drawn copper, 98 percent conductivity.
 - b) Equipment Ground Bus: Adequate for feeder and branch-circuit equipment grounding conductors; bonded to box.
 - 4) Conductor Connectors: Suitable for use with conductor material and sizes.
 - a) Material: Hard-drawn copper, 98 percent conductivity.
 - b) Main and Neutral Lugs: Mechanical type.
 - c) Ground Lugs and Bus-Configured Terminators: Mechanical type.
 - 5) Service Equipment Label: NRTL labeled for use as service equipment for panel boards or load centers with one or more main service disconnecting and overcurrent protective devices.
 - 6) Future Devices: Mounting brackets, bus connections, filler plates, and necessary appurtenances required for future installation of devices.
 - 7) Panel board Short-Circuit Current Rating: Fully rated to interrupt symmetrical short-circuit current available at terminals.
 - 8) Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a) Eaton Electrical Inc.; Cutler-Hammer Business Unit.
 - b) General Electric Company; GE Consumer & Industrial - Electrical Distribution.
 - c) Siemens Energy & Automation, Inc.
 - d) Square D; a brand of Schneider Electric.
 - e) Approved Equal
 - 9) Panel boards: NEMA PB 1, lighting and appliance branch-circuit type.
 - 10) Mains: Circuit breaker.
 - 11) Branch Overcurrent Protective Devices: Bolt-on circuit breakers, replaceable without disturbing adjacent units.
 - 12) Doors: Concealed hinges; secured with flush latch with tumbler lock; keyed alike.
 - 13) Column-Type Panel boards: Narrow gutter extension, with cover, to overhead junction box equipped with ground and neutral terminal buses.
- B) DISCONNECTING AND OVERCURRENT PROTECTIVE DEVICES
- 1) Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a) Eaton Electrical Inc.; Cutler-Hammer Business Unit.

- b) General Electric Company; GE Consumer & Industrial - Electrical Distribution.
- c) Siemens Energy & Automation, Inc.
- d) Square D; a brand of Schneider Electric.
- e) Approved Equal

2) Molded-Case Circuit Breaker (MCCB): Comply with UL 489, with interrupting capacity to meet available fault currents.

- a) Thermal-Magnetic Circuit Breakers: Inverse time-current element for low-level overloads, and instantaneous magnetic trip element for short circuits. Adjustable magnetic trip setting for circuit-breaker frame sizes 250 A and larger.
- b) Adjustable Instantaneous-Trip Circuit Breakers: Magnetic trip element with front-mounted, field-adjustable trip setting.
- c) Current-Limiting Circuit Breakers: Frame sizes 400 A and smaller; let-through ratings less than NEMA FU 1, RK-5.
- d) GFCI Circuit Breakers: Single- and two-pole configurations with Class A ground-fault protection (6-mA trip).
- e) Ground-Fault Equipment Protection (GFEP) Circuit Breakers: Class B ground-fault protection (30-mA trip).
- f) Molded-Case Circuit-Breaker (MCCB) Features and Accessories:
 - i) Standard frame sizes, trip ratings, and number of poles.
 - ii) Lugs: Mechanical style, suitable for number, size, trip ratings, and conductor materials.
 - iii) Application Listing: Appropriate for application; Type SWD for switching fluorescent lighting loads; Type HID for feeding fluorescent and high-intensity discharge (HID) lighting circuits.
 - iv) Ground-Fault Protection: Integrally mounted relay and trip unit with adjustable pickup and time-delay settings, push-to-test feature, and ground-fault indicator.
 - v) Multipole units enclosed in a single housing or factory assembled to operate as a single unit.
 - vi) Handle Padlocking Device: Fixed attachment, for locking circuit-breaker handle in off position.

3) Fused Switch: NEMA KS 1, Type HD; clips to accommodate specified fuses; lockable handle.

- a) Fuses, and Spare-Fuse Cabinet: Comply with requirements specified in Division 26 Section "Fuses."
- b) Fused Switch Features and Accessories: Standard ampere ratings and number of poles.

C) PANEL BOARD SUPPRESSORS

1) Provide transient voltage suppression (TVSS) device for lighting and appliance panel board. The device shall be by Siemens, model# TPS1180DRA, 208/120v, 3 phase, 4 wire (plus ground) or approved equal model manufactured by Eaton Electrical, Moon Township, PA or Cooper Bussman, St. Luis, MO. Installation and connections of the device shall be provided as required by the manufacturer for a fully operational system.

D) ACCESSORY COMPONENTS AND FEATURES

- 1) Accessory Set: Include tools and miscellaneous items required for overcurrent protective device test, inspection, maintenance, and operation.

E262416.12. METHODS

A) EXAMINATION

- 1) Receive, inspect, handle, and store panel boards according to NECA 407.
- 2) Examine panel boards before installation. Reject panel boards that are damaged or rusted or have been subjected to water saturation.
- 3) Examine elements and surfaces to receive panel boards for compliance with installation tolerances and other conditions affecting performance of the Work.
- 4) Proceed with installation only after unsatisfactory conditions have been corrected.

B) INSTALLATION

- 1) Install panel boards and accessories according to NECA 407.
- 2) Temporary Lifting Provisions: Remove temporary lifting eyes, channels, and brackets and temporary blocking of moving parts from panel boards.
- 3) Mount top of trim 90 inches above grade unless otherwise indicated.
- 4) Mount panel board cabinet plumb and rigid without distortion of box. Mount recessed panel boards with fronts uniformly flush with wall finish and mating with back box.
- 5) Install overcurrent protective devices and controllers not already factory installed.
- 6) Install filler plates in unused spaces.
- 7) Arrange conductors in gutters into groups and bundle and wrap with wire ties after completing load balancing.
- 8) Comply with NECA 1.

C) IDENTIFICATION

- 1) Identify field-installed conductors, interconnecting wiring, and components; provide warning signs complying with Section E260553 "IDENTIFICATION FOR ELECTRICAL SYSTEMS," herein.
- 2) Create a directory to indicate installed circuit loads after balancing panel board loads; incorporate the Maintenance Partner's final room designations. Obtain approval before installing. Use a computer or typewriter to create directory; handwritten directories are not acceptable.
- 3) Panel board Nameplates: Label each panel board with a nameplate complying with requirements for identification specified in Section E260553 "IDENTIFICATION FOR ELECTRICAL SYSTEMS," herein.

- 4) Device Nameplates: Label each branch circuit device in distribution panel boards with a nameplate complying with requirements for identification specified in Section E260553 "IDENTIFICATION FOR ELECTRICAL SYSTEMS," herein.

D) FIELD QUALITY CONTROL

- 1) Testing Agency: Engage a qualified testing agency to perform tests and inspections.
- 2) Manufacturer's Field Service: Engage a factory-authorized service representative to inspect, test, and adjust components, assemblies, and equipment installations, including connections.
- 3) Perform tests and inspections.
 - a) Manufacturer's Field Service: Engage a factory-authorized service representative to inspect components, assemblies, and equipment installations, including connections, and to assist in testing.
- 4) Acceptance Testing Preparation:
 - a) Test insulation resistance for each panel board bus, component, connecting supply, feeder, and control circuit.
 - b) Test continuity of each circuit.
- 5) Tests and Inspections:
 - a) Perform each visual and mechanical inspection and electrical test stated in NETA Acceptance Testing Specification. Certify compliance with test parameters.
 - b) Correct malfunctioning units on-site, where possible, and retest to demonstrate compliance; otherwise, replace with new units and retest.
 - c) Perform the following infrared scan tests and inspections and prepare reports:
 - i) Initial Infrared Scanning: After Substantial Completion, but not more than 60 days after Final Acceptance, perform an infrared scan of the panel board. Remove front panels so joints and connections are accessible to portable scanner.
 - ii) Follow-up Infrared Scanning: Perform an additional follow-up infrared scan of the panel board eleven (11) months after date of Substantial Completion.
 - iii) Instruments and Equipment:
 - (a) Use an infrared scanning device designed to measure temperature or to detect significant deviations from normal values. Provide calibration record for device.
- 6) Panel board will be considered defective if it does not pass tests and inspections.
- 7) Prepare test and inspection reports, including a certified report that identifies panel boards included and that describes scanning results. Include notation of deficiencies detected, remedial action taken, and observations after remedial action.

E) ADJUSTING

- 1) Adjust moving parts and operable component to function smoothly, and lubricate as recommended by manufacturer.
- 2) Load Balancing: After Substantial Completion, but not more than 60 days after Final Acceptance, measure load balancing and make circuit changes.
 - a) Measure as directed during period of normal system loading.
 - b) Perform load-balancing circuit changes outside normal occupancy/working schedule of the facility and at time directed. Avoid disrupting critical 24-hour services such as fax machines and on-line data processing, computing, transmitting, and receiving equipment.
 - c) After circuit changes, recheck loads during normal load period. Record all load readings before and after changes and submit test records.
 - d) Tolerance: Difference exceeding 20 percent between phase loads, within a panel board, is not acceptable. Rebalance and recheck as necessary to meet this minimum requirement.

F) PROTECTION

- 1) Temporary Heating: Apply temporary heat to maintain temperature according to manufacturer's written instructions.

E262416.13. MEASUREMENT AND PAYMENT

No separate payments will be made for this work. Any work completed with this section shall be deemed included in the unit price bid for Item No. E 16.01-RCP.

SECTION E262713 ELECTRICITY METERING
(NOT A BID ITEM)

E262713.1. INTENT

- A) This Section includes provisions for the accommodation of utility company metering equipment.

E262713.2. RELATED WORK AND REQUIREMENTS

The following requirements are included in this Section to expand the requirements specified in the General Conditions of the NYCDOT Standard Highway Specifications.

E262713.3. DEFINITIONS

- A) KY Pulse: Term used by the metering industry to describe a method of measuring consumption of electricity that is based on a relay opening and closing in response to the rotation of the disk in the meter.
- B) NECA: National Electrical Contractors Association.

E262713.4. SUBMITTALS

- A) Product Data: For each type of product indicated.
- B) Shop Drawings: For electricity-metering equipment.
 - 1) Dimensioned plans and sections or elevation layouts.
 - 2) Wiring Diagrams: For power, signal, and control wiring. Identify terminals and wiring designations and color-codes to facilitate installation, operation, and maintenance. Indicate recommended types, wire sizes, and circuiting arrangements for field-installed wiring, and show circuit protection features.
- C) Field quality-control reports.

E262713.5. QUALITY CONTROL

- A) Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

E262713.6. COORDINATION

- A) Electrical Service Connections: Coordinate with utility companies and components they furnish as follows:
 - 1) Comply with requirements of utilities providing electrical power services.
 - 2) Coordinate installation and connection of utilities and services, including provision for electricity-metering components.

E262713.7. MATERIALS

- A) EQUIPMENT FOR ELECTRICITY METERING BY UTILITY COMPANY
 - 1) Meters will be furnished by utility company.

- 2) Current-Transformer Cabinets: Comply with requirements of electrical-power utility company.
- 3) Meter Sockets: Comply with requirements of electrical-power utility company. Steady-state and short-circuit current ratings shall meet indicated circuit ratings.

E262713.8. METHODS

A) INSTALLATION

- 1) Comply with equipment installation requirements in NECA 1.
- 2) Install meters furnished by utility company. Install raceways and equipment according to utility company's written requirements. Provide empty conduits for metering leads and extend grounding connections as required by utility company.
- 3) Install modular meter center according to NECA 400 switchboard installation requirements.

B) IDENTIFICATION

- 1) Comply with requirements for identification specified in Section E260553 "Identification for Electrical Systems," herein.
 - a) Equipment Identification Labels: Adhesive film labels with clear protective overlay.

C) FIELD QUALITY CONTROL

- 1) Perform tests and inspections.
 - a) Manufacturer's Field Service: Engage a factory-authorized service representative to inspect components, assemblies, and equipment installations, including connections, and to assist in testing.
- 2) Tests and Inspections:
 - a) Connect a load of known kilowatt rating, 1.5kW minimum, to a circuit supplied by metered feeder.
 - b) Turn off circuits supplied by metered feeder and secure them in off condition.
 - c) Run test load continuously for eight hours minimum, or longer, to obtain a measurable meter indication. Use test-load placement and setting that ensures continuous, safe operation.
 - d) Check and record meter reading at end of test period and compare with actual electricity used, based on test-load rating, duration of test, and sample measurements of supply voltage at test-load connection. Record test results.
 - e) Electricity metering will be considered defective if it does not pass tests and inspections.
 - f) Prepare test and inspection reports.

E262713.9. MEASUREMENT AND PAYMENT

No separate payments will be made for this work. Any work completed with this section shall be deemed included in the unit price bid for Item No. E 16.01-RCP.

SECTION E262726 WIRING DEVICES
(NOT A BID ITEM)

E262726.1. INTENT

- A) This Section includes the following:
 - (i) Receptacles, receptacles with integral GFCI, and associated device plates.
 - (ii) Floor service outlets, poke-through assemblies, service poles, and multi-outlet assemblies.

E262726.2. RELATED WORK AND REQUIREMENTS

The following requirements are included in this Section to expand the requirements specified in the General Conditions of the NYCDOT Standard Highway Specifications.

E262726.3. DEFINITIONS

- A) EMI: Electromagnetic interference.
- B) GFCI: Ground-fault circuit interrupter.
- C) Pigtail: Short lead used to connect a device to a branch-circuit conductor.
- D) RFI: Radio-frequency interference.
- E) TVSS: Transient voltage surge suppressor.
- F) UTP: Unshielded twisted pair.

E262726.4. SUBMITTALS

- A) Product Data: For each type of product indicated.
- B) Shop Drawings: List of legends and description of materials and process used for pre-marking wall plates.
- C) Samples: One for each type of device and wall plate specified, in each color specified.
- D) Field quality-control test reports.
- E) Operation and Maintenance Data: For wiring devices to include in all manufacturers' packing label warnings and instruction manuals that include labeling conditions.

E262726.5. QUALITY CONTROL

- A) Source Limitations: Obtain each type of wiring device and associated wall plate through one source from a single manufacturer. Insofar as they are available, obtain all wiring devices and associated wall plates from a single manufacturer and one source.
- B) Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
- C) Comply with NFPA 70.

E262726.6. MATERIALS**A) MANUFACTURERS**

- 1) Manufacturers' Names: Shortened versions (shown in parentheses) of the following manufacturers' names are used in other articles:
 - a) Cooper Wiring Devices; a division of Cooper Industries, Inc. (Cooper).
 - b) Hubbell Incorporated; Wiring Device-Kellems (Hubbell).
 - c) Leviton Mfg. Company Inc. (Leviton).
 - d) Pass & Seymour/Legrand; Wiring Devices & Accessories (Pass & Seymour).
 - e) Approved equal.

B) STRAIGHT BLADE RECEPTACLES

- 1) Convenience Receptacles, 125 V, 20 A: Comply with NEMA WD 1, NEMA WD 6 configuration 5-20R, and UL 498.
 - a) Products: Subject to compliance with requirements, provide one of the following:
 - i) Cooper; 5351 (single), 5352 (duplex).
 - ii) Hubbell; HBL5351 (single), CR5352 (duplex).
 - iii) Leviton; 5891 (single), 5352 (duplex).
 - iv) Pass & Seymour; 5381 (single), 5352 (duplex).
 - v) Approved equal.
- 2) Tamper-Resistant Convenience Receptacles, 125 V, 20 A: Comply with NEMA WD 1, NEMA WD 6 configuration 5-20R, and UL 498.
 - a) Products: Subject to compliance with requirements, provide one of the following:
 - i) Cooper; TR8300.
 - ii) Hubbell; HBL8300SG.
 - iii) Leviton; 8300-SGG.
 - iv) Pass & Seymour; 63H.
 - v) Approved equal.
 - b) Description: Labeled to comply with NFPA 70, "Health Care Facilities" Article, "Pediatric Locations" Section.

C) GFCI RECEPTACLES

- 1) General Description: Straight blade, feed-through type. Comply with NEMA WD 1, NEMA WD 6, UL 498, and UL 943, Class A, and include indicator light that is lighted when device is tripped.
- 2) Duplex GFCI Convenience Receptacles, 125 V, 20 A:
 - a) Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, the following:
 - i) Cooper; GF20.
 - ii) Pass & Seymour; 2084.

D) ELECTRONIC 7-DAY ASTRONOMIC TIMER

- 1) The timer switch shall be a solid state electronic control capable of permitting 40 ON/OFF set points to be distributed through a 7-day time period with 1 astro ON and 1 astro OFF set point per day.
- 2) The time and set points shall be programmable to the nearest minute with a minimum ON duration of 1 minute and a maximum ON duration of 6 days, 23 hours, 59 minutes.
- 3) The timer shall have a digital LCD readout to show day-of-week and time-of-day using 12 hour AM/PM indicator.
- 4) The time switch shall provide a manual override control for both temporary or permanent override. Time switch shall operate over a temperature range of 32°F (0°C) to 104°F (40°C).
- 5) A lithium battery provides up to three years of time keeping without AC power and user program selections are stored in a non-volatile memory.
- 6) Switch configuration to be SPST with a UL listed rating of: Resistive (heater): 20 Amp, 120-277 VAC; Tungsten (incandescent): 15 Amp, 120 VAC; 6 Amp, 208-277 VAC; Ballast (Fluorescent): 16 Amp, 120-277 VAC; Motor: 1 H.P., 120 VAC; 2 H.P., 240 VAC; 4 Amp, DC Loads: 12 VDC; 2 Amp, 28 VDC.
- 7) The timer must be able to fit a standard wall box and accept a rectangular decorator wall plate.
- 8) Timer contacts shall make or break current according to user adjustable program. Timer shall be Intermatic Model EI600W or approved equal model manufactured by NSi Industries, LLC, Huntersville, NC or Leviton Manufacturing Company, Inc., Melville, NY.

E) COVERS FOR OUTDOOR WIRING DEVICES

- 1) Wet-Location, Weatherproof Cover Plates: NEMA 250, complying with type 4 weather-resistant, stainless steel with lockable cover.

F) POKE-THROUGH ASSEMBLIES

- 1) Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - a) Hubbell Incorporated; Wiring Device-Kellems.
 - b) Pass & Seymour/Legrand; Wiring Devices & Accessories.
 - c) Square D/ Schneider Electric.
 - d) Thomas & Betts Corporation.
 - e) Wiremold Company (The).
- 2) Description: Factory-fabricated and -wired assembly of below-floor junction box with multichanneled raceway/firestop unit and detachable service outlet assembly.
 - a) Service Outlet Assembly: Pedestal type with services indicated.

G) FINISHES

- 1) Color: As selected by Engineer in consultation with the Architect, unless otherwise indicated or required by NFPA 70 or device listing.

E262726.7. METHODS

A) INSTALLATION

- 1) Comply with NECA 1, including the mounting heights listed in that standard, unless otherwise noted.
- 2) Coordination with Other Trades:
 - a) Take steps to insure that devices and their boxes are protected.
 - b) Keep outlet boxes free of mortar, cement, concrete, dust, paint, and other material that may contaminate the raceway system, conductors, and cables.
 - c) Install wiring devices after all preparation is complete.
- 3) Conductors:
 - a) Do not strip insulation from conductors until just before they are spliced or terminated on devices.
 - b) Strip insulation evenly around the conductor using tools designed for the purpose. Avoid scoring or nicking of solid wire or cutting strands from stranded wire.
 - c) The length of free conductors at outlets for devices shall meet provisions of NFPA 70, Article 300, without pigtails.
 - d) Existing Conductors:
 - i) Cut back and pigtail, or replace all damaged conductors.
 - ii) Straighten conductors that remain and remove corrosion and foreign matter.
 - iii) Pigtailing existing conductors is permitted provided the outlet box is large enough.
- 4) Device Installation:
 - a) Replace all devices that have been in temporary use during construction or that show signs that they were installed before operations were complete.
 - b) Keep each wiring device in its package or otherwise protected until it is time to connect conductors.
 - c) Do not remove surface protection, such as plastic film and smudge covers, until the last possible moment.
 - d) Connect devices to branch circuits using pigtails that are not less than 6 inches (152 mm) in length.
 - e) When there is a choice, use side wiring with binding-head screw terminals. Wrap solid conductor tightly clockwise, 2/3 to 3/4 of the way around terminal screw.
 - f) Use a torque screwdriver when a torque is recommended or required by the manufacturer.
 - g) When conductors larger than No. 12 AWG are installed on 20A circuits, splice No. 12 AWG pigtails for device connections.
 - h) Tighten unused terminal screws on the device.
 - i) When mounting into metal boxes, remove the fiber or plastic washers used to hold device mounting screws in yokes, allowing metal-to-metal contact.

- 5) Receptacle Orientation:
 - a) Install ground pin of vertically mounted receptacles down, and on horizontally mounted receptacles to the right or left.
- 6) Device Plates: Do not use oversized or extra-deep plates.
- 7) Arrangement of Devices: Unless otherwise indicated, mount flush, with long dimension vertical and with grounding terminal of receptacles on top.
- 8) Adjust locations of outlets to suit project design intent.

B) IDENTIFICATION

- 1) Comply with Section E260553 "IDENTIFICATION FOR ELECTRICAL SYSTEMS," herein.
 - a) Receptacles: Identify panel board and circuit number from which served. Use hot, stamped or engraved machine printing with black-filled lettering on face of plate, and durable wire markers or tags inside outlet boxes.

C) FIELD QUALITY CONTROL

- 1) Perform tests and inspections and prepare test reports.
 - a) Test Instruments: Use instruments that comply with UL 1436.
 - b) Test Instrument for Convenience Receptacles: Digital wiring analyzer with digital readout or illuminated LED indicators of measurement.
- 2) Tests for Convenience Receptacles:
 - a) Line Voltage: Acceptable range is 105 to 132 V.
 - b) Percent Voltage Drop under 15-A Load: A value of 6 percent or higher is not acceptable.
 - c) Ground Impedance: Values of up to 2 ohms are acceptable.
 - d) GFCI Trip: Test for tripping values specified in UL 1436 and UL 943.
 - e) Using the test plug, verify that the device and its outlet box are securely mounted.
 - f) The tests shall be diagnostic, indicating damaged conductors, high resistance at the circuit breaker, poor connections, inadequate fault current path, defective devices, or similar problems. Correct circuit conditions, remove malfunctioning units and replace with new ones, and retest as specified above.
 - g) Test straight blade for the retention force of the grounding blade according to NFPA 99. Retention force shall be not less than 4 oz..

E262726.8. MEASUREMENT AND PAYMENT

No separate payments will be made for this work. Any work completed with this section shall be deemed included in the unit price bid for Item No. E 16.01-RCP.

SECTION E262813 FUSES
(NOT A BID ITEM)

E262813.1. INTENT

- A) This Section includes the following:
 - 1) Cartridge fuses rated 600-V AC and less for use in enclosed switches.
 - 2) Spare-fuse cabinets.

E262813.2. RELATED WORK AND REQUIREMENTS

The following requirements are included in this Section to expand the requirements specified in the General Conditions of the NYCDOT Standard Highway Specifications.

E262813.3. SUBMITTALS

- A) Product Data: For each type of product indicated. Include construction details, material, dimensions, descriptions of individual components, and finishes for spare-fuse cabinets. Include the following for each fuse type indicated:
 - 1) Ambient Temperature Adjustment Information: If ratings of fuses have been adjusted to accommodate ambient temperatures, provide list of fuses with adjusted ratings.
 - a) For each fuse having adjusted ratings, include location of fuse, original fuse rating, local ambient temperature, and adjusted fuse rating.
 - b) Provide manufacturer's technical data on which ambient temperature adjustment calculations are based.
 - 2) Dimensions and manufacturer's technical data on features, performance, electrical characteristics, and ratings.
- B) Operation and Maintenance Data: For fuses to include in operation, and maintenance manuals. Include the following:
 - 1) Ambient temperature adjustment information.
 - 2) Current-limitation curves for fuses with current-limiting characteristics.
 - 3) Coordination charts and tables and related data.

E262813.4. QUALITY CONTROL

- A) Source Limitations: Obtain fuses, for use within a specific product or circuit, from single source from single manufacturer.
- B) Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
- C) Comply with NEMA FU 1 for cartridge fuses.
- D) Comply with NFPA 70.

E262813.5. PROJECT CONDITIONS

- A) Where ambient temperature to which fuses are directly exposed is less than 40 deg F or more than 100 deg F, apply manufacturer's ambient temperature adjustment factors to fuse ratings.

E262813.6. COORDINATION

- A) Coordinate fuse ratings with utilization equipment nameplate limitations of maximum fuse size and with system short-circuit current levels.

E262813.7. MATERIALS

A) MANUFACTURERS

- 1) Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a) Cooper Bussmann, Inc.
 - b) Edison Fuse, Inc.
 - c) Ferraz Shawmut, Inc.
 - d) Littelfuse, Inc.
 - e) Approved equal.

B) CARTRIDGE FUSES

- 1) Characteristics: NEMA FU 1, nonrenewable cartridge fuses with voltage ratings consistent with circuit voltages.

C) SPARE-FUSE CABINET

- 1) Characteristics: Wall-mounted steel unit with full-length, recessed piano-hinged door and key-coded cam lock and pull.
 - a) Size: Adequate for storage of spare fuses specified with 15 percent spare capacity minimum.
 - b) Finish: Gray, baked enamel.
 - c) Identification: "SPARE FUSES" in 1-1/2-inch- (38-mm-) high letters on exterior of door.
 - d) Fuse Pullers: For each size of fuse, where applicable and available, from fuse manufacturer.
 - e) Location: Within water fountain vault next to water fountain controller disconnect switch.

E262813.8. METHODS

A) EXAMINATION

- 1) Examine fuses before installation. Reject fuses that are moisture damaged or physically damaged.
- 2) Examine holders to receive fuses for compliance with installation tolerances and other conditions affecting performance, such as rejection features.
- 3) Examine utilization equipment nameplates and installation instructions. Install fuses of sizes and with characteristics appropriate for each piece of equipment.

- 4) Evaluate ambient temperatures to determine if fuse rating adjustment factors must be applied to fuse ratings.
- 5) Proceed with installation only after unsatisfactory conditions have been corrected.

B) FUSE APPLICATIONS

- 1) Cartridge Fuses:
 - a) Motor Branch Circuits: Class RK1, time delay.

C) INSTALLATION

- 1) Install fuses in fusible devices. Arrange fuses so rating information is readable without removing fuse.
- 2) Install spare-fuse cabinet.

D) IDENTIFICATION

- 1) Install labels complying with requirements for identification specified in Section E260553 "IDENTIFICATION FOR ELECTRICAL SYSTEMS" herein, and indicating fuse replacement information on inside door of each fused switch and adjacent to each fuse block, socket, and holder.

E262813.9. MEASUREMENT AND PAYMENT

No separate payments will be made for this work. Any work completed with this section shall be deemed included in the unit price bid for Item No. E 16.01-RCP.

SECTION E262816 ENCLOSED SWITCHES
(NOT A BID ITEM)

E262816.1. INTENT

- A) This Section includes the following:
 - 1) Fusible switches.
 - 2) Enclosures.

E262816.2. RELATED WORK AND REQUIREMENTS

The following requirements are included in this Section to expand the requirements specified in the General Conditions of the NYCDOT Standard Highway Specifications.

E262816.3. DEFINITIONS

- A) NC: Normally closed.
- B) NO: Normally open.
- C) SPDT: Single pole, double throw.

E262816.4. SUBMITTALS

- A) Product Data: For each type of enclosed switch, circuit breaker, accessory, and component indicated. Include dimensioned elevations, sections, weights, and manufacturers' technical data on features, performance, electrical characteristics, ratings, accessories, and finishes:
 - 1) Enclosure types and details for types other than NEMA 250, Type 1.
 - 2) Current and voltage ratings.
 - 3) Short-circuit current ratings (interrupting and withstand, as appropriate).
 - 4) Include evidence of NRTL listing for series rating of installed devices.
 - 5) Detail features, characteristics, ratings, and factory settings of individual overcurrent protective devices, accessories, and auxiliary components.
- B) Shop Drawings: For enclosed switches and circuit breakers. Include plans, elevations, sections, details, and attachments to other work.
 - 1) Wiring Diagrams: For power, signal, and control wiring.
- C) Qualification Data: For qualified testing agency.
- D) Field quality-control reports.
 - 1) Test procedures used.
 - 2) Test results that comply with requirements.
 - 3) Results of failed tests and corrective action taken to achieve test results that comply with requirements.

- E) Manufacturer's field service report.
- F) Operation and Maintenance Data: For enclosed switches to include in emergency, operation, and maintenance manuals. Include the following:
 - 1) Manufacturer's written instructions for testing and adjusting enclosed switches.

E262816.5. QUALITY CONTROL

- A) Testing Agency Qualifications: Member company of NETA or an NRTL.
 - 1) Testing Agency's Field Supervisor: Currently certified by NETA to supervise on-site testing.
- B) Source Limitations: Obtain enclosed switches, overcurrent protective devices, components, and accessories, within same product category, from single source from single manufacturer.
- C) Product Selection for Restricted Space: Drawings indicate maximum dimensions for enclosed switches and circuit breakers, including clearances between enclosures, and adjacent surfaces and other items. Comply with indicated maximum dimensions.
- D) Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
- E) Comply with NFPA 70.

E262816.6. PROJECT CONDITIONS

- A) Environmental Limitations: Rate equipment for continuous operation under the following conditions unless otherwise indicated:
 - 1) Ambient Temperature: Not less than minus 22 deg F and not exceeding 104 deg F.
 - 2) Altitude: Not exceeding 6,600 feet.

E262816.7. COORDINATION

- A) Revise this article to delete or insert types of construction and encumbrances that affect switch and circuit-breaker installation.
- B) Coordinate layout and installation of switches and components with equipment served and adjacent surfaces. Maintain required workspace clearances and required clearances for equipment access doors and panels.

E262816.8. MATERIALS

- A) FUSIBLE SWITCHES
 - 1) Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a) Eaton Electrical Inc.; Cutler-Hammer Business Unit.
 - b) General Electric Company; GE Consumer & Industrial - Electrical Distribution.

- c) Siemens Energy & Automation, Inc.
 - d) Square D; a brand of Schneider Electric.
 - e) Approved Equal
- 2) Type HD, Heavy Duty, Six Pole, Single Throw, 240V ac, 200 A and Smaller: UL 98 and NEMA KS 1, horsepower rated, with clips or bolt pads to accommodate indicated fuses, lockable handle with capability to accept three padlocks, and interlocked with cover in closed position.
- 3) Accessories:
- a) Equipment Ground Kit: Internally mounted and labeled for copper and aluminum ground conductors.
 - b) Neutral Kit: Internally mounted; insulated, capable of being grounded and bonded; labeled for copper and aluminum neutral conductors.
 - c) Class R Fuse Kit: Provides rejection of other fuse types when Class R fuses are specified.
 - d) Lugs: Mechanical type, suitable for number, size, and conductor material.

B) ENCLOSURES

- 1) Enclosed Switches and Circuit Breakers: NEMA AB 1, NEMA KS 1, NEMA 250, and UL 50, to comply with environmental conditions at installed location.
- a) Outdoor Locations: NEMA 250, Type 4X, stainless steel.

E262816.9. METHODS

A) EXAMINATION

- 1) Examine elements and surfaces to receive enclosed switches for compliance with installation tolerances and other conditions affecting performance of the Work.
- 2) Proceed with installation only after unsatisfactory conditions have been corrected.

B) INSTALLATION

- 1) Install individual wall-mounted switches and circuit breakers with tops at uniform height unless otherwise indicated.
- 2) Temporary Lifting Provisions: Remove temporary lifting eyes, channels, and brackets and temporary blocking of moving parts from enclosures and components.
- 3) Install fuses in fusible devices.
- 4) Comply with NECA 1.

C) IDENTIFICATION

- 1) Comply with requirements in Section E260553 "IDENTIFICATION FOR ELECTRICAL SYSTEMS," herein.
 - a) Identify field-installed conductors, interconnecting wiring, and components; provide warning signs.
 - b) Label each enclosure with engraved metal or laminated-plastic nameplate.

D) FIELD QUALITY CONTROL

- 1) Testing Agency: Engage a qualified testing agency to perform tests and inspections.
- 2) Manufacturer's Field Service: Engage a factory-authorized service representative to inspect, test, and adjust components, assemblies, and equipment installations, including connections.
 - a) Manufacturer's Field Service: Engage a factory-authorized service representative to inspect components, assemblies, and equipment installations, including connections, and to assist in testing.
- 3) Acceptance Testing Preparation:
 - a) Test insulation resistance for each enclosed switch, component, connecting supply, feeder, and control circuit.
 - b) Test continuity of each circuit.
- 4) Tests and Inspections:
 - a) Perform each visual and mechanical inspection and electrical test stated in NETA Acceptance Testing Specification. Certify compliance with test parameters.
 - b) Correct malfunctioning units on-site, where possible, and retest to demonstrate compliance; otherwise, replace with new units and retest.
 - c) Perform the following infrared scan tests and inspections and prepare reports:
 - i) Initial Infrared Scanning: After Substantial Completion, but not more than 60 days after Final Acceptance, perform an infrared scan of each enclosed switch and circuit breaker. Remove front panels so joints and connections are accessible to portable scanner.
 - ii) Follow-up Infrared Scanning: Perform an additional follow-up infrared scan of each enclosed switch and circuit breaker 11 months after date of Substantial Completion.
 - iii) Instruments and Equipment: Use an infrared scanning device designed to measure temperature or to detect significant deviations from normal values. Provide calibration record for device.
 - d) Test and adjust controls, remote monitoring, and safeties. Replace damaged and malfunctioning controls and equipment.
- 5) Enclosed switches will be considered defective if they do not pass tests and inspections.
- 6) Prepare test and inspection reports, including a certified report that identifies enclosed switches and that describes scanning results. Include notation of deficiencies detected, remedial action taken, and observations after remedial action.

E) ADJUSTING

- 1) Adjust moving parts and operable components to function smoothly, and lubricate as recommended by manufacturer.

E262816.10. MEASUREMENT AND PAYMENT

No separate payments will be made for this work. Any work completed with this section shall be deemed included in the unit price bid for Item No. E 16.01 RCP.

SECTION RCP-AL1 FURNISH AND INSTALL EXTERIOR ARCHITECTURAL LIGHTING

RCP-AL1.1. DESCRIPTION

- A) Under this Section the Contractor shall furnish and install all exterior lighting fixtures, lamps, ballasts and accessories in accordance with the Contract Drawings, the Specifications and the Engineer.
- B) This Section does NOT include Pedestrian Lighting.

RCP-AL1.2. RELATED WORK AND REQUIREMENTS

- A) Drawings and general provisions of the NYCDOT Standard Specifications apply to this Section.

RCP-AL1.3. DEFINITIONS

- A) Luminaire: A complete lighting unit consisting of a lamp or lamps and ballasting (when applicable) together with the parts designed to distribute the light, to position and protect the lamps and to connect the lamps to the power supply.
 - 1. Fixture: The elements of a luminaire that are designed to distribute the light, and to position and protect the lamps.
 - 2. Lighting Unit: A fixture or an assembly of fixtures with a common support, including a pole or bracket plus mounting and support accessories.
 - 3. Average Rated Life: The time after which 50 percent of the lamps fail and 50 percent of the lamps survive under normal conditions.

RCP-AL1.4. SUBMITTALS

- A) General: Submit each item in this Article according to the general provisions of the NYCDOT Standard Specifications
- B) Product Data describing fixtures, lamps, ballasts and accessories. Arrange Product Data for fixtures in order of fixture designation. Include data on features, accessories, finishes, and the following:
 - 1. Scaled outline drawings indicating dimensions and principal features of fixtures and mounting brackets.
 - 2. Electrical Ratings and Photometric Data: Certified results of independent laboratory tests for fixtures and lamps.
 - a) Provide data as required to demonstrate that the submitted product meets or exceeds the performance of the specified fixture.
 - b) Include photometric data charts: C.U., candlepower distribution and/or luminance information as necessary.
 - c) Where technical charts alone cannot substantiate compliance, the submitting manufacturer may be required to provide a full photometric study of a specific project application for verification.
- C) Scaled Shop Drawings detailing nonstandard fixtures, mounting brackets and indicating dimensions, weights, method of field assembly, components, and accessories.

- D) Wiring diagrams detailing wiring for control system showing both factory-installed and field-installed wiring for specific system of this Project, and differentiating between factory-installed and field-installed wiring.
- E) Product certificates signed by manufacturers of lighting units certifying that their products comply with specified requirements.
- F) Field test reports indicating and interpreting test results specified in RCP-AL1.9 of this Section.
- G) Maintenance data for products to include in an Operation and Maintenance Manual.

RCP-AL1.5. QUALITY CONTROL

- A) Electrical Component Standard: Provide components that comply with NFPA 70 and that are listed and labeled by UL where available.
- B) Comply with ANSI C2.
- C) Listing and Labeling: Provide fixtures and accessories specified in this Section that are listed and labeled for their indicated use and installation conditions on Project.
 - 1. The Terms "Listed" and "Labeled": As defined in the National Electrical Code, Article 100.
 - 2. Listing and Labeling Agency Qualifications: A "Nationally Recognized Testing Laboratory" (NRTL) as defined in OSHA Regulation 1910.7.
- D) Applicable Codes: Fixtures shall be made and installed in accordance with the current version of the National Electric Code, the Uniform Building Code, the Federal Occupational Safety & Health Act, local codes, and all other applicable regulations.

RCP-AL1.6. WARRANTY

- A) General Warranty: The special warranty specified in this Article shall not deprive the Owner of other rights the Owner may have under other provisions of the Contract Documents and shall be in addition to, and run concurrent with, other warranties made by the Contractor under requirements of the Contract Documents.
- B) Special Warranty: Submit a written warranty signed by manufacturer and Installer agreeing to replace external parts of lighting fixtures exhibiting a failure of finish as specified below. This warranty is in addition to, and not a limitation of, other rights and remedies the Owner may have under the Contract Documents.
 - 1. Protection of Metal from Corrosion: Warranty against perforation or erosion of finish due to weathering.
 - 2. Color Retention: Warranty against fading, staining, and chalking due to effects of weather and solar radiation.
 - 3. Special Warranty Period: 5 years from date of Substantial Completion.

RCP-AL1.7. MATERIALS**A) MANUFACTURERS**

1. **Products:** Subject to compliance with requirements, fixtures that may be incorporated into the Work include, but are not limited to, the fixtures that follow.
2. Specific product names or numbers listed below, along with the Contract Documents, shall establish the quality standards required. Equivalent products of other manufacturers will be considered provided they meet those established standards, and are subject to approval by the Engineer.
3. Fixture Designation: L2
 - a) Description: Surface mounted LED strip light along planter edge.
 - b) Lamp Type: Warm LED module. Allow 1.5W per foot.
(White LED at 3000K)
 - c) Manufacturer: BRUCK LIGHTING SYSTEMS, 15774 Gateway Circle Tustin, CA. 92780, Phone: (714) 259-9959
 - d) Product: "Orion Belt" (135401-1-135914-135910-135915-70438-PT) by BRUCK LIGHTING or approved equal model manufactured by Filix LLC, Columbia, MD, Phone (410) 381-1497 or Prolume Inc., Monroe, CT Phone: (203) 268-7778
 - e) Notes: Run lengths (75' max. strip length) and mounting of strips to be coordinated with Architect's drawings; Contractor to supply belt clips, power feeds and flexible connectors per manufacturer's recommendation; Engineer, in consultation with the Architect, shall coordinate exact location of power supplies (25' max. remote distance from power supply to start of strip); Contractor to supply weather proof NEMA4X rated enclosure (direct burial, flush in planter) for power supplies per manufacturer's recommendation, where (2) power supplies are shown at one location, provide one NEMA4X enclosure to accommodate both; fixture and power supply housing must be UL Listed for wet location; (7) 96WDC LED drivers total, location: L2-D1 to L2-D7. Contractor to verify.
4. Fixture Designation: L3
 - a) Description: In-grade LED uplight with double lens for tree lighting.
 - b) Lamp Type: 22W warm white LEDs (3000K)
 - c) Manufacturer: Hydrel Lighting, 2066 Nordhoff Street, Suite B, Chatworth, CA 91311, Phone: (866) 533-9901
 - d) Product: M9720-(material)-22LED-WHT30K-(voltage)-MFL-FLC-(conduit entry)-IHL-LP-(finish) or approved equal product manufactured by B-K Lighting, Madera, CA, Phone (559) 438-5800; Bega-US, Carpinteria, CA, Phone (805) 684-0533; or other approved equivalent.
 - e) Note: Engineer, in consultation with the Architect, to specify fixture material and finish; supply with warm white 3000K LED, 15° tilt for LED board, medium flood distribution and flat clear lens; Contractor to determine conduit entries, with internal honeycomb louver; Contractor to refer to drainage installation and recommendations; Contractor to install fixture for lens to be 1-2" above grade to prevent sediments from covering luminaire face; coordinate with Contractor's Landscape Subcontractor to keep ornamental grass clear of uplight 12" all around.

B) FIXTURES AND FIXTURE COMPONENTS, GENERAL

1. Metal Parts: Free from burrs, sharp edges, and corners.
2. Sheet Metal Components: Corrosion-resistant aluminum, except as otherwise indicated. Form and support to prevent warping and sagging. Provide positive, durable, means of connection at all joints as required. No hollow rivets, unless specifically approved.
3. Housings: Rigidly formed, weather- and light-tight enclosures that will not warp, sag, or deform in use. Provide filter/breather for enclosed fixtures.
4. Doors, Frames, and Other Internal Access: Smooth operating, free from light leakage under operating conditions, and arranged to permit relamping without use of tools. Arrange doors, frames, lenses, diffusers, and other pieces to prevent accidental falling during relamping and when secured in operating position. Provide for door removal for cleaning or replacing lens. Arrange for door opening to disconnect ballast. Provide neoprene, silicone, rubber, or other appropriate gasketing, stops, and barriers where required to prevent light leak, control sound and vibration, prevent water leaks and, if pertinent, water vapor penetration.
5. Exposed Hardware Material: Stainless steel.
6. Reflecting Surfaces: Minimum reflectances as follows, except as otherwise indicated:
 - a) White Surfaces: 85 percent.
 - b) Specular Surfaces: 83 percent.
 - c) Diffusing Specular Surfaces: 75 percent.
7. Plastic Parts: High resistance to yellowing and other changes due to aging, exposure to heat, and UV radiation.
8. Lenses and Refractors: Materials as indicated. Use heat- and aging-resistant, resilient gaskets to seal and cushion lens and refractor mounting in fixture doors.
9. Photoelectric Relays: Conform to UL 773.
 - a. Contact Relays: Single throw, arranged to fail in the ON position and factory set to turn light unit on at 1.5 to 3 foot-candles (16 to 32 lux) and off at 4.5 to 10 foot-candles (48 to 108 lux) with 15-second minimum time delay.
 - b. Relay Mounting: In fixture housing.
11. Lampholders: Screw base: Sockets for incandescent and HID lamps shall be of heavy duty heat resistant porcelain with spring center contacts and plated screw shells, except as indicated.
12. Lamps: Comply with ANSI C78 series that is applicable to each type of lamp. Provide fixtures with indicated lamps of designated type, characteristics, and wattage.
 - a) Lamps of one type shall be from one manufacturer. Where indicated in the Lighting Fixture Schedule, lamps shall be supplied from the named manufacturer, only.

C) FINISHES

1. Metal Parts: Manufacturer's standard finish, except as otherwise indicated, applied over corrosion-resistant primer, free of streaks, runs, holidays, stains, blisters, and similar defects.
2. Other Parts: Manufacturer's standard finish, except as otherwise indicated.

D) SOLID STATE LIGHTING (LED) LUMINAIRES

1. Testing: All products shall be tested by a Nationally Recognized Testing Laboratory (NRTL) in accordance with IES LM-79 testing methods and shall carry a UL, ETL or CSA label. Fixture manufacturer shall confirm in writing that the LEDs within the fixture will not exceed the maximum temperature to which the LED die was tested using IES LM-80 testing methods.
2. LED Color Consistency: LEDs within each luminaire and from luminaire to luminaire must be batch-sorted for visual color consistency. All luminaires of the same type shall be supplied at the same time and shall come from the same batch. Spare luminaires shall be provided from the same batch. Acceptable light color variation (correlated color temperature, color spatial uniformity and color maintenance) shall not exceed the limits allowed by the Energy Star program (see requirements within the Energy Star document included as supplementary documentation at the end of this Section).
3. Color Rendering Index (CRI): Minimum CRI of 75.
4. Thermal Management: Luminaire manufacturers shall adhere to device manufacturer guidelines, certification programs, and test procedures for thermal management.
5. Special Warranty: Provide a written warranty indicating that the complete system (LED luminaires, drivers and power supplies) shall carry a 5-year warranty.
6. Power Supplies and Other Remote Gear:
 - a. Power Factor: Minimum power factor greater than or equal to 0.90.
 - b. Minimum Operating Temperature: Power supply shall have a minimum operating temperature of -4° F or below.
 - c. Contractor shall insure that all remote gear required for LED systems, including drivers, power supplies, DMX converters and/or other control gear are installed and wired in accordance with the LED luminaire manufacturer's requirements.
7. Packaging: Included documentation must clearly state any known incompatibility with photo-controls or timing devices.
8. Additional Requirements: Products shall meet all other requirements of the Energy Star program (see the Energy Star document included as supplementary documentation at the end of this Section).

RCP-AL1.8. METHODS

A) INSTALLATION

1. Set units plumb, square, level, and secure according to manufacturer's written instructions and approved Shop Drawings.

2. Concrete Foundations: Construct according to Section 4.06 and Section 4.14 of the NYCDOT Standard Highway Specifications.
 - a. Comply with details and manufacturer's recommendations for reinforcing, anchor bolts, nuts, and washers. Verify anchor-bolt templates by comparing with actual pole bases furnished.
 - b. Finish: Trowel and rub smooth parts exposed to view.
3. Fixture Attachment: Fasten to indicated structural supports.
4. Fixture Attachment with Adjustable Features or Aiming: Attach fixtures and supports to allow aiming for indicated light distribution.
5. Lamp fixtures with indicated lamps according to manufacturer's written instructions. Replace malfunctioning lamps.

B) GROUNDING

1. Ground fixtures according to Section E260526 "Grounding," herein.

C) FIELD QUALITY CONTROL

1. Inspect each installed unit for damage. Replace damaged fixtures and components.
2. Give advance notice of dates and times for field tests.
3. Provide instruments to make and record test results.
4. Tests and Observations: Verify normal operation of lighting units after installing fixtures and energizing circuits with normal power source.
5. Replace or repair damaged and malfunctioning units, make necessary adjustments, and retest. Repeat procedure until all units operate properly.

D) ADJUSTING AND CLEANING

1. Clean units after installation. Use methods and materials recommended by manufacturer.
2. Focusing and adjustment: After installation of all lighting fixtures, architectural components and landscaping has been completed, provide personnel and any other equipment necessary to expeditiously aim all adjustable lighting fixtures. Focusing shall be performed after dark and shall take place under supervision of the Lighting Designer. All work shall be performed in accordance with union rules, should they be in force, and applicable codes.

E) FINAL INSPECTION

1. Upon completion of the installation, lighting equipment must be in first class operating order and free from defects in condition and finish.
 - a. All fixtures and equipment must be installed and lamped with new lamps and be complete with all lenses, diffusers, reflectors, side panels, louvers or other necessary components.
 - b. Fixtures shall be completely clean and free from dirt or paint spots.
 - c. Any fixture parts damaged prior to the final inspection shall be replaced.

d. No light leaks shall be permitted from any visible part or joint.

RCP-AL1.9. PRICE TO COVER

The lump sum price bid shall cover the cost of all labor, materials, plant, equipment, insurance, permits, inspection certificates, and incidentals required to install all exterior architectural lighting included, but not limited to, furnishing and installing fixtures, lamps, ballasts, and accessories; all in accordance with NYC Electrical Code, Contract Drawings, the specifications and the direction of the Engineer. (NOTE: This Section does NOT include Pedestrian Lighting.)

Payment will be made at the Lump Sum Price bid for Item RCP-AL1, herein, and will be paid in proportion to the percentage of Item RCP-AL1 completed.

Payment will be made under:

Item No.	Item	Pay Unit
RCP-AL1	FURNISH AND INSTALL EXTERIOR ARCHITECTURAL LIGHTING	L.S.

SECTION RCP-AL2 FURNISH AND INSTALL 70W HPS STAD/CITEA LUMINAIRES

RCP-AL2.1. DESCRIPTION

- A) Under this section this Section the Contractor shall furnish and install all 70W HPS Stad/Citea luminaires in accordance with the Contract Drawings, the Specifications and the Architect.

RCP-AL2.2. RELATED WORK AND REQUIREMENTS

- A) Drawings and general provisions of the NYCDOT Standard Highway Specifications apply to this Section.
- B) Refer to the following sections in the NYC Standard Highway Specifications for a complete installation:
 - 1) SL-20.01.03, Furnish and Install Foundation for 'BB' Lamppost
 - 2) SL-21.01.05, Furnish and Install 'BB' Type Lamppost with transformer

RCP-AL2.3. DEFINITIONS

- A) Luminaire: A complete lighting unit consisting of a lamp or lamps and ballasting (when applicable) together with the parts designed to distribute the light, to position and protect the lamps and to connect the lamps to the power supply.
 - 1) Fixture: The elements of a luminaire that are designed to distribute the light, and to position and protect the lamps.
 - 2) Lighting Unit: A fixture or an assembly of fixtures with a common support, including a pole or bracket plus mounting and support accessories.
 - 3) Average Rated Life: The time after which 50 percent of the lamps fail and 50 percent of the lamps survive under normal conditions.

RCP-AL2.4. SUBMITTALS

- A) General: Submit each item in this Article according to the general provisions of the NYCDOT Standard Specifications
- B) Product Data describing fixtures, lamps, ballasts and accessories. Arrange Product Data for fixtures in order of fixture designation. Include data on features, accessories, finishes, and the following:
 - 1. Scaled outline drawings indicating dimensions and principal features of fixtures and mounting brackets.
 - 2. Electrical Ratings and Photometric Data: Certified results of independent laboratory tests for fixtures and lamps.
 - a) Provide data as required to demonstrate that the submitted product meets or exceeds the performance of the specified fixture.
 - b) Include photometric data charts: C.U., candlepower distribution and/or luminance information as necessary.
 - c) Where technical charts alone cannot substantiate compliance, the submitting manufacturer may be required to provide a full photometric study of a specific project application for verification.

- C) Scaled Shop Drawings detailing nonstandard fixtures, mounting brackets and indicating dimensions, weights, method of field assembly, components, and accessories.
- D) Wiring diagrams detailing wiring for control system showing both factory-installed and field-installed wiring for specific system of this Project, and differentiating between factory-installed and field-installed wiring.
- E) Product certificates signed by manufacturers of lighting units certifying that their products comply with specified requirements.
- F) Field test reports indicating and interpreting test results specified in RCP-AL1.9 of this Section.
- G) Maintenance data for products to include in an Operation and Maintenance Manual.

RCP-AL2.5. QUALITY CONTROL

- A) Electrical Component Standard: Provide components that comply with NFPA 70 and that are listed and labeled by UL where available.
- B) Comply with ANSI C2.
- C) Listing and Labeling: Provide fixtures and accessories specified in this Section that are listed and labeled for their indicated use and installation conditions on Project.
 - 1. The Terms "Listed" and "Labeled": As defined in the National Electrical Code, Article 100.
 - 2. Listing and Labeling Agency Qualifications: A "Nationally Recognized Testing Laboratory" (NRTL) as defined in OSHA Regulation 1910.7.
- D) Applicable Codes: Fixtures shall be made and installed in accordance with the current version of the National Electric Code, the Uniform Building Code, the Federal Occupational Safety & Health Act, local codes, and all other applicable regulations.

RCP-AL2.6. WARRANTY

- A) General Warranty: The special warranty specified in this Article shall not deprive the Owner of other rights the Owner may have under other provisions of the Contract Documents and shall be in addition to, and run concurrent with, other warranties made by the Contractor under requirements of the Contract Documents.
- B) Special Warranty: Submit a written warranty signed by manufacturer and Installer agreeing to replace external parts of lighting fixtures exhibiting a failure of finish as specified below. This warranty is in addition to, and not a limitation of, other rights and remedies the Owner may have under the Contract Documents.
 - 1. Protection of Metal from Corrosion: Warranty against perforation or erosion of finish due to weathering.
 - 2. Color Retention: Warranty against fading, staining, and chalking due to effects of weather and solar radiation.

3. Special Warranty Period: 5 years from date of Substantial Completion.

RCP-AL2.7. MATERIALS

A) MANUFACTURERS

1. Products: Subject to compliance with requirements, fixtures that may be incorporated into the Work include, but are not limited to, the fixtures that follow.
2. Specific product names or numbers listed below, along with the Contract Documents, shall establish the quality standards required. Equivalent products of other manufacturers will be considered provided they meet those established standards.
3. Fixture Designation: L1
 - a) Description: Pole mounted high pressure sodium fixture with Type III cut-off distribution.
 - b) Lamp Type: High Pressure Sodium 70W
 - c) Manufacturer: LUMEC
 - d) Product: "Citea" (CTS-70HPS-ED23 1/2-MC3-120V-PH) by LUMEC or approved equal product manufactured by Schreder lighting LLC, Addison, IL
 - e) Accessories: Photo-electric cell, if required
 - f) Planter Mount (Type L1): Fixture mounted on DOT Standard "BB" type lamppost, with 2' projection arm; Post as per as per SL-21.01.05. Foundation as per SL-20.01.03, installed within planter. Overall height to be 16'-0" above grade. Architect to select finishes for fixture, projection arm and post from standards.
 - g) Sidewalk Mount (Type L1A): Fixture mounted on DOT Standard "BB" type lamppost, with 2' projection arm; Post as per as per SL-21.01.05. Foundation as per SL-20.01.03, installed on sidewalk. Overall height to be 14'-8" above grade. Architect to select finishes for fixture, projection arm and post from standards.

B) FIXTURES AND FIXTURE COMPONENTS, GENERAL

1. Metal Parts: Free from burrs, sharp edges, and corners.
2. Sheet Metal Components: Corrosion-resistant aluminum, except as otherwise indicated. Form and support to prevent warping and sagging. Provide positive, durable, means of connection at all joints as required. No hollow rivets, unless specifically approved.
3. Housings: Rigidly formed, weather- and light-tight enclosures that will not warp, sag, or deform in use. Provide filter/breather for enclosed fixtures.
4. Doors, Frames, and Other Internal Access: Smooth operating, free from light leakage under operating conditions, and arranged to permit relamping without use of tools. Arrange doors, frames, lenses, diffusers, and other pieces to prevent accidental falling during relamping and when secured in operating position. Provide for door removal for cleaning or replacing lens. Arrange for door opening to disconnect ballast. Provide neoprene, silicone, rubber, or other appropriate gasketing, stops, and barriers where required to prevent light leak, control sound and vibration, prevent water leaks and, if pertinent, water vapor penetration.

5. Exposed Hardware Material: Stainless steel.
6. Reflecting Surfaces: Minimum reflectances as follows, except as otherwise indicated:
 - a) White Surfaces: 85 percent.
 - b) Specular Surfaces: 83 percent.
 - c) Diffusing Specular Surfaces: 75 percent.
7. Plastic Parts: High resistance to yellowing and other changes due to aging, exposure to heat, and UV radiation.
8. Lenses and Refractors: Materials as indicated. Use heat- and aging-resistant, resilient gaskets to seal and cushion lens and refractor mounting in fixture doors.
9. Photoelectric Relays: Conform to UL 773.
 - a. Contact Relays: Single throw, arranged to fail in the ON position and factory set to turn light unit on at 1.5 to 3 foot-candles (16 to 32 lux) and off at 4.5 to 10 foot-candles (48 to 108 lux) with 15-second minimum time delay.
 - b. Relay Mounting: In fixture housing.
10. High-Intensity-Discharge (HID) Fixtures: Conform to UL 1572.
11. HID Ballasts: Conform to UL 1029, and ANSI C82.4. Constant wattage autotransformer (CWA) or regulating high-power-factor type, unless otherwise indicated.
 - a. Ballast Fuses: One in each ungrounded supply conductor. Voltage and current ratings as recommended by ballast manufacturer.
 - b. Operating Voltage: Match system voltage.
 - c. Single-Lamp Ballasts: Minimum starting temperature of minus 30 deg C.
 - d. Open circuit operation will not reduce average life.
 - e. Noise: Uniformly quiet operation, with a noise rating of B or better.
12. Lampholders: Screw base: Sockets for incandescent and HID lamps shall be of heavy duty heat resistant porcelain with spring center contacts and plated screw shells, except as indicated.
13. Lamps: Comply with ANSI C78 series that is applicable to each type of lamp. Provide fixtures with indicated lamps of designated type, characteristics, and wattage.
 - a) Lamps of one type shall be from one manufacturer. Where indicated in the Lighting Fixture Schedule, lamps shall be supplied from the named manufacturer, only.

C) FINISHES

1. Metal Parts: Manufacturer's standard finish, except as otherwise indicated, applied over corrosion-resistant primer, free of streaks, runs, holidays, stains, blisters, and similar defects.
2. Other Parts: Manufacturer's standard finish, except as otherwise indicated.

RCP-AL2.8. METHODS

A) INSTALLATION

1. Set units plumb, square, level, and secure according to manufacturer's written instructions and approved Shop Drawings.
2. Fixture Attachment: Fasten to indicated structural supports.
3. Lamp fixtures with indicated lamps according to manufacturer's written instructions. Replace malfunctioning lamps.

B) GROUNDING

1. Ground fixtures according to Section E260526 "GROUNDING."
 - a. Poles: Install 3-m driven ground rod at each pole.

C) FIELD QUALITY CONTROL

1. Inspect each installed unit for damage. Replace damaged fixtures and components.
2. Give advance notice of dates and times for field tests.
3. Provide instruments to make and record test results.
4. Tests and Observations: Verify normal operation of lighting units after installing fixtures and energizing circuits with normal power source.
5. Replace or repair damaged and malfunctioning units, make necessary adjustments, and retest. Repeat procedure until all units operate properly.

D) ADJUSTING AND CLEANING

1. Clean units after installation. Use methods and materials recommended by manufacturer.
2. Focusing and adjustment: After installation of all lighting fixtures, architectural components and landscaping has been completed, provide personnel and any other equipment necessary to expeditiously aim all adjustable lighting fixtures. Focusing shall be performed after dark and shall take place under supervision of the Lighting Designer. All work shall be performed in accordance with union rules, should they be in force, and applicable codes.

E) FINAL INSPECTION

1. Upon completion of the installation, lighting equipment must be in first class operating order and free from defects in condition and finish.
 - a. All fixtures and equipment must be installed and lamped with new lamps and be complete with all lenses, diffusers, reflectors, side panels, louvers or other necessary components.
 - b. Fixtures shall be completely clean and free from dirt or paint spots.
 - c. Any fixture parts damaged prior to the final inspection shall be replaced.
 - d. No light leaks shall be permitted from any visible part or joint.

RCP-AL2.9. MEASUREMENT

The quantity of 70W HPS STAD/CITEA LUMINARIES to be measured for payment shall be the actual number of each installed at the site to the satisfaction of the Engineer.

RCP-AL2.10. PRICE TO COVER

The unit price bid per each 70W HPS STAD/CITEA LUMINAIRE shall cover the cost of all labor, materials, plant, equipment, insurance, permits, inspection certificates, and incidentals required to furnish and install each 70W HPS Stad/Citea luminaires; all in accordance with NYC Electrical Code, Contract Drawings, the specifications, and the direction of the Engineer.

The cost for furnishing and installing lampposts and their foundations shall be paid for separately under other contract items.

Payment will be made under:

Item No.	Item	Pay Unit
RCP-AL2	FURNISH AND INSTALL 70W HPS STAD/CITEA LUMINARIES	EACH

SECTION RCP-PL1 FURNISH AND INSTALL VALVES, SUPPORTS, HEAT TRACING AND IDENTIFICATION FOR PLAZA PLUMBING

RCP-PL1.1. DESCRIPTION

- A) Under this section the Contractor shall be required to complete the work of installing and connecting all domestic water supply components within the project limits, exclusive of bid items listed elsewhere in these specifications.
- B) Drawings and the general provisions of the NYCDOT Standard Highway Specifications apply to this Section.
- C) Related Sections: The following sections contain requirements that relate to this section:
 - 1) Section P220523, General-Duty Valves for Plumbing
 - 2) Section P220529, Hangers and Supports for Plumbing Piping & Equipment
 - 3) Section P220533, Heat Tracing for Plumbing Piping
 - 4) Section P220553, Identification for Plumbing Piping & Equipment
 - 5) Section P220700, Plumbing Insulation
- D) Refer to Section RCP-WF1.2.1.B) for a list of abbreviations for Standards and References.

RCP-PL1.2. PRICE TO COVER

The lump sum price bid shall cover the cost of all labor, materials, plan equipment, insurance, permits, inspection certificates, and incidentals required to furnish and install miscellaneous valves, plumbing supports, plumbing insulation, heat tracing, and identification for all plumbing components, exclusive of bid items listed elsewhere in these specifications; all in accordance with NYC Plumbing Code, Contract Drawings, the specifications and the direction of the Engineer.

The cost of all of the Sections noted in RCP-PL1.1.(C), above, shall be deemed included in the cost of this Item. Payment will be made at the Lump Sum Price bid for Item RCP-PL1 herein, and will be paid in proportion to the percentage of Item RCP-PL1 completed.

Payment will be made under:

Item No.	Item	Pay Unit
RCP-PL1	FURNISH AND INSTALL VALVES, SUPPORTS, HEAT TRACING AND IDENTIFICATION FOR PLAZA PLUMBING	L.S.

SECTION P220523 GENERAL-DUTY VALVES FOR PLUMBING PIPING
(NOT A BID ITEM)

P220523.1. INTENT

- A) This Section includes the following:
 - 1) Brass ball valves.
 - 2) Bronze ball valves.

P220523.2. RELATED WORK AND REQUIREMENTS

- A) The following requirements are included in this Section to expand the requirements specified in the General Conditions of the NYCDOT Standard Highway Specifications.

P220523.3. SUBMITTALS

- A) Product Data: For each type of valve indicated.

P220523.4. QUALITY CONTROL

- A) ASME Compliance: ASME B16.10 and ASME B16.34 for ferrous valve dimensions and design criteria.
- B) NSF Compliance: NSF 61 for valve materials for potable-water service.

P220523.5. MATERIALS

- A) GENERAL REQUIREMENTS FOR VALVES
 - 1) Refer to valve schedule articles for applications of valves.
 - 2) Valve Pressure and Temperature Ratings: Not less than indicated and as required for system pressures and temperatures.
 - 3) Valve Sizes: Same as upstream piping unless otherwise indicated.
 - 4) Valve Actuator Types:
 - a) Gear Actuator: For quarter-turn valves NPS 8 and larger.
 - b) Handwheel: For valves other than quarter-turn types.
 - c) Handlever: For quarter-turn valves NPS 6 and smaller [except plug valves].
 - d) Chainwheel: Device for attachment to valve handwheel, stem, or other actuator; of size and with chain for mounting height, as indicated in the "Valve Installation" Article.
 - 5) Valves in Insulated Piping: With 2-inch stem extensions and the following features:
 - a) Gate Valves: With rising stem.
 - b) Ball Valves: With extended operating handle of non-thermal-conductive material, and protective sleeve that allows operation of valve without breaking the vapor seal or disturbing insulation.
 - c) Butterfly Valves: With extended neck.
 - 6) Valve-End Connections:

- a) Solder Joint: With sockets according to ASME B16.18.
- b) Threaded: With threads according to ASME B1.20.1.

B) BRONZE BALL VALVES

- 1) Two-Piece, Full-Port, Bronze Ball Valves with Bronze Trim:
 - a) Manufacturers: Subject to compliance with requirements, Milwaukee Valve Model BA-100 or equal from approved manufacturers:
 - i) Conbraco Industries, Inc.; Apollo Valves.
 - ii) Crane Co.; Crane Valve Group; Crane Valves.
 - iii) NIBCO INC.
 - iv) Watts Regulator Co.; a division of Watts Water Technologies, Inc.
 - b) Description:
 - i) Standard: MSS SP-110.
 - ii) SWP Rating: 150 psig.
 - iii) CWP Rating: 600 psig.
 - iv) Body Design: Two piece.
 - v) Body Material: Bronze.
 - vi) Ends: Threaded.
 - vii) Seats: PTFE or TFE.
 - viii) Stem: Bronze.
 - ix) Ball: Chrome-plated brass.
 - x) Port: Full.

P220523.6. METHODS

A) VALVE INSTALLATION

- 1) Install valves with unions or flanges at each piece of equipment arranged to allow service, maintenance, and equipment removal without system shutdown.
- 2) Locate valves for easy access and provide separate support where necessary.
- 3) Install valves in horizontal piping with stem at or above center of pipe.
- 4) Install valves in position to allow full stem movement.

B) ADJUSTING

- 1) Adjust or replace valve packing after piping systems have been tested and put into service but before final adjusting and balancing. Replace valves if persistent leaking occurs.

C) DOMESTIC, COLD-WATER VALVE SCHEDULE

- 1) Pipe NPS 2 (DN 50) and Smaller:
 - a) Bronze Valves.
 - b) Ball Valves: Two piece, full port, bronze with bronze trim.

P220523.7. MEASUREMENT AND PAYMENT

No separate payments will be made for this work. Any work completed with this section shall be deemed included in the unit price bid for Item No. RCP-PL1.

SECTION P220529 HANGERS AND SUPPORTS FOR PLUMBING PIPING & EQUIPMENT
(NOT A BID ITEM)

P220529.1. INTENT

- A) This Section includes the following:
 - 1) Steel pipe hangers and supports.
 - 2) Fastener systems.

P220529.2. RELATED WORK AND REQUIREMENTS

- A) The following requirements are included in this Section to expand the requirements specified in the General Conditions of the NYCDOT Standard Highway Specifications.

P220529.3. DEFINITIONS

- A) Terminology: As defined in MSS SP-90, "Guidelines on Terminology for Pipe Hangers and Supports."

P220529.4. PERFORMANCE REQUIREMENTS

- A) Design supports for multiple pipes capable of supporting combined weight of supported systems, system contents, and test water.
- B) Design equipment supports capable of supporting combined operating weight of supported equipment and connected systems and components.
- C) Design seismic-restraint hangers and supports for piping and equipment and obtain approval from authorities having jurisdiction.

P220529.5. SUBMITTALS

- A) Product Data: For the following:
 - 1) Steel pipe hangers and supports.
 - 2) Thermal-hanger shield inserts.
 - 3) Powder-actuated fastener systems.

P220529.6. QUALITY CONTROL

- A) Welding: Qualify procedures and personnel according to ASME Boiler and Pressure Vessel Code: Section IX (latest edition).

P220529.7. MATERIALS

- A) MANUFACTURERS
 - 1) Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, manufacturers specified.
- B) STEEL PIPE HANGERS AND SUPPORTS
 - 1) Description: MSS SP-58, Types 1 through 58, factory-fabricated components. Refer to Section P220529.8.A) "HANGER AND SUPPORT APPLICATIONS", herein this Addendum, for where to use specific hanger and support types.

2) Manufacturers:

- a) AAA Technology & Specialties Co., Inc.
- b) Bergen-Power Pipe Supports.
- c) B-Line Systems, Inc.; a division of Cooper Industries.
- d) Carpenter & Paterson, Inc.
- e) Empire Industries, Inc.
- f) ERICO/Michigan Hanger Co.
- g) Globe Pipe Hanger Products, Inc.
- h) Grinnell Corp.
- i) GS Metals Corp.
- j) National Pipe Hanger Corporation.
- k) PHD Manufacturing, Inc.
- l) PHS Industries, Inc.
- m) Piping Technology & Products, Inc.
- n) Tolco Inc.
- o) or an approved equivalent manufacturer.

3) Galvanized, Metallic Coatings: Pregalvanized or hot dipped.

4) Nonmetallic Coatings: Plastic coating, jacket, or liner.

5) Padded Hangers: Hanger with fiberglass or other pipe insulation pad or cushion for support of bearing surface of piping.

C) FASTENER SYSTEMS

1) Powder-Actuated Fasteners: Threaded-steel stud, for use in hardened Portland cement concrete with pull-out, tension, and shear capacities appropriate for supported loads and building materials where used.

a) Manufacturers:

- i) Hilti, Inc.
- ii) ITW Ramset/Red Head.
- iii) Masterset Fastening Systems, Inc.
- iv) MKT Fastening, LLC.
- v) Powers Fasteners.
- vi) Or an approved equivalent.

2) Mechanical-Expansion Anchors: Insert-wedge-type stainless steel, for use in hardened Portland cement concrete with pull-out, tension, and shear capacities appropriate for supported loads and building materials where used.

a) Manufacturers:

- i) B-Line Systems, Inc.; a division of Cooper Industries.
- ii) Empire Industries, Inc.
- iii) Hilti, Inc.
- iv) ITW Ramset/Red Head.
- v) MKT Fastening, LLC.
- vi) Powers Fasteners.
- v) Or an approved equivalent.

D) MISCELLANEOUS MATERIALS

1) Structural Steel: ASTM A 36/A 36M, steel plates, shapes, and bars; black and galvanized.

- 2) Grout: ASTM C 1107, factory-mixed and -packaged, dry, hydraulic-cement, non-shrink and nonmetallic grout; suitable for interior and exterior applications.
 - a) Properties: Non-staining, noncorrosive, and nongaseous.
 - b) Design Mix: 5000-psi, 28-day compressive strength.

P220529.8. METHODS

A) HANGER AND SUPPORT APPLICATIONS

- 1) Specific hanger and support requirements are specified in Sections specifying piping systems and equipment.
- 2) Comply with MSS SP-69 for pipe hanger selections and applications that are not specified in piping system Sections.
- 3) Use hangers and supports with galvanized, metallic coatings for piping and equipment that will not have field-applied finish.
- 4) Use nonmetallic coatings on attachments for electrolytic protection where attachments are in direct contact with copper tubing.
- 5) Use padded hangers for piping that is subject to scratching.
- 6) Horizontal-Piping Hangers and Supports: Unless otherwise indicated and except as specified in piping system Sections, install the following types:
 - a) Adjustable, Steel Clevis Hangers (MSS Type 1): For suspension of non-insulated or insulated stationary pipes, NPS 1/2 to NPS 30.
 - b) Yoke-Type Pipe Clamps (MSS Type 2): For suspension of 120 to 450 deg. F pipes, NPS 4 to NPS 16, requiring up to 4 inches of insulation.
 - c) Carbon- or Alloy-Steel, Double-Bolt Pipe Clamps (MSS Type 3): For suspension of pipes, NPS 3/4 to NPS 24, requiring clamp flexibility and up to 4 inches of insulation.
 - d) Adjustable, Steel Band Hangers (MSS Type 7): For suspension of non-insulated stationary pipes, NPS 1/2 to NPS 8.
 - e) U-Bolts (MSS Type 24): For support of heavy pipes, NPS 1/2 to NPS 30.
 - f) Pipe Saddle Supports (MSS Type 36): For support of pipes, NPS 4 to NPS 36, with steel pipe base stanchion support and cast-iron floor flange.
 - g) Single Pipe Rolls (MSS Type 41): For suspension of pipes, NPS 1 to NPS 30, from 2 rods if longitudinal movement caused by expansion and contraction might occur.
 - h) Complete Pipe Rolls (MSS Type 44): For support of pipes, NPS 2 to NPS 42, if longitudinal movement caused by expansion and contraction might occur but vertical adjustment is not necessary.
- 7) Vertical-Piping Clamps: Unless otherwise indicated and except as specified in piping system Sections, install the following types:
 - a) Extension Pipe or Riser Clamps (MSS Type 8): For support of pipe risers, NPS 3/4 to NPS 20.
 - b) Carbon- or Alloy-Steel Riser Clamps (MSS Type 42): For support of pipe risers, NPS 3/4 to NPS 20, if longer ends are required for riser clamps.
- 8) Hanger-Rod Attachments: Unless otherwise indicated and except as specified in piping system Sections, install the following types:

- a) Steel Turnbuckles (MSS Type 13): For adjustment up to 6 inches for heavy loads.
 - b) Steel Clevises (MSS Type 14): For 120 to 450 deg. F piping installations.
- 9) Building Attachments: Unless otherwise indicated and except as specified in piping system Sections, install the following types:
- a) Steel or Malleable Concrete Inserts (MSS Type 18): For upper attachment to suspend pipe hangers from concrete ceiling.
 - b) Top-Beam C-Clamps (MSS Type 19): For use under roof installations with bar-joint construction to attach to top flange of structural shape.
 - c) Side-Beam or Channel Clamps (MSS Type 20): For attaching to bottom flange of beams, channels, or angles.
 - d) Center-Beam Clamps (MSS Type 21): For attaching to center of bottom flange of beams.
 - e) Welded Beam Attachments (MSS Type 22): For attaching to bottom of beams if loads are considerable and rod sizes are large.
 - f) C-Clamps (MSS Type 23): For structural shapes.
 - g) Welded-Steel Brackets: For support of pipes from below, or for suspending from above by using clip and rod. Use one of the following for indicated loads:
 - i) Light (MSS Type 31): 750 lb.
 - ii) Medium (MSS Type 32): 1500 lb.
 - iii) Heavy (MSS Type 33): 3000 lb.
 - h) Side-Beam Brackets (MSS Type 34): For sides of steel or wooden beams.
 - i) Plate Lugs (MSS Type 57): For attaching to steel beams if flexibility at beam is required.
- 10) Saddles and Shields: Unless otherwise indicated and except as specified in piping system Sections, install the following types:
- a) Steel Pipe-Covering Protection Saddles (MSS Type 39): To fill interior voids with insulation that matches adjoining insulation.
 - b) Protection Shields (MSS Type 40): Of length recommended in writing by manufacturer to prevent crushing insulation.
 - c) Thermal-Hanger Shield Inserts: For supporting insulated pipe.
- 11) Spring Hangers and Supports: Unless otherwise indicated and except as specified in piping system Sections, install the following types:
- a) Spring Cushions (MSS Type 48): For light loads if vertical movement does not exceed 1-1/4 inches.
 - b) Spring-Cushion Roll Hangers (MSS Type 49): For equipping Type 41 roll hanger with springs.
 - c) Variable-Spring Base Supports (MSS Type 52): Preset to indicated load and limit variability factor to 25 percent to absorb expansion and contraction of piping system from base support.
- 12) Comply with MSS SP-69 for trapeze pipe hanger selections and applications that are not specified in piping system Sections.
- 13) Comply with MFMA-102 for metal framing system selections and applications that are not specified in piping system Sections.
- 14) Use powder-actuated fasteners or mechanical-expansion anchors instead of building attachments where required in concrete construction.

B) HANGER AND SUPPORT INSTALLATION

- 1) **Steel Pipe Hanger Installation:** Comply with MSS SP-69 and MSS SP-89. Install hangers, supports, clamps, and attachments as required to properly support piping from building structure.
- 2) **Trapeze Pipe Hanger Installation:** Comply with MSS SP-69 and MSS SP-89. Arrange for grouping of parallel runs of horizontal piping and support together on field-fabricated trapeze pipe hangers.
 - a) **Pipes of Various Sizes:** Support together and space trapezes for smallest pipe size or install intermediate supports for smaller diameter pipes as specified above for individual pipe hangers.
 - b) **Field fabricate** from ASTM A 36/A 36M, steel shapes selected for loads being supported. Weld steel according to AWS D1.1.
- 3) **Metal Framing System Installation:** Arrange for grouping of parallel runs of piping and support together on field-assembled metal framing systems.
- 4) **Thermal-Hanger Shield Installation:** Install in pipe hanger or shield for insulated piping.
- 5) **Fastener System Installation:**
 - a) Install powder-actuated fasteners in concrete after concrete is placed and completely cured. Use operators that are licensed by powder-actuated tool manufacturer. Install fasteners according to powder-actuated tool manufacturer's operating manual.
 - b) Install mechanical-expansion anchors in concrete after concrete is placed and completely cured. Install fasteners according to manufacturer's written instructions.
- 6) Install hangers and supports complete with necessary inserts, bolts, rods, nuts, washers, and other accessories.
- 7) **Equipment Support Installation:** Fabricate from welded-structural-steel shapes.
- 8) Install hangers and supports to allow controlled thermal and seismic movement of piping systems, to permit freedom of movement between pipe anchors, and to facilitate action of expansion joints, expansion loops, expansion bends, and similar units.
- 9) Install lateral bracing with pipe hangers and supports to prevent swaying.
- 10) Install building attachments within concrete slabs or attach to structural steel. Install additional attachments at concentrated loads, including valves, flanges, and strainers, NPS 2-1/2 (DN 65) and larger and at changes in direction of piping. Install concrete inserts before concrete is placed; fasten inserts to forms and install reinforcing bars through openings at top of inserts.
- 11) **Load Distribution:** Install hangers and supports so piping live and dead loads and stresses from movement will not be transmitted to connected equipment.
- 12) **Pipe Slopes:** Install hangers and supports to provide indicated pipe slopes and so maximum pipe deflections allowed by ASME B31.9 (for building services piping) are not exceeded.
- 13) **Insulated Piping:** Comply with the following:

- a) Attach clamps and spacers to piping.
 - i) Piping Operating above Ambient Air Temperature: Clamp may project through insulation.
 - ii) Piping Operating below Ambient Air Temperature: Use thermal-hanger shield insert with clamp sized to match outside diameter of insert.
 - iii) Do not exceed pipe stress limits according to ASME B31.9 for building services piping.
- b) Install MSS SP-58, Type 39, protection saddles if insulation without vapor barrier is indicated. Fill interior voids with insulation that matches adjoining insulation.
- c) Install MSS SP-58, Type 40, protective shields on cold piping with vapor barrier. Shields shall span an arc of 180 degrees.
- d) Shield Dimensions for Pipe: Not less than the following:
 - i) NPS 1/4 to NPS 3-1/2: 12 inches long and 0.048 inch thick.
 - ii) NPS 4: 12 inches long and 0.06 inch thick.
 - iii) NPS 5 and NPS 6: 18 inches long and 0.06 inch thick.
- e) Pipes NPS 8 and Larger: Include wood inserts.
- f) Insert Material: Length at least as long as protective shield.
- g) Thermal-Hanger Shields: Install with insulation same thickness as piping insulation.

C) ADJUSTING

- 1) Hanger Adjustments: Adjust hangers to distribute loads equally on attachments and to achieve indicated slope of pipe.

D) PAINTING

- 1) Touch Up: Clean field welds and abraded areas of shop paint. Paint exposed areas immediately after erecting hangers and supports. Use same materials as used for shop painting. Comply with SSPC-PA 1 requirements for touching up field-painted surfaces.
 - a) Apply paint by brush or spray to provide minimum dry film thickness of 2.0 mils.
- 2) Galvanized Surfaces: Clean welds, bolted connections, and abraded areas and apply galvanizing-repair paint to comply with ASTM A 780.

P220529.9. MEASUREMENT AND PAYMENT

No separate payments will be made for this work. Any work completed with this section shall be deemed included in the unit price bid for Item No. RCP-PL1.

SECTION P262533 HEAT TRACING FOR PLUMBING PIPING
(NOT A BID ITEM)

P262533.1. INTENT

- A) This Section includes plumbing piping heat tracing for freeze prevention, domestic hot-water-temperature maintenance, and snow and ice melting on roofs and in gutters and downspouts with the following electric heating cables:
 - 1) Self-regulating, parallel resistance.

P262533.2. RELATED WORK AND REQUIREMENTS

- A) The following requirements are included in this Section to expand the requirements specified in the General Conditions of the NYCDOT Standard Highway Specifications.

P262533.3. SUBMITTALS

- A) Product Data: Include rated capacities, operating characteristics, furnished specialties, and accessories for each type of product indicated:
 - 1) Schedule heating capacity, length of cable, spacing, and electrical power requirement for each electric heating cable required.
- B) Shop Drawings: For electric heating cable. Include plans, sections, details, and attachments to other work.
 - 1) Wiring Diagrams: For power, signal, and control wiring.
- C) Field quality-control reports.
- D) Operation and Maintenance data.
- E) Warranty. Special warranty specified in this Section.

P262533.4. QUALITY CONTROL

- A) Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
- B) Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace electric heating cable that fails in materials or workmanship within specified warranty period.
 - 1) Warranty Period: 10 years from date of Substantial Completion.

P262533.5. MATERIALS

- A) SELF-REGULATING, PARALLEL-RESISTANCE HEATING CABLES
 - 1) Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - 2) Manufacturers: Subject to compliance with requirements, provide products by one of the following:

- 3) Basis-of-Design Product: Subject to compliance with requirements, provide self-regulating cable heat-tracing system Winterguard Wet manufactured by Raychem, Division of Tyco Thermal Controls or equal from approved manufacturers:
 - a) BH Thermal Corporation.
 - b) Chromalox, Inc.; Wiegard Industrial Division; Emerson Electric Company.
 - c) Delta-Therm Corporation.
 - d) or other approved manufacturer.
- 4) Heating Element: Pair of parallel No. 16 AWG nickel-coated, stranded copper bus wires embedded in crosslinked conductive polymer core, which varies heat output in response to temperature along its length. Terminate with waterproof, factory-assembled non-heating leads with connectors at one end, and seal the opposite end watertight. Cable shall be capable of crossing over itself once without overheating.
- 5) Electrical Insulating Jacket: Flame-retardant polyolefin.
- 6) Cable Cover: Tinned-copper braid, and polyolefin outer jacket with UV inhibitor.
- 7) Maximum Operating Temperature (Power On): 150 deg. F.
- 8) Maximum Exposure Temperature (Power Off): 185 deg. F.
- 9) Maximum Operating Temperature: 300 deg. F.
- 10) Capacities and Characteristics:
 - a) Maximum Heat Output: 6 W/ft.
 - b) Piping Diameter: 2".
 - c) Number of Parallel Cables: One.
 - d) Volts: 240 V.
 - e) Phase: 3.
 - f) Hertz: 60.
 - g) Minimum Circuit Ampacity: 20A
 - h) Maximum Overcurrent Protection: 20A

B) CONTROLS

- 1) Pipe-Mounting Thermostats for Freeze Protection:
 - a) Remote bulb unit with adjustable temperature range from 30 to 50 deg F.
 - b) Snap action; open-on-rise, single-pole switch with minimum current rating adequate for connected cable.
 - c) Remote bulb on capillary, resistance temperature device, or thermistor for directly sensing pipe-wall temperature.
 - d) Corrosion-resistant, waterproof control enclosure.

C) ACCESSORIES

- 1) Cable Installation Accessories: Fiberglass tape, heat-conductive putty, cable ties, silicone end seals and splice kits, and installation clips all furnished by manufacturer, or as recommended in writing by manufacturer.
- 2) Warning Labels: Refer to Section P220553 "IDENTIFICATION FOR PLUMBING PIPING AND EQUIPMENT," herein this Addendum.

- 3) Warning Tape: Continuously printed "Electrical Tracing"; vinyl, at least 3 mils (0.08 mm) thick, and with pressure-sensitive, permanent, waterproof, self-adhesive back.
 - a) Width for Markers on Pipes with outside diameter (OD), Including Insulation, Less Than 6 Inches: 3/4 inch minimum.
 - b) Width for Markers on Pipes with OD, Including Insulation, 6 Inches or Larger: 1-1/2 inches minimum.

P262533.6. METHODS

A) APPLICATIONS

- 1) Install the following types of electric heating cable for the applications described:
 - a) Freeze Protection for Domestic Water: Self-regulating, parallel-resistance heating cable.

B) INSTALLATION

- 1) Install electric heating cable across expansion, construction, and control joints according to manufacturer's written recommendations using cable protection conduit and slack cable to allow movement without damage to cable.
- 2) Electric Heating Cable Installation for Freeze Protection for Piping:
 - a) Install electric heating cables after piping has been tested and before insulation is installed.
 - b) Install electric heating cables according to IEEE 515.1.
 - c) Install insulation over piping with electric cables according to Section P220700 "PLUMBING INSULATION," herein this Addendum.
 - d) Install warning tape on piping insulation where piping is equipped with electric heating cables.
- 3) Set field-adjustable switches and circuit-breaker trip ranges.
- 4) Protect installed heating cables, including non-heating leads, from damage.
- 5) Ground equipment according to Section E260526 "GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS," herein this Addendum.
- 6) Connect wiring according to Section E260519 "LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES," herein this Addendum.

C) FIELD QUALITY CONTROL

- 1) Testing: Perform tests after cable installation but before application of coverings such as insulation, wall or ceiling construction, or concrete.
 - a) Test cables for electrical continuity and insulation integrity before energizing.
 - b) Test cables to verify rating and power input. Energize and measure voltage and current simultaneously.
- 2) Repeat tests for continuity, insulation resistance, and input power after applying thermal insulation on pipe-mounting cables.
- 3) Remove and replace malfunctioning units and retest as specified above.

P262533.7. MEASUREMENT AND PAYMENT

No separate payments will be made for this work. Any work completed with this section shall be deemed included in the unit price bid for Item No. RCP-PL1.

SECTION P220553 IDENTIFICATION FOR PLUMBING PIPING AND EQUIPMENT
(NOT A BID ITEM)

P220553.1. INTENT

- A) This Section includes:
- 1) Warning signs and labels.
 - 2) Pipe labels.

P220553.2. SUBMITTALS

- A) Product Data: For each type of product indicated.

P220553.3. MATERIALS

A) PIPE LABELS

- 1) General Requirements for Manufactured Pipe Labels: Preprinted, color-coded, with lettering indicating service, and showing flow direction.
- 2) Pretensioned Pipe Labels: Precoiled, semi-rigid plastic formed to [partially cover] [cover full] circumference of pipe and to attach to pipe without fasteners or adhesive.
- 3) Self-Adhesive Pipe Labels: Printed plastic with contact-type, permanent-adhesive backing.
- 4) Pipe Label Contents: Include identification of piping service using same designations or abbreviations as used on Drawings, pipe size, and an arrow indicating flow direction.
 - a) Flow-Direction Arrows: Integral with piping system service lettering to accommodate both directions, or as separate unit on each pipe label to indicate flow direction.
 - b) Lettering Size: At least 1-1/2 inches high.

P220553.4. METHODS

A) PREPARATION

- 1) Clean piping and equipment surfaces of substances that could impair bond of identification devices, including dirt, oil, grease, release agents, and incompatible primers, paints, and encapsulants.

B) EQUIPMENT LABEL INSTALLATION

- 1) Install or permanently fasten labels on each major item of mechanical equipment.
- 2) Locate equipment labels where accessible and visible.

C) PIPE LABEL INSTALLATION

- 1) Piping Color-Coding: as approved by Engineer.

- 2) Locate pipe labels where piping is exposed or above accessible ceilings in finished spaces; machine rooms; accessible maintenance spaces such as shafts, tunnels, and plenums; and exterior exposed locations as follows:
 - a) Near each valve and control device.
 - b) Near each branch connection, excluding short takeoffs for fixtures and terminal units. Where flow pattern is not obvious, mark each pipe at branch.
 - c) Near penetrations through walls, floors, ceilings, and inaccessible enclosures.
 - d) At access doors, manholes, and similar access points that permit view of concealed piping.
 - e) Near major equipment items and other points of origination and termination.
 - f) Spaced at maximum intervals of 50 feet along each run. Reduce intervals to 25 feet in areas of congested piping and equipment.
 - g) On piping above removable acoustical ceilings. Omit intermediately spaced labels.

- 3) Pipe Label Color Schedule:
 - a) Domestic Water Piping:
 - b) Background Color: White.
 - c) Letter Color: Black.

P220553.5. MEASUREMENT AND PAYMENT

No separate payments will be made for this work. Any work completed with this section shall be deemed included in the unit price bid for Item No. RCP-PL1.

SECTION P220700 PLUMBING INSULATION
(NOT A BID ITEM)

P220700.1. INTENT

- A) This Section includes:
- 1) Insulation materials:
 - a) Mineral fiber.
 - 2) Insulating cements.
 - 3) Adhesives.
 - 4) Mastics.
 - 5) Sealants.
 - 6) Field-applied jackets.
 - 7) Tapes.
 - 8) Securements.
 - 9) Corner angles.

P220700.2. SUBMITTALS

- A) Product Data: For each type of product indicated.
- B) Shop Drawings:
- 1) Detail application of protective shields, saddles, and inserts at hangers for each type of insulation and hanger.
 - 2) Detail attachment and covering of heat tracing inside insulation.
 - 3) Detail insulation application at pipe expansion joints for each type of insulation.
 - 4) Detail insulation application at elbows, fittings, flanges, valves, and specialties for each type of insulation.
 - 5) Detail removable insulation at piping specialties, equipment connections, and access panels.
 - 6) Detail application of field-applied jackets.
 - 7) Detail application at linkages of control devices.
 - 8) Detail field application for each equipment type.
- C) Field quality-control reports.

P220700.3. QUALITY CONTROL

- A) Fire-Test-Response Characteristics: Insulation and related materials shall have fire-test-response characteristics indicated, as determined by testing identical products per ASTM E 84, by a testing and inspecting agency acceptable to authorities having jurisdiction. Factory label insulation and jacket materials and adhesive, mastic, tapes, and cement material containers, with appropriate markings of applicable testing and inspecting agency.
- 1) Insulation Installed Indoors: Flame-spread index of 25 or less, and smoke-developed index of 50 or less.
 - 2) Insulation Installed Outdoors: Flame-spread index of 75 or less, and smoke-developed index of 150 or less.

P220700.4. MATERIALS

A) INSULATION MATERIALS

- 1) Comply with requirements in section P220700.5 for where insulating materials shall be applied.

- 2) Products shall not contain asbestos, lead, mercury, or mercury compounds.
- 3) Products that come in contact with stainless steel shall have a leachable chloride content of less than 50 ppm when tested according to ASTM C 871.
- 4) Insulation materials for use on austenitic stainless steel shall be qualified as acceptable according to ASTM C 795.
- 5) Foam insulation materials shall not use Chlorofluorocarbon (CFC) or Hydro chlorofluorocarbon (HCFC) blowing agents in the manufacturing process.
- 6) Mineral-Fiber, Preformed Pipe Insulation:
 - a) Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
 - i) Fibrex Insulations Inc.; Coreplus 1200.
 - ii) Johns Manville; Micro-Lok.
 - iii) Knauf Insulation; 1000 Pipe Insulation.
 - iiii) or Approved equal.
 - b) Type I, 850 deg. F Materials: Mineral or glass fibers bonded with a thermosetting resin. Comply with ASTM C 547, Type I, Grade A, without factory-applied jacket.
 - c) Pipe and tank insulation is used for large-diameter piping and vessels. ASJ is commonly used.

B) INSULATING CEMENTS

- 1) Mineral-Fiber, Hydraulic-Setting Insulating and Finishing Cement: Comply with ASTM C 449/C 449M.
 - a) Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
 - i) Insulco, Division of MFS, Inc.; SmoothKote.
 - ii) P. K. Insulation Mfg. Co., Inc.; PK No. 127, and Quik-Cote.
 - iii) Rock Wool Manufacturing Company; Delta One Shot.

C) ADHESIVES

- 1) Materials shall be compatible with insulation materials, jackets, and substrates and for bonding insulation to itself and to surfaces to be insulated, unless otherwise indicated.
- 2) Mineral-Fiber Adhesive: Comply with MIL-A-3316C, Class 2, Grade A.
 - a) Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
 - i) Childers Products, Division of ITW; CP-82.
 - ii) Foster Products Corporation, H. B. Fuller Company; 85-20.
 - iii) ITW TACC, Division of Illinois Tool Works; S-90/80.
 - iv) Marathon Industries, Inc.; 225.
 - v) Mon-Eco Industries, Inc.; 22-25.

- 3) PVC Jacket Adhesive: Compatible with PVC jacket.
 - a) Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
 - i) Dow Chemical Company (The); 739, Dow Silicone.
 - ii) Johns-Manville; Zeston Perma-Weld, CEEL-TITE Solvent Welding Adhesive.
 - iii) P.I.C. Plastics, Inc.; Welding Adhesive.
 - iv) Red Devil, Inc.; Celulon Ultra Clear.
 - v) Speedline Corporation; Speedline Vinyl Adhesive.

D) MASTICS

- 1) Materials shall be compatible with insulation materials, jackets, and substrates; comply with MIL-C-19565C, Type II.
- 2) Vapor-Barrier Mastic: Water based; suitable for indoor and outdoor use on below ambient services.
 - a) Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
 - i) Childers Products, Division of ITW; CP-35.
 - ii) Foster Products Corporation, H. B. Fuller Company; 30-90.
 - iii) ITW TACC, Division of Illinois Tool Works; CB-50.
 - iv) Marathon Industries, Inc.; 590.
 - v) Mon-Eco Industries, Inc.; 55-40.
 - vi) Vimasco Corporation; 749.
 - b) Water-Vapor Permeance: ASTM E 96, Procedure B, 0.013 perm (0.009 metric perm) at 43-mil dry film thickness.
 - c) Service Temperature Range: Minus 20 to plus 180 deg F.
 - d) Solids Content: ASTM D 1644, 59 percent by volume and 71 percent by weight.
 - e) Color: White.
- 3) Breather Mastic: Water based; suitable for indoor and outdoor use on above ambient services.
 - a) Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
 - i) Childers Products, Division of ITW; CP-10.
 - ii) Foster Products Corporation, H. B. Fuller Company; 35-00.
 - iii) ITW TACC, Division of Illinois Tool Works; CB-05/15.
 - iv) Marathon Industries, Inc.; 550.
 - v) Mon-Eco Industries, Inc.; 55-50.
 - vi) Vimasco Corporation; WC-1/WC-5.
 - b) Water-Vapor Permeance: ASTM F 1249, 3 perms at 0.0625-inch dry film thickness.
 - c) Service Temperature Range: Minus 20 to plus 200 deg F.

- d) Solids Content: 63 percent by volume and 73 percent by weight.
- e) Color: White.

E) SEALANTS

1) Joint Sealants:

- a) Joint Sealants for Cellular-Glass Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
 - i) Childers Products, Division of ITW; CP-76.
 - ii) Foster Products Corporation, H. B. Fuller Company; 30-45.
 - iii) Marathon Industries, Inc.; 405.
 - iv) Mon-Eco Industries, Inc.; 44-05.
 - v) Pittsburgh Corning Corporation; Pittseal 444.
 - vi) Vimasco Corporation; 750.

F) FIELD-APPLIED JACKETS

- 1) Field-applied jackets shall comply with ASTM C 921, Type I, unless otherwise indicated.
- 2) PVC Jacket: High-impact-resistant, UV-resistant PVC complying with ASTM D 1784, Class 16354-C; thickness as scheduled; roll stock ready for shop or field cutting and forming. Thickness is indicated in field-applied jacket schedules.
 - a) Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
 - i) Johns Manville; Zeston.
 - ii) P.I.C. Plastics, Inc.; FG Series.
 - iii) Proto PVC Corporation; LoSmoke.
 - iv) Speedline Corporation; SmokeSafe.
 - b) Adhesive: As recommended by jacket material manufacturer.
 - c) Color: White.
 - d) Factory-fabricated fitting covers to match jacket if available; otherwise, field fabricate.
 - i) Shapes: 45- and 90-degree, short- and long-radius elbows, tees, valves, flanges, unions, reducers, end caps, soil-pipe hubs, traps, mechanical joints, and P-trap and supply covers for lavatories.
 - e) Factory-fabricated tank heads and tank side panels.

G) TAPES

- 1) PVC Tape: White vapor-retarder tape matching field-applied PVC jacket with acrylic adhesive. Suitable for indoor and outdoor applications.
 - a) Products: Subject to compliance with requirements, [provide the following] [provide one of the following] available products that may be incorporated into the Work include, but are not limited to, the following:
 - i) Avery Dennison Corporation, Specialty Tapes Division; Fasson 0555.

- ii) Compac Corp.; 130.
 - iii) Ideal Tape Co., Inc., an American Biltrite Company; 370 White PVC tape.
 - iv) Venture Tape; 1506 CW NS.
- b) Width: 2 inches.
 - c) Thickness: 6 mils.
 - d) Adhesion: 64 ounces force/inch in width.
 - f) Elongation: 500 percent.
 - g) Tensile Strength: 18 lbf/inch in width.

H) SECUREMENTS

- 1) Aluminum Bands: ASTM B 209 (ASTM B 209M), Alloy 3003, 3005, 3105, or 5005; Temper H-14, 1/2 inch wide with wing or closed seal.
 - a) Products: Subject to compliance with requirements, provide the following products:
 - i) Childers Products; Bands.
 - ii) PABCO Metals Corporation; Bands.
 - iii) RPR Products, Inc.; Bands.
 - iv) or an approved equivalent.
- 2) Insulation Pins and Hangers:
 - a) Metal, Adhesively Attached, Perforated-Base Insulation Hangers: Baseplate welded to projecting spindle that is capable of holding insulation, of thickness indicated, securely in position indicated when self-locking washer is in place. Comply with the following requirements:
 - 1) Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
 - i) AGM Industries, Inc.; Tactoo Insul-Hangers, Series T.
 - ii) GEMCO; Perforated Base.
 - iii) Midwest Fasteners, Inc.; Spindle.
 - iv) or an approved equivalent.
 - 2) Baseplate: Perforated, galvanized carbon-steel sheet, 0.030 inch (0.76 mm) thick by 2 inches square.
 - 3) Spindle: Stainless steel, fully annealed, 0.106-inch-diameter shank, length to suit depth of insulation indicated.
 - 4) Adhesive: Recommended by hanger manufacturer. Product with demonstrated capability to bond insulation hanger securely to substrates indicated without damaging insulation, hangers, and substrates.
 - b) Nonmetal, Adhesively Attached, Perforated-Base Insulation Hangers: Baseplate fastened to projecting spindle that is capable of holding insulation, of thickness indicated, securely in position indicated when self-locking washer is in place. Comply with the following requirements:
 - 1) Products: Subject to compliance with requirements, provide one of the following products:
 - i) GEMCO; Nylon Hangers.
 - ii) Midwest Fasteners, Inc.; Nylon Insulation Hangers.
 - iii) or an approved equivalent.

- 2) Baseplate: Perforated, nylon sheet, 0.030 inch thick by 1-1/2 inches (38 mm) in diameter.
 - 3) Spindle: Nylon, 0.106-inch-diameter shank, length to suit depth of insulation indicated, up to 2-1/2 inches.
 - 4) Adhesive: Recommended by hanger manufacturer. Product with demonstrated capability to bond insulation hanger securely to substrates indicated without damaging insulation, hangers, and substrates.
- c) Self-Sticking-Base Insulation Hangers: Baseplate welded to projecting spindle that is capable of holding insulation, of thickness indicated, securely in position indicated when self-locking washer is in place. Comply with the following requirements:
- 1) Products: Subject to compliance with requirements, provide one of the following products:
 - i) AGM Industries, Inc.; Tactoo Insul-Hangers, Series TSA.
 - ii) GEMCO; Press and Peel.
 - iii) Midwest Fasteners, Inc.; Self Stick.
 - iv) or an approved equivalent.
 - 2) Baseplate: Galvanized carbon-steel sheet, 0.030 inch thick by 2 inches (50 mm) square.
 - 3) Spindle: Stainless steel, fully annealed, 0.106-inch-diameter shank, length to suit depth of insulation indicated.
 - 4) Adhesive-backed base with a peel-off protective cover.
- d) Insulation-Retaining Washers: Self-locking washers formed from 0.016-inch-thick, stainless-steel sheet, with beveled edge sized as required to hold insulation securely in place but not less than 1-1/2 inches in diameter.
- 1) Products: Subject to compliance with requirements, provide one of the following products:
 - i) AGM Industries, Inc.; RC-150.
 - ii) GEMCO; R-150.
 - iii) Midwest Fasteners, Inc.; WA-150.
 - iv) Nelson Stud Welding; Speed Clips.
 - v) or an approved equivalent.
 - 2) Protect ends with capped self-locking washers incorporating a spring steel insert to ensure permanent retention of cap in exposed locations.
- e) Nonmetal Insulation-Retaining Washers: Self-locking washers formed from 0.016-inch-thick nylon sheet, with beveled edge sized as required to hold insulation securely in place but not less than 1-1/2 inches in diameter.
- 1) Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
 - i) GEMCO.
 - ii) Midwest Fasteners, Inc.
 - 3) Staples: Outward-clinching insulation staples, nominal 3/4-inch wide, stainless steel or Monel.
 - 4) Wire: 0.062-inch soft-annealed, stainless steel.

- a) Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - i) C & F Wire.
 - ii) Childers Products.
 - iii) PABCO Metals Corporation.
 - iv) RPR Products, Inc.

I) CORNER ANGLES

- 1) PVC Corner Angles: 30 mils thick, minimum 1 by 1 inch, PVC according to ASTM D 1784, Class 16354-C. White or color-coded to match adjacent surface.

P220700.5. METHODS

A) PREPARATION

- 1) Surface Preparation: Clean and dry surfaces to receive insulation. Remove materials that will adversely affect insulation application.
- 2) Coordinate insulation installation with the trade installing heat tracing. Comply with requirements for heat tracing that apply to insulation.
- 3) Mix insulating cements with clean potable water; if insulating cements are to be in contact with stainless-steel surfaces, use demineralized water.

B) GENERAL INSTALLATION REQUIREMENTS

- 1) Install insulation materials, accessories, and finishes with smooth, straight, and even surfaces; free of voids throughout the length of equipment and piping including fittings, valves, and specialties.
- 2) Install insulation materials, forms, vapor barriers or retarders, jackets, and thicknesses required for each item of equipment and pipe system as specified in insulation system schedules.
- 3) Install accessories compatible with insulation materials and suitable for the service. Install accessories that do not corrode, soften, or otherwise attack insulation or jacket in either wet or dry state.
- 4) Install insulation with longitudinal seams at top and bottom of horizontal runs.
- 5) Install multiple layers of insulation with longitudinal and end seams staggered.
- 6) Do not weld brackets, clips, or other attachment devices to piping, fittings, and specialties.
- 7) Keep insulation materials dry during application and finishing.
- 8) Install insulation with tight longitudinal seams and end joints. Bond seams and joints with adhesive recommended by insulation material manufacturer.
- 9) Install insulation with least number of joints practical.
- 10) Where vapor barrier is indicated, seal joints, seams, and penetrations in insulation at hangers, supports, anchors, and other projections with vapor-barrier mastic.

- a) Install insulation continuously through hangers and around anchor attachments.
 - b) For insulation application where vapor barriers are indicated, extend insulation on anchor legs from point of attachment to supported item to point of attachment to structure. Taper and seal ends at attachment to structure with vapor-barrier mastic.
 - c) Install insert materials and install insulation to tightly join the insert. Seal insulation to insulation inserts with adhesive or sealing compound recommended by insulation material manufacturer.
 - d) Cover inserts with jacket material matching adjacent pipe insulation. Install shields over jacket, arranged to protect jacket from tear or puncture by hanger, support, and shield.
- 11) Apply adhesives, mastics, and sealants at manufacturer's recommended coverage rate and wet and dry film thicknesses.
- 12) Install insulation with factory-applied jackets as follows:
- a) Draw jacket tight and smooth.
 - b) Cover circumferential joints with 3-inch-wide strips, of same material as insulation jacket. Secure strips with adhesive and outward clinching staples along both edges of strip, spaced 4 inches o.c.
 - c) Overlap jacket longitudinal seams at least 1-1/2 inches. Install insulation with longitudinal seams at bottom of pipe. Clean and dry surface to receive self-sealing lap. Staple laps with outward clinching staples along edge at 4 inches o.c.
 - i) For below ambient services, apply vapor-barrier mastic over staples.
 - d) Cover joints and seams with tape as recommended by insulation material manufacturer to maintain vapor seal.
 - e) Where vapor barriers are indicated, apply vapor-barrier mastic on seams and joints and at ends adjacent to pipe flanges and fittings.
- 13) Cut insulation in a manner to avoid compressing insulation more than 75 percent of its nominal thickness.
- 14) Finish installation with systems at operating conditions. Repair joint separations and cracking due to thermal movement.
- 15) Repair damaged insulation facings by applying same facing material over damaged areas. Extend patches at least 4 inches beyond damaged areas. Adhere, staple, and seal patches similar to butt joints.
- 16) For above ambient services, do not install insulation to the following:
- a) Vibration-control devices.
 - b) Testing agency labels and stamps.
 - c) Nameplates and data plates.
 - d) Manholes.
 - e) Handholes.
 - f) Cleanouts.

C) PENETRATIONS

- 1) Insulation Installation at Roof Penetrations: Install insulation continuously through roof penetrations.

- a) Seal penetrations with flashing sealant.
 - b) For applications requiring only indoor insulation, terminate insulation above roof surface and seal with joint sealant. For applications requiring indoor and outdoor insulation, install insulation for outdoor applications tightly joined to indoor insulation ends. Seal joint with joint sealant.
 - c) Extend jacket of outdoor insulation outside roof flashing at least 2 inches below top of roof flashing.
 - d) Seal jacket to roof flashing with flashing sealant.
- 2) Insulation Installation at Underground Exterior Wall Penetrations: Terminate insulation flush with sleeve seal. Seal terminations with flashing sealant.
 - 3) Insulation Installation at Aboveground Exterior Wall Penetrations: Install insulation continuously through wall penetrations.
 - a) Seal penetrations with flashing sealant.
 - b) For applications requiring only indoor insulation, terminate insulation inside wall surface and seal with joint sealant. For applications requiring indoor and outdoor insulation, install insulation for outdoor applications tightly joined to indoor insulation ends. Seal joint with joint sealant.
 - c) Extend jacket of outdoor insulation outside wall flashing and overlap wall flashing at least 2 inches.
 - d) Seal jacket to wall flashing with flashing sealant.
 - 4) Insulation Installation at Interior Wall and Partition Penetrations (That Are Not Fire Rated): Install insulation continuously through walls and partitions.
 - 5) Insulation Installation at Floor Penetrations:
 - a) Pipe: Install insulation continuously through floor penetrations.

D) GENERAL PIPE INSULATION INSTALLATION

- 1) Requirements in this article generally apply to all insulation materials except where more specific requirements are specified in various pipe insulation material installation articles.
- 2) Insulation Installation on Fittings, Valves, Strainers, Flanges, and Unions:
 - a) Install insulation over fittings, valves, strainers, flanges, unions, and other specialties with continuous thermal and vapor-retarder integrity, unless otherwise indicated.
 - b) Insulate pipe elbows using preformed fitting insulation or mitered fittings made from same material and density as adjacent pipe insulation. Each piece shall be butted tightly against adjoining piece and bonded with adhesive. Fill joints, seams, voids, and irregular surfaces with insulating cement finished to a smooth, hard, and uniform contour that is uniform with adjoining pipe insulation.
 - c) Insulate tee fittings with preformed fitting insulation or sectional pipe insulation of same material and thickness as used for adjacent pipe. Cut sectional pipe insulation to fit. Butt each section closely to the next and hold in place with tie wire. Bond pieces with adhesive.
 - d) Insulate valves using preformed fitting insulation or sectional pipe insulation of same material, density, and thickness as used for adjacent pipe. Overlap adjoining pipe insulation by not less than two times the thickness of pipe insulation, or one pipe diameter, whichever is thicker. For valves, insulate up to and including the bonnets, valve stuffing-box studs, bolts, and nuts. Fill joints, seams, and irregular surfaces with insulating cement.

- e) Insulate strainers using preformed fitting insulation or sectional pipe insulation of same material, density, and thickness as used for adjacent pipe. Overlap adjoining pipe insulation by not less than two times the thickness of pipe insulation, or one pipe diameter, whichever is thicker. Fill joints, seams, and irregular surfaces with insulating cement. Insulate strainers so strainer basket flange or plug can be easily removed and replaced without damaging the insulation and jacket. Provide a removable reusable insulation cover. For below ambient services, provide a design that maintains vapor barrier.
 - f) Insulate flanges and unions using a section of oversized preformed pipe insulation. Overlap adjoining pipe insulation by not less than two times the thickness of pipe insulation, or one pipe diameter, whichever is thicker.
 - g) Cover segmented insulated surfaces with a layer of finishing cement and coat with a mastic. Install vapor-barrier mastic for below ambient services and a breather mastic for above ambient services. Reinforce the mastic with fabric-reinforcing mesh. Trowel the mastic to a smooth and well-shaped contour.
 - h) For services not specified to receive a field-applied jacket except for flexible elastomeric and polyolefin, install fitted PVC cover over elbows, tees, strainers, valves, flanges, and unions. Terminate ends with PVC end caps. Tape PVC covers to adjoining insulation facing using PVC tape.
 - i) Stencil or label the outside insulation jacket of each union with the word "UNION." Match size and color of pipe labels.
- 3) Insulate instrument connections for thermometers, pressure gages, pressure temperature taps, test connections, flow meters, sensors, switches, and transmitters on insulated pipes, vessels, and equipment. Shape insulation at these connections by tapering it to and around the connection with insulating cement and finish with finishing cement, mastic, and flashing sealant.
- 4) Install removable insulation covers at locations indicated. Installation shall conform to the following:
- a) Make removable flange and union insulation from sectional pipe insulation of same thickness as that on adjoining pipe. Install same insulation jacket as adjoining pipe insulation.
 - b) When flange and union covers are made from sectional pipe insulation, extend insulation from flanges or union long at least two times the insulation thickness over adjacent pipe insulation on each side of flange or union. Secure flange cover in place with stainless-steel or aluminum bands. Select band material compatible with insulation and jacket.
 - c) Construct removable valve insulation covers in same manner as for flanges except divide the two-part section on the vertical center line of valve body.
 - d) When covers are made from block insulation, make two halves, each consisting of mitered blocks wired to stainless-steel fabric. Secure this wire frame, with its attached insulation, to flanges with tie wire. Extend insulation at least 2 inches over adjacent pipe insulation on each side of valve. Fill space between flange or union cover and pipe insulation with insulating cement. Finish cover assembly with insulating cement applied in two coats. After first coat is dry, apply and trowel second coat to a smooth finish.
 - e) Unless a PVC jacket is indicated in field-applied jacket schedules, finish exposed surfaces with a metal jacket.

E) MINERAL-FIBER INSULATION INSTALLATION

- 1) Insulation Installation on Straight Pipes and Tubes:

- a) Secure each layer of preformed pipe insulation to pipe with wire or bands and tighten bands without deforming insulation materials.
- b) Where vapor barriers are indicated, seal longitudinal seams, end joints, and protrusions with vapor-barrier mastic and joint sealant.
- c) For insulation with factory-applied jackets on above ambient surfaces, secure laps with outward clinched staples at 6 inches o.c.
- d) For insulation with factory-applied jackets on below ambient surfaces, do not staple longitudinal tabs but secure tabs with additional adhesive as recommended by insulation material manufacturer and seal with vapor-barrier mastic and flashing sealant.

2) Insulation Installation on Pipe Flanges:

- a) Install preformed pipe insulation to outer diameter of pipe flange.
- b) Make width of insulation section same as overall width of flange and bolts, plus twice the thickness of pipe insulation.
- c) Fill voids between inner circumference of flange insulation and outer circumference of adjacent straight pipe segments with mineral-fiber blanket insulation.
- d) Install jacket material with manufacturer's recommended adhesive, overlap seams at least 1 inch, and seal joints with flashing sealant.

3) Insulation Installation on Pipe Fittings and Elbows:

- a) Install preformed sections of same material as straight segments of pipe insulation when available.
- b) When preformed insulation elbows and fittings are not available, install mitered sections of pipe insulation, to a thickness equal to adjoining pipe insulation. Secure insulation materials with wire or bands.

4) Insulation Installation on Valves and Pipe Specialties:

- a) Install preformed sections of same material as straight segments of pipe insulation when available.
- b) When preformed sections are not available, install mitered sections of pipe insulation to valve body.
- c) Arrange insulation to permit access to packing and to allow valve operation without disturbing insulation.
- d) Install insulation to flanges as specified for flange insulation application.

F) FIELD-APPLIED JACKET INSTALLATION

- 1) Where PVC jackets are indicated, install with 1-inch overlap at longitudinal seams and end joints; for horizontal applications, install with longitudinal seams along top and bottom of tanks and vessels. Seal with manufacturer's recommended adhesive.

- a) Apply two continuous beads of adhesive to seams and joints, one bead under lap and the finish bead along seam and joint edge.

G) FINISHES

- 1) Equipment and Pipe Insulation with ASJ or Other Paintable Jacket Material: Paint jacket with paint system identified below.

- a) Flat Acrylic Finish: Two finish coats over a primer that is compatible with jacket material and finish coat paint. Add fungicidal agent to render fabric mildew proof.

- i) Finish Coat Material: Interior, flat, latex-emulsion size.
- b) Flexible Elastomeric Thermal Insulation: After adhesive has fully cured, apply two coats of insulation manufacturer's recommended protective coating.
- c) Color: Final color as selected by Engineer, in consultation with the Architect. Vary first and second coats to allow visual inspection of the completed Work.
- d) Do not field paint aluminum or stainless-steel jackets.

H) FIELD QUALITY CONTROL

- 1) Perform tests and inspections.
- 2) Tests and Inspections:
 - a) Inspect field-insulated equipment, randomly selected by Engineer, by removing field-applied jacket and insulation in layers in reverse order of their installation. For large equipment, remove only a portion adequate to determine compliance.
 - b) Inspect pipe, fittings, strainers, and valves, randomly selected by Engineer, by removing field-applied jacket and insulation in layers in reverse order of their installation. Extent of inspection shall be at the discretion of the Engineer.
- 3) All insulation applications will be considered defective Work if sample inspection reveals noncompliance with requirements.

I) PIPING INSULATION SCHEDULE, GENERAL

- 1) Acceptable preformed pipe and tubular insulation materials and thicknesses are identified for each piping system and pipe size range. If more than one material is listed for a piping system, selection from materials listed is Contractor's option.
- 2) Items Not Insulated: Unless otherwise indicated, do not install insulation on the following:
 - a) Drainage piping located in crawl spaces.
 - b) Underground piping.
 - c) Chrome-plated pipes and fittings unless there is a potential for personnel injury.

J) INDOOR PIPING INSULATION SCHEDULE

- 1) Domestic Cold Water (Potable): Insulation shall be the following:
 - a) Mineral-Fiber, Preformed Pipe Insulation, Type I: 1-1/2 inch thick.

K) INDOOR, FIELD-APPLIED JACKET SCHEDULE

- 1) Install jacket over insulation material. For insulation with factory-applied jacket, install the field-applied jacket over the factory-applied jacket.
- 2) If more than one material is listed, selection from materials listed is Contractor's option.
 - a) Piping, Exposed:
 - b) PVC: 20 mils (0.5 mm) thick.

P220700.6. MEASUREMENT AND PAYMENT

No separate payments will be made for this work. Any work completed with this section shall be deemed included in the unit price bid for Item No. RCP-PL1.

SECTION RCP-WF1 EXTERIOR WATER FEATURE

RCP-WF1.1. DESCRIPTION

- A) Work of this Section includes all labor, materials, equipment, tools, incidentals, and services necessary to design, engineer, manufacture, supply, and install the Stationary Water feature with related mechanical and electrical systems complete including all components, hardware, and accessories as indicated on the Contract Drawing and specified herein:
- 1) Discharge and suction piping systems.
 - 2) Electrical conduit and wiring systems.
 - 3) Subterranean Vault.
 - 4) Subterranean Collector Tanks.
 - 5) Mechanical and electrical equipment with components and accessories.
 - 6) Manufacture of primary water feature equipment and components is a "Basis of Design".
 - 7) Include water feature system testing, adjustment, and operational training for the Maintenance Partner.
 - 8) Custom fabricated fixtures.
 - 9) Lighting fixtures.
- B) Related Water feature System Work to be provided by Other Separate Contractors, under separate Sections:
- 1) Earthwork including trench excavation and backfill.
 - 2) Concrete in Structures.
 - 3) Steel Reinforcing.
 - 4) Dimensioned Granite Masonry
 - 5) Stainless Steel Grating.
 - 6) Plumbing.
 - 7) Electrical.

RCP-WF1.2. MATERIALS

The materials under this section shall comply with the following:

RCP-WF1.2.1. References and Standards

- A) "Rules Governing and Restricting the Use and Supply of Water", City of New York, N.Y. Department of Environmental Protection, Bureau of Water and Sewer Operations, Division of Water Connections and Permits.
- B) Other Standards and References:
- 1) American Society for Testing and Materials (ASTM).
 - 2) American Water Works Association (AWWAA).
 - 3) American Public Works Association (APWA).
 - 4) American National Standards Institute, Inc. (ANSI).
 - 5) National Fire Protection Association (NFPA).
 - 6) Underwriters Laboratories, Inc. (UL).
 - 7) National Sanitation Foundation (NSF).
 - 8) Department of Health (DOH).
 - 9) National Electric Code (NEC).
 - 10) American Society of Mechanical Engineers (ASME).
 - 11) American Society of Sanitary Engineering (ASSE).
 - 12) Commercial Standards (CS).
 - 13) National Electrical Manufacturer's Association (NEMA).
 - 14) Uniform Building Code (UBC).
 - 15) Institute of Electrical and Electronic Engineers (IEEE).
 - 16) Insulated Power Cable Engineers Association (IPCEA).

17) International Plumbing Code (IPC)

C) All work shall conform to the latest edition of the National Building Code and/or International Plumbing Code.

RCP-WF1.2.2. System Requirements

A) Design Requirements:

1) The water feature described in this Section shall be a fully automated, self-contained type stationary feature.

2) The work of this Section shall include design of equipment items for fabrication and installation of water feature equipment and components to suit Project requirements as approved by the Engineer.

B) Performance Requirements:

1) The waterfall feature shall have (5) stainless steel discharge troughs as shown and shall perform at a combined pumping rate of 528 GPM @ 20' TDH, creating a 1/4" thick water curtain over each end of feature.

2) This feature shall also contain (1) filtration system as shown performing at a pumping rate of 40 GPM @ 60' TDH.

RCP-WF1.2.3. Submittals

A) Installer Qualifications: Comply with Article "QUALITY CONTROL", herein. Submit water feature system installer qualifications including resume and system identification of previous work experience on water feature systems of type indicated for Project and the following work:

- 1) Plumbing work.
- 2) Electrical work
- 3) Concrete and Waterproofing Work.

B) Product Data:

1) Submit to Engineer, in consultation with the Architect, for approval manufacturers' data for all equipment and individual components listed in RCP-WF1.2.8. Products.

2) Submit to Engineer, in consultation with the Architect, for approval a comprehensive electrical package to include a power diagram, logic diagram, panel layout, component schedule, and cut sheets on all individual components in the control panel. If necessary, the contractor shall furnish evidence that the building department has been contacted to assure local compliance and that any exceptions to local requirements or the National Electric Code have been addressed.

3) Submit to Engineer, in consultation with the Architect, for approval other items and materials of system not indicated in this Section including for items of conduit, wiring, electrical devices, piping and fittings, sealants and/or seals to confirm compatibility and conformance to Project wide requirements.

4) Submit to Engineer, in consultation with the Architect, for approval light fixture cuts.

C) Shop Drawings: Submit to Engineer, in consultation with the Architect, for approval a concise plan, details, and section(s) to accompany the submittal data on all components and to assure compliance with the intended design as specified and shown on the Contract Drawings.

1) Include equipment and material handling instructions and interfacing requirements and coordination notes with other trades and contractors.

- D) Samples for Verification: Submit to Engineer, in consultation with the Architect, for approval all surface-exposed elements of system as requested, 8" long minimum.
- E) Quality Control Submittals:
 - 1) Test Reports: Water feature manufacturer's test report must be included in the control panel information package. This report shall include results of the test on both motors and all lighting circuits.
 - 2) Field Reports: The manufacturer shall provide a field test report in the controls package. This report, which includes information on the field voltage, current, and resistance at all components, must be filled out by the installing electrical contractor and submitted to the manufacturer and the Architect for approval.
- F) Contract Closeout, Operations and Maintenance: Submit manuals pertaining to the operations and maintenance of the water feature system prior to final approval of system installation. The manuals shall include specification sheets, operations and maintenance data, exploded diagrams, replacement parts lists, copies of field and test reports, and warranty information. Comply with the General Terms of Contract.

RCP-WF1.2.4. Quality Control

- A) General:
 - 1) Insofar as possible, all materials and equipment used in the installation of this work shall be of the same brand or manufacturer throughout for each class of material or equipment. Conform to Reference Standards and other Project Manual Sections as applicable.
 - 2) Piping materials shall bear label, stamp, or other markings of specified testing agency.
 - 3) Use numbers of skilled workmen equal to work requirement or occasion. The skilled workman shall be thoroughly trained and experienced in the necessary crafts and shall be completely familiar with the specified requirements and methods needed for proper performance of the work in this Section.
- B) Water feature Manufacturer:
 - 1) The water feature equipment described in this section shall be supplied by Delta Fountains, Jacksonville, Florida, (800) 641-6675; Oase Pumps, Coraona, CA, (951) 272-9900; Wet Industries, Canyon Country, CA, (661) 250-2750; or approved equal.
 - 2) All water feature manufacturers requesting approval must comply with the requirements listed in Subsection RCP-WF1.2.3.B), above. All manufacturers' data on individual components listed in RCP-WF1.2.8. Products, or pre-approved equals where allowed, shall be submitted to the Engineer prior to approval. Manufacturers requesting prior approval shall submit to the Department of Design and Construction, at least 10 business days prior to the bid date, all data on all individual components listed in RCP-WF1.2.8. Products, for review by the Design Engineer. All approvals will be issued in an addendum prior to the bid date.
- C) Installer's Qualifications: Plumbing and electrical work for water feature system installation shall be performed by firms with each having at least 5 years of successful water feature installation experience on features similar to that required for the Project.
- D) Field Measurements: Verify dimensions with other work on Project which adjoins the equipment item(s) of this Section or to which work of this Section will be a part.

RCP-WF1.2.5. Delivery, Storage and Handling

- A) Packing and Shipping: Water feature manufacturer shall adequately package all shipments to protect the material during shipment. Consolidate freight of like items when possible to ensure minimal shipments. All shipments to be freight on board, manufacturer's plant, with fully insured freight allowed to the jobsite.
- B) Handling and Unloading: All shipments shall be driver signed and counted to verify that all components listed on the packing slips are included in shipment prior to leaving the manufacturer's premise.
- C) Special Handling: Contractor to take necessary precautions in unloading, handling, moving, and storing all shipments, until it is installed in its final position, to protect all components from damage. Contractor to refer to all notes on the shop drawings for any additional instructions on handling water feature equipment.
- D) Acceptance at Site: Contractor to schedule and arrange for delivery of all shipments. Contractor is responsible for preparations of all equipment necessary to safely facilitate the unloading of all shipments and moving it to the final location. All shipments are subject to the manufacture's standard terms and conditions.
- E) Storage and Protection: Contractor shall store all components in their original packages and protect all items from damage until final placement occurs. Contractor shall rotate all motor shafts 1/4 turn each and every month during storage up to the time of first performance to ensure motor shaft integrity.

RCP-WF1.2.6. Warranty

- A) Contractor, installer, and manufacturer shall furnish warranty for water feature system installation for a minimum period of one year from date of Substantial Completion of the Contract as specified in Contract Conditions. Contractor shall include provisions of warranty to City of New York not otherwise covered by manufacturer. Warranty to include the following:
 - 1) Water feature system to be free of defects of materials and workmanship.
 - 2) Water feature system performance to the designated water volumes, heights, patterns, and display features.
 - 3) Adjustments and/or corrections to warranted equipment shall be made at factory as per standard warranty terms.
- B) The manufacturer shall warrant all properly installed and maintained water feature equipment (except lamps) as provided in RCP-WF1.2. of this Section, free of defects in material and workmanship for a minimum period of one year from shipment. The water feature manufacturer, at their option, shall replace or repair any materials, components, or workmanship found to be defective within the warranty period when returned to the factory, freight pre-paid. No component may be returned for repair or replacement without an approved return materials authorization.
 - 1) Extended Warranties: Water feature manufacturer shall furnish to the City of New York any extended warranty that is standard and usually available from item manufacture/supplier for an item of equipment.

RCP-WF1.2.7. Maintenance

- A) Contractor shall supply any other special tools or parts that would be needed for the maintenance of the water feature system.

RCP-WF1.2.8. Products: Components

- A) Mechanical Components: The major mechanical components of the stationary water feature (based on Delta Fountain components) are as follows (In all cases, documentation of a comparable component by Oase or Wet Industries or approved

equal may be submitted by the contractor to the Engineer, in consultation with the Architect, for consideration. Contractor must verify that all plumbing and water feature components will work seamlessly together):

- 1) DFFP-500, 5 Hp feature pump, the motor shall be 208V, 3 phase, 1750 R.P.M, standard drip proof motor. The pump shall operate at a minimum of 528 GPM at 20' TDH and shall have flanged 5" suction and 4" discharge connections, and shall be cast iron body, and have a single piece enclosed cast iron impellor keyed to the shaft. Shaft is heat-treated carbon steel, turned and ground with a renewable bronze sleeve to prevent contact between the shaft and the liquid being pumped. The feature pump is pre-plumbed on a stainless steel skid and pre-wired in equipment vault using min. type 304 stainless steel hardware and including all necessary check valves, isolation/flow control valves, strainers, neoprene connectors, and 6" stainless steel header with five 4" flanged discharge points as shown on the drawings.
- 2) DFFP-050, 1/2 Hp, Self-priming, NSF approved filter pump and fitted 2" FPT connections. The pump shall operate at a minimum of 40 GPM at 60' TDH. Pump is one-piece case constructed with oversized basket strainer, double ring lock design lid for tool free access to removable basket strainer and pump internals. The pump shall have a floating eye seal between the closed impeller and diffuser for maximum efficiency. The motor shall be 120V, 1 phase, 3,450 R.P.M. and have a rust-proof stainless steel shaft, and permanently lubricated, sealed bearings. Filter pump is pre-plumbed in equipment vault including all necessary check valves, isolation/flow control valves, true union type, as shown on the drawings.
- 3) DFCF-200, 200 SQ. FT. Cartridge filter, heavy-duty abs constructed with cam & ramp lid for easy access to removable, washable filter media. Filter is pre-plumbed in equipment vault.
- 4) DFBF-65, 9 lb. Automatic erosion type bromine feeder, heavy-duty abs constructed with integral check valve and proportioning valve. Feeder is pre-plumbed in equipment vault.
- 5) DFWMUA-100, 1" water make-up assembly, type 304, schedule. 40 stainless steel constructed with 110V, bronze, slow closing solenoid valve, water hammer arrestor and (3) 1" heavy-duty bronze constructed ball valves. The water make-up assembly is pre-plumbed ready for installation by the contractor. PVC or copper construction is not acceptable. The Contractor shall connect in-line on fresh water make-up line and provide back-flow preventer and/or reduced pressure zone, and pressure reducing valve to ensure the incoming line pressure does not exceed 50 P.S.I.
- 6) DFEF-150, 1-1/2" N.P.T. cast bronze constructed directional eyeball fitting with 3/4" discharge. PVC constructed is not acceptable.
- 7) DFDT-1000, (5) 10' Sch. 40 stainless steel custom fabricated discharge trough with (5) 3" N.P.T. inlet connections, diverter plates, 1/2" x 1-1/2" x 10' solid stainless steel sold stock with 6" x 1" water jet slots, integral waterstop flange, and adjustable legs. (3) 1/4" x 1-1/2" x 10' stainless steel winterization plates, powder coated black, as shown on the drawings
- 8) DFSB-1300, 13' x 18" custom fabricated sch. 40 stainless steel 3/16" thick suction basin with 6" equalizing line connections, 2" filter suction connections, 4" suction connections, 1 1/2" eyeball connections and 3" overflow connections with stainless steel overflow pipe and dome. The basin will have integral anti-

- vortex plates adjustable legs, basin supports, water level sensor unistrut mount, and concrete anchors. As shown on the drawings.
- 9) DFWLS-CT, Adjustable Dual probe water level sensor, cast bronze and stainless steel constructed with integral wave suppression shield, mounted in basin on stainless steel unistrut. As shown on the drawings.
 - 10) DFPC-2123C, two part re-enterable potting compound for application in the junction boxes to provide watertight environment for electrical connections.
 - 11) DFCC-50, 1/2" Machined brass cord seals with neoprene grommet, for watertight cord entry into junction box.
 - 12) DFUL-12LED, 12VAC / 4.5W per ft submersible led fountain light. Fixture to have a 90 deg. Cord feed, stainless steel mounting brackets with 360° adjustability. Dimensions as shown on drawings.
 - 13) DFJB-4, 4-Tap underwater junction box, cast bronze constructed with neoprene gasket and (1) 3/4" bottom tap and (4) 1/2" side taps with machined brass cord seals and stainless steel hardware.
 - 14) DFBFV-XXX, X" butterfly valves for isolation and flow control, lug type, cast iron bodies, machined bronze discs, gear wheel operator, 316 stainless steel stems and EPDM seats. The companion flanges are to be heavy-duty schedule 80 PVC constructed using 304L stainless steel hardware for bolting all valves to the flanges. Sizes as shown on the drawings.
 - 15) DFCV-XXX, X" check valves for back flow control, wafer type, cast iron bodies, machined bronze discs, stainless steel stems and EPDM seats. The companion flanges are to be heavy-duty schedule 80 PVC constructed using 304L stainless steel hardware for bolting all valves to the flange. Sizes as shown on the drawings.
 - 16) DFNC-XXX, X" single sphere neoprene connector, stainless steel and heavy-duty rubber construction. Sizes as shown on the drawings.
 - 17) DFST-6400, 8' X 8' X 7'-6", subterranean equipment vault, heavy-duty fiberglass constructed with minimum (13) layers of fiberglass or a minimum of 3/4" thick, one-piece molded construction on bottom shell and lid. Fabricating the bottom shell from fiberglass sheets and caulking the joints will not be acceptable. The vault access hatch shall be a 48' x 44' H20, spring assisted tile set hatch with 44"x39-11/16"x2" recessed pan, 1-1/2" trough drain, slamlock, stainless steel hinge, and hinge lockbar. The vault is to house the feature pumps, filter pumps, filtration system, control panel, vault water detections with emergency shutoff switch, water make-up assembly, automatic sump pump, exhaust fan, stainless steel vent caps, utility light and access ladder. The vault shall be pre-plumbed and pre-wired in factory, ready for installation prior to shipment. As shown on the drawings
 - 18) DFST-300, 300W/120VAC/12VAC Safety transformer for low voltage lighting, ETL listed for swimming pool use. The transformers are shielded to ground between the primary and secondary voltages and shall be fused protected from the primary voltage.
 - 19) DFVG-100, Vacuum Switch and gauge panel equipped with (1) weathertight nema 4 enclosed, single pole/double throw switching element, combination vacuum switch with viton o-rings that are suitable for temperatures of 32° - 400° F. Panel also includes (1) 3/4" N.P.T., glycerin liquid filled, 304 stainless steel

cased pressure gauge, and (1) 3/4" N.P.T., glycerin liquid filled, 304 stainless steel cased vacuum gauge.

- 20) DFCEP-75, complete control panel in weather resistant NEMA 3R enclosure, includes motor starters, motor overload protection, main breaker, timers for pumps and lights, water level controls, surge protection, and 30 degree terminal strips for easy hook-up. The panel is UL 508A listed as an assembly.

B) Electrical Components: The major components to be included in the control panel and to be incorporated into a fully functional operating water feature system are specified and listed below:

- 1) The water feature control system shall be designed for 208 Volts, 3 phase, 4 wire service and shall operate (1) 5 Hp feature pump, (1) 1/2 Hp filter pump, vault water detection system, and appurtenances of the water feature. A conductivity type low water cut off system shall be provided to de-energize the control system during a low water level condition. The water level sensor shall also provide a separate water level control system to increase the water level before the low water cut off alarms.
- 2) NEMA 3R enclosure of galvanized steel construction, primed and phosphatized, finished with ANSI 49 gray baked on enamel, manufactured by Hoffman, equal to HCR series shall be provided. The enclosure shall have collar studs for sub-panel mounting, hasp and staple for padlocking, butterfly type stainless steel draw latches and hinged cover. All Hardware shall be stainless steel.
- 3) All components shall be mounted to a removable sub-panel. The sub-panel shall be fabricated from 14-gauge steel and shall be finished with baked on white enamel.
- 4) Service entrance lugs shall be provided, sized for 600 volts, 300-amp minimum. The power distribution block shall have a flammability rating of UL 94V-0, shall be based on NEC table using 75 degrees C wire and shall be equivalent to Square D class 9080.
- 5) A 600V lightning arrestor shall be provided and connected to the service entrance lugs.
- 6) Motor starters shall be IEC rated full voltage, non-reversing with thermal overload relay. Auxiliary contacts shall be provided as required for the specific control functions. Motor starters shall be as manufactured by Square 'D', Allen Bradley or pre-approved equal.
- 7) All 120 volt equipment shall be protected individually by thermal magnetic circuit breakers with an interrupting rating of 10KAIC @ 240 volt minimum. All circuit breakers shall be calibrated and sealed at the factory and shall be equivalent to Square D, type QOU.
- 8) The water feature e pump/filter pump shall be controlled by individual 24-hour time clock settings. The time clocks shall be electronic with 24-hour capabilities or shall be integral to the memory module or PLC.
- 9) Thermal-magnetic 2-pole molded case circuit breaker. The breaker disconnects power in case of a short circuit or over amperage. Breaker is UL listed.
- 10) The motor shall be controlled by a keyed three position selection, designated "Hand - Off - Auto". In the "Hand" mode, the appropriate motor shall be energized until the selection is placed in the "Off" mode. In the "Auto" mode, the appropriate motor shall be controlled by the appropriate time clock.

- 11) All power wiring shall be color coded using MTW #12 AWG minimum. Control wiring shall be MTW #14 AWG minimum and be numbered/lettered at each end. Wire numbers/letters shall be equivalent to Pass and Seymore "LeGrand".
- 12) All wiring shall be routed through a wiring duct system to provide wire protection and an organized appearance.
- 13) Terminals shall be provided for interface with field-installed equipment. The terminal blocks shall be mounted on a 30-degree angle for ease of field connection. Terminals shall be equivalent to Siemens, Allen Bradley, or Square D.
- 14) All components shall be labeled using a laser-screened Mylar nameplate. The nameplate shall be a laminated two-part system using black letters on a white background on the door and yellow background on the back panel providing protection against fading, peeling, or warping. The labeling system shall be computer controlled to provide logos, post-script type or custom design. The use of engraved plastic type tags is not acceptable.
- 15) The control system shall have complete drawings/schematics using AutoCAD. The drawing shall have a complete Bill of Materials, front panel view with component locations and electrical schematic. References to the Bill of Materials shall be located for each component.
- 16) The control system shall be designed and manufactured to meet all state and local codes, Underwriters Laboratories and the National Electric Code (particular attention to article 430 and 680)
- 17) The entire control system shall bear a UL 508 serialized label "Enclosed Industrial Control Panel". The use of the UL label "industrial control panel enclosure" without the UL 508 serialized label is not acceptable. Additionally the control panel shall bear a UL label for "Industrial Control Panel for Permanently Attached Fountains".
- 18) The low water cutout system shall provide intrinsically safe voltage to the dual probe sensor. The sensor shall provide an input to relays to de-energize the pumps and motors. An adjustable time delay shall be provided to prevent nuisance tripping. A pilot light, rated NEMA 4X oil-tight shall indicate this alarm as well as provide time delay values for alarm and reset.
- 19) The water make up system shall provide intrinsically safe voltage to the dual probe sensor. The sensor shall provide an input to a relay to energize the water make up solenoid. An adjustable time delay shall be provided to prevent nuisance tripping. A pilot light, rated NEMA 4X oil-tight shall indicate this alarm as well as provide time delay values for alarm and reset.
- 20) Low voltage, submerged water feature lights, heavy duty stainless steel constructed with integral rock guard, thermal protection, clear lens, LED lamp, 9.5' SO cord standard by Winona Lighting, Inter-lux, Hess America or approved equal. Lights to be pre-mounted in discharge sumps and wired by installing contractor in the field. Provide safety transformer for low voltage lighting, UL Listed.

RCP-WF1.2.9. Products: Installation Components

A) Piping Materials:

- 1) Unless the specifications indicate otherwise, the suggested minimum piping and fitting standard recommended for this installation is Type 1.

- 2) All interconnecting piping and associated fittings, supplied by installing Contractor, shall be a minimum of Schedule 80 PVC, NSF-PW rated.
 - 3) All welded PVC fittings above 6" diameter shall be fiberglass reinforced and used only on non-pressurized lines.
 - 4) Use only clear PVC cleaner meeting NSF, UPC, and ASTM standards for cleaning and repairing PVC pipe and fitting surfaces for solvent cementing (IPS Corporation "Weld-On" Type C-65 or equivalent). Follow all directions and instructions appearing on product label.
 - 5) Use only purple PVC primer meeting NSF, UPC, and ASTM #F-656 standards for softening and preparing field pipe and fitting surfaces for solvent cementing (IPS Corporation "Weld-On Type P-70 or equivalent). Follow all directions and instructions appearing on product label.
 - 6) Use only clear or white, heavy bodied, medium setting PVC cement meeting NSF, UPC, and ASTM #D-2564 standards for solvent cementing PVC plastic pipe and fittings (IPS Corporation "Weld-On" Type 711 or equivalent). Follow all directions and instructions on product label.
 - 7) Provide Link Seal for all penetrations in equipment room. All penetrations through outside walls to below grade shall be sealed per building specifications. Using "easy-link seals" is recommended
 - 8) All piping penetrations through structure walls into open areas below pool structure must have the necessary allowances made for settlement.
 - 9) Pipe hangers and supports per national plumbing code. All piping in open areas below the pools shall be installed free hanging from the ceiling in the level below with pipe hangers/per specifications and code
 - 10) Reference requirements of other Project Manual Specifications for materials and items not specified herein.
 - 11) Thrust Block for Piping Turns
- B) Electrical Materials:
- 1) Rigid conduit shall be corrosion resistant and either galvanized steel or rigid PVC as specified in RCP-WF1.3.4. "Basic Electrical Methods" herein. Submit Product Data and related specifications on materials to be used. All electrical conduit and conduit fittings between submersible light fixture niches, junction boxes and control panels will be U.L. listed rigid, nonmetallic, PVC NEMA, TC-2 max. 90°C, sunlight resistant for above and below ground use. All conduits shall be protected at all times from possible water ingress. Use only approved primer and PVS glue suitable for joining all PVC conduits and fittings per manufacturer's instructions.
 - 2) All conductors shall be copper with insulation suitable for the particular wiring location as specified in RCP-WF1.3.4. "Basic Electrical Methods" herein. Submit Product Data and related specifications on materials to be used underwater.
 - 3) Reference requirements of other Project Manual Specifications for materials and items not specified herein.
 - 4) All PVC conduit connections underground shall be SCH40 pressure fittings ((FE) male adaptors and couplings). Use color coded primer, pressure fitting PVC glue, and Teflon paste. The use of normal electrical PVC fittings is prohibited.

- 5) All connections in the pool/water feature shall be made with the assistance of a plumber, using Teflon paste or Teflon tape to eliminate all leaks. Use only tapered (NPT) stainless steel fittings and nipples. The use of galvanized, black, brass or steel piping is prohibited.
- 6) All conduit connections between dissimilar metals must be made with dielectric fittings, and sealed with dielectric thread compound to prevent galvanic degradation.

RCP-WF1.3. METHODS

RCP-WF1.3.1. Examination

- A) Verification of existing elevations: Verify all joining elevations prior to laying pipe or setting pipe. Notify Water feature equipment manufacturer and Engineer of all discrepancies before proceeding with the construction of the water feature.
- B) Verification of Dimensions: Before proceeding with any work, the Contractor shall check and verify all dimensions, sizes, and the like, and shall assume full responsibility for the fitting-in of all materials and equipment to the conditions on site if the Water feature equipment manufacturer and Engineer is not notified in writing and a resolution is not agreed upon.
- C) All conflicts relating to any penetration size, dimension, elevation, equipment location, or equipment size or dimension, shall be addressed and resolved with the manufacturer and Engineer before the Contractor can proceed with the construction of any part of the water feature that may be or become affected by the confliction.
- D) Verify Utilities: Contractor shall verify with local authorities where the proper tie into sanitary or storm sewer for overflow and drain.
- E) Contractor shall verify matching voltage and phase of main power feed provided to serve the water feature equipment control panel and report all discrepancies in writing to the Water feature Manufacturer and Engineer.

RCP-WF1.3.2. Installation

- A) All equipment furnished under this Section shall be installed in full conformity with the Contract Documents, engineering data, instructions, and recommendations of the manufacturer.
- B) Contractor shall obtain all necessary installation permits and inspections
- C) Installation of water feature equipment appurtenances shall confirm with provisions of Reference Standards and suit existing conditions on site as approved by the Engineer.
- D) Contractor shall insure that installation complies with all applicable national and local codes and project specifications.
- E) The incoming water supply line pressure must not exceed 50 PSI and is part of the building contract, not the water feature.
- F) Install horizontal piping one (1) foot below freeze line.
- G) Excavation, Backfill, and Compaction:
 - 1) Excavating, trenching, and backfilling shall be as specified in the Contract Documents and as noted on the drawings and compaction done in a maximum of 6" lifts.

- H) All pools shall be waterproofed by specified approved means.
- I) Prior to any finishing materials (i.e. lights, jets, coverplates) being installed, all pools shall be tested for leaks for a minimum of 72 hours and all waterproofing and stone work shall be completed.
- J) Refer to mechanical and electrical notes on drawing for further information.
- K) Contractor shall field verify all dimensions.
- L) Consult architectural, structural, mechanical, and electrical drawings for additional details not shown on these drawings.
- M) When applicable, all weirs shall be installed with an accuracy of "+" or "-1/16" over the entire weir length. Unless otherwise noted, refer to the architectural drawings for weir details.
- N) Contractor shall provide all concrete work as required by all mechanical and electrical water feature equipment requirements including, but not limited to, housekeeping pads, lock-down slabs, and thrust blocks where indicated.
- O) Contractor shall provide all utilities such as power supplies, water supplies, and sewer connections under the building contract up to the water feature controls, equipment and/or pool fittings where indicated.
- P) Contractor shall provide and is responsible for all elevation and X-Y coordinates relating to all water feature equipment including vaults, pool floors, and pumps.

RCP-WF1.3.3. Basic Piping Methods

- A) The Contractor shall verify and confirm all piping layouts, locations, and dimensions shown in these drawings, and insure that the specified locations do not interfere with other equipment, architecture, or construction before installation. All piping shall be installed as shown and as otherwise specified to make a complete, workable, and neat system. All piping shall be cut accurately from dimensions established at the Project site and allowances shall be made for clearance of other devices.
- B) All intraconnecting piping and associated fittings, supplied by system manufacturer, shall be a minimum of Schedule 80 PVC, NSF-PW rated. Interconnecting-intraconnecting interface points shall be slip fit, threaded or flanged
- C) All interconnecting piping and associated fittings, supports, and seals shall be per section RCP-WF1.2.9.
- D) The Contractor shall not deviate from the pipe sizes shown herein unless prior written approval is obtained from the manufacturer and Engineer. When a size is not indicated, the Contractor shall request the pipe size from the water feature manufacturer. In the event that interference with other equipment or architecture requires relocation of pipes or a layout different from that shown herein, the Contractor shall notify the water feature manufacturer immediately for reexamination of hydraulic parameters of the affected sections.
- E) Pipe and accessories shall be handled in such a manner to not cause damage. All cutting shall be done in a good workmanlike manner. Before installation, all piping and fittings shall be visually inspected for damage or defects. The interior of the pipe shall be clean during the laying operation. Pipe shall not be laid in water or in the trench when weather conditions are unsuitable for the work. Water shall be kept out of the trench until the pipe is installed. While work is in progress, open ends of the

pipe and fittings shall be securely closed so that no trench water, earth, or other foreign matter will enter the piping system or fittings.

- F) Perform adequate trenching and backfill operations when installing PVC piping below grade. Trench width should be minimum of "pipe O.D. plus 12 inches" and deep enough to allow piping to be buried a minimum of 12" below the maximum expected frost penetration line to avoid freeze damage. Lay piping in horizontal, parallel, or perpendicular manner. Avoid vertical stacking of pipes. Space minimum of 3" apart on all parallel runs.
- G) Use only clean, free-flowing, non-expansive backfill material (naturally rounded 1/4" pea gravel, 57 stone, or sand) and backfill in 6" lifts with adequate and complete compaction between lifts to 90% of maximum density per ASTM 1557-70. Compaction to excessive loads shall not be permitted. A second pressure test on the piping system must be made at this time to insure that piping has not been damaged during backfill operations.
- H) Concrete "thrust" blocking is recommended at all directional changes (tee's, elbows, etc.), reducer fittings and line terminations (bushings, end caps, plugs, etc.) in water feature display discharge piping 6" and larger.
- I) The bearing surface for the concrete thrust blocks, where possible, should be placed against undisturbed soil. Where it is not possible, the fill between bearing surface and undisturbed soil must be compacted to at least 90% standard proctor density. Thrust block shall be a concrete mix not leaner than one part cement, two and one-half sand, and five parts stone. Contractor shall coordinate the location of the thrust block with other work and existing conditions. Work shall be performed in accordance with all applicable codes. For additional information, refer to NFPA 24.
- J) The sump pump in the equipment vault shall be connected as immediately as possible after secure placement and shall have a continuous power supply for the duration of the water feature system installation process.
- K) Pressure test all piping as specified in RCP-WF1.3.5. "Field Quality Control" herein.
- L) Avoid laying suction piping in a manner that could result in a suction loop before, during, or after backfilling and compaction. Always pitch pipe in a downward direction to avoid a suction loop that will cause air to be permanently trapped, causing loss in performance of the piping system due to increased friction and work load demand.
- M) Piping in areas subject to freezing shall be installed at elevation of minimum 1 foot below frost line.
- N) Do not install any water lines above the control panel.
- O) Any and all costs associated with above are responsibility of installer.

RCP-WF1.3.4. Basic Electrical Methods

- A) The information supplied in the drawings specifies the general requirements of a complete functioning electrical power distribution and control system. The electrical subcontractor shall coordinate all electrical installation activities with the Contractor, Engineer, and (with respect to work Phase) other separate contractors performing work related to water feature installation.
- B) All electrical work shall comply with the latest edition of the National Electric Code (NEC), Section 680, published by the National Fire Protection Association; Quincy, Massachusetts. In the event of conflicting requirements between Contract Documents and any local electric code or other governing organizations for this location, the most

stringent shall govern and take precedence. In this event, the Engineer shall be notified immediately in writing of such conflict.

- C) The installation of electrical equipment and wiring in water can produce extreme hazards. It is the responsibility of the installing electrical contractor to consult and comply with all electrical codes and safety regulations prior to installation of electrical equipment. Local codes take precedence over the general notes where discrepancies of conflicts exist.
- D) All wiring and conduit shall be sized by the electrical sub-contractor in accordance with the latest edition of the NEC and all electrical codes and regulations. Where wiring and conduit sizes are specified herein, they shall be interpreted as minimum allowable sizes. All conductors shall be copper with insulation suitable for the particular wiring location. Minimum acceptable insulation is type THWN or better, suitable for both dry and wet locations. Conductor insulation shall be moisture resistant, flame-retardant thermoplastic as approved by the NEC. Conductor sizing shall be based on an ambient temperature of 68°F and a conductor temperature rating of 167°F maximum per Article 310 of NEC. All underwater electrical cable shall either be encased in waterproof, sealed PVC conduit or shall be rated for continuous operation in underwater, marine environments.
- E) Contractor shall obtain all necessary installation permits and inspections.
- F) It is the responsibility of the installing electrical contractor to insure that all electrical equipment is installed and wired by a qualified, licensed electrician, experienced in water feature system wiring, in accordance with shop drawings, and all provisions of the latest edition of NEC in general, Article 680 specifically, and local safety regulations. All electrical control panels shall include GFCIs when and where required, when furnished.
- G) It is the responsibility of the installing electrical contractor to verify all field dimensions critical to water feature equipment installation and performance and report any discrepancies to Engineer upon immediate notice.
- H) All conductors shall be run in rigid conduit sized for the number of wires contained within per NEC requirements. Rigid conduit shall be corrosion resistant and either galvanized steel or rigid PVC. When conduit is submerged or in other wet locations, rigid PVC shall be required. Conductor sizing shall be corrected for the number of wires to be run in a single conduit or raceway in accordance with NEC. All conduit locations and routing shall be approved by the Engineer before installation.
- I) The work includes such necessary material and devices of a minor nature that may not be indicated on the drawings or mentioned in the specifications, but which are necessary for the compliance with codes and for the successful operation of the entire control system. The contractor shall be allowed no extra compensation because of this requirement.
- J) All GFCI protected circuits must have a separate neutral. All GFCI breakers have pigtailed wired to a neutral bar. A Class 'A' ground fault circuit interrupter (GFCI) must be installed in each branch circuit supplying submersible or underwater water feature equipment. Equipment operating at 15 volts or less must be protected by suitable transformer U.L. Listed and marked for the application.
- K) Conduits are drawn for clarity and do not necessarily show exact routing. Contractor shall install conduits with as few changes in direction as jobsite conditions will allow.
- L) All electrical equipment must be properly bonded and grounded for safety, per the latest NEC and local code requirements. All bonding lugs shall be provided by

installing electrical contractor. Installing contractor shall verify all necessary requirements of local inspector before installing, and notify water feature manufacturer of any required deviations from specifications or plans or notes, and resolve all conflicts before installing equipment. Contractor to insure that all bonding codes are complied with for each metal pool equipment component.

- M) Submersible/underwater lighting fixtures must be installed for operation at 150 volts or less between conductors. Submersible pumps most operate at 300 volts or less between conductors.
- N) Submersible lighting fixtures must be installed with the top of the fixture lens a minimum of 2" below the normal operation water level and must have the lens adequately guarded to prevent contact by any person.
- O) All electrical equipment which depends on submersion for safe operation must be protected against overheating by an independent low water cutoff device if the water level drops below normal operating levels, or contain an internal Thermal Bimetallic Ambient compensating overload.
- P) Maximum length of exposed submersible cord in the water feature is limited to 9 feet. Cords extending beyond water feature perimeter must be enclosed in approved wiring enclosures.
- Q) All submersible lights and pumps must have sufficient cord length to allow removal from the water for re-lamping and normal maintenance. Fixtures cannot be permanently embedded in the water feature structure so that the water level must be reduced or the water feature drained for re-lamping, maintenance, or inspection.
- R) Submersible equipment must be inherently stable or be securely fastened in place with non-corrosive fasteners suitable for the purpose.
- S) Underwater junction boxes must be filled with an approved re-enterable electrical potting compound (wax or paraffin is not acceptable) prior to filling pool and after all circuits have been checked to prevent the entry of moisture and must be firmly attached to supports or directly to the water feature surface and bonded as required. All conduit stubbed up through pool floor must be stainless steel. PVC, Red Brass, and Everdur are not acceptable as a conduit support stub for submersible junction boxes. All conduit entries must be completely sealed prior to potting to prevent compound from entering conduit system. After testing, junction boxes shall be sealed with scotch 3M re-enterable compound or other approved filling compound.
- T) All underwater junction boxes must be equipped with threaded conduit entries and compression type cord connectors for cord entry. Strain relief connectors serving niche-Mounted underwater lights shall be capable of sealing both the fixture cord and an AWG #8 insulated bonding wire which may be required by some local codes.
- U) Pull correct quantity and size conductors, wired with separate ground, through conduit into junction box. Make all splices and connections tight and well insulated. Connect ground wire to ground lug in junction box, or other suitable grounding location.
- V) Insert each submersible cord through the brass cord seals provided on the junction box and tighten completely.
- W) Do not operate submersible lights or pumps more than ten seconds unless completely submerged or damage will result and warranty will be voided.

- X) The installing electrical contractor will verify that all electrical equipment grounds will have the same reference potential and will give evidence of such to water feature manufacturer and Engineer before any equipment is initially energized.
- Y) The installing contractor shall size all feed-wires leading to water feature control panel for no more than 2% voltage drop, and shall notify water feature manufacturer and Engineer before fabricating electrical control panel if wire is upsized such that extra large wire lugs are required. It is the responsibility of electrical contractor to provide any disconnect required by local code requirements.
- Z) The water feature control panel shall be adequately protected from debris and stored properly during construction and prior to initial operation and shall be vacuumed clean and all screws for terminal connections tightened.
- AA) The electrical contractor shall ensure that supply voltage is within 5% of design voltage when all equipment is in operation and shall re-tap transformer, up size wire, or supply a buck and boost transformer to get supply voltage to necessary level, if necessary.
- BB) Wires for water level sensors must be run in a separate conduit to the water feature control panel.
- CC) All conduit penetrations through structure walls into trade areas below the pool structure must have the necessary allowances made for settlement.
- DD) Contractor installing water feature manufacturer supplied deck boxes in concrete for water feature lighting is to ensure that all open conduit ports are plugged watertight prior to slab pour around deck boxes.
- EE) Any and all costs associated with the above are the responsibility of installing contractor.

RCP-WF1.3.5. Field Quality Control

- A) Inspection and Testing, General: Labor, materials, instruments, and power for testing shall be furnished by the Contractor. All tests shall be performed to the satisfaction of the Engineer and such other parties that may have legal jurisdiction. Item or system to be tested shall not be closed up, buried, or covered until testing is completed and the City of New York confirms approval. Prepare reports of testing activities and submit as specified.
- B) Piping Test:
 - 1) Conduct piping tests before joints are covered and after thrust blocks have been hardened sufficiently. Fill pipeline 24 hours before testing and apply test pressure to stabilize system. Use only potable water. Flush out all pipes with clean water prior to performing leak tests.
 - 2) Do not include equipment in tests which could be damaged by high pressure.
 - 3) Automatic water make-up systems shall be thoroughly tested and operative at the time of final observation.
 - 4) Pressure testing requires that a prescribed period of curing / drying time be allowed in order to allow the PVC cement to properly cure and take a permanent set. The following table sets forth the minimum drying period before the required pressure tests. Note that the table applies only to weather temperatures ranging from 50° F. to 90°F. For drying times during temperatures that differ from this, consult the water feature manufacturer.

Piping Size	Curing Time
1.5" - 2.5"	8 hours
3" - 4"	18 hours
6" - 8"	24 hours
10" & higher	36 hours

- 5) A 24-hour static pressure test of 10 ft. above highest vacuum, drainage, or gravity pipe invert elevation shall be performed on all vacuum and or gravity pipe lines using water as the medium. All vacuum and gravity drain piping shall be tested with no loss of water, pressure, or noticeable leaks. All pressure testing shall include a visual check of each joint by the Contractor in the presence of the Engineer.
- 6) The Contractor shall provide all pumps, pressure plugs, gauges, and other instruments and devices necessary to perform the hydrostatic pressure tests specified herein. Each complete discharge piping system shall be hydrostatically tested to a pressure of 150% of the system working pressure. For purposes of this test, system-working pressure shall be defined at 50 PSIG and the hydrostatic test shall be performed at 75 PSIG. Pressure test for at least 8 hours, at which time pressure shall remain constant, without additional pumping, pressure loss, or noticeable leaks. PSI is required on all pressure piping to include return inlets piping using water as the medium.
- 7) Pressure test all water piping prior to commencing backfill operations. Hydrostatic (water) testing shall be the only approved method. DO NOT PRESSURE TEST WITH COMPRESSED AIR as severe pipe damage and bodily injury can occur. Do not exceed the rated operational pressure of the piping and/or fittings carrying the lowest pressure rating. Locate and repair any leaks and retest prior to completion of backfill operations
- 8) After the system has operated for one week, the Contractor and the Engineer shall inspect water make-up rates and agree that water usage is appropriate for a system of this type, are within local ordinances or codes, and that such rates are not indicative of excessive leakage from system. A water meter shall be placed on the fill line for this purpose, if necessary to document precise water usage.

C. Manufacturer's Field Services:

- 1) The water feature manufacturer shall be present for a minimum of 4 site coordination meetings, which includes the review of the plans and shop drawings with the mechanical, electrical, and structural disciplines. The water feature manufacturer must be available at the jobsite within a one week notice. The representative shall be a factory employee, and or a local sales representative knowledgeable about the project.

RCP-WF1.3.6. Start Up and Adjustments

- A) Manufacturer shall be present for the initial startup of the water feature system.
- B) Contractor shall adjust water feature water system for volume and water flow characteristics to reflect design intent as approved by Engineer.
- C) Contractor shall have the following conditions satisfied prior to departure of personnel from factory:
 - 1) All electrical connections shall be made and tested.
 - 2) All underwater lighting shall be lamped, installed and tested.
 - 3) Thoroughly test all fixtures, services, and all circuits for proper operating conditions and freedom from grounds and short circuits before acceptance is

requested. All equipment, appliances, and devices shall be operated under load conditions

- 4) All underwater junction boxes shall be wired and sealed with potting compound.
 - 5) Pump and filter motors shall be power tested to insure proper impeller rotation at specified voltage.
 - 6) Electronic water level control and/or low water cut-off control shall be installed and wired for operation.
 - 7) All hydraulic lines and fittings shall be pressure tested for leaks, repaired as necessary, and flushed clean. Basket strainers shall be checked and cleaned as required.
 - 8) All nozzles, jets, manifolds, headers, and spray apparatus shall be installed properly and flushed of debris as required. Final nozzle adjustment for position and throttling to achieved specified performance for all display discharge points to be performed by installing contractor.
 - 9) Pump vaults, when supplied by manufacturer shall be thoroughly cleaned of debris, tested for electrical integrity and pressure tested for leaks.
 - 10) Chemical feed system, when supplied, shall be filled to proper level with required dosage of chemicals. (Manufacturer does not supply chemicals unless specifically listed in proposal).
 - 11) The water feature basin shall be thoroughly cleaned and filled to proper water level with clean, fresh water.
 - 12) Contractor shall make available to factory personnel a plumber and electrician who have first-hand knowledge of the water feature installation, at contractors own expense.
 - 13) Contractor will perform any manual labor or provide any tools for adjustment and start-up.
- D) Contractor acknowledges the above requirements and understands that, should above requirements not be completed, factory personnel may immediately cancel visit and return to factory. In such case, Contractor shall be responsible for all costs and expenses incurred by manufacturer.

RCP-WF1.3.7. Demonstration

- A) Furnish complete on-site instructions and demonstration to City's Maintenance Partner in the operation, adjustment and maintenance of water feature system.
- B) Furnish and provide to the Engineer two complete operations and maintenance manuals: one for the City of New York and one for the City's Maintenance Partner.

RCP-WF1.4. MEASUREMENT

The quantity measure for payment shall be a lump sum price bid for all work required in this section.

RCP-WF1.5. PRICE TO COVER

- A) The contract price bid to furnish and install the water feature shall be a lump sum price and shall include the cost of furnishing all labor, material, equipment, and appliances necessary to complete the work as indicated on the plans, and as specified under this section including, but not limited to, the following:
 - 1) Any other special tools or parts that would be needed for maintenance of the water feature system.
- B) Monthly payment shall be made for this item in proportion to the total amount of work completed under this item up to a limit of 50% of the lump sum price bid. The remaining 50% of the lump sum price bid shall be paid after the plumbing systems have been tested and accepted by the Owner.

Payment will be made under:

Item No.	Item	Pay Unit
RCP-WF1	EXTERIOR WATER FEATURE	L.S.

END OF ADDENDUM No. 5

This Addendum consists of one hundred thirty-six (136) pages.

THE CITY OF NEW YORK
DEPARTMENT OF DESIGN AND CONSTRUCTION
DIVISION OF INFRASTRUCTURE

DECEMBER 17, 2012

ADDENDUM NO. 6

PROJECT ID: HWXRCPLZ

RECONSTRUCTION OF
ROBERTO CLEMENTE PLAZA

INCLUDING SEWER, WATER MAIN, STREET LIGHTING,
AND TRAFFIC SIGNAL WORK

Together With All Work Incidental Thereto

BOROUGH OF THE BRONX
CITY OF NEW YORK

THIS ADDENDUM IS HEREBY MADE A PART OF THE CONTRACT DOCUMENTS

SPECIFICATIONS FOR
HANDLING, TRANSPORTATION AND DISPOSAL
OF NONHAZARDOUS AND POTENTIALLY HAZARDOUS
CONTAMINATED MATERIALS

This Addendum is issued for the purpose of amending the requirements of the Contract Documents and hereby made part of said Contract Documents to the same extent as if it was originally included herein.

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- Attachments**
1. New York City Department of Environmental Protection Limitations for Effluent to Storm-Sanitary or Combined Sewers Parameters
 2. Applicable Regulations
 3. Definitions
 4. Phase II Subsurface Corridor Investigation Report

ITEM 8.01 C1 HANDLING, TRANSPORTING AND DISPOSAL OF NON-HAZARDOUS CONTAMINATED SOILS

8.01 C1.1 WORK TO INCLUDE

General: This work shall consist of the handling, transportation and disposal of non-hazardous contaminated soils. The materials covered by this specification are soils that are contaminated with petroleum or chemical products but cannot be classified as hazardous waste. For the purpose of this specification, soil shall be defined as any material excavated below the pavement and base for pavement.

Non-hazardous contaminated soils are defined as soils exhibiting one or more of the following characteristics:

- ◆ Elevated Photo-Ionization Detector (PID) readings, subsequently confirmed by lab analysis
- ◆ Visual evidence of contamination
- ◆ Petroleum and/or chemical odors
- ◆ Soils that have been documented as contaminated in previous environmental reports

Non-hazardous contaminated soils must be stockpiled at an off-site approved location or secured on-site by the Contractor, meeting all required Federal, State and Local stipulations. Sampling and laboratory analysis must be conducted to determine if the soils are hazardous, unless the alternative procedure as defined under subsection 8.01 C1.1 A.5 has been agreed upon by treatment facilities. Contaminated soils determined to be non-hazardous shall be handled in accordance with the specifications herein for Item 8.01 C1. Contaminated soils determined to be hazardous shall be handled in accordance with the specifications for Item 8.01 H – Handling, Transporting and Disposal of Hazardous Soils.

The Contractor shall retain the services of an independent Environmental Consultant, as specified under Item 8.01 S – Health and Safety, to oversee the work required under this Item.

Non-hazardous soils shall be delivered to the disposal or treatment facility within thirty (30) calendar days after excavation.

The Contractor shall conduct sampling and analysis of the impacted soils as specified under Item 8.01 C2 – Sampling and Testing of Contaminated/Potentially Hazardous Soils for Disposal Parameters. The laboratory results shall be forwarded to DDC Program Administration, Engineering Support Services (ESS) for review to determine if the soils will be handled and disposed of as contaminated regulated soils or hazardous waste. No other soils shall be sampled or tested without the DDC's approval or direction.

The Contractor shall ensure that all operations associated with the handling, sampling, loading, transportation, and disposal of non-hazardous contaminated soils are in compliance with all applicable Federal, State, and City statutes and regulations.

The Contractor shall document the excavation, handling, transportation and disposal of non-hazardous contaminated soils. The Contractor shall supply all equipment, material and labor required to conduct the specified work of this Item.

A. Material Handling Plan: Within forty-five (45) calendar days after award of Contract, the Contractor shall submit to the Program Administration, ESS for review, a Material Handling Plan (MHP). The MHP must be approved by the Program Administration, ESS, prior to the Contractor's commencement of work. The MHP shall, at a minimum, consist of:

1. The Contractor's procedures for identifying non-hazardous contaminated soils during excavation, including the specific model and manufacturer of intended organic vapor

monitoring equipment and calibration procedures to be used. It should also include the training and experience of the personnel who will operate the equipment.

2. The Contractor's procedures for safely handling non-hazardous contaminated soils. The procedures must include personnel safety and health as well as environmental protection considerations.
3. Name, address, New York State Department of Health's (DOH) Environmental Laboratories Accreditation Program (ELAP) status and telephone number of the proposed laboratory for analysis of representative soil samples. The ELAP for the intended analysis must approve the laboratory.
4. Identification of the Contractor's proposed waste transporter(s). This information shall include:
 - a. Name and Waste Transporter Permit Number
 - b. Address
 - c. Name of responsible contact for the hauler
 - d. Telephone number for the contact
 - e. Any and all necessary permit authorizations for each type of waste transported
 - f. Previous experience in performing the type of work specified herein
5. All staging/stockpiling areas (if stockpiling areas are intended and available), or alternate procedures that will be used. Alternate procedures may include, but are not limited to, agreements from the intended disposal or treatment facilities to accept boring data and/or analytical data previously obtained during the site characterization so that materials may be directly loaded into vehicles for shipment to the disposal facility.
6. A backup facility should the staging/stockpile areas become unavailable, insufficient in area or not be present by some other unforeseen difficulty.
7. Identification of the Contractor's two proposed Treatment Storage or Disposal (TSD) facilities for non-hazardous contaminated soils (primary and back-up) for final disposal of the soils. The primary TSD shall be an approved soil recycling/treatment facility. The backup facility may be a recycling/treatment facility or a New York State Department of Environmental Conservation (DEC) approved lined landfill or other facility approved by DEC to accept this material. The information required for each facility shall include:
 - a. Facility name and the State identification number
 - (1) Facility location
 - (2) Name of responsible contact for the facility
 - (3) Telephone number for contact
 - (4) Signed letter of agreement to accept waste as specified in this contract
 - (5) Unit of measure utilized at facility for costing purposes
 - b. A listing of all permits, licenses, letters of approval, and other authorizations to operate, which are currently held and valid for the proposed facility.
 - c. A listing of all permits, licenses, letters of approval, and other authorizations to operate which have been applied for by the proposed facility but not yet granted or issued.

- d. The Contractor shall specify and describe the disposal/containment unit(s) that the proposed facility will use to manage the waste. The Contractor shall identify the capacity available in the units and the capacity reserved for the subject waste.
 - e. The Contractor shall provide the date of the proposed facility's last compliance inspection.
 - f. A list of all active (unresolved) compliance orders (or agreements), enforcement notices, or notices of violations issued to the proposed facility shall be provided. The source and nature of the cause of violation shall be stated, if known.
8. Description of all sampling and field/laboratory analyses that will be needed to obtain disposal facility approval.

8.01 C1.2 MATERIALS

- A. Containers shall be as required in the United State Department of Transportation (DOT) regulations.
- B. Polyethylene to be placed under (20 mil. thickness minimum) and over (10 mil. thickness minimum) soil piles.
- C. The Contractor shall assure that the waste hauler's appropriate choice of vehicles and operating practices shall prevent spillage or leakage of contaminated material from occurring en route.
- D. The Contractor shall provide, install and maintain any temporary loading facilities on site as required until completion of material handling activities. The location and design of any facilities shall be included in the MHP and be approved by the Program Administration, ESS.

8.01 C1.3 CONSTRUCTION DETAILS

A. Material Handling

1. Immediately after excavation of non-hazardous contaminated soil the Contractor shall:
 - a. Load material directly onto trucks/tankers/roll offs for disposal off site; or
 - b. If interim stockpiling is required, place on a minimum of 20 mil. or equivalent plastic ground cloth and cover by minimum of 10 mil. polyethylene sheeting or equivalent to protect against leaching or runoff of contaminants into groundwater or stormwater. Weight or secure the sheeting by appropriate means and seal seams as approved by the DDC to prevent tearing or removal by weather. Grade surrounding surface to provide for positive drainage away from pile. Stockpile shall not exceed 100 cubic yards.
2. Institute appropriate procedures and security measures to ensure the protection of site personnel and the public from contaminated materials as described in the approved MHP and Item 8.01 S - Health and Safety.
3. Any soil encountered that appears to contain unknown contaminants (based on visual, odor, or other observation), or that vary substantially from the material originally identified must be segregated in stockpiles and the independent Environmental Consultant promptly notified. Construct stockpiles to the same requirements as stated in subsection A.1.b above.
4. Provide any dewatering that is necessary to complete the work. Contaminated water shall be disposed of in accordance with Item 8.01 W1 - Removal, Treatment and Discharge/Disposal of Contaminated Water.

5. Provide and operate field organic vapor test equipment, a PID or a flame ionization detector (FID), to detect general organic vapor levels at intervals of approximately fifty (50) cubic yards of soil excavated, when visual or odor observations indicate the material may substantially differ from the soil previously excavated and/or as directed by the independent Environmental Consultant.

B. Off-Site Transportation to Disposal or Treatment Facility

1. General

- a. The Contractor shall furnish all labor, equipment, supplies and incidental costs required to transport contaminated material from the work area to the off-site disposal or treatment facility, and any other items and services required for transporting contaminated material for disposal at an off-site facility.
- b. The Contractor shall submit the name and location of the facility where an off-site scale is located. The Contractor shall also submit a plan to the DDC for review outlining procedures on controlling trucks leaving the work site and en-route to the off-site scale. The Contractor shall be responsible for tracking all material/vehicles from the site to the off-site scale.
- c. The Contractor shall provide to the DDC certified tare and gross weight slips for each load received at the accepted facility which shall be attached to each returned manifest.
- d. The Contractor shall coordinate the schedule for truck arrival and material deliveries at the job site to meet the approved project schedule.
- e. The Contractor shall inspect all vehicles leaving the project site to ensure that contaminated soils adhering to the wheels or undercarriage are removed prior to the vehicle leaving the site.
- f. The Contractor shall obtain letters of commitment from the waste haulers and the treatment, disposal or recovery facility to haul and accept shipments. The letter shall indicate agreement to handle and accept the specified estimated quantities and types of material during the time period specified in the project schedule and any time extension as deemed necessary.
- g. **The Program Administration, ESS shall review and approve waste profiles before transportation to the TSD facility.**

2. Hauling

- a. The Contractor shall coordinate manifesting, placarding of shipments, and vehicle decontamination. All quantities shall also be measured and recorded upon arrival at the disposal or treatment facility. If any deviation between the two records occurs, the matter is to be reported immediately to the DDC and to be resolved by the Contractor to the satisfaction of the DDC.
- b. The Contractor shall be held responsible, at its own cost for any and all actions necessary to remedy situations involving material spilled in transit or mud and dust tracked off-site.
- c. The Contractor shall ensure that trucks are protected against contamination by properly covering and lining them with compatible material (such as polyethylene) or by decontaminating them prior to and between acceptances of loads.
- d. The Contractor shall be responsible for inspecting the access routes for road conditions, overhead clearance, and weight restrictions.

- e. The Contractor shall only use the transporter(s) identified in the MHP for the performance of work. Any use of substitute or additional transporters must have previous written approval from the Program Administration, ESS at no additional cost to the City.
 - f. The Contractor shall develop, document, and implement a policy for accident prevention.
 - g. The Contractor shall not combine contaminated materials from other projects with material from this project.
 - h. No material shall be transported until approved by the DDC.
3. Off-Site Disposal
- a. The Contractor shall use only the facility(ies) identified in the MPH for the performance of the work. Substitutions or additions shall not be permitted without prior written approval from the Program Administration, ESS, and if approved shall be at no extra cost to the City.
 - b. The Contractor shall be responsible for acceptance of the materials at an approved facility, for ensuring that the facility is properly permitted to accept the stated materials, and that the facility provides the stated treatment and/or disposal services.
 - c. The DDC reserves the right to contact and visit the disposal or treatment facility and regulatory agencies to verify the agreement to accept the stated materials and to verify any other information provided.
 - d. In the event that the identified and approved facility ceases to accept the stated materials or the facility ceases operations, it is the Contractor's responsibility to locate an alternate approved and permitted facility(ies) for accepting materials. The alternate facility(ies) must be approved in writing by the DDC in the same manner and with the same requirements as for the original facility(ies). This shall be done at no extra cost or delay to the City.
 - e. The Contractor shall obtain manifest forms, and complete the shipment manifest records required by the appropriate regulatory agencies for verifying the material and quantity of each load in unit of volume and weight. Copies of each manifest shall be submitted to the DDC within four (4) business days following shipment, and within three (3) business days after notification of receipt of the facility. Any manifest discrepancies shall be reported immediately to the DDC and be resolved by the Contractor to the satisfaction of the DDC.
4. Equipment and Vehicle Decontamination
- a. The Contractor shall design and construct a portable decontamination station to be used to decontaminate equipment and vehicles exiting from the exclusion zone. The cost for this work will be paid under Item 8.01 S - Health and Safety.
 - b. Water generated during the decontamination process shall be disposed of in accordance with Item 8.01 W1 - Removal, Treatment and Discharge/Disposal of Contaminated Water.

8.01 C1.4 METHOD OF MEASUREMENT

Quantities for non-hazardous contaminated soils shall be measured in tons. The tonnage will be determined by off-site truck scales, as per Subsection 8.01 C1.3.B1, that are capable of generating load tickets.

8.01 C1.5 PRICE TO COVER

- A. The unit bid price bid per ton for Item 8.01 C1 shall include the cost of furnishing all labor, materials, plant, equipment, and insurance for excavation, handling, transportation, disposal, documentation, fees, permits, loading, stockpiling, hauling, and any other incidentals necessary to complete all the work as specified herein for handling, transporting, and disposal of non-hazardous contaminated soil.
- B. Final disposal of hazardous soil shall be paid for under Item 8.01 H – Handling, Transporting and Disposal of Hazardous Soils. Disposal of decontamination water shall be paid for under Item 8.01 W1 – Removal, Treatment and Discharge/Disposal of Contaminated Water.
- C. Backfill will be paid for under its respective item as specified in the contract document.
- D. The independent Environmental Consultant shall be paid under Item 8.01 S – Health and Safety.

Payment will be made under:

<u>ITEM NUMBER</u>	<u>ITEM</u>	<u>PAYMENT UNIT</u>
8.01 C1	Handling, Transporting, and Disposal of Non-Hazardous Contaminated Soil	Tons

**ITEM 8.01 C2 SAMPLING AND TESTING OF CONTAMINATED/ POTENTIALLY
HAZARDOUS SOIL FOR DISPOSAL PARAMETERS**

8.01 C2.1 WORK TO INCLUDE

A. Description

The work shall consist of collecting and analyzing representative soil samples for parameters typically requested by the disposal facilities.

B. Sampling and Laboratory Analysis

1. At least thirty (30) days prior to the commencement of work, the Contractor's independent Environmental Consultant must submit a Soil Sampling Plan/Field Sampling Plan (SSP/FSP) to the Program Administration, Engineering Support Services (ESS) for review and approval. The plan shall include the name, address, DOH's ELAP status, and telephone numbers of the proposed laboratory. The plan shall also include training and experience of the personnel who will collect the samples.
2. The Contractor shall sample and analyze representative samples of the contaminated/potentially hazardous soils. For stockpiled soils, the Contractor shall collect and analyze one (1) composite sample per 100 cubic yards or fraction thereof. Each composite sample shall consist of a minimum of five (5) grab samples collected from greater than two (2) feet below the soil surface. For drummed soil, the Contractor shall collect one (1) composite sample per (ten) 10 drums or fraction thereof. Each composite sample shall consist of a grab sample from each of the ten (10) drums or fraction thereof. Each composite sample shall be analyzed for Resource Conservation and Recovery Act (RCRA) hazardous waste characteristics (Ignitability, Reactivity, Corrosivity), Full Toxicity Characteristic Leaching Procedure (TCLP) (including RCRA metals, volatile Organic Compounds (VOCs), Semi-Volatile Organic Compounds (SVOCs), pesticides, herbicides), Total Petroleum Hydrocarbons (TPH) and Polychlorinated Biphenyls (PCBs). All samples collected should be analyzed on a rush four (4) calendar days turn around time and analytical results must be submitted to Program Administration, ESS within five (5) calendar days after sample collection.
3. All sampling shall be conducted by a person trained in sampling protocols using standard accepted practices for obtaining representative samples.
4. The Contractor must also contact the disposal facility where the waste will be sent for permanent disposal, and arrange to collect any additional samples required by the facility. The cost associated with additional sampling and testing shall be included in the bid price of this Item.
5. The quality of the data from the sampling program is the Contractor's responsibility. The Contractor must furnish all qualified personnel, equipment and instruments necessary to carry out the sampling. Unless directed otherwise, all sampling procedures must follow the DEC sampling guidelines and protocols.
6. All sample containers shall be marked and identified with legible sample labels which shall indicate the project name, sample location and/or container, the sample number, the date and time of sampling, preservatives utilized and other information that may be useful in determining the character of the sample. Chain-of-custody shall be tracked from laboratory issuance of sample containers through laboratory receipt of the samples.

7. The Contractor shall maintain a bound sample logbook. The Contractor shall provide DDC access to it at all times and shall turn it over to the DDC in good condition at the completion of the work. The following information, as a minimum shall be recorded to the log:
 1. Sample identification number
 2. Sample location
 3. Field observation
 4. Sample type
 5. Analyses
 6. Date/time of collection
 7. Collector's name
 8. Sample procedures and equipment utilized
 9. Date sent to laboratory and name of laboratory
8. The City reserves the right to direct the Contractor to conduct alternative sampling in lieu of the parameters described in subsection B2, if the situation warrants. The substitute sampling parameters shall be of equal or lesser monetary value than those described in subsection B2, as determined by industry laboratory pricing standards.
9. Only dedicated sampling equipment may be used to collect these samples. All equipment involved in field sampling must be decontaminated before being brought to the sampling location, and must be properly disposed after use.
10. Soils exceeding any of the hazardous characteristic criteria meet the legal definition of hazardous soils (rather than non-hazardous contaminated soils) and shall be transported or disposed of under Item 8.01 H – Handling, Transporting and Disposal of Hazardous Soils. All analyses must be done by a laboratory that has received approval from the ELAP for the methods to be used. The Contractor must specify the laboratory in the MHP.

8.01 C2.2 METHOD OF MEASUREMENT

Quantities for samples shall be measured as the number of sets of samples that are tested. A set shall be defined as one (1) composite sample analyzed for the full range of parameters as specified in subsection B2.

8.01 C2.3 PRICE TO COVER

The unit price bid per set for Item 8.01 C2 shall include the cost of furnishing all labor materials, plant, equipment, and insurance necessary for sampling, handling, transporting, testing, documentation, fees, permits and any other incidentals necessary to complete the work as specified herein for sampling and testing of contaminated/potentially hazardous soil.

Payment will be made under:

<u>ITEM NUMBER</u>	<u>ITEM</u>	<u>PAYMENT UNIT</u>
8.01 C2	Sampling and Testing of Contaminated/ Potentially Hazardous Soil for Disposal Parameters	Set

ITEM 8.01 H HANDLING, TRANSPORTING, AND DISPOSAL OF HAZARDOUS SOILS

8.01 H.1 WORK TO INCLUDE

General: This work shall consist of the handling, transportation and disposal of soils or materials that are listed as hazardous wastes or exhibit any of the characteristics of a hazardous waste, namely ignitability, corrosivity, reactivity, and toxicity, as defined in 6 NYCRR Part 371, Section 371.3 and 40 CFR Section 261. For the purpose of this specification, soils shall be defined as any materials excavated below the pavement and base for pavement.

Contaminated soils determined to be hazardous under Item 8.01 C2 shall be handled, transported, and disposed of under Item 8.01 H in accordance with the specifications herein.

The independent Environmental Consultant retained by the Contractor, as specified under Item 8.01 S – Health and Safety, shall conduct sampling and analysis of above soils to determine which soils are hazardous.

All work under Item 8.01 H shall be performed under the direct supervision of the Contractor's Environmental Consultant, as approved by the Program Administration, Engineering Support Services (ESS).

The Contractor shall ensure that all operations associated with the handling, sampling, loading, transportation, and disposal of hazardous materials are in compliance with the applicable Federal, State, and Local statutes and regulations.

The Contractor shall document the excavation, handling, sampling, and testing, transportation and disposal of hazardous soils. The City shall be listed in the disposal documents as the waste generator.

The Contractor shall supply all equipment, material and labor required to conduct the specified work of this section.

The Contractor shall ensure that all operations associated with the handling, sampling, loading, transportation and disposal of hazardous soils are conducted in a manner to protect site personnel, the public and the environment, in accordance with all applicable Federal, State, and Local laws and regulations.

The Contractor shall decontaminate all equipment prior to its removal from the exclusion zone and/or following contact with hazardous materials, as detailed in Item 8.01 S - Health and Safety. Water generated during the decontamination process shall be disposed of under Item 8.01 W1 – Removal, Treatment and Discharge/Disposal of Contaminated Water.

A. Material Handling Plan: Within forty-five (45) calendar days after award of Contract, the Contractor shall submit to the Program Administration, ESS for review, a Material Handling Plan (MHP). The MHP must be approved by the Program Administration, ESS, prior to the Contractor's commencement of work. The MHP shall, at a minimum, consist of:

1. The Contractor's procedures for identifying contaminated/potentially hazardous soils during excavation, including instrumentation and calibration procedures to be used.
2. The Contractor's procedures for safely handling hazardous soils or soils which have not yet been tested but are believed to be potentially hazardous.
3. Identification of the Contractor's proposed waste transporter(s). This information shall include:
 - a. Name and waste transporter permit number
 - b. Address

- c. Name of responsible contact for the hauler
 - d. Telephone number for the contact
 - e. Any and all necessary permit authorizations for each type of waste transported
 - f. Previous experience in performing the type of work specified herein
4. All staging/stockpiling areas (if stockpiling areas are intended and available), or alternate procedures that will be used. Alternate procedures could include, but are not limited to, agreements from the intended disposal or treatment facilities to accept boring data and/or analytical data previously obtained during the site characterization so that materials may be directly loaded into vehicles for shipment to the disposal facility or the use of off-site stockpiling locations approved by the DEC.
 5. A backup facility, should the staging/stockpile areas become unavailable, insufficient in area or not be present by some other unforeseen difficulty.
 6. Identification of the Contractor's two proposed United State Environmental Protection Agency (EPA) or DEC approved RCRA TSD facilities for hazardous soils.
 7. The Contractor shall submit the following information prior to any transportation of soils regarding the temporary and final off-site TSD or facilities where it is proposing to take hazardous soils. The expense of furnishing all information will be included in the Contractor's bid price:
 - a. General Information
 - (1) Facility name and the EPA identification number
 - (2) Facility location
 - (3) Name of responsible contact for the facility
 - (4) Telephone number for contact
 - (5) Signed letter of agreement to accept waste as specified in this contract
 - (6) Signed letter of agreement with a TSD for disposal of waste that may not be land-disposed
 - (7) Unit of measure utilized at each facility for costing purposes
 - b. A listing of all permits, licenses, letters of approval, and other authorizations to operate, which are currently held and valid for the proposed facility as they pertain to receipt and management of wastes derived from this Contract.
 - c. A listing of all permits, licenses, letters of approval, and other authorizations to operate which have been applied for by the proposed facility.
 - d. The Contractor shall specify and describe the disposal/containment unit(s) that the proposed facility will use to manage the waste. The Contractor shall identify the capacity available in the units and the capacity reserved for the subject waste.
 - e. The Contractor shall provide the date of the proposed facility(ies) last compliance inspection under RCRA.
 - f. A list of all active (unresolved) compliance orders, agreements, enforcement notices or notices of violations issued to the proposed facility shall be approved. The source and nature of the cause of violation shall be stated, if known.

8. Description of all sampling and analyses that will be needed to obtain disposal facility approval.

8.01 H.2 MATERIALS

- A. Containers shall be watertight as required in the DOT regulations and must meet all applicable regulations including but not limited to those in Attachment 2.
- B. Polyethylene (20 mil. thickness minimum) to be placed under and (10 mil. thickness minimum) over soil piles. If soils are placed in drums, polyethylene must be placed over the drums.

8.01 H.1.3 CONSTRUCTION DETAILS

A. Material Handling

1. The Contractor shall institute procedures to protect site personnel and the public from the non-hazardous and hazardous materials as described in Section 8.01 S - Health and Safety.
2. The Contractor shall handle hazardous soil as approved in the MHP.
3. Stockpiled materials at the temporary TSD facility shall be handled according to the facility requirements but at a minimum: shall be drummed or placed on and covered with polyethylene to protect against erosion and leaching into surrounding soils, the stockpile area shall be graded for positive drainage away from the pile, and shall be labeled while being held for sampling prior to permanent disposal.
4. Provide any dewatering that is necessary to complete the work. Water shall be disposed of in accordance with Item 8.01 W1 – Removal, Treatment and Discharge/Disposal of Contaminated Water.

B. Off-Site Transportation and Disposal

1. The Contractor shall furnish all labor, equipment and supplies required to transport hazardous materials from the work area to the off-site TSD facility(ies) and to acquire any other items and services required for transporting hazardous materials for storage and/or disposal at an approved off-site facility.
2. **Weight Measurement**
 - a. The Contractor shall submit the name and location of the facility where an off-site scale is located. The Contractor shall also submit a plan to the DDC for review outlining procedures on controlling trucks leaving the work site and on-route to the off-site scale. The Contractor shall be responsible for tracking all materials/vehicles from the site to the off-site scale.
 - b. The Contractor shall provide to the DDC certified tare and gross weight slips for each load received at the accepted facility which shall be attached to each returned manifest.
3. **General**
 - a. **Manifests:** The Contractor shall organize and maintain the material shipment records/manifests required by law.
 - b. The Contractor shall coordinate the schedule for truck arrival and material deliveries at the job site to meet the approved project schedule. The schedule shall be compatible with the availability of equipment and personnel for material handling at the job site.

- c. The Contractor shall inspect all vehicles leaving the project site to ensure that hazardous soils adhering to the wheels or under carriage are removed prior to the vehicle leaving the site.
- d. The Contractor shall obtain letters of commitment from the waste haulers and the TSD facility to haul and accept shipments. The letter shall indicate agreement to handle and accept the specified estimated quantities and types of material during the time period specified in the project schedule and any time extension as deemed as necessary.

4. Hauling

- a. The Contractor shall not deliver waste to any facility other than the TSD facility(ies) listed on the shipping manifest.
- b. The Contractor shall coordinate manifesting, placarding, of shipments, and vehicle decontamination. All quantities shall also be measured and recorded upon arrival at the TSD facility. If any deviation between the two records occurs, the matter is to be reported immediately to the DDC and to be resolved by the Contractor to the satisfaction of the DDC.
- c. The Contractor shall be held responsible, at its own expense, for any and all actions necessary to remedy situations involving material spilled in transit or mud and dust tracked off-site.
- d. The Contractor shall ensure that trucks are protected against contamination by properly covering and lining them with compatible material (such as polyethylene) or by decontaminating them prior to any use other than hauling hazardous materials.
- e. The Contractor shall be responsible for inspecting the access routes for road conditions, overhead clearance, and weight restrictions.
- f. The Contractor shall only use the transporter(s) identified in the MHP for the performance of work. Only a transporter with a current Part 364 Waste Transporter Permit from the DEC may transport this material. Any use of substitute or additional transporters must have previous written approval from the DDC at no additional cost to the City.
- g. The Contractor shall develop, document, and implement a policy for accident prevention.
- h. The Contractor shall not combine hazardous materials from other projects with material from this project.
- i. **The Contractor shall obtain for the City an EPA hazardous waste generator identification number and a representative of Program Administration, ESS will review and sign the manifest as the generator.**
- j. No materials shall be transported until approved by the DDC.

5. Off-Site Disposal

- a. The Contractor shall be responsible for acceptance of the materials at an approved TSD facility, for ensuring that the facility is properly permitted to accept the stated materials, and that the facility provides the stated storage and/or disposal services.
- b. In the event that the identified and approved facility ceases to accept the stated materials or the facility ceases operations, it is the Contractor's responsibility to locate an alternate approved and permitted facility(ies) for accepting materials. The Contractor is responsible for making the necessary arrangements to utilize the

facility(ies), and the alternate facility(ies) must be approved in writing by the DDC in the same manner and with the same requirements as for the original facility(ies). This shall be done with no extra cost or delay to the City.

- c. The Contractor shall submit all results and weights to the DDC.
- d. **The Contractor is responsible to pay all fees associated with the generation and disposal of all excavated hazardous waste. These fees include, but are not limited to, the New York State Department of Finance and Taxation (DFT) quarterly fees for hazardous waste and the New York State DEC annual hazardous waste regulatory fee program. The Contractor shall submit a copy of proof of payment to the DDC and Program Administration, ESS.**

6. Equipment and Vehicle Decontamination

The Contractor shall design and construct a portable decontamination station to be used to decontaminate equipment and vehicles exiting from the exclusion zone. The cost for this work shall be paid under Item 8.01 S - Health and Safety. Disposal of decontamination liquids is described under Item 8.01 W1 - Removal, Treatment and Discharge/Disposal of Contaminated Water.

7. Record Keeping

The Contractor shall obtain manifest forms, and complete the shipment manifest records required by the appropriate regulatory agencies for verifying the material and quantity of each load in unit of volume and weight. Copies of each manifest shall be submitted to the DDC within four (4) business days following shipment, and within three (3) business days after notification of receipt of the facility. Any manifest discrepancies shall be reported immediately to the DDC and be resolved by the Contractor to the satisfaction of the DDC.

8.01 H.4 METHOD MEASUREMENT

Quantities for hazardous soil shall be measured in tons satisfactorily delivered to the treatment, storage or disposal facility. The tonnage will be determined by off-site truck scales, as per subsection 8.01 H1.3.B.2, that are capable of generating load tickets.

8.01 H.5 PRICE TO COVER

- A. The unit price bid per ton for Item 8.01 H shall include the cost of furnishing all labor, materials, plant, equipment, and insurance for excavation, handling, transportation, disposal, documentation, permits, fees, taxes, stockpiling, hauling, and any other incidentals necessary to complete the work as specified herein for handling, transporting and disposal of hazardous soils.
- B. Final disposal of non-hazardous materials shall be paid for under Item 8.01 C1 - Handling, Transporting and Disposal of Non-Hazardous Soils. Disposal of decontamination water shall be paid under Item 8.01 W1 - Removal, Treatment and Discharge/Disposal of Contaminated Water.
- C. The independent Environmental Consultant shall be paid under Item 8.01 S - Health and Safety.
- D. Backfill will be paid for under its respective item.

Payment will be made under:

<u>ITEM NUMBER</u>	<u>ITEM</u>	<u>PAYMENT UNIT</u>
8.01 H	Handling, Transporting, and Disposal of Hazardous Soils	Tons

ITEM 8.01 S HEALTH AND SAFETY

8.01 S.1 WORK TO INCLUDE

Health and Safety Requirements

A. Scope of Work

It is the Contractor's responsibility to stage and conduct his work in a safe manner. The Contractor shall implement a Health and Safety Plan (HASP) for contaminated/hazardous soil intrusive activities as set forth in Occupational Safety and Health Administration (OSHA) Standards 1910.120 and 1926.650-652. The Contractor shall ensure that all workers have at a minimum hazard awareness training. The Contractor shall segregate contaminated work area in secured exclusion zones. These zones shall limit access to Contractor personnel specifically trained to enter the work area. The exclusion zone shall be set up to secure the area from the public and untrained personnel. The project health and safety program shall apply to all construction personnel including persons entering the work area. In addition, the Contractor shall protect the public from on-site hazards, including subsurface contaminants associated with on-site activities. The HASP shall be signed off by a Certified Industrial Hygienist and reviewed by Program Administration, Engineering Support Services (ESS).

Work shall include, but not be limited to:

1. Implementation of a baseline medical program.
2. Providing safety equipment and protective clothing for site personnel, including maintenance of equipment on a daily basis; replacement of disposable equipment as required; decontamination of clothing, equipment and personnel; and providing all other health and safety measures.
3. Providing, installing, operating and maintaining on-site emergency medical first aid equipment as specified in this section for which payment is not provided under other pay items in this Contract.
4. Providing, installing, operating, maintaining and decommissioning all equipment and personnel decontamination facilities specified within this section, including, but not limited to, the decontamination pad, decontamination water supply, decontamination water collection equipment and all other items and services required for the implementation of the health and safety requirements for which pay items are not provided elsewhere in this Contract.
5. Provide the minimum health and safety requirements for excavation activities within the limits of this Contract.
6. Implement and enforce a HASP: The HASP as presented in these specifications is dynamic with provisions for change to reflect new information, new practices or procedures, changing site environmental conditions or other situations which may affect site workers and the public. The HASP will also address measures for community protection, accident prevention, personnel protection, emergency response/contingency planning, air monitoring, odor control and hazardous chemicals expected on site. Providing a Confined Space Entry Program as defined in the Occupational Safety and Health Act, Confined Space Entry Standard, 29 CFR 1910.146.

B. Environmental Consulting Services

The Contractor shall retain an independent Environmental Consultant to obtain all permits and perform all field screening, air monitoring, community air monitoring, soil sampling, and health and safety services. The independent Environmental Consultant shall at a minimum provide documentation to the Program Administration, ESS demonstrating the minimum requirements as set forth below:

1. The independent Environmental Consultant project supervisor on site and other designated key personnel shall have a minimum of three (3) years experience in the environmental field dealing with issues associated with contaminated soils. Such experience shall include oversight on environmental, specifically volatile organic compound and dust monitoring services as a routine part of its daily operations.
2. The independent Environmental Consultant must be experienced in work of this nature, size, and complexity and must have previous experience in working with the DEC.
3. The independent Environmental Consultant shall furnish a project listing identifying the location, nature of services provided, owner, owner's contact, contact's telephone number, project duration and value for at least five (5) projects within the last three (3) years.
4. If conditions within the exclusion zone are deemed hazardous, then the Contractor and its independent Environmental Consultant shall ensure that all personnel working within identified exclusion zones and/or involved (direct contact) with the handling, storage or transport of hazardous and contaminated materials shall have completed a minimum of forty (40) hours of Health and Safety Training on Hazardous Waste Sites in accordance with 29 CFR 1910.120(e). The training program shall be conducted by a qualified safety instructor. If conditions in the exclusion zone are deemed to be non-hazardous, the independent Environmental Consultant shall provide site specific training.
5. The Contractor shall ensure that on-site management and supervisors directly responsible for or who supervise employees engaged in hazardous waste operations shall receive the training specified in above and at least eight (8) additional hours of specialized training on managing such operations at the time of job assignment.

C. Submittals

1. The Contractor shall submit, within forty-five (45) calendar days after the contract award, a written HASP as specified herein, to Program Administration, ESS for review and comment. The Contractor shall make all necessary revisions required by Program Administration, ESS and resubmit the HASP to the Program Administration, ESS for acceptance. Start-up work for the project will not be permitted until written acceptance has been issued by the Program Administration, ESS.
2. Daily safety logs shall be maintained by the Contractor and shall be submitted to the DDC either on request or on completion of the work. Training logs shall be maintained by the Contractor and submitted to the DDC either on request or on completion of the work. Daily logs on air monitoring during excavation activities shall be prepared and maintained by the Contractor and submitted to the DDC either on request or upon completion of the work.
3. A closeout report shall be submitted by the Contractor to the DDC upon completion of the work within the defined exclusion zones. This report shall summarize the daily safety and monitoring logs and provides an overview of the Contractor's performance regarding environmental and safety issues. The report shall carefully document all areas where contamination has been found including pictures, addresses of locations, and potential sources.

4. Medical Surveillance Examinations: The Contractor shall submit to the DDC the name, office address and telephone number of the medical consultant utilized. Evidence of baseline medical examinations together with the evidence of the ability to wear National Institute for Occupational Safety and Health (NIOSH) approved respirators (as specified in American National Standards Institute (ANSI) Z88.6) shall be provided to the DDC for all construction personnel who are to enter the exclusion zones.
5. Accident Reports: All accidents, spills, or other health and safety incidents shall be reported to the DDC.

D. Health and Safety Plan

The HASP shall comply with OSHA regulations 29 CFR 1910.120/1926.65. This document shall at a minimum contain the following:

1. Description of work to be performed
2. Site description
3. Key personnel
4. Worker training procedures
5. Work practices and segregation of work area
6. Hazardous substance evaluation
7. Hazard assessment
8. Personal and community air monitoring procedures and action levels
9. Personal protective equipment
10. Decontamination procedures
11. Safety rules
12. Emergency procedures
13. Spill control, dust control, vapor/odor suppression procedures
14. Identification of the nearest hospital and route
15. Confined space procedures
16. Excavation safety procedures

8.01 S.2 MEASUREMENT

Health and Safety Requirements

- A. 25% of the lump sum price will be paid when the following items are implemented or mobilized:

Medical surveillance program
 Health and safety training
 Health and safety plan
 Environmental and personnel monitoring
 Instrumentation
 Spill control
 Dust control
 Personnel and equipment decontamination facilities
 Personnel protective clothing
 Communications
 Mobilization

- B. 50% will be paid in proportional monthly amounts over the period of work.
 C. 25% will be paid when the operation is demobilized and removed from the project site.

8.01 S.3 PRICE TO COVER

Health and Safety Requirements

The lump sum price bid for the health and safety requirements shall include all labor, materials, equipment, and insurance necessary to complete the work in accordance with these specifications. The price bid shall include, but not be limited to, the following:

- A. Providing training, safety personnel, air monitoring and medical examinations as specified.
- B. Providing safety equipment and protective clothing for site personnel, including maintenance of equipment on a daily basis; replacement of disposable equipment as required; decontamination of clothing, equipment and personnel; and all other health and safety activities or costs not paid for under other pay items in this Contract.
- C. Providing, installing, operating and maintaining on-site emergency medical and first aid equipment. This includes all furnishings, equipment, supplies and maintenance of all medical equipment, and all other health and safety items and services for which payment is not provided under other pay items in this Contract.
- D. Providing, installing, operating, maintaining, and decommissioning all personnel and equipment decontamination facilities, including decontamination pad, decontamination water supply, and all other items and services required for the implementation of the health and safety requirements for which pay items are not provided elsewhere in this Contract. Vehicle decontamination pads shall be included in the price of this item. Disposal of decontamination fluid shall be paid for under Item 8.01 W1 – Removal, Treatment and Discharge/Disposal of Contaminated Water.
- E. Spill Control
 - 1. Payment shall account for furnishing, installing, and maintaining all spill control equipment and facilities. Payment will include equipment and personnel to perform emergency measures required to contain any spillage and to remove spilled materials and soils or liquids that become contaminated due to spillage during work within the exclusion zones and handling of excavated soils and liquids from these areas. This collected spill material will be properly disposed of.
 - 2. Payment under this item shall not include testing, handling, transportation or disposal of petroleum-contaminated/potentially hazardous soils excavated during construction. The price for this work will be paid for under Items 8.01 C1 – Handling, Transporting and Disposal of Non-Hazardous Contaminated Soils, 8.01 C2 – Sampling and Testing of Contaminated/Potentially Hazardous Soil for Disposal Parameters or 8.01 H – Handling, Transporting and Disposal of Hazardous Soils, as appropriate.
- F. Dust Control

Payment shall account for furnishing, installing, and maintaining dust control equipment and facilities to be used whenever applicable dust levels are exceeded. Payment will include all necessary labor, equipment, clean water, foam, and all other materials required by the Dust Control Plan. The DOH Community Air Monitoring Plan (CAMP) may be used as guidance.
- G. Vapor/Odor Suppression

Payment shall account for furnishing, installing and maintaining vapor/odor control equipment and facilities to be used whenever organic vapor monitoring or the presence of odors indicates that vapor suppression is required to protect workers or the public. Payment will include all necessary labor, equipment, clean water, foam and all other materials required by the Vapor/Odor Suppression Plan.

H. Mobilization/Demobilization

1. Mobilization

Payment shall include but not be limited to:

- a. All work required to furnish, install and maintain all signs, fencing, support zone facilities, parking areas and all temporary utilities;
- b. All work required to furnish, install, and maintain an office space with phone and utilities for health and safety personnel;
- c. All work required for complete preparation of lay down area for roll-off containers, including sampling, and any required fencing;
- d. All direct invoiced cost from bonding companies and government agencies for permits and costs of insurance; and
- e. All other items and services required for mobilization and site preparation.

2. Demobilization

Payment shall include but not be limited to: All work required to sample the area; remove from the site all equipment, temporary utilities and supporting facilities; performance of necessary decontamination and repairs; disposal of disposable equipment and protective gear and other items and services required for complete demobilization.

Payment will be made under:

<u>ITEM NUMBER</u>	<u>ITEM</u>	<u>PAYMENT UNIT</u>
8.01 S	Health and Safety	Lump Sum

ITEM 8.01 W1 REMOVAL, TREATMENT AND DISCHARGE/DISPOSAL OF CONTAMINATED WATER

8.01 W1.1 WORK TO INCLUDE

General: This work shall consist of the proper removal and disposal of all contaminated groundwater and decontamination water generated during construction operations. The Contractor shall be solely responsible for the proper disposal or discharge of all contaminated water generated at the job site. The Contractor will have the option of treating water on-site for discharge to the combined sanitary/storm sewer system or removing contaminated water for off-site disposal. The Contractor shall be responsible to choose a method compatible to the construction work and shall be compensated on a per day basis regardless of method employed. The Contractor will be compensated for only those days where the system is in full operation.

The Contractor shall retain a dewatering/water treatment Specialist (hereinafter the "Specialist") and laboratory as specified under Item 8.01 W2 – Sampling and Testing of Contaminated Water, to conduct any testing that may be required for disposal of impacted water.

The dewatering/water treatment Specialist is responsible to obtain all permits; perform all water sampling, testing; and provide ancillary services related to dewatering and water treatment. The Specialist shall at a minimum provide documentation to the Program Administration, Engineering Support Services (ESS) demonstrating the minimum requirements as set forth below:

1. The Specialist shall demonstrate that it has, at a minimum, three (3) years experience in the design of dewatering plans. The Specialist should demonstrate expertise dealing with issues associated with contaminated water. During that three (3) year period, the Specialist shall demonstrate that it provided dewatering and water treatment systems as a routine part of its daily operations.
2. The Specialist must be experienced in work of this nature, size, and complexity and must have previous experience in working with the DEC.
3. The Specialist shall furnish a project listing identifying the location, nature of services provided, owner, owner's contact, contact's telephone number, project duration and value for at least five (5) projects within the last three (3) years of a similar nature, size, and complexity to this one.
4. If conditions within the exclusion zone are deemed hazardous, then the Contractor and its independent Environmental Consultant shall ensure that all personnel working within identified exclusion zones and/or involved (direct contact) with the handling, storage or transport of hazardous and contaminated material shall have completed a minimum of forty (40) hours of Health and Safety Training on Hazardous Waste Sites in accordance with 29 CFR 1910.120(e). The training program shall be conducted by a qualified safety instructor. If conditions in the exclusion zone are deemed to be non-hazardous, the Specialist shall be responsible to provide site-specific training to its employees and other affected personnel.
5. The Contractor shall ensure that on-site management and supervisors directly responsible for or who supervise employees engaged in hazardous waste operations shall receive the training specified in above and at least eight (8) additional hours of specialized training on managing such operations at the time of job assignment.

The Contractor shall document all operations associated with the handling, sampling and disposal of contaminated water, and ensure that they are in compliance with applicable Federal, State and Local statutes and regulations.

The Contractor shall supply all labor, equipment, transport, plant, material, treatment, and other incidentals required to conduct the specified work of this section.

If water will be disposed of into the combined sanitary/storm sewer system, the Contractor shall ensure the Specialist treats the water to comply with the New York City Department of Environmental Protection (DEP) Sanitary/Combined and Storm Sewer Effluent Limit concentrations prior to discharge. The Contractor is responsible for providing settling or filtering tanks and any other apparatus required by DEP. Alternatively, the Contractor can provide a plan for transport and disposal at an off-site waste disposal facility.

Within forty-five (45) calendar days after award of Contract, the Contractor shall submit to the Program Administration, ESS for review, a Water Handling Plan (WHP). The WHP must be approved by the Program Administration, ESS, prior to the Contractor's commencement of work. The minimum requirements for the WHP are specified herein Item 8.01W 1.2, for each type of disposal (disposal into the combined sanitary/storm sewer or off-site disposal). The Contractor shall maintain a complete, up to date copy of the WHP on the job site at all times.

8.01 W1.2 CONSTRUCTION DETAILS

For each disposal method the Contractor proposes to utilize (disposal to combined sanitary/storm sewer or off-site disposal), the WHP shall include the information required in paragraphs A and B below, as appropriate.

A. On-site treatment and discharge into New York City combined sanitary/storm sewers.

1. Regulations: The Contractor shall comply with all applicable regulations. This includes but may not be limited to:
Title 15-New DEP Sewer Use Regulations.
2. Permits: The Contractor is solely responsible to obtain all necessary and appropriate Federal, State and Local permits and approvals. The Contractor will be responsible for performing all and any system pilot tests required for permit approval. This includes but may not be limited to:
 - a. Industrial waste approval for the New York City sewer system.
 - b. Groundwater discharge permit for the New York City sewer system (DEP Division of Sewer Regulation and Control), if discharge to sewer exceeds 10,000 gallons per day.
 - c. The Contractor shall comply with DEC State Pollutant Discharge Elimination System (SPDES) Permit Number GP-0-10-001, General Permit for Stormwater Discharges.
 - d. Long Island well point permit for Brooklyn and Queens sites, if well points are used for dewatering.
 - e. Wastewater quality control application, DEP.
3. The WHP for this portion of the work shall include at a minimum:

- a. Identification and design of Contractor's proposed treatment to assure that the water meets the DEP sewer use guidelines prior to discharge to the sewer, including identification of all materials, procedures, settling or filtering tanks, filters and other appurtenances proposed for treatment and disposal of contaminated water.
- b. The name, address and telephone number of the contact for the Contractor's proposed chemical laboratory, as well as the laboratory's certifications under Federal, State or non-governmental bodies.
- c. The name, address and telephone number of the contact for the Contractor's proposed independent Environmental Consultant.
- d. Copies of all submitted permit applications and approved permits the Contractor have received.

4. Materials

The Contractor shall supply all settling or filtering tanks, pumps, filters, treatment devices and other appurtenances for treatment, temporary storage and disposal of contaminated water. All equipment shall be suitable for the work described herein.

5. Execution

- a. The Contractor is solely responsible for disposal of all water, in accordance with all Federal, State and Local regulations.
- b. The Contractor is solely responsible for any treatment required to assure that water discharged into the sewer is in compliance with all permits and Federal, State and Local statutes and regulations.
- c. The Contractor is solely responsible for the quality of the water disposed of into the sewers.
- d. The Contractor is responsible for sampling and testing of water for the DEP Sanitary/Combined and Storm sewer Effluent Limit concentrations. The quality of the data is the Contractor's responsibility. Any sampling and testing shall be conducted and paid in accordance with Item 8.01 W2 – Sampling and Testing of Contaminated Water.
- e. The Contractor shall be responsible to maintain the discharge rate to the sewer such that all permit requirements are met, the capacity of the sewer is not exceeded and no surcharging occurs downstream due to the Contractor's actions. Dewatering by means of well points or deep wells will not be allowed in the Boroughs of Brooklyn or Queens where the rate of pumping exceeds forty-five (45) gallons per minute unless the appropriate permit has been secured from the DEC.
- f. Disposal of Treatment Media
 - (1) The Contractor shall be responsible for disposal or recycling of treatment media in accordance with all Federal, State and Local regulations.
 - (2) The Contractor shall provide the DDC with all relevant documentation concerning the disposal of treatment media, including manifests, bills of

loading, certificates of recycling or destruction and other applicable documentation.

- (3) **Disposal of treatment media shall not be considered as a separate pay item; instead it shall be considered as incidental work thereto and included in the unit price bid.**

B. Off-Site Disposal

1. Regulations: The Contractor shall conform to all applicable Federal, State and Local regulations pertaining to the transportation, storage and disposal of any hazardous and/or non-hazardous materials as listed in Attachment 2.
2. The following shall be submitted to the DDC prior to initiating any off-site disposal:
 - a.
 - (1) Name and waste transporter permit number
 - (2) Address
 - (3) Name of responsible contact for the hauler
 - (4) Any and all necessary permit authorizations for each type of waste transported
 - (5) Previous experience in performing the type of work specified herein
 - b. General information for each proposed treatment/disposal facility and at least one backup treatment/disposal facility
 - (1) Facility name and EPA identification number
 - (2) Facility location
 - (3) Name of responsible contact for the facility
 - (4) Telephone number for contact
 - (5) Unit of measure utilized at facility for costing purposes
 - c. A listing of all permits, licenses, letters of approval and other authorizations to operate, which are currently held and valid for the proposed facility as they pertain to receipt and management of the wastes derived from this Contract.
 - d. A listing of all permits, licenses, letters of approval and other authorizations to operate which have been applied for by the proposed facility but not yet granted or issued. Provide dates of application(s) submitted. Planned submittals shall also be noted.
 - e. The Contractor shall specify and describe the disposal/containment unit(s) that the proposed facility will use to manage the waste and provide dates of construction and beginning of use, if applicable. Drawings may be provided. The Contractor shall identify the capacity available in the units and the capacity reserved for the subject waste.
 - f. The Contractor shall provide the date of the proposed facility's last compliance inspection.

- g. A list of all active (unresolved) compliance orders, agreements, enforcement notices or notices of violations issued to the proposed facility shall be submitted. The source and nature of the cause of violation shall be stated, if known. If groundwater contamination is noted, details of the facility's groundwater monitoring program shall be provided.
- h. Description of all sampling and field/laboratory analyses that will be needed to obtain disposal facility approval.

3. Materials

All vessels for temporary storage and transport to an off-site disposal facility shall be as required in DOT regulations.

4. Execution

a. General

- (1) The Contractor shall organize and maintain the material shipment records/manifests required by Federal, State and Local law. The Contractor shall include all bills of lading, certificates of destruction, recycling or treatment and other applicable documents.
- (2) The Contractor shall coordinate the schedule for truck arrival and material deliveries at the job site to meet the approved project schedule. The schedule shall be compatible with the availability of equipment and personnel for material handling at the job site.
- (3) The Contractor shall inspect all vehicles leaving the project site to ensure that contaminated liquids are not spilling and are contained for transport.
- (4) The Contractor shall obtain letters of commitment from the waste haulers and the treatment, disposal or recovery facility to haul and accept shipment. The letter shall indicate agreement to handle and accept the specified estimated quantities and types of material during the time period specified in the project schedule and any time extension as deemed as necessary.
- (5) The Contractor shall verify the volume of each shipment of water from the site.
- (6) The Contractor is responsible for sampling and testing of water for off-site disposal. The quality of the data is the Contractor's responsibility. Any sampling and testing shall be conducted and paid in accordance with Item 8.01 W2 - Sampling and Testing of Contaminated Water.
- (7) The Contractor shall be responsible for any additional analyses required by the TSD facility, and for the acceptance of the water at an approved TSD facility.

b. Hauling

- (1) The Contractor shall not deliver waste to any facility other than the TSD facility(ies) listed on the shipping manifest.
- (2) The Contractor shall coordinate manifesting, placarding of shipments, and vehicle decontamination. All quantities shall also be measured and recorded

upon arrival at the TSD facility(ies). If any deviation between the two records occurs, the matter is to be reported immediately to the DDC and shall be resolved by the Contractor to the satisfaction of the DDC.

- (3) The Contractor shall be held responsible for any and all actions necessary to remedy situations involving material spilled in transit or mud and dust tracked off-site. This cleanup shall be accomplished at the Contractor's expense.
- (4) The Contractor shall be responsible for inspecting the access routes for road conditions, overhead clearance and weight restrictions.
- (5) The Contractor shall only use the transporter(s) identified in the WHP for the performance of work. Only a transporter with a current Part 364 Waste Transporter Permit from DEC may transport this material. Any use of substitute or additional transporters must have previous written approval from the DDC at no additional cost to the City.
- (6) The Contractor shall develop, document, and implement a policy for accident prevention.
- (7) The Contractor shall not combine waste materials from other projects with material from this project.
- (8) The Contractor shall obtain for the City a hazardous waste generator identification number and will sign the manifest as the generator, if necessary.
- (9) No material shall be transported until approved by the DDC.

c. Disposal Facilities

- (1) The Contractor shall use only the TSD facility(ies) identified in the WHP for the performance of the work. Substitutions or additions shall not be permitted without prior written approval from the Program Administration, ESS, and, if approved, shall be at no extra cost to the City.
- (2) The Contractor shall be responsible for acceptance of the material at an approved TSD facility, for ensuring that the facility is properly permitted to accept the stated material, and that the facility provides the stated storage and/or disposal services.
- (3) The DDC reserves the right to contact and visit the disposal facility and regulatory agencies to verify the agreement to accept the stated material and to verify any other information provided. This does not in any way relieve the Contractor of his responsibilities under this Contract.
- (4) In the event that the identified and approved facility ceases to accept the stated materials or the facility ceases operations, it is the Contractor's responsibility to locate an alternate approved and permitted facility(ies) for accepting materials. The Contractor is responsible for making the necessary arrangements to utilize the facility(ies), and the alternate facility(ies) must be approved in writing by the DDC in the same manner and with the same requirements as for the original facility(ies). This shall be done with no extra cost or delay to the City.

d. Equipment and Vehicle Decontamination

- (1) The Contractor shall design and construct a portable decontamination station to be used to decontaminate equipment and vehicles exiting the exclusion zone. The cost for this work shall be paid under Item 8.01 S – Health and Safety.

8.01 W1.3 METHOD OF MEASUREMENT

The quantity for on-site treatment and discharge or off-site disposal shall be on a per day basis.

8.01 W1.4 PRICE TO COVER

- A. The per day price bid for Item 8.01 W1 shall include the cost of furnishing all labor, materials, plant, equipment, and insurance for handling, transportation, disposal, documentation, permits, hauling, mobilization and demobilization, and any other incidentals thereto to complete the work.
- B. The Contractor will not be paid for water that is within the DEP Sewer Discharge Limits.

Payment will be made under:

<u>ITEM NUMBER</u>	<u>ITEM</u>	<u>PAYMENT UNIT</u>
8.01 W1	Removal, Treatment and Disposal/Discharge of Contaminated Water	Day

ITEM 8.01 W2 SAMPLING AND TESTING OF CONTAMINATED WATER

8.01 W2.1 WORK TO INCLUDE

A. Description

The work shall consist of sampling and testing of potentially contaminated groundwater, surface runoff within the excavated area and all contaminated water generated during the decontamination process.

B. Sampling and Testing

1. The Contractor is responsible, at a minimum, for sampling and testing of contaminated water for the DEP Sanitary/Combined and Storm Sewer Effluent Limit concentrations as listed in Attachment 1. The quality of the data is the Contractor's responsibility. Any additional testing required by the Federal, State and/or disposal facilities shall be included in the bid price of this Item.
2. All sampling and testing shall be conducted by a person trained in sampling protocols using accepted standard practices and/or the DEC sampling guidelines and protocols.
3. All sample containers shall be marked with legible sample labels which shall indicate the project name, sample location and/or container, the sample number, the date and time of sampling, preservatives utilized, how the sample was chilled to 4 degrees Celsius, and other information that may be useful in determining the character of the sample.
4. Chain-of-custody shall be tracked from laboratory issuance of sample containers through receipt of the samples.
5. The Contractor shall maintain a bound sample log book. The Contractor shall provide the DDC access to it at all times and shall turn it over to the DDC in good condition at the completion of the work. The following information, as a minimum, shall be recorded to the log:
 - a. Sample identification number
 - b. Sample location
 - c. Field observation
 - d. Sample type
 - e. Analyses
 - f. Date/time of collection
 - g. Collector's name
 - h. Sample procedures and equipment used
 - i. Date sent to laboratory/name of laboratory
6. Only dedicated sampling equipment may be used to collect these samples. All equipment involved in field sampling must be decontaminated before being brought to the site, and must be properly disposed of after use.
7. Samples shall be submitted to the Contractor's laboratory within the holding times for the parameters analyzed.

8. All analyses must be done by a laboratory that has received approval from the DOH's ELAP for the methods to be done. The Contractor must specify the laboratory in the WHP.
9. Analytical results for water discharged to the sewer and for off-site disposal must be submitted to the DDC no later than five (5) days after sample collection.
10. The City reserves the right to direct the Contractor to conduct alternative sampling in lieu of the parameters described above, if the situation warrants. The substitute sampling parameters shall be of equal or lesser monetary value than those described above, as determined by industry laboratory pricing standards.

8.01 W2.2 METHOD OF MEASUREMENT

Quantities for samples shall be measured as the number of sets of samples that are tested for the DEP Sanitary/Combined and Storm Sewer Effluent Limit concentrations. A set shall be defined as one (1) representative sample analyzed for the full range of DEP parameters as specified in attachment 1.

8.01 W2.3 PRICE TO COVER

The unit price bid per set for Item 8.01 W2 shall include the cost of furnishing all labor, materials, plant, equipment, and insurance for handling, transport, sampling, testing, documentation, permits, other incidentals necessary to complete the work of sampling and testing of contaminated water. Any additional costs incurred by the Contractor for sampling and testing of contaminated water shall be included in the bid price of this Item.

Payment will be made under:

<u>ITEM NUMBER</u>	<u>ITEM</u>	<u>PAYMENT UNIT</u>
8.01 W2	Sampling and Testing of Contaminated Water	Set

ATTACHMENT 1

**New York City Department of Environmental Protection
Limitations for Discharge To Storm, Sanitary/Combined Sewer**

NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION

BUREAU OF WASTEWATER TREATMENT

Limitations for effluent to storm, sanitary or combined sewers

Parameter	Daily Limit	Units	Sample Type	Monthly Limit
Oil & Grease	15	mg/l	Instantaneous	
Total Petroleum Hydrocarbons	50	mg/l	Instantaneous	
pH Range (Storm sewer)	6.5-8.5	SU's	Instantaneous	
(Sanitary sewer)	5-11			
Benzene	134	ppb	Instantaneous	57
Ethyl benzene	380	ppb	Instantaneous	142
Toluene	74	ppb	Instantaneous	28
Xylenes Total	74	ppb	Instantaneous	28
Temperature	< 150	°F	Instantaneous	
Cadmium	2	mg/l	Instantaneous	
	0.69	mg/l	Composite	
Chromium VI	5	mg/l	Instantaneous	
Copper	5	mg/l	Instantaneous	
Lead	2	mg/l	Instantaneous	
Mercury	0.05	mg/l	Instantaneous	
Nickel	3	mg/l	Instantaneous	
Zinc	5	mg/l	Instantaneous	
Flash Point	> 140	°F	Instantaneous	
Total Suspended Solids	350	ppm	Instantaneous	
PCB's Total*	1	ppb	Composite	
Perc (Tetrachloroethylene)	20	ppb	Instantaneous	
MTBE (Methyl-Tert-Butyl-Ether)	10	ppb	Instantaneous	10
Naphthalene	47	ppb	Instantaneous	19

* Analysis for PCB's are requested only if both conditions listed below are met:

- 1) If proposed discharge > 10,000 gpd
- 2) If duration of discharge > 10 days

Analysis for PCB's must be conducted by USEPA Method 608 only with MDL = 65ppt

ATTACHMENT 2
Applicable Regulations

Applicable regulations include, but are not limited to:

1. 49 CFR 100 to 179 - DOT Hazardous Materials Transport and Manifest System Requirements
2. New York State Department of Environmental Conservation (DEC), Spills Technology and Remediation Series (STARS) Memo #1
3. 6 NYCRR 360-1 DEC Solid Waste Management Facilities
4. 6 NYCRR 364- Waste Transporter permits
5. Local restrictions on transportation of waste/debris
6. 40 CFR 260 to 272 - Hazardous Waste Management (RCRA)
7. 6 NYCRR 371 - Identification and Listing of Hazardous Wastes
8. 6 NYCRR 372 - Hazardous Waste Manifest System and Related Standards for Generators, Transporters and Facilities
9. 6 NYCRR 373-1 - Hazardous Waste Treatment, Storage and Disposal Facility Permitting Requirements
10. 6 NYCRR 376 - Land Disposal Restrictions
11. Posted weight limitations on roads or bridges
12. Transportation Skills Programs, Inc. 1985 - Hazardous Materials and Waste Shipping Papers and Manifests
13. Other local restrictions on transportation of waste/debris
14. Occupational Safety and Health Administration (OSHA), Standards and Regulations, 29 CFR 1910 (General Industry)
15. OSHA 29 CFR 1910.120 Hazardous Waste Operations and Emergency Response
16. OSHA Safety and Health Standards 29 CFR 1926 (Construction Industry)
17. OSHA 29 CFR 1910.146 Confined Space Entry Standard
18. Standard Operating Safety Guidelines, EPA Office of Emergency and Remedial Response Publication, 9285.1-03
19. NIOSH / OSHA / USCG / EPA Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities (1986)
20. U.S. Department of Health and Human Services (DHHS) "NIOSH Sampling and Analytical Methods," DHHS (NIOSH) Publication 84-100
21. ANSI, Practice for Respiratory Protection, Z88.2 (1980)
22. ANSI, Emergency Eyewash and Shower Equipment, Z41.1 (1983)
23. ANSI, Protective Footwear, Z358.1 (1981)
24. ANSI, Physical Qualifications for Respirator Use, Z88.6 (1984)
25. ANSI, Practice for Occupational and Educational Eye and Face Protection, Z87.1 (1968)
26. Water Pollution Control Federation "Manual of Practice No. 1, Safety in Wastewater Works"
27. NFPA No. 327 "Standard Procedures for Cleaning and Safeguarding Small Tanks and Containers"

28. Occupational Safety and Health Act Confined Space Entry Standard 29 CFR 1910.146.87
29. Department of Transportation 49 CFR 100 through 179
30. Department of Transportation 49 CFR 387 (46 FR 30974, 47073)
31. Environmental Protection Agency 40 CFR 136 (41 FR 52779)
32. Environmental Protection Agency 40 CFR 262 and 761
33. Resource Conservation and Recovery Act (RCRA)
34. Any transporter of hazardous or non-hazardous materials shall be licensed in the State of New York and all other states traversed in accordance with all applicable regulations.

ATTACHMENT 3

Definitions

Contaminated Groundwater and Decontamination Fluids: Groundwater within the excavation trench or decontamination water that contains regulated compounds above the DEP Discharge to Sanitary/Combined Sewer Effluent limits.

Disposal or Treatment Facility: A facility licensed to accept either non-hazardous regulated waste or hazardous waste for either treatment or disposal.

Exclusion Zone: Work area that will be limited to access by Contractor personnel specifically trained to enter the work area only. The exclusion zone will be set up to secure the area from the public and untrained personnel. The project health and safety program will apply to all construction personnel including persons entering the work area.

Hazard Assessment: An assessment of any physical hazards that may be encountered on a work site.

Hazardous Soils: Soils that exhibit any of the characteristics of a hazardous waste, namely ignitability, corrosivity, reactivity, and toxicity, as defined in 6 NYCRR Part 371, Section 371.3 and 40 CFR Section 261.

Hazardous Substance Evaluation: An evaluation of the possible or known presence of any hazardous substances that may be encountered on a job site. This evaluation is included in the Health and Safety Plan and will include the identification and description of any hazardous substances expected to be encountered. Material Safety Data Sheets (MSDS) will be included for each substance.

Health and Safety Plan: A plan employed at a work site that describes all the measures that will be taken to assure that all work is conducted in a safe manner, and that the health of the workers and the public will be insured.

Material Handling Plan: A plan outlining the methods that will be employed to handle, transport and dispose of contaminated materials.

Non-Hazardous Contaminated Soils: Soils which exhibit a distinct chemical or petroleum odor, or exhibit elevated photoionization detector readings but are not classified as hazardous waste under 6 NYCRR Part 371, Section 371.3 and 40 CFR Section 261.

New York State Health Department's Environmental Laboratory Approval Program: A program by which the state of New York approves and accredits environmental testing laboratories.

PCBs: Polychlorinated biphenyls are a group of toxic compounds commonly used as a coolant in transformers and other electrical components.

Photoionization Detector: A hand held instrument used to measure volatile organic compounds in air. The instrument ionizes the organic molecules through the use of an ultraviolet lamp.

RCRA Hazardous Waste Characteristics: Characteristics of a material which may indicate the material is hazardous. These include: ignitability, corrosivity, reactivity, and toxicity.

Total Petroleum Hydrocarbons: An analytical procedure used to determine the total amount of petroleum compounds in a material.

Toxicity Characteristic Leaching Procedure: A laboratory testing method used to determine the concentrations of certain substances in a material that has the ability to leach from the material. These concentrations are used to determine if the material exhibits toxicity levels characteristic of a hazardous waste.

ATTACHMENT 4

Phase II Subsurface Corridor Investigation Report

- Final -

Phase II Subsurface Corridor Investigation Report
For
RECONSTRUCTION OF ROBERTO CLEMENTE PLAZA
BRONX, NEW YORK

DDC PROJECT NO. HWXRCPLZ
WORK ORDER NO. 7064-ATC-6748
CONTRACT REGISTRATION NO. 20090016802

Prepared for:



Bureau of Environmental and Geotechnical Services

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PROJECT NO. 015.38500.0095

July 26, 2010



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EXECUTIVE SUMMARY

On behalf of the New York City Department of Design and Construction (NYCDDC), ATC Associates, Inc. (ATC) conducted a Phase II Subsurface Corridor Investigation (Phase II SCI) of the following three (3) street segments, which together form a triangular shape around Roberto Clemente Plaza, in the Mott Haven section of Bronx, NY (hereinafter referred to as the Corridor):

1. 3rd Avenue, between East 148th Street and East 149th Street;
2. Willis Avenue, between East 148th Street and East 149th Street; and
3. East 148th Street, between 3rd Avenue and Willis Avenue.

ATC prepared a Phase I Corridor Assessment Report (Phase I CAR) dated April 30, 2009, which presented the results of a survey conducted along the Corridor to assess the presence of potential sources of subsurface contamination within, and in the immediate vicinity of, the Corridor. The Phase I CAR did not identify "High" or "Moderate" risk sites that had a potential to impact the subsurface (soil and/or groundwater) of the Corridor. Therefore, the objective of the Phase II SCI was to assess whether the potential presence of subsurface contamination associated with historic (urban) fill material might impact proposed construction activities. Infrastructure improvements consisting of excavation for the street reconstruction, including water main replacement, catch basins, sidewalks and pedestrian ramps are proposed for the Corridor.

The Phase II SCI was performed by ATC in conjunction with a geotechnical investigation, which was performed under the direction of Tectonic Engineering & Surveying Consultants P.C. (Tectonic), a consulting firm retained by DDC. The Phase II SCI consisted of the following components:

- The advancement of two (2) borings (B-1 and B-4) to a depth of 40 feet below ground surface (ftbg) and 30 ftbg, respectively, and the field screening of soil samples, including photo-ionization detector (PID) readings and visual and olfactory indicators of contamination (staining, odors);
- The collection of two (2) soil samples (B-1 and B-4), which were analyzed for the following parameters: (1) United States Environmental Protection Agency (EPA) Target Compound List (TCL) volatile organic compounds (VOCs); (2) TCL Base Neutral/Acid (BN/A) extractable semi-volatile organic compounds (SVOCs); (3) Target Analyte List (TAL) metals; (3) TCL pesticides; and (4) TCL polychlorinated biphenyls (PCBs);
- The collection of one (1) waste characterization soil sample, which was analyzed for: (1) the EPA Full Toxicity Characteristics Leaching Procedure (TCLP) parameters; (2) the Resource Conservation and Recovery Act (RCRA) Characteristics (ignitability, reactivity and corrosivity); and (3) Total Petroleum Hydrocarbons Diesel Range Organics/Gasoline Range Organics (TPHC DRO/GRO);



- The collection of one (1) groundwater sample from a monitoring well (B-2PW) that was installed as part of the geotechnical investigation and the analysis of the groundwater sample for the parameters published by the New York City Department of Environmental Protection (NYCDEP) as Limitations for Effluent to Sanitary or Combined Sewers (NYCDEP Sewer Discharge Criteria); and
- The preparation of this report, which includes tables summarizing the laboratory analytical results and figures depicting boring locations, significant site features and, if applicable, contamination occurrence and distribution.

In order to evaluate the subsurface soil and groundwater quality, the laboratory analytical results for soils were compared with the regulatory standards identified in: (1) New York State Department of Environmental Conservation (NYSDEC) Technical and Administrative Guidance Memorandum #4046 (TAGM) dated 1994 (including Eastern USA Soil Background Concentrations for metals); (2) NYSDEC STARS 1992 Memo #1, Petroleum Contamination Soil Guidance Policy Toxicity Characteristic Leaching Procedure (TCLP) Alternative Guidance Values (AGVs); (3) NYSDEC Subpart 375-6: Remedial Program Unrestricted and Restricted Use (Track 1 and Track 2) Soil Cleanup Objectives (SCOs); and (4) the Toxicity Characteristic Regulatory Levels for Hazardous Waste published in RCRA and NYSDEC Part 371. In order to evaluate the groundwater quality, the laboratory analytical results for groundwater samples were compared to the NYCDEP Sewer Discharge Criteria.

The subsurface soils encountered during this Phase II SCI from grade to approximately nine (9) ftbg consisted predominantly of light brown fine to coarse sand and medium to coarse gravel, little silt, and trace amounts of asphalt. This material appeared to be fill imported for the construction of the MTA Subway tunnels and associated structures, that are present below and adjacent to the Corridor. Below the fill material, the subsurface soils consisted predominantly of fine to coarse tan sand, some silt, little gravel and occasional cobbles and boulders (glacial deposits). Bedrock was encountered in borings B-1, B-2PW and B-4 at depths of 40.1 ftbg, 33.5 ftbg and 28.5 ftbg, respectively. The bedrock consisted of white/light gray/light tan fresh to slightly weathered marble (possibly Inwood Marble).

Field screening did not identify evidence of petroleum impacts, such as stained soil or petroleum odors, in either of the two (2) soil borings. PID readings were not detected above background levels.

VOCs were not detected in any of the collected soil samples at concentrations above the NYSDEC TAGM RSCOs and the Unrestricted Use (Track 1) and Restricted-Residential Use (Track 2) SCOs.

SVOCs were not detected in any of the collected soil samples at concentrations above the NYSDEC TAGM RSCOs and the Unrestricted Use (Track 1) and Restricted-Residential Use (Track 2) SCOs.

Mercury was detected in sample B-1 at a concentration that exceeds the TAGM RSCO, the Eastern USA Soil Background level, and the Unrestricted Use (Track 1) SCO. Mercury was detected in sample B-4 at a concentration below the RSCO and SCOs. Beryllium, chromium, iron, and zinc were detected in both soil samples, B-1 and B-4, at concentrations above their respective TAGM RSCOs. However, the detected concentrations were below the Eastern USA Soil Background levels. Detected concentrations of beryllium and zinc were below their Unrestricted Use (Track 1) SCOs. There are no Unrestricted Use (Track 1) SCOs for chromium and iron. Nickel and selenium were detected in samples B-4 and B-1, respectively, at concentrations that marginally exceeded their corresponding TAGM RSCOs but are below the Eastern USA Soil Background levels and Unrestricted Use (Track 1) SCOs.

Pesticides and PCBs were not detected in the soil samples collected.

The waste characterization soil sample (WC-01) did not exhibit evidence of hazardous waste characteristics. DRO was detected in sample WC-01. There are no regulatory standards for DRO. The metals barium and selenium were detected at concentrations below the RCRA Hazardous Waste Levels.

Groundwater was encountered in monitoring well B-2PW at a depth of 16.7 ftbg.

Total Suspended Solids (TSS) were detected in the groundwater sample collected at a concentration that exceeds the NYCDEP Sewer Discharge Criterion. All other parameters were within NYCDEP Sewer Discharge Criteria.

Conclusions

Based on the evaluation of the field screening data and the laboratory analytical results, and a comparison to applicable regulatory standards, the following conclusions are presented:

- Field screening did not identify evidence of contamination in the two (2) soil borings;
- Subsurface soils contain elevated concentrations of metals and DRO. The presence of metals is attributable to natural (background) levels and/or the presence of fill material. The presence of DRO in the soil sample may be attributed to the detection of organic compounds that are not diesel constituents but are used by the laboratory as part of the analytical methodologies or the presence of historic fill material.
- The subsurface soils did not exhibit hazardous waste characteristics; and
- The groundwater at the Site contains TSS at a concentration that exceeds the NYCDEP Sewer Discharge Criteria. Therefore, groundwater may require pre-treatment prior to discharge. All other parameters were within NYCDEP Sewer Discharge Criteria.

Based on the results of the field investigation and laboratory analytical results, ATC recommends the following:

- The Contract documents should identify provisions and a contingency for managing, handling, transporting and disposing of non-hazardous soil for metals and DRO. The contract documents should also contain provisions for managing and transporting non-hazardous contaminated fill material as a contingency. The Contractor should be required to submit a Material Handling Plan, to identify the specific protocol and procedures that will be employed to manage the waste in accordance with applicable regulations;
- Due to the presence of metals at concentrations above TAGM RSCOs in the investigated sites, dust control procedures are recommended during excavation activities to minimize the creation and dispersion of fugitive airborne dust. The Contractor may implement dust control measures to minimize potential airborne contaminants released as a direct result of construction activities. A Community Air Monitoring Plan (CAMP) shall be developed in accordance with NYSDEC DER-10 Regulations. The CAMP requires real-time monitoring for particulates (i.e., dust) at the downwind perimeter of each designated work area when certain activities are in progress at contaminated sites. The CAMP is intended to provide a measure of protection for the downwind community from potential airborne contaminant releases as a direct result of investigative and remedial work activities. Specific requirements shall be reviewed for each situation in consultation with the New York State Department of Health (NYSDOH) to ensure proper applicability;
- Dewatering may be necessary during construction activities in the Corridor. Based on the results of laboratory analyses for NYCDEP sewer discharge criteria, groundwater may require pre-treatment for the TSS exceedance. Therefore, should dewatering be necessary during construction activities within the Corridor, the contractor should be required to obtain a New York City Department of Environmental Protection (NYCDEP) sewer discharge permit and perform sampling and laboratory analysis prior to discharging into sanitary and combined sewers;
- If discharge into storm sewers is required during dewatering, it must be done under the appropriate NYSDEC State Pollutant Discharge Elimination System (SPDES) permit. Additional sampling and laboratory analysis will be required to satisfy NYSDEC requirements prior to discharge into storm sewers; and
- Before beginning any excavation activity, the contractor shall submit a site-specific health and safety plan (HASP) that will meet the requirements set forth by the Occupational, Safety and Health Administration (OSHA), the NYSDOH and any other applicable regulations. The HASP should identify the possible locations and risks associated with the potential contaminants that may be encountered, and the administrative and engineering controls that will be utilized to mitigate concerns (i.e. dust control procedures for metals).

1.0 INTRODUCTION

On behalf of the New York City Department of Design and Construction (NYCDDC), ATC Associates, Inc. (ATC) conducted a Phase II Subsurface Corridor Investigation (Phase II SCI) of the following three (3) street segments, which together form a triangular shape around Roberto Clemente Plaza, in the Mott Haven section of Bronx, NY (hereinafter referred to as the Corridor):

1. 3rd Avenue, between East 148th Street and East 149th Street;
2. Willis Avenue, between East 148th Street and East 149th Street; and
3. East 148th Street, between 3rd Avenue and Willis Avenue.

Infrastructure improvements consisting of excavation for street reconstruction including water main replacement, catch basins, sidewalks and pedestrian ramps are proposed along the Corridor. This Phase II SCI was conducted to determine if the Corridor's environmental condition (the potential presence of fill material) might impact proposed construction activities.

1.1 Summary of Previous Environmental Investigations

ATC prepared a Phase I Corridor Assessment Report (Phase I CAR) dated April 30, 2009, which presented the results of a survey conducted along the Corridor to assess the presence of potential sources of subsurface contamination within, and in the immediate vicinity of, the Corridor. The survey also included a review of fire insurance maps to document historical use and a limited review of the New York State databases to identify sites that are known to be contaminated.

The Phase I CAR did not identify "High" or "Moderate" risk sites that had a potential to impact the subsurface (soil and/or groundwater) of the Corridor. However, the potential presence of subsurface contamination associated with the placement of historic (urban) fill material throughout New York City is an environmental concern that might impact proposed construction activities and requires further investigation.

1.2 Scope of Work

The Phase II SCI consisted of a field investigation, laboratory analyses, and the preparation of this report, which includes tables summarizing the laboratory analytical results and figures depicting boring locations, significant site features and, if applicable, contamination occurrence and distribution. Drilling activities for the field investigation were performed by Warren George Inc. of Jersey City, New Jersey, as part of a geotechnical investigation conducted under the direction/oversight of Tectonic Engineering & Surveying Consultants P.C. (Tectonic), a consulting firm retained by DDC. Field screening and the collection of soil and groundwater samples was performed by ATC. Laboratory analyses were provided by CHEMTECH Consulting Group (CHEMTECH), of Mountainside, New Jersey, a New York State Department of Health (NYSDOH)-approved laboratory (No. 11376). Field derived Quality Assurance/Quality Control samples (i.e. field blanks, trip blanks, duplicates) were not collected

for this project. The field investigation was conducted on June 22-30, 2010 and consisted of the following components:

- The advancement of two (2) borings (B-1 and B-4) to a depth of 20 feet below ground surface (ftbg) and the field screening of soil samples, including photo-ionization detector (PID) readings and visual and olfactory indicators of contamination (staining, odors).
- Field screening, classification and identification of soils from the ground surface to the bottom of each boring. Soil samples were visually identified and classified in the field using the Burmister-based soil classification system. Field screening consisted of visual and olfactory indicators of contamination (staining, odors), as well as screening with a photo-ionization detector (PID).
- The collection of one (1) composite and one (1) grab sample from borings SB-1 and SB-4. The composite samples were comprised of soil from the entire boring column. Since no evidence of contamination was detected during field screening, the grab samples were collected from the 6-inch interval above the groundwater table.
- Laboratory analysis of the composite samples for: (1) Target Compound List (TCL) Base Neutral/Acid (BN/A) extractable semi-volatile organic compounds (SVOCs) by United States Environmental Protection Agency (EPA) Method 8270; (2) Target Analyte List (TAL) metals by EPA Method 6010; (3) TCL pesticides by EPA Method 8081; and (4) TCL polychlorinated biphenyls (PCBs) by EPA Method 8082.
- Laboratory analysis of the grab samples for TCL volatile organic compounds (VOCs) by EPA Method 8260.
- The collection of one (1) groundwater sample from monitoring well B-2PW, which was installed as part of the geotechnical investigation, and the analysis of the groundwater sample for the parameters published by the New York City Department of Environmental Protection (NYCDEP) as Limitations for Effluent to Sanitary or Combined Sewers (NYCDEP Sewer Discharge Criteria).
- The collection of one (1) composite waste characterization (WC) sample (WC-01) comprised of soil aliquots from borings SB-1 and SB-4 [grade to bottom of boring (20 ftbg)].
- Laboratory analysis of the waste characterization sample for: (a) Full Toxicity Characteristics Leaching Procedure (TCLP) by EPA Method SW846; (b) Resource Conservation and Recovery Act (RCRA) Characteristics (ignitability, reactivity and corrosivity) by EPA Method SW846; and (c) Total Petroleum Hydrocarbons Diesel Range Organics/Gasoline Range Organics (TPHC DRO/GRO) by EPA Methods 8015B/8015.

2.0 CORRIDOR INFORMATION

2.1 Corridor Location, Description and Use

The Corridor is located in the Mott Haven section of Bronx, New York and consists of the following three (3) street segments, which together form a triangular shape around Roberto Clemente Plaza (hereinafter referred to as the Corridor):

1. 3rd Avenue, between East 148th Street and East 149th Street;
2. Willis Avenue, between East 148th Street and East 149th Street; and
3. East 148th Street, between 3rd Avenue and Willis Avenue.

The Corridor location is shown on Figure 1. The Corridor is comprised of paved roadways and infrastructure systems. The Corridor segments are characterized primarily by commercial, institutional, ground level retail, offices, and MTA subway stations. MTA rail lines are located in tunnels below and adjacent to the Corridor.

2.2 Description of Surrounding Properties

The Corridor is primarily surrounded by commercial storefronts, residential apartments, and offices. The triangular plaza within the Corridor is occupied by a single-story MTA bus depot. The Willis Avenue segment of the Corridor is currently a pedestrian plaza.

2.3 Corridor and Regional Topographic Setting

Based on a review of the United States Geological Survey (USGS) 7.5-minute Topographic Quadrangle Map for Central Park, NY-NJ (1995) to determine topography at the Corridor. The Corridor exhibits a slight vertical change of approximately one (1) foot along its length. The approximate elevation of the Corridor ranges from 28 feet above mean sea level (msl) at the intersection of Willis Avenue and East 149th Street on the north side of the Corridor to 27 feet above msl at the intersections where Willis Avenue and Third Avenue cross East 148th Street on the south side of the Corridor. Surface water runoff within the Corridor flows to the south following the grade of the roadways. A copy of the topographic map is presented on Figure 1.

2.4 Corridor and Regional Geology

Based on the USGS *Ground Water in Bronx, New York, and Richmond Counties, with Summary Data on Kings and Queens Counties, New York City, New York*, the area's geology is expected to consist of Pleistocene age glacial till deposits and glaciofluvial sediments derived from melt-water of the retreating glaciers. The upper portions of the glacial deposits have been disturbed by a long history of development activities, thus resulting in a layer of fill material, which is classified as Urban Land. Urban Land refers to soils that have been altered by urban development such as buildings and streets, where at least 85 percent of the surface is covered with asphalt, concrete or other impervious building material. Typically, these soils have been mixed with other materials, such as brick and concrete.

The subsurface soils encountered during this Phase II SCI from grade to approximately nine (9) ftbg consisted predominantly of light brown fine to coarse sand and medium to coarse gravel, little silt, and trace amounts of asphalt. This material appeared to be fill imported for the construction of the MTA Subway tunnels and associated structures, that are present below and adjacent to the Corridor. Below the fill material, the subsurface soils consisted predominantly of fine to coarse tan sand, some silt, little gravel and occasional cobbles and boulders (glacial deposits). Bedrock was encountered in borings B-1, B-2PW and B-4 at depths of 40.1 ftbg, 33.5 ftbg and 28.5 ftbg, respectively. The bedrock consisted of white/light gray/light tan fresh to slightly weathered marble (possibly Inwood Marble). Geologic Boring Logs for borings B-1 and B-4 are provided in Appendix B.

2.5 Corridor and Regional Hydrogeology

The nearest surface water body is the Harlem River, located approximately 0.75 mile to the west. Groundwater was encountered at 16.7 ftbg in monitoring well B-2PW. Based on the topography and the proximity of the Corridor to the Harlem River, the regional groundwater flow direction is anticipated to be to the west-southwest. Depth to groundwater and groundwater flow directions may vary due to seasonal fluctuations in precipitation, local usage demands, geology, underground structures, or dewatering operations.

3.0 CORRIDOR EVALUATION

Proposed construction activities at this site include soil excavation and may include dewatering, which in-turn requires that soils and groundwater at the site be characterized to identify material handling requirements (i.e. use of protective equipment) and for material reuse, handling and/or waste disposal requirements. ATC performed field screening and collected soil and groundwater samples from two (2) borings (B-1 and B-4) and one (1) monitoring well (B-2PW) advanced/installed as part of a geotechnical investigation. The soil and groundwater samples from the borings and monitoring well were transferred into laboratory supplied sample jars and properly labeled. The samples were stored with ice in a cooler to preserve the samples at 4° Celsius prior to and during shipment. A chain-of-custody was prepared prior to sample shipment. A summary of the field observations, including the location of the sites and the details of the soil borings, is provided in Table 1.

3.1 Soil Quality Investigation

Two (2) borings (B-1 and B-4) were advanced to depths of 40.1 ftbg and 30.2 ftbg using a rotary drilling rig. Prior to advancement, the borings were cleared to a depth of five (5) ftbg using a Vac truck and hand auger. Soil samples were collected using 2-foot long, 2-inch diameter stainless steel split-spoon samplers. Soil boring locations are shown on Figure 2. The designations and sampling intervals for the samples that were submitted to the laboratory are included in Table 1. Maps depicting each boring location are included in Appendix A. Boring logs are provided in Appendix B. The locations of each boring are described below:

- **B-1** – Located on Willis Avenue, 16 feet west of the eastern curb line and seven (7) feet south of East 148th Street, in the street.
- **B-4** – Located on East 148th Street, 36 feet west of the western curb line of Willis Avenue and in line with the northern curb line of East 148th Street, in the street.

Continuous soil samples were collected from each boring at 2-foot intervals. Upon sample retrieval, the soils were examined for visual evidence (i.e. staining, discoloration) and any olfactory indications (i.e. odors) of contamination. In addition, a photo-ionization detector (PID) was used to screen the soil for VOC vapors.

In order to identify representative conditions relative to the presence of SVOCs, metals, pesticides and PCBs, composite samples were collected from the upper 20 ftbg in borings B-1 and B-4. The composite soil samples were collected by mixing the soil from the upper 20-foot column in a stainless steel bowl.

In order to identify representative conditions relative to the presence of VOCs, grab soil samples were collected in borings B-1 and B-4 from a depth of 16.1 to 16.7 ftbg, which was the 6-inch interval above the groundwater table as measured in monitoring well B-2PW.

In order to identify representative conditions for disposal purposes, one (1) waste classification sample (WC-01) was collected. The sample was comprised of soil aliquots from borings B-1 and B-4 from grade to 20 ftbg.

Soil classification information, including stratigraphy, is documented on the boring logs included in Appendix B. All boring equipment was cleaned by being rinsed with tap water, scrubbed with Alconox, then rinsed with deionized water again between each sample interval. Following the completion of each boring, the boreholes were backfilled with drill cuttings, and then sealed with concrete.

3.2 Groundwater Quality Investigation

As groundwater may be encountered within the depths associated with the future excavation, one (1) groundwater sample was collected for screening and laboratory analysis. As part of the geotechnical investigation, one (1) monitoring well was installed in boring location B-2PW to 35 ftbg. The monitoring well consisted of 10 feet of screen and a 25-foot length section of two-inch diameter schedule 40 PVC riser. Groundwater was measured at 16.7 ftbg in B-2PW. The groundwater sample was collected from the well for screening and laboratory analysis via dedicated polyethylene tubing and low-flow peristaltic submersible pump. All tubing was new, clean and unused and was properly disposed after use. Upon extraction, the sample was examined for visual evidence (i.e., discoloration, sheen) and any olfactory indications (i.e. odors) of contamination. None were noted.

The monitoring well log and summary of the measurements taken from the well is provided in Appendix B. The monitoring well was installed on Willis Avenue, 5.5 feet east of the western curblin and 79 feet north of East 148th Street. The location of the monitoring well is shown on Figure 2.

3.3 Laboratory Analyses

The soil and groundwater samples were submitted to CHEMTECH, a NYSDOH-approved laboratory (No. 11376). Field derived Quality Assurance/Quality Control samples (i.e. field blanks, trip blanks, duplicates) were not collected for this project. Laboratory analytical reports are included in Appendix C.

The grab soil samples were analyzed for TCL VOCs by Method 8260. The boring composite soil samples were analyzed for: (1) TCL SVOCs by EPA Method 8270; (2) TAL metals by EPA Method 6010; (3) TCL pesticides by EPA Method 8081; and (4) TCL PCBs by EPA Method 8082.

The waste characterization soil sample was analyzed for: (1) the TCLP parameters by EPA Method SW846; (2) the RCRA Characteristics (ignitability, reactivity and corrosivity) by EPA Method SW846; and (3) TPHC DRO/GRO by EPA Method 8015/8015B..



The groundwater sample was analyzed for the parameters published by NYCDEP as Limitations for Effluent to Sanitary or Combined Sewers.

3.4 Data Evaluation

In order to evaluate the subsurface soil quality, the laboratory analytical results of the grab and composite soil samples were compared with the regulatory standards identified in: (1) NYSDEC Technical and Administrative Guidance Memorandum #4046 (TAGM) dated 1994, which provides the Recommended Soil Cleanup Objectives (RSCOs) at NYSDEC Inactive Hazardous Waste and Spill sites, based on health-related concerns and available clean-up technologies, and the Eastern USA Soil Background Concentrations for metals; (2) NYSDEC STARS 1992 Memo #1 Petroleum Contamination Soil Guidance Policy Toxicity Characteristic Leaching Procedure (TCLP) Alternative Guidance Values; and (3) NYSDEC Subpart 375-6: Remedial Program Unrestricted and Restricted Use (Track 1 and Track 2) Soil Cleanup Objectives (SCOs). The laboratory analytical results of the waste classification soil sample were compared with the Toxicity Characteristic Regulatory Levels for Hazardous Waste published in RCRA and NYSDEC Part 371. The analytical results of the groundwater sample were compared to the NYCDEP Sewer Discharge Criteria.

4.0 FINDINGS

This section discusses the analytical data and findings for the activities discussed in Section 3. Complete analytical data reports are included in Appendix C.

4.1 Field Screening

Field screening did not identify evidence of petroleum impacts, such as stained soil or petroleum odors, in either of the two (2) soil boring locations. PID readings above background levels were not detected.

4.2 Soil and Groundwater Laboratory Analytical Results

4.2.1 Volatile Organic Compounds (VOCs) in Soil

Methylene chloride was detected in both soil samples, B-1 and B-4, at concentrations below the NYSDEC TAGM RSCO and the Unrestricted Use (Track 1) and Restricted-Residential Use (Track 2) SCOs. No other VOCs were detected in either sample collected. The detection of methylene chloride is attributed to laboratory cross-contamination and may not be representative of the soil sample collected. Refer to Table 2 for a summary of TCL VOC detections.

4.2.2 Semi-Volatile Organic Compounds (SVOCs) in Soil

Dimethyl phthalate was detected in both samples (SB-1 and SB-4) at concentrations below the NYSDEC TAGM RSCO. The detection of this compound is attributed to laboratory cross-contamination and may not be representative of the soil sample collected. 2-methylnaphthalene was detected in sample B-1 at a concentration below the NYSDEC TAGM RSCO. There are no SCOs or AGVs for these two (2) compounds. The detection of this compound is attributed to the presence of fill material (asphalt) and/or potential undocumented releases of fuel oil in the roadways. Refer to Table 3 for a summary of TCL SVOC detections.

4.2.3 Target Analyte List Metals (TAL Metals) in Soil

Mercury was detected in sample B-1 at 0.68 milligrams per kilogram (mg/kg), which exceeds the TAGM RSCO of 0.1 mg/kg, the Eastern USA Soil Background level of 0.2 mg/kg, and the Unrestricted Use (Track 1) SCO of 0.18 mg/kg. Mercury was detected in sample B-4 at a concentration below the RSCO and SCOs. Beryllium, chromium, iron, and zinc were detected in both soil samples, B-1 and B-4, at concentrations above the TAGM RSCOs. However, the detected concentrations were below the Eastern USA Soil Background levels. Detected concentrations of beryllium and zinc were below their Unrestricted Use (Track 1) SCOs. There are no Unrestricted Use (Track 1) SCOs for chromium and iron. Nickel and selenium were detected in samples B-4 and B-1, respectively, at concentrations that marginally exceeded their corresponding TAGM RSCOs but are below the Eastern USA Soil Background levels and Unrestricted Use (Track 1) SCOs. The presence of metals is attributable to natural (background) levels and/or the presence of fill material within the Corridor. Refer to Table 4 for a summary of TAL metals detections.

4.2.4 Pesticides in Soil

Pesticides were not detected in either composite sample collected. Refer to Table 5 for a summary of analytical results for pesticides in soil.

4.2.5 PCBs in Soil

PCBs were not detected in either composite sample collected. Refer to Table 6 for a summary of analytical results for PCBs in soil.

4.2.6 Waste Classification of Soil

Ignitability (flash point), reactivity (cyanide and sulfide), and corrosivity (pH) were within the acceptable RCRA ranges in the waste classification sample (WC-01). TCLP VOCs, SVOCs, herbicides, pesticides, and PCBs were not detected. Barium was detected at a concentration of 0.582 mg/L, which is below the RCRA hazardous waste level of 100 mg/L. Selenium was detected at a concentration of 0.0616 mg/L, which is below the RCRA hazardous waste level of 1 mg/L. The presence of barium and selenium is attributed to the presence of fill material within the Corridor. No other TCLP metals were detected. DRO was detected at a concentration of 14.298 mg/kg. There is no regulatory standard for DRO. The presence of DRO in the soil sample may be attributed to the detection of organic compounds that are not diesel constituents but are used by the laboratory as part of the analytical methodologies or the presence of historic fill material. Analytical results will need to be compared to levels acceptable by the chosen receiving facility to determine appropriate waste classification prior to off-site disposal. Refer to Table 7 for a summary of TCLP parameters, RCRA characteristics and DRO/GRO results.

4.2.7 Analysis of NYCDEP Parameters in Groundwater

The groundwater sample was analyzed for the parameters required by the NYCDEP Limitations for Effluent to Sanitary or Combined Sewers (Daily Limits). Total Suspended Solids (TSS) were detected at a concentration of 428 mg/L, which exceeds the NYCDEP Sewer Discharge Criterion of 350 mg/L. The presence of TSS is attributed to the sediment in the well. All other parameters were either not detected, detected within NYCDEP Sewer Discharge Criteria, or were detected but there are no corresponding NYCDEP Sewer Discharge Criteria. Based on the results for TSS, groundwater does not meet NYCDEP Sewer Discharge Criteria and may require pre-treatment prior to discharge. Refer to Table 8 for a summary of selected NYCDEP parameters in groundwater.

5.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the evaluation of the field screening data and the laboratory analytical results, and a comparison to applicable regulatory standards, the following conclusions are presented:

Conclusions

Based on the evaluation of the field screening data and the laboratory analytical results, and a comparison to applicable regulatory standards, the following conclusions are presented:

- Field screening did not identify evidence of contamination in the two (2) soil borings;
- Subsurface soils contain elevated concentrations of metals and DRO. The presence of metals is attributable to natural (background) levels and/or the presence of fill material. The presence of DRO in the soil sample may be attributed to the detection of organic compounds that are not diesel constituents but are used by the laboratory as part of the analytical methodologies or the presence of historic fill material.
- The subsurface soils did not exhibit hazardous waste characteristics; and
- The groundwater at the Site contains TSS at a concentration that exceeds the NYCDEP Sewer Discharge Criteria. Therefore, groundwater may require pre-treatment prior to discharge. All other parameters were within NYCDEP Sewer Discharge Criteria.

Based on the results of the field investigation and laboratory analytical results, ATC recommends the following:

- The Contract documents should identify provisions and a contingency for managing, handling, transporting and disposing of non-hazardous soil for metals and DRO. The contract documents should also contain provisions for managing and transporting non-hazardous contaminated fill material as a contingency. The Contractor should be required to submit a Material Handling Plan, to identify the specific protocol and procedures that will be employed to manage the waste in accordance with applicable regulations;
- Due to the presence of metals at concentrations above TAGM RSCOs in the investigated sites, dust control procedures are recommended during excavation activities to minimize the creation and dispersion of fugitive airborne dust. The Contractor may implement dust control measures to minimize potential airborne contaminants released as a direct result of construction activities. A Community Air Monitoring Plan (CAMP) shall be developed in accordance with NYSDEC DER-10 Regulations. The CAMP requires real-time monitoring for particulates (i.e., dust) at the downwind perimeter of each designated work area when certain activities are in progress at contaminated sites. The CAMP is intended to provide a measure of protection for the downwind community from potential airborne contaminant releases as a direct result of investigative and remedial work activities. Specific

requirements shall be reviewed for each situation in consultation with the New York State Department of Health (NYSDOH) to ensure proper applicability;

- Dewatering may be necessary during construction activities in the Corridor. Based on the results of laboratory analyses for NYCDEP sewer discharge criteria, groundwater may require pre-treatment for the TSS exceedance. Therefore, should dewatering be necessary during construction activities within the Corridor, the contractor should be required to obtain a New York City Department of Environmental Protection (NYCDEP) sewer discharge permit and perform sampling and laboratory analysis prior to discharging into sanitary and combined sewers;
- If discharge into storm sewers is required during dewatering, it must be done under the appropriate NYSDEC State Pollutant Discharge Elimination System (SPDES) permit. Additional sampling and laboratory analysis will be required to satisfy NYSDEC requirements prior to discharge into storm sewers; and
- Before beginning any excavation activity, the contractor shall submit a site-specific health and safety plan (HASP) that will meet the requirements set forth by the Occupational, Safety and Health Administration (OSHA), the NYSDOH and any other applicable regulations. The HASP should identify the possible locations and risks associated with the potential contaminants that may be encountered, and the administrative and engineering controls that will be utilized to mitigate concerns (i.e. dust control procedures for metals).



6.0 STATEMENT OF LIMITATIONS

The data presented and the opinions expressed in this report are qualified as stated in the attachment to this section of the report.

Report Prepared By:

Pamela Oelerich
Senior Project Manager

Report Reviewed By:

Constantine Tsentas, LSRP, P.G.
Manager, Environmental Division

STATEMENT OF LIMITATIONS

The data presented and the opinions expressed in this report are qualified as follows:

The sole purpose of the investigation and of this report is to assess the physical characteristics of the Site with respect to the presence or absence in the environment of oil or hazardous materials and substances as defined in the applicable state and federal environmental laws and regulations and to gather information regarding current and past environmental conditions at the Site.

ATC derived the data in this report primarily from visual inspections, examination of records in the public domain, interviews with individuals with information about the Site, and a limited number of subsurface explorations made on the dates indicated. The passage of time, manifestation of latent conditions or occurrence of future events may require further exploration at the Site, analysis of the data, and reevaluation of the findings, observations, and conclusions expressed in the report.

In preparing this report, ATC has relied upon and presumed accurate certain information (or the absence thereof) about the Site and adjacent properties provided by governmental officials and agencies, the Client, and others identified herein. Except as otherwise stated in the report, ATC has not attempted to verify the accuracy or completeness of any such information.

The data reported and the findings, observations, and conclusions expressed in the report are limited by the Scope of Services, including the extent of subsurface exploration and other tests. The Scope of Services was defined by the requests of the Client, the time and budgetary constraints imposed by the Client, and the availability of access to the Site.

Because of the limitations stated above, the findings, observations, and conclusions expressed by ATC in this report are not, and should not be considered, an opinion concerning the compliance of any past or present owner or operator of the site with any federal, state or local law or regulation. No warranty or guarantee, whether express or implied, is made with respect to the data reported or findings, observations, and conclusions expressed in this report. Further, such data, findings, observations, and conclusions are based solely upon site conditions in existence at the time of investigation.

This report has been prepared on behalf of and for the exclusive use of the Client, and is subject to and issued in connection with the Agreement and the provisions thereof.



TABLES

- TABLE 1 - SUMMARY OF ENVIRONMENTAL BORING DATA**
- TABLE 2 - SUMMARY OF TCL VOCs DETECTED IN SOIL**
- TABLE 3 - SUMMARY OF TCL SVOCs DETECTED IN SOIL**
- TABLE 4 - SUMMARY OF TAL METALS DETECTED IN SOIL**
- TABLE 5 - SUMMARY OF ANALYTICAL RESULTS FOR PESTICIDES IN SOIL**
- TABLE 6 - SUMMARY OF ANALYTICAL RESULTS FOR PCBS IN SOIL**
- TABLE 7 - SUMMARY OF WASTE CHARACTERIZATION SAMPLE ANALYSIS OF SOIL**
- TABLE 8 - SUMMARY OF NYCDEP PARAMETERS ANALYZED IN THE GROUNDWATER SAMPLE**



Table 1. Summary of Environmental Boring Data
 Phase II Environmental Site Investigation for Roberto Clemente Plaza
 Bronx, New York

Boring No.	Sample ID	PID (ppm)	Sample Interval (ftbg)	Total VOCs (mg/kg)	Total SVOCs (mg/kg)	Metals Exceed (Yes/No) ¹	Total PCBs (mg/kg)	Total Pesticides (mg/kg)	Depth to Water (ftbg)	Total Depth (ftbg)	Other Comments
B-1	B-1 (16.1-16.7)	0	16.1-16.7	0.0028	NA	NA	NA	NA			Grab Sample
	B-1	0	0-20	NA	0.9	Yes	ND	ND	*Unable to determine	40	*Due to the use of water to advance the borehole, the depth to groundwater could not be determined. Boring composite sample and aliquot for waste characterization composite sample.
B-2PW	B-2PW	0	NA	ND	NA	NA	NA	NA			Grab Sample
	B-2PW	0	NA	NA	NA	NA	NA	NA	16.7	35	Aliquot of soil for waste characterization composite sample collected. Permanent well installed. Groundwater sample collected.
B-4	B-4 (16.1-16.7)	0	16.1-16.7	0.0022	NA	NA	NA	NA			Grab Sample
	B-4	0	0-20	NA	0.43	Yes	ND	ND	*Unable to determine	30	*Due to the use of water to advance the borehole, the depth to groundwater could not be determined. Boring composite sample and aliquot for waste characterization composite sample.

Notes:

- 1. Metal(s) exceeds TAGM 4046 or Eastern USA Soil (EUS) Background guidance values.
- ND = Not Detected
- NA = Not Analyzed or Not Applicable
- ftbg = feet below grade
- ppm = parts per million
- mg/kg = milligrams per kilogram

ATC Associates Inc.
 DDC Project Number: HWXRCPLZ

July 26, 2010
 Work Order Letter No. 7064-ATC-6748



Table 2. Summary of Target Compound List Volatile Organic Compounds Detected in Soil
 Phase II Environmental Site Investigation for Roberto Clemente Plaza
 Bronx, New York

TCL VOC	Unrestricted Use (Track 1) Soil Cleanup Objectives (SCOs)	Restricted-Residential Use (Track 2) Soil Cleanup Objectives (SCOs)	STARS TCLP Alternative Guidance Values	TAGM #4046 Recommended Soil Clean-up Objective	Sample ID, Date Collected and Depth	
					Sample ID, Date Collected	Depth
Methylene Chloride	0.05	100	NS	0.1	B-1 (16.1-16.7)	B-4 (16.1-16.7)
					6/29/2010	6/30/2010
					16.1-16.7	16.1-16.7
					0.0028J	0.0022J

Notes:

All concentrations are reported in parts per million (ppm or mg/kg)

ND = Compound not detected above method detection limit (see attached lab report for mdl's)

NS = No Standard

J = Compound detected below the quantitation limit

TAGM RSCOs = NYSDEC Technical and Administrative Guidance Memorandum (TAGM #4046) Recommended Soil Cleanup Objectives (RSCOs) (January 24, 1994)

SCOs = Soil Cleanup Objectives as per the NYSDEC Regulations 6 NYCRR Subpart 375-6 Remedial Program Soil Cleanup Objectives (December 14, 2006)

STARS TCLP Alternative Guidance Values are the Spill Technology and Remediation Series (STARS) Toxicity Characteristic Leaching Procedure (TCLP) Alternative

Guidance Values, NYSDEC STARS Memorandum 1 - Petroleum Contaminated Soil Guidance Policy (August 1992)

BOLD = Concentration exceeds NYSDEC TAGM RSCOs

Shading = Concentration exceeds Unrestricted Use (Track 1) Soil Cleanup Objectives

Underline = Concentration exceeds STARS TCLP Alternative Guidance Values

NGV = No Guidance Value



Table 3. Summary of Target Compound List Semi-Volatile Organic Compounds Detected in Soil
 Phase II Environmental Site Investigation for Roberto Clemente Plaza
 Bronx, New York

TCL SVOC	Unrestricted Use (Track 1) Soil Cleanup Objectives (SCOs)	Restricted-Residential Use (Track 2) Soil Cleanup Objectives (SCOs)	STARS TCLP Alternative Guidance Values	TAGM #4046 Recommended Soil Clean-up Objective	Sample ID, Date Collected and Depth	
					B-1 (5-20) 6/29/2010 5-20	B-4 (5-20) 6/30/2010 5-20
2-Methylnaphthalene	NS	NS	NS	36.4	0.18J	ND
Dimethyl Phthalate	NS	NS	NS	2	0.720J	0.43

Notes:

All concentrations are reported in parts per million (ppm or mg/kg)

ND = Compound not detected above method detection limit (see attached lab report for mdl's)

NS = No Standard

J = Compound detected below the quantitation limit

TAGM RSCOs = NYSDEC Technical and Administrative Guidance Memorandum (TAGM #4046) Recommended Soil Cleanup Objectives (RSCOs) (January 24, 1994)

SCOs = Soil Cleanup Objectives as per the NYSDEC Regulations 6 NYCRR Subpart 375-6 Remedial Program Soil Cleanup Objectives (December 14, 2006)

STARS TCLP Alternative Guidance Values are the Spill Technology and Remediation Series (STARS) Toxicity Characteristic Leaching Procedure (TCLP) Alternative Guidance Values, NYSDEC STARS Memorandum 1 - Petroleum Contaminated Soil Guidance Policy (August 1992)

BOLD = Concentration exceeds NYSDEC TAGM RSCOs

Shading = Concentration exceeds Unrestricted Use (Track 1) Soil Cleanup Objectives

Underling = Concentration exceeds STARS TCLP Alternative Guidance Values

ATC Associates Inc.

DDC Project Number: HWXRCPLZ

July 26, 2010

Work Order Letter No. 7064-ATC-6748



Table 4. Summary of Target Analyte List Metals Detected in Soil
 Phase II Environmental Site Investigation for Roberto Clemente Plaza
 Bronx, New York

Target Analyte List Metal	20 Times RCRA Hazardous Waste Levels (mg/L)	Eastern USA Soil Background (mg/kg)	TAGM #4046 Recommended Soil Cleanup Objective (mg/kg)	Unrestricted Use (Track 1) Soil Cleanup Objectives (SCOs)	Sample ID, Date Collected and Depth	
					B-1 (5-20) 6/29/2010 5-20	B-4 (5-20) 6/30/2010 5-20
Aluminum	NS	33,000	SB	NS	7,700	6,120
Arsenic	100	3 -- 12	7.5 or SB	13	1,180J	ND
Barium	2,000	15 - 600	300 or SB	350	63.9	56.6
Beryllium	NS	0-1.75	0.16 or SB	7.2	0.47	0.45
Cadmium	20	0.1-1	1 or SB	2.5	0.76	1.04
Calcium	NS	130 - 35,000	SB	NS	2,490	51,600
Chromium	100	1.5 - 40	10 or SB	NS	13.2	14.4
Copper	NS	1 - 50	25 or SB	50	9.89	12.4
Cobalt	NS	2.5 - 60	30 or SB	NS	5.8	7.88
Iron	NS	2,000 - 550,000	2,000 or SB	NS	13,200	12,300
Lead	100	500*	SB	63	39	6.12
Magnesium	NS	100 - 5,000	SB	NS	3,340	22,000
Manganese	NS	50 - 5,000	SB	1600	219	230
Mercury	4	0.001 - 0.2	0.1	0.18	0.68D	0.007
Nickel	NS	0.5-25	13 or SB	30	11.2	13.6
Potassium	NS	8,500 - 4,300	SB	NS	1,020	2,680
Selenium	20	0.1-3.9	2 or SB	3.9	2.31	1.56
Sodium	NS	6,000 - 8,000	SB	NS	605	310
Thallium	NS	NS	SB	NS	ND	0.48J
Vanadium	NS	1 - 300	150 or SB	NS	15.7	19.2
Zinc	NS	9 - 50	20 or SB	109	47.2	42.2

Notes:

All concentrations are in parts per million (ppm, mg/kg, or mg/L)

ND = Compound not detected above method detection limit (see attached lab report for mdl's)

NS = No Standard

SB = Site Background Concentration

D = The reported value is from a secondary analysis with a dilution factor.

TAGM RSCOs = NYSDEC Technical and Administrative Guidance Memorandum (TAGM #4046) Recommended Soil Cleanup Objectives (RSCOs) (January 24, 1994)

BOLD = Concentration exceeds NYSDEC TAGM RSCOs

Shading = Detected concentration exceeds Eastern Soil Background Concentrations as per TAGM RSCOs

Underline = Concentration exceeds twenty times RCRA Hazardous Waste Level

*Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4 - 61 ppm. Average background levels in metropolitan or suburban areas or near highways are much higher and typically range from 200 - 500 ppm



Table 5. Summary of Pesticide Analytical Results in Soil
 Phase II Environmental Site Investigation for Roberto Clemente Plaza
 Bronx, New York

Pesticides	Unrestricted Use (Track 1) Soil Cleanup Objectives (SCOs) Varies by compound	Restricted-Residential Use (Track 2) Soil Cleanup Objectives (SCOs) Varies by compound	STARS TCLP Alternative Guidance Values Varies by compound	TAGM #4046 Recommended Soil Clean-up Objective Varies by compound	Sample ID, Date Collected and Depth	
					B-1 (5-20) 6/29/2010 5-20	B-4 (5-20) 6/30/2010 5-20
Pesticides	Varies by compound	Varies by compound	Varies by compound	Varies by compound	ND	ND

Notes:

- All concentrations are reported in parts per million (ppm or mg/kg)
- ND = Compound not detected above method detection limit (see attached lab report for mdl's)
- NS = No Standard
- TAGM RSCOs = NYSDEC Technical and Administrative Guidance Memorandum (TAGM #4046) Recommended Soil Cleanup Objectives (RSCOs) (January 24, 1994)
- SCOs = Soil Cleanup Objectives as per the NYSDEC Regulations 6 NYCRR Subpart 375-6 Remedial Program Soil Cleanup Objectives (December 14, 2006)
- Values, NYSDEC STARS Memorandum 1 - Petroleum Contaminated Soil Guidance Policy (August 1992)
- BOLD** = Concentration exceeds NYSDEC TAGM RSCOs
- Shading** = Concentration exceeds Unrestricted Use (Track 1) Soil Cleanup Objectives



Table 6. Summary of Polychlorinated Biphenyls Analytical Results in Soil
 Phase II Environmental Site Investigation for Roberto Clemente Plaza
 Bronx, New York

Polychlorinated Biphenyls	Unrestricted Use (Track 1) Soil Cleanup Objectives (SCOs)	Restricted-Residential Use (Track 2) Soil Cleanup Objectives (SCOs)	STARS TCLP Alternative Guidance Values	TAGM #4046 Recommended Soil Clean-up Objective	Sample ID, Date Collected and Depth	
					B-1 (5-20) 6/29/2010 5-20	B-4 (5-20) 6/30/2010 5-20
PCBs	NS	1	NS	1 (surface) 10 (subsurface)	ND	ND

Notes:

All concentrations are reported in parts per million (ppm or mg/kg)
 ND = Compound not detected above method detection limit (see attached lab report for mdl's)
 NS = No Standard
 TAGM RSCOs = NYSDEC Technical and Administrative Guidance Memorandum (TAGM #4046) Recommended Soil Cleanup Objectives (RSCOs) (January 24, 1994)
 SCOs = Soil Cleanup Objectives as per the NYSDEC Regulations 6 NYCRR Subpart 375-6 Remedial Program Soil Cleanup Objectives (December 14, 2006)
 Values, NYSDEC STARS Memorandum 1 - Petroleum Contaminated Soil Guidance Policy (August 1992)
BOLD = Concentration exceeds NYSDEC TAGM RSCOs
 Shading = Concentration exceeds Unrestricted Use (Track 1) Soil Cleanup Objectives
 Underline = Concentration exceeds STARS TCLP Alternative Guidance Values



**Table 7. Summary of Waste Characterization Sample Analysis of Soil
 Phase II Environmental Site Investigation for Roberto Clemente Plaza
 Bronx, New York**

Parameter	RCRA Hazardous Waste Levels		Sample ID, Date Collected and Borings
			WC-01
			6/30/2010 B-1 and B-4
RCRA Characteristics			
Reactivity Cyanide	250	mg/kg	ND
Reactivity Sulfide	500 mg/lg	mg/kg	ND
Flash Point - Liquid/Solid	140	°F	>200
pH (Corrosivity)	>2 and < 12.5	S.U	7.58
1,1-Dichloroethene	0.7	mg/L	ND
1,2-Dichloroethane	0.5	mg/L	ND
2-Butanone	200	mg/L	ND
Benzene	0.5	mg/L	ND
Carbon Tetrachloride	5	mg/L	ND
Chlorobenzene	100	mg/L	ND
Chloroform	6	mg/L	ND
Tetrachloroethene	0.7	mg/L	ND
Trichloroethene	0.5	mg/L	ND
Vinyl Chloride	0.2	mg/L	ND
1,4-Dichlorobenzene	7.5	mg/L	ND
2,4,5-Trichlorophenol	400	mg/L	ND
2,4,6-Trichlorophenol	2	mg/L	ND
2,4-Dinitrotoluene	0.13	mg/L	ND
2-Methylphenol	200	mg/L	ND
3+4-Methylphenols	200	mg/L	ND
Hexachlorobenzene	0.13	mg/L	ND
Hexachlorobutadiene	0.5	mg/L	ND
Hexachloroethane	3	mg/L	ND
Nitrobenzene	2	mg/L	ND
Pentachlorophenol	100	mg/L	ND
Pyridine	5	mg/L	ND
2,4,5-TP (SILVEX)	1	mg/L	ND
2,4-D	10	mg/L	ND
Chlordane	0.03	mg/L	ND
Endrin	0.02	mg/L	ND
gamma-BHC	0.4	mg/L	ND
Heptachlor	0.008	mg/L	ND
Heptachlor epoxide	0.008	mg/L	ND
Methoxychlor	10	mg/L	ND
Toxaphene	0.5	mg/L	ND
Arsenic	5	mg/L	ND
Barium	100	mg/L	0.582
Cadmium	1	mg/L	ND
Chromium	5	mg/L	ND
Lead	5	mg/L	ND
Mercury	0.2	mg/L	ND
Selenium	1	mg/L	0.0616
Silver	5	mg/L	ND
GRO	NS	mg/kg	ND
DRO	NS	mg/kg	14.298

Notes:

NS = No Standard

ND = Compound not detected above method detection limit (see attached lab report for mdl's)

BOLD and Shaded = Concentration failed TCLP analysis

F = Degrees Fahrenheit

S.U. = Standard Units



**Table 8. Summary of NYCDEP Parameters Analyzed in the Groundwater Sample
 Phase II Environmental Site Investigation for Roberto Clemente Plaza
 Bronx, NY**

Parameter ¹	NYC DEP Limitations to Sanitary or Combined Sewers		Well ID, Date Collected and Depth to Water
			B-2PW
			6/30/2010 16.7 feet
Non-Polar Material ²	50	mg/L	ND
pH	5-12	SU's	8.86
Temperature	< 150	°F	22.3
Flash Point - Liquid/Solid	> 140	°F	>150
Cadmium (Instantaneous or Composite)	2 or 0.69	mg/L	0.00127J
Chromium Hexavalent (VI)	5	mg/L	ND
Copper	5	mg/L	0.0361
Lead	2	mg/L	0.0311
Mercury	0.05	mg/L	0.00002J
Nickel	3	mg/L	0.0182J
Zinc	5	mg/L	0.104
Benzene	134	ug/L	ND
Carbon Tetrachloride	NS	ug/L	ND
Chloroform	NS	ug/L	22
1,4 Dichlorobenzene	NS	ug/L	ND
Ethylbenzene	380	ug/L	ND
MTBE (Methyl-Tert-Butyl-Ether)	50	ug/L	ND
Naphthalene	47	ug/L	ND
Phenol	NS	ug/L	ND
Tetrachloroethene	20	ug/L	ND
Toluene	74	ug/L	ND
1,2,4 Trichlorobenzene	NS	ug/L	ND
1,1,1 Trichloroethane	NS	ug/L	ND
Xylenes (Total)	74	ug/L	ND
PCBs (Total) ³	1	ug/L	ND
Total Suspended Solids	350	mg/L	428
CBOD ⁵	NS	mg/L	ND
Chloride ⁵	NS	mg/L	92
Total Nitrogen ⁵	NS	mg/L	3.29
Total Solids ⁵	NS	mg/L	834

Notes:

All concentrations are reported in parts per million (ppm or mg/L) or parts per billion (ppb or ug/L)

N/A = Compound or sample characteristic not analyzed

NS = No Standard

ND = Compound not detected above method detection limit (see attached lab report for mdl's)

Bold = Positive detection

Shaded = Concentration exceeds NYCDEP Limitations for Effluent to Sanitary or Combined Sewers (daily limit)

¹ All handling and preservation of collected samples and laboratory analyses of samples was performed in accordance with 40 CFR Part 136.

² Analysis for non-polar materials was performed by EPA method 1664.

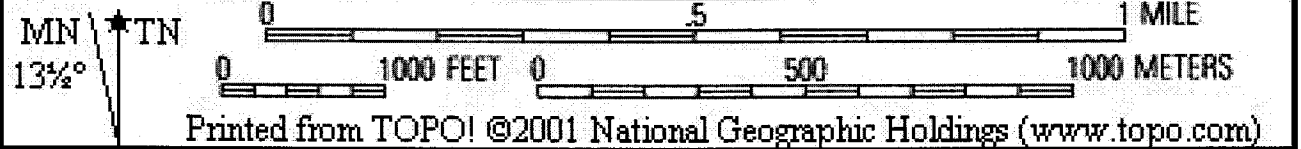
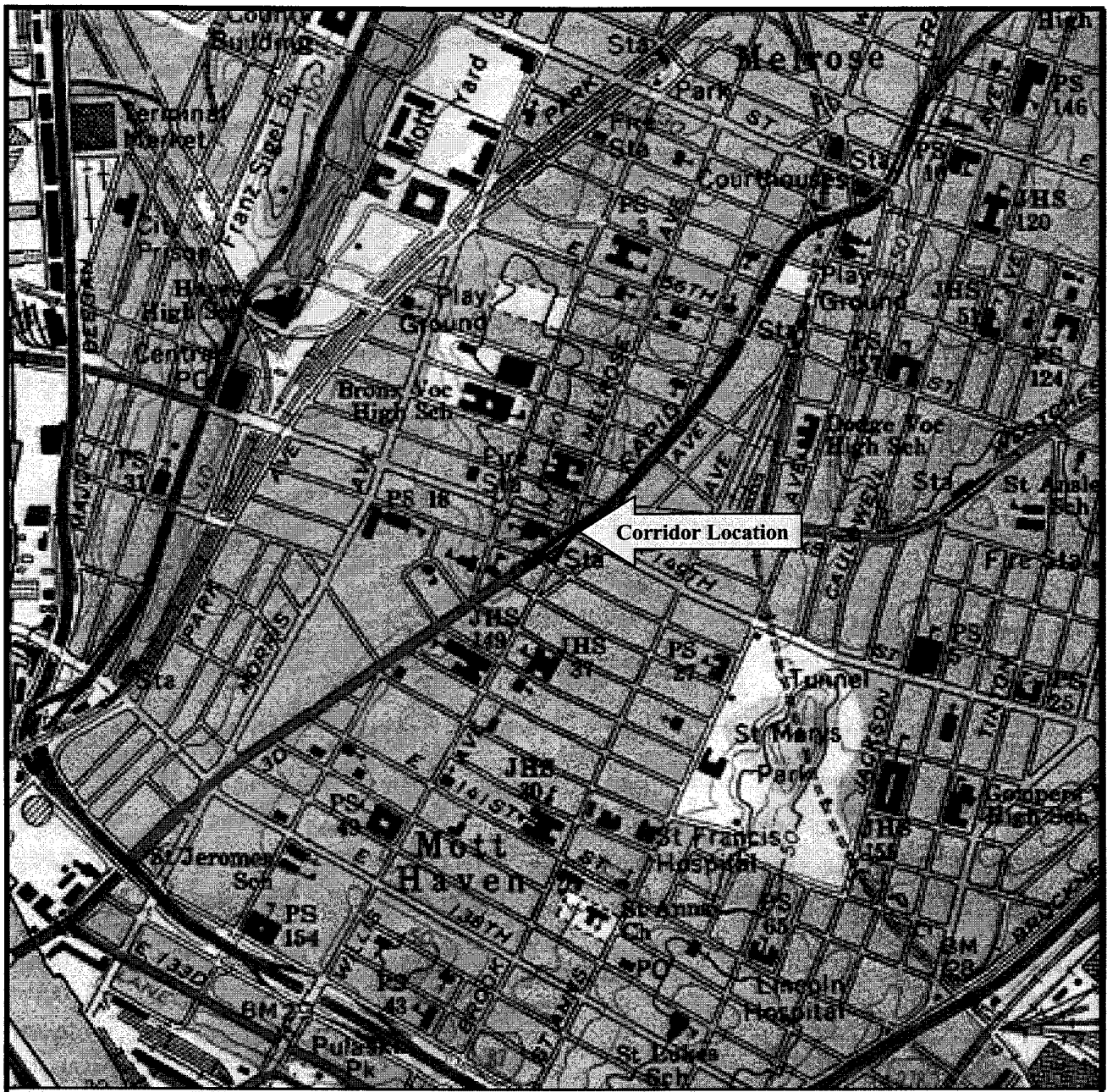
³ Analysis for PCBs was performed according to EPA method 608 with method detection limit =<65 parts per trillion. Analysis for PCBs is required if discharge =>10,000 gallons per day (gpd) and duration of discharge > 10 days.

⁴ For discharge => 10,000 gpd, the TSS limit is 350 mg/l. For discharge < 10,000 gpd, the limit is determined on a case by case basis

⁵ Analysis for Carbonaceous Biochemical Oxygen Demand (CBOD), Chloride, Total Solids, and Total Nitrogen are required if proposed discharge => 10,000 gpd



FIGURE 1 – TOPOGRAPHIC CORRIDOR LOCATION MAP



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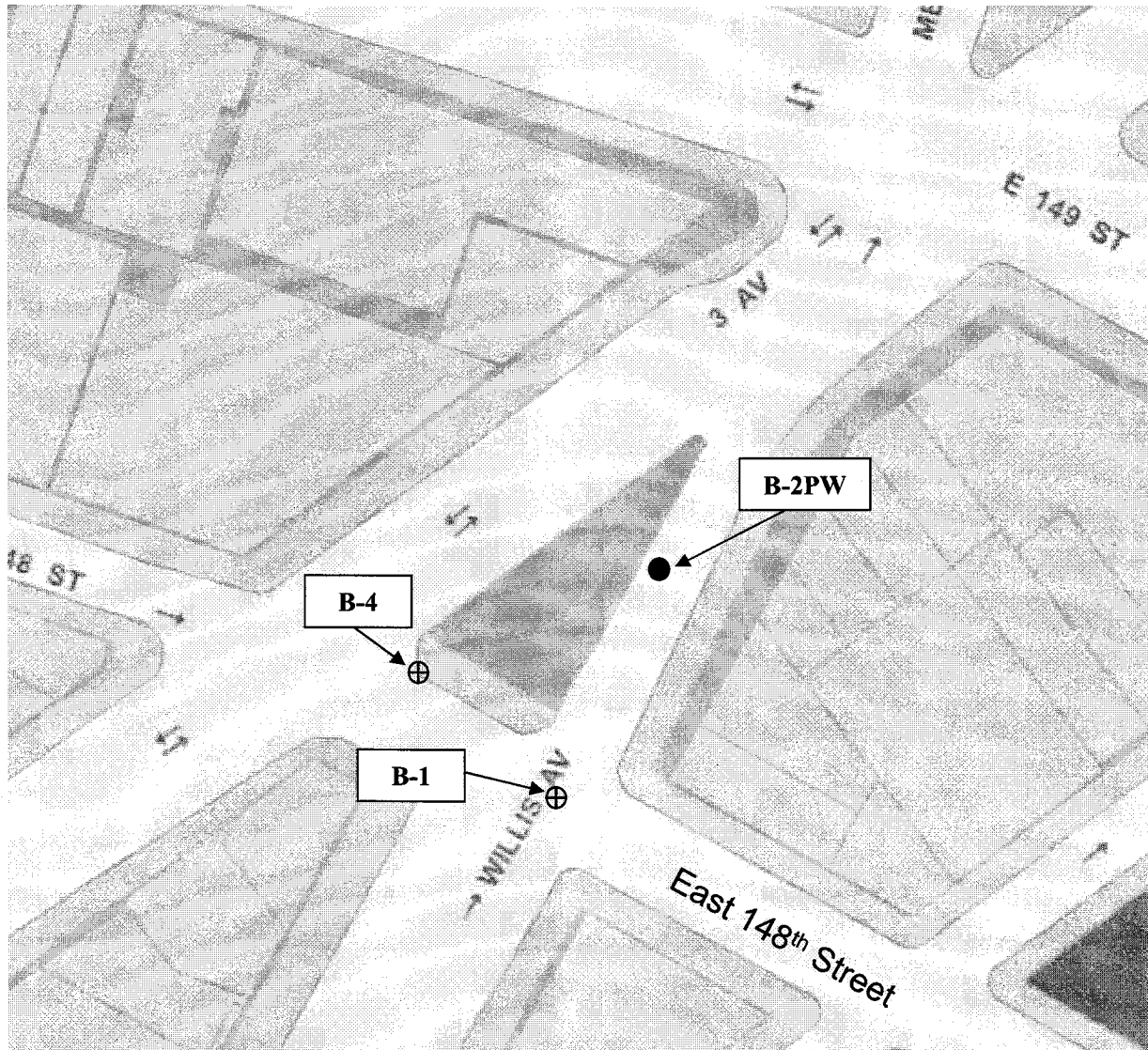
FIGURE 1 - TOPOGRAPHIC CORRIDOR LOCATION MAP

PROJECT NAME: Reconstruction of Roberto Clemente Plaza
BOROUGH, STATE: Bronx, New York
ATC PROJECT NO. : 015.38500.0095
DDC REGISTRATION CONTRACT NO. : 20090016802
DDC PROJECT NO. : HWXRCPLZ
DDC WORK ORDER NO. : 7064-ATC-6748

Reference: USGS Quadrangle Map:
 Central Park, NY-NJ (1995)



FIGURE 2 – SAMPLE LOCATION PLAN



Scale: 0' 50' 100'



Figure 2 – Sample Location Plan



LEGEND:

- ⊕ Soil Boring Location
- Monitoring Well Location

PROJECT NAME: Reconstruction of Roberto Clemente Plaza

BOROUGH, STATE: Bronx, New York

ATC PROJECT NO. : 015.38500.0095

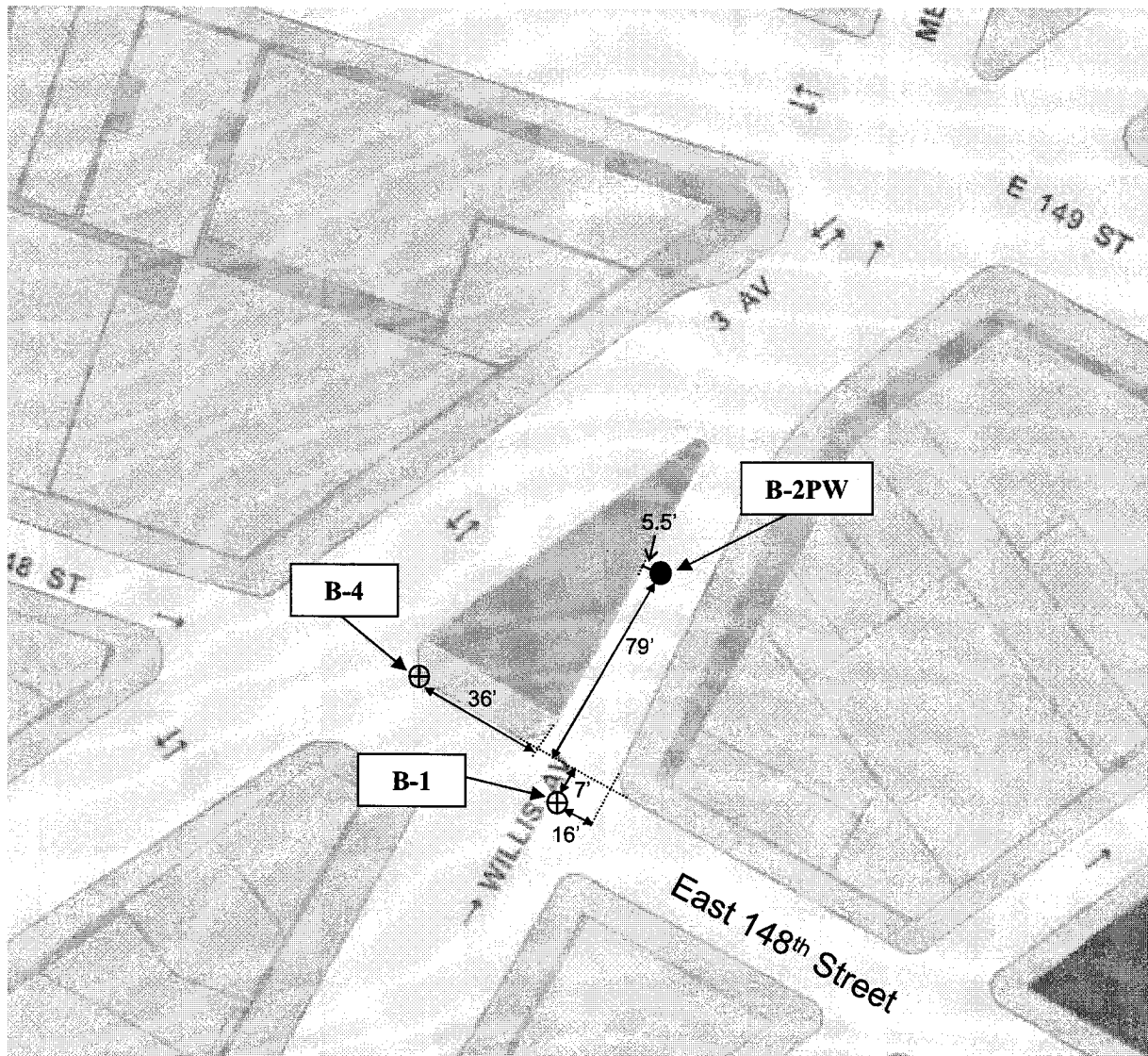
DDC REGISTRATION CONTRACT NO. : 20090016802

DDC PROJECT NO. : HWXRCPLZ

DDC WORK ORDER NO. : 7064-ATC-6748



APPENDIX A
BORING LOCATION SKETCHES



- Not To Scale -



Appendix A - Boring Location Sketches




- LEGEND:**
- ⊕ Soil Boring Location
 - Monitoring Well Location

PROJECT NAME: Reconstruction of Roberto Clemente Plaza
BOROUGH, STATE: Bronx, New York
ATC PROJECT NO. : 015.38500.0095
DDC REGISTRATION CONTRACT NO. : 20090016802
DDC PROJECT NO. : HWXRCPLZ
DDC WORK ORDER NO. : 7064-ATC-6748




APPENDIX B
GEOLOGIC BORING LOGS AND MONITORING WELL CONSTRUCTION DETAILS


BORING LOG

ATC Associates Inc. 104 East 25th Street New York, NY 10010 212-353-8280				Client: New York City Department of Design & Construction	 <small>NEW YORK CITY DEPARTMENT OF DESIGN + CONSTRUCTION</small>	Boring No.: B-1	
				Project Name: Reconstruction of Roberto Clemente Plaza			
				DDC Project No.: HWRPLZ	Project Location: Bronx, NY		
				DDC Task No.: 7064-ATC-6748	Boring Location:		
				ATC Project No.: 015.38500.0095	Located on Willis Avenue, 16 feet west of the eastern curb line and seven (7) feet south of East 148th Street, in the street.		
Driller: Zebra Environmental Corp.				Drilling Method: Vac Truck / Hand Auger / Rotary Drilling			
Inspector: Pam Oelerich				Sampling Method: Split Spoon			
Groundwater: 16.7 (estimated)				Date: June 29, 2010			
Depth (ft.)	Sample Interval	Recovery (in.)	PID Reading (ppm)	Lithology and Field Observations			
0			0	0-5' Cleared via Vactron and hand auger. 0-7" Concrete 7"-9' Tan/brown fine to coarse SAND, little silt, some gravel, crushed stone, asphalt fragments (FILL)			
5			0	9'-28' Tan/brown fine to coarse SAND, little to some silt, little to some gravel			
10			0				
15			0	Groundwater table estimated at 16.7 ftbg based on measurements in nearby monitoring well B-2PW. Due to water used during rotary drilling, the depth to the groundwater table in boring B-1 could not be determined. Grab sample collected from 16.1'-16.7' Composite sample collected from 5'-20'			
16.7 ▼	16.1-16.7'						
	5-20'						
20							
25				28'-40.1' Tan/gray fine to coarse SAND, little to some silt, some gravel			
30							
35							
40				40.1' Fresh white/light tan marble. Boring completed at a depth of 40.1 feet below grade.			

BORING AND MONITORING WELL LOG

ATC Associates Inc. 104 East 25th Street New York, NY 10010 212-353-8280				Client: New York City Department of Design & Construction 	Boring No.: B-2PW
				Project Name: Reconstruction of Roberto Clemente Plaza	
				DDC Project No: HWXRPLZ	Project Location: Bronx, NY
				DDC Task No.: 7064-ATC-6748	Boring Location:
				ATC Project No.: 015.38500.0095	Located on Willis Avenue, 5.5 feet east of the western curb line and 79 feet north of East 148th Street, in the street.
Driller: Zebra Environmental Corp.		Drilling Method: Vac Truck / Hand Auger / Rotary Drilling			
Inspector: Pam Oelerich		Sampling Method: Split Spoon			
Groundwater: 16.7		Date: June 22-25, 2010			
Depth (ft.)	Sample Interval	Recovery (in.)	PID Reading (ppm)	Lithology and Field Observations	
0				0-5' Cleared via Vac Truck and hand auger. 0-1.1' Concrete 1.1-9' Tan/brown fine to coarse SAND, little silt, some gravel, crushed stone, asphalt fragments (FILL)	
5				9'-33.5' Tan/brown fine to coarse SAND, little to some silt, little to some gravel, occasional cobbles and boulders	
10					
15					
16.7▼				Groundwater table encountered at 16.7 ftbg. Groundwater sample collected.	
20					
25					
30				33.5'-35' Fresh white/light gray marble.	
35				Boring completed at a depth of 35.0 feet below grade.	
40				<p style="text-align: center;"><u>Monitoring Well Construction Details</u></p> Total Depth: 35 Diameter: 2 inches Riser Interval: 0-25 feet Screen Interval: 25-35 feet Slot Size: #10	

BORING LOG

ATC Associates Inc. 104 East 25th Street New York, NY 10010 212-353-8280				Client: New York City Department of Design & Construction			Boring No.: B-4
				Project Name: Reconstruction of Roberto Clemente Plaza			
				DDC Project No.: HWXRPLZ		Project Location: Bronx, NY	
				DDC Task No.: 7064-ATC-6748		Boring Location:	
				ATC Project No.: 015.38500.0095		Located on East 148th Street, 36 feet west of the western curb line of Willis Avenue and inline with the northern curb line of East 148th Street, in the street.	
Driller: Zebra Environmental Corp.				Drilling Method: Vac Truck / Hand Auger / Rotary Drilling		Located on East 148th Street, 36 feet west of the western curb line of Willis Avenue and inline with the northern curb line of East 148th Street, in the street.	
Inspector: Pam Oelerich				Sampling Method: Split Spoon			
Groundwater: 16.7 (estimated)						Date: June 30, 2010	
Depth (ft.)	Sample Interval	Recovery (in.)	PID Reading (ppm)	Lithology and Field Observations			
0			0	0-5' Cleared via Vactron and hand auger. 0-1.1' Concrete 1.1-9' Tan/brown fine to coarse SAND, little silt, some gravel, crushed stone, asphalt fragments (FILL)			
5			0	9'-19' Tan/brown fine to coarse SAND, little to some silt, little to some gravel			
10			0				
15			0	Groundwater table estimated at 16.7 ftbg based on measurements in nearby monitoring well B-2PW. Due to water used during rotary drilling, the depth to the groundwater table in boring B-1 could not be determined. Grab sample collected from 16.1'-16.7' Composite sample collected from 5'-20'			
16.7 ▼	16.1-16.7'						
20	5-20'			19'-25.2' Tan/gray fine to coarse SAND, little to some silt, some gravel			
25				25.2'-30.2' White/light gray fresh to slightly weathered marble with trace mica schist			
30				Boring completed at a depth of 30.2 feet below grade.			
35							
40							



APPENDIX C
LABORATORY ANALYTICAL RESULTS

Contractors/Consultants can obtain laboratory analytical results from New York City Department of Design and Construction Infrastructure Division, Program Administration – Engineering Support Services.

END OF ADDENDUM NO. 6

This Addendum Consists of Seventy Nine (79) Pages

(NO TEXT ON THIS PAGE)

THE CITY OF NEW YORK
DEPARTMENT OF DESIGN AND CONSTRUCTION
INFRASTRUCTURE DIVISION
BUREAU OF DESIGN

PROJECT ID: HWXRCPLZ

RECONSTRUCTION OF
ROBERTO CLEMENTE PLAZA

INCLUDING SEWER, WATER MAIN, STREET LIGHTING,
AND TRAFFIC SIGNAL WORK

Together With All Work Incidental Thereto
BOROUGH OF THE BRONX
CITY OF NEW YORK

ADDENDUM NO. 7

DATED: June 29, 2012

THIS ADDENDUM IS HEREBY MADE A PART OF THE CONTRACT DOCUMENTS

1. The Contractor shall be responsible for compliance with all the provisions of the following Sections and Schedules, which are hereby made a part of the original contract documents:
 - A. "SECTION U: Additional Contract Requirements Applying to Work Performed in the Presence of Privately Owned Utility Facilities" (Pages A7-3 through A7-13)
 - B. Schedule U-1 (Page A7-14)
 - C. Schedules U-2 (one for each Utility Company) (Pages A7-15 through A7-39)
 - D. Section U-3 (as per the Private Utilities reference document for SECTION U called "CET SPECIFICATIONS AND SKETCHES", dated November 2010, and Page (A7-40) in this Addendum)
 - E. Utility drawings (Sheet Nos.1 of 12 through 12 of 12) attached to the Plans.
2. Each facility operator shall provide inspectors at the work site to inspect methods of interference work, verify quantities and items of Utility Work, and coordinate all phases of the facility operator operations.
3. In addition, the following statements are made to provide clarification of various paragraphs under Section U:
 - A. Section U, ¶4, requires the Contractor to immediately commence negotiations with each Company for an Interference Agreement under which the Company will compensate the Contractor for any Interference Work which the Company does not elect to perform with its own forces or by specialty contractors retained by the Company. Thus the Contractor is on notice that its work under the Contract may be affected by Interference Work performed by (a) the Contractor pursuant to

a separate Interference Agreement with the Company, (b) the Company, or (c) partly by each.

- B. Section U, ¶2, informs the Contractor that the duration of the Contract as shown in Schedule A includes the time which may be necessary for the Contractor to perform the necessary Interference Work.
- C. The Contractor is hereby informed that the duration of the Contract as shown in Schedule A includes the time which may be necessary for the Company to perform whatever portion of the Interference Work which the Company elects to perform with its own forces or by specialty contractors retained by the Company.
- D. Section U informs the Contractor that the City has entered into a Utility Agreement with the Companies regarding interferences to the City work in this Contract created by the facilities owned and/or operated by such Companies. Pursuant to this Addendum, a sample of the Utility Agreement letter as executed by the Companies is annexed on page A7-13, as an Exhibit to the Contract. Signed copies of those Utility Agreement letters are on file with NYCDDC.
- E. The City has no contract with any of the Companies for work on or adjacent to the site of work under this Contract, and the Companies are not "Other Contractors" as defined for the purposes of this Contract. The Contractor is reminded, however, that pursuant to Section U, ¶4, the City will not compensate the Contractor for any direct and/or indirect costs related to Interference Work, regardless of whether such Interference Work is covered by an Interference Agreement between the Contractor and the Company or is performed by the Company using its own forces or by specialty contractors retained by the Company.
- F. Section U, ¶14, provides that the provisions of Section U are material provisions of the Contract and that the Contractor's failure to comply with the procedures set forth in Section U are sufficient for the Commissioner to declare the Contractor in default pursuant to Article 48 of the Contract.

Pursuant to this Addendum, the Contractor is informed that the Performance Bond required of the Contractor pursuant to the Contract is not deemed to guarantee performance of any of the Interference Work.

Section U: Additional Contract Requirements Applicable to Work Performed in the Presence of Privately Owned Utility Facilities

The Contractor is hereby notified that pursuant to the law and franchise agreements issued by the City, certain private utility and public service companies named in Schedule U-1 ("the Companies") own and/or operate surface and/or subsurface facilities within the limits of this contract. The existence of these facilities impacts the productivity of the City work called for in the contract. In order to improve coordination of the City construction with the private utility facilities owned and/or operated by the Companies named in Schedule U-1, Article 1.06.30 of the Standard Highway Specifications of the New York City Department of Transportation, Dated November 1, 2010; Articles 1.06.14 through 1.06.17 of the General Provisions of the Standard Water Main Specifications of the New York City Department of Environmental Protection, dated August 1, 2009; and/or Articles 1.06.14 through 1.06.17 of the Standard Sewer Specifications of the New York City Department of Environmental Protection, Dated August 1, 2009; as applicable, are amended and will be implemented as follows:

1. Pre-engineering:

The anticipated scopes of private utility facilities interferences and anticipated work items and specifications are included in this contract. The locations of these interferences are indicated on the plans and/or listed in the specifications for this contract, and a schedule of estimated quantities by type of interference expected to be encountered within the limits of this project area have been listed on Schedule U-2. In addition, in Section U-3 the Companies have provided standard details and methods for supporting, protecting, relocating, and/or working around their facilities when they are in interference with City contract work.

2. Means and methods for City work:

- a) The Contractor is hereby notified that the utility interferences identified on the plans and/or listed in the Specifications to be known conditions which may impact the performance of, and/or interferes with, City work. The contractor will be required to perform such utility work as directed by the Resident Engineer in order to clear all utility interferences from the project site as required for satisfactory completion of City work within specified contract schedule.
- b) In areas serviced by overhead electric system, the contractor understands and by bidding for this contract agrees that he/she has reviewed the section 'U' package and that he/she will be required to perform the public work in the presence of energized

electrical overhead lines and appurtenances located in areas adjacent and/or within the project area. As a consequence he/she will select means and method of construction appropriate to maintain the safety clearances required or as permitted by contract specifications (e.g. "CET 350 - Overhead Accommodation Protection of Overhead Facilities, Poles, and Appurtenances") in order to avoid damaging the insulation or shielding of these lines and also to prevent knocking them down. The duration of the contract as shown in Schedule A thus includes the time which may be necessary for the Contractor to remove, repair, protect, support, shift, relocate, temporarily remove and replace, work around and/or work in the presence of the Companies' facilities ("Interference Work") as described on the plans and/or specifications of the contract during the progress of the City work.

3. *Field inspection prior to construction:*

Prior to the start of any contract work in areas serviced by overhead electric lines, and after the award to the apparent low bidder for this contract, the contractor must request a field walk of the project area along with the operator of the overhead electrical facilities and the DDC Engineer-In-Charge. At that time the facility operator, pursuant to contract specification (e.g. "CET 350 - Overhead Accommodation Protection of Overhead Facilities, Poles, and Appurtenances") will confirm the type and condition of the overhead electrical lines and the sufficiency of their insulating properties with respect to the means and methods proposed by the contractor. The contractor must be prepared to describe in enough details his/her proposed means and methods of construction operations in order to anticipate the likelihood that electric lines insulation would be cut or otherwise compromised. Also such details will allow the facility operator to anticipate the need for added insulation and/or shielding of non-insulated lines.

4. *Compensation for interference work:*

Compensation for Interference Work is a matter of adjustment between the Contractor and each private utility company located within the limits of the project area and whose utility facilities are affected by City contract work. In particular, the City will not compensate the Contractor for any direct and/or indirect costs related to Interference Work, including, but not limited to, lost profit, increased overhead, or any other impact costs. Upon receipt of a Notice of Award from the City, the Contractor shall immediately commence negotiations with each of the Companies concerning the manner in which and the price for which the Contractor, through its own forces or by others hired by it, will perform and be paid by the Company for all

necessary Interference Work as defined above that the Company(ies) choose(s) not to perform with its(their) own forces or by specialty Contractors hired by it (them) (as per "Interference Agreement"). (Specialty contractors' work is limited to (i) insulation installation and removal, (ii) live gas and steam work, (iii) cleanup and disposal of hazardous materials, (iv) splicing live electrical and telecommunications facilities, and (v) work not traditionally performed by general construction contractors.

5. *Interference Agreement:*

1. The Companies have provided estimate of the quantity of each of the types of interferences expected to be encountered in the contract in Schedule U-2. Although the parties may negotiate an Interference Agreement in any format or manner they deem fit, the Contractor is hereby advised that the Companies have indicated to the City that they will agree to compensate the Contractor on a unit price basis according to the Quantity and Types of Interferences expected to be encountered on this Contract as stated in Schedule U-2.
2. Furthermore, in Section U-3, standard unit work measurement and payment provisions are specified and shall apply only if the Contractor and affected Utility companies enters into a unit price based Interference Agreement, otherwise the unit of work measurement, and payment provisions set forth in Section U-3 shall not apply. The Contractor shall notify the City upon concluding an Interference Agreement with each of the Companies, which shall be binding and final once concluded.

6. *City contract work to continue without Interference Agreement :*

If, prior to the start of construction, as directed by the City's Order to work / Notice To Proceed (OTW/ NTP) date any of the Companies and the Contractor have not concluded an Interference Agreement as described above, then the City construction will proceed as ordered and the Contractor will be directed by the Resident Engineer to perform the City work on Time, Material and Equipment basis (T&M) as specified in standard City contract agreement Article 26.2. T&M records will include identification of types of utility facilities interfering with City work, utility facility owners, specifying the nature and quantity of any materials, plant and equipment furnished or used in connection with the performance of such work and crew size, such as: name and number of each worker employed on such work. T&M records will also indicate the hours of active time, standby time and idle time. The Company (ies) and the Contractor will maintain separate records of the actual quantity and cost of labor, materials, and equipment expended, and will provide copies of this information to the other party on a

daily basis for reconciliation. These T&M records along with cost evaluations will be submitted daily to the Resident Engineer for review and approval. The total cost of City work will be based on quantity of work performed multiplied by unit price contract bid items. The total interference cost will be calculated as the difference between the total T&M cost and total cost for City work. The Resident Engineer will conduct a monthly reconciliation session of the daily T&M records with the affected Company (ies) and contractor. If the contractor and affected utility companies cannot reconcile their T&M records, by the last day of each month, then the Resident Engineer will submit the approved City's T&M records along with total cost evaluations to the DDC Director of Construction who will review these records and recommend approval and validity certification by the DDC Deputy Commissioner.

1. Copies of the DDC approved and certified T&M records will then be transmitted by the DDC to the contractor and the utility companies. These certified records may be used by the contractor for compensation claims against the responsible private facility owners, or may be used by any party as supporting documentation in dispute regarding compensation for performing Interference Work as identified in Schedule U-2. The contractor will be required to perform City work while invoices are submitted by the contractor to the Utility companies for payment within 30 days, or while compensation disputes between contractor and affected company (ies) are submitted to Binding Arbitration process described in Paragraph 10.
2. All issues related to utility work and/ or delays due to compensation disputes or claims against utility companies are not allowable as justification for granting contract time extensions. The City may assess liquidated damages specified in the contract for net overall delays suffered by City contract work as a result of utility issues, disputes and claims.
3. The standard City contract dispute resolution process specified in Article 27 "Presentation of disputes to Commissioner", of the standard City contract agreement is not applicable to any disputes related to utility work and/ or compensation for such work or claim against utility companies. Utility work issues, disputes and claims may only be submitted to Binding Arbitration process described in Paragraph 10.
4. The contractor will notify the Resident Engineer when utility capital work not specified in Schedule U2 and/ or for utility work that require the intervention of company utility specialty crews causes excessive contractor's labor and equipment standby or idleness and, thereby jeopardizing the City project schedule. The Resident Engineer will submit

the facts to the DDC Director of construction who will recommend to the Deputy Commissioner regarding the issuance of a "48 hours notice" to the concerned utility company as authorized by the New York City administrative Code Section 19-143 and/ or Section 24-521 as applicable.

5. Utility delays caused by utility capital work not listed in Schedule U2 and/ or by unavailability of utility specialty crews cannot be discounted for earning any contractual bonus when such bonus clause is included in a contract. However, if such specified bonus is not earned or disallowed by the City or if the City assesses specified liquidated damages as a result of such excessive delays, the contractor may seek damages from the responsible utility company (ies).

7. *Extra utility work with Utility Agreement:*

If during construction the Contractor encounters utility facilities interferences or utility scope of work that it believes is not covered by the Interference Agreement as described above, then the Contractor shall immediately notify the Company in writing, with a copy to the City, describing the nature and location of the extra work in question. The Company then has five (5) business days to investigate the conditions and then:

1. Advise the Contractor and the City in writing that no interference with its facilities exists at the location in question, and hence that the Contractor may proceed with City work without providing for any impact from Company facilities;
2. Advise the Contractor and the City in writing that the Interference Agreement negotiated pursuant to Paragraph (6), above, provides for the scope of work encountered, specifying the exact unit items and/or terms of the agreement that cover the work;
3. Advise the Contractor and the City in writing that it intends to perform the necessary utility Work with company forces or with its own contractor including, but not limited to, relocating its facility out of the way of the proposed City work. In this case, the Company shall provide a written schedule for the performance of the utility work it proposes to perform, which shall be subject to approval by the City based on its impact to the Contractor's currently approved progress schedule. Upon approval of the Company's schedule by the City, the Contractor shall provide access to the worksite to the Company and/or any contractors hired by it to perform this utility work. If necessary, the City may grant a contract time extension for delays caused by the performance of such utility work by the company.

4. Reasonably specify in writing the scope of work to be performed by the Contractor on behalf of the Company that is not covered under the Interference Agreement negotiated pursuant to Paragraph (6), including, but not limited to, relocating, supporting, and/or protecting the Company's facilities, and/or shifting the City facility if approved by the Resident Engineer, and/or otherwise changing its operations to work in the presence of the Company's facilities. Should the Company elect this option, it must adequately define and provide an initial price offer for the work required to be performed.

8. *Means and Methods for utility work:*

Upon receipt of the Company's determination pursuant to paragraphs 7.2, or 7.4, above, the Contractor shall determine reasonable means and methods of performing the work defined by the Company. These means and methods are subject to approval of the Company, which shall not be unreasonably withheld. If, however, the Company objects to the Contractor's proposed means and methods then it shall define an alternate method of construction. Upon receipt of the Company's approval or its proposed alternate method of construction, the Contractor shall commence performance of the work defined by the Company as soon as possible, and shall perform the work in a good, workmanlike, and efficient manner, using the means and methods approved by the Company, in order to permit the City work to proceed in the most expeditious manner possible, but without imposing unreasonable and/or unnecessary costs on the Company. It is expressly understood by all parties that the City's rights pursuant to Article 4 of the Contract apply to Utility Work performed pursuant to this section.

9. *Disputed utility work covered by a utility agreement:*

The City Work will continue as described in paragraph 6 above. In the event of any dispute between the Company (ies) and the Contractor regarding any issue related to the performance of, or payment for, utility work, including, but not limited to, any indirect or impact costs incurred by the Contractor due to the Utility Work and/or to the existence of facilities owned or operated by the Company (ies) on the line of the work. The Company (ies) and the Contractor hereby agree to submit to each other a "Final Offer," in writing, by certified mail. Each party shall then have three business days to consider each other's Final Offer. In the event that neither party accepts the other's Final Offer within those three days, the Company (ies) and the Contractor agree to immediately submit the dispute to binding arbitration as described in Paragraph 10. During the pendency of any arbitration, the Company (ies) and the Contractor shall maintain separate records of the actual quantity and cost of labor, materials, and equipment expended, and to provide copies of this information to the other party on a daily

basis for reconciliation. Any and all disagreement with the records maintained and provided by the other, must be documented in writing to all parties. However, these records are solely for the benefit of presentation to the arbitrator, whose decision may not necessarily be based on these records and in any event is final. Both parties should be aware that the City will not confirm or deny the accuracy of any records maintained by either party for Utility work performed pursuant to a Utility Agreement. While the arbitration is pending, the Company shall pay the Contractor on a monthly basis, based on the price offered by the Company to the Contractor for the performance of the work.

10. Arbitration of utility work:

The arbitration of the issues described above shall be conducted pursuant to the Construction Industry Arbitration Rules of the American Arbitration Association (hereinafter "the Rules" and "AAA") in effect on the date the arbitration is initiated except as set forth herein. The arbitration award shall be final and binding upon the parties to the arbitration and judgment upon the award may be entered in a court having jurisdiction.

- (a) Once an arbitrator(s) has been appointed by the AAA, the arbitration shall be scheduled as promptly as possible given the arbitrator(s) and the parties' schedules.
- (b) No later than seven days prior to the first arbitration hearing, Company and Contractor shall submit to the arbitrator(s), and to each other, a summary of each party's respective position and such other information as is deemed appropriate, along with a copy of each party's Final Offer as specified in paragraph 9.
- (c) The arbitration shall be conducted and concluded in two days.
- (d) On the morning of the first day of the arbitration, Contractor and/or representatives shall have 3 ½ hrs to make a presentation of its claim to the arbitrator. During its presentation, Contractor shall not be permitted to produce any documents or cost records which have not already been provided to the Company. Contractor shall be permitted to produce any analysis or description of its claim which has been prepared for the purpose of its presentation.
- (e) After lunch, Company and/or its representatives shall have two hours to ask Contractor questions about its claim and its presentation. Thereafter the arbitrator(s) shall have two hours to ask Contractor questions about its claim and its presentation.
- (f) On the morning of the second day of the arbitration, Company and/or its representatives shall have 3 ½ hours to make a presentation of its claim to the arbitrator. During its presentation, the Company shall not be permitted to produce any documents or cost

records which have not already been provided to the Contractor. The Company shall be permitted to produce any analysis or description of its claim which has been prepared for the purpose of its presentation.

- (g) After lunch, Contractor and/or its representatives shall have two hours to ask Company questions about its claim and its presentation. Thereafter the arbitrator(s) shall have two hours to ask Company questions about its claim and its presentation.
- (h) Subject to the above time limitations, the arbitrator(s) may conduct the arbitration in such manner as the arbitrator(s) deems reasonable.
- (i) The arbitrator(s) shall then have one week to select in writing, as the arbitrator ('s) award, that party's Final Offer which appears to be more reasonable, based on the presentations at the arbitration hearings.
- (j) The arbitrator shall have no discretion to grant an award other than one of the two Final Offers submitted by the parties.
- (k) Any award for work that has already been performed shall be paid on the 7th day after receipt of the arbitrator's decision, or on the 30th day after completion of the work, whichever is later. Payment for work not yet completed at the time of the arbitrator's decision shall be paid within 30 days of completion of work. Interest shall accrue from the date payment is due at the rate of 9% per annum. Either party may cause judgment to be entered in accordance with the arbitrator(s) decision in a court in the State of New York, County of New York.
- (l) The arbitrator's fees and any other costs of the arbitration shall be initially shared equally by Company and Contractor. The non-prevailing party shall then pay all arbitrator's fees and costs of the arbitration and shall reimburse the prevailing party for its share of such fees and costs theretofore paid.
- (m) The parties may, at any time, settle any matter submitted to arbitration.

11. Order-out waiver:

The Contractor and all subcontractors hired by it, if an Interference Agreement is executed as specified between the concerned parties, agree to waive any rights they may have, if any, under law, contract or otherwise to compel the City to assert any right the City may have, including the issuance of any directives required under the New York City Administrative Code, Section 19-143 and Section 24-521, to require any or all of the Companies to maintain, repair, replace, protect, support, shift, alter, relocate, and/or remove utility facilities in connection with the work to be performed under this contract. However, nothing in this section shall preclude the City from exercising its rights under the Law to issue such a directive to the Company.

12. Cost of insurance:

Each of the named Companies, at their option and if an Interference Agreement is executed as specified between the concerned parties, may be named as an additional insured on all insurance policies required to be maintained under this contract. In the event that a Company opts to be so named as an additional insured, the actual incremental cost, if any, to the Contractor of providing such insurance coverage shall be borne by that Company. The Contractor shall provide a written statement from its insurance provider documenting the actual cost of this added coverage to the Company. Under no circumstances shall the cost of insurance coverage on behalf of any Company be borne by the City. Nothing in this paragraph shall be interpreted to imply the City's acceptance of any additional responsibility or liability for any matter related to the performance of Utility Work. In particular, the Company and the Contractor bear joint and full responsibility to ensure that any Utility Work performed by the Contractor is in compliance with all applicable government and Company regulations.

13. Cost of utility interference work:

The Companies, by virtue of a prior agreement with the City, have agreed to perform their obligations described in this section. It is expressly understood that the cost of Utility Work shall not be a charge against the City, but shall be a matter for adjustment between the Contractor and the Company or Companies concerned. The City and the Contractor agree that the Companies are third party beneficiaries of this section of the contract, if a Utility Agreement is executed between the contractor and utility company (ies). The provisions of this section shall govern in all cases where Company property interferes with or is about to be disturbed by the City work, notwithstanding any other provision of the Contract, except for Natural Gas transmission/distribution facilities covered subject to the Gas Facility Cost Allocation Act (GFCAA) and covered separately in this contract.

14. Default declaration:

The Contractor agrees that the provisions of this section are material provisions of the contract, and that the Contractor's failure to comply with the procedures set forth above are sufficient for the Commissioner to declare the Contractor in default pursuant to Article 48 of the Contract.

15. NYS Labor Law:

The Contractor is hereby advised that New York State Labor Law applies to public work. The work described in this Section U of the contract performed by utility company (ies) with their own forces or vendors hired by such company (ies) is not public work.

16. Facility operators:

The insurance requirements in Paragraph 12 of this Section U apply to: (i) additional Companies, if any, who were not named in Schedule "A" but which have executed a Utility Agreement with the contractor for utility work; and (ii) additional coverage, if any, paid for by Utility Companies whose utility facilities are located within the project limits, that they may require for the utility work pursuant to an utility agreement between the contractor and such utility companies.

[End]

“STANDARD UTILITY LETTER OF AGREEMENT”

(Name)
Deputy Commissioner, Infrastructure Division
Department of Design and Construction
30-30 Thomson Avenue
Long Island City, NY 11101

RE: City Work Performed in the Presence of Private Utility Facilities
Project No: _____

Dear (Name):

This letter is to certify that _____, has requested the inclusion of the attached “Section U: Additional contract requirements applying to work performed in the presence of privately owned utility.” The company agrees to abide by the terms of this Section U and to submit a schedule listing the scope of work, including the items and estimated quantities, and types of utility facilities to be supported and protected at the company’s own expenses due to interferences with the Public work.

Sincerely,

By: Authorized Company Representative

Title

NOTARY PUBLIC

CERTIFIED AS TO FORM
AND LEGAL AUTHORITY:

By: _____

SCHEDULE U-1

SCHEDULE U-1

LISTING OF COMPANIES NAMED FOR THIS CONTRACT

<u>COMPANY NAME</u>	<u>CONTACT NAME</u>	<u>CONTACT TELEPHONE</u>
CON EDISON	DONALD SOLDIVIERO	718-460-4834
VERIZON	AUBREY MAKHANLALL	718-977-8165
CABLE VISION	SIMON GOMEZ	917-578-2695

SCHEDULE U-2**CONTRACT NO. - HWXRCLZ****FOR INFORMATION ONLY****ENGINEER'S ESTIMATE OF QUANTITY AND TYPES OF INTERFERENCE****FOR CONSOLIDATED EDISON CO.****NEW YORK CITY DEPARTMENT OF DESIGN AND CONSTRUCTION****ROBERTO CLEMENTE PLAZA, THE BRONX**

CET ITEM NUMBER	DESCRIPTION	Estimated Quantity	Unit of Measure
CET 100.1	UTILITIES CROSSING TRENCH FOR CATCH BASIN CHUTE CONNECT. AND/OR TEST PIT (≤ 0.75 SF)	8	EA
CET 100.2	UTILITIES CROSSING TRENCH FOR CATCH BASIN CHUTE CONNECT. AND/OR TEST PIT (> 0.75 SF - ≤ 2.0 SF)	3	EA
CET 100.3	UTILITIES CROSSING TRENCH FOR CATCH BASIN CHUTE CONNECT. AND/OR TEST PIT (> 2.0 SF - ≤ 6.0 SF)	3	EA
CET 108.1	UTILITIES CROSSING TRENCH FOR WATER MAIN UP TO AND INCL. 12" DIAMETER (≤ 0.75 SF)	23	EA
CET 108.2	UTILITIES CROSSING TRENCH FOR WATER MAIN UP TO AND INCL. 12" DIAMETER (> 0.75 SF - ≤ 2.0 SF)	11	EA
CET 108.3	UTILITIES CROSSING TRENCH FOR WATER MAIN UP TO AND INCL. 12" DIAMETER (> 2.0 SF - ≤ 6.0 SF)	9	EA
CET 109.1	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 12" AND UP TO 24" DIAMETER (≤ 0.75 SF)	2	EA
CET 109.2	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 12" AND UP TO 24" DIAMETER (> 0.75 SF - ≤ 2.0 SF)	4	EA
CET 200.1	EXTRA DEPTH EXCAVATION OF CATCH BASIN CHUTE CONNECTION PIPES (UPSTREAM INVER DEPTH $> 4'6"$, $\leq 5'$)	130	LF
CET 225.1A	INSTALLATION AND REMOVAL OF CATCH BASINS WITH UTILITY INTERFERENCES	1	EA
CET 225.1B	INSTALLATION OF CATCH BASINS WITH UTILITY INTERFERENCES	5	EA
CET 225.1C	REMOVAL OF CATCH BASINS WITH UTILITY INTERFERENCES	4	EA
CET 300	SPECIAL CARE EXCAVATION & BACKFILLING	450	CY
CET 304A	FURNISH, DELIVER, AND INSTALL CONCRETE ROAD BASE	212	CY
CET 304B	FURNISH, DELIVER, AND INSTALL CONCRETE SIDEWALK	75	CY
CET 304C	BREAK, REMOVE, AND DISPOSE CONCRETE SIDEWALK	75	CY
CET 330EA.1	SUPPORT AND PROTECT UTILITIES WITHIN TRENCH THAT DOES NOT REQUIRE SHEETING (≤ 0.75 SF)	100	LF
CET 330EA.2	SUPPORT AND PROTECT UTILITIES WITHIN TRENCH THAT DOES NOT REQUIRE SHEETING (> 0.75 SF - ≤ 2.0 SF)	100	LF
CET 330EA.3	SUPPORT AND PROTECT UTILITIES WITHIN TRENCH THAT DOES NOT REQUIRE SHEETING (> 2.0 SF - ≤ 6.0 SF)	100	LF
CET 330EB.1	SUPPORT AND PROTECT UTILITIES WITHIN TRENCH THAT REQUIRES SHEETING (≤ 0.75 SF)	350	LF
CET 330EB.2	SUPPORT AND PROTECT UTILITIES WITHIN TRENCH THAT REQUIRES SHEETING (> 0.75 SF - ≤ 2.0 SF)	310	LF
CET 330EB.3	SUPPORT AND PROTECT UTILITIES WITHIN TRENCH THAT REQUIRES SHEETING (> 2.0 SF - ≤ 6.0 SF)	620	LF
CET 400	TEST PITS FOR UTILITY FACILITIES	300	CY

SCHEDULE U-2

CONTRACT NO.- HWXRCPLZ

FOR INFORMATION ONLY

ENGINEER'S ESTIMATE OF QUANTITY AND TYPES OF INTERFERENCE

FOR CONSOLIDATED EDISON CO.

NEW YORK CITY DEPARTMENT OF DESIGN AND CONSTRUCTION

ROBERTO CLEMENTE PLAZA, THE BRONX

CET ITEM NUMBER	DESCRIPTION	Estimated Quantity	Unit of Measure
CET 401	TRENCH EXCAVATION FOR ADJUSTMENT OF UTILITY FACILITIES	300	CY
CET 402.1	EXISTING OCCUPIED CONCRETE ENCASED CONDUITS PLACED IN FINAL POSITION W/O CONCRETE ENCASEMENT	480	LF
CET 402.1A	EXISTING OCCUPIED CONCRETE ENCASED CONDUITS PLACED IN FINAL POSITION WITH CONCRETE ENCASEMENT	375	LF
CET 402.2	EXISTING OCCUPIED NON-CONCRETE ENCASED CONDUITS PLACED IN FINAL POSITION W/O CONCRETE ENCASEMENT	560	LF
CET 402.2A	EXISTING OCCUPIED NON-CONCRETE ENCASED CONDUITS PLACED IN FINAL POSITION WITH CONCRETE ENCASEMENT	200	LF
CET 402.V1	EXISTING VACANT CONCRETE ENCASED CONDUITS PLACED IN FINAL POSITION W/O CONCRETE ENCASEMENT	480	LF
CET 402.V1A	EXISTING VACANT CONCRETE ENCASED CONDUITS PLACED IN FINAL POSITION WITH CONCRETE ENCASEMENT	375	LF
CET 402.V2	EXISTING VACANT NON-CONCRETE ENCASED CONDUITS PLACED IN FINAL POSITION W/O CONCRETE ENCASEMENT	560	LF
CET 402.V2A	EXISTING VACANT NON-CONCRETE ENCASED CONDUITS PLACED IN FINAL POSITION WITH CONCRETE ENCASEMENT	200	LF
CET 403	PLACING STEEL PROTECTION PLATES FOR UTILITY FACILITIES	150	SF
CET 404	PIER AND PLATE PROTECTION FOR DUCTILE IRON WATER MAINS AND OTHER SHALLOW FACILITIES	225	SF
CET 405.1	TRENCH EXCAVATION FOR INSTALLATION OF UTILITY FACILITIES WITH TOTAL DEPTHS < 5 FT.	234	CY
CET 406	EXCAVATION FOR UTILITY STRUCTURE	26	CY
CET 450.2	CONSTRUCTION FIELD SUPPORT; AVG SMALL SIZE CREW	750	Crrhrs
CET 500	REMOVAL OF ABANDONED UTILITY CONDUITS (NON-CONCRETE ENCASED)	450	LF
CET 600.1	INSTALL CONDUIT IN UNPAVED AREA, (1) 2", 4", OR 5" CONDUIT (ALL TYPES)	150	LF
CET 600.2	INSTALL CONDUIT IN UNPAVED AREA, (2) 2", 4", OR 5" CONDUITS (ALL TYPES)	270	LF
CET 600.3	INSTALL CONDUIT IN UNPAVED AREA, (4) 2", 4", OR 5" CONDUITS (ALL TYPES)	230	LF
CET 601.1	INSTALL CONDUIT IN PAVED AREA, (1) 2", 4", OR 5" CONDUIT (ALL TYPES)	150	LF
CET 601.2	INSTALL CONDUIT IN PAVED AREA, (2) 2", 4", OR 5" CONDUITS (ALL TYPES)	305	LF
CET 601.3	INSTALL CONDUIT IN PAVED AREA, (4) 2", 4", OR 5" CONDUITS (ALL TYPES)	300	LF
CET 603E.1	INSTALL CONDUITS IN FINAL POSITION WITHOUT CONCRETE ENCASEMENT	430	LF
CET 636EERD	ADJUSTMENT OF UTILITY HARDWARE IN ROADWAY (34" - < 41" WIDTH)	5	EA

SCHEDULE U-2

CONTRACT NO.- HWXRCPLZ

FOR INFORMATION ONLY

ENGINEER'S ESTIMATE OF QUANTITY AND TYPES OF INTERFERENCE

FOR CONSOLIDATED EDISON CO.

NEW YORK CITY DEPARTMENT OF DESIGN AND CONSTRUCTION

ROBERTO CLEMENTE PLAZA, THE BRONX

CET ITEM NUMBER	DESCRIPTION	Estimated Quantity	Unit of Measure
CET 636EGRD	ADJUSTMENT OF UTILITY HARDWARE IN ROADWAY (41" - < 75" WIDTH)	3	EA
CET 636EHRD	ADJUSTMENT OF UTILITY HARDWARE IN ROADWAY (75" - < 125" WIDTH)	1	EA
CET 638N	INSTALLATION OF FIELD CONSTRUCTED UTILITY STRUCTURE	12	CY
CET 638R	BREAK OUT AND REMOVE UTILITY STRUCTURE	21	CY
CET 700	MODIFICATION OF WORK METHODS TO ACCOMMODATE AND/OR PROTECT U.G. FACILITIES WITH LIMITED COVER	372	CY
CET 710.1	REMOVAL OF ABANDONED UTILITY STEEL, CAST IRON, AND/OR PLASTIC PIPES (<= 12" DIA)	450	LF
CET 781	REMOVABLE CURB/SIDEWALK PANEL FOR ACCESS TO UTILITY STRUCTURES OPENINGS	4	EA
CET 798	MODIFICATION OF NON CONCRETE YOKE TROLLEY STRUCTURE REMOVAL WHEN CROSSING UTILITY FACILITIES	75	LF
CET 799	MODIFICATION OF NON CONCRETE YOKE TROLLEY STRUCTURE REMOVAL PARALLEL TO UTILITY FACILITIES	450	LF
CET 802A	SPECIAL CARE EXCAVATION AND RESTORATION FOR SIDEWALK WORK	523	SF
CET 802B	SPECIAL CARE EXCAVATION AND RESTORATION FOR CURB WORK	125	LF
CET 1012V	VERTICAL OR ROLLED 12" WATERMAIN OFFSET	1	EA
CET 1020V	VERTICAL OR ROLLED 20" WATERMAIN OFFSET	1	EA

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CET 100.1 UTILITIES CROSSING TRENCH FOR CATCH BASIN 8 EA
 CHUTE CONNECTION AND/OR TEST PIT
 (<= 0.75 SF)

LOCATIONS:

- NWC WILLIS AVE & E 147 th ST (Sht U1)	1
- SWC WILLIS AVE & E 148 th ST (Sht U1)	1
- NWC COURTLANDT AVE & 3 rd AVE (Sht U6)	1
- NEC COURTLANDT AVE & 3 rd AVE (Sht U6)	1
- 50'+/- WEC WILLIS AVE, 20'+/- NNC E 148 th ST (Sht PL-C1)	1
- E/S WILLIS AVE, 5'+/- NNC E 148 th ST (Sht PL-C1)	1
- E/S WILLIS AVE, 22'+/- NNC E 148 th ST (Sht PL-C1)	1
- E/S WILLIS AVE, 47'+/- NNC E 148 th ST (Sht PL-C1)	1

CET 100.2 UTILITIES CROSSING TRENCH FOR CATCH BASIN 3 EA
 CHUTE CONNECTION AND/OR TEST PIT
 (> 0.75 SF - <= 2.0 SF)

LOCATIONS:

- NWC WILLIS AVE & E 147 th ST (Sht U1)	1
- N/S E 148 th ST, 48'+/- EEC WILLIS AVE (Sht U1)	1
- W/S MELROSE AVE, 30'+/- SSC E 150 th ST (Sht U2)	1

CET 100.3 UTILITIES CROSSING TRENCH FOR CATCH BASIN 3 EA
 CHUTE CONNECTION AND/OR TEST PIT
 (> 2.0 SF - <= 6.0 SF)

LOCATIONS:

- NWC WILLIS AVE & E 147 th ST (Sht U1)	1
- NWC COURTLANDT AVE & 3 rd AVE (Sht U6)	1
- NEC COURTLANDT AVE & 3 rd AVE (Sht U6)	1

CET 108.1 UTILITIES CROSSING TRENCH FOR WATER MAIN 23 EA
 UP TO AND INCLUDING 12" DIAMETER
 (<= 0.75 SF)

LOCATIONS:

- BERGEN AVE & E 147 th ST (Sht U1)	1
- S/S E 147 th ST, 90'+/- EEC WILLIS AVE (Sht U1)	1
- SWC WILLIS AVE & E 148 th ST (Sht U1)	1
- N/S E 148 th ST, 53'+/- EEC WILLIS AVE (Sht U1)	1
- SEC WILLIS AVE & E 148 th ST (Sht U1)	1
- W/S 3 rd AVE, 65'+/- S/O E 149 th ST (Sht U4)	1
- N/S E 147 th ST, 60'+/- EEC 3 rd AVE (Sht U4)	1

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- 3 rd AVE & E 147 th ST (Sht U4)	2
- W/S 3 rd AVE, 30'+/- SSC E 148 th ST (Sht U4)	1
- NEC 3 rd AVE & E 146 th ST (Sht U6)	1
- COURTLANDT AVE & 3 rd AVE (Sht U6)	1
- W/S COURTLANDT AVE, 80'+/- N/O E 146 th ST (Sht U6)	1
- E/S COURTLANDT AVE, 240'+/- N/O E 146 th ST (Sht U6)	1
- W/S COURTLANDT AVE, 45'+/- SSC E 148 th ST (Sht U6)	1
- W/S COURTLANDT AVE, 50'+/- SSC E 148 th ST (Sht U6)	1
- SWC COURTLANDT AVE & E 148 th ST (Sht U6)	1
- NWC COURTLANDT AVE & E 148 th ST (Sht U6)	1
- NEC COURTLANDT AVE & E 148 th ST (Sht U6)	1
- W/S COURTLANDT AVE, 90'+/- NNC E 148 th ST (Sht U6)	1
- W/S COURTLANDT AVE, 65'+/- SSC E 149 th ST (Sht U6)	1
- N/S E 148 th ST, 100'+/- EEC COURTLANDT AVE (Sht U6)	1
- N/S E 148 th ST, 210'+/- EEC COURTLANDT AVE (Sht U6)	1

<u>CET 108.2</u>	UTILITIES CROSSING TRENCH FOR WATER MAIN UP TO AND INCLUDING 12" DIAMETER (> 0.75 SF - <= 2.0 SF)	11	EA
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LOCATIONS:

- BERGEN AVE & E 147 th ST (Sht U1)	1
- S/S E 147 th ST, 90'+/- EEC WILLIS AVE (Sht U1)	1
- W/S WILLIS AVE, 40'+/- SSC E 148 th ST (Sht U1)	1
- SWC WILLIS AVE & E 148 th ST (Sht U1)	1
- N/S E 148 th ST, 48'+/- EEC WILLIS AVE (Sht U1)	1
- W/S MELROSE AVE, 43'+/- NNC E 149 th ST (Sht U2)	1
- W/S 3 rd AVE, 65'+/- S/O E 149 th ST (Sht U4)	1
- NEC COURTLANDT AVE & E 148 th ST (Sht U6)	1
- N/S E 148 th ST, 15'+/- EEC COURTLANDT AVE (Sht U6)	1
- N/S E 148 th ST, 140'+/- EEC COURTLANDT AVE (Sht U6)	1
- CENTER OF WILLIS AVE, S/S E 148 th ST (Sht PL-P2)	1

<u>CET 108.3</u>	UTILITIES CROSSING TRENCH FOR WATER MAIN UP TO AND INCLUDING 12" DIAMETER (> 2.0 SF - <= 6.0 SF)	9	EA
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LOCATIONS:

- SEC WILLIS AVE & E 148 th ST (Sht U1)	1
- NEC 3 rd AVE & E 148 th ST (Sht U4)	1
- SWC 3 rd AVE & E 148 th ST (Sht U4)	1
- N/S E 148 th ST, 40'+/- W/O 3 rd AVE (Sht U4)	1
- W/S 3 rd AVE, 65'+/- S/O E 149 th ST (Sht U4)	1
- 3 rd AVE & E 147 th ST (Sht U4)	1
- W/S 3 rd AVE, 30'+/- SSC E 148 th ST (Sht U4)	1
- NEC 3 rd AVE & E 146 th ST (Sht U6)	1
- COURTLANDT AVE & 3 rd AVE (Sht U6)	1

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CET 225.1C **REMOVAL OF CATCH BASINS WITH UTILITY INTERFERENCES** **4** **EA**

LOCATIONS:

- W/S WILLIS AVE, 25'+/- NNC E 147th ST (Sht U1) 1
- S/S E 148th ST, 25'+/- WWC WILLIS AVE (Sht U1) 1
- S/S ROBERTO CLEMENTE PLAZA, 10'+/- EWC WILLIS AVE (Sht U1) 1
- E/S WILLIS AVE, 20'+/- NNC E 148th ST (Sht U1) 1

CET 300 **SPECIAL CARE EXCAVATION AND BACKFILLING** **450** **CY**

LOCATIONS:

- VARIOUS LOCATIONS TBD BY CON ED FIELD REP 450

CET 304A **FURNISH, DELIVER, AND INSTALL CONCRETE ROAD BASE** **212** **CY**

LOCATIONS:

- W/S WILLIS AVE, 40'+/- NNC E 147th ST (Sht U1) 4
- SWC WILLIS AVE & E 148th ST (Sht U1) 4
- CENTER OF WILLIS AVE, S/S E 148th ST (Sht PL-P2) 4
- VARIOUS LOCATIONS TBD BY CON ED FIELD REP 200

CET 304B **FURNISH, DELIVER, AND INSTALL CONCRETE SIDEWALK** **75** **CY**

LOCATIONS:

- VARIOUS LOCATIONS TBD BY CON ED FIELD REP 75

CET 304C **BREAK, REMOVE, AND DISPOSE CONCRETE SIDEWALK** **75** **CY**

LOCATIONS:

- VARIOUS LOCATIONS TBD BY CON ED FIELD REP 75

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CET 330EB.3 **SUPPORT AND PROTECT UTILITIES WITHIN
 TRENCH THAT REQUIRES SHEETING
 (> 2.0 SF - <= 6.0 SF)** **620** **LF**

LOCATIONS:

- E/S COURTLANDT AVE, B/T E 146th ST & E 148th ST (Sht U6) 320
- VARIOUS LOCATIONS TBD BY CON ED FIELD REP 300

CET 400 **TEST PITS FOR UTILITY FACILITIES** **300** **CY**

LOCATIONS:

- VARIOUS LOCATIONS TBD BY CON ED FIELD REP 300

CET 401 **TRENCH EXCAVATION FOR ADJUSTMENT
 OF UTILITY FACILITIES** **300** **CY**

LOCATIONS:

- W/S WILLIS AVE, 40'+/- NNC E 147th ST (Sht U1) 15
- SWC WILLIS AVE & E 148th ST (Sht U1) 15
- CENTER OF WILLIS AVE, S/S E 148th ST (Sht PL-P2) 20
- VARIOUS LOCATIONS TBD BY CON ED FIELD REP 250

CET 402.1 **EXISTING OCCUPIED CONCRETE ENCASED
 CONDUITS PLACED IN FINAL POSITION WITHOUT
 CONCRETE ENCASEMENT** **480** **LF**

LOCATIONS:

- W/S WILLIS AVE, 40'+/- NNC E 147th ST (Sht U1) 90
- SWC WILLIS AVE & E 148th ST (Sht U1) 90
- VARIOUS LOCATIONS TBD BY CON ED FIELD REP 300

CET 402.1A **EXISTING OCCUPIED CONCRETE ENCASED
 CONDUITS PLACED IN FINAL POSITION WITH
 CONCRETE ENCASEMENT** **375** **LF**

LOCATIONS:

- VARIOUS LOCATIONS TBD BY CON ED FIELD REP 375

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<u>CET 402.2</u>	EXISTING OCCUPIED NON-CONCRETE ENCASED CONDUITS PLACED IN FINAL POSITION WITHOUT CONCRETE ENCASEMENT	560	LF
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LOCATIONS:

- | | | | |
|---|--|-----|--|
| - | CENTER OF WILLIS AVE, S/S E 148 th ST (Sht PL-P2) | 60 | |
| - | VARIOUS LOCATIONS TBD BY CON ED FIELD REP | 500 | |

<u>CET 402.2A</u>	EXISTING OCCUPIED NON-CONCRETE ENCASED CONDUITS PLACED IN FINAL POSITION WITH CONCRETE ENCASEMENT	200	LF
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LOCATIONS:

- | | | | |
|---|---|-----|--|
| - | VARIOUS LOCATIONS TBD BY CON ED FIELD REP | 200 | |
|---|---|-----|--|

<u>CET 402.V1</u>	EXISTING VACANT CONCRETE ENCASED CONDUITS PLACED IN FINAL POSITION WITHOUT CONCRETE ENCASEMENT	480	LF
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LOCATIONS:

- | | | | |
|---|--|-----|--|
| - | W/S WILLIS AVE, 40'+/- NNC E 147 th ST (Sht U1) | 90 | |
| - | SWC WILLIS AVE & E 148 th ST (Sht U1) | 90 | |
| - | VARIOUS LOCATIONS TBD BY CON ED FIELD REP | 300 | |

<u>CET 402.V1A</u>	EXISTING VACANT CONCRETE ENCASED CONDUITS PLACED IN FINAL POSITION WITH CONCRETE ENCASEMENT	375	LF
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LOCATIONS:

- | | | | |
|---|---|-----|--|
| - | VARIOUS LOCATIONS TBD BY CON ED FIELD REP | 375 | |
|---|---|-----|--|

<u>CET 402.V2</u>	EXISTING VACANT NON-CONCRETE ENCASED CONDUITS PLACED IN FINAL POSITION WITHOUT CONCRETE ENCASEMENT	560	LF
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LOCATIONS:

- | | | | |
|---|--|-----|--|
| - | CENTER OF WILLIS AVE, S/S E 148 th ST (Sht PL-P2) | 60 | |
| - | VARIOUS LOCATIONS TBD BY CON ED FIELD REP | 500 | |

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<u>CET 402.V2A</u>	EXISTING VACANT NON-CONCRETE ENCASED CONDUITS PLACED IN FINAL POSITION WITH CONCRETE ENCASEMENT	200	LF
LOCATIONS:			
-	VARIOUS LOCATIONS TBD BY CON ED FIELD REP	200	
<u>CET 403</u>	PLACING STEEL PROTECTION PLATES FOR UTILITIES	150	SF
LOCATIONS:			
-	VARIOUS LOCATIONS TBD BY CON ED FIELD REP	150	
<u>CET 404</u>	PIER AND PLATE PROTECTION FOR DUCTILE IRON WATER MAINS AND OTHER SHALLOW FACILITIES	225	SF
LOCATIONS:			
-	VARIOUS LOCATIONS TBD BY CON ED FIELD REP	225	
<u>CET 405.1</u>	TRENCH EXCAVATION FOR INSTALLATION OF UTILITY FACILITIES (DEPTH < 5')	234	CY
LOCATIONS:			
-	E 147 th ST & BERGEN AVE (Sht U1)	13	
-	E/S WILLIS AVE, N/O E 148 th ST (Sht U1)	17	
-	E/S WILLIS AVE, S/O 3 rd AVE (Sht U1)	22	
-	E 148 th ST & 3 rd AVE (Sht U4)	7	
-	N/S E 148 th ST, E/O COURTLANDT AVE (Sht U6)	42	
-	E/S 3 rd AVE, FROM WILLIS AVE TO E 149 th ST (Sht PL-C1)	93	
-	VARIOUS LOCATIONS TBD BY CON ED FIELD REP	40	
<u>CET 406</u>	EXCAVATION FOR UTILITY STRUCTURE	26	CY
LOCATIONS:			
-	W/S WILLIS AVE, 85'+/- NNC E 147 th ST (11467) (Sht U1)	3.5	
-	SWC WILLIS AVE & E 148 th ST (M-11468) (Sht U1)	12	
-	E/S WILLIS AVE, 35'+/- NNC E 148 th ST (11472) (Sht U1)	3.5	
-	E/S COURTLANDT AVE, 240'+/- N/O E 146 th ST (2406) (Sht U6)	3.5	
-	E/S COURTLANDT AVE, 140'+/- SSC E 148 th ST (2407) (Sht U6)	3.5	

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CET 450.2 **CONSTRUCTION FIELD SUPPORT; AVERAGE
 SMALL SIZE CREW** **750** **Crhrs**

LOCATIONS:

- VARIOUS LOCATIONS TBD BY CON ED FIELD REP 750

CET 500 **REMOVAL OF ABANDONED UTILITY CONDUITS
 (NON-CONCRETE ENCASED)** **450** **LF**

LOCATIONS:

- VARIOUS LOCATIONS TBD BY CON ED FIELD REP 450

CET 600.1 **INSTALL CONDUIT IN UNPAVED AREA, (1) 2",
 4", OR 5" CONDUIT (ALL TYPES)** **150** **LF**

LOCATIONS:

- VARIOUS LOCATIONS TBD BY CON ED FIELD REP 150

CET 600.2 **INSTALL CONDUIT IN UNPAVED AREA, (2) 2",
 4", OR 5" CONDUITS (ALL TYPES)** **270** **LF**

LOCATIONS:

- NEC WILLIS AVE & E 148th ST (Sht U1) 25
 - S/S E 149th ST, W/O COURTLANDT AVE (Sht U3) 80
 - SWC COURTLANDT AVE & E 149th ST (Sht U3) 15
 - VARIOUS LOCATIONS TBD BY CON ED FIELD REP 150

CET 600.3 **INSTALL CONDUIT IN UNPAVED AREA, (4) 2",
 4", OR 5" CONDUITS (ALL TYPES)** **230** **LF**

LOCATIONS:

- W/S WILLIS AVE, B/T E 147th ST & E 148th ST (Sht U1) 80
 - VARIOUS LOCATIONS TBD BY CON ED FIELD REP 150

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<u>CET 601.1</u>	INSTALL CONDUIT IN PAVED AREA, (1) 2", 4", OR 5" CONDUIT (ALL TYPES)	150	LF
LOCATIONS:			
	- VARIOUS LOCATIONS TBD BY CON ED FIELD REP	150	
<u>CET 601.2</u>	INSTALL CONDUIT IN PAVED AREA, (2) 2", 4", OR 5" CONDUITS (ALL TYPES)	305	LF
LOCATIONS:			
	- NEC WILLIS AVE & E 148 th ST (Sht U1)	45	
	- S/S E 149 th ST, W/O COURTLANDT AVE (Sht U3)	70	
	- SWC COURTLANDT AVE & E 149 th ST (Sht U3)	40	
	- VARIOUS LOCATIONS TBD BY CON ED FIELD REP	150	
<u>CET 601.3</u>	INSTALL CONDUIT IN PAVED AREA, (4) 2", 4", OR 5" CONDUITS (ALL TYPES)	300	LF
LOCATIONS:			
	- W/S WILLIS AVE, B/T E 147 th ST & E 148 th ST (Sht U1)	150	
	- VARIOUS LOCATIONS TBD BY CON ED FIELD REP	150	
<u>CET 603E.1</u>	INSTALL CONDUITS IN FINAL POSITION WITHOUT CONCRETE ENCASEMENT	430	LF
LOCATIONS:			
	- E/S 3 rd AVE, FROM WILLIS AVE TO E 149 th ST (Sht PL-C1)	280	
	- VARIOUS LOCATIONS TBD BY CON ED FIELD REP	150	
<u>CET 636EERD</u>	ADJUSTMENT OF UTILITY HARDWARE IN ROADWAY (34" - < 41" WIDTH)	5	EA
LOCATIONS:			
	- E/S WILLIS AVE, 85'+/- NNC E 148 th ST (11473) (Sht U1)	1	
	- MELROSE AVE & 3 rd AVE (M-16018) (Sht U2)	1	
	- W/S 3 rd AVE, 87'+/- N/O MELROSE AVE (16019) (Sht U2)	1	
	- S/S E 149 th ST, 30'+/- WWC COURTLANDT AVE (M-23703) (Sht U3)	1	
	- NEC COURTLANDT AVE & 3 rd AVE (M-2405) (Sht U6)	1	

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CET 636EGRD ADJUSTMENT OF UTILITY HARDWARE IN ROADWAY (41" - < 75" WIDTH) 3 EA

LOCATIONS:

- NEC WILLIS AVE & 3rd AVE (11474) (Sht U1) 1
- W/S MELROSE AVE AVE, 100'+/- NNC E 149th ST (18139) (Sht U2) 1
- S/S E 149th ST, 75'+/- WWC COURTLANDT AVE (7102) (Sht U3) 1

CET 636EHRD ADJUSTMENT OF UTILITY HARDWARE IN ROADWAY (75" - < 125" WIDTH) 1 EA

LOCATIONS:

- COURTLANDT AVE & E 146th ST (TM-672) (Sht U6) 1

CET 638N INSTALLATION OF FIELD CONSTRUCTED UTILITY STRUCTURE 12 CY

LOCATIONS:

- W/S WILLIS AVE, 85'+/- NNC E 147th ST (11467) (Sht U1) 0.8
- SWC WILLIS AVE & E 148th ST (M-11468) (Sht U1) 9.0
- E/S WILLIS AVE, 35'+/- NNC E 148th ST (11472) (Sht U1) 0.8
- E/S COURTLANDT AVE, 240'+/- N/O E 146th ST (2406) (Sht U6) 0.8
- E/S COURTLANDT AVE, 140'+/- SSC E 148th ST (2407) (Sht U6) 0.8

CET 638R BREAK OUT AND REMOVE UTILITY STRUCTURE 21 CY

LOCATIONS:

- W/S WILLIS AVE, 85'+/- NNC E 147th ST (11467) (Sht U1) 1
- SWC WILLIS AVE & E 148th ST (M-11468) (Sht U1) 8
- E/S WILLIS AVE, 35'+/- NNC E 148th ST (11472) (Sht U1) 1
- E/S COURTLANDT AVE, 240'+/- N/O E 146th ST (2406) (Sht U6) 1
- E/S COURTLANDT AVE, 140'+/- SSC E 148th ST (2407) (Sht U6) 1
- 50'+/- WEC WILLIS AVE, 20'+/- NNC E 148th ST (11471) (Sht PL-C1) 1
- W/S WILLIS AVE, 105'+/- NNC E 148th ST (M-21472) (Sht PL-C1) 8

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<u>CET 799</u>	MODIFICATION OF NON CONCRETE YOKE TROLLEY STRUCTURE REMOVAL PARALLEL TO UTILITY FACILITIES	450	LF
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LOCATIONS:

- E 149 th ST, MELROSE AVE, & 3 rd AVE (Sht TT1)		450	
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<u>CET 802A</u>	SPECIAL CARE EXCAVATION AND RESTORATION FOR SIDEWALK WORK	523	SF
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LOCATIONS:

- E/S 3 rd AVE, 75'+/- S/O WILLIS AVE (Sht U1)		125	
- W/S MELROSE AVE, 30'+/- SSC E 150 th ST (Sht U2)		60	
- MELROSE AVE & 3 rd AVE (Sht U2)		138	
- VARIOUS LOCATIONS TBD BY CON ED FIELD REP		200	

<u>CET 802B</u>	SPECIAL CARE EXCAVATION AND RESTORATION FOR CURB WORK	125	LF
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LOCATIONS:

- E/S 3 rd AVE, 50'+/- S/O WILLIS AVE (Sht U1)		5	
- W/S WILLIS AVE, 35'+/- S/O 3 rd AVE (Sht U1)		5	
- W/S MELROSE AVE, 30'+/- SSC E 150 th ST (Sht U2)		4	
- MELROSE AVE & 3 rd AVE (Sht U2)		11	
- VARIOUS LOCATIONS TBD BY CON ED FIELD REP		100	

<u>CET 1012V</u>	VERTICAL OR ROLLED 12" WATERMAIN OFFSET	1	EA
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LOCATIONS:

- VARIOUS LOCATIONS TBD BY CON ED FIELD REP		1	
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<u>CET 1020V</u>	VERTICAL OR ROLLED 20" WATERMAIN OFFSET	1	EA
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LOCATIONS:

- VARIOUS LOCATIONS TBD BY CON ED FIELD REP		1	
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SCHEDULE U-2
FOR INFORMATION ONLY
ENGINEER'S ESTIMATE OF QUANTITY AND TYPES OF INTERFERENCE
FOR EMPIRE CITY SUBWAY CO., LTD.
Hwxrcplz
Reconstruction of Roberto Clemente Plaza

CET ITEM NUMBER	DESCRIPTION	UNITS	ESTIMATED QUANTITY
CET 100.2	UTILITIES CROSSING TRENCH FOR CATCH BASIN CHUTE CONNECT. AND/OR TEST PIT (TYPE .2)	EA.	3
CET 100.3	UTILITIES CROSSING TRENCH FOR CATCH BASIN CHUTE CONNECT. AND/OR TEST PIT (TYPE .3)	EA.	1
CET 100.4	UTILITIES CROSSING TRENCH FOR CATCH BASIN CHUTE CONNECT. AND/OR TEST PIT (TYPE .4)	EA.	1
CET 108.1	UTILITIES CROSSING TRENCH FOR WATERMAIN UP TO AND INCL 12" DIAMETER (TYPE .1)	EA.	2
CET 108.2	UTILITIES CROSSING TRENCH FOR WATERMAIN UP TO AND INCL 12" DIAMETER (TYPE .2)	EA.	6
CET 108.3	UTILITIES CROSSING TRENCH FOR WATERMAIN UP TO AND INCL 12" DIAMETER (TYPE .3)	EA.	7
CET 108.4	UTILITIES CROSSING TRENCH FOR WATERMAIN UP TO AND INCL 12" DIAMETER (TYPE .4)	EA.	2
CET 109.1	UTILITIES CROSSING TRENCH FOR WATERMAIN OVER 12" AND UP TO 24" DIAMETER (TYPE .1)	EA.	1
CET 200.2	EXTRA DEPTH EXCAVATION OF CATCH BASIN CHUTE CONNECTION PIPES	LF.	50
CET 225.1B	INSTALLATION OF CATCH BASINS WITH UTILITY INTERFERENCES	EA.	2
CET 300	SPECIAL CARE EXCAVATION & BACKFILLING	CY	40
CET 330T	SUPPORT & PROTECTION OF COMMUNICATION UTILITY FACILITIES DURING EXCAVATION OF CITY TRENCH WHEN	LF.	215
CET 400	TEST PITS FOR UTILITY FACILITIES	CY	40
CET 401	TRENCH EXCAVATION FOR ADJUSTMENT OF UTILITY FACILITIES	CY	210
CET 402T.1A	EXIST. OCCUPIED CONCR. ENCASED CONDUITS PLCD. IN FINAL POS. W. CONCR. ENCSMNT.	LF.	2045
CET 402T.V1A	EXIST. VACANT CONCR. ENCASED CONDUITS PLCD. IN FINAL POS. W. CONCR. ENCSMNT.	LF.	450
CET 402T.2	EXIST. OCCUPIED NON-CONCR. ENCASED CONDUITS PLCD. IN FINAL POS. WITHOUT CONCR. ENCSMNT.	LF.	60
CET 500	RMVL. OF ABANDONED UTILITY CONDUITS (NON-CONC. ENCSMNT.)	LF.	580
CET 636 EE	ADJUSTMENT OF UTILITY HARWARE (34" TO UNDER 41" WIDTH)	EA.	6

ENGINEER'S ESTIMATE OF QUANTITY AND TYPES OF INTERFERENCE
FOR EMPIRE CITY SUBWAY CO., LTD.

HWXRCP LZ

Reconstruction of Roberto Clemente Plaza

<u>CET ITEM NUMBER</u>	<u>DESCRIPTION</u>	<u>UNITS</u>	<u>ESTIMATED QUANTITY</u>
CET 636 ME	MOD. OF METHODS TO ACCOMM. UTILITY STREET HRDW. DURING PAVE. MILL. AND RESURF. OPS (34" TO UNDER 41"	EA.	5
CET 700	SPECIAL MOD. OF WORK MTHDS TO ACCOM./PROTECT U.G. FACIL. W. LMTD CVR.	C.Y.	689
CET 781	REMOVABLE CURB SIDEWALK PANEL FOR ACCESS TO UTILITY STRUCTURE OPENINGS	EA.	4
CET 802A	SPECIAL MODIFICATION OF WORK METHODS FOR INSTALLATION OF NEW SIDEWALKS	S.F.	806
CET 802B	SPECIAL MODIFICATION OF WORK METHODS FOR INSTALLATION OF NEW CURB	LF.	558
CET 1006V	6" VERTICAL OR ROLLED WATERMAIN OFFSET	EA.	3
CET 1012V	12" VERTICAL OR ROLLED WATERMAIN OFFSET	EA.	6

EMPIRE CITY SUBWAY CO., LTD. CET SCOPE OF WORK

SUPPORT & PROTECTION

HWXRPLZ

Reconstruction of Roberto Clemente Plaza

CET 100.2	UTILITIES CROSSING TRENCH FOR CATCH BASIN CHUTE CONNECT. AND/OR TEST PIT (TYPE .2)		3
Sheet #	Station	Locations	
U-1	NA	SWC 148th and Willis	1
U-8	NA	Intersection Courtlandt Avenue and Third Avenue	2
	Total quantity for	CET 100.2 = 3 EA.	
CET 100.3	UTILITIES CROSSING TRENCH FOR CATCH BASIN CHUTE CONNECT. AND/OR TEST PIT (TYPE .3)		1
Sheet #	Station	Locations	
U-8	NA	Intersection Courtlandt Avenue and Third Avenue	1
	Total quantity for	CET 100.3 = 1 EA.	
CET 100.4	UTILITIES CROSSING TRENCH FOR CATCH BASIN CHUTE CONNECT. AND/OR TEST PIT (TYPE .4)		1
Sheet #	Station	Locations	
U-8	NA	Intersection Courtlandt Avenue and Third Avenue	1
	Total quantity for	CET 100.4 = 1 EA.	
CET 108.1	UTILITIES CROSSING TRENCH FOR WATERMAIN UP TO AND INCL. 12" DIAMETER (TYPE .1)		2
Sheet #	Station	Locations	
U-1	NA	ESE 147th Street and Willis Avenue	1
U-1	NA	Courtlandt Avenue between 148th Street and 149th Street	1
	Total quantity for	CET 108.1 = 2 EA.	
CET 108.2	UTILITIES CROSSING TRENCH FOR WATERMAIN UP TO AND INCL. 12" DIAMETER (TYPE .2)		6
Sheet #	Station	Locations	
U-1	NA	SWC 148th Street and Third Avenue	1
U-1	NA	West side Third Avenue n/o 148th Street	1
U-6	NA	West side Third Avenue s/o 149th Street	2
U-8	NA	Intersection Courtlandt Avenue and Third Avenue	2
	Total quantity for	CET 108.2 = 6 EA.	
CET 108.3	UTILITIES CROSSING TRENCH FOR WATERMAIN UP TO AND INCL. 12" DIAMETER (TYPE .3)		7
Sheet #	Station	Locations	
U-1	NA	Intersection 148th Street and Third Avenue	1
U-1	NA	West side Third Avenue n/o 148th Street	1
U-6	NA	West side Third Avenue s/o 149th Street	2
U-8	NA	Intersection Courtlandt Avenue and Third Avenue	1
U-8	NA	On Courtlandt between 148th Street and 148th Street	2
	Total quantity for	CET 108.3 = 7 EA.	

EMPIRE CITY SUBWAY CO., LTD. CET SCOPE OF WORK

SUPPORT & PROTECTION

HWXRCPLZ

Reconstruction of Roberto Clemente Plaza

CET 108.4	UTILITIES CROSSING TRENCH FOR WATERMAIN UP TO AND INCL. 12" DIAMETER (TYPE .4)		2
Sheet #	Station	Locations	
U-1	NA	SWC 148th and Third Avenue	1
U-8	NA	Intersection Courtlandt Avenue and Third Avenue	1
	Total quantity for	CET 108.4 = 2 EA.	
CET 109.1	UTILITIES CROSSING TRENCH FOR WATERMAIN OVER 12" AND UP TO 24" DIAMETER (TYPE .1)		1
Sheet #	Station	Locations	
U-1	NA	Intersection 148th Street and Third Avenue	1
	Total quantity for	CET 109.1 = 1 EA.	
CET 200.2	EXTRA DEPTH EXCAVATION OF CATCH BASIN CHUTE CONNECTION PIPES		50
Sheet #	Station	Locations	
U-8	NA	Intersection Courtlandt Avenue and Third Avenue	50
	Total quantity for	CET 200.2 = 50 L.F.	
CET 225.1B	INSTALLATION OF CATCH BASINS WITH UTILITY INTERFERENCES		2
Sheet #	Station	Locations	
U-2	NA	NNEC 149th Street and Melrose Avenue	1
U-8	NA	NWC Courtlandt Avenue and Third Avenue	1
	Total quantity for	CET 225.1B = 2 EA.	
CET 300	SPECIAL CARE EXCAVATION & BACKFILLING		40
Sheet #	Station	Locations	
U-1	NA	SWC 148th Street and Third Avenue	5
U-2	NA	NNEC 149th Street and Melrose Avenue	5
U-8	40+00 - 41+60	On Courtlandt between 146th Street and 148th Street	18
U-8	NA	Intersection Courtlandt Avenue and 148th Street	6
U-8	NA	148th Street w/o Courtlandt Avenue	6
	Total quantity for	CET 300 = 40 CY	
CET 330T	SUPPORT & PROTECTION OF COMMUNICATION UTILITY FACILITIES DURING EXCAVATION OF CITY TRENCH WHEN FACILITIES LIE IN OR CLOSE PROXIMITY TO TRENCH LIMITS		215
Sheet #	Station	Locations	
U-8	NA	148th Street w/o Courtlandt Avenue	40
U-8	42+45 - 44+20	Courtlandt Avenue between 148th Street and 149th Street	175
	Total quantity for	CET 330T = 215 LF	
CET 400	TEST PITS FOR UTILITY FACILITIES		40
Sheet #	Station	Locations	
NA	NA	As Directed by the ECS Field Representative	40
	Total quantity for	CET 400 = 40 CY	

EMPIRE CITY SUBWAY CO., LTD. CET SCOPE OF WORK

SUPPORT & PROTECTION

HWXRCPLZ

Reconstruction of Roberto Clemente Plaza

CET 401 TRENCH EXCAVATION FOR ADJUSTMENT OF UTILITY FACILITIES 210

Sheet #	Station	Locations	
U-1	NA	Intersection 148th Street and Third Avenue	18
U-8	NA	NWC Courtlandt Avenue and Third Avenue	104
U-8	NA	Intersection Courtlandt Avenue and Third Avenue	88

Total quantity for CET 401 = 210 CY

CET 402T.1A EXIST. OCCUPIED CONCR. ENCASED CONDUITS PLCD. IN FINAL POS. W. CONCR. ENCSMNT. 2045

Sheet #	Station	Locations	
U-8	NA	NWC Courtlandt Avenue and Third Avenue	1225
U-8	NA	Intersection Courtlandt Avenue and Third Avenue	820

Total quantity for CET 402T.1A = 2045 L.F.

CET 402T.V1A EXIST. VACANT CONCR. ENCASED CONDUITS PLCD. IN FINAL POS. W. CONCR. ENCSMNT. 450

Sheet #	Station	Locations	
U-8	NA	NWC Courtlandt Avenue and Third Avenue	350
U-8	NA	Intersection Courtlandt Avenue and Third Avenue	100

Total quantity for CET 402T.V1A = 450 L.F.

CET 402T.2 EXIST. OCCUPIED NON-CONCR. ENCASED CONDUITS PLCD. IN FINAL POS. WITHOUT CONCR. 60

Sheet #	Station	Locations	
U-1	NA	Intersection 148th Street and Third Avenue	60

Total quantity for CET 402T.2 = 60 L.F.

CET 500 RMVL. OF ABANDONED UTILITY CONDUITS (NON-CONC. ENCSMNT.) 580

Sheet #	Station	Locations	
U-2	NA	NNEC 149th Street and Melrose Avenue	580

Total quantity for CET 500 = 580 L.F.

CET 636 EE ADJUSTMENT OF UTILITY HARDWARE (34" TO UNDER 41" WIDTH) 6

Sheet #	Station	Locations	
H-2	NA	NNEC 149th Street and Melrose Avenue	4
H-5	NA	NWC 146th Street and Third Avenue	2

Total quantity for CET 636 EE = 6 EA.

CET 636 ME MOD. OF METHODS TO ACCOMM. UTILITY STREET HRDW. DURING PAVE. MILL. AND RESURF. OPS (34" TO UNDER 41" WIDTH) 5

Sheet #	Station	Locations	
H-2	NA	SEC 150th Street and Melrose Avenue	3
H-5	NA	NWC 146th Street and Third Avenue	2

Total quantity for CET 636 ME = 5 EA.

EMPIRE CITY SUBWAY CO., LTD. CET SCOPE OF WORK

SUPPORT & PROTECTION

HWXRPLZ

Reconstruction of Roberto Clemente Plaza

CET 700	SPECIAL MOD. OF WORK MTHDS TO ACCOM./PROTECT U.G. FACIL. W. LMTD CVR.		689
Sheet #	Station	Locations	
NA	NA	As Shown on the Special Care Excavation Plan	689
	Total quantity for	CET 700 =	689 C.Y.
CET 781	REMOVABLE CURB SIDEWALK PANEL FOR ACCESS TO UTILITY STRUCTURE OPENINGS		4
Sheet #	Station	Locations	
U-2	NA	NEC 149th Street and Melrose	2
U-2	NA	NWC 146th Street and Third Avenue	2
	Total quantity for	CET 781 =	4 EA.
CET 802A	SPECIAL MODIFICATION OF WORK METHODS FOR INSTALLATION OF NEW SIDEWALKS		806
Sheet #	Station	Locations	
NA	NA	As Shown on the Special Care Excavation Plan	806
	Total quantity for	CET 802A =	806 S.F.
CET 802B	SPECIAL MODIFICATION OF WORK METHODS FOR INSTALLATION OF NEW CURB		558
Sheet #	Station	Locations	
NA	NA	As Shown on the Special Care Excavation Plan	558
	Total quantity for	CET 802B =	558 L.F.
CET 1006V	6" VERTICAL OR ROLLED WATERMAIN OFFSET		3
Sheet #	Station	Locations	
NA	NA	As Directed by the ECS Field Representative	3
	Total quantity for	CET 1006V =	3 EA.
CET 1012V	12" VERTICAL OR ROLLED WATERMAIN OFFSET		6
Sheet #	Station	Locations	
NA	NA	As Directed by the ECS Field Representative	6
	Total quantity for	CET 1012V =	6 EA.

**HWXRCPLZ – Reconstruction Of Roberto Clemente Plaza
Borough of The Bronx**

Schedule U-2 Preliminary Engineer's Estimate of Quantity and Types of
Interference Expected to be Encountered

CET ITEM	UNITS	ESTIMATED QUANTITY	DESCRIPTION
100.1	EACH	1	UTILITY CROSSING TRENCH FOR CATCH BASIN CHUTE CONNECTIONS AND/OR TEST PITS (TYPE .3)
108.1	EACH	4	UTILITIES CROSSING TRENCH FOR WATER MAIN UP TO AND INCLUDING 12" DIAMETER (TYPE .1)
226	EACH	2	INSTALLATION OF CATCH BASINS WITH UTILITY INTERFERENCE
350	LS	1	OVERHEAD ACCOMMODATION PROTECTION OF OVERHEAD FACILITIES, POLES AND APPURTENANCES
401	CY	97	TRENCH EXCAVATION FOR ADJUSTMENT OF UTILITY FACILITIES
401AC	CY	84	SPECIAL CARE PAVEMENT EXCAVATION FOR ADJUSTMENT OF CABLE TV FACILITIES CONNECTED TO THE BASE PAVEMENT
402.2	LF	860	EXISTING NON-CONCRETE ENCASED CONDUITS PLACED IN FINAL POSITION WITHOUT CONCRETE ENCASEMENT
802B	LF	57	SPECIAL MODIFICATION OF WORK METHODS FOR INSTALLATION OF NEW CURB

HWXRCPLZ – Reconstruction Of Roberto Clemente Plaza

Borough of The Bronx

Schedule U-2: Scope of Work for CET items

CET 100.1

UTILITIES CROSSING TRENCH FOR CATCH BASIN CHUTE CONNECTIONS AND/OR TEST PITS (TYPE .1)

@ THE FOLLOWING LOCATIONS		QTY (EA)
NWC OF INT OF COURTLANDT AVE & THIRD AVE		1
CET 100.1	TOTAL	1

CET 108.1

UTILITIES CROSSING TRENCH FOR WATER MAIN UP TO AND INCLUDING 12" DIAMETER (TYPE .1)

@ THE FOLLOWING LOCATIONS		QTY (EA)
NWC OF INT OF BERGEN AVE. & E. 147 TH ST.		1
NWC OF INT OF COURTLANDT AVE & THIRD AVE		1
NWC OF INT OF COURTLANDT AVE & E. 148 TH ST		2
CET 108.1	TOTAL	4

CET 226

INSTALLATION OF CATCH BASINS WITH UTILITY INTERFERENCE

@ THE FOLLOWING LOCATIONS		QTY (EA)
NWC OF INT OF BERGEN AVE. & E. 147 TH ST.		1
NWC OF INT OF COURTLANDT AVE & THIRD AVE		1
CET 226	TOTAL	2

CET 350

OVERHEAD ACCOMMODATION PROTECTION OF OVERHEAD FACILITES, POLES AND APPURTENANCES

EST TOTAL: 1.0 LS
AS ENCOUNTERED AND DIRECTED BY THE CABLEVISION FIELD REPRESENTATIVE

CET 401

TRENCH EXCAVATION FOR ADJUSTMENT TO UTILITY FACILITIES

HWXRCPLZ – Reconstruction Of Roberto Clemente Plaza

Borough of The Bronx

Schedule U-2: Scope of Work for CET items

@ THE FOLLOWING LOCATIONS		QTY (CY)
NWC OF INT OF BERGEN AVE. & E. 147 TH ST.		18
SEC OF INT OF MELROSE AVE & E. 150 TH ST		34
NWC OF INT OF COURTLANDT AVE & THIRD AVE		45
CET 401	TOTAL	97

CET 401AC

SPECIAL CARE PAVEMENT EXCAVATION FOR ADJUSTMENT OF CABLE TV FACILITIES CONNECTED TO THE BASE PAVEMENT

EST TOTAL: 84 CY

AS SHOWN ON THE CABLEVISION SPECIAL CARE EXCAVATION PLAN

CET 402.2

EXISTING NON-CONCRETE ENCASED CONDUITS PLACED IN FINAL POSITION WITHOUT CONCRETE ENCASEMENT

@ THE FOLLOWING LOCATIONS		QTY (LF)
NWC OF INT OF BERGEN AVE. & E. 147 TH ST.		160
SEC OF INT OF MELROSE AVE & E. 150 TH ST		300
NWC OF INT OF COURTLANDT AVE & THIRD AVE		400
CET 402.2	TOTAL	860

CET 802B

SPECIAL MODIFICATION OF WORK METHODS FOR INSTALLATION OF NEW CURB

EST TOTAL: 57 LF

AS SHOWN ON THE CABLEVISION SPECIAL CARE EXCAVATION PLAN

SECTION U-3

(NO TEXT IN THIS SECTION)

END OF ADDENDUM No.7

This Addendum consists of Forty One (41) pages

And Twelve (12) pages of Contract Drawings

(NO TEXT ON THIS PAGE)

ATTACH TO CONTRACT DOCUMENTS

THE CITY OF NEW YORK
DEPARTMENT OF DESIGN AND CONSTRUCTION
INFRASTRUCTURE DIVISION
BUREAU OF DESIGN

PROJECT ID: HWKRCPLZ

RECONSTRUCTION OF
ROBERTO CLEMENTE PLAZA

INCLUDING SEWER, WATER MAIN, STREET LIGHTING,
AND TRAFFIC SIGNAL WORK

Together With All Work Incidental Thereto
BOROUGH OF THE BRONX
CITY OF NEW YORK

ADDENDUM NO. 8

DATED: February 28, 2013

THIS ADDENDUM IS HEREBY MADE A PART OF THE CONTRACT DOCUMENTS

1. Refer to the Bid and Contract Documents, Volume 3 of 3, Addendum No. 5, SECTION E260533 RACEWAYS AND BOXES FOR ELECTIRCAL SYSTEMS (NOT A BID ITEM), as contained on pages A5-36 through A5-45;
Delete SECTION E260533, in its entirety;
Substitute the revised SECTION E260533, as contained on attached pages A5-36 (REVISED) through A5-45 (REVISED).

By signing in the space provided below, the bidder acknowledges receipt of this Addendum consisting of one (1) page and ten (10) pages of attachments.

THIS ADDENDUM MUST BE SIGNED BY ALL BIDDERS AND ATTACHED TO THEIR BID

Mohsen Zargarelahi

MOHSEN ZARGARELAHI, P.E.
Assistant Commissioner

Trocom Construction Corp
Name of Bidder

By: *[Signature]*

A8-1



ATTACH TO CONTRACT DOCUMENTS

THE CITY OF NEW YORK
DEPARTMENT OF DESIGN AND CONSTRUCTION
INFRASTRUCTURE DIVISION
BUREAU OF DESIGN

PROJECT ID: HWXRCPLZ

RECONSTRUCTION OF
ROBERTO CLEMENTE PLAZA

INCLUDING SEWER, WATER MAIN, STREET LIGHTING,
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Together With All Work Incidental Thereto
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Delete SECTION E260533, in its entirety;
Substitute the revised SECTION E260533, as contained on attached pages A5-36 (REVISED) through A5-45 (REVISED).

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MOHSEN ZARGARELAHI, P.E.
Assistant Commissioner

Name of Bidder

By: _____



SECTION E260533 RACEWAYS AND BOXES FOR ELECTRICAL SYSTEMS
(NOT A BID ITEM)

E260533.1. INTENT

- A) This Section includes raceways, fittings, boxes, enclosures, and cabinets for electrical wiring.

E260533.2. RELATED WORK AND REQUIREMENTS

The following requirements are included in this Section to expand the requirements specified in the General Conditions of the NYCDOT Standard Highway Specifications.

E260533.3. DEFINITIONS

- A) EPDM: Ethylene-propylene-diene terpolymer rubber.
- B) FMC: Flexible Metal Conduit.
- C) LFMC: Liquidtight Flexible Metal Conduit.
- D) IMC: Intermediate Metal Conduit
- E) RNC: Rigid Nonmetallic Conduit

E260533.4. SUBMITTALS

- A) Product Data: For surface raceways, hinged-cover enclosures, and cabinets.
- B) Shop Drawings: For the following raceway components. Include plans, elevations, sections, details, and attachments to other work.
- C) Samples for Verification: For each type of exposed finish required for surface raceways, 3" sample size, and samples of each device exposed to view.
- D) Coordination Drawings: Conduit routing plans, drawn to scale, on which the following items are shown and coordinated with each other, based on input from installers of the items involved:
 - 1) Structural members in the paths of conduit groups with common supports.
 - 2) Plumbing items and architectural features in the paths of conduit groups with common supports.

E) Qualification Data: For professional engineer and testing agency.

F) Source quality-control test reports.

E260533.5. QUALITY CONTROL

- A) Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
- B) Comply with NFPA 70.

E260533.6. MATERIALS



A) METAL CONDUIT AND TUBING

- 1) Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a) AFC Cable Systems, Inc.
 - b) Alflec Inc.
 - c) Allied Tube & Conduit; a Tyco International Ltd. Co.
 - d) Anamet Electrical, Inc.; Anaconda Metal Hose.
 - e) Electri-Flex Co.
 - f) Manhattan/CDT/Cole-Flex.
 - g) Maverick Tube Corporation.
 - h) O-Z Gedney; a unit of General Signal.
 - i) Wheatland Tube Company.
- 2) Rigid Steel Conduit and Rigid Hot-dipped Galvanized Steel Conduit: ANSI C80.1.
- 3) Intermediate Metal Conduit: ANSI C80.6.
- 4) PVC-Coated Steel Conduit: PVC-coated rigid steel conduit.
 - a) Comply with NEMA RN 1.
 - b) Coating Thickness: 0.040 inch (1 mm), minimum.
- 5) Flexible Metal Conduit: Zinc-coated steel or aluminum.
- 6) Liquidtight Flexible Metal Conduit: Flexible steel conduit with PVC jacket.
- 7) Fittings for Conduit (Including all Types and Flexible and Liquidtight), and Cable: NEMA FB 1; listed for type and size raceway with which used, and for application and environment in which installed.
 - a) Conduit Fittings for Hazardous (Classified) Locations: Comply with UL 886.
 - b) Coating for Fittings for PVC-Coated Conduit: Minimum thickness, 0.040 inch (1 mm), with overlapping sleeves protecting threaded joints.
- 8) Joint Compound for Rigid Steel Conduit: Listed for use in cable connector assemblies, and compounded for use to lubricate and protect threaded raceway joints from corrosion and enhance their conductivity.

B) SURFACE RACEWAYS

- 1) Surface Metal Raceways: Galvanized steel with snap-on covers. Manufacturer's standard enamel finish in color selected by Engineer in consultation with the Architect.
- 2) Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a) Thomas & Betts Corporation.
 - b) Walker Systems, Inc.; Wiremold Company (The).
 - c) Wiremold Company (The); Electrical Sales Division.
 - d) Approved Equal.

C) WEATHERPROOF RECEPTACLE BOXES



- 1) Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a) HUBBELL, Bell
 - b) RACO
 - c) Cooper Industries
 - d) Approved Equal

D) WEATHERPROOF RECEPTACLE BOX COVERS

- 1) Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a) Intermatic
 - b) RACO
 - c) Cooper Industries
 - d) Approved Equal

E) BOXES, ENCLOSURES, AND CABINETS

- 1) Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a) Cooper Crouse-Hinds; Div. of Cooper Industries, Inc.
 - b) EGS/Appleton Electric.
 - c) Erickson Electrical Equipment Company.
 - d) Hoffman.
 - e) Hubbell Incorporated; Killark Electric Manufacturing Co. Division.
 - f) O-Z/Gedney; a unit of General Signal.
 - g) RACO; a Hubbell Company.
 - h) Robroy Industries, Inc.; Enclosure Division.
 - i) Scott Fetzer Co.; Adalet Division.
 - j) Spring City Electrical Manufacturing Company.
 - k) Thomas & Betts Corporation.
 - l) Walker Systems, Inc.; Wiremold Company (The).
 - m) Woodhead, Daniel Company; Woodhead Industries, Inc. Subsidiary.
 - n) Approved Equal
- 2) Sheet Metal Outlet and Device Boxes: NEMA OS 1.
- 3) Cast-Metal Outlet and Device Boxes: NEMA FB 1, ferrous alloy Type FD, with gasketed cover.
- 4) Small Sheet Metal Pull and Junction Boxes: NEMA OS 1.
- 5) Cast-Metal Access, Pull, and Junction Boxes: NEMA FB 1, galvanized, cast iron with gasketed cover.
- 6) Hinged-Cover Enclosures: NEMA 250, Type 1, with continuous-hinge cover with flush latch, unless otherwise indicated.
 - a) Metal Enclosures: Steel, finished inside and out with manufacturer's standard enamel.
- 7) Cabinets:
 - a) NEMA 250, Type 1, galvanized-steel box with removable interior panel and removable front, finished inside and out with manufacturer's standard enamel.
 - b) Hinged door in front cover with flush latch and concealed hinge.



- c) Key latch to match panel boards.
- d) Metal barriers to separate wiring of different systems and voltage.
- e) Accessory feet where required for freestanding equipment.

F) HANDHOLES AND BOXES FOR EXTERIOR UNDERGROUND WIRING

- 1) Description: Comply with Society of Cable Telecommunications Engineers (SCTE) 77.
 - a) Color of Frame and Cover: Gray.
 - b) Configuration: Units shall be designed for flush burial and have open bottom, unless otherwise indicated.
 - c) Cover: Weatherproof, secured by tamper-resistant locking devices and having structural load rating consistent with enclosure.
 - d) Cover Finish: Nonskid finish shall have a minimum coefficient of friction of 0.50.
 - e) Cover Legend: Molded lettering, "ELECTRIC."
 - f) Conduit Entrance Provisions: Conduit-terminating fittings shall mate with entering ducts for secure, fixed installation in enclosure wall.
 - g) Handholes 12 inches wide by 24 inches long (300 mm wide by 600 mm long) and larger shall have inserts for cable racks and pulling-in irons installed before concrete is poured.
- 2) Polymer-Concrete Handholes and Boxes with Polymer-Concrete Cover: Molded of sand and aggregate, bound together with polymer resin, and reinforced with steel or fiberglass or a combination of the two.
Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a) Armorcast Products Company.
 - b) Carson Industries LLC.
 - c) CDR Systems Corporation.
 - d) NewBasis.
 - e) Approved Equal.
- 3) Fiberglass Handholes and Boxes with Polymer-Concrete Frame and Cover: Sheet-molded, fiberglass-reinforced, polyester-resin enclosure joined to polymer-concrete top ring or frame.
Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a) Armorcast Products Company.
 - b) Carson Industries LLC.
 - c) Christy Concrete Products.
 - d) Synertech Moulded Products, Inc.; a division of Oldcastle Precast.
 - e) Approved Equal.
- 4) Fiberglass Handholes and Boxes: Molded of fiberglass-reinforced polyester resin, with covers of polymer concrete.
Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a) Carson Industries LLC.
 - b) Christy Concrete Products.
 - c) Nordic Fiberglass, Inc.
 - d) Approved Equal.

G) SLEEVES FOR RACEWAYS



- 1) Steel Pipe Sleeves: ASTM A 53/A 53M, Type E, Grade B, Schedule 40, galvanized steel, plain ends.
- 2) Sleeves for Rectangular Openings: Galvanized sheet steel with minimum 0.052- or 0.138-inch (1.3- or 3.5-mm) thickness as indicated and of length to suit application.

H) SLEEVE SEALS

- 1) Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a) Advance Products & Systems, Inc.
 - b) Calpico, Inc.
 - c) Metraflex Co.
 - d) Pipeline Seal and Insulator, Inc.
 - e) Approved Equal.
- 2) Description: Modular sealing device, designed for field assembly, to fill annular space between sleeve and cable.
 - a) Sealing Elements: EPDM interlocking links shaped to fit surface of cable or conduit. Include type and number required for material and size of raceway or cable.
 - b) Pressure Plates: Stainless steel. Include two for each sealing element.
 - c) Connecting Bolts and Nuts: Stainless steel of length required to secure pressure plates to sealing elements. Include one for each sealing element.

I) SOURCE QUALITY CONTROL FOR UNDERGROUND ENCLOSURES

- 1) Handhole and Pull-Box Prototype Test: Test prototypes of handholes and boxes for compliance with SCTE 77. Strength tests shall be for specified tier ratings of products supplied.
 - a) Strength tests of complete boxes and covers shall be by either an independent testing agency or manufacturer. A qualified registered professional engineer shall certify tests by manufacturer.
 - b) Testing machine pressure gages shall have current calibration certification complying with ISO 9000 and ISO 10012, and traceable to NIST standards.

E260533.7. METHODS

A) RACEWAY APPLICATION

- 1) Outdoors: Apply raceway products as specified below, unless otherwise indicated:
 - a) Exposed Conduit: Rigid steel conduit.
 - b) Concealed Conduit, Aboveground: Rigid steel conduit.
 - c) Underground Conduit: Rigid Hot-Dipped Galvanized Steel, concrete encased except where planters unless otherwise shown on the Contract Drawings.
 - d) Connection to Vibrating Equipment (Including Transformers and Hydraulic, Pneumatic, Electric Solenoid, or Motor-Driven Equipment): LFMC.
 - e) Boxes and Enclosures, Aboveground: NEMA 250, Type 4.
 - f) Application of Handholes and Boxes for Underground Wiring:



- i) Handholes and Pull Boxes in Driveway, Parking Lot, and Off-Roadway Locations, Subject to Occasional, Nondeliberate Loading by Heavy Vehicles: Polymer concrete, SCTE 77, Tier 15 structural load rating.
 - ii) Handholes and Pull Boxes in Sidewalk and Similar Applications with a Safety Factor for Nondeliberate Loading by Vehicles: Polymer-concrete units, SCTE 77, Tier 8 structural load rating.
 - iii) Handholes and Pull Boxes Subject to Light-Duty Pedestrian Traffic Only: Fiberglass-reinforced polyester resin, structurally tested according to SCTE 77 with 3000-lbf (13 345-N) vertical loading.
- 2) Comply with the following indoor applications (i.e. vaults) unless otherwise indicated:
- a) Exposed, Not Subject to Physical Damage: Rigid Steel Conduit
 - b) Connection to Vibrating Equipment (Including Transformers and Hydraulic, Pneumatic, Electric Solenoid, or Motor-Driven Equipment): FMC, except use LFMC in damp or wet locations.
 - c) Damp or Wet Locations: Rigid steel conduit.
 - d) Boxes and Enclosures: NEMA 250, Type 1, except use NEMA 250, Type 4, stainless steel in damp or wet locations.
- 3) Minimum Raceway Size: 3/4-inch (21-mm) trade size.
- 4) Raceway Fittings: Compatible with raceways and suitable for use and location.
- a) Rigid and Intermediate Steel Conduit: Use threaded rigid steel conduit fittings, unless otherwise indicated.
 - b) PVC Externally Coated, Rigid Steel Conduits: Use only fittings listed for use with that material. Patch and seal all joints, nicks, and scrapes in PVC coating after installing conduits and fittings. Use sealant recommended by fitting manufacturer.
- 5) Do not install aluminum conduits in contact with concrete.

B) INSTALLATION

- 1) Comply with NECA 1 for installation requirements applicable to products specified in Section E260533.6 Materials, except where requirements on Drawings or in this Article are stricter.
- 2) Keep raceways at least 6 inches (150 mm) away from parallel runs of flues and steam or hot-water pipes. Install horizontal raceway runs above water and steam piping.
- 3) Complete raceway installation before starting conductor installation.
- 4) Support raceways as specified in Section E260529 "Hangers and Supports for Electrical Systems," herein.
- 5) Arrange stub-ups so curved portions of bends are not visible above the finished slab.
- 6) Raceways Embedded in Slabs:
 - a) Run conduit larger than 1-inch trade size, parallel or at right angles to main reinforcement. Where at right angles to reinforcement, place conduit close to slab support.
 - b) Arrange raceways to cross building expansion joints at right angles with expansion fittings.



- 7) Threaded Conduit Joints, Exposed to Wet, Damp, Corrosive, or Outdoor Conditions: Apply listed compound to threads of raceway and fittings before making up joints. Follow compound manufacturer's written instructions.
- 8) Raceway Terminations at Locations Subject to Moisture or Vibration: Use insulating bushings to protect conductors, including conductors smaller than No. 4 AWG.
- 9) Install pull wires in empty raceways. Use polypropylene or monofilament plastic line with not less than 200-lb tensile strength. Leave at least 12 inches of slack at each end of pull wire.
- 10) Install raceway sealing fittings at suitable, approved, and accessible locations and fill them with listed sealing compound. For concealed raceways, install each fitting in a flush steel box with a blank cover plate having a finish similar to that of adjacent plates or surfaces. Install raceway sealing fittings at the following points:
 - a) Where conduits pass from warm to cold locations, such as boundaries of refrigerated spaces.
 - b) Where otherwise required by NFPA 70.
- 11) Expansion-Joint Fittings for RNC: Install in each run of aboveground conduit that is located where environmental temperature change may exceed 30 deg F (17 deg C), and that has straight-run length that exceeds 25 feet (7.6 m).
 - a) Install expansion-joint fittings for each of the following locations, and provide type and quantity of fittings that accommodate temperature change listed for location:
 - i) Outdoor Locations Not Exposed to Direct Sunlight: 125 deg F temperature change.
 - ii) Outdoor Locations Exposed to Direct Sunlight: 155 deg F temperature change.
 - iii) Indoor Spaces: Connected with the Outdoors without Physical Separation: 125 deg F temperature change.
 - iv) Attics: 135 deg F temperature change.
 - b) Install fitting(s) that provide expansion and contraction for at least 0.00041 inch per foot of length of straight run per deg F of temperature change.
 - c) Install each expansion-joint fitting with position, mounting, and piston setting selected according to manufacturer's written instructions for conditions at specific location at the time of installation.
- 12) Flexible Conduit Connections: Use maximum of 72 inches of flexible conduit for recessed and semi-recessed lighting fixtures, equipment subject to vibration, noise transmission, or movement; and for motors.
 - a) Use LFMC in damp or wet locations subject to severe physical damage.
 - b) Use LFMC in damp or wet locations not subject to severe physical damage.

C) INSTALLATION OF UNDERGROUND CONDUIT

- 1) Direct-Buried Conduit:
 - a) Install in excavated trench bottom. Prepare trench bottom for pipe less than 6 inches in nominal diameter.



- b) After installing conduit, backfill and compact. Start at tie-in point, and work toward end of conduit run, leaving conduit at end of run free to move with expansion and contraction as temperature changes during this process. Firmly hand tamp backfill around conduit to provide maximum supporting strength. After placing controlled backfill to within 12 inches (300 mm) of finished grade, make final conduit connection at end of run and complete backfilling with normal compaction as specified for Item 4.11 CA in the NYCDOT Standard Highway Specifications.
- c) Install manufactured duct elbows for stub-ups at poles and equipment, unless otherwise indicated. Encase elbows for stub-up ducts throughout the length of the elbow.
 - i) Couple steel conduits to ducts with adapters designed for this purpose, and encase coupling with 3 inches of concrete.
 - ii) For stub-ups at equipment mounted on outdoor concrete bases, extend steel conduit horizontally a minimum of 60 inches from edge of equipment pad or foundation. Install insulated grounding bushings on terminations at equipment.
- d) Warning Planks: Bury warning planks approximately 12 inches above direct-buried conduits, placing them 24 inches o.c. Align planks along the width and along the centerline of conduit.

2) Concrete Encasement:

- a) Single Pour Method.
- b) Two Pour Method:
 - i) Lay conduits on a continuous concrete footing not less than 3 inches thick and as wide as the encasement. Install footings straight and true both in line of run and transversely, and finished with an even surface. Incorporate anchoring devices into the footing for use in tying down the conduits. Grade footings so that conduits maintain required pitch. Before installing spacers, levelers, and conduits, let concrete footings harden as required to prevent damage to the footings.
 - 1) Where conduits enter building or manhole wall, reinforce footings for 10 feet with No. 4 rods, 4 inches on center.
 - 2) Footings are not required for rigid ferrous metal conduit.
 - ii) After rigid nonmetallic conduits have been laid on footing with spacers and levelers (located no more than 8 feet apart), tie conduits down to the footing, then surround the conduits by concrete not less than 2 inches thick on top and 2 inches on each side. Separate individual conduits a minimum of 3 inches so that each conduit is completely enveloped in concrete.
 - 1) Where conduits enter building or manhole walls, reinforce encasement for 10 feet with No. 4 rods, 4 inches on center.
 - iii) Form sides of the concrete encasement. Exception: Earth cuts will be permitted as the form where trenches are neatly excavated in stable soils.

D) INSTALLATION OF UNDERGROUND HANDHOLES AND BOXES

- 1) Install handholes and boxes level and plumb and with orientation and depth coordinated with connecting conduits to minimize bends and deflections required for proper entrances.



- 2) Unless otherwise indicated, support units on a level bed of crushed stone or gravel, graded from 1/2-inch sieve to No. 4 sieve and compacted to same density as adjacent undisturbed earth.
- 3) Elevation: In paved areas, set so cover surface will be flush with finished grade. Set covers of other enclosures 1 inch above finished grade.
- 4) Install handholes and boxes with bottom below the frost line, below grade.
- 5) Field-cut openings for conduits according to enclosure manufacturer's written instructions. Cut wall of enclosure with a tool designed for material to be cut. Size holes for terminating fittings to be used, and seal around penetrations after fittings are installed.

E) INSTALLATION OF RECEPTACLE WEATHERPROOF BOXES

- 1) Install boxes a minimum of 3" above the soil within the planter.
- 2) The portion of conduit where the conduit bend occurs to the weatherproof box shall be encased within concrete, below the planter soil, as required by the Engineer.
- 3) Field-cut openings for conduits according to enclosure manufacturer's written instructions. Cut wall of enclosure with a tool designed for material to be cut. Size holes for terminating fittings to be used, and seal around penetrations after fittings are installed.

F) INSTALLATION OF LED STRIP LIGHT POWER SUPPLY (L2-D1 TO L2-D7) WEATHERPROOF BOXES

- 1) Box shall be NEMA 3R, stainless steel sized in accordance with the electrical drawings.
- 2) Box shall be installed under the planter soil at a depth which allows its incoming and outgoing conduits to be 1-foot below the planter soil measured to the top of the conduit.
- 3) Field-cut openings for conduits according to enclosure manufacturer's written instructions. Cut wall of enclosure with a tool designed for material to be cut. Size holes for terminating fittings to be used, and seal around penetrations after fittings are installed.

G) SLEEVE INSTALLATION FOR ELECTRICAL PENETRATIONS

- 1) Concrete Slabs and Walls: Install sleeves for penetrations unless core-drilled holes or formed openings are used. Install sleeves during erection of slabs and walls.
- 2) Use pipe sleeves unless penetration arrangement requires rectangular sleeved opening.
- 3) Rectangular Sleeve Minimum Metal Thickness:
 - a) For sleeve cross-section rectangle perimeter less than 50 inches and no side greater than 16 inches, thickness shall be 0.052 inch.
 - b) For sleeve cross-section rectangle perimeter equal to, or greater than, 50 inches and 1 or more sides equal to, or greater than, 16 inches, thickness shall be 0.138 inch.



- 4) Cut sleeves to length for mounting flush with both surfaces of walls.
- 5) Extend sleeves installed in floors 2 inches above finished floor level.
- 6) Size pipe sleeves to provide 1/4-inch annular clear space between sleeve and raceway unless sleeve seal is to be installed.
- 7) Seal space outside of sleeves with grout for penetrations of concrete and masonry.
- 8) Aboveground, Exterior-Wall Penetrations: Seal penetrations using sleeves and mechanical sleeve seals. Select sleeve size to allow for 1-inch annular clear space between pipe and sleeve for installing mechanical sleeve seals.
- 9) Underground, Exterior-Wall Penetrations: Install cast-iron "wall pipes" for sleeves. Size sleeves to allow for 1-inch annular clear space between raceway and sleeve for installing mechanical sleeve seals.

H) SLEEVE-SEAL INSTALLATION

- 1) Install to seal underground, exterior wall penetrations.
- 2) Use type and number of sealing elements recommended by manufacturer for raceway material and size. Position raceway in center of sleeve. Assemble mechanical sleeve seals and install in annular space between raceway and sleeve. Tighten bolts against pressure plates that cause sealing elements to expand and make watertight seal.

I) PROTECTION

- 1) Provide final protection and maintain conditions that ensure coatings, finishes, and cabinets are without damage or deterioration at time of Substantial Completion.
 - a) Repair damage to galvanized finishes with zinc-rich paint recommended by manufacturer.
 - b) Repair damage to PVC or paint finishes with matching touchup coating recommended by manufacturer.

E260533.8. MEASUREMENT AND PAYMENT

No separate payments will be made for this work. Any work completed with this section shall be deemed included in the unit price bid for Item No. E 16.01-RCP.





**INFRASTRUCTURE DIVISION
BUREAU OF DESIGN**

VOLUME 3 OF 3

PROJECT ID: HWXRCPLZ

RECONSTRUCTION OF
ROBERTO CLEMENTE PLAZA

INCLUDING SEWER, WATER MAIN, STREET LIGHTING,
AND TRAFFIC SIGNAL WORK

Together With All Work Incidental Thereto
BOROUGH OF THE BRONX
CITY OF NEW YORK

Contractor.

Dated _____, 20____

