



**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: HWPLZ001K

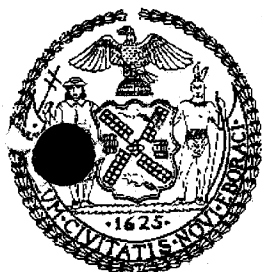
RECONSTRUCTION OF

MYRTLE AVENUE

FROM HALL STREET TO EMERSON PLACE

**INCLUDING SEWER, WATER MAIN, STREET LIGHTING,
AND TRAFFIC SIGNALWORK**

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



FOR THE DEPARTMENT OF TRANSPORTATION
PREPARED BY
AECOM

MAY 15, 2013

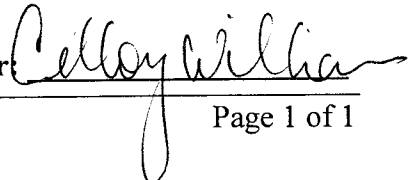
103-064

Bid Tab

Description	RECONSTRUCTION OF MYRTLE AVENUE FROM HALL STREET TO EMERSON PLACE - BOROUGH OF BROOKLYN		
Bid Date	9/11/2013	FMS ID	HWPLZ001K
Estimated Cost	\$7,563,332.00	DEP Supervised	No
Bid Security	2% of Total Bid Price	PLA	No
Time Allowed	365 CCD	Contract Manager	Vicky Ayo-Vaughan
Addendum	6	Project Manager	Francisque, Serge
PIN	8502013HW0018C	E-PIN	85013B0118
Selective Bidding	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Consultant	AECOM

Bid Rank	Vendor	Bid Amount	Security Type
1	C.A.C. INDUSTRIES, INC.	\$5,861,333.79	Bond
2	ADC CONSTRUCTION LLC	\$6,843,453.49	Bond
3	JLJ IV ENTERPRISES INC.	\$6,928,053.77	Bond
4	TROCOM CONSTRUCTION CORP	\$7,031,302.09	Bond
5	PERFETTO CONTRACTING CO. INC.	\$7,236,814.59	Bond
6	TRIUMPH CONSTRUCTION CORP.	\$7,485,423.22	Bond
7	P & T II CONTRACTING CORP.	\$7,787,423.90	Bond
8	NY ASPHALT INC	\$7,935,292.00	Bond
9	DIFAZIO INDUSTRIES, INC.	\$8,850,000.00	Bond

Recorder: Tia Clarke – ext. 2608

Approver: 

Bid Tab

Pin: 8502013HW0018C

Page 1 of 1





NEW YORK CITY DEPARTMENT OF
DESIGN + CONSTRUCTION

DAVID J. BURNEY, FAIA
Commissioner

CAROL DIAGOSTINO
Agency Chief
Contracting Officer

November 13, 2013

CERTIFIED MAIL - RETURN RECEIPT REQUEST

C.A.C. INDUSTRIES, INC.
54-08 Vernon Boulevard
Long Island City, NY 11101

RE: FMS ID: HWPLZ001K
E-PIN: 85013B0118001
DDC PIN: 8502013HW0018C
RECONSTRUCTION OF MYRTLE
AVENUE FROM HALL STREET TO
EMERSON PLACE - BOROUGH OF
BROOKLYN
NOTICE OF AWARD

Dear Contractor:

You are hereby awarded the above referenced contract based upon your bid in the amount of \$5,861,333.79 submitted at the bid opening on September 11, 2013. Within ten (10) 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.

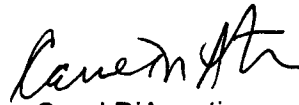
- (1) Execute four copies of the Agreement in the Contracts Unit, 30-30 Thomson Avenue, 1st Floor, Long Island City, New York (IDCNY Building). A Commissioner of Deeds will be available to witness and notarize your signature. The Agreement must be signed by an officer of the corporation or a partner 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.



On or before the contract commencement date, you are required to submit all other certificates of insurance and/or policies in the types and amounts required by Schedule A. Such certificates of Insurance and/or policies must be submitted to the Agency Chief Contracting Office, Attention: Risk Manager, Fourth Floor at the above indicated department address.

Your attention is directed to the section of the Information for Bidders entitled "Failure to Execute Contract". As indicated in this section, in the event you fail to execute the contract and furnish the required bonds within the (10) days of your receipt of this notice of award, your bid security will be retained by the City and you will be liable for the difference between your bid price and the price for which the contract is subsequently awarded, less the amount of the bid security retained.

Sincerely,



Carol DiAgostino

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 AND REQUIRED FOR:

PROJECT ID: HWPLZ001K

RECONSTRUCTION OF

MYRTLE AVENUE

FROM HALL STREET TO EMERSON PLACE

**INCLUDING SEWER, WATER MAIN, STREET LIGHTING,
AND TRAFFIC SIGNALWORK**

Together With All Work Incidental Thereto
BOROUGH OF BROOKLYN
CITY OF NEW YORK

(NO TEXT ON THIS PAGE)

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. Schedule B: M/WBE 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)
11. Any addenda issued prior to the receipt of bids

**FAILURE TO SUBMIT ITEMS (4) THROUGH (11)
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 the bidder has any questions or requires additional information, please contact the Department of Design and Construction by phone (718-391- 2601) or by fax (718-391-2615).
- (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: _____

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ATTACHMENT 1 - BID INFORMATION

PROJECT ID: HWPLZ001K

PIN: 8502013HW0018C

Description and Location of Work:

RECONSTRUCTION OF
MYRTLE AVENUE
FROM HALL STREET TO EMERSON PLACE
INCLUDING SEWER, WATER MAIN, STREET LIGHTING,
AND TRAFFIC SIGNAL WORK

Together With All Work Incidental Thereto

BOROUGH OF BROOKLYN
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 SEPTEMBER 11, 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 SEPTEMBER 11, 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 2% 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
Phone: 718-391-2601 FAX: 718-391-2615

(NO TEXT ON THIS PAGE)

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) excluding items beginning with the number "8.01", shall comply with the requirements of the corresponding numerical Sections of the NYCDOT Standard Highway Specifications as amended by Addendum No. 1, herein Volume 3 of 3.

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. 5, 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. 2 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. 2, herein Volume 3 of 3.

Items listed in the Bid Schedule which have two (2) digits beginning with the number "7" followed by a decimal (e.g. 70.91SW12), 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, as applicable, and as amended by Addendum No. 2, herein Volume 3 of 3.

Items listed in this Bid Schedule which have three (3) digits followed by a decimal (e.g. 656.01), shall comply with the requirements of the corresponding numerical Sections of the New York State Department of Transportation (NYSDOT) Standard Highway Specifications of May 1, 2008 as currently amended.

However in the Specifications for the items referred to in the above paragraph, all references 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 beginning with the prefix "BMP" (e.g. BMP-GI-9.13HDPP) 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 "E" or "P" (e.g. E262726 F, P 220523A), shall comply with the requirements of the corresponding alphanumeric Sections incorporated in Addendum No. 4, herein Volume 3 of 3.

Items listed in this Bid Schedule beginning with the prefix "PK-" (e.g. PK-435, PK-143D), shall comply with the requirements of the corresponding alphanumeric Sections incorporated in either Addendum No. 1 or Addendum No.4, herein Volume 3 of 3.

Items listed in this Bid Schedule beginning with the prefix "SL-" (e.g. SL-21.09.06) 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-2.22) 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 which shall comply with the requirements of Section T-60000B in Addendum No. 1, herein Volume 3 of 3.

Items listed in this Bid Schedule beginning with the prefix "UTL-" (e.g. UTL-6.01.8) 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: HWPLZ001K

RECONSTRUCTION OF

MYRTLE AVENUE

FROM HALL STREET TO EMERSON PLACE

INCLUDING SEWER, WATER MAIN, STREET LIGHTING,
AND TRAFFIC SIGNALWORK

Together With All Work Incidental Thereto

BOROUGH OF
CITY OF NEW YORK

Name of Bidder: CAC INDUSTRIES INC

Date of Bid Opening: 9/11/13

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

Place of Business of Bidder: 5408 VERNON BLVD LIC NY 1110

Bidder's Telephone Number: 718 729-3600 Fax Number: 718 729-0400

Bidder's E-Mail Address: WSVIAN AT CAC IND INC .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: MICHAEL A CAPASSO
45 E 72ND ST NYC NY 10021

Name and Home Address of Secretary: _____

Name and Home Address of Treasurer: _____

BID FORM

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

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.)

Full Name of Bidder: CAC INDUSTRIES INC
Address: 3408 VERMONT BLVD
City: LTC State: NY Zip Code: 11101

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

11-3082726

By: [Signature]
Signature

Title: 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.

(NO TEXT ON THIS PAGE)

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: CAC INDUSTRIES INC

Name of Project: SE 166 BS

Location of Project: BILLYN

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

Name: DANNY LEFKOWITZ

Title: _____ Phone Number: _____

Brief description of the Project completed or the Project in progress:
EMERGENCY REPAIRS OF SEWERS

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

Amount of Contract, Subcontract or Sub-subcontract: _____

Start Date and Completion Date: MAY 2009 - MAY 2010

Name of Contractor: CAC INDUSTRIES INC

Name of Project: SE 166 BX

Location of Project: BKLYN

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

Name: DANNY LEFKOWITZ

Title: _____ Phone Number: _____

Brief description of the Project completed or the Project in progress:
EMERGENCY REPAIR OF SEWERS

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

Amount of Contract, Subcontract or Sub-subcontract: _____

Start Date and Completion Date: MAY 2008

(NO TEXT ON THIS PAGE)

06/26/2013
3:18PM
Ver 5.00.01



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

Contract PIN 8502013HW0018C
Project ID HWPLZ001K

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 - 78



06/26/2013

3:18PM

BID PAGES

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

Contract PIN

8502013HW0018C

Project ID

HWPLZ001K

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
4.02 AG (001)	7,601.0 S.Y.	ASPHALTIC CONCRETE WEARING COURSE, 3" THICK	\$ 15	00	\$ 114,015	00
4.02 CB (002)	1,089.0 TONS	ASPHALTIC CONCRETE MIXTURE	\$ 0	01	\$ 10	89
4.04 H (003)	5.0 C.Y.	CONCRETE BASE FOR PAVEMENT, VARIABLE THICKNESS FOR TRENCH RESTORATION, (HIGH-EARLY STRENGTH)	\$ 200	00	\$ 1,000	00
4.04 HB (004)	4,510.0 C.Y.	CONCRETE BASE FOR PAVEMENT, 7" THICK (HIGH-EARLY STRENGTH)	\$ 0	01	\$ 45	10

06/26/2013

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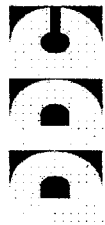


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			DOLLARS	CTS	DOLLARS	CTS
4.05 AP (005)	148.0 C.Y.	NON-REINFORCED PERMEABLE CONCRETE PAVEMENT	\$ 2 00	00	\$ 29,600	00
4.05 AP-CC (006)	37.0 C.Y.	CHOKER COURSE AGGREGATE	\$ 50	00	\$ 1,850	00
4.05 AP-SC (007)	73.0 C.Y.	SUBBASE COURSE AGGREGATE	\$ 60	00	\$ 4,380	00
4.05 AX (008)	110.0 C.Y.	HIGH-EARLY STRENGTH REINFORCED CONCRETE PAVEMENT (BUS STOPS)	\$ 225	00	\$ 24,750	00



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			DOLLARS	CTS	DOLLARS	CTS
4.06 (009)	152.0 C.Y.	CONCRETE IN STRUCTURES, CLASS A-40	\$ 250	00	\$ 38,000	00
4.09 ADB (010)	2,695.0 L.F.	STRAIGHT STEEL FACED CONCRETE CURB (20" DEEP)	\$ 55	00	\$ 148,225	00
4.09 AF (011)	248.0 L.F.	STRAIGHT STEEL FACED CONCRETE CURB (27" DEEP)	\$ 65	00	\$ 16,120	00
4.09 BDB (012)	99.0 L.F.	DEPRESSED STEEL FACED CONCRETE CURB (20" DEEP)	\$ 55	00	\$ 5,445	00



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			DOLLARS	CTS	DOLLARS	CTS
4.09 CDB (013)	638.0 L.F.	CORNER STEEL FACED CONCRETE CURB (20" DEEP)	\$ 90	00	\$ 57,420	00
4.11 AS (014)	11.0 C.Y.	EARTH EXCAVATION FOR STRUCTURES	\$ 230	00	\$ 2,530	00
4.11 CA (015)	132.0 C.Y.	FILL, PLACE MEASUREMENT	\$ 60	00	\$ 7,920	00
4.13 AAS (016)	41,703.0 S.F.	4" CONCRETE SIDEWALK (UNPIGMENTED)	\$ 9	00	\$ 375,327	00

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			DOLLARS	CTS	DOLLARS	CTS
4.13 AAT (017)	3,850.0 S.F.	4" CONCRETE SIDEWALK ON EXISTING FOUNDATION (UNPIGMENTED)	\$ 7	50	\$ 28,875	00
4.13 BAS (018)	4,864.0 S.F.	7" CONCRETE SIDEWALK (UNPIGMENTED)	\$ 13	00	\$ 63,232	00
4.13 DE (019)	286.0 S.F.	EMBEDDED PREFORMED DETECTABLE WARNING UNITS	\$ 25	00	\$ 7,150	00
4.14 (020)	10,566.0 LBS.	STEEL REINFORCEMENT BARS	\$ 1	00	\$ 10,566	00



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			DOLLARS	CTS	DOLLARS	CTS
4.14 W (021)	1,117.0 LBS.	WELDED STEEL WIRE FABRIC	\$ 1	00	\$ 1,117	00
4.15 (022)	440.0 C.Y.	TOPSOIL	\$ 78	00	\$ 34,320	00
4.15 SS (023)	1,848.0 C.Y.	STRUCTURAL SOIL FOUNDATION MATERIAL	\$ 100	00	\$ 184,800	00
4.16 AA (024)	1.0 EACH	TREES REMOVED (4" TO UNDER 12" CALIPER)	\$ 450	00	\$ 450	00



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			DOLLARS	CTS	DOLLARS	CTS
4.16 AM (025)	7.0 EACH	TREES PLANTED, 10 TO 12 FEET HIGH, MULTI STEM AMELANCHIER	\$ 650	00	\$ 4,550	00
4.16 BAT (026)	6.0 EACH	TREES TRANSPLANTED, 2" TO 3" CALIPER, ALL TYPES	\$ 450	00	\$ 2,700	00
4.16 FA (027)	38.0 EACH	TREES PLANTED, 4-1/2" TO 5" CALIPER, ALL TYPES	\$ 1,800	00	\$ 68,400	00
4.16 STUMP (028)	2.0 UNITS	STUMP REMOVAL	\$ 515	00	\$ 1,030	00

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			DOLLARS	CTS	DOLLARS	CTS
4.17 MAGC (029)	899.0 EACH	GROUND COVER PLANTED, ALL TYPES	\$ 25	00	\$ 22,475	00
4.17 MAS (030)	78.0 EACH	SHRUBS PLANTED, ALL TYPES	\$ 112	00	\$ 8,736	00
4.18 A (031)	18.0 EACH	MAINTENANCE TREE PRUNING (UNDER 12" CAL.)	\$ 215	00	\$ 3,870	00
4.18 B (032)	1.0 EACH	MAINTENANCE TREE PRUNING (12" TO UNDER 18" CAL.)	\$ 345	00	\$ 345	00



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			DOLLARS	CTS	DOLLARS	CTS
4.18 C (033)	1.0 EACH	MAINTENANCE TREE PRUNING (18" TO UNDER 24" CAL.)	\$ 415	00	\$ 415	00
4.18 DM (034)	231.0 S.F.	GEOTEXTILE/COMPOSITE DRAINAGE MAT	\$ 1	00	\$ 231	00
4.18 RRB (035)	880.0 L.F.	RIBBED ROOT BARRIER	\$ 30	00	\$ 26,400	00
4.21 (036)	1,560.0 P/HR	TREE CONSULTANT	\$ 65	00	\$ 101,400	00

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			DOLLARS	CTS	DOLLARS	CTS
51.21C000000C (037)	4.0 EACH	CLEANOUT MANHOLE	\$ 10,000	00	\$ 40,000	00
51.21S0A1000E (038)	1.0 EACH	STANDARD MANHOLE TYPE A-1 ON EXISTING SEWER	\$ 25,000	00	\$ 25,000	00
51.23RF (039)	5.0 EACH	REPLACEMENT OF EXISTING MANHOLE FRAME AND COVER	\$ 750	00	\$ 3,750	00
51.41S001 (040)	18.0 EACH	STANDARD CATCH BASIN, TYPE 1	\$ 12,000	00	\$ 216,000	00



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			DOLLARS	CTS	DOLLARS	CTS
51.42B1X (041)	2.0 EACH	INCREMENTAL COST OF TYPE 3 CATCH BASIN WITHOUT CURB PIECE IN LIEU OF TYPE 1 CATCH BASIN	\$ 5,000	00	\$ 10,000	00
52.11D12 (042)	449.0 L.F.	12" DUCTILE IRON PIPE BASIN CONNECTION	\$ 200	00	\$ 89,800	00
6.02 AAN (043)	2,503.0 C.Y.	UNCLASSIFIED EXCAVATION	\$ 250	00	\$ 625,150	00
6.02 PA (044)	86.0 C.Y.	PNEUMATIC EXCAVATION AROUND TREES	\$ 80	00	\$ 6,880	00



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			DOLLARS	CTS	DOLLARS	CTS
6.03 AA (045)	764.0 S.Y.	STRIPPING PAVEMENT SURFACE (ASPHALTIC CONCRETE)	\$ 0	01	\$ 7	64
6.03 CA (046)	225.0 S.Y.	STRIPPING PAVEMENT SURFACE (GRANITE BLOCK) (DISPOSAL OF BLOCK)	\$ 0	01	\$ 2	25
6.22 F (047)	1,183.0 LBS.	ADDITIONAL HARDWARE	\$ 1	50	\$ 1,774	50
6.23 AB (048)	3.0 EACH	REMOVE EXISTING FIRE ALARM POST	\$ 400	00	\$ 1,200	00

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			DOLLARS	CTS	DOLLARS	CTS
6.23 BA (049)	3.0 EACH	FURNISH AND INSTALL FIRE ALARM POST AND SUBBASE IN ACCORDANCE WITH F.D. STD. DWG. #141	\$ 1,050	00	\$ 3,150	00
6.23 BD (050)	187.0 L.F.	FURNISH AND INSTALL 4-PAIR FIRE ALARM CABLE	\$	11 00	\$ 2,057	00
6.23 BEA (051)	1.0 EACH	FURNISH AND INSTALL FIRE DEPARTMENT 48 WIRE TERMINAL BOX AND TERMINATE FIRE ALARM CABLES	\$ 1,400	00	\$ 1,400	00
6.23 BEC (052)	2.0 EACH	FURNISH AND INSTALL FIRE DEPARTMENT 12 WIRE TERMINAL BOX AND TERMINATE FIRE ALARM CABLES	\$ 650	00	\$ 1,300	00

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			DOLLARS	CTS	DOLLARS	CTS
6.23 BGS (053)	112.0 L.F.	FURNISH AND INSTALL 4" P.V.C. CONDUIT, SCHEDULE 40, U.L. 651 (WITHOUT PAVEMENT EXCAVATION)	\$ 27	00	\$ 3,024	00
6.23 BGTE (054)	21.0 L.F.	FURNISH AND INSTALL 2 - 4" P.V.C. CONDUIT, SCHEDULE 40, U.L. 651 IN ONE TRENCH (WITH PAVEMENT EXCAVATION, ONE ON TOP OF THE OTHER)	\$ 34	00	\$ 714	00
6.23 BH (055)	3.0 EACH	FURNISH AND INSTALL 4" 90-DEGREE P.V.C. WIDE BEND, SCHEDULE 40, U.L. 651 (WITHOUT PAVEMENT EXCAVATION) IN ACCORDANCE WITH F.D. STD. DWG. #141 OR #145AA	\$ 200	00	\$ 600	00
6.23 BP (056)	3.0 SETS	FURNISH AND INSTALL FIRE ALARM PEDESTAL BUMPERS (2 REQUIRED PER SET) IN ACCORDANCE WITH F.D. STD. DWG. #168	\$ 500	00	\$ 1,500	00



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			DOLLARS	CTS	DOLLARS	CTS
6.23 DC (057)	94.0 L.F.	FURNISH AND INSTALL 10 PAIR FIRE ALARM CABLE	\$ 18	00	\$ 1,692	00
6.25 RS (058)	6,879.0 S.F.	TEMPORARY SIGNS	\$ 0	01	\$ 68	79
6.26 (059)	1,320.0 L.F.	TIMBER CURB	\$ 1	00	\$ 1,320	00
6.28 AA (060)	2,970.0 L.F.	LIGHTED TIMBER BARRICADES	\$ 2	00	\$ 5,940	00

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			DOLLARS	CTS	DOLLARS	CTS
6.31 PCC12 (061)	165.0 L.F.	PRECAST CONCRETE CURB - 12" HEIGHT	\$ 100	00	\$ 16,500	00
6.31 PCC6 (062)	451.0 L.F.	PRECAST CONCRETE CURB - 6" HEIGHT	\$ 80	00	\$ 36,080	00
6.31 PCS (063)	1.0 EACH	PRECAST CONCRETE SEATING STEPS	92,000 92,000	- 00	\$ 92,000	00
6.31 PSW (064)	407.0 L.F.	PRECAST CONCRETE SEAT WALL	\$ 388	00	\$ 157,916	00



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			DOLLARS	CTS	DOLLARS	CTS
6.34 ACTP (065)	1,188.0 L.F.	TEMPORARY CHAIN LINK FENCE, 6'-0" HIGH (WITH TOP AND BOTTOM RAILS AND POSTS MOUNTED ON STEEL PLATES)	\$	0 01	\$	11 88
6.36 DR (066)	1.0 C.Y.	STRUCTURAL REPAIR AND ADJUSTMENT OF UTILITY STRUCTURES	\$	500 00	\$	500 00
6.40 C (067)	18.0 MONTH	ENGINEER'S FIELD OFFICE (TYPE C)	\$	4,250 00	\$	76,500 00
6.43 (068)	1,088.0 SETS	PHOTOGRAPHS	\$	16 00	\$	17,408 00

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			DOLLARS	CTS	DOLLARS	CTS
6.44 (069)	10,791.0 L.F.	THERMOPLASTIC REFLECTORIZED PAVEMENT MARKINGS (4" WIDE)	\$ 1	00	\$ 10,791	00
6.49 (070)	13,046.0 L.F.	TEMPORARY PAVEMENT MARKINGS (4" WIDE)	\$ 0	01	\$ 130	46
6.50 (071)	6.0 EACH	CLEANING OF DRAINAGE STRUCTURES	\$ 500	00	\$ 3,000	00
6.52 (072)	3,840.0 P/HR	UNIFORMED FULL-TIME FLAGPERSON	\$ 31	50	\$ 120,960	00

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			DOLLARS	CTS	DOLLARS	CTS
6.53 (073)	1,925.0 L.F.	REMOVE EXISTING LANE MARKINGS (4" WIDE)	\$ 0	01	\$ 19	25
6.55 (074)	390.0 L.F.	SAWCUTTING EXISTING PAVEMENT	\$ 1	00	\$ 390	00
6.67 (075)	99.0 C.Y.	SUBBASE COURSE, SELECT GRANULAR MATERIAL	\$ 30	00	\$ 2,970	00
6.68 (076)	1,861.0 S.Y.	PLASTIC FILTER FABRIC	\$ 1	00	\$ 1,861	00

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			DOLLARS	CTS	DOLLARS	CTS
6.73 A (077)	38.0 EACH	REMOVING EXISTING PARKING METER POSTS	\$ 1	00	\$ 38	00
6.82 A (078)	297.0 S.F.	REMOVING EXISTING TRAFFIC AND STREET NAME SIGNS	\$ 5	00	\$ 1,485	00
6.82 B (079)	422.0 L.F.	REMOVING EXISTING TRAFFIC AND STREET NAME SIGN POSTS	\$ 5	00	\$ 2,110	00
6.83 AA (080)	87.0 S.F.	FURNISHING NEW NON-REFLECTORIZED TRAFFIC SIGNS	\$ 17	00	\$ 1,479	00



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			DOLLARS	CTS	DOLLARS	CTS
6.83 AB (081)	515.0 L.F.	FURNISHING NEW TRAFFIC SIGN POSTS	\$ 5	00	\$ 2,575	00
6.83 AR (082)	148.0 S.F.	FURNISHING NEW REFLECTORIZED TRAFFIC SIGNS	\$ 18	00	\$ 2,664	00
6.83 BA (083)	235.0 S.F.	INSTALLING TRAFFIC SIGNS	\$ 12	00	\$ 2,820	00
6.83 BB (084)	515.0 L.F.	INSTALLING TRAFFIC SIGN POSTS	\$ 13	00	\$ 6,695	00

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			DOLLARS	CTS	DOLLARS	CTS
6.84 B (085)	1.0 F.S.	LOLLIPOP TYPE BUS STOP SIGNS PRICE BID SHALL BE FOR THE FIXED SUM OF \$ 15,000.00	\$ 15,000.00		\$ 15,000.00	
6.85 A (086)	1.0 F.S.	TRAFFIC ENFORCEMENT AGENTS PRICE BID SHALL BE FOR THE FIXED SUM OF \$ 207,659.29	\$ 207,659.29		\$ 207,659.29	
6.86 AA (087)	81.0 S.F.	FURNISHING NEW STREET NAME SIGNS	\$ 31.00		\$ 2,511.00	
6.86 AB (088)	15.0 L.F.	FURNISHING NEW STREET NAME SIGN POSTS	\$ 9.00		\$ 135.00	



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			DOLLARS	CTS	DOLLARS	CTS
6.86 BA (089)	81.0 S.F.	INSTALLING STREET NAME SIGNS	\$ 17	00	\$ 1,377	00
6.86 BB (090)	15.0 L.F.	INSTALLING STREET NAME SIGN POSTS	\$ 12	00	\$ 180	00
6.87 (091)	1,200.0 EACH	PLASTIC BARRELS	\$ 1	00	\$ 1,200	00
6.91 (092)	6,050.0 L.F.	REFLECTIVE CRACKING MEMBRANE (18" WIDE)	\$ 3	00	\$ 18,150	00



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			DOLLARS	CTS	DOLLARS	CTS
6.99 (093)	1.0 L.S.	AUDIO AND VIDEO DOCUMENTATION SURVEY	\$ 10,000	00	\$ 10,000	00
60.11R520 (094)	1,291.0 L.F.	FURNISHING AND DELIVERING 20-INCH DUCTILE IRON RESTRAINED JOINT PIPE (CLASS 55)	\$ 175	00	\$ 225,925	00
60.11R606 (095)	132.0 L.F.	FURNISHING AND DELIVERING 6-INCH DUCTILE IRON RESTRAINED JOINT PIPE (CLASS 56)	\$ 40	00	\$ 5,280	00
60.11R608 (096)	381.0 L.F.	FURNISHING AND DELIVERING 8-INCH DUCTILE IRON RESTRAINED JOINT PIPE (CLASS 56)	\$ 56	00	\$ 21,336	00



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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
60.11R612 (097)	54.0 L.F.	FURNISHING AND DELIVERING 12-INCH DUCTILE IRON RESTRAINED JOINT PIPE (CLASS 56)	\$ 90	00	\$ 4,860	00
60.12D06 (098)	151.0 L.F.	LAYING 6-INCH DUCTILE IRON PIPE AND FITTINGS	\$ 50	00	\$ 7,550	00
60.12D08 (099)	419.0 L.F.	LAYING 8-INCH DUCTILE IRON PIPE AND FITTINGS	\$ 70	00	\$ 29,330	00
60.12D12 (100)	65.0 L.F.	LAYING 12-INCH DUCTILE IRON PIPE AND FITTINGS	\$ 80	00	\$ 5,200	00

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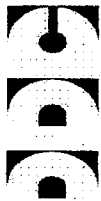


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			DOLLARS	CTS	DOLLARS	CTS
60.12D20 (101)	1,337.0 L.F.	LAYING 20-INCH DUCTILE IRON PIPE AND FITTINGS	\$ 90	00	\$ 120,330	00
60.13M0A24 (102)	9.0 TONS	FURNISHING AND DELIVERING DUCTILE IRON MECHANICAL JOINT 24-INCH DIAMETER AND SMALLER FITTINGS, INCLUDING WEDGE TYPE RETAINER GLANDS	\$ 1	00	\$ 9	00
61.11DM06 (103)	5.0 EACH	FURNISHING AND DELIVERING 6-INCH MECHANICAL JOINT DUCTILE IRON GATE VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$ 2,000	00	\$ 10,000	00
61.11DM08 (104)	4.0 EACH	FURNISHING AND DELIVERING 8-INCH MECHANICAL JOINT DUCTILE IRON GATE VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$ 3,000	00	\$ 12,000	00



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			DOLLARS	CTS	DOLLARS	CTS
61.11DM12 (105)	1.0 EACH	FURNISHING AND DELIVERING 12-INCH MECHANICAL JOINT DUCTILE IRON GATE VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$ 5,000	00	\$ 5,000	00
61.11DM20 (106)	4.0 EACH	FURNISHING AND DELIVERING 20-INCH MECHANICAL JOINT DUCTILE IRON GATE VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$ 20,000	00	\$ 80,000	00
61.11TWC03 (107)	2.0 EACH	FURNISHING AND DELIVERING 3-INCH WET CONNECTION TAPPING VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$ 750	00	\$ 1,500	00
61.11TWC04 (108)	1.0 EACH	FURNISHING AND DELIVERING 4-INCH WET CONNECTION TAPPING VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$ 800	00	\$ 800	00

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			DOLLARS	CTS	DOLLARS	CTS
61.11TWC06 (109)	1.0 EACH	FURNISHING AND DELIVERING 6-INCH WET CONNECTION TAPPING VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$ 1,000	00	\$ 1,000	00
61.12DM06 (110)	5.0 EACH	SETTING 6-INCH MECHANICAL JOINT DUCTILE IRON GATE VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$ 1	00	\$ 5	00
61.12DM08 (111)	4.0 EACH	SETTING 8-INCH MECHANICAL JOINT DUCTILE IRON GATE VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$ 1	00	\$ 4	00
61.12DM12 (112)	1.0 EACH	SETTING 12-INCH MECHANICAL JOINT DUCTILE IRON GATE VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$ 1	00	\$ 1	00



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			DOLLARS	CTS	DOLLARS	CTS
61.12DM20 (113)	4.0 EACH	SETTING 20-INCH MECHANICAL JOINT DUCTILE IRON GATE VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$	1 00	\$	4 00
61.12TWC03 (114)	2.0 EACH	SETTING 3-INCH WET CONNECTION TAPPING VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$	250 00	\$	500 00
61.12TWC04 (115)	1.0 EACH	SETTING 4-INCH WET CONNECTION TAPPING VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$	250 00	\$	250 00
61.12TWC06 (116)	1.0 EACH	SETTING 6-INCH WET CONNECTION TAPPING VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$	250 00	\$	250 00



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			DOLLARS	CTS	DOLLARS	CTS
62.11SD (117)	5.0 EACH	FURNISHING AND DELIVERING HYDRANTS	\$ 10,000	00	\$ 50,000	00
62.12SG (118)	5.0 EACH	SETTING HYDRANTS COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$ 5,000	00	\$ 25,000	00
62.13RH (119)	6.0 EACH	REMOVING HYDRANTS	\$ 1	00	\$ 6	00
62.14FS (120)	10.0 EACH	FURNISHING, DELIVERING AND INSTALLING HYDRANT FENDERS	\$ 150	00	\$ 1,500	00



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			DOLLARS	CTS	DOLLARS	CTS
63.11VC (121)	1.0 TONS	FURNISHING AND DELIVERING VARIOUS CASTINGS	\$ 10,000	00	\$ 10,000	00
64.11EL (122)	20.0 EACH	WITHDRAWING AND REPLACING HOUSE SERVICES USING 1-1/2-INCH OR LARGER SCREW TAPS	\$ 750	00	\$ 15,000	00
64.11ST (123)	18.0 EACH	WITHDRAWING AND REPLACING HOUSE SERVICES USING SMALLER THAN 1-1/2-INCH SCREW TAPS	\$ 450	00	\$ 8,100	00
64.12COEG (124)	290.0 L.F.	CUTTING AND OFFSETTING HOUSE SERVICE WATER CONNECTIONS (EQUAL TO OR GREATER THAN 3-INCH DIAMETER)	\$	1 00	\$ 290	00

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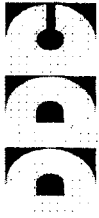
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			DOLLARS	CTS	DOLLARS	CTS
64.12COLT (125)	339.0 L.F.	CUTTING AND OFFSETTING HOUSE SERVICE WATER CONNECTIONS (LESS THAN 3-INCH DIAMETER)	\$ 1	00	\$ 339	00
64.12SEGC (126)	145.0 L.F.	EXTENDING HOUSE SERVICE WATER CONNECTIONS (EQUAL TO OR GREATER THAN 3-INCH DIAMETER)	\$ 140	00	\$ 20,300	00
64.12ESLT (127)	145.0 L.F.	EXTENDING HOUSE SERVICE WATER CONNECTIONS (LESS THAN 3-INCH DIAMETER)	\$ 120	00	\$ 17,400	00
64.13WC20 (128)	4.0 EACH	FURNISHING, DELIVERING AND INSTALLING WET CONNECTION SLEEVE ON 20-INCH WATER MAIN PIPE WITH VARIOUS OUTLETS	\$ 2,500	00	\$ 10,000	00



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			DOLLARS	CTS	DOLLARS	CTS
65.11BR (129)	220.0 LBS.	FURNISHING, DELIVERING AND INSTALLING BANDS, RODS, WASHERS, ETC., COMPLETE, FOR RESTRAINING JOINTS	\$ 1	00	\$ 220	00
65.21PS (130)	939.0 L.F.	FURNISHING AND PLACING POLYETHYLENE SLEEVE Unit price bid shall not be less than: \$ 1.00	\$ 1	00	\$ 939	00
65.31FF (131)	20,304.0 S.F.	FURNISHING, DELIVERING AND PLACING FILTER FABRIC Unit price bid shall not be less than: \$ 0.20	\$ 0	20	\$ 4,060	80
65.71SG (132)	154.0 C.Y.	FURNISHING, DELIVERING AND PLACING SCREENED GRAVEL OR SCREENED BROKEN STONE BEDDING	\$ 30	00	\$ 4,620	00

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			DOLLARS	CTS	DOLLARS	CTS
656.01 (133)	66.0 LBS.	MISCELLANEOUS METALS	\$ 10	00	\$ 660	00
7.07 RBRT (134)	6.0 EACH	REMOVE, STORE AND REINSTALL BICYCLE RACKS	\$ 50	00	\$ 300	00
7.12 A (135)	12.0 EACH	PROCTOR ANALYSIS	\$ 125	00	\$ 1,500	00
7.12 B (136)	46.0 EACH	IN-PLACE SOIL DENSITY TEST	\$ 75	00	\$ 3,450	00



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			DOLLARS	CTS	DOLLARS	CTS
7.13 B (137)	12.0 MONTH	MAINTENANCE OF SITE Unit price bid shall not be less than: \$ 10,000.00	\$ 10,000	00	\$ 120,000	00
7.16 D (138)	4.0 C.Y.	TEST PITS	\$ 160	00	\$ 640	00
7.20 (139)	353.0 L.F.	RESET BASEMENT ACCESS	\$ 15	00	\$ 5,295	00
7.30 B (140)	50.0 L.F.	REMOVAL OF TRACK	\$	1 00	\$ 50	00



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			DOLLARS	CTS	DOLLARS	CTS
7.31 A (141)	1.0 C.Y.	DEMOLITION OF ROADWAY VAULTS	\$ 1	00	\$ 1	00
7.31 B (142)	22.0 C.Y.	DEMOLITION OF TROLLEY TRACK TRUSS BLOCKS	\$ 1	00	\$ 22	00
7.36 (143)	7,590.0 L.F.	PEDESTRIAN STEEL BARRICADES	\$ 5	00	\$ 37,950	00
7.50 SF-MA1 (144)	94.0 EACH	CHAIRS	\$ 175	00	\$ 16,450	00



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			DOLLARS	CTS	DOLLARS	CTS
7.50 SF-MA2 (145)	16.0 EACH	LOUNGE CHAIRS	\$ 400	00	\$ 6,400	00
7.50 SF-MA3 (146)	25.0 EACH	MOVEABLE TABLES	\$ 900	00	\$ 22,500	00
7.50 SF-MA4 (147)	12.0 EACH	UMBRELLAS	\$ 1,100	00	\$ 13,200	00
7.50 SF-MA5 (148)	12.0 EACH	UMBRELLA ANCHORS	\$ 300	00	\$ 3,600	00

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			DOLLARS	CTS	DOLLARS	CTS
7.50 SF-NA6 (149)	25.0 EACH	TRASH RECEPTACLES	\$ 600	-	\$ 15,000	-
7.50 SW4 (150)	2.0 EACH	STEEL AND WOOD BENCHES - 4'	\$ 4,000	-	\$ 8,000	-
7.50 SW6 (151)	8.0 EACH	STEEL AND WOOD BENCHES - 6'	\$ 4,200	-	\$ 33,600	-
7.50 SWSA4 (152)	3.0 EACH	STEEL AND WOOD BENCHES - 4' SEATWALL ATTACHMENT	\$ 4,000	-	\$ 12,000	-



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			DOLLARS	CTS	DOLLARS	CTS
7.50 SWSA6 (153)	21.0 EACH	STEEL AND WOOD BENCHES - 6' SEATWALL ATTACHMENT	\$ 4,200	-	\$ 88,200	-
7.50 SWSPA (154)	1.0 EACH	STEEL AND WOOD SEATING PLATFORM A	\$ 10,000	-	\$ 10,000	-
7.50 SWSPB (155)	1.0 EACH	STEEL AND WOOD SEATING PLATFORM B	\$ 17,000	-	\$ 17,000	-
7.50 SWSPC (156)	1.0 EACH	STEEL AND WOOD SEATING PLATFORM C	\$ 13,000	-	\$ 13,000	-



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			DOLLARS	CTS	DOLLARS	CTS
7.50 SWSPD (157)	1.0 EACH	STEEL AND WOOD SEATING PLATFORM D	\$ 13,000	-	\$ 13,000	-
7.53 CT (158)	10.0 EACH	STEEL TABLES - CATENA COFFEE TABLE	\$ 90	-	\$ 900	-
7.53 GT (159)	3.0 EACH	STEEL TABLES - CATENA GAME TABLE	\$ 950	-	\$ 2,850	-
7.54 AFD (160)	1.0 EACH	CAST IRON FLOOR DRAIN FRAME AND GRATE	\$ 250	-	\$ 250	-



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			DOLLARS	CTS	DOLLARS	CTS
7.88 AA (161)	1.0 L.S.	RODENT INFESTATION SURVEY AND MONITORING Unit price bid shall not be less than: \$ 1,750.00	\$ 1,750	-	\$ 1,750	-
7.88 AB (162)	130.0 EACH	RODENT BAIT STATIONS Unit price bid shall not be less than: \$ 60.00	\$ 60	-	\$ 7,800	-
7.88 AC (163)	130.0 EACH	BAITING OF RODENT BAIT STATIONS Unit price bid shall not be less than: \$ 9.25	\$ 9	25	\$ 1,202	50
7.88 AD (164)	5.0 BLOCK	WATERBUG BAIT APPLICATIONS Unit price bid shall not be less than: \$ 65.00	\$ 65	-	\$ 325	-

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			DOLLARS	CTS	DOLLARS	CTS
7.96 A (165)	2,255.0 S.F.	ANTI-GRAFFITI COATING	\$ 7	-	\$ 15,725	-
70.31FN (166)	1,931.0 L.F.	FENCING Unit price bid shall not be less than: \$ 4.00	\$ 4	-	\$ 7,724	-
70.51EO (167)	1.0 C.Y.	EXCAVATION OF BOULDERS IN OPEN CUT Unit price bid shall not be less than: \$ 150.00	\$ 150	-	\$ 150	-
70.61RE (168)	1.0 C.Y.	ROCK EXCAVATION	\$ 1	-	\$ 1	-



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			DOLLARS	CTS	DOLLARS	CTS
70.81CB (169)	429.0 C.Y.	CLEAN BACKFILL Unit price bid shall not be less than: \$ 30.00	\$ 30	-	\$ 12,870	-
70.91SW12 (170)	5,830.0 S.F.	FURNISHING AND PLACING SHEETING AND BRACING IN TRENCH FOR WATER MAIN PIPE 12-INCH IN DIAMETER AND LESS	\$ -	01	\$ 58	30
70.91SW20 (171)	15,510.0 S.F.	FURNISHING AND PLACING SHEETING AND BRACING IN TRENCH FOR WATER MAIN PIPE 20-INCH IN DIAMETER	\$ -	01	\$ 155	10
73.21AC (172)	55.0 C.Y.	ADDITIONAL CONCRETE Unit price bid shall not be less than: \$ 125.00	\$ 125	-	\$ 6,875	-

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			DOLLARS	CTS	DOLLARS	CTS
73.31AE0 (173)	220.0 C.Y.	ADDITIONAL EARTH EXCAVATION INCLUDING TEST PITS (ALL DEPTHS) Unit price bid shall not be less than: \$ 40.00	\$ 40	-	\$ 8,800	-
73.41AG (174)	220.0 C.Y.	ADDITIONAL SELECT GRANULAR BACKFILL Unit price bid shall not be less than: \$ 30.00	\$ 30	-	\$ 6,600	-
8.01 C1 (175)	1,500.0 TONS	HANDLING, TRANSPORTING AND DISPOSAL OF NON-HAZARDOUS CONTAMINATED SOIL	\$ 48	-	\$ 72,000	-
8.01 C2 (176)	3.0 SETS	SAMPLING AND TESTING OF CONTAMINATED/POTENTIALLY HAZARDOUS SOIL FOR DISPOSAL PURPOSES	\$ 1,300	-	\$ 3,900	-



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			DOLLARS	CTS	DOLLARS	CTS
8.01 H (177)	1.0 TONS	HANDLING, TRANSPORTING AND DISPOSAL OF HAZARDOUS SOIL	\$ 145	-	\$ 145	-
8.01 S (178)	1.0 L.S.	HEALTH AND SAFETY	\$ 7,500	-	\$ 7,500	-
8.01 W1 (179)	7.0 DAY	REMOVAL, TREATMENT, AND DISCHARGE/DISPOSAL OF CONTAMINATED WATER	\$ 1	-	\$ 7	-
8.01 W2 (180)	1.0 SETS	SAMPLING AND TESTING OF WATER	\$ 1	-	\$ 1	-

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			DOLLARS	CTS	DOLLARS	CTS
8.02 A (181)	16,764.0 S.F.	SPECIAL CARE EXCAVATION AND RESTORATION FOR SIDEWALK WORK	\$ 2	50	\$ 4,910	-
8.02 B (182)	3,439.0 L.F.	SPECIAL CARE EXCAVATION AND RESTORATION FOR CURB WORK	\$ 6	-	\$ 20,634	-
8.15 DF (183)	1.0 EACH	DRINKING FOUNTAIN	\$ 4,000	-	\$ 4,000	-
9.04 HW (184)	1.0 F.S.	ALLOWANCE FOR ANTI-FREEZE ADDITIVE IN CONCRETE 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
9.06 HW (185)	1.0 F.S.	ALLOWANCE FOR DECORATIVE MESH FABRIC PRICE BID SHALL BE FOR THE FIXED SUM OF \$ 222,750.00	\$ 222,750.00	—	\$ 222,750.00	—
BMP-GI-9.13HDPP (186)	363.0 L.F.	6" PERFORATED HIGH-DENSITY POLYETHYLENE UNDERDRAIN PIPE	\$ 40	—	\$ 14,520	—
BMP-GI-9.13HDPS (187)	110.0 L.F.	6" SOLID HIGH-DENSITY POLYETHYLENE DRAINAGE PIPE	\$ 40	—	\$ 4,400	—
E 260519 A (188)	154.0 L.F.	LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES (NO. 3/0 AWG WIRE)	\$ 10	—	\$ 1,540	—

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			DOLLARS	CTS	DOLLARS	CTS
E 260519 B (189)	1,870.0 L.F.	LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES (NO. 2 AWG WIRE)	\$ 4	-	\$ 7,420	-
E 260519 C (190)	44.0 L.F.	LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES (NO. 4 AWG WIRE)	\$ 3	-	\$ 132	-
E 260519 D (191)	3,707.0 L.F.	LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES (NO. 6 AWG WIRE)	\$ 2	60	\$ 9,638	20
E 260519 G (192)	2,266.0 L.F.	LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES (NO. 10 AWG WIRE)	\$ 2	-	\$ 4,532	-



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			DOLLARS	CTS	DOLLARS	CTS
E 260526 (193)	110.0 L.F.	GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS	\$ 22	-	\$ 2,420	-
E 260533 BA (194)	1.0 EACH	LOCKABLE STAINLESS STEEL ENCLOSURE FOR UTILITY SERVICE AND DISTRIBUTION PANEL	\$ 12,000	-	\$ 12,000	-
E 260533 BB (195)	1.0 EACH	FREESTANDING LOCKABLE EVENT BOX OUTLETS ENCLOSURE	\$ 8,000	-	\$ 8,000	-
E 262726 A (196)	19.0 EACH	GFCI RECEPTACLE (DUPLEX)	\$ 800	-	\$ 15,200	-

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			DOLLARS	CTS	DOLLARS	CTS
E 262726 G (197)	10.0 EACH	EVENT BOX RECEPTACLES (20A)	\$ 600	-	\$ 6,000	-
E 262726 H (198)	1.0 EACH	SPOT LIGHT (STREET LIGHT POLE MOUNTED)	\$ 5,000	-	\$ 5,000	-
E260533 AA (199)	1,667.0 L.F.	METAL CONDUIT AND TUBING (1" PVC COATED RIGID STEEL CONDUIT)	\$ 32	-	\$ 53,344	-
E260533 AB (200)	935.0 L.F.	METAL CONDUIT AND TUBING (1-1/4" PVC COATED RIGID STEEL CONDUIT)	\$ 40	-	\$ 37,400	-



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			DOLLARS	CTS	DOLLARS	CTS
E260533 AC (201)	39.0 L.F.	METAL CONDUIT AND TUBING (2" PVC COATED RIGID STEEL CONDUIT)	\$ 65	-	\$ 2,535	-
E260533 AD (202)	22.0 L.F.	METAL CONDUIT AND TUBING (2-1/2" PVC COATED RIGID STEEL CONDUIT)	\$ 75	-	\$ 1,650	-
E260533 AE (203)	39.0 L.F.	METAL CONDUIT AND TUBING (3" PVC COATED RIGID STEEL CONDUIT)	\$ 80	-	\$ 3,120	-
E260533 CA (204)	4.0 EACH	HANDHOLES AND BOXES FOR EXTERIOR UNDERGROUND WIRING	\$ 200	-	\$ 800	-

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			DOLLARS	CTS	DOLLARS	CTS
E260533 CB (205)	1.0 EACH	CON EDISON PROPERTY LINE SPLICE BOX	\$ 2,700	-	\$ 2,700	-
E262416 A (206)	1.0 EACH	PANELBOARDS, 225 A 24 POLE WITH (24) IP-20A CB	\$ 3,400	-	\$ 3,400	-
E262713 A (207)	1.0 EACH	ELECTRICITY METERING, 200 A UTILITY METER	\$ 1,000	-	\$ 1,000	-
E262816 A (208)	1.0 EACH	ENCLOSED SWITCH, FUSED, 200 A, 240 V	\$ 1,300	-	\$ 1,300	-

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			DOLLARS	CTS	DOLLARS	CTS
P 220523A (209)	6.0 EACH	BRONZE BALL VALVE	\$ 250	-	\$ 1,500	-
P 220523B (210)	1.0 EACH	BRONZE GLOBE VALVE	\$ 210	-	\$ 210	-
PK-12E (211)	1.0 EACH	WATER TAP. 2-1/2" DIAMETER	\$ 510	-	\$ 510	-
PK-13AA (212)	28.0 L.F.	TYPE K COPPER TUBING, 1/8" DIAMETER	\$ 14	-	\$ 392	-

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			DOLLARS	CTS	DOLLARS	CTS
PK-13D (213)	418.0 L.F.	TYPE K COPPER TUBING, 1" DIAMETER	\$ 18	-	\$ 7,524	-
PK-13E (214)	308.0 L.F.	TYPE K COPPER TUBING, 1-1/2" DIAMETER	\$ 21	-	\$ 6,468	-
PK-13F (215)	44.0 L.F.	TYPE K COPPER TUBING, 2" DIAMETER	\$ 24	-	\$ 1,056	-
PK-13G (216)	110.0 L.F.	TYPE K COPPER TUBING, 2-1/2" DIAMETER	\$ 30	-	\$ 3,300	-

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			DOLLARS	CTS	DOLLARS	CTS
PK-143D (217)	1.0 EACH	RPZ & WATER METER WITH REMOTE & STRUCTURE - 2-1/2" DIA.	\$ 23,000	-	\$ 23,000	-
PK-159C (218)	1.0 EACH	CURB & PROPERTY LINE VALVES - 2-1/2" DIA.	\$ 130	-	\$ 130	-
PK-17 (219)	1.0 EACH	CAST IRON VALVE BOX, 5-1/4" DIAMETER	\$ 150	-	\$ 150	-
PK-184-GH1 (220)	6.0 EACH	GROUND HYDRANT - 1" DIAMETER	\$ 750	-	\$ 4,500	-

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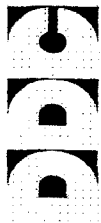


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			DOLLARS	CTS	DOLLARS	CTS
PK-435 (221)	92.0 INCH	PREPARATORY FERTILIZE EXISTING TREE	\$ 5	-	\$ 460	-
SL-20.01.03 (222)	6.0 EACH	FURNISH AND INSTALL FOUNDATION FOR TYPE "BB" LAMPPOST, AS PER DRAWING E-5239	\$ 900	-	\$ 5,400	-
SL-20.02.10 (223)	9.0 EACH	FURNISH AND INSTALL STANDARD TYPE ANCHOR BOLT FOUNDATION AS PER DWG J-5253 FOR INSTALLING TYPE "BC", "M", LYRE AND "5TH AVENUE", "GCPW", LAMPPOST.	\$ 1,100	-	\$ 9,900	-
SL-20.08.02 (224)	10.0 EACH	REMOVE FOUNDATION OTHER THAN STANDARD TYPE.	\$ 25	-	\$ 250	-



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			DOLLARS	CTS	DOLLARS	CTS
SL-21.01.05 (225)	6.0 EACH	FURNISH AND INSTALL TYPE "BB" OR OTHER PEDESTRIAN LAMPOST WITH 20" TRANSFORMER BASE, AS PER DRAWINGS H-5239 AND H-5235.	\$ 2,400	-	\$ 4,400	-
SL-21.04.01 (226)	9.0 EACH	INSTALL ORNAMENTAL LAMPOST (TYPE "BC" (H-5263), "M" (H-5260), "5TH AVE.", "LYRE", "CPW", "GCPW", "F", "TBTA", "HERITAGE", OTHER THAN 25FT. STD. FS., ETC.).	\$ 1,200	-	\$ 10,800	-
SL-21.09.06 (227)	10.0 EACH	REMOVE ORNAMENTAL LAMPOST (TYPE "BC", "M", "F", "5TH AVENUE", "LYRE" GRAND CENTRAL) ON FOUNDATION, WITH ALL ATTACHMENTS, IF ANY. REMOVE PORTION OF FOUNDATION.	\$ 500	-	\$ 5,000	-
SL-22.03.01 (228)	14.0 EACH	INSTALL LUMINAIRE ON STREET TYPE (INCLUDING ALL DECORATIVE) LAMPOST. MAKE ALL NECESSARY CONNECTIONS. LAMP FURNISHED BY CONTRACTOR.	\$ 200	-	\$ 2,800	-



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			DOLLARS	CTS	DOLLARS	CTS
SL-22.14.33 (229)	6.0 EACH	FURNISH AND INSTALL "STAD" OR EQUAL TYPE LUMINAIRE (SAG OR FLAT LENS) AND LAMP WITH PEC RECEPTACLE 60 WATTS COSMOPOLIS LAMP	\$ 2,200	-	\$ 13,200	-
SL-24.04.02 (230)	1.0 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.	\$ 4,300	-	\$ 4,300	-
SL-24.04.04 (231)	1.0 EACH	FURNISH AND INSTALL "M" TWIN ARMS/SHAFT EXTENSION ASSEMBLY WITH P.E.C. RECEPTACLE FOR M-2 TRAFFIC POST AS PER DWG H-5268. M-2 ORNAMENTAL CASTINGS FURNISHED AND INSTALLED BY OTHERS PER UNIT ITEM.	\$ 5,800	-	\$ 5,800	-



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			DOLLARS	CTS	DOLLARS	CTS
SL-24.04.16 (232)	2.0 EACH	REMOVE ORNAMENTAL SHAFT EXTENSION AND ARM(S) ASSEMBLY, LUMINAIRE(S), ETC. FROM "M-2" TRAFFIC LAMPPOST	\$ 150	-	\$ 300	-
SL-24.05.01 (233)	2.0 EACH	FURNISH AND INSTALL SKIRT AND OTHER CASTINGS FOR "M-2" TRAFFIC POST	\$ 5,600	-	\$ 11,200	-
SL-26.01.01 (234)	11.0 EACH	FURNISH AND INSTALL, OR FURNISH AND REPLACE A PLUG-IN SOLID STATE PHOTOELECTRIC CONTROL	\$ 10	-	\$ 110	-
SL-26.06.02 (235)	1.0 EACH	FURNISH AND INSTALL LED FIRE ALARM LUMINAIRES.	\$ 135	-	\$ 135	-

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			DOLLARS	CTS	DOLLARS	CTS
SL-28.01.01 (236)	1.0 EACH	FURNISH AND INSTALL COPPER WELD GROUND ROD AND CLAMP, AS PER DRAWING H-5019	\$ 200	-	\$ 200	-
SL-31.01.03 (237)	2.0 EACH	PAINT "M-2" TRAFFIC POST INCLUDING SHAFT EXTENSION AND ARM	\$ 500	-	\$ 1,000	-
SL-33.01.02 (238)	850.0 L.F.	FURNISH AND INSTALL NO. 6 AWG XLP COPPER CABLE OR EQUAL IN CONDUIT	\$ 3	-	\$ 2,550	-
SL-35.03.03 (239)	100.0 L.F.	FURNISH AND INSTALL 1-1/2" HOT DIPPED GALVANIZED STEEL CONDUIT IN UNPAVED AREA	\$ 32	-	\$ 3,200	-



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			DOLLARS	CTS	DOLLARS	CTS
SL-35.03.04 (240)	300.0 L.F.	FURNISH AND INSTALL 2" HOT DIPPED GALVANIZED STEEL CONDUIT IN UNPAVED AREA	\$ 42	-	\$ 12,600	-
SL-37.05.07 (241)	1.0 EACH	FURNISH AND INSTALL TYPE 4824 SIDEWALK CONCRETE BOX WITH CAST IRON FRAME AND COVER WITH TAMPER PROOF BOLTS AS PER DWG J-3179A.	\$ 5,000	-	\$ 5,000	-
SL-37.05.08 (242)	6.0 EACH	FURNISH AND INSTALL TYPE 1812 ROADWAY CONCRETE BOX WITH CAST IRON FRAME AND COVER WITH TAMPER PROOF BOLTS AS PER DWG J-3179B.	\$ 2,000	-	\$ 12,000	-
T-1.1 (243)	9.0 EACH	INSTALL TYPE "S" OR "T" FOUNDATION	\$ 800	-	\$ 7,200	-



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			DOLLARS	CTS	DOLLARS	CTS
T-1.18 (244)	4.0 EACH	REMOVE TYPE "A", "B", "S" OR "T" SERIES FOUNDATION	\$ 250	-	\$ 1,000	-
T-1.20 (245)	2.0 EACH	REMOVE TYPE "M" SERIES FOUNDATION	\$ 175	-	\$ 350	-
T-1.29 (246)	1.0 EACH	RAISE OR LOWER FOUNDATION TO GRADE	\$ 1,250	-	\$ 1,250	-
T-1.3 (247)	7.0 EACH	INSTALL TYPE "M2-5S" FOUNDATION	\$ 950	-	\$ 6,650	-



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			DOLLARS	CTS	DOLLARS	CTS
T-1.6 (248)	1.0 EACH	INSTALL TYPE "M2-5T" FOUNDATION	\$ 1,400	-	\$ 1,400	-
T-2.1 (249)	4.0 EACH	INSTALL TYPE "S-1" OR "T-1" SERIES POST	\$ 300	-	\$ 1,200	-
T-2.16 (250)	2.0 EACH	FURNISH, INSTALL, MAINTAIN AND REMOVE TEMPORARY POST OR PYLON WITH SIGNALS	\$ 1,000	-	\$ 2,000	-
T-2.18 (251)	2.0 EACH	FURNISH, INSTALL, MAINTAIN AND REMOVE TEMPORARY POST OR PYLON WITH CONTROLLER AND SIGNALS	\$ 1,200	-	\$ 2,400	-

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			DOLLARS	CTS	DOLLARS	CTS
T-2.22 (252)	4.0 EACH	REMOVE TYPE "S-1" OR "T-1" SERIES POST	\$ 350	-	\$ 1,400	-
T-2.24 (253)	2.0 EACH	REMOVE TYPE "M" SERIES POST	\$ 600	-	\$ 1,200	-
T-2.28 (254)	2.0 EACH	REMOVE MAST ARM FROM ANY POST	\$ 450	-	\$ 900	-
T-2.4 (255)	2.0 EACH	INSTALL TYPE "M-2" POST	\$ 900	-	\$ 1,800	-



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			DOLLARS	CTS	DOLLARS	CTS
T-20000 (256)	4.0 EACH	FURNISH TEN FOOT ALUMINUM SIGNAL POST TYPE "S-1"	\$ 800	-	\$ 3,200	-
T-20020 (257)	24.0 EACH	a) FURNISH 3/4" ANCHOR BOLT ASSEMBLIES FOR S-1 (EACH) (3 REQUIRED PER POST)	\$ 22	-	\$ 528	-
T-20160 (258)	2.0 EACH	FURNISH 20 FOOT SIGNAL MAST ARM POLE ASSEMBLY TYPE "M-2"	\$ 2,700	-	\$ 5,400	-
T-20220 (259)	32.0 EACH	c) FURNISH 1-1/4" ANCHOR BOLT ASSEMBLIES FOR M-2 (EACH) (4 REQUIRED PER POST)	\$ 41	-	\$ 1,312	-

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			DOLLARS	CTS	DOLLARS	CTS
T-3.1 (260)	6.0 EACH	INSTALL "ONE-WAY" SIGNAL UNIT ON MAST ARM OR TOP OF TRAFFIC POST	\$ 150	-	\$ 900	-
T-3.18 (261)	4.0 EACH	REMOVE SIGNAL HEAD FROM ANY TYPE POST	\$ 150	-	\$ 600	-
T-3.21 (262)	12.0 EACH	REMOVE PEDESTRIAN SIGNAL OR SIGN UNIT OR OTHER ILLUMINATED SIGNS FROM ANY POST	\$ 225	-	\$ 2,700	-
T-3.6 (263)	12.0 EACH	INSTALL PEDESTRIAN SIGNAL ON ANY TYPE POST	\$ 225	-	\$ 2,700	-



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			DOLLARS	CTS	DOLLARS	CTS
T-30013L (264)	6.0 EACH	FURNISH ADJUSTABLE 3 SECTION 1-WAY, DIE CAST ALUMINUM TRAFFIC SIGNALS 8" - W/LED LENS	\$ 325	-	\$ 1,950	-
T-31210 (265)	6.0 EACH	h) "HUB" ASSEMBLY *ASSEMBLY IS EQUAL TO ONE PAIR	\$ 31	-	\$ 186	-
T-31225 (266)	2.0 EACH	c) "3MS"	\$ 250	-	\$ 500	-
T-31351 (267)	6.0 EACH	g) "VB-2P" ASSEMBLY *ASSEMBLY IS EQUAL TO ONE PAIR	\$ 200	-	\$ 1,200	-



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			DOLLARS	CTS	DOLLARS	CTS
T-33000L (268)	12.0 EACH	FURNISH POLYCARBONATE INCANDESCENT PED SIGNAL W/LED LENS	\$ 260	-	\$ 3,120	-
T-4.1 (269)	2.0 EACH	INSTALL ONE CONTROL BOX AND CONTROLLER ON ANY POST OR SUPPORT	\$ 700	-	\$ 1,400	-
T-4.8 (270)	2.0 EACH	REMOVE ONE CONTROL BOX AND CONTROLLER FROM ANY POST OR SUPPORT	\$ 300	-	\$ 600	-
T-5.1 (271)	850.0 L.F.	FURNISH AND INSTALL 2" RIGID UNDERGROUND CONDUIT IN UNPAVED ROADWAY	\$ 40	-	\$ 34,000	-



06/26/2013

3:18PM

BID PAGES

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

Contract PIN

8502013HW0018C

Project ID

HWPLZ001K

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
T-6.10 (272)	1,500.0 L.F.	REMOVE CABLE (INCLUDES OVERHEAD)	\$ 0	80	\$ 1,200	-
T-6.2 (273)	1,500.0 L.F.	INSTALL MULTIPLE CABLE (INCLUDES OVERHEAD)	\$ 9	-	\$ 13,500	-
T-60000B (274)	1,500.0 L.F.	FURNISH 2 C # 10B (BREAKDOWN = 2#10 WITH 3RD WIRE FOR GROUNDING).	\$ 1	70	\$ 2,550	-
T-60040 (275)	700.0 L.F.	c) 7 CONDUCTOR, 14 A.W.G.	\$ 1	60	\$ 1,120	-

06/26/2013

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BID PAGES



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

Contract PIN 8502013HW0018C

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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
T-60190 (276)	1,500.0 L.F.	e) 13 CONDUCTOR, 14 A.W.G.	\$ 2	70	\$ 4,050	-
T-7.50 (277)	1.0 EACH	REMOVE (1812) HAND BOX OR PULL BOX IN PAVED SIDEWALK	\$ 250	-	\$ 250	-
T-8.10 (278)	2.0 EACH	RELOCATE CONCRETE PYLON WITH POST	\$ 900	-	\$ 1,800	-
T-8.8 (279)	2.0 EACH	INSTALL CONCRETE PYLON	\$ 600	-	\$ 1,200	-



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BID PAGES

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

Contract PIN 8502013HW0018C

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			DOLLARS	CTS	DOLLARS	CTS
T-8.9 (280)	2.0 EACH	REMOVE CONCRETE PYLON	\$ 300	-	\$ 600	-
T-81000 (281)	2.0 EACH	FURNISH CONCRETE PYLON	\$ 450	-	\$ 900	-
UTL-6.01.1 (282)	1.0 EACH	GAS MAIN CROSSING SEWER UP TO 24" IN DIAMETER (\$6.01) Unit price bid shall not be less than: \$ 1,040.00	\$ 1,040	-	\$ 1,040	-
UTL-6.01.8 (283)	25.0 EACH	GAS SERVICES CROSSING TRENCHES AND/OR EXCAVATIONS (\$6.01) Unit price bid shall not be less than: \$ 465.00	\$ 465	-	\$ 11,625	-

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BID PAGES



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

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			DOLLARS	CTS	DOLLARS	CTS
UTL-6.01.9 (284)	7.0 EACH	GAS MAIN CROSSING WATER MAIN UP TO 20" IN DIAMETER (\$6.01) Unit price bid shall not be less than: \$ 485.00	\$ 485	-	\$ 3,395	-
UTL-6.02 (285)	2.0 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	-	\$ 1,430	-
UTL-6.03 (286)	2,000.0 L.F.	REMOVAL OF ABANDONED GAS FACILITIES. ALL SIZES. (\$6.03) Unit price bid shall not be less than: \$ 15.00	\$ 15	-	\$ 30,000	-
UTL-6.03.1 (287)	1,000.0 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	-	\$ 25,000	-



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BID PAGES

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

Contract PIN

8502013HW0018C

Project ID

HWPLZ001K

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
UTL-6.04 (288)	50.0 EACH	ADJUST HARDWARE TO GRADE USING SPACER RINGS/ADAPTORS. (STREET REPAVING.) (\$6.04) Unit price bid shall not be less than: \$ 35.00	\$ 35	-	\$ 1,750	-
UTL-6.05 (289)	50.0 EACH	ADJUST HARDWARE TO GRADE BY RESETTING. (ROAD RECONSTRUCTION.) (\$6.05) Unit price bid shall not be less than: \$ 65.00	\$ 65	-	\$ 3,250	-
UTL-6.06 (290)	600.0 C.Y.	SPECIAL CARE EXCAVATION AND BACKFILLING (\$6.06) Unit price bid shall not be less than: \$ 180.00	\$ 180	-	\$ 108,000	-
UTL-6.07 (291)	100.0 C.Y.	TEST PITS FOR GAS FACILITIES (\$6.07) Unit price bid shall not be less than: \$ 100.00	\$ 100	-	\$ 10,000	-

06/26/2013

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BID PAGES



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

Contract PIN

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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
UTL-GCS-2WS (292)	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	



06/26/2013
3:18PM
BID PAGES

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

Contract PIN 8502013HW0018C
Project ID HWPLZ001K

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
			SUB-TOTAL:		\$ 5,635,817	95
6.39 A (293)	1.0 LUMP SUM	MOBILIZATION PRICE BID SHALL NOT EXCEED 4% OF THE ABOVE SUB-TOTAL PRICE.			\$ 225,435	84
TOTAL BID PRICE:					\$ 5,861,333	79

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.

BID FORM

PROJECT ID. HWPLZ001K

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)

\$ 5,861,333.79

9-11-2013

BIDDER'S SIGNATURE AND AFFIDAVIT

M/WBE UTILIZATION PLAN: By signing its bid in the space below, the bidder agrees to the Vendor Certification and Required Affirmations set forth below, unless a full waiver of the Participation Goals is granted. The Vendor Certification and Required Affirmations will be deemed to satisfy the requirement to complete Section V of Part II of Schedule B: M/WBE Utilization Plan.

Section V: Vendor Certification and Required Affirmations: I hereby: 1) acknowledge my understanding of the M/WBE participation requirements as set forth in this Contract and the pertinent provisions of Section 6-129 of the Administrative Code of the City of New York ("Section 6-129"), and the rules promulgated thereunder; 2) affirm that the information supplied in support of the M/WBE Utilization Plan is true and correct; 3) agree, if awarded this Contract, to comply with the M/WBE participation requirements of this Contract, the pertinent provisions of Section 6-129, 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 the total dollar value of the M/WBE Participation Goals to certified MBEs and/or WBEs, unless a full waiver is obtained or such goals are modified by the Agency; and 5) agree and affirm, if awarded this Contract, to make all reasonable, good faith efforts to meet the M/WBE Participation Goals, or If a partial waiver is obtained or such goals are modified by the Agency, to meet the modified Participation Goals by soliciting and obtaining the participation of certified MBE and/or WBE firms.

Bidder: CAC INDUSTRIES INC

By: [Signature]
(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:

_____ being duly sworn says:

I am the PRESIDENT of the above named corporation whose name is subscribed to and which executed the foregoing bid. I reside at 45 E 22ND ST NYC, NY 10021.
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
11 day of Sept, 2013

[Signature]
Notary Public

DIANE C. DERIN
Notary Public, State of New York
No. 01DE5048152
Qualified in Queens County
Commission Expires August 14, 2017

**BID BOND 1
FORM OF BID BOND**

KNOW ALL MEN BY THESE PRESENTS. That we, _____

C.A.C. Industries, Inc.

54-08 Vernon Blvd., Long Island City, NY 11101

hereinafter referred to as the "Principal", and _____

Federal Insurance Company

15 Mountain View Road, Warren, NJ 07059

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%), 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 _____

Project ID: HWPLZ001K, Reconstruction of Myrtle Avenue from Hall Street to Emerson Place,

including Sewer, Water Main, Street Lighting and Traffic Signal Work, Borough of Brooklyn.

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 4th day of September, 2013.

(Seal)

C.A.C. Industries, Inc. _____ (L.S.)

Principal

By: _____

(Seal)

Federal Insurance Company _____

Surety

By: _____

Susan Lupski

Attorney-in-Fact



ACKNOWLEDGMENT OF PRINCIPAL, IF A CORPORATION

State of NEW YORK County of QUEENS ss.
 On this 10TH day of SEPTEMBER, 2013, before me personally came
MICHAEL A CAPASSO to me known, who, being by me duly sworn, did depose and say
 that he resides at 45 E. 72ND ST NY NY 10021
 that he is the PRESIDENT of CPC INDUSTRIES INC
 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.

DIANE C. DERIN
 Notary Public, State of New York
 No. 01DE5048152
 Qualified in Queens County
 Commission Expires August 14, 2017


 Notary Public

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 A N 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

ACKNOWLEDGMENT OF SURETY COMPANY

STATE OF ...NEW YORK.....} ss
COUNTY OF ...NASSAU.....}

On thisSEPTEMBER 4, 2013....., before me personally came...SUSAN LUPSKI.....
to me know, who, being by me duly sworn, did depose and say; that he/she resides in
NASSAU COUNTY....., State of...NEW YORK....., that he/she is the Attorney-In-Fact of the
.....FEDERAL INSURANCE COMPANY.....the corporation described in which
executed the above instrument; that he/she knows the seal of said corporation; that the
seal affixed to said instrument is such corporate seal; that is was so affixed by order of
the Board of Directors of said corporation; and that he/she signed his/her name thereto by
like order; and the affiant did further depose and say that the Superintendent of Insurance
of the State of New York, has, pursuant to Section 1111 of the Insurance Law of the State
of New York, issued to.....FEDERAL INSURANCE COMPANY.....(Surety) his/her
certificate of qualification evidencing the qualification of said Company and its
sufficiency under any law of the State of New York as surety and guarantor, and the
propriety of accepting and approving it as such; and that such certificate has not been
revoked.



Notary Public

DESIREE CARDLIN
Notary Public, State of New York
No. 01CA6150043
Qualified in Suffolk County
Commission Expires July 24, 2014

NY acknowledgment



**Chubb
Surety**

**POWER
OF
ATTORNEY**

**Federal Insurance Company
Vigilant Insurance Company
Pacific Indemnity Company**

**Attn: Surety Department
15 Mountain View Road
Warren, NJ 07059**

Know All by These Presents, That FEDERAL INSURANCE COMPANY, an Indiana corporation, VIGILANT INSURANCE COMPANY, a New York corporation, and PACIFIC INDEMNITY COMPANY, a Wisconsin corporation, do each hereby constitute and appoint Thomas Bean, George O. Brewster, Colette R. Chisholm, Susan Lupski, Gerard S. Macholz, Camille Maitland, Robert T. Pearson and Rita Sagistano of Uniondale, New York

each as their true and lawful Attorney- in- Fact to execute under such designation in their names and to affix their corporate seals to and deliver for and on their behalf as surety thereon or otherwise, bonds and undertakings and other writings obligatory in the nature thereof (other than bail bonds) given or executed in the course of business, and any instruments amending or altering the same, and consents to the modification or alteration of any instrument referred to in said bonds or obligations.

In Witness Whereof, said FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, and PACIFIC INDEMNITY COMPANY have each executed and attested these presents and affixed their corporate seals on this **27th** day of **March, 2013**.

David J. Edwards

David J. Edwards, Assistant Secretary

David B. Norris, Jr.

David B. Norris, Jr., Vice President

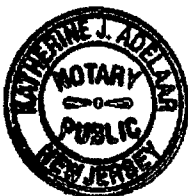
STATE OF NEW JERSEY

ss.

County of Somerset

On this **27th** day of **March, 2013** before me, a Notary Public of New Jersey, personally came David J. Edwards, to me known to be Assistant Secretary of FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, and PACIFIC INDEMNITY COMPANY, the companies which executed the foregoing Power of Attorney, and the said David J. Edwards, being by me duly sworn, did depose and say that he is Assistant Secretary of FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, and PACIFIC INDEMNITY COMPANY and knows the corporate seals thereof, that the seals affixed to the foregoing Power of Attorney are such corporate seals and were thereto affixed by authority of the By- Laws of said Companies; and that he signed said Power of Attorney as Assistant Secretary of said Companies by like authority; and that he is acquainted with David B. Norris, Jr., and knows him to be Vice President of said Companies; and that the signature of David B. Norris, Jr., subscribed to said Power of Attorney is in the genuine handwriting of David B. Norris, Jr., and was thereto subscribed by authority of said By- Laws and in deponent's presence.

Notarial Seal



**KATHERINE J. ADELAAR
NOTARY PUBLIC OF NEW JERSEY
No 2316685
Commission Expires July 16, 2014**

Kath J Adelaar

Notary Public

CERTIFICATION

Extract from the By- Laws of FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, and PACIFIC INDEMNITY COMPANY:

"All powers of attorney for and on behalf of the Company may and shall be executed in the name and on behalf of the Company, either by the Chairman or the President or a Vice President or an Assistant Vice President, jointly with the Secretary or an Assistant Secretary, under their respective designations. The signature of such officers may be engraved, printed or lithographed. The signature of each of the following officers: Chairman, President, any Vice President, any Assistant Vice President, any Secretary, any Assistant Secretary and the seal of the Company may be affixed by facsimile to any power of attorney or to any certificate relating thereto appointing Assistant Secretaries or Attorneys- in- Fact for purposes only of executing and attesting bonds and undertakings and other writings obligatory in the nature thereof, and any such power of attorney or certificate bearing such facsimile signature or facsimile seal shall be valid and binding upon the Company and any such power so executed and certified by such facsimile signature and facsimile seal shall be valid and binding upon the Company with respect to any bond or undertaking to which it is attached."

I, David J. Edwards, Assistant Secretary of FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, and PACIFIC INDEMNITY COMPANY (the "Companies") do hereby certify that

- (i) the foregoing extract of the By- Laws of the Companies is true and correct,
- (ii) the Companies are duly licensed and authorized to transact surety business in all 50 of the United States of America and the District of Columbia and are authorized by the U.S. Treasury Department; further, Federal and Vigilant are licensed in Puerto Rico and the U.S. Virgin Islands, and Federal is licensed in American Samoa, Guam, and each of the Provinces of Canada except Prince Edward Island; and
- (iii) the foregoing Power of Attorney is true, correct and in full force and effect.

Given under my hand and seals of said Companies at Warren, NJ this **SEP 0 4 2013**



David J. Edwards

David J. Edwards, Assistant Secretary

IN THE EVENT YOU WISH TO NOTIFY US OF A CLAIM, VERIFY THE AUTHENTICITY OF THIS BOND OR NOTIFY US OF ANY OTHER MATTER, PLEASE CONTACT US AT ADDRESS LISTED ABOVE, OR BY Telephone (908) 903- 3493 Fax (908) 903- 3656
e-mail: surety@chubb.com

FEDERAL INSURANCE COMPANY

STATEMENT OF ASSETS, LIABILITIES AND SURPLUS TO POLICYHOLDERS

Statutory Basis

DECEMBER 31, 2012

(in thousands of dollars)

ASSETS		LIABILITIES AND SURPLUS TO POLICYHOLDERS	
Cash and Short Term Investments.....	\$ 402,323	Outstanding Losses and Loss Expenses	\$ 12,627,388
United States Government, State and Municipal Bonds	9,901,519	Unearned Premiums.....	3,416,163
Other Bonds.....	4,595,536	Ceded Reinsurance Premiums Payable.....	364,197
Stocks.....	811,166	Provision for Reinsurance	62,250
Other Invested Assets.....	1,681,828	Other Liabilities.....	935,654
 TOTAL INVESTMENTS	 17,392,372	 TOTAL LIABILITIES	 17,405,652
Investments in Affiliates:			
Chubb Investment Holdings, Inc.	3,352,969	Capital Stock.....	20,980
Pacific Indemnity Company.....	2,496,198	Paid-In Surplus.....	3,106,809
Chubb Insurance Investment Holdings Ltd....	1,228,075	Unassigned Funds	10,713,227
Executive Risk Indemnity Inc.....	1,100,637	 SURPLUS TO POLICYHOLDERS.....	 13,841,016
CC Canada Holdings Ltd.....	758,892		
Chubb Insurance Company of Australia Limited	517,597		
Great Northern Insurance Company	438,592		
Chubb European Investment Holdings SLP ..	265,490		
Vigilant Insurance Company.....	246,766		
Other Affiliates	429,458		
Premiums Receivable	1,494,693		
Other Assets	1,524,929		
 TOTAL ADMITTED ASSETS	 \$ 31,246,668	 TOTAL LIABILITIES AND SURPLUS TO POLICYHOLDERS.....	 \$ 31,246,668

Investments are valued in accordance with requirements of the National Association of Insurance Commissioners.
Investments with a carrying value of \$430,688,714 are deposited with government authorities as required by law.

State, County & City of New York, — ss:

Yvonne Baker, Assistant Secretary _____ of the Federal Insurance Company
being duly sworn, deposes and says that the foregoing Statement of Assets, Liabilities and Surplus to Policyholders of said
Federal Insurance Company on December 31, 2012 is true and correct and is a true abstract of the Annual Statement of said
Company as filed with the Secretary of the Treasury of the United States for the 12 months ending December 31, 2012.
Subscribed and sworn to before me
this March 31, 2013.

Dorothy Baker

Notary Public

DOROTHY M. BAKER
Notary Public, State of New York
No. 31-4904994
Qualified in New York County
Commission Expires Sept. 14, 2013

Yvonne Baker

Assistant Secretary

Tax ID #:

11-308226

APT E-

PIN #: 85013B0118

SCHEDULE B – M/WBE Utilization Plan

Part I: M/WBE Participation Goals

Part I to be completed by contracting agency

Contract Overview

APT E- Pin # 85013B0118 FMS Project ID#: HWPLZ001K
 Project Title/ Agency PIN # RECONSTRUCTION OF MYRTLE AVENUE/ 8502013HW0018C
 Bid/Proposal Response Date SEPTEMBER 11, 2013
 Contracting Agency Department of Design and Construction
 Agency Address 30-30 Thomson Ave. City Long Island City State NY Zip Code 11101
 Contact Person Jessica Lavidès Title MWBE Liaison & Compliance Analyst
 Telephone # (718) 391-1065 Email LavidèsJe@ddc.nyc.gov

Project Description (attach additional pages if necessary)

**RECONSTRUCTION OF
 MYRTLE AVENUE
 FROM HALL STREET TO EMERSON PLACE
 INCLUDING SEWER, WATER MAIN, STREET LIGHTING,
 AND TRAFFIC SIGNAL WORK
 Together With All Work Incidental Thereto
 BOROUGH OF BROOKLYN
 CITY OF NEW YORK**

M/WBE Participation Goals for Services

Enter the percentage amount for each group or for an unspecified goal. Please note that there are no goals for Asian Americans in Professional Services.

Prime Contract Industry: Construction

Group	Percentage	
<u>Unspecified</u>	6 %	
or		
Black American	UNSPECIFIED	
Hispanic American	UNSPECIFIED	
Asian American	UNSPECIFIED	
Women	UNSPECIFIED	
Total Participation Goals	6 %	Line 1

Tax ID #: 11-3082726

APT E- 85013B0118

PIN #:

SCHEDULE B - Part II: M/WBE Participation Plan

Part II to be completed by the bidder/proposer.

Please note: For Non-M/WBE Prime Contractors who will NOT subcontract any services and will self-perform the entire contract, you must obtain a FULL waiver by completing the Waiver Application on pages 17 and 18 and timely submitting it to the contracting agency pursuant to the Notice to Prospective Contractors. Once a FULL WAIVER is granted, it must be included with your bid or proposal and you do not have to complete or submit this form with your bid or proposal.

Section I: Prime Contractor Contact Information

Tax ID # 11-3082726 FMS Vendor ID # 516657
 Business Name CAC INDUSTRIES INC Contact Person William Sular
 Address 5408 VERNON BLVD LIC NY 11001
 Telephone # 718 729-3600 Email W.SULAR AT CACINDUSTRIES.COM

Section II: M/WBE Utilization Goal Calculation: Check the applicable box and complete subsection.**PRIME CONTRACTOR ADOPTING AGENCY M/WBE PARTICIPATION GOALS**

<input checked="" type="checkbox"/> For Prime Contractors (including Qualified Joint Ventures and M/WBE firms) adopting Agency M/WBE Participation Goals.	Total Bid/Proposal Value		Agency Total Participation Goals (Line 1, Page 13)		Calculated M/WBE Participation Amount
Calculate the total dollar value of your total bid that you agree will be awarded to M/WBE subcontractors for services and/or credited to an M/WBE prime contractor or Qualified Joint Venture. Please review the Notice to Prospective Contractors for more information on how to obtain credit for M/WBE participation.	\$ 5,861,333 ²⁹	X	6%	=	\$ 351,680 ⁻ Line 2

PRIME CONTRACTOR OBTAINED PARTIAL WAIVER APPROVAL: ADOPTING MODIFIED M/WBE PARTICIPATION GOALS

<input type="checkbox"/> For Prime Contractors (including Qualified Joint Ventures and M/WBE firms) adopting Modified M/WBE Participation Goals.	Total Bid/Proposal Value		Adjusted Participation Goal (From Partial Waiver)		Calculated M/WBE Participation Amount
Calculate the total dollar value of your total bid that you agree will be awarded to M/WBE subcontractors for services and/or credited to an M/WBE prime contractor or Qualified Joint Venture. Please review the Notice to Prospective Contractors for more information on how to obtain credit for M/WBE participation.	\$	X		=	\$ Line 3

Section III: M/WBE Utilization Plan: How Proposer/Bidder Will Fulfill M/WBE Participation Goals. Please review the Notice to Prospective Contractors for more information on how to obtain credit for M/WBE participation. Check applicable box. The Proposer or Bidder will fulfill the M/WBE Participation Goals:

☐ As an M/WBE Prime Contractor that will self-perform and/or subcontract to other M/WBE firms a portion of the contract the value of which is at least the amount located on Lines 2 or 3 above, as applicable. The value of any work subcontracted to non-M/WBE firms will not be credited towards fulfillment of M/WBE Participation Goals. Please check all that apply to Prime Contractor:

☐ MBE ☐ WBE

☐ As a Qualified Joint Venture with an M/WBE partner, in which the value of the M/WBE partner's participation and/or the value of any work subcontracted to other M/WBE firms is at least the amount located on Lines 2 or 3 above, as applicable. The value of any work subcontracted to non M/WBE firms will not be credited towards fulfillment of M/WBE Participation Goals.

☒ As a non M/WBE Prime Contractor that will enter into subcontracts with M/WBE firms the value of which is at least the amount located on Lines 2 or 3 above, as applicable.

Section IV: General Contract Information

What is the expected percentage of the total contract dollar value that you expect to award in subcontracts for services, regardless of M/WBE status? % 6.07

Enter brief description of the type(s) and dollar value of subcontracts for all any services you plan on subcontracting if awarded this contract. For each item, indicate whether the work is designated for participation by MBEs and/or WBEs and the time frame in which such work is scheduled to begin and end. Use additional sheets if necessary.

1.	TREE PLANTING	\$100,000	MBE
2.	STRIPING	\$10,000	MBE
3.	FLAGPERSONS	\$120,900	MBE
4.	TRUCKING	\$100,000	MBE
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			

✓ Scopes of Subcontract Work

Tax ID #: 11-3082726

APT E-
PIN #:

Section V: Vendor Certification and Required Affirmations

I hereby:

- 1) acknowledge my understanding of the M/WBE participation requirements as set forth herein and the pertinent provisions of Section 6-129 of the Administrative Code of the City of New York ("Section 6-129"), and the rules promulgated thereunder;
- 2) affirm that the information supplied in support of this M/WBE Utilization Plan is true and correct;
- 3) agree, if awarded this Contract, to comply with the M/WBE participation requirements of this Contract, the pertinent provisions of Section 6-129, 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 the total dollar value of the M/WBE Participation Goals to certified MBEs and/or WBEs, unless a full waiver is obtained or such goals are modified by the Agency; and
- 5) agree and affirm, if awarded this Contract, to make all reasonable, good faith efforts to meet the M/WBE Participation Goals, or If a partial waiver is obtained or such goals are modified by the Agency, to meet the modified Participation Goals by soliciting and obtaining the participation of certified MBE and/or WBE firms.

Signature

William S. Silar

Date

9/11/2013

Print Name

William Silar

Title

Chief Engineer

SCHEDULE B - PART III - REQUEST FOR WAIVER OF M/WBE PARTICIPATION REQUIREMENT

Contract Overview

Tax ID # 11-3082726 FMS Vendor ID # 516657
 Business Name CAC INDUSTRIES INC
 Contact Name WSV/AL Telephone # 718729-3600 Email WSV/AL AT CAC INDUSTRIES INC
 Type of Procurement ☐ Competitive Sealed Bids ☐ Other Bid/Response Due Date _____
 APT E-PIN # (for this procurement): _____ Contracting Agency: _____

M/WBE Participation Goals as described in bid/solicitation documents

6.67 %

Agency M/WBE Participation Goal

Proposed M/WBE Participation Goal as anticipated by vendor seeking waiver

%

of the total contract value anticipated in good faith by the bidder/proposer to be subcontracted for services and/or credited to an M/WBE Prime Contractor or Qualified Joint Venture.

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

- ☐ Vendor does not subcontract services, and has the capacity and good faith intention to perform all such work itself with its own employees.
- ☐ Vendor subcontracts some of this type of work but at a lower % than bid/solicitation describes, and has the capacity and good faith intention to do so on this contract. (Attach subcontracting plan outlining services that the vendor will self-perform and subcontract to other vendors or consultants.)
- ☐ Vendor has other legitimate business reasons for proposing the M/WBE Participation Goal above. Explain under separate cover.

References

List 3 most recent contracts performed for NYC agencies (if any). Include information for each subcontract awarded in performance of such contracts. Add more pages if necessary.

CONTRACT NO.	AGENCY	DATE COMPLETED
Total Contract Amount \$	Total Amount Subcontracted \$	
Item of Work Subcontracted and Value of subcontract	Item of Work Subcontracted and Value of subcontract	Item of Work Subcontracted and Value of subcontract
CONTRACT NO.	AGENCY	DATE COMPLETED
Total Contract Amount \$	Total Amount Subcontracted \$	
Item of Work Subcontracted and Value of subcontract	Item of Work Subcontracted and Value of subcontract	Item of Work Subcontracted and Value of subcontract
CONTRACT NO.	AGENCY	DATE COMPLETED
Total Contract Amount \$	Total Amount Subcontracted \$	
Item of Work Subcontracted and Value of subcontract	Item of Work Subcontracted and Value of subcontract	Item of Work Subcontracted and Value of subcontract

List 3 most recent contracts performed for other entities. Include information for each subcontract awarded in performance of such contracts. Add more pages if necessary.

(Complete ONLY if vendor has performed fewer than 3 New York City contracts.)

TYPE OF Contract	ENTITY	DATE COMPLETED
Manager at entity that hired vendor (Name/Phone No./Email)		
Total Contract Amount \$	Total Amount Subcontracted \$	
Type of Work Subcontracted		

TYPE OF Contract	AGENCY/ENTITY	DATE COMPLETED
Manager at agency/entity that hired vendor (Name/Phone No./Email)		
Total Contract Amount \$	Total Amount Subcontracted \$	
Item of Work Subcontracted and Value of subcontract	Item of Work Subcontracted and Value of subcontract	Item of Work Subcontracted and Value of subcontract

TYPE OF Contract	AGENCY/ENTITY	DATE COMPLETED
Manager at entity that hired vendor (Name/Phone No./Email)		
Total Contract Amount \$	Total Amount Subcontracted \$	
Item of Work Subcontracted and Value of subcontract	Item of Work Subcontracted and Value of subcontract	Item of Work Subcontracted and Value of subcontract

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: _____

Waiver Determination

Full Waiver Approved ☐

Waiver Denied ☐

Partial Waiver Approved ☐

Revised Participation Goal _____ %

APPRENTICESHIP PROGRAM REQUIREMENTS

Bidders are advised that the Apprenticeship Program Requirements set forth below apply to each contract for which a check mark is indicated before the word "Yes". Compliance with these requirements will be determined solely by the City.

 √ YES NO

(1) Apprenticeship Program Requirements

Notice to Bidders: Please be advised that, pursuant to the authority granted to the City under Labor Law Section 816-b, the Department of Design and Construction hereby requires that the contractor awarded a contract as a result of this Invitation for Bids, and any of its subcontractors with subcontracts worth one million dollars or over, have, prior to entering into such contract or subcontract, apprenticeship agreements appropriate for the type and scope of work to be performed that have been registered with, and approved by, the New York State Commissioner of Labor. In addition, the contractor and its subcontractors will be required to show that such apprenticeship programs have three years of current, successful experience in providing career opportunities.

The failure to prove, upon request, that these requirements have been met shall result in the contract not being awarded to the contractor or the subcontract not being approved.

Please be further advised that, pursuant to Labor Law Section 220, the allowable ratio of apprentices to journeypersons in any craft classification shall not be greater than the ratio permitted to the contractor as to its workforce on any job under the registered apprenticeship program.

(2) Apprenticeship Program Questionnaire

The bidder must submit a completed and signed Apprenticeship Program Questionnaire. The Questionnaire is set forth on the following page of the Bid Booklet.

PROJECT ID: HWPLZ001K

Name of Bidder: _____

- _____ YES _____ NO

- _____ YES _____ NO

- _____ YES NO

This image shows a single sheet of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

Bidder: _____

By: _____ Title: _____
(Signature of Partner or Corporate Officer)

Date: _____

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: _____

DDC Project Number: _____

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	_____	_____
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. _____

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
_____	_____	_____
_____	_____	_____
_____	_____	_____

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:

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

_____ 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.

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

Project ID. _____

YEAR	TOTAL NUMBERS OF HOURS WORKED BY EMPLOYEES	INCIDENT RATE
_____	_____	_____
_____	_____	_____
_____	_____	_____

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)

_____ Contractor previously audited by the DDC Office of Site Safety.

DDC Project Number(s): _____

_____ Accident on previous DDC Project(s).

_____ 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: _____

By: _____
(Signature of Owner, Partner, Corporate Officer)

Title: _____

(NO TEXT ON THIS PAGE)

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 26 through 28 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, Michael A. Capasso, 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: CAE Industries Inc

Vendor's Address: 3408 VERMONT BLVD LIC NY 11101

Vendor's EIN or TIN: 11-3082726 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: 10/23/12

Signature date on change submission for the submitting vendor: 7/29/13

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	MICHAEL A CAPASSO		7/29/13
2	JAMES E MCMURRAY	7/29/13	
3	JOHN M LABOZZA	7/29/13	
4			
5			
6			

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

Certification This section is required.

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

Certified By:

MICHAEL A CAPASSO
Name (Print)
PRESIDENT
Title
CAC INDUSTRIES INC
Name of Submitting Entity
[Signature]
Signature
9/11/13
Date

Notarized By:

[Signature]
Notary Public
QUEENS
County License Issued
01DE5048152
License Number

Sworn to before me on: 9/11/13
Date

DIANE C. DERIN
Notary Public, State of New York
No. 01DE5048152
Qualified in Queens County
Commission Expires August 14, 2017

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
- (2) 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**

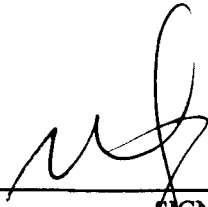
Pursuant to General Municipal Law §103-g, which generally prohibits the City from entering into contracts with persons engaged in investment activities in the energy sector of Iran, the bidder/proposer submits the following certification:

[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: 11th, New York
Sept, 20 13

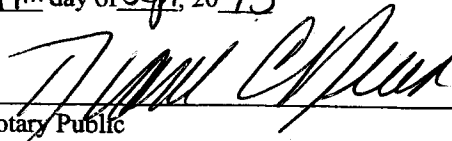


SIGNATURE
Michael A Capasso

PRINTED NAME
president

TITLE

Sworn to before me this
11th day of Sept, 20 13



Notary Public

Dated: 9/11/13

DIANE C. DERIN
Notary Public, State of New York
No. 01DE5048152
Qualified in Queens County
Commission Expires August 14, 2017

**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)

The City of New York Department of Small Business Services
Division of Labor Services Contract Compliance Unit
110 William Street, New York, New York 10038
Phone: (212) 513 - 6323
Fax: (212) 618-8879

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. 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 ☐ Emerging Business Enterprise
- 2a. If you are certified as an MBE, WBE, or LBE, what city/state agency are you certified with?
____ Are you DBE certified? Yes ☐ No ☒
3. Please indicate if you would like assistance from SBS in identifying 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. 11-3082726 WSULAN AT CACINDUC.COM
Employer Identification Number or Federal Tax I.D./ Email Address
6. CAC INDUSTRIES
Company Name
7. 5108 VERNON BLVD LTR NY 11101
Company Address and Zip Code
8. MICHAEL A CAPASSO 718729-3600
Chief Operating Officer Telephone Number
9. DIANA RAUGEL 718729-3600 EXT 28
Designated Equal Opportunity Compliance Officer Telephone Number
(If same as Item #7, write "same")
10. SAME
Name of Prime Contractor and Contact Person
(If same as Item #5, write "same")
11. Number of employees in your company: 165

12. Contract information:

(a) NYC DDC
Contracting Agency (City Agency)

(b) _____
Contract Amount

(d) HNPL2001K
Procurement Identification Number (PIN)

(e) _____
Contract Registration Number (CT#)

(f) _____
Projected Commencement Date

(g) _____
Projected Completion Date

(h) Description and location of proposed contract:

RECONSTRUCTION OF MURPHY AVE FROM HWY 157 TO
EMERSON PL. INCLUDING SEWER, WATER MAINS, LIGHTING, TRAFFIC
SIGNAL WORK, BOXES OF BELLY

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 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 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: _____
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 36 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 ___

GENERAL CONTRACTORS ASSOCIATION

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

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 <input checked="" type="checkbox"/> |
| (b) After a conditional job offer | Yes ___ No <input checked="" type="checkbox"/> |
| (c) After a job offer | Yes ___ No <input checked="" type="checkbox"/> |
| (d) Within the first three days on the job | Yes <input checked="" type="checkbox"/> No ___ |
| (e) To some applicants | Yes ___ No <input checked="" type="checkbox"/> |
| (f) To all applicants | Yes ___ No <input checked="" type="checkbox"/> |
| (g) To some employees | Yes ___ No <input checked="" type="checkbox"/> |
| (h) To all employees | Yes <input checked="" type="checkbox"/> No ___ |

20. Explain where and how completed I-9 Forms, with their supportive documentation, are maintained and made accessible.
FILES ARE LOCATED IN INDIVIDUAL FOLDERS LOCATED
IN THE MAIN OFFICE AT 5108 VERNON BLVD LENOX
MASS 01907

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:

- | | |
|-----------------------------------|----------------|
| (a) Prior to a 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 employment 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) NO
___ 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 qualifications? Yes___ No___

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

FIELD LABOR

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).

SIGNATURE PAGE

I, (print name of authorized official signing) Michael A Capasso 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 contractual obligation.

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.

CAE Industries Inc
Contractor's Name
DIANE DERIN ENG ASST
Name of person who prepared this Employment Report Title
Michael A Capasso PRESIDENT
Name of official authorized to sign on behalf of the contractor Title
718-729-3600
Telephone Number
[Signature] 9/11/13
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.

Only original signatures accepted.

Sworn to before me this 11th day of Sept 20 13

[Signature] [Signature] 9/11/13
Notary Public Authorized Signature Date

DIANE C. DERIN
Notary Public, State of New York
No. 01DE5048152
Qualified in Queens County
Commission Expires August 14, 2017

The City of New York Department of Small Business Services
Division of Labor Services Contract Compliance Unit
110 William Street, New York, New York 10038
Phone: (212) 513 - 6323
Fax: (212) 616-8879

CONSTRUCTION EMPLOYMENT REPORT

GENERAL INFORMATION

1. Your contractual relationship in this contract is: Prime contractor _____ Subcontractor X
- 1a. Are M/WBE goals attached to this project? Yes ✓ No _____
2. 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 _____ Emerging Business Enterprise
- 2a. If you are certified as an **MBE, WBE, or LBE**, what city/state agency are you certified with?
_____ Are you DBE certified? Yes _____ No ✓
3. Please indicate if you would like assistance from SBS in identifying 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. 11-3082726 W SVILAIR AT CACIND INC.
Employer Identification Number or Federal Tax I.D./ Email Address com
6. CAC INDUSTRIES INC
Company Name
7. 5408 VERNON BLVD LIC NY 11101
Company Address and Zip Code
8. MICHAEL A CAPASSO 718 729-3600
Chief Operating Officer Telephone Number
9. DIANA LANGEL 718 729-3600 EXT 228
Designated Equal Opportunity Compliance Officer Telephone Number
(If same as Item #7, write "same")
10. SAME
Name of Prime Contractor and Contact Person
(If same as Item #5, write "same")
11. Number of employees in your company: 165

12. Contract information:

- (a) NYCDDC
Contracting Agency (City Agency)
- (b) _____
Contract Amount
- (d) HWP L2001K
Procurement Identification Number (PIN)
- (e) _____
Contract Registration Number (CT#)
- (f) _____
Projected Commencement Date
- (g) _____
Projected Completion Date

(h) Description and location of proposed contract:

RECONSTRUCTION OF MYRTLE AVE FROM HAUST TO EMERSON PL
BORO OF BRKLYN

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 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 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: _____

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 36 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___ *General Contractors Association*

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

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 <input checked="" type="checkbox"/> |
| (b) After a conditional job offer | Yes___ No <input checked="" type="checkbox"/> |
| (c) After a job offer | Yes___ No <input checked="" type="checkbox"/> |
| (d) Within the first three days on the job | Yes <input checked="" type="checkbox"/> No___ |
| (e) To some applicants | Yes___ No <input checked="" type="checkbox"/> |
| (f) To all applicants | Yes___ No <input checked="" type="checkbox"/> |
| (g) To some employees | Yes___ No <input checked="" type="checkbox"/> |
| (h) To all employees | Yes <input checked="" type="checkbox"/> No___ |

20. Explain where and how completed I-9 Forms, with their supportive documentation, are maintained and made accessible.
- FILES MAINTAINED IN INDIVIDUAL FOLDERS LOCATED
IN THE MAIN OFFICE AT 5K 08 VERMONT BLVD LIC NY
11101

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:

- | | |
|-----------------------------------|----------------|
| (a) Prior to a 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 employment 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) NO
- ___ 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 qualifications? Yes ☒ No ☐

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

FIELD LABOR

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).

SIGNATURE PAGE

I, (print name of authorized official signing) Michael A Capasso 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 contractual obligation.

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.

CAE INDUSTRIES INC
Contractor's Name
DIANE C DERIN ENG ASST
Name of person who prepared this Employment Report Title
MICHAEL A CAPASSO PRESIDENT
Name of official authorized to sign on behalf of the contractor Title
718 729-3600
Telephone Number
[Signature] 9/11/13
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.

Only original signatures accepted.

Sworn to before me this 11TH day of Sept 20 13

[Signature] [Signature] 9/11/13
Notary Public Authorized Signature Date

DIANE C. DERIN
Notary Public, State of New York
No. 01DE5048152
Qualified in Queens County
Commission Expires August 14, 2017

The City of New York Department of Small Business Services
Division of Labor Services Contract Compliance Unit
110 William Street, New York, New York 10038
Phone: (212) 513 - 6323 Fax: (212) 616-8679

Date _____ File Number _____
LESS THAN \$750,000 SUBCONTRACT CERTIFICATE

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

MBE Yes ___ No ___ WBE Yes ___ No ___ LBE Yes ___ No ___ DBE Yes ___ No ___

If you are certified as an MBE, WBE, LBE or DBE, 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 _____

Description and location of proposed subcontract: _____

Procurement Identification Number (PIN) _____ Contract Registration Number (CT#) _____
(City contracts only) (City contracts only)

Block and Lot Number _____ ICIP Application Number _____
(ICIP projects only) (ICIP projects only)

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. This affirmation is made in accordance with NYC Charter Chapter 56, Executive Order No. 50 (1980) and the implementing Rules.

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 _____

Sworn to before me this _____ day of _____ 20 _____
Only original signatures accepted.

Notary Public _____ Authorized Signature _____ Date _____

(NO TEXT ON THIS PAGE)

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

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

NOTE: All proposed subcontractors with a subcontract in excess of \$750,000 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
- B: Black
- H: Hispanic
- A: Asian
- N: Native American
- F: Female

FORM B: PROJECTED WORKFORCE

TRADE CLASSIFICATION CODES

(J) Journeylevel 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:

LABORERS

Union Affiliation, if applicable

IOIO/731

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

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:

transfers

Union Affiliation, if applicable

282

Total (Col. #1-10):

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

Total Female
(Col. #6 - 10):

MALES

(1) White Non Hisp.	(2) Black Non Hisp.	(3) Hisp.	(4) Asian	(5) Native Amer.
J 2				
H				
A				
TRN				
TOT 2	T			

FEMALES

(6) White Non Hisp.	(7) Black Non Hisp.	(8) Hisp.	(9) Asian	(10) Native Amer.

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

FORM C: CURRENT WORKFORCE

TRADE CLASSIFICATION CODES

(J) Journeylevel Workers
(H) Helper
(TOT) Total by Column

(A) Apprentice
(TRN) Trainee

For each trade currently engaged by your company for all work performed in New York City, enter the current workforce for Males and Females by trade classification on the charts below.

Trade:

TIMBER MAN

Union Affiliation, if applicable

1536

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) White Non Hisp.	(2) Black Non Hisp.	(3) Hisp.	(4) Asian	(5) Native Amer.
J	2				
H					
A					
TRN					
TOT	2				

	(6) White Non Hisp.	(7) Black Non Hisp.	(8) Hisp.	(9) Asian	(10) 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 C: CURRENT WORKFORCE

Trade:

CP Eng

Union Affiliation, if applicable

14/15

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) White Non Hisp.	(2) Black Non Hisp.	(3) Hisp.	(4) Asian	(5) Native Amer.	(6) White Non Hisp.	(7) Black Non Hisp.	(8) Hisp.	(9) Asian	(10) Native Amer.
J	<i>14</i>									
H										
A										
TRN										
TOT	<i>✓</i>									

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

(NO TEXT ON THIS PAGE)





NEW YORK CITY DEPARTMENT OF
DESIGN + CONSTRUCTION

INFRASTRUCTURE DIVISION
BUREAU OF DESIGN

VOLUME 1 OF 3

PROJECT ID: HWPLZ001K

RECONSTRUCTION OF

MYRTLE AVENUE

FROM HALL STREET TO EMERSON PLACE

INCLUDING SEWER, WATER MAIN, STREET LIGHTING,
AND TRAFFIC SIGNALWORK

Together With All Work Incidental Thereto
BOROUGH OF BROOKLYN
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: HWPLZ001K

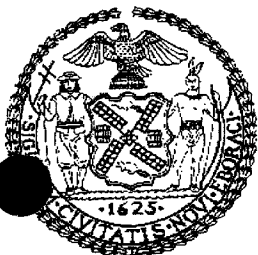
RECONSTRUCTION OF

MYRTLE AVENUE

FROM HALL STREET TO EMERSON PLACE

**INCLUDING SEWER, WATER MAIN, STREET LIGHTING,
AND TRAFFIC SIGNALWORK**

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



FOR THE DEPARTMENT OF TRANSPORTATION
PREPARED BY
AECOM

MAY 15, 2013

3-064





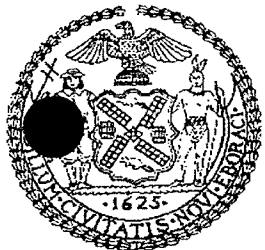
**THE CITY OF NEW YORK
DEPARTMENT OF DESIGN AND CONSTRUCTION
DIVISION OF INFRASTRUCTURE**

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:

In 2013 the City will be implementing a new web based subcontractor reporting system. Once this subcontractor reporting system is implemented, and Contractor receives notice of its implementation, Contractor will be required to list in the system all of the subcontractors that it knows it will use or is already using in the performance of this contract. For each subcontractor listed, Contractor will be required to provide the following information: maximum contract value, description of subcontractor work, start and end date of the subcontract and identification of the subcontractor's industry. Identification of subcontractors in the system along with the required information will be required in order to obtain subcontractor approval under [section 3.02 of Appendix A][Article 17 of the Standard Construction Contract] and PPB Rule § 4-13 for all subcontractors that have not been approved as of the implementation date. Thereafter, Contractor will be required to report in the system the payments made to each subcontractor within 30 days of making the payment. If any of the required information changes throughout the term of the contract, Contractor will be required to revise the information in the system...

When the subcontractor reporting system is implemented, Contractor will receive a written notice from the City which will contain the information the Contractor will need to list its subcontractors and report payments. Contractor will not be required to comply with the requirements set forth herein until such notice is issued. Contractor will have 30 days from the date of the notice to list its current subcontractors for which it has already received Agency approval, if any. Thereafter, for those subcontractors that have not yet been approved by the Agency, subcontractors will have to be listed in the system in order to obtain the required Agency approval.

Failure of the Contractor to list a subcontractor and/or to report subcontractor payments in a timely fashion may result in the Agency declaring the Contractor in default of the Contract and may subject Contractor to liquidated damages in the amount of \$100 per day for each day that the Contractor fails to identify a subcontractor along with the required information about the subcontractor and/or fails to report payments to a subcontractor, beyond the time frames set forth herein or in the notice from the City. For construction contracts, the provisions of Article 15 of the Standard Construction Contract shall govern the issue of liquidated damages.

Contractor hereby agrees to these provisions and acknowledges that they will become effective on the date set forth in the notice.

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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.

(NO TEXT ON THIS PAGE)

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 Bid Submission Requirements are set forth on page 2 of the Bid Booklet.

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.

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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.

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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

(NO TEXT ON THIS PAGE)

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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 sub-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.

of: 27.6 **Contract Dispute Resolution Board.** There shall be a Contract Dispute Resolution Board composed

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**.

that: 37.2 The **Contractor** specifically agrees, as required by Labor Law Section 220 and 220-d, as amended,

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 construction 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 SIX.

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, (\$ 5,861,333.79) 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. Five Million

Eight Hundred Sixty One Thousand, Three Hundred
Thirty Three dollars
79/100

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 to 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

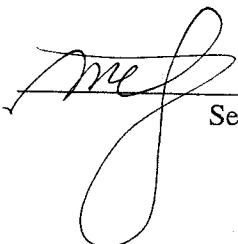
CONTRACTOR: C.A.C. Industries, Inc

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 NEW YORK County of QUEENS ss:

On this 14TH day of NOV, 2013, before me personally came MICHAEL A CIPASSO
to me known who, being by me duly sworn did depose and say that he resides at 45 E 125TH ST
NYC NY 10021 that he is the 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.

DIANE C. DERIN
Notary Public, State of New York
No. 01DES040152
Qualified in Queens County
Commission Expires August 14, 2017

[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:

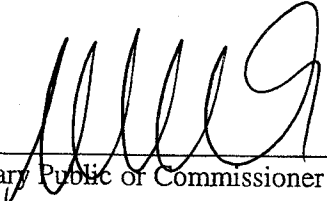
On this _____ day of _____, _____, before me personally appeared _____
to me known, and known to me to be the person described in and who executed the foregoing instrument;
and acknowledged that he executed the same.

Notary Public or Commissioner of Deeds

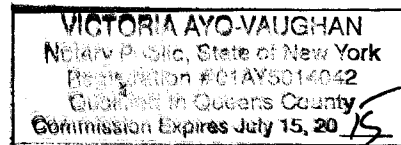
ACKNOWLEDGEMENT BY COMMISSIONER

State of New York County of Queens ss:

On this 19th day of Nov, 2003, 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



AUTHORITY

MAYOR'S CERTIFICATE NO. CBX
BUDGET DIRECTOR'S CERTIFICATE NO.

DATED
DATED

APPROPRIATION
COMMISSIONER'S CERTIFICATE

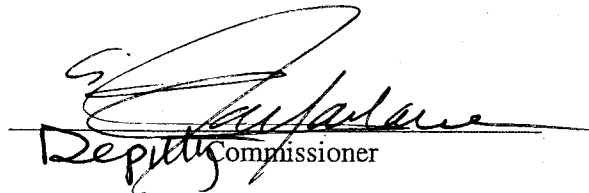
In conformity with the provisions of Section 6-101 of the Administrative Code of the City of New York, it is hereby certified that the estimated cost of the work, materials and supplies required by the within Contract, amounting to

Five Million, Eight Hundred
Sixty One Thousand, Three Hundred
Thirty three Dollars 79/100
Dollars (\$ 5,861,333.79)

is chargeable to the fund of the Department of Design and Construction entitled Code

Department of Design and Construction

I hereby certify that the specifications contained herein comply with the terms and conditions of the BUDGET.


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

Bond No. 82335174

KNOWN ALL MEN BY THESE PRESENTS. That
we, _____

C.A.C. Industries, Inc.

54-08 Vernon Blvd., Long Island City, NY 11101

hereinafter referred to as the "Principal,"
and, Federal Insurance Company

15 Mountain View Road, Warren, NJ 07059

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 _____

Five Million Eight Hundred Sixty One Thousand Three Hundred Thirty Three Dollars and 79/100

(\$ 5,861,333.79) 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

Project ID: HWPLZ001K, Reconstruction of Myrtle Avenue from Hall Street to Emerson Place, including

Sewer, Water Main, Street Lighting and Traffic Signal Work, Borough of Brooklyn.

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 failure so to do, and shall fully reimburse and repay the City for all outlay and expense which the City may incur in making 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 doing of said work, or the repair or maintenance thereof, or the manner of doing the same, or the neglect of the said PRINCIPAL or his (their, its) agents or servants, or the improper performance of the said work by the said PRINCIPAL, or his (their, its) agents or servants, or the infringement of any patent or patent rights by reason of the use of any materials furnished or work done as aforesaid or otherwise, 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, if requested to do so by the City, to fully perform and complete the Work to be performed under the Contract, pursuant to the terms, conditions, and covenants thereof, if the City determines that the Principal, for any cause, has failed or neglected to fully perform and complete such Work. The Surety (Sureties) further agrees 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 such time as the City may fix. 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 values 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.

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

_____, 15th day of _____, November, _____, 2013.
(Seal)

C.A.C. Industries, Inc. _____ (L.S.)

Principal

(Seal)

By _____

(Seal)



(Seal)

(Seal)

(Seal)

Surety
Federal Insurance Company

By Susan Lupski
Susan Lupski Attorney-in-Fact
Surety

By _____

Surety

By _____

Surety

By _____

Surety

By _____

Bond Premium Rate \$8.05/Sliding Scale

Bond Premium Cost \$46,107.00

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.

ACKNOWLEDGMENT OF PRINCIPAL IF A CORPORATIONState of NEW YORK County of QUEENS ss:On this 18th day of NOVEMBER 2013 before me personally came MICHAEL ACAPASSOto me known, who, being by me duly sworn did depose and say that he/she resides at 45 E 72ND ST NYC, NY 10021that he/she is the PRESIDENT of CCC 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.DIANE C. DERIN
Notary Public, State of New York
No. 01DE5048152
Qualified in Queens County
Commission Expires August 14, 2017**ACKNOWLEDGMENT OF PRINCIPAL IF A PARTNERSHIP**

State of _____ County of _____ ss:

On this _____ day of _____ 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 the _____ 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.**ACKNOWLEDGMENT OF PRINCIPAL IF AN INDIVIDUAL**

State of _____ County of _____ ss:

On this _____ day of _____ 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 the
_____ 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.

Affix Acknowledgments and justification of Sureties



**Chubb
Surety**

**POWER
OF
ATTORNEY**

**Federal Insurance Company
Vigilant Insurance Company
Pacific Indemnity Company**

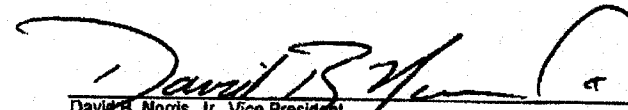
**Attn: Surety Department
15 Mountain View Road
Warren, NJ 07059**

Know All by These Presents, That FEDERAL INSURANCE COMPANY, an Indiana corporation, VIGILANT INSURANCE COMPANY, a New York corporation, and PACIFIC INDEMNITY COMPANY, a Wisconsin corporation, do each hereby constitute and appoint Thomas Bean, George O. Brewster, Colette R. Chisholm, Susan Lupski, Gerard S. Macholz, Camille Maitland, Robert T. Pearson and Rita Sagistano of Unlondale, New York

each as their true and lawful Attorney-in-Fact to execute under such designation in their names and to affix their corporate seals to and deliver for and on their behalf as surety thereon or otherwise, bonds and undertakings and other writings obligatory in the nature thereof (other than bail bonds) given or executed in the course of business, and any instruments amending or altering the same, and consents to the modification or alteration of any instrument referred to in said bonds or obligations.

In Witness Whereof, said FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, and PACIFIC INDEMNITY COMPANY have each executed and attested these presents and affixed their corporate seals on this **27th** day of **March, 2013**.


David J. Edwards, Assistant Secretary


David B. Norris, Jr., Vice President

STATE OF NEW JERSEY
County of Somerset


ss.

On this **27th** day of **March, 2013** before me, a Notary Public of New Jersey, personally came David J. Edwards, to me known to be Assistant Secretary of FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, and PACIFIC INDEMNITY COMPANY, the companies which executed the foregoing Power of Attorney, and the said David J. Edwards, being by me duly sworn, did depose and say that he is Assistant Secretary of FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, and PACIFIC INDEMNITY COMPANY and knows the corporate seals thereof, that the seals affixed to the foregoing Power of Attorney are such corporate seals and were thereto affixed by authority of the By-Laws of said Companies; and that he signed said Power of Attorney as Assistant Secretary of said Companies by like authority; and that he is acquainted with David B. Norris, Jr., and knows him to be Vice President of said Companies; and that the signature of David B. Norris, Jr., subscribed to said Power of Attorney is in the genuine handwriting of David B. Norris, Jr., and was thereto subscribed by authority of said By-Laws and in deponent's presence.

Notarial Seal



KATHERINE J. ADELAAR
NOTARY PUBLIC OF NEW JERSEY
No 2316685
Commission Expires July 16, 2014


Notary Public

CERTIFICATION

Extract from the By-Laws of FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, and PACIFIC INDEMNITY COMPANY:

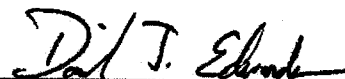
"All powers of attorney for and on behalf of the Company may and shall be executed in the name and on behalf of the Company, either by the Chairman or the President or a Vice President or an Assistant Vice President, jointly with the Secretary or an Assistant Secretary, under their respective designations. The signature of such officers may be engraved, printed or lithographed. The signature of each of the following officers: Chairman, President, any Vice President, any Assistant Vice President, any Secretary, any Assistant Secretary and the seal of the Company may be affixed by facsimile to any power of attorney or to any certificate relating thereto appointing Assistant Secretaries or Attorneys-in-Fact for purposes only of executing and attesting bonds and undertakings and other writings obligatory in the nature thereof, and any such power of attorney or certificate bearing such facsimile signature or facsimile seal shall be valid and binding upon the Company and any such power so executed and certified by such facsimile signature and facsimile seal shall be valid and binding upon the Company with respect to any bond or undertaking to which it is attached."

I, David J. Edwards, Assistant Secretary of FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, and PACIFIC INDEMNITY COMPANY (the "Companies") do hereby certify that

- (i) the foregoing extract of the By-Laws of the Companies is true and correct,
- (ii) the Companies are duly licensed and authorized to transact surety business in all 50 of the United States of America and the District of Columbia and are authorized by the U.S. Treasury Department; further, Federal and Vigilant are licensed in Puerto Rico and the U.S. Virgin Islands, and Federal is licensed in American Samoa, Guam, and each of the Provinces of Canada except Prince Edward Island; and
- (iii) the foregoing Power of Attorney is true, correct and in full force and effect.

Given under my hand and seals of said Companies at Warren, NJ this **NOV 15 2013**




David J. Edwards, Assistant Secretary


IN THE EVENT YOU WISH TO NOTIFY US OF A CLAIM, VERIFY THE AUTHENTICITY OF THIS BOND OR NOTIFY US OF ANY OTHER MATTER, PLEASE CONTACT US AT ADDRESS LISTED ABOVE, OR BY Telephone (908) 903-3493 Fax (908) 903-3656
e-mail: surety@chubb.com

ACKNOWLEDGMENT OF SURETY COMPANY

STATE OFNew York.....} ss
COUNTY OFNassau.....}

On this NOVEMBER 15, 2013, before me personally came SUSAN LUPSKI.....
to me know, who, being by me duly sworn, did depose and say; that he/she resides in
NASSAU COUNTY....., State of NEW YORK....., that he/she is the Attorney-In-Fact of the
FEDERAL INSURANCE COMPANY.....the corporation described in which
executed the above instrument; that he/she knows the seal of said corporation; that the
seal affixed to said instrument is such corporate seal; that is was so affixed by order of
the Board of Directors of said corporation; and that he/she signed his/her name thereto by
like order; and the affiant did further depose and say that the Superintendent of Insurance
of the State of New York, has, pursuant to Section 1111 of the Insurance Law of the State
of New York, issued to....FEDERAL INSURANCE COMPANY.....(Surety) his/her
certificate of qualification evidencing the qualification of said Company and its
sufficiency under any law of the State of New York as surety and guarantor, and the
propriety of accepting and approving it as such; and that such certificate has not been
revoked.

GRACE ACKERSON
Notary Public, State of New York
Nassau County
Lic. #01AC6111590
Term Expires June 14, 2016


Notary Public

NY acknowledgment

FEDERAL INSURANCE COMPANY

STATEMENT OF ASSETS, LIABILITIES AND SURPLUS TO POLICYHOLDERS

Statutory Basis

DECEMBER 31, 2012

(in thousands of dollars)

ASSETS		LIABILITIES AND SURPLUS TO POLICYHOLDERS	
Cash and Short Term Investments.....	\$ 402,323	Outstanding Losses and Loss Expenses.....	\$ 12,627,388
United States Government, State and Municipal Bonds.....	9,901,519	Unearned Premiums.....	3,416,163
Other Bonds.....	4,595,536	Ceded Reinsurance Premiums Payable.....	364,197
Stocks.....	811,166	Provision for Reinsurance.....	62,250
Other Invested Assets.....	1,681,828	Other Liabilities.....	935,654
TOTAL INVESTMENTS	17,392,372	TOTAL LIABILITIES	17,405,652
Investments in Affiliates:			
Chubb Investment Holdings, Inc.....	3,352,969	Capital Stock.....	20,980
Pacific Indemnity Company.....	2,496,198	Paid-In Surplus.....	3,106,809
Chubb Insurance Investment Holdings Ltd....	1,228,075	Unassigned Funds	10,713,227
Executive Risk Indemnity Inc.....	1,100,637		
CC Canada Holdings Ltd.....	758,892	SURPLUS TO POLICYHOLDERS.....	13,841,016
Chubb Insurance Company of Australia Limited	517,597		
Great Northern Insurance Company	438,592		
Chubb European Investment Holdings SLP ..	265,490		
Vigilant Insurance Company.....	246,766		
Other Affiliates.....	429,458		
Premiums Receivable	1,494,693		
Other Assets	1,524,929		
TOTAL ADMITTED ASSETS	\$ 31,246,668	TOTAL LIABILITIES AND SURPLUS TO POLICYHOLDERS.....	\$ 31,246,668

Investments are valued in accordance with requirements of the National Association of Insurance Commissioners.
Investments with a carrying value of \$430,688,714 are deposited with government authorities as required by law.

State, County & City of New York, — ss:

Yvonne Baker, Assistant Secretary

of the Federal Insurance Company

being duly sworn, deposes and says that the foregoing Statement of Assets, Liabilities and Surplus to Policyholders of said Federal Insurance Company on December 31, 2012 is true and correct and is a true abstract of the Annual Statement of said Company as filed with the Secretary of the Treasury of the United States for the 12 months ending December 31, 2012.

Subscribed and sworn to before me
this March 31, 2013.

Dorothy Baker

Notary Public

DOROTHY M. BAKER

Notary Public, State of New York
No. 31-4904994

Qualified in New York County
Commission Expires Sept. 14, 2013

Yvonne Baker

Assistant Secretary

PAYMENT BOND

KNOW ALL PERSONS BY THESE PRESENTS, That we,

C.A.C. Industries, Inc.

54-08 Vernon Blvd., Long Island City, NY 11101

hereinafter referred to as the "Principal" and

Federal Insurance Company

15 Mountain View Road, Warren, NJ 07059

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:

Five Million Eight Hundred Sixty One Thousand Three Hundred Thirty Three Dollars and 79/100

\$ 5,861,333.79

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:

Project ID: HWPLZ001K, Reconstruction of Myrtle Avenue from Hall Street to Emerson Place,

including Sewer, Water Main, Street Lighting and Traffic Signal Work, Borough of Brooklyn.

a copy of which Contract is annexed to and hereby made a part of this bond as though herein set forth in full.

PAYMENT BOND

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 of any such Subcontractors, including all persons so engaged who perform the work of laborers or mechanics at or in the vicinity of the site 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 (construction or not), as well as teams, fuels, oils, implements or machinery furnished, used or consumed by said Principal or any Subcontractors 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 null and void; otherwise to remain in full force and effect. This bond is subject to the following additional conditions, limitations and agreements:**
- c) The Principal and Surety (Sureties) agree that this bond shall be for the benefit of any materialman or laborer having a just claim, as well as the City itself.**
- d) 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 person as party plaintiff.**
- e) The Principal and Surety (Sureties) agree that neither of them will hold the City liable for any judgment for costs or otherwise, obtained against either or both of them by 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.**
- f) 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.**

PAYMENT BOND

g) 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/herself 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, MATERIALMAN 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 placed 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 bond 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 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.

PAYMENT BOND


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 15th day of November, 2013.

(SEAL) C.A.C. Industries, Inc. (L.S.)

By: [Signature]
Principal

(SEAL) Federal Insurance Company
Surety

By: [Signature]
Susan Lupski Attorney-in-Fact

(SEAL)  Indiana
Surety

By: _____

(SEAL) _____
Surety

By: _____

(SEAL) _____
Surety

By: _____

BOND PREMIUM RATE: \$8.05/Sliding Scale

BOND PREMIUM COST: \$46,107.00

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 member of counterparts of the bond corresponding to the number of counterparts of the Contract.

PAYMENT BOND

ACKNOWLEDGMENT OF PRINCIPAL - IF A CORPORATION

State of NEW YORK County of QUEENS ss:

On this 18TH day of NOVEMBER, 2013

before me personally came MICHAEL A CAPASSO

to me known, who, affirms or being by me duly sworn did depose and say that he/she resides

at 45 E 72ND ST
NYC NY 10021

that he/she is the PRESIDENT of CAR INDUSTRIES INC
the corporation described in and which executed the foregoing instrument; that he/she 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/she signed his name thereto
by like order.

[Signature]
Notary Public or Commissioner of Deeds

DIANE C. DERIN
Notary Public, State of New York
No. 01DE5048152
Qualified in Queens County
Commission Expires August 14, 2017

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/she acknowledged to me that
he/she executed the same as and for the act and deed of said firm.

Notary Public or Commissioner of Deeds

PAYMENT BOND

ACKNOWLEDGMENT OF PRINCIPAL - IF AN INDIVIDUAL

State of _____ County of _____ SS.:

On this _____ day of _____, _____

before me personally appeared _____ me known and known to me to be the

person described in and who executed the foregoing instrument and acknowledged that he/she 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) duly certified copy of latest published financial statement of assets and liabilities of Surety.

AFFIX ACKNOWLEDGMENTS AND JUSTIFICATIONS OF SURETIES



**Chubb
Surety**

**POWER
OF
ATTORNEY**

**Federal Insurance Company
Vigilant Insurance Company
Pacific Indemnity Company**

**Attn: Surety Department
15 Mountain View Road
Warren, NJ 07059**

Know All by These Presents, That FEDERAL INSURANCE COMPANY, an Indiana corporation, VIGILANT INSURANCE COMPANY, a New York corporation, and PACIFIC INDEMNITY COMPANY, a Wisconsin corporation, do each hereby constitute and appoint Thomas Bean, George O. Brewster, Colette R. Chisholm, Susan Lupski, Gerard S. Macholz, Camille Maitland, Robert T. Pearson and Rita Sagliano of Uniondale, New York

each as their true and lawful Attorney-in-Fact to execute under such designation in their names and to affix their corporate seals to and deliver for and on their behalf as surety thereon or otherwise, bonds and undertakings and other writings obligatory in the nature thereof (other than bail bonds) given or executed in the course of business, and any instruments amending or altering the same, and consents to the modification or alteration of any instrument referred to in said bonds or obligations.

In Witness Whereof, said FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, and PACIFIC INDEMNITY COMPANY have each executed and attested these presents and affixed their corporate seals on this 27th day of March, 2013.

David J. Edwards
David J. Edwards, Assistant Secretary

David B. Norris, Jr.
David B. Norris, Jr., Vice President

STATE OF NEW JERSEY

County of Somerset

ss.

On this 27th day of March, 2013 before me, a Notary Public of New Jersey, personally came David J. Edwards, to me known to be Assistant Secretary of FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, and PACIFIC INDEMNITY COMPANY, the companies which executed the foregoing Power of Attorney, and the said David J. Edwards, being by me duly sworn, did depose and say that he is Assistant Secretary of FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, and PACIFIC INDEMNITY COMPANY and knows the corporate seals thereof, that the seals affixed to the foregoing Power of Attorney are such corporate seals and were thereto affixed by authority of the By-Laws of said Companies; and that he signed said Power of Attorney as Assistant Secretary of said Companies by like authority; and that he is acquainted with David B. Norris, Jr., and knows him to be Vice President of said Companies; and that the signature of David B. Norris, Jr., subscribed to said Power of Attorney is in the genuine handwriting of David B. Norris, Jr., and was thereto subscribed by authority of said By-Laws and in deponent's presence.

Notarial Seal



**KATHERINE J. ADELAAR
NOTARY PUBLIC OF NEW JERSEY
No 2316685
Commission Expires July 16, 2014**

Kath J Adelaar
Notary Public

CERTIFICATION

Extract from the By-Laws of FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, and PACIFIC INDEMNITY COMPANY:

"All powers of attorney for and on behalf of the Company may and shall be executed in the name and on behalf of the Company, either by the Chairman or the President or a Vice President or an Assistant Vice President, jointly with the Secretary or an Assistant Secretary, under their respective designations. The signature of such officers may be engraved, printed or lithographed. The signature of each of the following officers: Chairman, President, any Vice President, any Assistant Vice President, any Secretary, any Assistant Secretary and the seal of the Company may be affixed by facsimile to any power of attorney or to any certificate relating thereto appointing Assistant Secretaries or Attorneys-in-Fact for purposes only of executing and attesting bonds and undertakings and other writings obligatory in the nature thereof, and any such power of attorney or certificate bearing such facsimile signature or facsimile seal shall be valid and binding upon the Company and any such power so executed and certified by such facsimile signature and facsimile seal shall be valid and binding upon the Company with respect to any bond or undertaking to which it is attached."

I, David J. Edwards, Assistant Secretary of FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, and PACIFIC INDEMNITY COMPANY (the "Companies") do hereby certify that

- (i) the foregoing extract of the By-Laws of the Companies is true and correct,
- (ii) the Companies are duly licensed and authorized to transact surety business in all 50 of the United States of America and the District of Columbia and are authorized by the U.S. Treasury Department; further, Federal and Vigilant are licensed in Puerto Rico and the U.S. Virgin Islands, and Federal is licensed in American Samoa, Guam, and each of the Provinces of Canada except Prince Edward Island; and
- (iii) the foregoing Power of Attorney is true, correct and in full force and effect.

Given under my hand and seals of said Companies at Warren, NJ this NOV 15 2013



David J. Edwards
David J. Edwards, Assistant Secretary

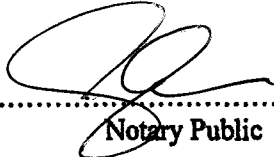
IN THE EVENT YOU WISH TO NOTIFY US OF A CLAIM, VERIFY THE AUTHENTICITY OF THIS BOND OR NOTIFY US OF ANY OTHER MATTER, PLEASE CONTACT US AT ADDRESS LISTED ABOVE, OR BY Telephone (908) 903- 3493 Fax (908) 903- 3656
e-mail: surety@chubb.com

ACKNOWLEDGMENT OF SURETY COMPANY

STATE OFNew York.....} ss
COUNTY OFNassau.....}

On this NOVEMBER 15, 2013, before me personally came. SUSAN LUPSKI.....
to me know, who, being by me duly sworn, did depose and say; that he/she resides in
NASSAU COUNTY....., State of NEW YORK....., that he/she is the Attorney-In-Fact of the
FEDERAL INSURANCE COMPANY.....the corporation described in which
executed the above instrument; that he/she knows the seal of said corporation; that the
seal affixed to said instrument is such corporate seal; that is was so affixed by order of
the Board of Directors of said corporation; and that he/she signed his/her name thereto by
like order; and the affiant did further depose and say that the Superintendent of Insurance
of the State of New York, has, pursuant to Section 1111 of the Insurance Law of the State
of New York, issued to...FEDERAL INSURANCE COMPANY.....(Surety) his/her
certificate of qualification evidencing the qualification of said Company and its
sufficiency under any law of the State of New York as surety and guarantor, and the
propriety of accepting and approving it as such; and that such certificate has not been
revoked.

GRACE ACKERSON
Notary Public, State of New York
Nassau County
Lic. #01AC6111590
Term Expires June 14, 2016


.....
Notary Public

NY acknowledgment

FEDERAL INSURANCE COMPANY

STATEMENT OF ASSETS, LIABILITIES AND SURPLUS TO POLICYHOLDERS

Statutory Basis

DECEMBER 31, 2012

(in thousands of dollars)

ASSETS		LIABILITIES AND SURPLUS TO POLICYHOLDERS	
Cash and Short Term Investments.....	\$ 402,323	Outstanding Losses and Loss Expenses	\$ 12,627,388
United States Government, State and Municipal Bonds	9,901,519	Unearned Premiums.....	3,416,163
Other Bonds.....	4,595,536	Ceded Reinsurance Premiums Payable.....	364,197
Stocks.....	811,166	Provision for Reinsurance	62,250
Other Invested Assets.....	1,681,828	Other Liabilities.....	935,654
 TOTAL INVESTMENTS	 17,392,372	 TOTAL LIABILITIES	 17,405,652
Investments in Affiliates:			
Chubb Investment Holdings, Inc.	3,352,969	Capital Stock.....	20,980
Pacific Indemnity Company.....	2,496,198	Paid-In Surplus.....	3,106,809
Chubb Insurance Investment Holdings Ltd....	1,228,075	Unassigned Funds	10,713,227
Executive Risk Indemnity Inc.....	1,100,637		
CC Canada Holdings Ltd.....	758,892	SURPLUS TO POLICYHOLDERS	13,841,016
Chubb Insurance Company of Australia Limited	517,597		
Great Northern Insurance Company	438,592		
Chubb European Investment Holdings SLP ..	265,490		
Vigilant Insurance Company.....	246,766		
Other Affiliates	429,458		
Premiums Receivable	1,494,693		
Other Assets	1,524,929		
 TOTAL ADMITTED ASSETS	 \$ 31,246,668	 TOTAL LIABILITIES AND SURPLUS TO POLICYHOLDERS.....	 \$ 31,246,668

Investments are valued in accordance with requirements of the National Association of Insurance Commissioners.
Investments with a carrying value of \$430,688,714 are deposited with government authorities as required by law.

State, County & City of New York, — ss:

Yvonne Baker, Assistant Secretary

of the Federal Insurance Company

being duly sworn, deposes and says that the foregoing Statement of Assets, Liabilities and Surplus to Policyholders of said Federal Insurance Company on December 31, 2012 is true and correct and is a true abstract of the Annual Statement of said Company as filed with the Secretary of the Treasury of the United States for the 12 months ending December 31, 2012.

Subscribed and sworn to before me
this March 31, 2013.

Dorothy Baker

Notary Public

Yvonne Baker

Assistant Secretary

DOROTHY M. BAKER
Notary Public, State of New York
No. 31-4904994
Qualified in New York County
Commission Expires Sept. 14, 2013



CERTIFICATE OF LIABILITY INSURANCE

OP ID: CY

DATE (MM/DD/YYYY)

10/21/13

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 Loyd Keith Friedlander Partners, Ltd. 18 Prospect Street Huntington, NY 11743 Loyd Keith Friedlander		631-424-2600 631-424-4533	CONTACT NAME: LKF Partners, Ltd. PHONE (A/C, No, Ext): 631-424-2600 FAX (A/C, No): 631-424-4533 E-MAIL ADDRESS: cristina@lkfpartners.com PRODUCER CUSTOMER ID #: CACIN-1
INSURED C.A.C. Industries Inc. 54-08 Vernon Blvd Long Island City, NY 11101	INSURER(S) AFFORDING COVERAGE		NAIC #
	INSURER A : Travelers Property Casualty Co		25674
	INSURER B : Travelers Indemnity Company		25658
	INSURER C : Starr Indemnity & Liability Co		38318
	INSURER D : The Hartford		423450
	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 INSR	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	GENERAL LIABILITY						
	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY			VTC2J-CO-828K6241-TIL-13	06/29/13	06/29/14	EACH OCCURRENCE \$ 1,000,000
	<input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR						DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 300,000
	<input checked="" type="checkbox"/> Contractual Liab						MED EXP (Any one person) \$ 10,000
A	Lead Umbrella			VTSMJ-CUP-828K6253-TIL-13	06/29/13	06/29/14	PERSONAL & ADV INJURY \$ 1,000,000
	GEN'L AGGREGATE LIMIT APPLIES PER:						GENERAL AGGREGATE \$ 2,000,000
	<input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PROJECT <input type="checkbox"/> LOC						PRODUCTS - COMP/OP AGG \$ 2,000,000
							UMBRELLA \$ 5,000,000
B	AUTOMOBILE LIABILITY						
	<input checked="" type="checkbox"/> ANY AUTO			VTNYK-CAP-828K6265-IND13	06/29/13	06/29/14	COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000
	<input checked="" type="checkbox"/> ALL OWNED AUTOS						BODILY INJURY (Per person) \$
	<input checked="" type="checkbox"/> SCHEDULED AUTOS						BODILY INJURY (Per accident) \$
	<input checked="" type="checkbox"/> HIRED AUTOS						PROPERTY DAMAGE (Per accident) \$
	<input checked="" type="checkbox"/> NON-OWNED AUTOS						\$
C	UMBRELLA LIAB <input checked="" type="checkbox"/> OCCUR						EACH OCCURRENCE \$ 10,000,000
	<input checked="" type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE			SISCCCL01823412	06/29/13	06/29/14	AGGREGATE \$ 10,000,000
	DEDUCTIBLE						\$
	<input checked="" type="checkbox"/> RETENTION \$ 10,000						\$
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY						
	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH)	<input type="checkbox"/> Y <input type="checkbox"/> N	N/A				WC STATUTORY LIMITS \$
	If yes, describe under DESCRIPTION OF OPERATIONS below						E.L. EACH ACCIDENT \$
							E.L. DISEASE - EA EMPLOYEE \$
D	Equipment Floater			12 UUM ZU 7405	06/29/13	06/29/14	E.L. DISEASE - POLICY LIMIT \$
D	Property			12 UUM ZU 7405	06/29/13	06/29/14	Equipment 7,752,868 BPP 888,200

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)

RE: Contract #SE-814. PIN 8502013SE0011C for the Construction of Combined Sewers in: 69th Street between Queens Boulevard & Calamus Avenue. Borough of Queens.

CERTIFICATE HOLDER**CANCELLATION**

City of New York
Department of Design &
Construction
30-30 Thompson Avenue
Long Island City, NY 11101

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
Loyd Keith Friedlander

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SCHEDULE "A"
(GENERAL CONDITIONS TO CONSTRUCTION CONTRACT)
(GENERAL CONDITIONS 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.

LKF Partners Ltd ¹

[Name Of Broker (Typewritten)]

18 Prospect St. Huntington, NY 11743 ²

[Address Of Broker (Typewritten)]

Keith Friedlander
[Signature Of Authorized Official Or Broker]

Keith Friedlander- President ³

[Name And Title Of Authorized Official (Typewritten)]

Sworn to before me this

21 day of October 2001 ¹³

[Signature]
NOTARY PUBLIC

CELESTIA A. YUEN
Notary Public, State of New York
North Hempden, NY 11762
Commission Expires September 15, 2003





New York State Insurance Fund

Workers' Compensation & Disability Benefits Specialists Since 1914

199 CHURCH STREET, NEW YORK, N.Y. 10007-1100

Phone: (888) 997-3863

CERTIFICATE OF WORKERS' COMPENSATION INSURANCE

***** 113082726
C.A.C. INDUSTRIES INC
54-08 VERNON BLVD
LONG ISLAND CITY NY 11101

POLICYHOLDER

C.A.C. INDUSTRIES INC
54-08 VERNON BLVD
LONG ISLAND CITY NY 11101

CERTIFICATE HOLDER

CITY OF NEW YORK DEPARTMENT OF
DESIGN & CONSTRUCTION
30-30 THOMPSON AVENUE
LONG ISLAND CITY NY 11101

POLICY NUMBER
G 1394 246-1

CERTIFICATE NUMBER
639070

PERIOD COVERED BY THIS CERTIFICATE
06/29/2013 TO 06/29/2014

DATE
10/21/2013

THIS IS TO CERTIFY THAT THE POLICYHOLDER NAMED ABOVE IS INSURED WITH THE NEW YORK STATE INSURANCE FUND UNDER POLICY NO. 1394 246-1 UNTIL 06/29/2014, COVERING THE ENTIRE OBLIGATION OF THIS POLICYHOLDER FOR WORKERS' COMPENSATION UNDER THE NEW YORK WORKERS' COMPENSATION LAW WITH RESPECT TO ALL OPERATIONS IN THE STATE OF NEW YORK, EXCEPT AS INDICATED BELOW, AND, WITH RESPECT TO OPERATIONS OUTSIDE OF NEW YORK, TO THE POLICYHOLDER'S REGULAR NEW YORK STATE EMPLOYEES ONLY.

IF SAID POLICY IS CANCELLED, OR CHANGED PRIOR TO 06/29/2014 IN SUCH MANNER AS TO AFFECT THIS CERTIFICATE, 10 DAYS WRITTEN NOTICE OF SUCH CANCELLATION WILL BE GIVEN TO THE CERTIFICATE HOLDER ABOVE. NOTICE BY REGULAR MAIL SO ADDRESSED SHALL BE SUFFICIENT COMPLIANCE WITH THIS PROVISION. THE NEW YORK STATE INSURANCE FUND DOES NOT ASSUME ANY LIABILITY IN THE EVENT OF FAILURE TO GIVE SUCH NOTICE.

THIS POLICY DOES NOT COVER THE SOLE PROPRIETOR, PARTNERS AND/OR MEMBERS OF A LIMITED LIABILITY COMPANY.

THIS CERTIFICATE DOES NOT APPLY TO THOSE JOB SITES WHICH ARE COVERED BY OTHER INSURANCE AND ARE SPECIFICALLY EXCLUDED BY ENDORSEMENT.

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS NOR INSURANCE COVERAGE UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICY.

NEW YORK STATE INSURANCE FUND

DIRECTOR, INSURANCE FUND UNDERWRITING

This certificate can be validated on our web site at <http://www.nysif.com/validate> or by calling (888) 997-3863



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. Pursuant to Labor Law §220 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.

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.

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

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

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

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OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

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ASBESTOS HANDLER

(Hazardous Material; Disturbs, removes, encapsulates, repairs, or encloses friable asbestos material)

Asbestos Handler

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: **\$35.90**

Supplemental Benefit Rate per Hour: **\$15.05**

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 and Local #12A)

BLASTER

Blaster

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: **\$44.40**

Supplemental Benefit Rate per Hour: **\$38.44**

Blaster (Hydraulic)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: **\$45.17**

Supplemental Benefit Rate per Hour: **\$38.44**

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

Blaster - Trac Drill Hydraulic

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$40.04

Supplemental Benefit Rate per Hour: \$38.44

Blaster - Wagon: Air Trac: Quarry Bar: Drillrunners

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$39.30

Supplemental Benefit Rate per Hour: \$38.44

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: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$38.32

Supplemental Benefit Rate per Hour: \$38.44

Blaster - Powder Carriers

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$34.66

Supplemental Benefit Rate per Hour: \$38.44

Blaster - Hydraulic Trac Drill Chuck Tender

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$33.46

Supplemental Benefit Rate per Hour: \$38.44

Blaster - Chuck Tender & Nipper

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$32.75

Supplemental Benefit Rate per Hour: \$38.44

Blaster - Magazine Keepers: (Watch Person)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$19.76

Supplemental Benefit Rate per Hour: \$38.44

Overtime Description

Magazine Keepers:

Time and one half for work performed in excess of forty (40) hours per week and for work performed on Saturdays, Sundays and Holidays.

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

All Other Employees:

Time and one-half for the first eight hours of work on Saturday and for Make-up Time. Double time for all hours over eight Monday through Friday (except make-up hours) and for all hours worked on Sunday and Holidays.

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: 7/1/2013 - 12/31/2013

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.

Effective Period: 1/1/2014 - 6/30/2014

Wage Rate per Hour: **\$50.45**

Supplemental Benefit Rate per Hour: **\$41.31**

Supplemental Note: The above rate applies to repair or maintenance and new construction; For time and one half overtime - \$61.37; For double overtime - \$81.43.

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

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: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$46.44

Supplemental Benefit Rate per Hour: \$27.53

Overtime

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

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: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$48.08

Supplemental Benefit Rate per Hour: \$41.10

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.

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

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

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: 7/1/2013 - 7/17/2013

Wage Rate per Hour: **\$46.74**

Supplemental Benefit Rate per Hour: **\$42.37**

Effective Period: 7/18/2013 - 6/30/2014

Wage Rate per Hour: **\$46.82**

Supplemental Benefit Rate per Hour: **\$44.97**

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

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

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: 7/1/2013 - 6/30/2014

Wage Rate per Hour: **\$42.33**

Supplemental Benefit Rate per Hour: **\$26.17**

Supplemental Note: \$28.92 on Saturdays; \$31.67 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

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)

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

CEMENT MASON

Cement Mason

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$38.63

Supplemental Benefit Rate per Hour: \$39.05

Supplemental Note: Overtime supplemental benefit rate per hour: \$57.55

Overtime Description

Time and one-half the regular rate after an 8 hour day, double time the regular rate after 10 hours. Time and one-half the regular rate on Saturday, double time the regular rate after 10 hours. Double time the regular rate on 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.

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. Four Days a week at Ten (10)hour day.

(Local #780)

CORE DRILLER

Core Driller

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$35.44

Supplemental Benefit Rate per Hour: \$19.75

Core Driller Helper

Effective Period: 7/1/2013 - 6/30/2014

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

Wage Rate per Hour: \$28.60

Supplemental Benefit Rate per Hour: \$19.75

Core Driller Helper(Third year in the industry)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$25.74

Supplemental Benefit Rate per Hour: \$19.75

Core Driller Helper (Second year in the industry)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$22.88

Supplemental Benefit Rate per Hour: \$19.75

Core Driller Helper (First year in the industry)

Effective Period: 7/1/2013 - 6/30/2014

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.

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)

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

DERRICKPERSON AND RIGGER

Derrick Person & Rigger

Effective Period: 7/1/2013 - 6/30/2014

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.

Derrick Person & Rigger - Site Work

For site work where no rigging is involved.

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$30.00

Supplemental Benefit Rate per Hour: \$31.32

Overtime Description

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: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$59.40

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

Supplemental Benefit Rate per Hour: \$44.97

Diver Tender (Marine)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$42.05

Supplemental Benefit Rate per Hour: \$44.97

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

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: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$46.82

Supplemental Benefit Rate per Hour: \$44.97

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
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 11:00 P.M., shall work eight and one half hours allowing for one half hour for lunch but will be paid 113% of the straight time hourly wage and the straight time supplemental benefits.

(Carpenters District Council)

DRIVER: TRUCK (TEAMSTER)

Driver - Automobile Chauffeur (Dump Truck)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$38.11

Supplemental Benefit Rate per Hour: \$40.20

Driver - Heavy Equipment Trailer Driver

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$39.61

Supplemental Benefit Rate per Hour: \$40.20

Note: For time and one half overtime Wage Rate - \$57.16; for double time overtime Wage Rate - \$76.21

Driver - Euclid & Turnapull Operator

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$38.67

Supplemental Benefit Rate per Hour: \$40.20

Driver - Six Wheeler(3 Axle) Tractors & Trailers

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: **\$39.11**

Supplemental Benefit Rate per Hour: **\$40.20**

Note: For time and one half overtime Wage Rate - \$58.01; for double time overtime Wage Rate - \$77.34

Driver - Boom Truck

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: **\$39.36**

Supplemental Benefit Rate per Hour: **\$40.20**

Note: For time and one half overtime Wage Rate - \$58.01; for double time overtime Wage Rate - \$77.34

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).

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

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

Driver - Redi-Mix Driver (Sand & Gravel)

Effective Period: 7/1/2013 - 6/30/2014

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

Wage Rate per Hour: \$35.71

Supplemental Benefit Rate per Hour: \$37.27

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

Election Day

Thanksgiving Day

Christmas Day

(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: 7/1/2013 - 5/13/2014

Wage Rate per Hour: \$52.00

Supplemental Benefit Rate per Hour: \$46.13

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

Effective Period: 5/14/2014 - 6/30/2014

Wage Rate per Hour: \$53.00

Supplemental Benefit Rate per Hour: \$47.54

Electrician "A" (Regular Day Overtime)

Effective Period: 7/1/2013 - 5/13/2014

Wage Rate per Hour: \$78.00

Supplemental Benefit Rate per Hour: \$49.39

Effective Period: 5/14/2014 - 6/30/2014

Wage Rate per Hour: \$79.50

Supplemental Benefit Rate per Hour: \$50.86

Electrician "A" (Day Shift)

Effective Period: 7/1/2013 - 5/13/2014

Wage Rate per Hour: \$52.00

Supplemental Benefit Rate per Hour: \$46.13

Effective Period: 5/14/2014 - 6/30/2014

Wage Rate per Hour: \$53.00

Supplemental Benefit Rate per Hour: \$47.54

Electrician "A" (Day Shift Overtime After 8 hours)

Effective Period: 7/1/2013 - 5/13/2014

Wage Rate per Hour: \$78.00

Supplemental Benefit Rate per Hour: \$49.39

Effective Period: 5/14/2014 - 6/30/2014

Wage Rate per Hour: \$79.50

Supplemental Benefit Rate per Hour: \$50.86

Electrician "A" (Swing Shift)

Effective Period: 7/1/2013 - 5/13/2014

Wage Rate per Hour: \$61.01

Supplemental Benefit Rate per Hour: \$52.47

Effective Period: 5/14/2014 - 6/30/2014

Wage Rate per Hour: \$62.19

Supplemental Benefit Rate per Hour: \$54.07

Electrician "A" (Swing Shift Overtime After 7.5 hours)

Effective Period: 7/1/2013 - 5/13/2014

Wage Rate per Hour: \$91.52

Supplemental Benefit Rate per Hour: \$56.30

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
\$220 PREVAILING WAGE SCHEDULE

Effective Period: 5/14/2014 - 6/30/2014

Wage Rate per Hour: \$93.29

Supplemental Benefit Rate per Hour: \$57.97

Electrician "A" (Graveyard Shift)

Effective Period: 7/1/2013 - 5/13/2014

Wage Rate per Hour: \$68.34

Supplemental Benefit Rate per Hour: \$57.83

Effective Period: 5/14/2014 - 6/30/2014

Wage Rate per Hour: \$69.66

Supplemental Benefit Rate per Hour: \$59.59

Electrician "A" (Graveyard Shift Overtime After 7 hours)

Effective Period: 7/1/2013 - 5/13/2014

Wage Rate per Hour: \$102.51

Supplemental Benefit Rate per Hour: \$62.11

Effective Period: 5/14/2014 - 6/30/2014

Wage Rate per Hour: \$104.49

Supplemental Benefit Rate per Hour: \$63.96

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.

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

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, maintain and repair all kinds of lighting fixtures and local lighting controls and washing and cleaning of foregoing fixtures.

Effective Period: 7/1/2013 - 5/13/2014

Wage Rate per Hour: **\$26.50**

Supplemental Benefit Rate per Hour: **\$19.56**

First and Second Year "M" Wage Rate Per Hour - Hired on or before 5/10/07: **\$25.80**

First and Second Year "M" Supplemental Rate- Hired on or before 5/10/07: **\$19.21**

First and Second Year "M" Wage Rate Per Hour - Hired after 5/10/07: **\$22.00**

First and Second Year "M" Supplemental Rate- Hired after 5/10/07: **\$17.30**

Effective Period: 5/14/2014 - 6/30/2014

Wage Rate per Hour: **\$27.00**

Supplemental Benefit Rate per Hour: **\$20.32**

First and Second Year "M" Wage Rate Per Hour - Hired on or before 5/10/07: **\$26.30**

First and Second Year "M" Supplemental Rate- Hired on or before 5/10/07: **\$19.96**

First and Second Year "M" Wage Rate Per Hour - Hired after 5/10/07: **\$22.50**

First and Second Year "M" Supplemental Rate- Hired after 5/10/07: **\$18.06**

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: 7/1/2013 - 5/13/2014

Wage Rate per Hour: **\$39.75**

Supplemental Benefit Rate per Hour: **\$21.23**

First and Second Year "M" Wage Rate Per Hour - Hired on or before 5/10/07: **\$38.70**

First and Second Year "M" Supplemental Rate- Hired on or before 5/10/07: **\$20.83**

First and Second Year "M" Wage Rate Per Hour - Hired after 5/10/07: **\$33.00**

First and Second Year "M" Supplemental Rate- Hired after 5/10/07: **\$18.68**

Effective Period: 5/14/2014 - 6/30/2014

Wage Rate per Hour: **\$40.50**

Supplemental Benefit Rate per Hour: **\$21.01**

First and Second Year "M" Wage Rate Per Hour - Hired on or before 5/10/07: **\$39.45**

First and Second Year "M" Supplemental Rate- Hired on or before 5/10/07: **\$21.61**

First and Second Year "M" Wage Rate Per Hour - Hired after 5/10/07: **\$33.75**

First and Second Year "M" Supplemental Rate- Hired after 5/10/07: **\$19.47**

Overtime

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

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)

Alarm Technician

Effective Period: 7/1/2013 - 6/30/2014

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

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

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

(Local #3)

ELECTRICIAN-STREET LIGHTING WORKER

Electrician - Electro Pole Electrician

Effective Period: 7/1/2013 - 5/20/2014
Wage Rate per Hour: \$52.00
Supplemental Benefit Rate per Hour: \$47.90

Effective Period: 5/21/2014 - 6/30/2014
Wage Rate per Hour: \$53.00
Supplemental Benefit Rate per Hour: \$49.34

Electrician - Electro Pole Foundation Installer

Effective Period: 7/1/2013 - 5/20/2014
Wage Rate per Hour: \$39.42
Supplemental Benefit Rate per Hour: \$36.46

Effective Period: 5/21/2014 - 6/30/2014
Wage Rate per Hour: \$40.18
Supplemental Benefit Rate per Hour: \$37.73

Electrician - Electro Pole Maintainer

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

Effective Period: 7/1/2013 - 5/20/2014

Wage Rate per Hour: \$33.75

Supplemental Benefit Rate per Hour: \$32.83

Effective Period: 5/21/2014 - 6/30/2014

Wage Rate per Hour: \$34.40

Supplemental Benefit Rate per Hour: \$34.00

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

(Local #3)

ELEVATOR CONSTRUCTOR

Elevator Constructor

Effective Period: 7/1/2013 - 6/30/2014

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.

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

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: 7/1/2013 - 6/30/2014

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

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

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

Cherry pickers 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: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$61.05

Supplemental Benefit Rate per Hour: \$31.93

Supplemental Note: \$57.46 on overtime

Shift Wage Rate: \$97.68

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-A-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, Cherry pickers. 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: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$59.24

Supplemental Benefit Rate per Hour: \$31.93

Supplemental Note: \$57.46 on overtime

Shift Wage Rate: \$94.78

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

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: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$56.22

Supplemental Benefit Rate per Hour: \$31.93

Supplemental Note: \$57.46 on overtime

Shift Wage Rate: \$89.95

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: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$58.97

Supplemental Benefit Rate per Hour: \$31.93

Supplemental Note: \$57.46 on overtime

Shift Wage Rate: \$94.35

Engineer - Heavy Construction Maintenance Engineer II

On Base Mounted Tower Cranes

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$77.30

Supplemental Benefit Rate per Hour: \$31.93

Supplemental Note: \$57.46 on overtime

Shift Wage Rate: \$123.68

Engineer - Heavy Construction Maintenance Engineer III

On Generators, Light Towers

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$39.10

Supplemental Benefit Rate per Hour: \$31.93

Supplemental Note: \$57.46 on overtime

Shift Wage Rate: \$62.56

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

Engineer - Heavy Construction Maintenance Engineer IV

On Pumps and Mixers including mud sucking

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$40.11

Supplemental Benefit Rate per Hour: \$31.93

Supplemental Note: \$57.46 on overtime

Shift Wage Rate: \$64.18

Engineer - Heavy Construction Oilers I

Gradalls, Cold Planer Grader, Concrete Pumps, Driving Truck Cranes, Driving and Operating Fuel and Grease Trucks.

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$53.22

Supplemental Benefit Rate per Hour: \$31.93

Supplemental Note: \$57.46 on overtime

Shift Wage Rate: \$85.15

Engineer - Heavy Construction Oilers II

All gasoline, electric, diesel or air operated Shovels, Draglines, Backhoes, Keystones, Pavers, Gunite Machines, Battery of Compressors, Crawler Cranes, two-person Trenching Machines.

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$36.97

Supplemental Benefit Rate per Hour: \$31.93

Supplemental Note: \$57.46 on overtime

Shift Wage Rate: \$59.15

Engineer - Steel Erection Maintenance Engineers

Derrick, Travelers, Tower, Crawler Tower and Climbing Cranes

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$57.05

Supplemental Benefit Rate per Hour: \$31.93

Supplemental Note: \$57.46 on overtime

Shift Wage Rate: \$91.28

Engineer - Steel Erection Oiler I

On a Truck Crane

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$53.43

Supplemental Benefit Rate per Hour: \$31.93

Supplemental Note: \$57.46 on overtime

Shift Wage Rate: \$85.49

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

Engineer - Steel Erection Oiler II

On a Crawler Crane

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$40.84

Supplemental Benefit Rate per Hour: \$31.93

Supplemental Note: \$57.46 on overtime

Shift Wage Rate: \$65.34

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.

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

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: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$54.04

Supplemental Benefit Rate per Hour: \$31.93

Supplemental Note: \$57.46 on overtime

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

Engineer - Building Work Maintenance Engineers II

On Pumps, Generators, Mixers and Heaters

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$42.10

Supplemental Benefit Rate per Hour: \$31.93

Supplemental Note: \$57.46 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 Cranes: Driving and Operating Fuel and Grease Trucks, Cherrypickers (hydraulic cranes) over 70,000 GVW, and machines of a similar nature.

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$51.40

Supplemental Benefit Rate per Hour: \$31.93

Supplemental Note: \$57.46 on overtime

Engineer - Building Work Oilers II

Oilers on Crawler Cranes, Backhoes, Trenching Machines, Gunite Machines, Compressors (three or more in Battery).

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$38.31

Supplemental Benefit Rate per Hour: \$31.93

Supplemental Note: \$57.46 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

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

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)

ENGINEER - CITY SURVEYOR AND CONSULTANT

Party Chief

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$35.55

Supplemental Benefit Rate per Hour: \$17.65

Instrument Person

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$29.41

Supplemental Benefit Rate per Hour: \$17.65

Rodperson

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$25.54

Supplemental Benefit Rate per Hour: \$17.65

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.)

Field Engineer - BC Party Chief

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$55.40

Supplemental Benefit Rate per Hour: \$30.62

Supplemental Note: Overtime Benefit Rate - \$42.73 per hour (time & one half) \$54.84 per hour (double time).

Field Engineer - BC Instrument Person

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$43.10

Supplemental Benefit Rate per Hour: \$30.62

Supplemental Note: Overtime Benefit Rate - \$42.73 per hour (time & one half) \$54.84 per hour (double time).

Field Engineer - BC Rodperson

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$27.96

Supplemental Benefit Rate per Hour: \$30.62

Supplemental Note: Overtime Benefit Rate - \$42.73 per hour (time & one half) \$54.84 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

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)

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

ENGINEER - FIELD (HEAVY CONSTRUCTION)

(Construction of Roads, Tunnels, Bridges, Sewers, Building Foundations, Engineering Structures etc.)

Field Engineer - HC Party Chief

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$62.61

Supplemental Benefit Rate per Hour: \$30.62

Supplemental Note: Overtime benefit rate - \$42.73 per hour (time & one half), \$54.84 per hour (double time).

Field Engineer - HC Instrument Person

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$46.00

Supplemental Benefit Rate per Hour: \$30.62

Supplemental Note: Overtime benefit rate - \$42.73 per hour (time & one half), \$54.84 per hour (double time).

Field Engineer - HC Rodperson

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$38.61

Supplemental Benefit Rate per Hour: \$30.62

Supplemental Note: Overtime benefit rate - \$42.73 per hour (time & one half), \$54.84 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

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)

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

Field Engineer - Steel Erection Party Chief

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$58.50

Supplemental Benefit Rate per Hour: \$30.62

Supplemental Note: Overtime benefit rate - \$42.73 per hour (time & one half), \$54.84 per hour (double time).

Field Engineer - Steel Erection Instrument Person

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$45.53

Supplemental Benefit Rate per Hour: \$30.62

Supplemental Note: Overtime benefit rate - \$42.73 per hour (time & one half), \$54.84 per hour (double time).

Field Engineer - Steel Erection Rodperson

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$30.43

Supplemental Benefit Rate per Hour: \$30.62

Supplemental Note: Overtime benefit rate - \$42.73 per hour (time & one half), \$54.84 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

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

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
\$220 PREVAILING WAGE SCHEDULE

Back Filling Machines, Cranes, Mucking Machines and Dual Drum Paver.

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$67.70
Supplemental Benefit Rate per Hour: \$28.60
Supplemental Note: \$51.75 overtime hours
Shift Wage Rate: \$108.32

Operating Engineer - Road & Heavy Construction II

Backhoes, Power Shovels, Hydraulic Clam Shells, Steel Erection, Moles and machines of a similar nature.

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$70.10
Supplemental Benefit Rate per Hour: \$28.60
Supplemental Note: 51.75 overtime hours
Shift Wage Rate: \$112.16

Operating Engineer - Road & Heavy Construction III

Mine Hoists, Cranes, etc. (Used as Mine Hoists)

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$72.34
Supplemental Benefit Rate per Hour: \$28.60
Supplemental Note: \$51.75 overtime hours
Shift Wage Rate: \$115.74

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: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$70.63
Supplemental Benefit Rate per Hour: \$28.60
Supplemental Note: \$51.75 overtime hours
Shift Wage Rate: \$113.01

Operating Engineer - Road & Heavy Construction V

Pile Drivers & Rigs (employing Dock Builder foreperson): Derrick Boats, Tunnel Shovels.

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$69.23
Supplemental Benefit Rate per Hour: \$28.60
Supplemental Note: \$51.75 overtime hours
Shift Wage Rate: \$110.77

Operating Engineer - Road & Heavy Construction VI

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

Mixers (Concrete with loading attachment), Concrete Pavers, Cableways, Land Derricks, Power Houses (Low Air Pressure Units).

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$65.76

Supplemental Benefit Rate per Hour: \$28.60

Supplemental Note: \$51.75 overtime hours

Shift Wage Rate: \$105.22

Operating Engineer - Road & Heavy Construction VII

Barrier Movers , Barrier Transport and Machines of a Similar Nature.

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$53.08

Supplemental Benefit Rate per Hour: \$28.60

Supplemental Note: \$51.75 overtime hours

Shift Wage Rate: \$84.93

Operating Engineer - Road & Heavy Construction VIII

Utility Compressors

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$41.18

Supplemental Benefit Rate per Hour: \$28.60

Supplemental Note: \$51.75 overtime hours

Shift Wage Rate: \$51.93

Operating Engineer - Road & Heavy Construction IX

Horizontal Boring Rig

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$62.53

Supplemental Benefit Rate per Hour: \$28.60

Supplemental Note: \$51.75 overtime hours

Shift Wage Rate: \$100.05

Operating Engineer - Road & Heavy Construction X

Elevators (manually operated as personnel hoist).

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$57.46

Supplemental Benefit Rate per Hour: \$28.60

Supplemental Note: \$51.75 overtime hours

Shift Wage Rate: \$91.94

Operating Engineer - Road & Heavy Construction XI

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

Compressors (Portable 3 or more in battery), Driving of Truck Mounted Compressors, Well-point Pumps, Tugger Machines Well Point Pumps, Churn Drill.

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$44.63

Supplemental Benefit Rate per Hour: \$28.60

Supplemental Note: \$51.75 overtime hours

Shift Wage Rate: \$71.41

Operating Engineer - Road & Heavy Construction XII

All Drills and Machines of a similar nature.

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$66.45

Supplemental Benefit Rate per Hour: \$28.60

Supplemental Note: \$51.75 overtime hours

Shift Wage Rate: \$106.32

Operating Engineer - Road & Heavy Construction XIII

Concrete Pumps, Concrete Plant, Stone Crushers, Double Drum Hoist, Power Houses (other than above).

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$64.34

Supplemental Benefit Rate per Hour: \$28.60

Supplemental Note: \$51.75 overtime hours

Shift Wage Rate: \$102.94

Operating Engineer - Road & Heavy Construction XIV

Concrete Mixer

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$61.53

Supplemental Benefit Rate per Hour: \$28.60

Supplemental Note: \$51.75 overtime hours

Shift Wage Rate: \$98.45

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: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$41.44

Supplemental Benefit Rate per Hour: \$28.60

Supplemental Note: \$51.75 overtime hours

Shift Wage Rate: \$66.30

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

Operating Engineer - Road & Heavy Construction XVI

Concrete Breaking Machines, Hoists (Single Drum), Load Masters, Locomotives (over ten tons) and Dinkies over ten tons, Hydraulic Crane-Second Engineer.

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$58.74

Supplemental Benefit Rate per Hour: \$28.60

Supplemental Note: \$51.85 overtime hours

Shift Wage Rate: \$93.98

Operating Engineer - Road & Heavy Construction XVII

On-Site concrete plant engineer, On-site Asphalt Plant Engineer, and Vibratory console.

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$59.21

Supplemental Benefit Rate per Hour: \$28.60

Supplemental Note: \$51.75 overtime hours

Shift Wage Rate: \$94.74

Operating Engineer - Road & Heavy Construction XVIII

Tower Crane

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$85.00

Supplemental Benefit Rate per Hour: \$28.60

Supplemental Note: \$51.75 overtime hours

Shift Wage Rate: \$136.00

Operating Engineer - Paving I

Asphalt Spreaders, Autogrades (C.M.I.), Roto/Mil

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$65.76

Supplemental Benefit Rate per Hour: \$28.60

Supplemental Note: \$51.75 overtime hours

Shift Wage Rate: \$105.22

Operating Engineer - Paving II

Asphalt Roller

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$64.04

Supplemental Benefit Rate per Hour: \$28.60

Supplemental Note: \$51.75 overtime hours

Shift Wage Rate: \$102.46

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

Operating Engineer - Paving III

Asphalt Plants

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$54.17

Supplemental Benefit Rate per Hour: \$28.60

Supplemental Note: \$51.75 overtime hours

Shift Wage Rate: \$86.67

Operating Engineer - Concrete I

Cranes

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$70.32

Supplemental Benefit Rate per Hour: \$28.60

Supplemental Note: \$51.75 overtime hours

Operating Engineer - Concrete II

Compressors

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$41.76

Supplemental Benefit Rate per Hour: \$28.60

Supplemental Note: \$51.75 overtime hours

Operating Engineer - Concrete III

Micro-traps (Negative Air Machines), Vac-All Remediation System.

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$56.16

Supplemental Benefit Rate per Hour: \$28.60

Supplemental Note: \$51.75 overtime hours

Operating Engineer - Steel Erection I

Three Drum Derricks

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$73.37

Supplemental Benefit Rate per Hour: \$28.60

Supplemental Note: \$51.75 overtime hours

Shift Wage Rate: \$117.39

Operating Engineer - Steel Erection II

Cranes, 2 Drum Derricks, Hydraulic Cranes, Fork Lifts and Boom Trucks.

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$70.50

Supplemental Benefit Rate per Hour: \$28.60

Supplemental Note: \$51.75 overtime hours

Shift Wage Rate: \$112.80

Operating Engineer - Steel Erection III

Compressors, Welding Machines.

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$41.84

Supplemental Benefit Rate per Hour: \$28.60

Supplemental Note: \$51.75 overtime hours

Shift Wage Rate: \$66.94

Operating Engineer - Steel Erection IV

Compressors - Not Combined with Welding Machine.

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$39.85

Supplemental Benefit Rate per Hour: \$28.60

Supplemental Note: \$51.75 overtime hours

Shift Wage Rate: \$63.76

Operating Engineer - Building Work I

Forklifts, Plaster (Platform machine), Plaster Bucket, Concrete Pump and all other equipment used for hoisting material.

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$57.82

Supplemental Benefit Rate per Hour: \$28.60

Supplemental Note: \$51.75 overtime hours

Operating Engineer - Building Work II

Compressors, Welding Machines (Cutting Concrete-Tank Work), Paint Spraying, Sandblasting, Pumps (with the exclusion of Concrete Pumps), All Engines irrespective of Power (Power-Pac) used to drive Auxiliary Equipment, Air, Hydraulic, Jacking System, etc.

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$43.28

Supplemental Benefit Rate per Hour: \$28.60

Supplemental Note: \$51.75 overtime hours

Operating Engineer - Building Work III

Double Drum

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$65.83

Supplemental Benefit Rate per Hour: \$28.60

Supplemental Note: \$51.75 overtime hours

Operating Engineer - Building Work IV

Stone Derrick, Cranes, Hydraulic Cranes Boom Trucks.

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$69.74

Supplemental Benefit Rate per Hour: \$28.60

Supplemental Note: \$51.75 overtime hours

Operating Engineer - Building Work V

Dismantling and Erection of Cranes, Relief Engineer.

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$64.26

Supplemental Benefit Rate per Hour: \$28.60

Supplemental Note: \$51.75 overtime hours

Operating Engineer - Building Work VI

4 Pole Hoist, Single Drum Hoists.

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$63.58

Supplemental Benefit Rate per Hour: \$28.60

Supplemental Note: \$51.75 overtime hours

Operating Engineer - Building Work VII

Rack & Pinion and House Cars

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$50.53

Supplemental Benefit Rate per Hour: \$28.60

Supplemental Note: \$51.75 overtime hours

For New House Car projects started after 7/1/11 only: Wage Rate per Hour \$40.31

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.

For House Cars and Rack & Pinion only: Overtime paid at time and one-half for all hours in excess of eight hours in a day, Saturday, Sunday and Holidays worked.

Overtime

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
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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

For Steel Erection Only: 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: 7/1/2013 - 6/30/2014

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.

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
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: 7/1/2013 - 10/31/2013

Wage Rate per Hour: \$42.00

Supplemental Benefit Rate per Hour: \$33.24

Supplemental Note: Supplemental Benefit Overtime Rate: \$41.24

Effective Period: 11/1/2013 - 6/30/2014

Wage Rate per Hour: \$42.00

Supplemental Benefit Rate per Hour: \$34.09

Supplemental Note: Supplemental Benefit Overtime Rate: \$42.59

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.

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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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: 7/1/2013 - 4/30/2014

Wage Rate per Hour: \$23.50

Supplemental Benefit Rate per Hour: \$18.54

Effective Period: 5/1/2014 - 6/30/2014

Wage Rate per Hour: \$23.60

Supplemental Benefit Rate per Hour: \$19.04

Overtime

Time and one half the regular rate after an 8 hour day.

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

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
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(Local #1281)

HEAT AND FROST INSULATOR

Heat & Frost Insulator

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$56.48

Supplemental Benefit Rate per Hour: \$33.31

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

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)

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
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**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: 7/1/2013 - 6/30/2014

Wage Rate per Hour: **\$34.01**

Supplemental Benefit Rate per Hour: **\$25.14**

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: 7/1/2013 - 6/30/2014

Wage Rate per Hour: **\$23.75**

Supplemental Benefit Rate per Hour: **\$18.62**

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

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Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$42.30

Supplemental Benefit Rate per Hour: \$43.54

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

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: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$46.75

Supplemental Benefit Rate per Hour: \$62.48

Supplemental Note: Supplemental benefits are to be paid at the applicable overtime rate when overtime is in effect.

Overtime Description

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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.

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: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$39.25

Supplemental Benefit Rate per Hour: \$33.25

Overtime

Time and one half the regular rate after an 8 hour day.

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
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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

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: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$24.25

Supplemental Benefit Rate per Hour: \$12.30

Landscaper (3 - 6 years experience)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$23.25

Supplemental Benefit Rate per Hour: \$12.30

Landscaper (up to 3 years experience)

Effective Period: 7/1/2013 - 6/30/2014

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Wage Rate per Hour: \$20.75

Supplemental Benefit Rate per Hour: \$12.30

Groundperson

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$20.75

Supplemental Benefit Rate per Hour: \$12.30

Tree Remover / Pruner

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$29.25

Supplemental Benefit Rate per Hour: \$12.30

Landscaper Sprayer (Pesticide Applicator)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$19.25

Supplemental Benefit Rate per Hour: \$12.30

Watering - Plant Maintainer

Effective Period: 7/1/2013 - 6/30/2014

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)

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MARBLE MECHANIC

Marble Setter

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: **\$49.19**

Supplemental Benefit Rate per Hour: **\$32.24**

Marble Finisher

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: **\$39.05**

Supplemental Benefit Rate per Hour: **\$31.43**

Marble Polisher

Effective Period: 7/1/2013 - 6/30/2014

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

Local #7)

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MASON TENDER

Mason Tender

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$35.00

Supplemental Benefit Rate per Hour: \$25.74

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)

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: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$34.07

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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: 7/1/2013 - 6/30/2014

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

(Local #79)

METALLIC LATHER

Metallic Lather

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$41.43

Supplemental Benefit Rate per Hour: \$40.15

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

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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)

MILLWRIGHT

Millwright

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$47.69

Supplemental Benefit Rate per Hour: \$48.87

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

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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: 7/1/2013 - 6/30/2014

Wage Rate per Hour: **\$44.39**

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 - Mosaic & Terrazzo Finisher

Effective Period: 7/1/2013 - 6/30/2014

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: 7/1/2013 - 6/30/2014

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

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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

Paid Holidays

None

(Local #7)

PAINTER

Painter - Brush & Roller

Effective Period: 7/1/2013 - 4/30/2014

Wage Rate per Hour: \$37.50

Supplemental Benefit Rate per Hour: \$25.62

Supplemental Note: \$30.25 on overtime

Effective Period: 5/1/2014 - 6/30/2014

Wage Rate per Hour: \$39.50

Supplemental Benefit Rate per Hour: \$26.12

Supplemental Note: \$30.75 on overtime

Spray & Scaffold / Decorative / Sandblast

Effective Period: 7/1/2013 - 4/30/2014

Wage Rate per Hour: \$40.50

Supplemental Benefit Rate per Hour: \$25.62

Supplemental Note: \$30.25 on overtime

Effective Period: 5/1/2014 - 6/30/2014

Wage Rate per Hour: \$42.50

Supplemental Benefit Rate per Hour: \$26.12

Supplemental Note: \$30.75 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.

Overtime Holidays

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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: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$36.15

Supplemental Benefit Rate per Hour: \$9.66

Journey person

Effective Period: 7/1/2013 - 6/30/2014

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
Christmas Day

Shift Rates

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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: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$33.00

Supplemental Benefit Rate per Hour: \$11.62

Supplemental Note: Overtime Supplemental Benefit rate - \$7.42; New Hire Rate (0-3 months) - \$0.00

Lineperson (thermoplastic)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$37.00

Supplemental Benefit Rate per Hour: \$11.62

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.

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

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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: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$47.00

Supplemental Benefit Rate per Hour: \$32.08

Painter - Power Tool

Effective Period: 7/1/2013 - 6/30/2014

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

Paid Holidays

None

Shift Rates

Regular hourly rates plus a ten per cent (10%) differential

(Local #806)

PAPERHANGER

Paperhanger

Effective Period: 7/1/2013 - 4/30/2014

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

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.

Effective Period: 5/1/2014 - 6/30/2014

Wage Rate per Hour: \$41.08

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.

(District Council of Painters #9)

PAVER AND ROADBUILDER

Paver & Roadbuilder - Formsetter

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$43.54

Supplemental Benefit Rate per Hour: \$33.55

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

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

and repair of temporary construction fencing; slurry seal coating, maintenance of safety surfaces; play equipment installation, and other related work.

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$39.67

Supplemental Benefit Rate per Hour: \$33.55

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: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$45.12

Supplemental Benefit Rate per Hour: \$33.55

Production Paver & Roadbuilder - Raker

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$44.61

Supplemental Benefit Rate per Hour: \$33.55

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: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$41.32

Supplemental Benefit Rate per Hour: \$33.55

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 25%.

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

Presidential Election Day

Thanksgiving Day

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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 the single time rate, except that production paving work shall be paid at 20% over the single time rate for the screed person, rakers and shovelers directly involved only. All other workers will be exempt. 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: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$41.13

Supplemental Benefit Rate per Hour: \$24.95

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.

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
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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: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$35.00

Supplemental Benefit Rate per Hour: \$25.74

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

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
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Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$51.76

Supplemental Benefit Rate per Hour: \$37.19

Supplemental Note: Overtime supplemental benefit rate per hour: \$74.10

Overtime Description

Double time the regular rate after a 7 hour day - unless for new construction site work where the plumbing contract price is \$1.5 million or less, the hours of labor can be 8 hours per day at the employers option. On Alteration jobs when other mechanical 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 (MECHNICAL EQUIPMENT AND SERVICE)

(Mechanical Equipment and Service work shall include any repair and/or replacement of the present plumbing system.)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$33.46

Supplemental Benefit Rate per Hour: \$16.93

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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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
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: 7/1/2013 - 6/30/2014

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

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.

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(Plumbers Local #1)

PLUMBER: PUMP & TANK
(Installation and Maintenance)

Plumber - Pump & Tank

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$53.01

Supplemental Benefit Rate per Hour: \$31.86

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

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Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$45.41

Supplemental Benefit Rate per Hour: \$23.29

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: 7/1/2013 - 6/30/2014

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

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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: 7/1/2013 - 6/30/2014

Wage Rate per Hour: **\$45.41**

Supplemental Benefit Rate per Hour: **\$23.29**

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.

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

(Bricklayer District Council)

SHEET METAL WORKER

Sheet Metal Worker

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$45.96

Supplemental Benefit Rate per Hour: \$43.19

Supplemental Note: Supplemental benefit contributions are to be made at the applicable overtime rates.

Sheet Metal Worker - Duct Cleaner

Effective Period: 7/1/2013 - 6/30/2014

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: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$36.77

Supplemental Benefit Rate per Hour: \$43.19

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

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
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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.

Effective Period: 7/1/2013 - 7/31/2013

Wage Rate per Hour: **\$41.28**

Supplemental Benefit Rate per Hour: **\$22.88**

Supplemental Note: Supplemental benefit contributions are to be made at the applicable overtime rates.

Effective Period: 8/1/2013 - 6/30/2014

Wage Rate per Hour: **\$40.78**

Supplemental Benefit Rate per Hour: **\$23.38**

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

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§220 PREVAILING WAGE SCHEDULE

Paid Holidays

None

(Local #28)

SIGN ERECTOR

(Sheet Metal, Plastic, Electric, and Neon)

Sign Erector

Effective Period: 7/1/2013 - 6/30/2014

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.

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: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$52.50

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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

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: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$52.50

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

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§220 PREVAILING WAGE SCHEDULE

Columbus Day
Veteran's Day
Thanksgiving Day
Day after Thanksgiving
Christmas Day

Paid Holidays

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: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$36.30

Supplemental Benefit Rate per Hour: \$11.76

Refrigeration and Air Conditioner Service Person V

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$29.82

Supplemental Benefit Rate per Hour: \$10.71

Refrigeration and Air Conditioner Service Person IV

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$24.71

Supplemental Benefit Rate per Hour: \$9.80

Refrigeration and Air Conditioner Service Person III

Filter changing and maintenance thereof, oil and greasing, tower and coil cleaning, scraping and painting, general housekeeping, taking of water samples.

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Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$21.21

Supplemental Benefit Rate per Hour: \$9.12

Refrigeration and Air Conditioner Service Person II

Filter changing and maintenance thereof, oil and greasing, tower and coil cleaning, scraping and painting, general housekeeping, taking of water samples.

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$17.60

Supplemental Benefit Rate per Hour: \$8.50

Refrigeration and Air Conditioner Service Person I

Filter changing and maintenance thereof, oil and greasing, tower and coil cleaning, scraping and painting, general housekeeping, taking of water samples.

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$10.95

Supplemental Benefit Rate per Hour: \$7.90

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

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

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§220 PREVAILING WAGE SCHEDULE

(Local #638B)

STONE MASON - SETTER

Stone Mason - Setters

Effective Period: 7/1/2013 - 6/30/2014

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

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: 7/1/2013 - 12/31/2013

Wage Rate per Hour: \$44.32

Supplemental Benefit Rate per Hour: \$21.66

Effective Period: 1/1/2014 - 6/24/2014

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Wage Rate per Hour: \$44.82

Supplemental Benefit Rate per Hour: \$21.66

Effective Period: 6/25/2014 - 6/30/2014

Wage Rate per Hour: \$45.32

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.

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: 7/1/2013 - 6/30/2014

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.

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
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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

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: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$38.49

Supplemental Benefit Rate per Hour: \$27.40

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§220 PREVAILING WAGE SCHEDULE

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

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: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$48.35

Supplemental Benefit Rate per Hour: \$31.44

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

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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)

TIMBERPERSON

Timberperson

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$42.63

Supplemental Benefit Rate per Hour: \$44.54

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.

Time and one half the regular hourly rate after 40 hours in any work week.

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 11:00 P.M., shall work eight and one half hours allowing for one half hour for lunch but will be paid 113% of the straight time hourly wage and the straight time supplemental benefits.

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
\$220 PREVAILING WAGE SCHEDULE

(Local #1536)

TUNNEL WORKER

Blasters, Mucking Machine Operators (Compressed Air Rates)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$54.20

Supplemental Benefit Rate per Hour: \$48.20

Tunnel Workers (Compressed Air Rates)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$52.31

Supplemental Benefit Rate per Hour: \$46.59

Top Nipper (Compressed Air Rates)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$51.35

Supplemental Benefit Rate per Hour: \$45.78

Outside Lock Tender, Outside Gauge Tender, Muck Lock Tender (Compressed Air Rates)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$50.42

Supplemental Benefit Rate per Hour: \$44.91

Bottom Bell & Top Bell Signal Person: Shaft Person (Compressed Air Rates)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$50.42

Supplemental Benefit Rate per Hour: \$44.92

Changehouse Attendant: Powder Watchperson (Compressed Air Rates)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$43.94

Supplemental Benefit Rate per Hour: \$42.55

Blasters (Free Air Rates)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$51.72

Supplemental Benefit Rate per Hour: \$46.03

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 PREVAILING WAGE SCHEDULE

Tunnel Workers (Free Air Rates)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: **\$49.48**

Supplemental Benefit Rate per Hour: **\$44.06**

All Others (Free Air Rates)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: **\$45.73**

Supplemental Benefit Rate per Hour: **\$40.75**

Microtunneling (Free Air Rates)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: **\$39.58**

Supplemental Benefit Rate per Hour: **\$35.25**

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.

For Small-Bore Micro Tunneling Machines - Time and one-half the regular rate shall be paid for all overtime.

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 JOURNEYPEPERSON 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.

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ASBESTOS HANDLER

(Ratio of Apprentice Journeyperson: 1 to 1, 1 to 3)

Asbestos Handler (First 1000 Hours)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate Per Hour: 78% of Journeyperson's rate

Supplemental Benefit Rate Per Hour: \$15.05

Asbestos Handler (Second 1000 Hours)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate Per Hour: 80% of Journeyperson's rate

Supplemental Benefit Rate Per Hour: \$15.05

Asbestos Handler (Third 1000 Hours)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate Per Hour: 83% of Journeyperson's rate

Supplemental Benefit Rate Per Hour: \$15.05

Asbestos Handler (Fourth 1000 Hours)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate Per Hour: 89% of Journeyperson's rate

Supplemental Benefit Rate Per Hour: \$15.05

(Local #78)

BOILERMAKER

(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 3)

Boilermaker (First Year)

Effective Period: 7/1/2013 - 12/31/2013

Wage Rate Per Hour: 65% of Journeyperson's rate

Supplemental Benefit Rate Per Hour: \$28.75

Effective Period: 1/1/2014 - 6/30/2014

Wage Rate Per Hour: 65% of Journeyperson's rate

Supplemental Benefit Rate Per Hour: \$29.74

Boilermaker (Second Year: 1st Six Months)

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 APPRENTICESHIP PREVAILING WAGE SCHEDULE

Effective Period: 7/1/2013 - 12/31/2013
Wage Rate Per Hour: 70% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: \$30.33

Effective Period: 1/1/2014 - 6/30/2014
Wage Rate Per Hour: 75% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: \$31.91

Boilermaker (Second Year: 2nd Six Months)

Effective Period: 7/1/2013 - 12/31/2013
Wage Rate Per Hour: 75% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: \$31.91

Effective Period: 1/1/2014 - 6/30/2014
Wage Rate Per Hour: 75% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: \$33.05

Boilermaker (Third Year: 1st Six Months)

Effective Period: 7/1/2013 - 12/31/2013
Wage Rate Per Hour: 80% of Journeyperson's rat
Supplemental Benefit Rate Per Hour: \$33.49

Effective Period: 1/1/2014 - 6/30/2014
Wage Rate Per Hour: 80% of Journeyperson's rat
Supplemental Benefit Rate Per Hour: \$34.69

Boilermaker (Third Year: 2nd Six Months)

Effective Period: 7/1/2013 - 12/31/2013
Wage Rate Per Hour: 85% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: \$35.05

Effective Period: 1/1/2014 - 6/30/2014
Wage Rate Per Hour: 85% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: \$36.34

Boilermaker (Fourth Year: 1st Six Months)

Effective Period: 7/1/2013 - 12/31/2013
Wage Rate Per Hour: 90% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: \$36.63

Effective Period: 1/1/2014 - 6/30/2014
Wage Rate Per Hour: 90% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: \$38.00

Boilermaker (Fourth Year: 2nd Six Months)

Effective Period: 7/1/2013 - 12/31/2013

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 APPRENTICESHIP PREVAILING WAGE SCHEDULE

Wage Rate Per Hour: 95% of Journeyman's rate
Supplemental Benefit Rate Per Hour: \$38.20

Effective Period: 1/1/2014 - 6/30/2014

Wage Rate Per Hour: 95% of Journeyman's rate
Supplemental Benefit Rate Per Hour: \$39.65

(Local #5)

BRICKLAYER

(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 4)

Bricklayer (First 750 Hours)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate Per Hour: 50% of Journeyman's rate
Supplemental Benefit Rate Per Hour: \$16.60

Bricklayer (Second 750 Hours)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate Per Hour: 60% of Journeyman's rate
Supplemental Benefit Rate Per Hour: \$16.60

Bricklayer (Third 750 Hours)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate Per Hour: 70% of Journeyman's rate
Supplemental Benefit Rate Per Hour: \$16.60

Bricklayer (Fourth 750 Hours)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate Per Hour: 80% of Journeyman's rate
Supplemental Benefit Rate Per Hour: \$16.60

Bricklayer (Fifth 750 Hours)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate Per Hour: 90% of Journeyman's rate
Supplemental Benefit Rate Per Hour: \$16.60

Bricklayer (Sixth 750 Hours)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate Per Hour: 95% of Journeyman's rate

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 APPRENTICESHIP PREVAILING WAGE SCHEDULE

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: 7/1/2013 - 6/30/2014

Wage Rate Per Hour: 40% of Journeyperson's rate

Supplemental Benefit Rate Per Hour: \$27.69

Effective 7/18/13 - Supplemental Benefit Rate Per Hour: \$30.29

Carpenter (Second Year)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate Per Hour: 50% of Journeyperson's rate

Supplemental Benefit Rate Per Hour: \$27.69

Effective 7/18/13 - Supplemental Benefit Rate Per Hour: \$30.29

Carpenter (Third Year)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate Per Hour: 65% of Journeyperson's rate

Supplemental Benefit Rate Per Hour: \$27.69

Effective 7/18/13 - Supplemental Benefit Rate Per Hour: \$30.29

Carpenter (Fourth Year)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate Per Hour: 80% of Journeyperson's rate

Supplemental Benefit Rate Per Hour: \$27.69

Effective 7/18/13 - Supplemental Benefit Rate Per Hour: \$30.29

(Carpenters District Council)

CEMENT MASON

(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 4)

Cement Mason (First Year)

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
\$220 APPRENTICESHIP PREVAILING WAGE SCHEDULE

Effective Period: 7/1/2013 - 6/30/2014

Wage and Supplemental Rate Per Hour: 50% of Journeyperson's Rate

Cement Mason (Second Year)

Effective Period: 7/1/2013 - 6/30/2014

Wage and Supplemental Rate Per Hour: 60% of Journeyperson's Rate

Cement Mason (Third Year)

Effective Period: 7/1/2013 - 6/30/2014

Wage and Supplemental Rate Per Hour: 70% of Journeyperson's Rate

(Local #780)

CEMENT AND CONCRETE WORKER

(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 3)

Cement & Concrete Worker (0 - 500 hours)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate Per Hour: 50% of Journeyperson's rate

Supplemental Benefit Rate Per Hour: \$18.04

Cement & Concrete Worker (501 - 1000 hours)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate Per Hour: 65% of Journeyperson's rate

Supplemental Benefit Rate Per Hour: \$18.87

Cement & Concrete Worker (1001 - 2000 hours)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate Per Hour: 65% of Journeyperson's rate

Supplemental Benefit Rate Per Hour: \$24.25

Cement & Concrete Worker (2001 - 4000 hours)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate Per Hour: 80% of Journeyperson's rate

Supplemental Benefit Rate Per Hour: \$25.07

(Cement Concrete Workers District Council)

DERRICKPERSON & RIGGER (STONE)

(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 6)

Derrickperson & Rigger (stone) - First Year

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate Per Hour: 50% of Journeyperson's rate

Supplemental Benefit Rate Per Hour: 50% of Journeyperson's rate

Derrickperson & Rigger (stone) - Second Year: 1st Six Months

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate Per Hour: 70% of Journeyperson's rate

Supplemental Benefit Rate Per Hour: 75% of Journeyperson's rate

Derrickperson & Rigger (stone) - Second Year: 2nd Six Months

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate Per Hour: 80% of Journeyperson's rate

Supplemental Benefit Rate Per Hour: 75% of Journeyperson's rate

Derrickperson & Rigger (stone) - Third Year

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate Per Hour: 90% of Journeyperson's rate

Supplemental Benefit Rate Per Hour: 75% of Journeyperson's rate

(Local #197)

DOCKBUILDER/PILE DRIVER

(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 6)

Dockbuilder/Pile Driver (First Year)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate Per Hour: 40% of Journeyperson's rate

Supplemental Benefit Rate Per Hour: \$30.29

Dockbuilder/Pile Driver (Second Year)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate Per Hour: 50% of Journeyperson's rate

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 APPRENTICESHIP PREVAILING WAGE SCHEDULE

Supplemental Benefit Rate Per Hour: \$30.29

Dockbuilder/Pile Driver (Third Year)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate Per Hour: 65% of Journeyperson's rate

Supplemental Benefit Rate Per Hour: \$30.29

Dockbuilder/Pile Driver (Fourth Year)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate Per Hour: 80% of Journeyperson's rate

Supplemental Benefit Rate Per Hour: \$30.29

(Carpenters District Council)

ELECTRICIAN

(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 3)

Electrician (First Year - Hired before 5/10/07)

Effective Period: 7/1/2013 - 5/13/2014

Wage Rate per Hour: \$15.25

Supplemental Benefit Rate per Hour: \$12.26

Overtime Wage Rate Per Hour: \$22.88

Overtime Supplemental Rate Per Hour: \$13.26

Effective Period: 5/14/2014 - 6/30/2014

Wage Rate per Hour: \$15.25

Supplemental Benefit Rate per Hour: \$12.51

Overtime Wage Rate Per Hour: \$22.88

Overtime Supplemental Rate Per Hour: \$13.51

Electrician (First Year - Hired on or After 5/10/07)

Effective Period: 7/1/2013 - 5/13/2014

Wage Rate per Hour: \$12.50

Supplemental Benefit Rate per Hour: \$10.86

Overtime Wage Rate Per Hour: \$18.75

Overtime Supplemental Rate Per Hour: \$11.68

Effective Period: 5/14/2014 - 6/30/2014

Wage Rate per Hour: \$12.50

Supplemental Benefit Rate per Hour: \$11.11

Overtime Wage Rate Per Hour: \$18.75

Overtime Supplemental Rate Per Hour: \$11.93

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
\$220 APPRENTICESHIP PREVAILING WAGE SCHEDULE

Electrician (Second Year - Hired before 5/10/07)

Effective Period: 7/1/2013 - 5/13/2014

Wage Rate per Hour: \$18.05

Supplemental Benefit Rate per Hour: \$13.68

Overtime Wage Rate Per Hour: \$27.08

Overtime Supplemental Rate Per Hour: \$14.87

Effective Period: 5/14/2014 - 6/30/2014

Wage Rate per Hour: \$18.05

Supplemental Benefit Rate per Hour: \$13.93

Overtime Wage Rate Per Hour: \$27.08

Overtime Supplemental Rate Per Hour: \$15.12

Electrician (Second Year - Hired on or After 5/10/07)

Effective Period: 7/1/2013 - 5/13/2014

Wage Rate per Hour: \$14.50

Supplemental Benefit Rate per Hour: \$11.88

Overtime Wage Rate Per Hour: \$21.75

Overtime Supplemental Rate Per Hour: \$12.83

Effective Period: 5/14/2014 - 6/30/2014

Wage Rate per Hour: \$14.50

Supplemental Benefit Rate per Hour: \$12.13

Overtime Wage Rate Per Hour: \$21.75

Overtime Supplemental Rate Per Hour: \$13.08

Electrician (Third Year - Hired before 5/10/07)

Effective Period: 7/1/2013 - 5/13/2014

Wage Rate per Hour: \$20.15

Supplemental Benefit Rate per Hour: \$14.75

Overtime Wage Rate Per Hour: \$30.23

Overtime Supplemental Rate Per Hour: \$16.08

Effective Period: 5/14/2014 - 6/30/2014

Wage Rate per Hour: \$20.15

Supplemental Benefit Rate per Hour: \$15.00

Overtime Wage Rate Per Hour: \$30.23

Overtime Supplemental Rate Per Hour: \$16.33

Electrician (Third Year - Hired on or After 5/10/07)

Effective Period: 7/1/2013 - 5/13/2014

Wage Rate per Hour: \$16.50

Supplemental Benefit Rate per Hour: \$12.89

Overtime Wage Rate Per Hour: \$24.75

Overtime Supplemental Rate Per Hour: \$13.98

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
\$220 APPRENTICESHIP PREVAILING WAGE SCHEDULE

Effective Period: 5/14/2014 - 6/30/2014

Wage Rate per Hour: \$16.50

Supplemental Benefit Rate per Hour: \$13.14

Overtime Wage Rate Per Hour: \$24.75

Overtime Supplemental Rate Per Hour: \$14.23

Electrician (Fourth Year - Hired before 5/10/07)

Effective Period: 7/1/2013 - 5/13/2014

Wage Rate per Hour: \$22.10

Supplemental Benefit Rate per Hour: \$15.74

Overtime Wage Rate Per Hour: \$33.15

Overtime Supplemental Rate Per Hour: \$17.20

Effective Period: 5/14/2014 - 6/30/2014

Wage Rate per Hour: \$22.10

Supplemental Benefit Rate per Hour: \$15.99

Overtime Wage Rate Per Hour: \$33.15

Overtime Supplemental Rate Per Hour: \$17.45

Electrician (Fourth Year - Hired on or After 5/10/07)

Effective Period: 7/1/2013 - 5/13/2014

Wage Rate per Hour: \$18.50

Supplemental Benefit Rate per Hour: \$13.91

Overtime Wage Rate Per Hour: \$27.75

Overtime Supplemental Rate Per Hour: \$15.13

Effective Period: 5/14/2014 - 6/30/2014

Wage Rate per Hour: \$18.50

Supplemental Benefit Rate per Hour: \$14.16

Overtime Wage Rate Per Hour: \$27.75

Overtime Supplemental Rate Per Hour: \$15.38

Electrician (Fifth Year - Hired before 5/10/07)

Effective Period: 7/1/2013 - 5/13/2014

Wage Rate per Hour: \$25.80

Supplemental Benefit Rate per Hour: \$19.21

Overtime Wage Rate Per Hour: \$38.70

Overtime Supplemental Rate Per Hour: \$20.83

Effective Period: 5/14/2014 - 6/30/2014

Wage Rate per Hour: \$26.30

Supplemental Benefit Rate per Hour: \$19.96

Overtime Wage Rate Per Hour: \$39.45

Overtime Supplemental Rate Per Hour: \$21.61

Electrician (Fifth Year - Hired on or After 5/10/07)

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 APPRENTICESHIP PREVAILING WAGE SCHEDULE

Effective Period: 7/1/2013 - 5/13/2014

Wage Rate per Hour: \$22.00

Supplemental Benefit Rate per Hour: \$17.30

Overtime Wage Rate Per Hour: \$33.00

Overtime Supplemental Rate Per Hour: \$18.68

Effective Period: 5/14/2014 - 6/30/2014

Wage Rate per Hour: \$22.50

Supplemental Benefit Rate per Hour: \$18.05

Overtime Wage Rate Per Hour: \$33.75

Overtime Supplemental Rate Per Hour: \$19.46

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: 7/1/2013 - 6/30/2014

Wage Rate Per Hour: 50% of Journeyperson's rate

Supplemental Rate Per Hour: \$26.87

Elevator (Constructor) - Second Year

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate Per Hour: 55% of Journeyperson's rate

Supplemental Rate Per Hour: \$27.92

Elevator (Constructor) - Third Year

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate Per Hour: 65% of Journeyperson's rate

Supplemental Rate Per Hour: \$29.38

Elevator (Constructor) - Fourth Year

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate Per Hour: 75% of Journeyperson's rate

Supplemental Rate Per Hour: \$30.84

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 APPRENTICESHIP PREVAILING WAGE SCHEDULE

(Local #1)

ELEVATOR REPAIR & MAINTENANCE

(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 2)

Elevator Service/Modernization Mechanic (First Year)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate Per Hour: 50% of Journeyperson's rate

Supplemental Benefit Per Hour: \$26.79

Elevator Service/Modernization Mechanic (Second Year)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate Per Hour: 55% of Journeyperson's rate

Supplemental Benefit Per Hour: \$27.12

Elevator Service/Modernization Mechanic (Third Year)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate Per Hour: 65% of Journeyperson's rate

Supplemental Benefit Per Hour: \$28.43

Elevator Service/Modernization Mechanic (Fourth Year)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate Per Hour: 75% of Journeyperson's rate

Supplemental Benefit Per Hour: \$29.74

(Local #1)

ENGINEER

(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 5)

Engineer - First Year

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$22.49

Supplemental Benefit Rate per Hour: \$20.68

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
\$220 APPRENTICESHIP PREVAILING WAGE SCHEDULE

Engineer - Second Year

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$28.11

Supplemental Benefit Rate per Hour: \$20.68

Engineer - Third Year

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$20.92

Supplemental Benefit Rate per Hour: \$20.68

Engineer - Fourth Year

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$33.73

Supplemental Benefit Rate per Hour: \$20.68

(Local #15)

ENGINEER - OPERATING

(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 5)

Operating Engineer - First Year

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate Per Hour 40% of Journeyperson's Rate

Supplemental Benefit Per Hour: \$18.60

Operating Engineer - Second Year

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate Per Hour: 50% of Journeyperson's Rate

Supplemental Benefit Per Hour: \$18.60

Operating Engineer - Third Year

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate Per Hour: 60% of Journeyperson's Rate

Supplemental Benefit Per Hour: \$18.60

(Local #14)

FLOOR COVERER

(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 4)

Floor Coverer (First Year)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate Per Hour: 40% of Journeyperson's rate

Supplemental Rate Per Hour: \$25.75

Floor Coverer (Second Year)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate Per Hour: 50% of Journeyperson's rate

Supplemental Rate Per Hour: \$25.75

Floor Coverer (Third Year)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate Per Hour: 65% of Journeyperson's rate

Supplemental Rate Per Hour: \$25.75

Floor Coverer (Fourth Year)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate Per Hour: 80% of Journeyperson's rate

Supplemental Rate Per Hour: \$25.75

(Carpenters District Council)

GLAZIER

(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 3)

Glazier (First Year)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate Per Hour: 40% of Journeyperson's rate

Supplemental Rate Per Hour: \$11.97

Glazier (Second Year)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate Per Hour: 50% of Journeyperson's rate

Supplemental Rate Per Hour: \$21.13

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 APPRENTICESHIP PREVAILING WAGE SCHEDULE

Glazier (Third Year)

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 60% of Journeyperson's rate
Supplemental Rate Per Hour: \$23.54

Glazier (Fourth Year)

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 80% of Journeyperson's rate
Supplemental Rate Per Hour: \$28.34

(Local #1281)

HEAT & FROST INSULATOR

(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 4)

Heat & Frost Insulator (First Year)

Effective Period: 7/1/2013 - 6/30/2014
Wage and Supplemental Rate Per Hour: 40% of Journeyperson's rate

Heat & Frost Insulator (Second Year)

Effective Period: 7/1/2013 - 6/30/2014
Wage and Supplemental Rate Per Hour: 60% of Journeyperson's rate

Heat & Frost Insulator (Third Year)

Effective Period: 7/1/2013 - 6/30/2014
Wage and Supplemental Rate Per Hour: 70% of Journeyperson's rate

Heat & Frost Insulator (Fourth Year)

Effective Period: 7/1/2013 - 6/30/2014
Wage and Supplemental Rate Per Hour: 80% of Journeyperson's rate

(Local #12)

**HOUSE WRECKER
(TOTAL DEMOLITION)**

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 APPRENTICESHIP PREVAILING WAGE SCHEDULE

(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 3)

House Wrecker - First Year

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$20.36

Supplemental Benefit Rate per Hour: \$16.35

House Wrecker - Second Year

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$21.46

Supplemental Benefit Rate per Hour: \$16.35

House Wrecker - Third Year

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$23.01

Supplemental Benefit Rate per Hour: \$16.35

House Wrecker - Fourth Year

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$25.36

Supplemental Benefit Rate per Hour: \$16.35

(Local #79)

IRON WORKER - ORNAMENTAL

(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 4)

Iron Worker (Ornamental) - 1st Four Months - Hired on or Before 8/1/08

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate Per Hour: 60% of Journeyperson's rate

Supplemental Rate Per Hour: \$35.78

Iron Worker (Ornamental) 5 - 10 Months - Hired on or Before 8/1/08

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate Per Hour: 65% of Journeyperson's rate

Supplemental Rate Per Hour: \$36.75

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
\$220 APPRENTICESHIP PREVAILING WAGE SCHEDULE

Iron Worker (Ornamental) 11 - 16 Months - Hired on or Before 8/1/08

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 70% of Journeyperson's rate
Supplemental Rate Per Hour: \$37.72

Iron Worker (Ornamental) 17 - 22 Months - Hired on or Before 8/1/08

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 80% of Journeyperson's rate
Supplemental Rate Per Hour: \$39.66

Iron Worker (Ornamental) 23 - 28 Months - Hired on or Before 8/1/08

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 85% of Journeyperson's rate
Supplemental Rate Per Hour: \$40.63

Iron Worker (Ornamental) 29 - 36 Months - Hired on or Before 8/1/08

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 95% of Journeyperson's rate
Supplemental Rate Per Hour: \$42.57

Iron Worker (Ornamental) - 1st Ten Months - Hired After 8/1/08

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 50% of Journeyperson's rate
Supplemental Rate Per Hour: \$33.84

Iron Worker (Ornamental) - 11 - 16 Months - Hired After 8/1/08

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 55% of Journeyperson's rate
Supplemental Rate Per Hour: \$34.81

Iron Worker (Ornamental) - 17 - 22 Months - Hired After 8/1/08

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 60% of Journeyperson's rate
Supplemental Rate Per Hour: \$35.78

Iron Worker (Ornamental) - 23 - 28 Months - Hired After 8/1/08

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 70% of Journeyperson's rate
Supplemental Rate Per Hour: \$37.72

Iron Worker (Ornamental) - 29 - 36 Months - Hired After 8/1/08

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 APPRENTICESHIP PREVAILING WAGE SCHEDULE

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate Per Hour: 80% of Journeyman's rate

Supplemental Rate Per Hour: \$39.66

(Local #580)

IRON WORKER - STRUCTURAL

(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 6)

Iron Worker (Structural) - 1st Six Months

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$24.48

Supplemental Benefit Rate per Hour: \$43.87

Iron Worker (Structural) - 7- 18 Months

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$25.08

Supplemental Benefit Rate per Hour: \$43.87

Iron Worker (Structural) - 19 - 36 months

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$25.68

Supplemental Benefit Rate per Hour: \$43.87

(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: 7/1/2013 - 6/30/2014

Wage Rate Per Hour: 50% of Journeyman's rate

Supplemental Rate Per Hour: \$33.25

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 APPRENTICESHIP PREVAILING WAGE SCHEDULE

**Laborer (Foundation, Concrete, Excavating, Street Pipe Layer & Common) -
Second 1000 hours**

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 60% of Journeyman's rate
Supplemental Rate Per Hour: \$33.25

**Laborer (Foundation, Concrete, Excavating, Street Pipe Layer & Common) -
Third 1000 hours**

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 75% of Journeyman's rate
Supplemental Rate Per Hour: \$33.25

**Laborer (Foundation, Concrete, Excavating, Street Pipe Layer & Common) -
Fourth 1000 hours**

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 90% of Journeyman's rate
Supplemental Rate Per Hour: \$33.25

(Local #731)

MARBLE MECHANICS

(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 4)

Cutters & Setters - First 750 Hours

Effective Period: 7/1/2013 - 6/30/2014
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: 7/1/2013 - 6/30/2014
Wage and Supplemental Rate Per Hour: 55% of Journeyman's rate

Cutters & Setters - Third 750 Hours

Effective Period: 7/1/2013 - 6/30/2014
Wage and Supplemental Rate Per Hour: 65% of Journeyman's rate

Cutters & Setters - Fourth 750 Hours

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 APPRENTICESHIP PREVAILING WAGE SCHEDULE

Effective Period: 7/1/2013 - 6/30/2014

Wage and Supplemental Rate Per Hour: 75% of Journeyperson's rate

Cutters & Setters - Fifth 750 Hours

Effective Period: 7/1/2013 - 6/30/2014

Wage and Supplemental Rate Per Hour: 85% of Journeyperson's rate

Cutters & Setters - Sixth 750 Hours

Effective Period: 7/1/2013 - 6/30/2014

Wage and Supplemental Rate Per Hour: 95% of Journeyperson's rate

Polishers & Finishers - First 750 Hours

Effective Period: 7/1/2013 - 6/30/2014

Wage and Supplemental Rate Per Hour: 50% of Journeyperson's rate

NO BENEFITS PAID DURING THE FIRST TWO MONTHS (PROBATIONARY PERIOD)

Polishers & Finishers - Second 750 Hours

Effective Period: 7/1/2013 - 6/30/2014

Wage and Supplemental Rate Per Hour: 60% of Journeyperson's rate

Polishers & Finishers - Third 750 Hours

Effective Period: 7/1/2013 - 6/30/2014

Wage and Supplemental Rate Per Hour: 75% of Journeyperson's rate

Polishers & Finishers - Fourth 750 Hours

Effective Period: 7/1/2013 - 6/30/2014

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: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$20.63

Supplemental Benefit Rate per Hour: \$17.06

Mason Tender - Second Year

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$21.73

Supplemental Benefit Rate per Hour: \$17.06

Mason Tender - Third Year

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$23.33

Supplemental Benefit Rate per Hour: \$17.06

Mason Tender - Fourth Year

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$25.93

Supplemental Benefit Rate per Hour: \$17.06

(Local #79)

METALLIC LATHER

(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 3)

Metallic Lather (First Year -Called Prior to 6/29/11)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$28.11

Supplemental Benefit Rate per Hour: \$22.79

Metallic Lather (Second Year - Called Prior to 6/29/11)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$32.71

Supplemental Benefit Rate per Hour: \$24.44

Metallic Lather (Third Year - Called Prior to 6/29/11)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$37.77

Supplemental Benefit Rate per Hour: \$25.59

Metallic Lather (First Year -Called On Or After 6/29/11)

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
\$220 APPRENTICESHIP PREVAILING WAGE SCHEDULE

Effective Period: 7/1/2013 - 6/30/2014

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: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$22.81

Supplemental Benefit Rate per Hour: \$19.85

Metallic Lather (Third Year - Called On Or After 6/29/11)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$27.91

Supplemental Benefit Rate per Hour: \$19.85

(Local #46)

MILLWRIGHT

(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 4)

Millwright (First Year)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$26.23

Supplemental Benefit Rate per Hour: \$31.51

Millwright (Second Year)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$31.00

Supplemental Benefit Rate per Hour: \$34.77

Millwright (Third Year)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$35.77

Supplemental Benefit Rate per Hour: \$39.19

Millwright (Fourth Year)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$45.30

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
\$220 APPRENTICESHIP PREVAILING WAGE SCHEDULE

Supplemental Benefit Rate per Hour: \$44.63

(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: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$26.19

Supplemental Benefit Rate per Hour: \$16.20

Paver and Roadbuilder - Second Year (Minimum 1000 hours)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$27.77

Supplemental Benefit Rate per Hour: \$16.20

(Local #1010)

PAINTER

(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 3)

Painter - Brush & Roller - First Year

Effective Period: 7/1/2013 - 4/30/2014

Wage Rate per Hour: \$15.00

Supplemental Benefit Rate per Hour: \$11.38

Effective Period: 5/1/2014 - 6/30/2014

Wage Rate per Hour: \$15.80

Supplemental Benefit Rate per Hour: \$11.88

Painter - Brush & Roller - Second Year

Effective Period: 7/1/2013 - 4/30/2014

Wage Rate per Hour: \$18.75

Supplemental Benefit Rate per Hour: \$15.23

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 APPRENTICESHIP PREVAILING WAGE SCHEDULE

Effective Period: 5/1/2014 - 6/30/2014

Wage Rate per Hour: \$19.75

Supplemental Benefit Rate per Hour: \$15.73

Painter - Brush & Roller - Third Year

Effective Period: 7/1/2013 - 4/30/2014

Wage Rate per Hour: \$22.50

Supplemental Benefit Rate per Hour: \$18.14

Effective Period: 5/1/2014 - 6/30/2014

Wage Rate per Hour: \$23.70

Supplemental Benefit Rate per Hour: \$18.64

Painter - Brush & Roller - Fourth Year

Effective Period: 7/1/2013 - 4/30/2014

Wage Rate per Hour: \$30.00

Supplemental Benefit Rate per Hour: \$23.52

Effective Period: 5/1/2014 - 6/30/2014

Wage Rate per Hour: \$31.60

Supplemental Benefit Rate per Hour: \$24.02

(District Council of Painters)

PAINTER - STRUCTURAL STEEL

(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 3)

Painters - Structural Steel (First Year)

Effective Period: 7/1/2013 - 6/30/2014

Wage and Supplemental Rate Per Hour: 40% of Journeyperson's rate

Painters - Structural Steel (Second Year)

Effective Period: 7/1/2013 - 6/30/2014

Wage and Supplemental Rate Per Hour: 60% of Journeyperson's rate

Painters - Structural Steel (Third Year)

Effective Period: 7/1/2013 - 6/30/2014

Wage and Supplemental Rate Per Hour: 80% of Journeyperson's rate

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
\$220 APPRENTICESHIP PREVAILING WAGE SCHEDULE

(Local #806)

PLASTERER

(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 3)

Plasterer - First Year: 1st Six Months

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate Per Hour: 40% of Journeyperson's rate

Supplemental Rate Per Hour: \$12.76

Plasterer - First Year: 2nd Six Months

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate Per Hour: 45% of Journeyperson's rate

Supplemental Rate Per Hour: \$13.24

Plasterer - Second Year: 1st Six Months

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate Per Hour: 55% of Journeyperson's rate

Supplemental Rate Per Hour: \$15.21

Plasterer - Second Year: 2nd Six Months

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate Per Hour: 60% of Journeyperson's rate

Supplemental Rate Per Hour: \$16.29

Plasterer - Third Year: 1st Six Months

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate Per Hour: 70% of Journeyperson's rate

Supplemental Rate Per Hour: \$18.46

Plasterer - Third Year: 2nd Six Months

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate Per Hour: 75% of Journeyperson's rate

Supplemental Rate Per Hour: \$19.54

(Local #530)

PLUMBER

(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 3)

Plumber - First Year: 1st Six Months

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$14.00

Supplemental Benefit Rate per Hour: \$0.71

Plumber - First Year: 2nd Six Months

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$14.00

Supplemental Benefit Rate per Hour: \$2.96

Plumber - Second Year

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$17.96

Supplemental Benefit Rate per Hour: \$16.25

Plumber - Third Year

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$20.06

Supplemental Benefit Rate per Hour: \$16.25

Plumber - Fourth Year

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$22.91

Supplemental Benefit Rate per Hour: \$16.25

Plumber - Fifth Year: 1st Six Months

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$24.31

Supplemental Benefit Rate per Hour: \$16.25

Plumber - Fifth Year: 2nd Six Months

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$36.38

Supplemental Benefit Rate per Hour: \$16.25

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§220 APPRENTICESHIP PREVAILING WAGE SCHEDULE

(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

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$25.00

Supplemental Benefit Rate per Hour: \$3.64

Pointer - Waterproofer, Caulker Mechanic - Second Year

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$27.25

Supplemental Benefit Rate per Hour: \$8.59

Pointer - Waterproofer, Caulker Mechanic - Third Year

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$32.23

Supplemental Benefit Rate per Hour: \$11.34

Pointer - Waterproofer, Caulker Mechanic - Fourth Year

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$38.66

Supplemental Benefit Rate per Hour: \$11.34

(Bricklayer District Council)

ROOFER

(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 2)

Roofer - First Year

Effective Period: 7/1/2013 - 6/30/2014

Wage and Supplemental Rate Per Hour: 35% of Journeyperson's Rate

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Roofer - Second Year

Effective Period: 7/1/2013 - 6/30/2014

Wage and Supplemental Rate Per Hour: 50% of Journeyperson's Rate

Roofer - Third Year

Effective Period: 7/1/2013 - 6/30/2014

Wage and Supplemental Rate Per Hour: 60% of Journeyperson's Rate

Roofer - Fourth Year

Effective Period: 7/1/2013 - 6/30/2014

Wage and Supplemental Rate Per Hour: 75% of Journeyperson's Rate

(Local #8)

SHEET METAL WORKER

(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 3)

Sheet Metal Worker - First Year

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate Per Hour: 30% of Journeyperson's rate

Supplemental Rate Per Hour: \$15.37

Sheet Metal Worker - Second Year

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate Per Hour: 35% of Journeyperson's rate

Supplemental Rate Per Hour: \$18.24

Sheet Metal Worker - Third Year (1st Six Months)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate Per Hour: 40% of Journeyperson's rate

Supplemental Rate Per Hour: \$20.06

Sheet Metal Worker - Third Year (2nd Six Months)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate Per Hour: 45% of Journeyperson's rate

Supplemental Rate Per Hour: \$21.87

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
\$220 APPRENTICESHIP PREVAILING WAGE SCHEDULE

Sheet Metal Worker - Fourth Year (1st Six Months)

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 50% of Journeyperson's rate
Supplemental Rate Per Hour: \$23.69

Sheet Metal Worker - Fourth Year (2nd Six Months)

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 55% of Journeyperson's rate
Supplemental Rate Per Hour: \$25.33

Sheet Metal Worker - Fifth Year (1st Six Months)

Effective Period: 7/1/2013 - 6/30/2014
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: 7/1/2013 - 6/30/2014
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: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 35% of Journeyperson's rate
Supplemental Rate Per Hour: \$5.96

Sign Erector - First Year: 2nd Six Months

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 40% of Journeyperson's rate
Supplemental Rate Per Hour: \$6.75

Sign Erector - Second Year: 1st Six Months

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 45% of Journeyperson's rate
Supplemental Rate Per Hour: \$7.55

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§220 APPRENTICESHIP PREVAILING WAGE SCHEDULE

Sign Erector - Second Year: 2nd Six Months

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate Per Hour: 50% of Journeyman's rate

Supplemental Rate Per Hour: \$8.34

Sign Erector - Third Year: 1st Six Months

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate Per Hour: 55% of Journeyman's rate

Supplemental Rate Per Hour: \$9.13

Sign Erector - Third Year: 2nd Six Months

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate Per Hour: 60% of Journeyman's rate

Supplemental Rate Per Hour: \$9.92

Sign Erector - Fourth Year: 1st Six Months

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate Per Hour: 65% of Journeyman's rate

Supplemental Rate Per Hour: \$10.72

Sign Erector - Fourth Year: 2nd Six Months

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate Per Hour: 70% of Journeyman's rate

Supplemental Rate Per Hour: \$11.51

Sign Erector - Fifth Year

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate Per Hour: 75% of Journeyman's rate

Supplemental Rate Per Hour: \$12.30

Sign Erector - Sixth Year

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate Per Hour: 80% of Journeyman's rate

Supplemental Rate Per Hour: \$12.30

(Local #137)

STEAMFITTER

Ratio of Apprentice to Journeyman: 1 to 1, 1 to 3)

Steamfitter - First Year

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate and Supplemental Per Hour: 40% of Journeyperson's rate

Steamfitter - Second Year

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate and Supplemental Rate Per Hour: 50% of Journeyperson's rate.

Steamfitter - Third Year

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate and Supplemental Rate per Hour: 65% of Journeyperson's rate.

Steamfitter - Fourth Year

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate and Supplemental Rate Per Hour: 80% of Journeyperson's rate.

Steamfitter - Fifth Year

Effective Period: 7/1/2013 - 6/30/2014

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: 7/1/2013 - 6/30/2014

Wage and Supplemental Rate Per Hour: 50% of Journeyperson's rate

Stone Mason - Setters - Second 750 Hours

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate Per Hour: 60% of Journeyperson's rate

Supplemental Rate Per Hour: 50% of Journeyperson's rate

Stone Mason - Setters - Third 750 Hours

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§220 APPRENTICESHIP PREVAILING WAGE SCHEDULE

Effective Period: 7/1/2013 - 6/30/2014

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: 7/1/2013 - 6/30/2014

Wage Rate Per Hour: 80% of Journeyperson's rate

Supplemental Rate Per Hour: 50% of Journeyperson's rate

Stone Mason - Setters - Fifth 750 Hours

Effective Period: 7/1/2013 - 6/30/2014

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: 7/1/2013 - 6/30/2014

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: 7/1/2013 - 6/30/2014

Wage and Supplemental Rate Per Hour: 40% of Journeyperson's rate

Drywall Taper - Second Year

Effective Period: 7/1/2013 - 6/30/2014

Wage and Supplemental Rate Per Hour: 60% of Journeyperson's rate

Drywall Taper - Third Year

Effective Period: 7/1/2013 - 6/30/2014

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: 7/1/2013 - 6/30/2014

Wage and Supplemental Rate Per Hour: 50% of Journeyperson's rate

Tile Layer - Setter - Second 750 Hours

Effective Period: 7/1/2013 - 6/30/2014

Wage and Supplemental Rate Per Hour: 55% of Journeyperson's rate

Tile Layer - Setter - Third 750 Hours

Effective Period: 7/1/2013 - 6/30/2014

Wage and Supplemental Rate Per Hour: 65% of Journeyperson's rate

Tile Layer - Setter - Fourth 750 Hours

Effective Period: 7/1/2013 - 6/30/2014

Wage and Supplemental Rate Per Hour: 75% of Journeyperson's rate

Tile Layer - Setter - Fifth 750 Hours

Effective Period: 7/1/2013 - 6/30/2014

Wage and Supplemental Rate Per Hour: 85% of Journeyperson's rate

Tile Layer - Setter - Sixth 750 Hours

Effective Period: 7/1/2013 - 6/30/2014

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: 7/1/2013 - 6/30/2014

Wage Rate Per Hour: 40% of Journeyperson's rate

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\$220 APPRENTICESHIP PREVAILING WAGE SCHEDULE

Supplemental Rate Per Hour: \$30.04

Timberperson - Second Year

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate Per Hour: 50% of Journeyperson's rate

Supplemental Rate Per Hour: \$30.04

Timberperson - Third Year

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate Per Hour: 65% of Journeyperson's rate

Supplemental Rate Per Hour: \$30.04

Timberperson - Fourth Year

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate Per Hour: 80% of Journeyperson's rate

Supplemental Rate Per Hour: \$30.04

(Local #1536)

(NO TEXT ON THIS PAGE)

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.

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.

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§6-109 PREVAILING WAGE SCHEDULE

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)

For the above building service classification, see the Labor Law Section 230 Schedule.

BUILDING CLEANER AND MAINTAINER (RESIDENTIAL)

For the above building service classification, see the Labor Law Section 230 Schedule.

CLEANER (PARKING GARAGE)

For the above building service classification, see the Labor Law Section 230 Schedule.

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: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$10.00

Supplemental Benefit Rate per Hour: \$1.50

(NYC Administrative Code §6-109)

FOOD SERVICE EMPLOYEES

Cook

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$15.62

Supplemental Benefit Rate per Hour: \$1.72

Cafeteria Attendant

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§6-109 PREVAILING WAGE SCHEDULE

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: **\$10.48**

Supplemental Benefit Rate per Hour: **\$1.72**

Counter Attendant

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: **\$9.95**

Supplemental Benefit Rate per Hour: **\$1.72**

Kitchen Helper / Dishwasher

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: **\$9.60**

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

For the above building service classification, see the Labor Law Section 230 Schedule.

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: 7/1/2013 - 6/30/2014

Wage Rate per Hour: **\$10.00**

Supplemental Benefit Rate per Hour: **\$1.50**

(NYC Administrative Code §6-109)

HEMECARE 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: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$10.00

Supplemental Benefit Rate per Hour: \$1.50

(NYC Administrative Code §6-109)

SECURITY GUARD (ARMED)

For the above building service classification, see the Labor Law Section 230 Schedule.

SECURITY GUARD (UNARMED)

For the above building service classification, see the Labor Law Section 230 Schedule.

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.

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§6-109 PREVAILING WAGE SCHEDULE

Effective Period: 7/1/2013 - 6/30/2014

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: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$32.83

Supplemental Benefit Rate per Hour: None

Cashier

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$11.50

Supplemental Benefit Rate per Hour: None

Clerk (various)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$14.86

Supplemental Benefit Rate per Hour: None

Computer Assistant

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$21.23

Supplemental Benefit Rate per Hour: None

Data Entry Operator

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$16.21

Supplemental Benefit Rate per Hour: None

Receptionist

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$14.88

Supplemental Benefit Rate per Hour: None

Secretary (various)

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§6-109 PREVAILING WAGE SCHEDULE

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$18.66
Supplemental Benefit Rate per Hour: None

Word Processor

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$20.02
Supplemental Benefit Rate per Hour: None

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 or NYC Administrative Code §6-109)

WINDOW CLEANER

For the above building service classification, see the Labor Law Section 230 Schedule.



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) 669-3621
FAX NUMBER: (212) 669-8491

ALAN G. HEVESI
COMPTROLLER

MEMORANDUM

November 6, 2000

To Agency Chief Contracting Officers

From: Leonard A. Mancusi *LMancusi*

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: HWPLZ001K

RECONSTRUCTION OF

MYRTLE AVENUE

FROM HALL STREET TO EMERSON PLACE

INCLUDING SEWER, WATER MAIN, STREET LIGHTING,
AND TRAFFIC SIGNALWORK

Together With All Work Incidental Thereto
BOROUGH OF BROOKLYN
CITY OF NEW YORK

CAC Industries, Inc

85013BD118001 / 8502013HW0018C ^{Contractor}

Dated November 19, 2013

APPROVED AS TO FORM
CERTIFIED AS TO LEGAL AUTHORITY

[Signature]

Acting Corporation Counsel

DD 6/27/13

Dated June 27, 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 6**

FOR FURNISHING ALL LABOR AND MATERIALS NECESSARY AND REQUIRED FOR:

PROJECT ID: HWPLZ001K

RECONSTRUCTION OF

MYRTLE AVENUE

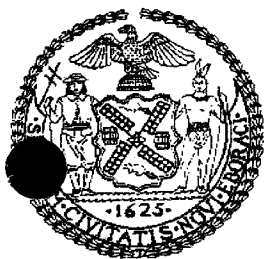
FROM HALL STREET TO EMERSON PLACE

**INCLUDING SEWER, WATER MAIN, STREET LIGHTING,
AND TRAFFIC SIGNALWORK**

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

FOR THE DEPARTMENT OF TRANSPORTATION
PREPARED BY
AECOM

MAY 15, 2013



W 3-064



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 March 2012

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/pagefiles/53/Tree-Planting-Standards.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>\$1500.00</u>
Article 17 Contract	Subcontracts	Not to Exceed <u>50%</u> of Contract Price
Article 24 Contract	Deposit as Guarantee	Percent of Contract Price <u>1%</u>
	Maintenance Period	Eighteen (18) Months, excluding Trees Twenty-four (24) Months for Tree Planting
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>\$250.00</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 365 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:

- 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.
- 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
<div> <div>■</div> <div>Commercial General Liability Art. 22.1.1</div> </div>	<div>\$3,000,000 per occurrence</div> <div>\$6,000,000 aggregate (applicable separately to this Project)</div> <div>Additional Insureds:</div> <div> <ol style="list-style-type: none"> <li>1. <u>City of New York, including its officials and employees;</u> <li>2. National Grid </div>

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
<div>■ Workers' Compensation Art. 22.1.2</div> <div>■ Disability Benefits Insurance Art. 22.1.2</div> <div>■ Employers' Liability Art. 22.1.3</div> <div><input type="checkbox"/> Jones Act Art. 22.1.4</div> <div><input type="checkbox"/> U.S. Longshoremen's and Harbor Workers Compensation Act Art. 22.1.4</div>	<div>Workers' Compensation: Statutory per New York State law without regard to jurisdiction</div> <div>Disability Benefits Insurance: Statutory per New York State law without regard to jurisdiction</div> <div>Employers' Liability: \$2,000,000 each accident</div> <div><input type="checkbox"/> Additional Requirements:</div> <div>(1) <u>Two (2) certificates of such 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></div>
<div><input type="checkbox"/> Builders' Risk Art. 22.1.5</div>	<div>_____ % 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</div>

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	\$2,000,000 per accident 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. Additional Insureds: (1) <u>City of New York, including its officials and employees;</u>
<input type="checkbox"/> Pollution/Environmental Liability Art. 22.1.7	\$ _____ per occurrence \$ _____ aggregate Additional Insureds: 1. City of New York, including its officials and employees, and 2. _____ 3. _____
<input type="checkbox"/> Marine Protection and Indemnity Art. 22.1.8(a)	\$ _____ per occurrence \$ _____ aggregate 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
<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><input type="checkbox"/> Railroad Protection Liability Policy</p> <p>(ISO-RIMA or equivalent form) approved by Permitior 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>1. <u>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] Art. 22.1.9</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>[OTHER] Art. 22.1.9</p> <p>■ Engineer's Field Office</p> <p>Section 6.40, Standard Highway Specifications</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: HWPLZ001K

RECONSTRUCTION OF

MYRTLE AVENUE

FROM HALL STREET TO EMERSON PLACE

INCLUDING SEWER, WATER MAIN, STREET LIGHTING,
AND TRAFFIC SIGNALWORK

Together With All Work Incidental Thereto
BOROUGH OF BROOKLYN
CITY OF NEW YORK

ADDENDUM NO. 1

DATED: May 24, 2013

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."

[Added 04-08-2013]

7. Refer to Page 200, **Subsection 4.11.2.(B), first paragraph, sixth line;**
Delete the word "porcelain,".
8. Refer to Page 201, **Subsection 4.11.3.(B) FILL AND BACKFILL, second and third paragraphs;**
Delete the second and third paragraphs under Subsection 4.11.3.(B), in their entirety;
Substitute the following revised two paragraphs:

"Glass or Recycled Porcelain Aggregate (RPA) from recycling facilities that meets the requirements of **Subsection 4.11.3.(E)** for Glass and **Subsection 4.11.3.(F)** for RPA shall be considered suitable material for mixing with fill provided the Contractor maintains the gradations specified herein. However, glass shall not be placed in contact with synthetic liners, geogrids, geotextiles or other geosynthetics.

Glass and/or RPA incorporated into fill shall be thoroughly mixed with other suitable material so that glass, RPA or combination of both constitutes no more than 30 percent by volume anywhere in the fill as visually determined by the Engineer."

9. Refer to Page 202, **Subsection 4.11.3.(E) GLASS;**
Add the following new **Subsection 4.11.3.(F) RECYCLED PORCELAIN**
AGGREGATE (RPA) :

“(F) RECYCLED PORCELAIN AGGREGATE (RPA).

All porcelain to be used as RPA shall be crushed by a New York City Department of Environmental Protection (NYCDEP) approved recycling facility to a maximum particle size of 3/8 inch and graded to meet the gradation specified above for use in either fill, backfill or select fill, as may be required. RPA from any other source will not be permitted. The NYCDEP approved recycling facility will also certify that the RPA being furnished is free from organic material and other unsuitable material.

Should the Contractor desire to use RPA in his fill or backfill material, he shall contact Mr. Vasyl Kravchyk at NYCDEP (Tel. No. 718-595-7512) to determine the availability of RPA and from which recycling facility it can be obtained.

The Contractor shall be required to make arrangement with the recycling plant, at least two (2) weeks in advance of when he would need the material, to schedule the time, date and quantity available for pickup. The Contractor shall be required to furnish the recycling facility with a complete list of his trucks involved in transporting the material, which shall include the name of the registered owner (Contractor), Consumer Affairs or DOS Permit numbers, body license plate number, and truck volume. This information must be supplied to the facility prior to the start of picking up the RPA.

Weight ticket receipt slips given by the recycling facility to each truck driver picking up RPA shall be collected by the Contractor and given to the Engineer upon delivering fill or backfill material to the site that contains RPA, and the Contractor agrees and warrants that in obtaining the RPA that such material has originated only from a NYCDEP approved recycling plant and it has not been mixed with porcelain material from any other source.

The Contractor shall be required to transport said material from the approved recycling facility to his yard for storage and mixing with his fill material; however, there is not guarantee that the material will actually be available.

The Contractor is advised that there is no guarantee that RPA will in fact be available for his use from a NYCDEP approved recycling plant and he shall make no claim against the City for loss of anticipated profits should the material not be available upon request by the Contractor.

All excess RPA not used in the fill or backfill shall remain the property of the DDC Contractor.

The Contractor must comply with all rules and regulations of the Department of Transportation and the Department of Environmental Protections governing the use of RPA in its fill and backfill material.”

10. Refer to Pages 218 and 219, **Subsection 4.13.4.(H) PIGMENTING,**
first four paragraphs;
Delete the first four paragraphs under Subsection 4.13.4.(H), in
their entirety;
Substitute the following revised four paragraphs:

“Where pigmenting is specified, the concrete sidewalks shall be pigmented with an admixture complying with the requirements of **Section 2.19** and the following requirements:

'Commercial Gray': In commercial districts C4-4 through C4-7, C5 and C6, as defined in the Zoning Resolution of the City of New York, and in areas under the jurisdiction of the Lower Manhattan Development Corporation 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.

'Bluestone': 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.

'Granite': 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."

[Added 05-24-2013]

11. Refer to Page 14, **Subsection 1.06.23.(A) PERMITS**, first paragraph as modified by Article 4 on page A1-1b;

Add the following new text:

"(d) All necessary permits from the Department of Environmental Protection which may include, but are not limited to, permits for use of City water."

12. Refer to Page 14, **Subsection 1.06.23.(A) PERMITS**, second paragraph;

Add the following as the third paragraph:

"No fee permits for use of City water necessary to complete roadway pavement reconstruction project in conjunction with installation of sewers and/or water mains, will be issued by the Department of Environmental Protection. However, for all other type projects (such as installation of sidewalks, installation of pedestrian ramps, pavement milling, resurfacing, rehabilitation of retaining walls, and bridge reconstruction type projects) the Contractor will be required to obtain the water use permit at its own cost."

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 DIMMSs |
| (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.

[Added 02-08-2013]

12. Refer to Page 394, **Subsection 6.52.3. METHODS**;
Insert the following new sentence to the end of the third paragraph:

"However, on Federally Funded Projects all uniformed full-time flagpersons paid under this item, irrespective of where they are used in Examples #1 and #2, shall be deemed to be Laborers and shall not be paid less than the highest minimum hourly rate as set forth by Federal, State or City laws."

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

[Added 05-24-2013]

13. Refer to Page 366, **Subsection 6.40.2.(C)(c)(1)(m) Software Requirements**, as modified by Article 1 on page A1-2;

Delete the text under **Subsection (m)**, in its entirety;

Substitute the following revised text:

“(m) **Software Requirements:** Microsoft Windows 7 Professional SP1, 32 bit; Microsoft Office Professional 2010; Microsoft Project 2010; Adobe Acrobat reader; Anti-Virus software package with 2 year updates subscription; and, either Auto Cad LT or Microsoft Visio Standard Edition, as directed by the Engineer.”

(NO TEXT ON THIS PAGE)

3. NEW SECTION

SECTION 4.05 AP PERMEABLE CONCRETE PAVEMENT

4.05AP.1. DESCRIPTIONS: Under this section, the Contractor shall furnish and place PERMEABLE CONCRETE PAVEMENT in accordance with the plans, specifications, and directions of the Engineer.

4.05AP.2. RELATED SECTIONS:

(A) Section 6.02 AAN – Unclassified Excavation

4.05AP.3. REFERENCES:

American Concrete Institute (ACI)

- (A) ACI 211.3R "Guide for Selecting Proportions for No-Slump Concrete"
- (B) ACI 522.1-08 "Specification for Permeable Concrete Pavement"
- (C) ACI Field Technician Certification Program

American Society for Testing and Materials (ASTM)

- (A) ASTM C 33 "Specification for Concrete Aggregates"
- (B) ASTM C 42 "Test Method for Obtaining and Testing Drilled Cores and Sawed Beams of Concrete"
- (C) ASTM C 94 "Specification for Ready-Mixed Concrete"
- (D) ASTM C 150 "Specification for Portland Cement"
- (E) ASTM C 260 "Specification for Air-Entraining Admixtures for Concrete"
- (F) ASTM C 494 "Specification for Chemical Admixtures for Concrete"
- (G) ASTM C 618 "Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use as a Mineral Admixture in Portland Cement Concrete"
- (H) ASTM C 1116 "Specification for Fiber-Reinforced Concrete"
- (I) ASTM C 1688 "Test Method for Density and Void Content of Freshly Mixed Permeable Concrete"
- (J) ASTM C 1701 "Test Method for Infiltration Rate of In Place Permeable Concrete"
- (K) ASTM D7357 "Specification for Cellulose Fibers for Fiber-Reinforced Concrete"

National Ready Mixed Concrete Association (NRMCA)

- (A) NRMCA Permeable Concrete Contractor Certification

4.05AP.4. MATERIALS: Permeable Concrete Pavement shall comply with ACI 522.1-08.

- (A) Cement: Air Entrained Gray Portland Cement shall comply with the ASTM Specifications for Portland Cement, Designation C150.
 - 1. Supplementary Cementitious Materials: Fly ash shall comply with the ASTM Specifications for Portland Cement, Designation C618. Ground Granulated Blast-Furnace Slag shall comply with the ASTM Specifications for Portland Cement, Designation C989.
 - 2. Cement Content: shall not be less than 256 lbs/cy.

(B) Concrete and Aggregates:

1. Permeable Concrete: shall consist of #67 or #89 size aggregate, complying with ASTM C33. Permeable Concrete shall be free from any fine aggregate. Proportions of Materials used in Permeable Concrete shall comply with the following :

NO	Description	Guidelines
1	Cementitious materials	450 to 550 lb/cy
2	Aggregate	2000 to 2500 lb/cy
3	Water/Cement Ratio	0.27 to 0.34
4	Minimum Infiltration rate	340 in/hour
5	Void Ratio	15% Minimum
		25% Maximum
6	Design Mix Weight Tolerance	+/- 5 lb /cft of Design Mix Weight

2. Choker Course: shall consist of #57 size aggregate, complying with ASTM C33, free from organic or other deleterious material.
3. Subbase, Reservoir, Course: shall consist of #2 size aggregate, complying with ASTM C33. Aggregate shall be clean washed and uniformly graded.

(C) Admixtures: Air Entrained Admixtures shall comply with the ASTM Specifications for Portland Cement, Designation C260.

Chemical Admixtures shall comply with the ASTM Specifications for Portland Cement, Designation C494, including Mid-range water reducers (Type A) and High range water reducers (Types F or G). These are permitted due to the low water/cementitious ratios specified for previous concrete.

(D) Fiber Reinforcement: Synthetic fibers (Type III polypropylene) shall comply with the ASTM Specifications, Designation C1116. Cellulose fibers (Type IV) shall comply with the ASTM Specifications, Designation D7357.(E) Expansion Joint: The expansion joint material shall be one of the following:

1. A premolded bituminous fiber joint filler, as specified in Section "B" (requires a bond breaker and sealant), or approved equal, or,
2. A premolded closed cell expanded polyethylene foam joint filler, such as Sonoflex F by Sonneborn Corporation, Shakopee, MN (requires only sealant), or approved equal.

(F) Filter Fabric: Filter fabric shall be a non-woven geotextile, such as Mirafi #140N, or approved equal.(G) Water: Do not use hot water.4.05AP.5. METHODS:

- (A) Preparation of Fine Grade: Before any pavement is placed upon the finish grade of structural soil, its fine grade shall be prepared to line and grade and compacted, where practicable, with an approved self-propelling roller weighing not less than ten (10) tons. All hollows and depressions, which develop under rolling, shall be filled with structural soil material and shall again be rolled. This process of shaping, filling, and rolling shall be repeated until no depressions develop.

The Contractor shall remove from the subgrade and structural soil all debris, foreign material, and all other undesirable material designated by the Engineer. The fine grade shall not be muddy or otherwise unsatisfactory when the pavement is placed upon it. If the fine grade becomes rutted or displaced, due to any cause whatsoever, the Contractor shall re-grade same without additional payment.

- (B) Choker Course and Subbase Course Installation: Upon approval of structural soil finish grade, filter fabric shall be placed, in accordance with manufacturer's recommendations. Adjacent fabric strips shall overlap a minimum of 16", and shall extend 24" outside of the proposed paving area. The Contractor shall take steps to prevent runoff or sediment from entering the area.

Moisten, spread and compact the Subbase Course in 4 to 6 inch lifts, without wrinkling or folding the geotextile. Place subbase to protect geotextile from wrinkling under equipment tires and tracks. For each lift, make at least two passes in the vibratory mode, then at least two in the static mode with a minimum 10 ton vibratory roller until there is no visible movement of the stone. Do not crush aggregate with the roller. The surface tolerance of the compacted subbase course shall be $\pm 3/4$ in. over 10 ft.

Moisten, spread and compact the Choker Course. Compact with a minimum 10 ton static roller. Make at least 4 passes. No visible movement should occur in the base material when compaction is complete. Do not crush aggregate with the roller. The surface tolerance of the compacted surface should not deviate more than $\pm 1/2$ in. over 10 ft.

Following aggregate bed placement, the filter fabric shall be folded back along bed edges to protect from runoff or sediment accumulation. As formwork is placed, and adjacent planting beds stabilized, the fabric can be cut back to meet the top of aggregates.

- (C) Forms: Forms shall be made of substantial material (preferably steel), with suitable metal dividing plates and of sufficient strength to satisfactorily resist distortion when fastened together and secured in place. Forms and dividing plates shall be of a depth not less than that of the thickness of the concrete slab, be properly located with tops set to the designated sidewalk surface, and be left in place until the concrete is set.
- (D) Mixing and Hauling: Permeable concrete shall be mixed and delivered in accordance with ASTM C94, and transit mixers shall mix the concrete at a designated speed for 90-100 revolutions prior to placement. Discharge of individual loads shall be completed with 60 minutes of the introduction of mix water to the cement, unless a hydration stabilizer is used, where the time can be extended to 90 minutes. Additional mix water shall be permitted only if no more than half of the load has been discharged.
- (E) Placement: The choker course shall be wetted immediately before concrete is placed. The concrete shall be placed within the forms. The Contractor shall utilize a mechanical vibratory screed to strike-off the concrete 1/2" to 3/4" above finish grade to allow for steel roller/plate tamper compaction, or shall utilize a hydraulically actuated pipe roller screed to achieve finish grade. This equipment must be able to produce a minimum pressure of 10 psi onto the concrete surface. Hand tampers or

edgers with a 1/4" radius shall be used to compact the concrete along edges, and immediately adjacent to formwork.

After strike-off and compaction, no finishing operations will be allowed. No internal vibration will be permitted, in order to preserve the void structure of the Permeable concrete. Rollers and/or tampers shall be cleaned as necessary to avoid aggregate pick-up during compaction.

The Permeable concrete shall be compacted to achieve a finish grade that does not deviate more than 3/8" from the designed grade.

- (F) Protection and Curing: Pavement shall be carefully protected from the drying effects of the sun and wind, traffic, or other causes by means of suitable guards and coverings, and shall be kept moist for a period of three days. Curing shall begin immediately after finishing. Completely cover the pavement surface with a minimum 6 mil thick polyethylene sheet. Cut sheeting to a minimum of a full placement width. Cure pavement for a minimum of 7 uninterrupted dates, unless otherwise noted.
- (G) Expansion Joints: Where Permeable concrete is to be placed adjacent to structures, (manholes, hydrants, footings, etc.) expansion joints and sealant shall be installed as directed.

After the concrete is placed, finished and set, and the bond breaker, if necessary, installed, the space, as shown in the drawings, shall be filled with a joint sealant. Thoroughly clean expansion joints of dirt, loose particles, asphalt, tar, paint, wax, waterproofing, and curing compounds. When dry, apply primer to the clean dry surfaces by brushing on a thin, uniform coat. Allow primer to dry, tack free. Fill joint with joint filler where necessary and compressible backer rod and leave a one-half inch (1/2") deep void for placement of sealant. Cover adjacent sides of joints with masking tape to prevent spillage onto pavement.

- (H) Joint Sealant: Fully mix the two component sealant and pour into joint slot in one direction and allow to flow and level out as necessary. Smaller joints can be filled from a bulk-loading gun. Fill joints from bottom to prevent air voids. Tool lightly to smooth out ripples and maximize adhesion to the sides of joints. If bubbles form, wait 5-10 minutes before tooling to break the bubbles. Remove excess sealant promptly as the work progresses and clean adjacent surfaces. Remove masking tape.

Install sealant in accordance with manufacturer's instructions including allowable minimum temperature of 40 degrees Fahrenheit.

4.05AP.6. PERFORMANCE INSPECTION:

- (A) Excessive raveling: At or before 28 days after placement, any areas of excessive raveling, as determined by the Engineer, shall be removed and replaced or repaired by the Contractor at no additional cost to the project.
- (B) Surface Drainage: At or before 28 days after placement, any areas of insufficient porosity, as determined by the Engineer per ASTM C1701, shall be removed and replaced by the Contractor, at no additional cost to the project.

4.05AP.7. QUALITY CONTROL:

- (A) Contractor Experience and Certifications: Prior to bid award, the Prospective Bidder/Contractor shall submit evidence of three successful Permeable concrete pavement installation projects, each greater in size than 1000 S.F., and in a climate similar to this project site (Brooklyn, NY), including, but not limited to, the following:

1. Project name and address.
2. Owner's name and contact information.
3. Test results of the installation, including density, void content and thickness.

The Bidder/Contractor shall employ no fewer than:

1. One (1) NRMCA Certified Permeable Concrete Craftsman, who must be on site overseeing each concrete placement crew, or
2. Three (3) NRMCA Certified Permeable Concrete Installers, who must be on site as members of each concrete placement crew, or
3. Five (5) NRMCA Certified Permeable Concrete Technicians, who must be on site as members of each concrete placement crew.
4. One (1) Grade I ACI Concrete Field Testing Technician.

If the placing contractor and concrete producer have insufficient experience (fewer than three projects) or insufficient certified and experienced staff, the placing contractor shall retain an NRMCA Certified Permeable Concrete Craftsman to monitor production, handling and placement operations, at the Contractor's expense.

The bidder/contractor shall employ the services of one of the following subcontractors:

1. Icon Contracting, New York, NY (718) 569-0772.
2. NovaCrete, Sayreville, NJ (732) 553-0280.
3. Magruder Construction, Sanford, FL (866) 768-3535.
4. Charger Enterprises, Seminole, FL (727) 593-8600.
5. Or another approved subcontractor.

- (B) Mock-up: Prior to construction, mock-up sections shall be built by the Contractor at site as directed by the Engineer, constructed at the required project thickness, using the proposed aggregate base layer(s), finished and cured using materials, equipment, and personnel proposed for the project.

Each panel shall be field tested for density and void content, in accordance with ASTM C1688 (fresh mix concrete). The unit weight (density) of the fresh mix shall fall between 100 lbs per cubic foot and 125 lbs per cubic foot.

Once each test panel has cured, the Infiltration Rate of the panels shall be field tested, in accordance with ASTM C1701. Acceptable infiltration rate is 340 inches/hour minimum.

A minimum of two (2) cores shall be taken from each of the hardened test panels, in accordance with ASTM C42. These shall be sent to a testing laboratory, inspected within the past 24 months by either the AASHTO Materials Reference Laboratory or the Cement and Concrete Reference Laboratory. Cores shall be tested in order to

meet the requirements of Minimum Infiltration Rate, Void Ratio, and Design Mix Weight Tolerance (see table at Subsection 4.05AP.4.B.1 herein).

If tests are found to be unsatisfactory, the Contractor shall remove the test panels and replace them for another round of tests, until the design criteria are achieved. Once satisfactory results are achieved, the panels shall be removed from the project site at no additional cost to the project.

(C) Weather Limitations: The Contractor shall not place Permeable concrete pavement when:

1. The ambient temperature is predicted to be 40 degrees Fahrenheit or lower during the 7 days following concrete placement, unless approved in writing by the Engineer, or
2. The ambient temperature is predicted to be 90 degrees Fahrenheit or higher during the 7 days following concrete placement, unless approved in writing by the Engineer, or
3. The coarse aggregate course has frozen.

4.05AP.8. SUBMITTALS:

(A) Contractor Experience and certification: Submit contractor qualifications and prior project experience.

(B) Contractor staffing: Submit resumes and certifications for actual staff who will be installing work including concrete craftsman, installers and technicians as indicated in Quality Control.

(C) Project Data: Submit product data for all materials specified.

(D) Test Reports: Submit the following test reports.

1. Permeable Concrete mix proportions shall follow as described under "Materials".
2. Choker course: sieve analysis.
3. Base course: sieve analysis.
4. Test Panels: field tested shall include densities and void contents, in accordance with ASTM C1688 (fresh mix properties) and ASTM C140 (hardened mix properties), as described under "Quality Assurance"
5. Test Panels: field tested for Infiltration, in accordance with ASTM C1701 as described under "Quality Assurance".

(E) Curing: The Contractor shall submit the method of curing they intend to use.

Appendix 6 of ACI 211.3R provides guidance for Permeable concrete mixture proportioning, and the composition should be optimized for performance in local conditions with local materials.

4.05AP.9. MAINTENANCE

(A) Prior to final completion of the project, the Contractor shall remove debris from the surface of the pavement with a vacuum sweeper.

4.05AP.10. MEASUREMENT

- (A) The quantity to be measured for payment of permeable concrete shall be the number of cubic yard of permeable concrete pavement satisfactorily constructed, measured in place, to the satisfaction of the Engineer.
- (B) The quantity to be measured for payment of aggregate for the Choker Course (#57 size aggregate) shall be the number of cubic yard satisfactorily constructed, measured in place, to the satisfaction of the Engineer.
- (C) The quantity to be measured for payment of aggregate for the Subbase Course (#2 size aggregate) shall be the number of cubic yard satisfactorily constructed, measured in place, to the satisfaction of the Engineer.

4.05AP.11. PRICES TO COVER

(A) NON-REINFORCED PERMEABLE CONCRETE PAVEMENT:

The contract price bid for permeable concrete pavement shall be a unit price per cubic yard and shall cover the cost of all labor, materials (unless otherwise noted), equipment, insurance, and necessary incidentals required to furnish, lay and cure a permeable concrete pavement of the thickness specified, in accordance with the Contract Drawings, the specifications, and the Engineer. The unit price bid shall include, but not limited to, installation, furnishing such samples and cores for testing, and to maintain the concrete in good condition as specified in accordance with the plans, the specifications and the directions of the Engineer.

(B) CHOKER COURSE AGGREGATE:

The contract price bid for Choker Course Aggregate shall be a unit price per cubic yard and shall cover the cost of all labor, materials (unless otherwise noted), equipment, insurance, and necessary incidentals specified, in accordance with the Contract Drawings, the specifications, and the Engineer.

(C) SUBBASE COURSE AGGREGATE:

The contract price bid for Subbase Course Aggregate shall be a unit price per cubic yard and shall cover the cost of all labor, materials (unless otherwise noted), equipment, insurance, and necessary incidentals specified, in accordance with the Contract Drawings, the specifications, and the Engineer.

(D) EXCAVATION:

The cost of excavation required to install the permeable concrete pavement and subbase course shall be made on a one time basis under Item No. 6.02 AAN. No additional payment shall be made for the removal of any temporary pavement that may be placed to install the adjacent roadway pavement.

(E) FILTER FABRIC:

The cost of the filter fabric shall be paid under Item No. 6.68.

(F) MOCK-UP :

Cost of mock-up section shall be paid if acceptable by the Engineer. In case the mock-up is rejected by the Engineer, then it shall be taken off by the Contractor at no cost to the city. Removal shall include demolition, and clearing the site from all the debris including all incidentals therein for the removal.

Payment will be made under:

Item No.	Item	Pay Unit
4.05 AP	NON-REINFORCED PERMEABLE CONCRETE PAVEMENT	C.Y.
4.05 AP-CC	CHOKER COURSE AGGREGATE	C.Y.
4.05 AP-SC	SUBBASE COURSE AGGREGATE	C.Y.

SECTION 4.18 DM
Geotextile/Composite Drainage Mat

4.18DM.1. Description

This work consists of furnishing and installing drainage mat along planter walls to ensure adequate soil aeration and drainage.

4.18DM.2. Material

A Drainage mat shall be one of the following two-part prefabricated soil sheet drains:

- 1 Formed and punched polystyrene core covered on both sides with a non-woven, needle-punched polypropylene filter fabric, as Amerdrain 650, manufactured by American Wick Drain Corp., Monroe, NC28110. Phone 800-242-WICK, www.americanwick.com
- 2 Three-dimensional drainage core covered with non-woven, needle punched filter fabric as Hydrodrain 300 manufactured by American Hydrotech Inc. Chicago, Ill.
- 3 Three-dimensional drainage core covered with non-woven, filter fabric as Enkadrain Wide 5006H/5-2S/T110PP manufactured by Colobond Inc.
- 4 Or an approved equivalent.

4.18DM.3. Construction

- A Preparation of the substrate: Inspect substrate for irregularities in surface. Ensure that surface is smooth and has no depressions or bumps. Smooth any depressions with cement grout, remove any bumps and clean surface in accordance with manufacturer's instructions.
- B Placing drainage mat: Place the mat on the prepared substrate in accordance with manufacturer's instructions, being careful to avoid damage to mat during or after installation. Test for positive drainage using hoses to apply the equivalent of at least 2" per hour over the entire area.
- C Protection: After approval of the installation for drainage immediately cover the entire surface of the mat with planting soil to protect the surface from subsequent operations. Where necessary for operation of equipment or placement of other materials provide additional protection, using temporary planking or other approved methods, to ensure that the drainage mat is not damaged.

4.18DM.4. Measurement and Payment

- A Measurement: The quantity to be measured for Payment shall be the number of square feet of Geotextile/Composite Drainage Mat actually installed at the site in accordance with the plans and specifications, and to the satisfaction of the Engineer.
- B Price to Cover: The unit price bid per square feet shall include the cost of all labor, materials, equipment, insurance, and incidentals necessary to complete the work as required in a manner approved by the Engineer; 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 DM	GEOTEXTILE/COMPOSITE DRAINAGE MAT	S.F.

SECTION 4.18 RRB RIBBED ROOT BARRIER

4.18RRB.1. DESCRIPTION: Under this Item, the Contractor shall furnish and install Ribbed Root Barrier in accordance with the plans, specifications and directions of the Engineer.

4.18RRB.2. MATERIALS:

(A) Citygreen ReRoot 600 Ribbed Root Barrier, as manufactured by Citygreen Urban, www.citygreen.com.

1. Code RER600A
2. Material: HDPE
3. Finish: Natural Black.
4. Type: Ribbed
5. Thickness: 1mm
6. Width: 600mm
7. Roll length: 30m

PROPERTIES	ISO	VALUE
PHYSICAL		
Density	g/cc (Lbs/ cubic inch)	0.97 (0.35)
Shrinkage	%	2.5 – 3.0
Melt Flow (190°C/5kg)	g/10min (Lbs/ hour)	<0.8 (<0.012)
MECHANICAL		
Izod Impact, notched	KJ/m2 (Ft-lbf/in2)	>13 (>6.2) >10 (>4.76)
Stress at yield	MPa (psi)	23-26 (3,335-3,770)
Stress at break	MPa (psi)	28-30 (4,060-4,350)
Strain at break	%	>600
Flexular Modulus	MPa (psi)	950 – 1100 (137,750-159,500)
Shore D hardness		60-63
THERMAL		
VST@10N (VST/A)	%	115-130
HDT@0.45mpA (hdt/b)	°C (°F)	73-80 (163-176)

(B) Manufacturer: ReRoot 600 ribbed root barrier provided by the following, or approved equivalent, are acceptable:

1. Citygreen Urban, 24A Corydon Place, Cambridge, ON N1R7L5; 1-519-623-8062; info.na@citygreen.com Web site: www.citygreen.com.
2. Atrium Services, Ancaster, ON; 1-905-648-5056; sales@atriumarch.com.
3. The Edgewood Company, Inc., Folcroft, PA 19032; 1-610-532-3265; tim.fry@edgewoodco.com.

(C) Hardware: Use only approved ReRoot jointing tape

4.18RRB.3. METHOD: Contractor shall install Ribbed Root Barrier in accordance with manufacturer's instructions, in locations as indicated on Contract Drawings or as directed by the Engineer.

(A) The ReRoot barrier shall be installed when the tree pit has been fully excavated and before any backfilling has taken place. In a surround situation, the base of the pit shall be loosened to aid drainage. The barrier is then formed around the pit perimeter with the ribs facing inwards, allowing as generous clearance as possible (minimum 150mm) between roots and barrier to ease backfilling and allow the roots to spread. Minimum dimensions, shown below, should be observed. The barrier should then be cut to length with a sharp knife allowing a minimum overlap of 300mm. The joint should then be taped using ReRoot polypropylene jointing tape. Both sides of the join must be taped the surfaces must be clean and free of dust, dirt, grease, etc. There shall be no gaps through which a root could penetrate. The ribs must face inwards towards the tree roots. The top edge of the barrier shall be installed to protrude very slightly above the finished grade of the topsoil, i.e. 5-10mm, but not more than 20mm.

(B) Jointing Instructions: When jointing lengths of ReRoot barrier, abide by the following instructions:

1. Use only approved ReRoot jointing tape.
2. Ensure barrier surfaces are clean and dry.
3. Overlap the barrier by a minimum of 300mm.
4. Apply tape over the join in a continuous length.
5. Tape the join down both sides of the barrier.
6. After applying the tape, make sure it is firmly attached without wrinkles or air pockets, which could allow a fine root hair through. It is easiest to joint the barriers when working on a firm level surface. Once joined, the barrier can be lowered into the prepared trench and backfilled.

(C) For linear installations, care must be taken to ensure that the barrier is kept vertically upright in the trench when backfilled. If a slope is unavoidable, the top edge shall slope very slightly towards the tree. For joining two rolls together, follow jointing instructions in Subsection 4.18RRB.3.(B), above.

1. Root Barrier ribs shall protrude towards the tree; the upper edge of the barrier shall be slightly above the final level of the soil in the tree pit (this prevents root overgrowth).

4.18RRB.4. SUBMITTALS:

(A) Product Data: Submit manufacturer's product data, storage and handling requirements and recommendations, installation methods and available colors, including catalog, and minimum 4"x 4" sample of Ribbed Root Barrier material, for approval by the Engineer.

4.18 RRB.5. MEASUREMENT: The quantity of 600mm width RIBBED ROOT BARRIER to be measured for payment under this item shall be the quantity in LINEAR FEET of Ribbed Root Barrier that has been installed at the site to the satisfaction of the Engineer.

4.18 RRB.6. PRICE TO COVER: The unit price bid per linear foot for this item shall include the cost of furnishing all labor, materials, plant, equipment, insurance, and incidentals necessary to complete the work including, but not limited to, the cost of preparing the surface upon which the Ribbed Root Barrier 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 RRB	RIBBED ROOT BARRIER	L.F.

SECTION 6.02 PA
Pneumatic Excavation Around Trees

6.02PA.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).

6.02PA.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.

6.02PA.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.

6.02PA.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, the contractor shall refer to the latest revision/edition of Standard Specifications of the New York State Department of Transportation (NYSDOTSS):

(A) PNEUMATIC EXCAVATING TOOL: Excavation shall be performed through the use of a pneumatic excavation tool with the following requirements:

1. 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.
2. 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

(B) 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.

(C) VACUUM TRUCK: A vacuum truck should be used to collect excavated spoil directly from the trench or pit.

(D) 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.

(E) ROOT PROTECTION. The following are required for root protection:

<u>Item</u>	<u>NYSDOTSS Articles</u>
Quilted Covers	711-02
Burlap	711-06

6.02PA.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 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 Design and Construction, Division of Infrastructure, 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.

6.02PA.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.

6.02PA.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 New York City Department of Parks and Recreation (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 6.31 P
PRECAST CONCRETE SEAT WALLS, CURBS,
& SEATING STEPS

6.31P.1. DESCRIPTION. Under this section, the Contractor shall furnish all necessary labor, materials, plant, equipment, insurance, and necessary incidental required to furnish and install new precast concrete seat walls, curbs and seating steps where designated on the plans or otherwise directed, in accordance with the plans, the specifications and the directions of the Engineer.

6.31P.2. RELATED SECTIONS:

(A) Item 4.06 - Concrete in Structures, Class A-40

6.31P.3. REFERENCES:

American Concrete Institute (ACI)

- (A) ACI 211.1 "Maximum Aggregate Size for Concrete Mix Design
- (B) ACI 318 "Building Code Requirements for Structural Concrete and Commentary"
- (C) ACI 530.1/ ASCE 6/TMS 602. "Building Code Requirements and Specifications for Masonry Structures and Related Commentaries"

American Society for Testing and Materials (ASTM)

- (A) ASTM A 123 "Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products"
- (B) ASTM A 153 "Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware
- (C) ASTM A 240 "Specification for Chromium and Chromium-Nickel Stainless Steel Plate Sheet, and Strip for Pressure Vessels and for General Applications"
- (D) ASTM A 276 "Specification for Stainless Steel Bars and Shapes"
- (E) ASTM A 572 "Specification for High-Strength Low-Alloy Columbium-Vanadium Structural Steel"
- (F) ASTM A 593
- (G) ASTM A 615 "Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement"
- (H) ASTM A 666 "Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat"
- (I) ASTM C 33 "Specification for Concrete Aggregates"
- (J) ASTM C 42 "Test Method for Obtaining and Testing Drilled Cores and Sawed Beams of Concrete"
- (K) ASTM C 114 "Test Methods for Chemical Analysis of Hydraulic Cement"
- (L) ASTM C 150 "Specification for Portland Cement"
- (M) ASTM C 260 "Specification for Air-Entraining Admixtures for Concrete"
- (N) ASTM C 270 "Specification for Mortar for Unit Masonry"
- (O) ASTM C 494 "Specification for Chemical Admixtures for Concrete"
- (P) ASTM C 881 "Specification for Epoxy-Resin-Base Bonding Systems for Concrete"
- (Q) ASTM C 920 "Specification for Elastomeric Joint Sealants"
- (R) ASTM C 979 "Specification for Pigments for Integrally Colored Concrete"
- (S) ASTM C 1017 "Specification for Chemical Admixtures for Use in Producing Flowing Concrete"

- (T) ASTM C 1193 "Guide for Use of Joint Sealants"
- (U) ASTM C 1218 "Test Method for Water-Soluble Chloride in Mortar and Concrete"
- (V) ASTM D 545 "Test Methods for Preformed Expansion Joint Fillers for Concrete Construction (Non-extruding and Resilient Types)"
- (W) ASTM D 1752 "Specification for Preformed Sponge Rubber Cork and Recycled PVC Expansion Joint Fillers for Concrete Paving and Structural Construction"

Precast Concrete Institute (PCI)

- (A) PCI MNL-177 "Manual for Quality Control for Plants and Production of Architectural Precast Concrete Products"

Interim Federal Specifications

- (A) TT-S-00230C "Sealing Compound: Elastomeric Type, Single Component (for Caulking, Sealing, and Glazing in Buildings and other Structures"
- (B) TT-S-001543A "Sealing Compound: Silicone Rubber Base (for Caulking, Sealing, and Glazing in Buildings and other Structures"

6.31 P.4. MATERIALS.

- (A) Manufacturers: Subject to compliance with specification requirements, Precast Concrete Seat Walls, Curbs, and Seating Step shall be furnished by one of the following fabricators:

1. Concrete Works East – Precast Bench, Precast Architectural Concrete, Finish: Honed. Color to match the approved sample. Sample to be submitted to the Engineer for approval.

Address: 349 Dunhams Corner Road, East Brunswick, NJ 08816;
www.concreteworks.com; Jon Mitzner, jon@concreteworks.com; 732-390-9944.

2. Wausau Tile, Inc. – Precast Bench, Precast Architectural Concrete, Finish: Patina. Color to match the approved sample. Sample to be submitted to the Engineer for approval.

Address: P.O. Box 1520, Wausau, WI 54402-1520; 9001 Bus. Hwy 51, Rothschild, WI 54474; Chris Bendickson, cbendickson@wausautile.com; 800-388-8728; Mark Rounds, mrounds@wausautile.com, Wausau Tile Custom Precast Division, Northeastern Region Project Manager, 800-388-8728.

3. Architectural Cast Stone, Inc. – Precast Bench, Precast Architectural Concrete, Color to match the approved sample. Sample to be submitted to the Engineer for approval.

Address: 1953 N. Ohio Street, Wichita, KS 67214; Shane Wedel, shane@architecturalscaststone.com, 316-262-5543.

4. Or an approved equivalent fabricator.

(B) Precast Concrete Materials:

1. Portland Cement: ASTM C 150, Type I, containing not more than 0.60 percent total alkali when tested according to ASTM C 114. Provide white cement as

required to produce cast stone color indicated.

2. Normal-Weight Aggregates: Except as modified by Portland Cement Institute (PCI) MNL 117, ASTM C 33, with coarse aggregates complying with Class 5S. Stockpile fine and coarse aggregates for each type of exposed finish from a single source (pit or quarry) for Project.
3. Coarse Aggregates: Selected, hard, and durable; free of material that reacts with cement or causes staining; to match selected finish sample.
4. Fine Aggregates: Selected, natural or manufactured sand of same material as coarse aggregate, unless otherwise approved by Engineer.
5. Coloring Admixture: ASTM C 979, synthetic or natural mineral-oxide pigments or colored water-reducing admixtures, temperature stable, and non-fading.
6. Water: Potable; free from deleterious material that may affect color stability, setting, or strength of concrete and complying with chemical limits of PCI MNL 117.
7. Air-Entrained Admixture: ASTM C 260, certified by manufacturer to be compatible with other required admixtures.
8. Chemical Admixtures: Certified by manufacturer to be compatible with other admixtures and to not contain calcium chloride or more than 0.15 percent chloride ions or other salts by weight of admixture.
 - a. Water-Reducing Admixtures: ASTM C 494/C 494M, Type A.
 - b. Retarding Admixture: ASTM C 494/C 494M, Type B.
 - c. Water-Reducing and Retarding Admixture: ASTM C 494/C 494M, Type D.
 - d. Water-Reducing and Accelerating Admixture: ASTM C 494/C 494M, Type E.
 - e. High-Range, Water-Reducing Admixture: ASTM C 494/C 494M, Type F.
 - f. High-Range, Water-Reducing and Retarding Admixture: ASTM C 494/C 494M, Type G.
 - g. Plasticizing and Retarding Admixture: ASTM C 1017/C 1017 M.

(C) Reinforcing Materials:

1. Reinforcing Bars: ASTM A 775, Epoxy coated reinforcing bars, deformed.
2. Supports: Suspend reinforcement from back of mold or use bolsters, chairs, spacers, and other devices for spacing, supporting, and fastening reinforcing bars in place according to PCI MNL 117.

(D) Anchors: Type and size indicated, fabricated from Type 304 stainless steel complying with ASTM A 240/A 240M, ASTM A 276, or ASTM A 666.

(E) Dowels: 1/4-inch diameter, round bars, fabricated from Type 304 stainless steel complying with ASTM A 240/A 240M, ASTM A 276, or ASTM A 666.

(F) Steel Connection Materials:

1. Finish: Provide miscellaneous steel items required for installation of precast architectural concrete with galvanized finish, except those items listed as stainless steel in the following article; apply zinc coating by hot-dip process according to ASTM 123/A 123M, after fabrication, and ASTM A 153/A 153M, as applicable.
2. Structural Steel Shapes and Plates: ASTM A572 Grade 50.
3. Accessories: Provide clips, hangers, plastic shims, and other accessories required to install precast architectural concrete units.
4. Miscellaneous Items Embedded in Precast Concrete: Hot-dipped galvanized steel.

(G) Stainless Steel Connection Materials: Stainless Steel: ASTM 593, alloy 316.

(H) Precast Accessories: Provide plastic shims and other accessories required to install precast concrete units.

(I) Precast Concrete Mixtures:

1. Limit use of metakaolin to 10 percent of Portland cement by weight.
2. Design mixtures may be prepared by a qualified independent testing agency or by qualified precast plant personnel at precast concrete fabricator's option.
3. Limit water-soluble chloride ions to maximum percentage by weight of cement permitted by ACI 318 or PCI MNL 117 when tested according to ASTM C 1218/C 1218M.
4. Normal-Weight Concrete Mixtures: Proportion mixture by either laboratory trial batch or field test data methods according to ACI 211.1, with materials to be used on Project, to provide normal-weight concrete with the following properties:
 - a. Compressive Strength (28 Days): 5000 psi minimum.
 - b. Maximum Water-Cementitious Materials Ratio: 0.45.
5. Water Absorption: 6 percent by weight or 14 percent by volume, tested according to PCI MNL 117.
6. Add air-entraining admixture at manufacturer's prescribed rate to result in concrete at point of placement having an air content complying with PCI MNL 117. When included in design mixtures, add other admixtures to concrete mixtures according to manufacturer's written instructions.

(J) Mortar Mixes:

1. Do not use admixtures including pigments, air-entraining agents, accelerators, retarders, water-repellent agents, antifreeze compounds, or other admixtures unless otherwise directed by Engineer.
2. Do not use calcium chloride in mortar.
3. Use Portland cement-lime masonry cement mortar unless otherwise indicated.

4. Comply with ASTM C 270, Proportion Specification.
 5. For setting mortar, use ASTM Type S.
- (K) Epoxy-Resin Grout: Two-component, mineral-filled epoxy resin; ASTM C 881/C 881M, of type, grade, and class to suit requirements.
- (L) Joint Filler: Preformed expansion joint filler shall be synthetic foam of isomeric polymers in a very small, closed-cell structure. Joint filler shall be non-absorbent and have a resiliency of 99%. Joint filler shall conform to the following standards and meet the
1. ASTM D545 using a (1/2" (12.7 mm) thick test specimen).
 - a. Compression: 13 psi (9 g/mm²) 89.6 kPa.
 - b. Extrusion: 0.1" (2.5 mm).
 - c. Recovery: 99.21%.
 - d. Water Absorption, volume %: 0.246.
 2. ASTM D 1752, Type II.
- Thickness shall be as indicated on the Contract Drawings.
- (M) Joint Sealer: A low-modulus, high-performance, 1-component, polyurethane-based, non-sag elastomeric sealant meeting Federal Specification TT-S-00230C, Type II, Class A; ASTM C-920, ASTM Type S, Grade NS, Class 100/50, use T, NT, G, A, O, M; Federal Specification for silicones – TT-S-001543A, Type non-sag; that is available in a full range of architectural colors.
- (N) Bond Breaker: Preformed, compressible, resilient, non-staining, non-waxing, closed-cell polyethylene foam backer rod or bond breaker tape, nonabsorbent to liquid and gas, 1/8 inch (3.2 mm) thick.
- (O) Mold Materials and Fabrication:
1. Molds: Rigid, dimensionally stable, non-absorptive material, warp and buckle free, that will provide continuous and true precast concrete surfaces within fabrication tolerances indicated; nonreactive with concrete and suitable for producing required finishes. Accurately construct molds, mortar tight, of sufficient strength to withstand pressures due to concrete-placement operations and temperature changes. Coat contact surfaces of molds with release agent before reinforcement is placed. Avoid contamination of reinforcement by release agent.
 2. Form Liners: Units of face design, texture, arrangement, and configuration indicated. Furnish with manufacturer's recommended liquid-release agent that will not bond with, stain, or adversely affect precast concrete surfaces and will not impair subsequent surface or joint treatments of precast concrete. Place form liners accurately to provide finished surface texture indicated. Provide solid backing and supports to maintain stability of liners during concrete placement. Coat form liner with form-release agent.
 3. Mold-Release Agent: Commercially produced liquid-release agent that will not bond with, stain or adversely affect precast concrete surfaces and will not impair subsequent surface or joint treatments of precast concrete.

4. Maintain molds to provide completed precast concrete units of shapes, lines, and dimensions indicated, within fabrication tolerances specified. Form joints are not permitted on faces exposed to view in the finished work.

6.31P.5. FABRICATION.

- (A) Cast-in Anchors and Other Anchorage Hardware: Fabricate anchorage hardware with sufficient anchorage and embedment to comply with design requirements. Accurately position and secure in place during precasting operations. Locate anchorage hardware where it does not affect position of main reinforcement or concrete placement.
- (B) Furnish loose hardware items including anchors, dowels and other hardware shapes for securing architectural precast concrete units to supporting and adjacent construction.
- (C) Reinforcement: Comply with recommendations in PCI MNL 117 for fabricating, placing, and supporting reinforcement.
- (D) Clean reinforcement of loose rust and mill scale, earth, and other materials that reduce or destroy the bond with concrete.
- (E) Accurately position, support, and secure reinforcement against displacement during concrete-placement and consolidation operations. Completely conceal support devices to prevent exposure on finished surfaces.
- (F) Place reinforcement to maintain at least 2-inch minimum coverage. Arrange, space, and securely tie bars and bar supports to hold reinforcement in position while placing concrete. Direct wire tie ends away from finished, exposed concrete surfaces.
- (G) Reinforce precast concrete units to resist handling, transportation, and erection stresses.
- (H) Comply with requirements in PCI MNL 117 and requirements in this Section for measuring, mixing, transporting, and placing concrete. After concrete batching, no additional water may be added.
- (I) Place concrete in a continuous operation to prevent seams or planes of weakness from forming in precast concrete units.
- (J) Thoroughly consolidate placed concrete by internal and external vibration without dislocating or damaging reinforcement and built-in items, and minimize pour lines, honeycombing, or entrapped air on surfaces. Use equipment and procedures complying with PCI MNL 117.
- (K) Comply with PCI MNL 117 for hot- and cold-weather concrete placement.
- (L) Cure concrete, according to requirements in PCI MNL 117, by moisture retention without heat or by accelerated heat curing using low-pressure live steam or radiant heat and moisture. Cure units until compressive strength is high enough to ensure that stripping does not have an effect on performance or appearance of final product.

- (M) Discard and replace precast concrete units that do not comply with requirements, including structural, manufacturing tolerance, and appearance, unless repairs meet requirements in PCI MNL 117 and Engineer's approval. All materials, as well as the plant and methods of manufacture, shall be subject at all times to the inspection and approval of the Engineer. All materials inspected and approved at place of manufacture, may be subject to further inspection at the place of use, and any materials failing to comply with the specification requirements will be rejected.

The Engineer may at any time order such other and further inspection, examination, and tests, as the Engineer may deem necessary and proper to satisfy the Engineer that the work and materials are in compliance with these specifications.

The Contractor shall give the Engineer sufficient advance notice prior to starting the manufacture of the materials. The Engineer shall have free entry at all times, while work on the contract is being performed to all parts of the manufacturer's works which concern the manufacture of the materials. The manufacturer shall afford the Inspector, without charge, all reasonable facilities to satisfy the Inspector that the material is being furnished in accordance with these specifications. In the absence of an Inspector at the plant during manufacture, the Engineer may accept a certificate of test.

(N) Fabrication Tolerances:

1. Fabricate architectural precast concrete units straight and true to size and shape with exposed edges and corners precise and true with indicated texture on all exposed surfaces unless otherwise indicated.
2. Slope exposed horizontal surfaces 1:12 to drain unless otherwise indicated.
3. Variation in Cross Section: Do not vary from indicated dimensions by more than 1/8 inch.
4. Variation in Length: Do not vary from indicated dimensions by more than 1/360 of the length of unit or 1/8 inch, whichever is greater.
5. Warp, Bow, and Twist: Not to exceed 1/360 of the length of unit or 1/8 inch.
6. Location of Grooves, False Joints, Holes, Anchorages, and Similar Features: Do not vary from indicated position by more than 1/8 inch.

- (O) Finishes: Exposed faces shall be free of joint marks, grain, and other obvious defects. Corners, including false joints shall be uniform, straight, and sharp. Finish exposed-face surfaces (front, back, top and sides) of precast concrete units to match approved sample panels and as follows:

1. Light Acid-Etched Finish: Use inhibited hydrochloric acid and hot-water solution, equipment, application techniques, and cleaning procedures to expose aggregate and surrounding matrix surfaces. Protect hardware, connections, and insulation from acid attack.
2. Finish unexposed surfaces of precast concrete units with as-cast smooth finish.

(P) Source Quality Control:

1. Quality Control Testing: Test and inspect precast concrete according to PCI MNL 117 requirements. Testing of the psi and water absorption for the precast concrete shall occur with 1 test cylinder for each day of production batch.

2. Strength of precast concrete units will be considered deficient if units fail to comply with ACI 318 requirements.
3. Testing: if there is evidence that the strength of precast architectural concrete bench units may be deficient or may not comply with ACI 318 requirements, the Contractor shall employ an independent testing agency, at no cost to the city, to obtain, prepare, and test cores drilled from hardened concrete to determine compressive strength according to ASTM C 42 as directed by the Engineer.
4. Defective Work: Precast architectural concrete bench units that do not comply with requirements, including strength, manufacturing tolerances, and finishes, are unacceptable. Replace with new precast architectural concrete bench units that comply with requirements.

6.31P.6. QUALITY CONTROL.

- (A) Installer Qualifications: All on-site work of this Section shall be performed by an installer having completed at least one (1) project similar in scope in the last seven (7) years.
- (B) Manufacturer Qualifications: All work of this Section shall be fabricated by a fabricator having not less than five (5) years of satisfactory experience in fabricating architectural quality precast concrete and is a plant certified by the Architectural Precast Association or the Precast/Prestressed Concrete Institute for Group A, Category AT.
 1. Assumes responsibility for engineering precast architectural concrete units to comply with performance requirements. This responsibility includes preparation of Shop Drawings and comprehensive engineering and design analysis by a qualified licensed professional engineer.
 2. Participates in Prestressed Concrete Institute's (PCI's) Plant Certification program and is designated a PCI-certified plant for Group A, Category A1-Architectural Cladding and Load Bearing Units.
 3. Has sufficient production capacity to produce required units without delaying the Work.
 4. Is registered with and approved by authorities having jurisdiction.
- (C) Design Standards: Comply with ACI 318 and the design recommendations of PCI MNL 120, "PCI Design Handbook – Precast and Prestressed Concrete."
- (D) Quality-Control Standard: for manufacturing procedures and testing requirements, quality-control recommendations, and dimensional tolerances for types of units required, comply with PCI MNL 117, "Manual for Quality Control for Plants and Production of Architectural Precast Concrete Products."

- (E) Source Limitations for Mortar Materials: Obtain mortar ingredients of a uniform quality, including color, from one manufacturer for each cementitious component and from one source or producer for each aggregate.
- (F) Sample Unit: After sample approval and before fabricating precast concrete units, produce a minimum of 2 sample units full height by approximately 24 inches long in area for review and approval by the Engineer. Incorporate full-scale details of features, finishes, textures, and transitions in sample units.

Locate units where indicated or, if not indicated, as directed by the Engineer.

Damage part of an exposed-face surface for each finish, color, and texture, and demonstrate adequacy of repair techniques proposed for repair of surface blemishes.

After acceptance of repair technique, maintain sample units at Project site in an undisturbed condition as a standard for judging the completed Work.

Demolish and remove sample units when directed.

- (H) Mockups: Prepare mockups of each unit to demonstrate aesthetic effects and set quality standards for materials and execution and for fabrication and installation. Build mockups for each type of precast concrete unit in actual sizes; include accessories.
1. Include a sealed joint in mockup of each precast concrete unit.
 2. Protect accepted mockups from the elements with weather-resistant membrane.
 3. Approval of mockups is for color, texture, relationship of sealant colors to precast concrete units; tooling of joints; and aesthetic qualities of workmanship; and also other material and construction qualities Engineer specifically approves in writing.
 4. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless the Engineer specifically approves such deviations in writing.
 5. Approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion, with approval by Engineer

6.31P.7. DELIVERY, STORAGE, AND HANDLING:

- (A) Deliver precast concrete units to the Project site in such quantities and at such times to avoid delaying the Work and minimize on-site storage.
- (B) Support units during shipment on non-staining shock-absorbing material.
- (C) Store units with adequate dunnage and bracing and protect units to prevent contact with soil, to prevent staining, and to prevent cracking or other physical damage.

- (D) Place stored units so identification marks are clearly visible, and units can be inspected.
- (E) Handle and transport units in a position consistent with their shape and design in order to avoid excessive stresses which would cause cracking or damage.
- (F) Lift and support units only at designated points shown on Shop Drawings.
- (G) Store cementitious materials on elevated platforms, under cover, and in a dry location. Do not use cementitious materials that have become damp.
- (H) Store mortar aggregates where grading and other required characteristics can be maintained and contamination can be avoided.
- (I) Furnish loose connection hardware and anchorage items to be embedded in or attached to other construction without delaying the Work. Provide locations, setting diagrams, templates, instructions, and directions, as required, for installation.

6.31P.8. PROJECT CONDITIONS:

- (A) Cold-Weather Requirements: Do not use frozen materials or materials mixed or coated with ice or frost. Do not build on frozen substrates. Remove and replace precast concrete units damaged by frost or freezing conditions. Comply with cold-weather construction requirements contained in ACI 530.1/ASCE 6/TMS 602.
- (B) Cold-Weather Cleaning: Use liquid cleaning methods only when air temperature is 40 deg F and above and will remain so until precast concrete has dried, but not less than 7 days after completing cleaning.
- (C) Hot-Weather Requirements: Comply with hot-weather construction requirements contained in ACI 530.1/ASCE 6/TMS 602.
- (D) Protection of Precast Concrete Units: During construction, cover tops of walls with waterproof sheeting at end of each day's work. Cover partially completed precast concrete unit installation when construction is not in progress.
 - 1. Extend cover a minimum of 24 inches down both sides and hold cover securely in place.
 - 2. Stain Prevention: Immediately remove mortar and soil to prevent them from staining the face of precast concrete units.
 - 3. Protect base of walls from rain-splashed mud and mortar splatter by coverings spread on the ground and over the wall surface.

6.31P.9. METHOD.

- (A) Examine supporting foundation and conditions, with installer present, for compliance with requirements for installation tolerances, true and level bearing surfaces, and other conditions affecting performance verify that slots, inserts, anchors, and other items installed in supporting foundation and required for or extending into precast units are correctly installed. Proceed with installation only after unsatisfactory conditions have been corrected.

- (B) Install accessories required for connecting precast concrete units to supporting foundation.
- (C) Set precast concrete units level, plumb, and square within specified allowable tolerances. Provide temporary supports and bracing as required to maintain position, stability, and alignment as units are being permanently connected.
- (D) Install temporary steel or plastic spacing shims or bearing pads as precast concrete units are being erected.
- (E) Maintain horizontal and vertical joint alignment and uniform joint width as installation progresses.
- (F) Remove projecting lifting devices and grout fill voids within recessed lifting devices flush with surface of adjacent precast surfaces. Lifting devices and recesses remaining from lifting devices shall not be on exposed surfaces.
- (G) Unless otherwise indicated, maintain uniform joint widths of 3/8 inch.
- (H) Wet joint surfaces thoroughly before setting in mortar.
- (I) Set units in full bed of mortar unless otherwise indicated; bed thickness as indicated on Contract Drawings. Keep expansion joints and other vertical joints free of mortar.
- (J) Install joint filler of sufficient size to accommodate bond breaker and sealant depth in vertical joints as indicated.
- (K) Remove temporary shims, wedges, and spacers as soon as practical after setting.
- (L) Clean out joints immediately before installing joint sealants to comply with joint-sealant manufacturer's written instructions and the following requirements. Remove all foreign material from joint substrates that could interfere with adhesion of joint sealant, including dust. Clean porous joint substrate surfaces by brushing, grinding, mechanical abrading, or a combination of these methods to produce a clean, sound substrate capable of developing optimum bond with joint sealants. Remove loose particles remaining after cleaning operations above by vacuuming or blowing out joints with oil-free compressed air. Porous joint substrates include concrete, precast concrete and precast stone.
- (M) Masking Tape: Use masking tape where required to prevent contact of sealant or primer with adjoining surfaces that otherwise would be permanently stained or damaged by such contact or by cleaning methods required to remove sealant smears. Remove tape immediately after tooling without disturbing joint seal.
- (N) Comply with joint-sealant manufacturer's written installation instructions for products and applications indicated, unless more stringent requirements apply. Comply with recommendations in ASTM C 1193 for use of joint sealants as applicable to materials, applications, and conditions indicated.
- (O) Install bond-breaker tape behind sealants as indicated and recommended by sealant manufacturer.

(P) Install sealants using proven techniques that comply with the following and at the same time backings are installed:

1. Place sealants so they directly contact and fully wet joint substrates.
2. Completely fill recesses in each joint configuration.
3. Produce uniform, cross-sectional shapes and depths relative to joint widths that allow optimum sealant movement capability.

(Q) Tooling of Nonsag Sealants: Immediately after sealant application and before skinning or curing begins, tool sealants according to requirements specified in subparagraphs below to form smooth, uniform beads of configuration indicated; to eliminate air pockets; and to ensure contact and adhesion of sealant with sides of joint.

1. Remove excess sealant from surfaces adjacent to joints.
2. Use tooling agents that are approved in writing by sealant manufacturer and that do not discolor sealants or adjacent surfaces.
3. Provide concave joint profile per Figure 8A in ASTM C 1193, unless otherwise indicated.

(R) Setting Tolerances:

1. Variation from Plumb: Do not exceed 1/8 inch in 10 feet.
2. Variation from Level: Do not exceed 1/8 inch in 10 feet.
3. Variation in Joint Width: Do not vary joint thickness more than one-fourth of nominal joint width.
4. Variation in Plane between Adjacent Surfaces (Lipping): Do not vary from flush alignment with adjacent units or adjacent surfaces indicated to be flush with units by more than 1/32 inch.

(S) Repairs: Blemishes occurring after delivery are normally repaired before final joint sealing and cleaning as weather permits

1. Repair precast concrete units if permitted by the Engineer. The Engineer reserves the right to reject repaired units that do not comply with requirements.
2. Precast concrete manufacturer should develop appropriate repair mixtures and techniques during production sample approval process.
3. Mix patching materials and repair units so cured patches blend with color, texture, and uniformity of adjacent exposed surfaces and show no apparent line of demarcation between original and repaired work, when viewed in typical daylight illumination from a distance of 20 feet.
4. Remove and replace damaged precast concrete units when repairs do not comply with requirements.

(T) Cleaning: Clean cast stone as work progresses. Clean off excess sealant or sealant smears adjacent to joints as the Work progresses by methods and with cleaning materials approved in writing by manufacturers of joint sealants and of products in which joints occur.

1. Final Cleaning: After mortar and sealant is thoroughly set and cured, clean exposed precast units as follows:
 - a. Perform cleaning procedures, if necessary, according to precast concrete manufacturer's recommendations. Clean soiled precast concrete surfaces with detergent and water, using stiff fiber brushes and sponges, and rinse with clean water. Protect other work from staining or damage due to cleaning operations.
 - b. Do not use cleaning materials or processes that could change the appearance of exposed concrete finishes or damage adjacent materials.
 - c. Test cleaning methods on sample; leave one sample uncleaned for comparison purposes. Obtain Engineer's approval of sample cleaning before proceeding with cleaning.

6.31P.10. SUBMITTALS. The Contractor shall make the following submittals to the Engineer for approval:

- (A) Product Data: For each type of product indicated.
- (B) Design Mixtures: For each precast concrete mixture. Include compressive strength and water-absorption tests.
- (C) Shop Drawings: Detail fabrication and installation of precast concrete units. Indicate locations, plans, elevations, dimensions, shapes, and cross sections of each unit, limits of each finish, and types of reinforcement, including special reinforcement. Indicate joints, reveals, and extent and location of each precast concrete units. Shop drawings shall also:
 1. Indicate scope of work for this project showing all conditions, dimensions, profiles, reveals, etc., as shown on the Drawings.
 2. Indicate locations and extent and treatment of dry joints if two-stage casting is proposed.
 3. Indicate miscellaneous steel and welded connections per AWS standard symbols. Detail loose and cast-in hardware, inserts, connections, and joints, including accessories.
 4. Indicate reinforcement and embedded pick-up point locations and hardware.
 5. Indicate locations, tolerances, and details of anchorage devices to be embedded in or attached to foundations or other construction.
 6. Indicate location of each precast concrete unit by same identification mark placed on unit.
 7. Indicate relationship of precast concrete units to adjacent materials.
 8. Indicate locations and details of corner units, special shapes, and joint treatment.

9. Indicate locations and details of anchors, and joint widths.
10. Comprehensive engineering, design and analysis for the entire precast installation shall be signed and sealed by the qualified professional engineer registered in the State of New York, responsible for its preparation.

(D) Samples:

1. Precast Samples: For each type of finish and color indicated on exposed surfaces of precast concrete units, in sets of 3, illustrating full range of finish, color, and texture variations expected; each sample size shall be approximately 24 by 24 by 2 inches. Finish and Color to be selected and approved by the Landscape Architect.
2. Joint Filler Sample for Verification: 12 inch by 12 inch of thickness indicated.
3. Joint Sealant Samples: Manufacturer's color charts consisting of strips of cured sealants showing the full range of colors available for each product exposed to view.
4. Informational Submittals: Qualification data for installer and fabricator.

(E) Qualification Data: for firms and persons specified, "Quality Control", to demonstrate their capabilities and experience. Include lists of completed projects with project names and addresses, names and addresses of architects and owners, and other information requested.

(F) Material Certificates: signed by manufacturers certifying that each of the following items complies with requirements:

1. Concrete materials.
2. Reinforcing materials.
3. Admixtures.

(G) Non-Shrink Waterproof Grout: All joints to be filled with Non-shrink waterproof grout, custom color to match precast architectural concrete. Color samples to be submitted to Landscape Architect for approval.

6.31P.11. MEASUREMENT. The quantities of Precast Concrete Seat Walls and Curbs to be measured for payment shall be the number of linear feet (top surface) of precast concrete seat walls and curbs, actually installed to the satisfaction of the Engineer, measured in place.

The quantities of Precast Concrete Seating Steps to be measured for payment shall be the number of seating steps actually installed to the satisfaction of the Engineer.

6.31P.12. PRICES TO COVER.

(A) PRECAST CONCRETE CURB - 12" HEIGHT

The contract price bid for Precast Concrete Curb - 12" Height shall be a unit price per linear foot and shall cover the cost of all labor, materials, equipment, insurance, and incidentals required to furnish and install new Precast Concrete Curbs, in accordance with the Contract Drawings, the

specifications, and the directions of the Engineer. The unit price bid shall include, but not be limited to, the cost of furnishing and installing precast units, anchors, dowels, setting accessories, mortar for setting bed, joint materials, joint filler, bond breaker, sealant, and samples and mock-ups as specified and as directed by the Engineer.

(B) PRECAST CONCRETE CURB - 6" HEIGHT

The contract price bid for Precast Concrete Curb - 6" Height shall be a unit price per linear foot and shall cover the cost of all labor, materials, equipment, insurance, and incidentals required to furnish and install new Precast Concrete Curbs, in accordance with the Contract Drawings, the specifications, and the directions of the Engineer. The unit price bid shall include, but not be limited to, the cost of furnishing and installing precast units, anchors, dowels, setting accessories, mortar for setting bed, joint materials, joint filler, bond breaker, sealant, and samples and mock-ups as specified and as directed by the Engineer.

(C) PRECAST CONCRETE SEATING STEP

The contract price bid for Precast Concrete Seating Step shall be a unit price per each and shall cover the cost of all labor, materials, equipment, insurance, and incidentals required to furnish and install each new Precast Concrete Seat Step, in accordance with the Contract Drawings, the specifications, and the directions of the Engineer. The unit price bid shall include, but not be limited to, the cost of furnishing and installing precast units, anchors, dowels, setting accessories, mortar for setting bed, joint materials, joint filler, bond breaker, sealant, and samples and mock-ups as specified and as directed by the Engineer.

(D) PRECAST CONCRETE SEAT WALL

The contract price bid for Precast Concrete Seat Wall shall be a unit price per linear foot and shall cover the cost of all labor, materials, equipment, insurance, and incidentals required to furnish and install new Precast Concrete Seat Walls, in accordance with the Contract Drawings, the specifications, and the directions of the Engineer. The unit price bid shall include, but not be limited to, the cost of furnishing and installing precast units, anchors, dowels, setting accessories, mortar for setting bed, joint materials, joint filler, bond breaker, sealant, and samples and mock-ups as specified and as directed by the Engineer.

The cost for furnishing and installing the concrete footings for Precast Concrete Seat Walls, Curbs, and Seating Step shall be paid for under Item No. 4.06, Concrete in Structures, Class A-40.

The cost for furnishing and placing steel reinforcement for the footings of Precast Concrete Seat Walls, Curbs, and Seating Step shall be paid for under Item No. 4.14.

Payment will be made under:

Item No.	Description	Pay Unit
6.31 PCC12	PRECAST CONCRETE CURB - 12" HEIGHT	L.F.
6.31 PCC6	PRECAST CONCRETE CURB - 6" HEIGHT	L.F.
6.31 PCS	PRECAST CONCRETE SEATING STEP	EACH
6.31 PSW	PRECAST CONCRETE SEAT WALL	L.F.

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 quantity 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 7.50 SF-MA
MOVABLE SITE FURNISHINGS**

7.50SF-MA.1. INTENT: This section describes the products and installation of Site Furnishings.

7.50SF-MA.2. DESCRIPTION: Under this Section, the Contractor shall furnish and install the followings Site Furnishings, in accordance with the Contract Drawings, specifications and directions of the Engineer:

- (A) Chairs
- (B) Lounge Chairs
- (C) Movable Tables
- (D) Umbrellas
- (E) Umbrella Anchors
- (F) Trash Receptacles

7.50SF-MA.3. REFERENCES:

(A) ASTM Testing Standards:

1. ASTM B 117 – Standard Practice for Operating Salt Spray (Fog) Apparatus.
2. ASTM D 522 – Standard Test Methods for Mandrel Bend Test of Attached Organic Coatings.
3. ASTM D 523 – Standard Test Method for Specular Gloss.
4. ASTM D 2247 – Standard Practice for Testing Water Resistance of Coatings in 100% Relative Humidity.
5. ASTM D 2794 – Standard Test Method for Resistance of Organic Coatings to the Effects of Rapid Deformation (Impact).
6. ASTM D 3359 – Standard Test Methods for Measuring Adhesion by Tape Test.
7. ASTM D 3363 – Standard Test Method for Film Hardness by Pencil Test.
8. ASTM G 155 – Standard Practice for Operating Xenon Arc Light Apparatus for Exposure of Non-Metallic Materials.

(B) ISO Testing Standards:

1. ISO 1520 – Paints and Varnishes – Cupping Test.
2. ISO 2815 – Paints and Varnishes – Buchholz Indentation Test.

(C) ANSI/BIFMA Testing Standards:

1. ANSI/BIFMA X5.4-2005 – Standard Test for Lounge Seating.

7.50SF-MA.4. SUBMITTALS:

- (A) Product Data: Submit manufacturer's product data, storage and handling requirements and recommendations, installation methods and available colors, styles, patterns and textures.
- (B) Shop Drawings: Submit manufacturer's shop drawings, including plans and elevations, indicating overall dimensions for approval by the Engineer.
- (C) Samples: Submit manufacturer's samples of materials, finishes, and colors, including three (3) samples of specified color as applied to an 8 inch by 8 inch square of specified metal for approval by the Engineer.
- (D) Warranty: Guarantee for a minimum of three years.

7.50SF-MA.5. DELIVERY, STORAGE, AND HANDLING:

- (A) Delivery: Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying product name and manufacturer.
- (B) Storage: Store materials in clean, dry area in accordance with manufacturer's instructions. Keep materials in manufacturer's original, unopened containers and packaging until installation.
- (C) Handling: Protect materials and finish during handling and installation to prevent damage.

7.50SF-MA.6. WARRANTY:

- (A) Warranty Information:
 1. Products will be free from defects in material and/or workmanship for a period of three years from the date of substantial completion.
 2. The warranty may exclude damage resulting from accident, misuse, tampering, negligence, or abuse.
 3. Products shall be repaired or replaced to the satisfaction of the Engineer any items found defective upon inspection by an authorized manufacturer service representative and Engineer.

7.50SF-MA.7. MANUFACTURER AND VENDORS:

- (A) Chairs: "Parc Centre" Chair

1. Manufacturer:

- a. Landscape Forms, Inc., 431 Lawndale Avenue, Kalamazoo, Michigan 49048. Toll Free (800) 521-2546. Phone (269) 381-0396. Fax (269) 381-3455.

Website: www.landscapeforms.com.

E-mail: specify@landscapeforms.com.

2. Vendors:

- a. Landscape Forms, Inc., 431 Lawndale Avenue, Kalamazoo, Michigan 49048. Toll Free (800) 521-2546. Phone (269) 381-0396. Fax (269) 381-3455.

Website: www.landscapeforms.com.

E-mail: specify@landscapeforms.com.

- b. Arenson
1115 Broadway, New York, NY
212-633-2400
MAdinolfi@aof.com

- c. AFD Contract Furniture Inc.
810 7th Avenue #2, New York, NY
212-721-7100
tcohen@afd-inc.com

- d. Empire Office
105 Madison Ave.
New York, NY 10016
212.607.5500
mmaltz@empireoffice.com

- e. Or approved equivalent vendor.

3. Option: No Arms

4. Color: "Pure Orange" (RAL 2004).

- (B) Lounge Chairs: "Parc Lounge" Chair, with arms shall comply with ANSI/BIFMA X5.4-2005 – Standard Test for Lounge Seating.

1. Manufacturer:

- a. Landscape Forms, Inc., 431 Lawndale Avenue, Kalamazoo, Michigan 49048. Toll Free (800) 521-2546. Phone (269) 381-0396. Fax (269) 381-3455.

Website: www.landscapeforms.com.

E-mail: specify@landscapeforms.com.

2. Vendors:

- a. Landscape Forms, Inc., 431 Lawndale Avenue, Kalamazoo, Michigan 49048.
Toll Free (800) 521-2546. Phone (269) 381-0396. Fax (269) 381-3455.
Website: www.landscapeforms.com.
E-mail: specify@landscapeforms.com.
 - b. Arenson
1115 Broadway, New York, NY
212-633-2400
MAdinolfi@aof.com
 - c. AFD Contract Furniture Inc.
810 7th Avenue #2, New York, NY
212-721-7100
tcohen@afd-inc.com
 - d. Empire Office
105 Madison Ave.
New York, NY 10016
212.607.5500
mmaltz@empireoffice.com
 - e. Or approved equivalent vendor
3. Color: "Pure Orange" (RAL 2004).
- (C) Movable Tables: "Catena" Table with perforated surface.
1. Manufacturer:
 - a. Landscape Forms, Inc., 431 Lawndale Avenue, Kalamazoo, Michigan 49048. Toll Free (800) 521-2546. Phone (269) 381-0396. Fax (269) 381-3455.
Website www.landscapeforms.com. E-mail: specify@landscapeforms.com.
 2. Vendors:
 - a. Landscape Forms, Inc., 431 Lawndale Avenue, Kalamazoo, Michigan 49048. Toll Free (800) 521-2546. Phone (269) 381-0396. Fax (269) 381-3455.
Website: www.landscapeforms.com.
E-mail: specify@landscapeforms.com.
 - b. Arenson
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MAdinolfi@aof.com
 - c. AFD Contract Furniture Inc.
810 7th Avenue #2, New York, NY

212-721-7100
tcohen@afd-inc.com

- d. Empire Office
105 Madison Ave.
New York, NY 10016
212.607.5500
mmaltz@empireoffice.com

- e. Or approved equivalent vendor

3. Diameter: 30 inches round with umbrella hole.

4. Color: "Pure Orange" (RAL 2004).

(D) Trash Receptacles: "Parc Vue" by Landscape Forms.

1. Manufacturer:

- a. Landscape Forms, Inc., 431 Lawndale Avenue, Kalamazoo, Michigan 49048. Toll Free (800) 521-2546. Phone (269) 381-0396. Fax (269) 381-3455.

Website: www.landscapeforms.com.

E-mail: specify@landscapeforms.com.

2. Vendors:

- a. Landscape Forms, Inc., 431 Lawndale Avenue, Kalamazoo, Michigan 49048. Toll Free (800) 521-2546. Phone (269) 381-0396. Fax (269) 381-3455.

Website: www.landscapeforms.com.

E-mail: specify@landscapeforms.com.

- b. Arenson
1115 Broadway, New York, NY
212-633-2400
MAdinolfi@aof.com
- c. AFD Contract Furniture Inc.
810 7th Avenue #2, New York, NY
212-721-7100
tcohen@afd-inc.com

- d. Empire Office
105 Madison Ave.
New York, NY 10016
212.607.5500
mmaltz@empireoffice.com

- e. Or approved equivalent vendor
- 3. Style: Top-Opening Style
 - a. Diameter: 22-1/4 inches
 - b. Height: 36 inches
 - c. Opening: 8-inch diameter
- 4. Capacity: with liner – 30 gallons
- 5. Mounting: free-standing
- 6. Liner: FOG-colored polyethylene urn-shaped insert
- 7. Receptacle Top Color: Fog
- 8. Color: Titanium (standard color) metal base and wire mesh.
- (E) Umbrellas: "Ocean Master Autoscope" by Tuuci.
 - 1. Suppliers:
 - a. Beachwood Collective, 195 Chrystie St. #501C, New York.
Contact person: Dan Ryan, Phone: (212) 561-5533
 - b. Steve Glickman Marketing, 95 Putnam Avenue, Hamden, CT 65172.
Contact person: Steve Glickman, Phone: (203) 248-1417
 - c. Dickinson Contract, 900 Apple Hill Road, Cincinnati, OH 45230.
Contact person: Jay Dickinson, Phone: (513) 509-3600
 - d. Or approved equivalent supplier.
 - 2. Size: 11ft diameter
 - 3. Shape: Octagon
 - 4. Fabric Grade/ Color: Single Solid Color Panels - Sunbrella Plus/ Taupe (4648-0000)
 - 5. Option: Straight Valance
 - 6. Option: Single vent
 - 7. Option: Auto-loc marine lift pulley system
 - 8. Finish: Polished Titanium Finish
- (F) Umbrella Anchors: "Alum-crete" with lift handles by Tucci.

1. Suppliers:

- a. Beachwood Collective, 195 Chrystie St. #501C, New York.
Contact person: Dan Ryan, Phone: (212) 561-5533
- b. Steve Glickman Marketing, 95 Putnam Avenue, Hamden, CT 65172.
Contact person: Steve Glickman, Phone: (203) 248-1417
- c. Dickinson Contract, 900 Apple Hill Road, Cincinnati, OH 45230.
Contact person: Jay Dickinson, Phone: (513) 509-3600,
- d. Or approved equivalent supplier.

2. Weight: 250 lbs.

3. Base Color: Polished Titanium Finish

7.50SF-MA.8. MATERIALS:

(A) Chairs: "Parc Centre" Chair

1. Seat & Back Panel: made of steel straps.
2. Frame: Cold Drawn Steel.
3. Stacking Bumper Glide: Made from super-tough nylon to resist damage from dragging on rough surfaces.

(B) Lounge Chairs: "Parc Lounge" Chair

1. Seat & Back Panel: made of HRP&O A36 3/4" x 0.188" steel straps.
2. Lounge Form: 1/2" outer diameter solid 1018 cold drawn carbon steel wire.
3. Stacking Bumper Glide: Size: 0.85" width x 1.5" length x 0.53" height. Made from super-tough nylon to resist damage from dragging on rough surfaces.

(C) Movable Tables: "Catena" Table with perforated surface.

1. Table Tops: 16 gauge with rolled edge, reinforced with steel channels beneath the top.
 - a. Powder coated steel
2. Table Supports: 2.5" outer diameter x 0.120" wall steel tubing welded to 18" diameter cast iron base.
 - a. Freestanding with nylon glides

(D) Trash Receptacles: "Parc Vue" by Landscape Forms.

1. Frame Assembly: Basket is formed of 3/4" #13F expanded steel and has two 3/8" diameter steel rod rings welded on the top and bottom of the assembly. Basket is attached to cast iron base with three stainless steel threaded studs.
2. Top: Tops are molded from linear low or medium density polyethylene with 1/4" wall thickness. Tops are attached to receptacle with a cable. Cable is constructed of 1/16" stainless steel wire rope; nylon coated with eye fittings.
3. Liner: Liners are molded from 100% linear low or medium density polyethylene with a 1/8" wall.

(E) Umbrellas: "Ocean Master Autoscope"

1. Fabric: "Marine Grade" tuff-skin Grade C
2. Auto-loc marine lift pulley system
3. Pole: Aluminum

(F) Umbrella Anchors: "Alum-crete" with lift handles by Tucci.

7.50SF-MA.9. RECYCLED CONTENT:

(A) Chairs: "Parc Centre" and "Parc Lounge" Chairs

1. Recycled Material Content: Minimum 90.6 percent.
2. Post-Consumer Material Content: Minimum 58.8 percent.
3. Pre-Consumer Material Content: Minimum 31.8 percent.
4. Recyclable: 100 percent

(B) Movable Tables: "Catena" Table with perforated surface.

(C) Trash Receptacles: "Parc Vue" by Landscape Forms.

1. Recycled Material Content: Minimum 70 percent.
2. Post-Consumer Material Content: Minimum 41 percent.
3. Pre-Consumer Material Content: Minimum 29 percent.
4. Recyclable: 100 percent

7.50SF-MA.10. FINISHES:

(A) Chairs, Lounge Chairs and Trash Receptacles

1. Finish on Metal: Landscape Forms, Inc. "Pangard II".
2. Primer: Rust inhibitor.
3. Topcoat: Thermosetting polyester powdercoat. UV, chip, and flake resistant.

4. Test Results: "Pangard II".

- a. Gloss Consistency, Gardner 60 Degrees, ASTM D 523: Plus or minus 5 percent from standard.
- b. UV Resistance, Color and Gloss, ASTM G 155, Cycle 7: Delta E less than 2 at 2.0 mils and less than 20 percent loss.
- c. Cross-Hatch Adhesion, ASTM D 3359, Method B: 100 percent pass.
- d. Flexibility Test, Mandrel, ASTM D 522: 3 mm at 2 mils.
- e. Erichsen Cupping, ISO 1520: 8 mm.
- f. Impression Hardness, Buchholz, ISO 2815: 95.
- g. Impact Test, ASTM D 2794: 60 inch-pounds at 2.5 mils.
- h. Pencil Hardness, ASTM D 3363: 2H minimum.
- i. Corrosion Resistance, 1,500-Hour Test, ASTM B 117: Max undercutting 1 mm.
- j. Humidity Resistance, 1,500-Hour Test, ASTM D 2247: Max blisters 1 mm.

(B) Movable Tables:

- 1. Finish on Carbon Steel: Landscape Forms, Inc. "Pangard II".
- 2. Primer: Rust inhibitor.
- 3. Topcoat: Thermosetting polyester powdercoat. UV, chip, and flake resistant.
- 4. Test Results: "Pangard II".
 - a. Gloss Consistency, Gardner 60 Degrees, ASTM D 523: Plus or minus 5 percent from standard.
 - b. UV Resistance, Color and Gloss, ASTM G 155, Cycle 7: Delta E less than 2 at 2.0 mils and less than 20 percent loss.
 - c. Cross-Hatch Adhesion, ASTM D 3359, Method B: 100 percent pass.
 - d. Flexibility Test, Mandrel, ASTM D 522: 3 mm at 2 mils.
 - e. Erichsen Cupping, ISO 1520: 8 mm.
 - f. Impression Hardness, Buchholz, ISO 2815: 95.
 - g. Impact Test, ASTM D 2794: 60 inch-pounds at 2.5 mils.
 - h. Pencil Hardness, ASTM D 3363: 2H minimum.

- i. Corrosion Resistance, 1,500-Hour Test, ASTM B 117: Max undercutting 1 mm.
- j. Humidity Resistance, 1,500-Hour Test, ASTM D 2247: Max blisters 1 mm.

(C) Umbrellas: Polished Titanium Finish

(D) Umbrella Anchors: Polished Titanium Finish

7.50SF-MA.11. FABRICATION: Assembled and fabricated in the shop.

7.50SF-MA.12. METHODS: The following methods of installation shall be used.

(A) Examination:

- 1. Examine areas to receive the Site Furnishings.
- 2. Notify Engineer of conditions that would adversely affect installation or subsequent use.
- 3. Do not begin installation until unacceptable conditions are corrected and acceptance verified in writing by Engineer.

(B) Installation:

- 1. Install Site Furnishings in accordance with manufacturer's instructions at locations indicated on the Drawings.
- 2. Locate Site Furnishings as directed by Engineer.
- 3. Install Site Furnishings plumb and level.

(C) Adjusting:

- 1. Finish Damage: Repair minor damages to finish in accordance with manufacturer's instructions and as approved by Engineer.
- 2. Component Damage: Remove and replace damaged components that cannot be successfully repaired as determined by Engineer.

(D) Cleaning: Clean Site Furnishings promptly after installation in accordance with manufacturer's instructions. Do not use harsh cleaning materials or methods that could damage finish.

(E) Protection: Protect installed Site Furnishings to ensure they will be without damage or deterioration at time of Substantial Completion.

7.50SF-MA.13. MEASUREMENT: The quantities of Site Furnishings to be measured for payment shall be the quantity of each type Site Furnishing installed at the site to the satisfaction of the Engineer.

7.50SF-MA.14. PRICES TO COVER: The prices bid shall be the unit price per EACH

type site furnishing Item covered under this Section and shall include the cost of furnishing all labor, materials, equipment, insurance, and incidentals necessary to furnish, assemble and install the Site Furnishings including, but not limited to, chair arm rests and glides, and hardware, 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 SF-MA1	CHAIRS	EACH
7.50 SF-MA2	LOUNGE CHAIRS	EACH
7.50 SF-MA3	MOVABLE TABLES	EACH
7.50 SF-MA4	UMBRELLAS	EACH
7.50 SF-MA5	UMBRELLA ANCHORS	EACH
7.50 SF-MA6	TRASH RECEPTACLES	EACH

**SECTION 7.50 SW
STEEL AND WOOD BENCHES
AND SEATWALL ATTACHMENTS**

7.50SW.1. INTENT: This section describes the furnishing and installation of Steel & Wood Benches and Seatwall Attachments.

7.50SW.2. DESCRIPTION: Under this Item, the Contractor shall furnish and install Steel & Wood Benches and Seatwall Attachments, in accordance with the Contract Drawings, specifications and directions of the Engineer.

7.50SW.3. REFERENCES:

ASTM Testing Standards:

- (A) ASTM B 117 – Standard Practice for Operating Salt Spray (Fog) Apparatus.
- (B) ASTM D 522 – Standard Test Methods for Mandrel Bend Test of Attached Organic Coatings.
- (C) ASTM D 523 – Standard Test Method for Specular Gloss.
- (D) ASTM D 2247 – Standard Practice for Testing Water Resistance of Coatings in 100% Relative Humidity.
- (E) ASTM D 2794 – Standard Test Method for Resistance of Organic Coatings to the Effects of Rapid Deformation (Impact).
- (F) ASTM D 3359 – Standard Test Methods for Measuring Adhesion by Tape Test.
- (G) ASTM D 3363 – Standard Test Method for Film Hardness by Pencil Test.
- (H) ASTM G 155 – Standard Practice for Operating Xenon Arc Light Apparatus for Exposure of Non-Metallic Materials.

ISO Testing Standards:

- (A) ISO 1520 – Paints and Varnishes – Cupping Test.
- (B) ISO 2815 – Paints and Varnishes – Buchholz Indentation Test.

7.50SW.4. SUBMITTALS:

- (A) Product Data: Submit manufacturer's product data, storage and handling requirements and recommendations, installation methods and available colors, styles, patterns and textures.
- (B) Shop Drawings: Submit manufacturer's shop drawings, including plans and elevations, indicating overall dimensions for approval by the Engineer.
- (C) Samples: Submit manufacturer's samples of materials, finishes, and colors, including three (3) samples of specified color as applied to an 8 inch by 8 inch square of specified metal for approval by the Engineer.
- (D) Warranty: Guarantee for a minimum of three years.

7.50SW.5. QUALITY CONTROL:

- (A) Manufacturer's Qualifications: Manufacturer shall be regularly engaged in manufacture of site furnishings for a minimum of ten years.
- (B) Product Support: All Products shall be supported with complete engineering drawings and design patents.
- (C) Production: Orders shall be filled within 10 weeks.
- (D) Wood: Black Locust
 - 1. Approved end grain protection maintained on bowls, saw logs, rough sawn and samples at all times.
 - 2. A batch (charge) of Black Locust put into the dry kiln under a specific kiln schedule, conditioning procedures and testing, when completed, is to have a minimum of the following defects in order to yield Premium Grade Plus:
 - a. Cup, warp, bow, twist, telegraphing, cell-collapse, enzymatic and mineral staining, case-hardening and reverse case hardening.

7.50SW.6. DELIVERY, STORAGE, AND HANDLING:

- (A) Delivery: Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying product name and manufacturer.
- (B) Storage: Store materials in clean, dry area in accordance with manufacturer's instructions. Keep materials in manufacturer's original, unopened containers and packaging until installation.
- (C) Handling: Protect materials and finish during handling and installation to prevent damage.

7.50SW.7. WARRANTY:

- (A) Warranty Information:
 - 1. Products will be free from defects in material and/or workmanship for a period of three years from the date of substantial completion.
 - 2. The warranty may exclude damage resulting from accident, misuse, tampering, negligence, or abuse.
 - 3. Items found defective upon inspection by an authorized manufacturer service representative and/or the Engineer shall be repaired or replaced to the satisfaction of the Engineer.

7.50SW.8. MANUFACTURER AND VENDORS:

- A. Product to be as manufactured by:

Landscape Forms, Inc., 431 Lawndale Avenue, Kalamazoo, Michigan 49048. Toll Free (800) 521-2546. Phone (269) 381-0396. Fax (269) 381-3455.

Website: www.landscapeforms.com.

E-mail: denises@landscapeforms.com, specify@landscapeforms.com.

B. Vendors:

- 1) Landscape Forms, Inc., 431 Lawndale Avenue, Kalamazoo, Michigan 49048. Toll Free (800) 521-2546. Phone (269) 381-0396. Fax (269) 381-3455.

Website: www.landscapeforms.com.

E-mail: denises@landscapeforms.com, specify@landscapeforms.com.

- 2) Arenson

1115 Broadway, New York, NY

212-633-2400

MAdinolfi@aof.com

- 3) AFD Contract Furniture Inc.

810 7th Avenue #2, New York, NY

212-721-7100

tcohen@afd-inc.com

- 4) Empire Office

105 Madison Ave.

New York, NY 10016

212.607.5500

mmaltz@empireoffice.com

- 5) Or other approved vendor.

7.50SW.9. PRODUCTS:

(A) STEEL & WOOD BENCH – 4': Model # - SF0961-003

(B) STEEL & WOOD BENCH – 6': Model # - SF0961-002

(C) STEEL & WOOD BENCH – 4' SEATWALL ATTACHMENT: Model # - SF0962-005

(D) STEEL & WOOD BENCH – 6' SEATWALL ATTACHMENT: Model # - SF0961-004

7.50SW.10. MATERIALS:

(A) Seats, Back and Arms: Grade 316 Stainless Steel – custom formed & welded for profile.

(B) Supports: Grade 316 Stainless Steel – custom formed & welded for profile.

(C) Wood: Black Locus (robinia pseudoacacia)

1. Kiln Schedule:
 - a. T3-A1 to maximum 4/4
 - b. T5-A3 for 5/4
 - c. T6-A3 from 6/4 to 8/4
 - d. Maximum start-up 45°F wet-bulb depression
 - 1) Reduce maximum wet-bulb depression for each step in Moisture Content class
2. Equalizing: Equilibrium Moisture Content 2% below the target Moisture Content at dry-bulb of scheduled degrees – F
3. Conditioning: Relative Humidity and Equilibrium Moisture Content 4% correlated above target Moisture Content at dry-bulb of scheduled – F
 - a. Transverse prongs tests per (ML87 5492)
 - b. Longitudinal prongs tests per (ML87 5491)
4. Moisture Content Gradients: to be determined by sampling and recording:
 - a. Dead green weight
 - b. Dead green Moisture Content
 - c. Pin moisture meter average parallel to grain at case depth and core
 - d. Oven dry weight from dead green and at kiln intervals
 - e. Calculated oven dry weight
 - f. Calculated average Moisture Content %
5. Grade is Premium – (Plus) heartwood Black Locust

7.50SW.11. RECYCLED CONTENT:

(A) Custom Product:

1. Recycled Material Content: Minimum 65%
2. Post-Consumer Material Content: Minimum 50%
3. Pre-Consumer Material Content: Minimum 15%
4. Recyclable: 100%

7.50SW.12. FINISHES:

(A) Stainless Steel: #4 Grain – Factory Applied Before Forming

(B) Stainless Steel: Glass Bead Blast & Passivated finish: Blast Media shall be #8 size

(C) Finish on Metal: Landscape Forms, Inc "Pangard II"

1. Primer: Rust inhibitor.

2. Topcoat: Thermosetting TGIC polyester powdercoat. UV, chip, and flake resistant.
3. Test Results: "Pangard II".
 - a. Gloss, Garner 60 Degrees, ASTM D 523: Plus or minus 5 percent from standard.
 - b. UV Resistance, Color and Gloss, ASTM G 155, Cycle 7: Delta E less than 2 at 2.0 mils and less than 20 percent loss.
 - c. Cross-Hatch Adhesion, ASTM D 3359, Method B: 100 percent pass.
 - d. Flexibility Test, Mandrel, ASTM D 522: 3 mm at 2 mils.
 - e. Erichsen Cupping, ISO 1520: 8 mm.
 - f. Impression Hardness, Buchholz, ISO 2815: 95.
 - g. Impact Test, ASTM D 2794: 60 inches/pound at 2.5 mils.
 - h. Pencil Hardness, ASTM D 3363: 2H minimum.
 - i. Corrosion Resistance, 1,500-Hour Test, ASTM B 117: Max undercutting 1 mm.
 - j. Humidity Resistance, 1,500-Hour Test, ASTM D 2247: Max blisters 1 mm.

7.50SW.13. FABRICATION: Unique, shop fabricated and assembled Steel & Wood Benches.

7.50SW.14. METHODS: The following methods of installation shall be used.

(A) Examination:

1. Examine areas to receive the Steel & Wood Benches.
2. Notify Engineer of conditions that would adversely affect installation or subsequent use.
3. Do not begin installation until unacceptable conditions are corrected and acceptance verified in writing by Engineer.

(B) Installation:

1. Install Steel & Wood Benches in accordance with manufacturer's instructions at locations indicated on the Drawings.
2. Locate Steel & Wood Benches as directed by Engineer.
3. Install Steel & Wood Benches plumb and level.

(C) Adjusting:

1. Finish Damage: Repair minor damages to finish in accordance with manufacturer's instructions and as approved by Engineer.
2. Component Damage: Remove and replace damaged components that cannot be successfully repaired as determined by Engineer.

(D) Cleaning: Clean Steel & Wood Benches promptly after installation in accordance with manufacturer's instructions. Do not use harsh cleaning materials or methods that could damage finish.

(E) Protection: Protect installed Steel & Wood Benches to ensure they will be without damage or deterioration at time of Substantial Completion

7.50SW.15. MEASUREMENT: The quantities of Steel & Wood Benches and Seatwall Attachments to be measured for payment shall be the quantity of each type Steel & Wood Bench and Seatwall Attachments installed at the site to the satisfaction of the Engineer.

7.50SW.16. PRICES TO COVER: The prices bid shall be a unit price per EACH size Steel & Wood Bench and EACH size Steel & Wood Bench Seatwall Attachment and shall include the cost of furnishing all labor, materials, equipment, insurance, and incidentals necessary to furnish, assemble and install the Steel & Wood Benches and Seatwall Attachments including, but not limited to, chair arm rests and glides, and hardware, 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 SW4	STEEL & WOOD BENCH – 4'	EACH
7.50 SW6	STEEL & WOOD BENCH – 6'	EACH
7.50 SWSA4	STEEL & WOOD BENCH – 4' SEATWALL ATTACHMENT	EACH
7.50 SWSA6	STEEL & WOOD BENCH – 6' SEATWALL ATTACHMENT	EACH

**SECTION 7.50 SWSP
STEEL AND WOOD SEATING PLATFORM**

7.50SWSP.1. INTENT: This section describes the furnishing and installation various types of Steel & Wood Seating Platforms.

7.50SWSP.2. DESCRIPTION: Under this Item, the Contractor shall furnish and install various types of Steel & Wood Seating Platforms, in accordance with the Contract Drawings, specifications and directions of the Engineer.

7.50SWSP.3. REFERENCES:

- (A) ASTM Testing Standards:
- (B) ASTM B 117 – Standard Practice for Operating Salt Spray (Fog) Apparatus.
- (C) ASTM D 522 – Standard Test Methods for Mandrel Bend Test of Attached Organic Coatings.
- (D) ASTM D 523 – Standard Test Method for Specular Gloss.
- (E) ASTM D 2247 – Standard Practice for Testing Water Resistance of Coatings in 100% Relative Humidity.
- (F) ASTM D 2794 – Standard Test Method for Resistance of Organic Coatings to the Effects of Rapid Deformation (Impact).
- (G) ASTM D 3359 – Standard Test Methods for Measuring Adhesion by Tape Test.
- (H) ASTM D 3363 – Standard Test Method for Film Hardness by Pencil Test.
- (I) ASTM G 155 – Standard Practice for Operating Xenon Arc Light Apparatus for Exposure of Non-Metallic Materials.

ISO Testing Standards:

- (A) ISO 1520 – Paints and Varnishes – Cupping Test.
- (B) ISO 2815 – Paints and Varnishes – Buchholz Indentation Test.

7.50SWSP.4. SUBMITTALS:

- (A) Product Data: Submit manufacturer's product data, storage and handling requirements and recommendations, installation methods and available colors, styles, patterns and textures.
- (B) Shop Drawings: Submit manufacturer's shop drawings, including plans and elevations, indicating overall dimensions for approval by the Engineer.
- (C) Samples: Submit manufacturer's samples of materials, finishes, and colors, including three (3) samples of specified color as applied to an 8 inch by 8 inch square of specified metal for approval by the Engineer.
- (D) Warranty: Guarantee for a minimum of three years.

7.50SWSP.5. QUALITY CONTROL:

- (A) Manufacturer's Qualifications: Manufacturer shall be regularly engaged in manufacture of site furnishings for a minimum of ten years.

(B) Product Support: All Products shall be supported with complete engineering drawings and design patents.

(C) Production: Orders shall be filled within 10 weeks.

(E) Wood: Black Locust

1. Approved end grain protection maintained on bowls, saw logs, rough sawn and samples at all times.
2. A batch (charge) of Black Locust put into the dry kiln under a specific kiln schedule, conditioning procedures and testing, when completed, is to have a minimum of the following defects in order to yield Premium Grade Plus:
 - a. Cup, warp, bow, twist, telegraphing, cell-collapse, enzymatic and mineral staining, case-hardening and reverse case hardening.

7.50SWSP.6. DELIVERY, STORAGE, AND HANDLING:

- (A) Delivery: Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying product name and manufacturer.
- (B) Storage: Store materials in clean, dry area in accordance with manufacturer's instructions. Keep materials in manufacturer's original, unopened containers and packaging until installation.
- (C) Handling: Protect materials and finish during handling and installation to prevent damage.

7.50SWSP.7. WARRANTY:

(A) Warranty Information:

1. Products will be free from defects in material and/or workmanship for a period of three years from the date of substantial completion.
2. The warranty may exclude damage resulting from accident, misuse, tampering, negligence, or abuse.
3. Items found defective upon inspection by an authorized manufacturer service representative and/or the Engineer shall be repaired or replaced to the satisfaction of the Engineer.

7.50SWSP.8. MANUFACTURER AND VENDORS:

A. Product to be as manufactured by:

Landscape Forms, Inc., 431 Lawndale Avenue, Kalamazoo, Michigan 49048. Toll Free (800) 521-2546. Phone (269) 381-0396. Fax (269) 381-3455.

Website: www.landscapeforms.com.

E-mail: denises@landscapeforms.com, specify@landscapeforms.com.

B. Vendors:

- 1) Landscape Forms, Inc., 431 Lawndale Avenue, Kalamazoo, Michigan 49048. Toll Free (800) 521-2546. Phone (269) 381-0396. Fax (269) 381-3455.
Website: www.landscapiforms.com.
E-mail: denises@landscapiforms.com, specify@landscapiforms.com.
- 2) Arenson
1115 Broadway, New York, NY
212-633-2400
MAdinolfi@aof.com
- 3) AFD Contract Furniture Inc.
810 7th Avenue #2, New York, NY
212-721-7100
tcohen@afd-inc.com
- 4) Empire Office
105 Madison Ave.
New York, NY 10016
212.607.5500
mmaltz@empireoffice.com
- 5) Or approved equivalent supplier.

7.50SWSP.9. PRODUCTS:

- (A) STEEL & WOOD SEATING PLATFORM A: Model # - SF0962-006
- (B) STEEL & WOOD SEATING PLATFORM B: Model # - SF0962-007
- (C) STEEL & WOOD SEATING PLATFORM C: Model # - SF0962-008
- (D) STEEL & WOOD SEATING PLATFORM D: Model # - SF0962-009

7.50SWSP.10. MATERIALS:

- (A) Seats, Back and Arms: Grade 316 Stainless Steel – custom formed & welded for profile.
- (B) Supports: Grade 316 Stainless Steel – custom formed & welded for profile.
- (C) Wood: Black Locus (*robinia pseudoacacia*)

1. Kiln Schedule:

- a. T3-A1 to maximum 4/4
- b. T5-A3 for 5/4
- c. T6-A3 from 6/4 to 8/4
- d. Maximum start-up 45°F wet-bulb depression

- 1) Reduce maximum wet-bulb depression for each step in MC class

2. Equalizing: EMC 2% below the target MC at dry-bulb of scheduled degrees – F
3. Conditioning: RH and EMC 4% correlated above target MC at dry-bulb of scheduled – F
 - a. Transverse prongs tests per (ML87 5492)
 - b. Longitudinal prongs tests per (ML87 5491)
4. Moisture Content Gradients: to be determined by sampling and recording:
 - a. Dead green weight
 - b. Dead green MC
 - c. Pin moisture meter average parallel to grain at case depth and core
 - d. Oven dry weight from dead green and at kiln intervals
 - e. Calculated oven dry weight
 - f. Calculated average MC%
5. Grade is Premium – (Plus) heartwood Black Locust

7.50SWSP.11. RECYCLED CONTENT:

(A) Custom Product:

1. Recycled Material Content: Minimum 65%
2. Post-Consumer Material Content: Minimum 50%
3. Pre-Consumer Material Content: Minimum 15%
4. Recyclable: 100%

7.50SWSP.12. FINISHES:

(A) Stainless Steel: #4 Grain – Factory Applied Before Forming

(B) Stainless Steel: Glass Bead Blast & Passivated finish: Blast Media shall be #8 size

(C) Finish on Metal: Landscape Forms, Inc “Pangard II”

1. Primer: Rust inhibitor.
2. Topcoat: Thermosetting TGIC polyester powdercoat. UV, chip, and flake resistant.
3. Test Results: “Pangard II”.
 - a. Gloss, Garner 60 Degrees, ASTM D 523: Plus or minus 5 percent from standard.
 - b. UV Resistance, Color and Gloss, ASTM G 155, Cycle 7: Delta E less than 2 at 2.0 mils and less than 20 percent loss.
 - c. Cross-Hatch Adhesion, ASTM D 3359, Method B: 100 percent pass.
 - d. Flexibility Test, Mandrel, ASTM D 522: 3 mm at 2 mils.
 - e. Erichsen Cupping, ISO 1520: 8 mm.
 - f. Impression Hardness, Buchholz, ISO 2815: 95.
 - g. Impact Test, ASTM D 2794: 60 inches/pound at 2.5 mils.

- h. Pencil Hardness, ASTM D 3363: 2H minimum.
- i. Corrosion Resistance, 1,500-Hour Test, ASTM B 117: Max undercutting 1 mm.
- j. Humidity Resistance, 1,500-Hour Test, ASTM D 2247: Max blisters 1 mm.

7.50SWSP.13. FABRICATION: Unique shop fabricated and assembled Steel & Wood Seating Platform.

7.50SWSP.14. METHODS: The following methods of installation shall be used.

(A) Examination:

- 1. Examine areas to receive the Steel & Wood Seating Platform.
- 2. Notify Engineer of conditions that would adversely affect installation or subsequent use.
- 3. Do not begin installation until unacceptable conditions are corrected and acceptance verified in writing by Engineer.

(B) Installation:

- 1. Install Steel & Wood Seating Platform in accordance with manufacturer's instructions at locations indicated on the Drawings.
- 2. Locate Steel & Wood Seating Platform as directed by Engineer.
- 3. Install Steel & Wood Seating Platform with neoprene spacers to provide for plumb and level installation.

(C) Adjusting:

- 1. Finish Damage: Repair minor damages to finish in accordance with manufacturer's instructions and as approved by Engineer.
- 2. Component Damage: Remove and replace damaged components that cannot be successfully repaired as determined by Engineer.

(D) Cleaning: Clean Steel & Wood Seating Platform promptly after installation in accordance with manufacturer's instructions. Do not use harsh cleaning materials or methods that could damage finish.

(E) Protection: Protect installed Steel & Wood Seating Platform to ensure they will be without damage or deterioration at time of Substantial Completion

7.50SWSP.15. MEASUREMENT: The quantities of each type Steel & Wood Seating Platform to be measured for payment shall be the quantity of each Steel & Wood Seating Platform installed at the site to the satisfaction of the Engineer.

7.50SWSP.16. PRICES TO COVER: The prices bid shall be a unit price per EACH type Steel & Wood Seating Platform and shall include the cost of furnishing all labor, materials, equipment, insurance, and incidentals necessary to furnish, assemble and install the Steel & Wood Seating platform including, but not limited to, chair arm rests and glides, and hardware, 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 SWSPA	STEEL AND WOOD SEATING PLATFORM A	EACH
7.50 SWSPB	STEEL AND WOOD SEATING PLATFORM B	EACH
7.50 SWSPC	STEEL AND WOOD SEATING PLATFORM C	EACH
7.50 SWSPD	STEEL AND WOOD SEATING PLATFORM D	EACH

**SECTION 7.53
STEEL TABLES**

7.53.1. INTENT: This section describes the furnishing and installation of steel tables.

7.53.2. DESCRIPTION: Under this Section, the Contractor shall furnish and install steel tables in accordance with the Contract Drawings, the specifications and directions of the Engineer.

7.53.3. REFERENCES:

ASTM Testing Standards:

- (A) ASTM B 117 – Standard Practice for Operating Salt Spray (Fog) Apparatus.
- (B) ASTM D 522 – Standard Test Methods for Mandrel Bend Test of Attached Organic Coatings.
- (C) ASTM D 523 – Standard Test Method for Specular Gloss.
- (D) ASTM D 2247 – Standard Practice for Testing Water Resistance of Coatings in 100% Relative Humidity.
- (E) ASTM D 2794 – Standard Test Method for Resistance of Organic Coatings to the Effects of Rapid Deformation (Impact).
- (F) ASTM D 3359 – Standard Test Methods for Measuring Adhesion by Tape Test.
- (G) ASTM D 3363 – Standard Test Method for Film Hardness by Pencil Test.
- (H) ASTM G 155 – Standard Practice for Operating Xenon Arc Light Apparatus for Exposure of Non-Metallic Materials.

ISO Testing Standards:

- (A) ISO 1520 – Paints and Varnishes – Cupping Test.
- (B) ISO 2815 – Paints and Varnishes – Buchholz Indentation Test.

7.53.4. SUBMITTALS:

- (A) Product Data: Submit manufacturer's product data, storage and handling requirements and recommendations, installation methods and available colors, styles, patterns and textures.
- (B) Shop Drawings: Submit manufacturer's shop drawings, including plans and elevations, indicating overall dimensions for approval by the Engineer.
- (C) Samples: Submit manufacturer's samples of materials, finishes, and colors, including three (3) samples of specified color as applied to an 8 inch by 8 inch square of specified metal for approval by the Engineer.
- (D) Warranty: Guarantee for a minimum of three years.

7.53.5. QUALITY CONTROL:

- (A) Manufacturer's Qualifications: Manufacturer shall be regularly engaged in manufacture of site furnishings for a minimum of ten years.
- (B) Product Support: All Products shall be supported with complete engineering drawings and design patents.
- (C) Production: Orders shall be filled within 10 weeks.

7.53.6. DELIVERY, STORAGE, AND HANDLING:

- (A) Delivery: Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying product name and manufacturer.
- (B) Storage: Store materials in clean, dry area in accordance with manufacturer's instructions. Keep materials in manufacturer's original, unopened containers and packaging until installation.
- (C) Handling: Protect materials and finish during handling and installation to prevent damage.

7.53.7. WARRANTY:

(A) Warranty Information:

- 1. Products shall be free from defects in material and/or workmanship for a period of three years from the date of substantial completion.
- 2. The warranty may exclude damage resulting from accident, misuse, tampering, negligence, or abuse.
- 3. Items found defective upon inspection by an authorized manufacturer service representative and/or the Engineer shall be repaired or replaced to the satisfaction of the Engineer.

7.53.8. MANUFACTURERS AND SUPPLIERS:

A. Product to be as manufactured by:

Landscape Forms, Inc., 431 Lawndale Avenue, Kalamazoo, Michigan 49048. Toll Free (800) 521-2546. Phone (269) 381-0396. Fax (269) 381-3455.

Website: www.landscapeforms.com.

E-mail: denises@landscapeforms.com, specify@landscapeforms.com.

B. Vendors:

- 1) Landscape Forms, Inc., 431 Lawndale Avenue, Kalamazoo, Michigan 49048. Toll Free (800) 521-2546. Phone (269) 381-0396. Fax (269) 381-3455.
Website: www.landscapeforms.com.
E-mail: denises@landscapeforms.com, specify@landscapeforms.com.
- 2) Arenson
1115 Broadway, New York, NY
212-633-2400
MAdinolfi@aof.com
- 3) AFD Contract Furniture Inc.
810 7th Avenue #2, New York, NY
212-721-7100
tcohen@afd-inc.com
- 4) Empire Office
105 Madison Ave.
New York, NY 10016
212.607.5500
mmaltz@empireoffice.com
- 5) Or an approved equivalent vendor.

7.53.10. PRODUCTS:

(A) Game Table:

1. Product Number: CT999-06018
2. Type: 'Catena'
3. Size: 30 inch diameter, 29 inches height, no umbrella hole.
4. Material: stainless steel
5. Finish: perforated checkerboard pattern.
6. Support: embedded.
7. Support Color: TBD.

(B) Coffee Table:

1. Product Number: CT999-06073-SS-16
2. Type: 'Catena'
3. Size: 30 inch diameter, 16 inches height, no umbrella hole.
4. Material: stainless steel
5. Finish: stainless steel.
6. Support: embedded.
7. Support Color: TBD.

7.53.11. MATERIALS:

(A) Table Tops:

1. 16 gauge with rolled edge, reinforced with steel channels beneath the top.
 - a. Type 304 stainless steel.

(B) Table Supports:

1. Single Mount: 3" outer diameter x 0.120" wall steel tubing.
 - a. Embedded.

7.53.12. Recycled Content:

1. Recycled Material Content: Minimum 91 percent.
2. Post-Consumer Material Content: Minimum 59 percent.
3. Pre-Consumer Material Content: Minimum 32 percent.
4. Recyclable: 100 percent.

7.53.13. FINISHES:

(A) Finish on Carbon Steel: Landscape Forms, Inc. "Pangard II".

1. Primer: Rust inhibitor.
2. Topcoat: Thermosetting polyester powdercoat. UV, chip, and flake resistant.
3. Test Results: "Pangard II".
 - a. Gloss, Garner 60 Degrees, ASTM D 523: Plus or minus 5 percent from standard.
 - b. UV Resistance, Color and Gloss, ASTM G 155, Cycle 7: Delta E less than 2 at 2.0 mils and less than 20 percent loss.
 - c. Cross-Hatch Adhesion, ASTM D 3359, Method B: 100 percent pass.
 - d. Flexibility Test, Mandrel, ASTM D 522: 3 mm at 2 mils.
 - e. Erichsen Cupping, ISO 1520: 8 mm.
 - f. Impression Hardness, Buchholz, ISO 2815: 95.
 - g. Impact Test, ASTM D 2794: 60 inches/pound at 2.5 mils.
 - h. Pencil Hardness, ASTM D 3363: 2H minimum.
 - i. Corrosion Resistance, 1,500-Hour Test, ASTM B 117: Max undercutting 1 mm.
 - j. Humidity Resistance, 1,500-Hour Test, ASTM D 2247: Max blisters 1 mm.

7.53.14. METHODS: The following methods of installation shall be used.

(A) Examination:

1. Examine areas to receive tables.
2. Notify Engineer of conditions that would adversely affect installation or subsequent use.

3. Do not begin installation until unacceptable conditions are corrected and accepted by the Engineer.

(B) Installation:

1. Install tables in accordance with manufacturer's instructions at locations indicated on the Drawings.
2. Locate tables as directed by Engineer.
3. Install tables plumb and level.

(C) Adjusting:

1. Finish Damage: Repair minor damages to finish in accordance with manufacturer's instructions and as approved by Engineer.
2. Component Damage: Remove and replace damaged components that cannot be successfully repaired as determined by Engineer.

(D) Cleaning: Clean tables promptly after installation in accordance with manufacturer's instructions. Do not use harsh cleaning materials or methods that could damage finish.

(E) Protection: Protect installed tables to ensure tables will be without damage or deterioration at time of Substantial Completion

7.53.15. MEASUREMENT: The quantities of TABLES to be measured for payment shall be the quantity of each type table installed at the site to the satisfaction of the Engineer.

7.53.16. PRICES TO COVER: The prices bid shall be the unit price per EACH type Table and shall include the cost of furnishing all labor, materials, equipment, insurance, and incidentals necessary to furnish, assemble and install tables, 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
7.53 CT	STEEL TABLES – CATENA COFFEE TABLE	EACH
7.53 GT	STEEL TABLES – CATENA GAME TABLE	EACH

SECTION 7.54 A
Drain Frames and Grates

7.54A.1. WORK. Under this section, the Contractor shall furnish and install drain frames and grates of the specified shape and size, in accordance with the plans, details and directions of the Engineer. The work of forming concrete and connecting and joining it to drainage piping and drainage structures with connecting pieces shall be included for each of the drain frames and grates specified.

7.54A.2. SUBMITTALS. Shop drawings are required for each drain frame and grate item and shall contain manufacturer's installation guidelines, and details of the connections to adjoining drainage piping and drainage structures.

7.54A.3. MATERIALS. The Drain Grates and Frames shall be Cast Grey Iron meeting the requirements of ASTM A-48 Class 35B with no finish.

7.54A.4. GRATES AND FRAME. The drain frames and grates shall be fabricated with grates that are connected to frames with "lockable" screws or bolts. Drain frames and grates shall be equal to Model R-4937-C3 as manufactured by Neenah Foundry Company, 2121 Brooks Avenue, Neenah, Wisconsin 54956, Phone: 920-725-7000; or an equivalent model in shape and size as manufactured by:

Jay R. Smith MFG. Co.
2781 Gunter Park Drive E.
Montgomery, AL 36109-1405
Phone: 800-467-6484

Josam Company
525 West Highway 20
Michigan City, IN 46360
Phone: 800-365-6726

Or an approved equivalent manufacturer.

7.54A.5. TOLERANCES. Finished drain frames and grates shall be constructed with a maximum allowable tolerance of $\pm 1/16"$ for dimensional accuracy and rail co-planarity.

7.54A.6. EXECUTION. Install drain frames and grates at the locations indicated on the plans and in accordance with approved shop drawings.

7.54A.7. MEASUREMENT.

The quantity to be measured for payment shall be the number of combined CAST IRON FLOOR DRAIN FRAME AND GRATE units actually installed to the satisfaction of the Engineer.

7.54A.8. PRICE TO COVER. The contract price for Item No. 7.54 AFD - CAST IRON FLOOR DRAIN FRAME AND GRATE shall be a unit price bid per each combined drain frame and grate unit and shall include the cost of furnishing all labor, material, plant, equipment, insurance, and incidentals necessary to furnish and install Cast Iron Floor Drain Frame and Grates, complete, in accordance with the plans, the specifications and directions of the Engineer.

The unit price bid shall also include, but not be limited to, the cost of structure excavation and backfilling, furnishing and installing all forms, rails, anchorages, support bars, grates, connecting pipes, concrete backfill and collars, reinforcement anchor and other connecting devices, forming concrete for the drain installation and connections to drainage piping; all as shown on the plans and as directed by the Engineer.

Payment will be made under:

Item No.	Item Description	Pay Unit
7.54 AFD	CAST IRON FLOOR DRAIN FRAME AND GRATE	EACH

**SECTION 8.15 DF
DRINKING FOUNTAIN**

8.15DF.1. INTENT: This section describes the furnishing and installation of the Drinking Fountain.

8.15DF.2. DESCRIPTION: Under this section, the Contractor shall furnish all labor, materials and equipment necessary or required to furnish and install cast ductile iron accessible Drinking Fountain in compliance with all A.D.A. and A.N.S.I. standards, all internal plumbing, concrete foundation, crushed stone base, miscellaneous iron and steel, stone drywell, and connection to water service and drain line to stone drywell; all in accordance with the Contract Drawings, specifications and directions of the Engineer. Drinking Fountain design and installation shall comply with Americans with Disabilities Act (ADA) provisions as described in ANSI A117.1 –1998 (or most recent edition).

8.15DF.3. RELATED SECTIONS:

- (A) Section PK-13, Item PK-13D – Type K Copper Tubing, 1" Diameter (see Addendum No. 4).

8.15DF.4. MATERIALS:

- (A) DRINKING FOUNTAIN: The Drinking Fountain shall be "Haws model 3500D Pedestal-Mounted Drinking Fountain" as manufactured by Haws, Co., 1455 Kleppe Lane, Sparks, NV 89431; (888) 640-4297; www.hawscow.com; info@hawscow.com.
- (B) Vendors shall include, but not be limited to, the following:
 - 1. Haws, Co., 1455 Kleppe Lane, Sparks, NV 89431; (888) 640-4297; www.hawscow.com; info@hawscow.com.
 - 2. Woods & Jaye Sales Co., Inc., 33-09 37th Avenue, Long Island City, NY 11101; 718-786-8260; sales@woodsnyjaye.com.
 - 3. The Sullivan Group, 24 Pheasant Lant, Suffield, CT 06078; 888-668-5850; mark@sullivansafety.com.
 - 4. Barbieri & Kline, Inc., 341 West Glenside Avenue, Glenside, PA 19038; 800-673-7990; info@barbierikline.com.
- (C) Drinking Fountain shall be delivered as preassembled body, with all external parts and internal plumbing as per the manufacturer's details. All parts shall meet applicable requirements of N.Y.C. Codes.
 - 1. Model 3500D: "Hi-Lo" barrier-free, superior-duty vandal-resistant pedestal drinking fountain with attached pet fountain shall include a 12 gauge Type 304 Stainless Steel pedestal with integral 3/8" (0.95 cm) thick cast stainless steel basins, all with green powder-coating, push-button operated stainless steel valves with front-accessible cartridge and flow adjustment, 100% lead free waterways, polished chrome-plated brass vandal-resistant bubbler heads,

polished chrome-plated brass vandal-resistant waste strainers with top-down clean-out access, pet basin with modified waste strainer to accommodate a puddle effect, large access door with heavy-duty hinges and square key locks, vandal-resistant bottom plate, integral mounting plate, and 1-1/2" slip waste.

2. Hardware: All hardware shall be as specified by the manufacturer. All heads shall be vandal resistant.
- (D) Drinking Fountain Assembly: Brass bubblers, bronze bowls, strainers, push-buttons, and all internal plumbing shall be preassembled by the drinking fountain manufacturer and shall meet the requirements of the plumbing section of this specification and the Contract Drawings. The Fountain Manufacturer shall have all factory installed plumbing components pre-tested before delivery to site. All factory connections shall be made by a licensed plumber.
1. Bubbler Head: Shall be polished chrome-plated forged brass, integral basin shank, shielded, anti-squirt, vandal-resistant bubbler head with 100% lead-free waterways, as manufactured by Haws Co., Sparks, NV, Model 5703M.
 2. Push Button (Handicapped Accessible): Assembly shall have a polished chrome-plated finish, Model PBA7; Part 0006983506 spanner wrench for removal of the PBA6 and PBA7 push button cover; also used to remove retaining ring for replacing the cartridge and screen (VRK5874 kit) in 5874 assembly; as manufactured by Haws, Co., Sparks, NV.
 3. Valve: Shall be patented lead-free stainless steel, push activated valve, front accessible for stream adjustment and servicing, replaceable pressure regulation control cartridge, with an operating pressure range of 30 – 90 psi (2.1 – 6.2 bar) (Patent No. 6,981,692), as manufactured by Haws, Co., Sparks, NV, Model 5874SS.
 4. Key: Shall be tee handle door key for large access panel on 3500 series pedestal fountains, as manufactured by Haws, Co., Sparks, NV, Part 0002049640.
 5. Waste Strainer: Shall be polished chrome-plated brass with three vandal-resistant pinned socket screws and wrench for screws, as manufactured by Haws, Sparks, NV, Model 6452.
- (E) Water Piping: Water Piping shall be rigid hard temper type "K" copper tubing as shown on the Contract Drawings meeting the requirements of Section PK-13.
- (F) Drain Piping: Drain piping shall be ductile iron pipe as shown on the Contract Drawings.
- (G) Drywell:
1. Broken Stone: Broken stone shall be Type 1, Grade A, size No. 3, coarse aggregate meeting the requirements of Section 2.02 of NYCDOT Standard Highway Specifications.

2. Geotextile Filter Fabric: Geotextile fibers and the threads used in joining geotextiles by sewing, shall consist of long-chain, synthetic polymers, composed of at least 95 percent by weight polyolefin, polyesters, or polyamides. They shall be formed into a stable network such that the filaments or yarns retain their dimensional stability relative to each other, including selvages. The geotextile shall have no tears or defects which adversely alter its physical properties. Geotextiles used in drainage applications shall be Class 2 and shall conform to the following AASHTO-M288 properties for drainage geotextiles:

		Insitu Soil requirements passing through a standard No. 200 US sieve	
Property	ASTM Test	15% to 50%	
Structure		Woven (Class 1)	Non-Woven (Class 2)
Elongation	ASTM D4595	<50%	>=50%
Grab Strength (Min.)	ASTM D4632	1100N (247 lbf)	700N (157 lbf)
Tear Strength (Min.)	ASTM D4533	400N (90 lbf)	250N (56 lbf)
Puncture Strength (Min.)	ASTM D4833	400N (90 lbf)	250N (56 lbf)
Permitivity (Min.)	ASTM D4491	0.21 / sec.	
Apparent Opening Size (Max.)	ASTM D4751	0.25 mm (0.0098 inch) Std. No. 60 sieve	

a. Manufacturers:

- i. Advanced Drainage Systems, Inc., Hillard, OH.
- ii. Carthage Mills, Cincinnati, OH.
- iii. Mirafi, Inc., Charlotte, NC.
- iv. Approved equivalent.

(H) Concrete Pier:

1. Concrete shall be Class A-40 in accordance with Section 4.06 of NYCDOT Standard Highway Specifications.
2. Stone base shall be, Type 1, Grade A or B, size No. 57 coarse aggregate meeting the requirements of Section 2.02 of NYCDOT Standard Highway Specifications.

8.15DF.5. METHODS:

(A) Plumbing: The Contractor shall furnish and install all pipe, fittings, valves, and other sundries to complete the plumbing for the Drinking Fountain connections. The Drinking Fountain waste water line shall be extended into the drywell as shown on the Contract Drawings and as directed by the Engineer. The three-eighth inch (3/8") internal copper tubing shall be connected to one-half (1/2") inch cold water line which shall be extended and connected to the water supply at the plug valve, as shown on the Contract Drawings and as directed by the Engineer. Connection to water supply shall be made with a threaded, extra heavy fitting. The Contractor shall provide dielectric fitting at appropriate locations, as shown on Contract Drawings.

(B) Field Installation: The poured in place concrete pier shall be set level on a bed of compacted coarse aggregate installed to the dimensions as shown on the Contract Drawings. The fountain is to be handled at lifting locations designated by the manufacturer; no chipped, cracked, or otherwise defective fountains will be acceptable. The factory installed portion of the cold water supply and waste water lines shall be extended from the Fountain Base at lengths indicated on the Contract Drawings. All field connections to be made by a licensed plumber. Installation shall meet applicable requirements of N.Y.C. Codes.

Field Connections required to complete the installation: Supply connections and any other miscellaneous work required to complete the work. All parts to be installed in such a manner as to facilitate removal for purposes of replacement.

(C) Winterization: Drinking Fountain shall be winterized by shutting off water supply and opening bleeder valve (outside of fountain). The fountain shall be designed to allow internal water to drain by gravity.

(D) Water and Drain Lines: Pitch water and drain lines away from the Drinking Fountain. Pockets in rigid piping that cannot be drained by gravity will be rejected. The plumber will be required to reinstall piping until gravity drain is achieved.

8.15DF.6. SUBMITTALS: All submittals shall be submitted as per Subsection 1.06.13 of NYCDOT Standard Highway Specifications and as specified herein.

(A) Catalogue Cuts: The Contractor shall submit Catalogue Cuts of the hardware, brass bubblers, bronze bowls, strainer push buttons, and all other plumbing parts for approval twelve (12) weeks prior to proposed installation.

(B) Shop Drawings: The Contractor shall submit a complete dimensional shop drawing, for approval by the Engineer prior to proposed installation, showing details of construction, plumbing, etc., including gauges of metal and thickness of wall construction, etc.

(C) Foundry Certificates: A foundry certificate verifying authenticity of ductile iron supplied on this item shall be submitted. The certificate shall be on foundry letterhead, dated and signed by an officer of the company with the contract name and number, Contractor name, and class of ductile iron provided.

(D) Galvanizing Certificate: A certificate and paid receipts certifying galvanizing by the hot-dip process must be submitted to the Engineer.

8.15DF.7. MEASUREMENT: The quantity to be measured for payment shall be the quantity of each DRINKING FOUNTAIN installed at the site to the satisfaction of the Engineer

8.15DF.8. PRICE TO COVER: The price bid shall be a unit price for EACH drinking fountain and shall include the cost of all labor, materials, equipment, insurance, and incidentals necessary to complete the work, including, but not limited to, excavation, furnishing and installing stone base, concrete pier, hardware, and all plumbing work including, but not limited to, furnishing and installing all piping, couplings, connections to water service and waste water line to dry well, broken stone and geotextile filter fabric for drywell; all in accordance with the Contract Drawings, the specifications and the directions of the Engineer.

Payment for the two (1") inch Type K Copper Tubing for waste line to dry well shall be paid for under Item No. PK-13D.

Payment will be made under:

Item No.	Item	Pay Unit
8.15 DF	DRINKING FOUNTAIN	EACH

SECTION 9.06 HW
Allowance for Decorative Mesh Fabric

9.06HW.1. DESCRIPTION. Under this Section, the Contractor will be paid to furnish and install panels of breathable mesh fabric upon which art work is printed in a maximum of 4-colors, as directed by the Engineer. Each panel shall also contain metal grommets installed at a 1' maximum spacing around the perimeter of the fabric for mounting on the Temporary Chain Link Fence as specified in the drawings, unless an alternate method of mounting the fabric is proposed by the Contractor and approved by the Engineer. All art work to be printed on the fabric will be provided to the Contractor by the City.

At the completion of the work the panels shall remain the property of the City and shall be delivered to the Engineer, unless otherwise directed.

The lump sum payment made under this item shall be equal to the sum total of all invoices submitted by the Contractor, as approved by the Engineer, for furnishing and installing decorative mesh fabric materials, to the satisfaction of the Engineer, plus an allowance of 10% overhead and 10% profit.

The total estimated cost of this item is the "fixed sum" amount shown for this item in the Bid Schedule and shall not be varied in the bid. No guarantee is given that the actual lump sum cost for this item will in fact be the "fixed sum" amount. The "fixed sum" amount is included in the bid solely to ensure that sufficient monies will be available to pay the Contractor for this work, which may be more or less than the fixed amount. This "fixed sum" amount shall be included with the other amounts bid by the Contractor for all the other items under this contract.

The unit price shall cover the cost of all labor, materials, equipment, insurance, and incidentals necessary to complete the work under this section in accordance with the Contract Drawings, the specifications and the directions of the Engineer

Payment will be made under:

Item No.	Description	Pay Unit
9.06 HW	ALLOWANCE FOR DECORATIVE MESH FABRIC	F.S.

**SECTION BMP-GI-9.13HDP
HIGH-DENSITY POLYETHYLENE PIPE**

BMP-GI-9.13HDP.1. DESCRIPTION:

Under these Items, the Contractor shall furnish and install each type of polyethylene corrugated pipe of the required size, in accordance with the Contract Drawings, the specifications and directions of the Engineer. All work of connecting and joining to other pipes or drainage structures, including, but not limited to, connecting pieces, plugs and clean out covers, shall be deemed included under these Items:

BMP-GI-9.13HDPP 6" PERFORATED HIGH-DENSITY POLYETHYLENE
UNDERDRAIN PIPE

BMP-GI-9.13HDPS 6" SOLID HIGH-DENSITY POLYETHYLENE DRAINAGE PIPE

BMP-GI-9.13HDP.2. MATERIALS:

- (A) Pipe: (N-12) pipe shall have a full circular cross-section with a solid single wall or outer corrugated perforated pipe wall and an essentially smooth inner wall (waterway). Corrugations may be either annular or spiral. Size shall conform to the AASHTO classification "Type S" or Type "SP" (which describes pipe with a smooth waterway and Class 2 perforations).

Pipe manufactured for this specification shall comply with the requirements for test methods, dimensions, and markings found in AASHTO Designation M 252. Pipe and fittings shall be made from virgin polyethylene compounds which conform to the requirements of cell Class 324420C, as defined and described in ASTM D3350. Pipe and fittings shall be as manufactured by either: Advanced Drainage Systems, Inc. (AAC), Staybrook Industrial Area, 58 Wyoming Street, Ludlow, MA. 01056, (800) 733-9554, Fax (740) 852-0687; JM Eagle, 5200 West Century Blvd., Los Angeles, CA., 90045, (800) 621-4404, Fax (800) 451-4170; Hancor, Inc. (886) 367-7473, www.hancor.com; or an approved equivalent. The minimum parallel plate stiffness values when tested in accordance with ASTM D2412 shall be 50 psi (340 Kpa).

- (B) Sock: The perforated pipe shall have a "DC Sock" - a polyester machine knitted envelope factory applied and ready for installation.
- (C) Fittings: The fittings shall not reduce or impair the overall integrity or function of the pipe line and must be soil tight. 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, wyes, pipe end caps, and clean out end caps. 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. Where designated on the plans, a neoprene or rubber gasket shall be supplied.

BMP-GI-9.13HDP.3. METHOD:

- (A) Laying Pipe: All pipes shall be laid in reasonably close conformity to line and grade shown on the Contract Drawings 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 1/4". 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. Installation of the pipe shall be in accordance with ASTM Recommended Practice D2321 and the following:

1. Compacted sand backfill material shall be used as the bedding and envelope material around the pipe outside of the Structural Soil Foundation Material (Item 4.15 SS). Inside the Structural Soil Foundation Material (Item 4.15 SS), the Structural Soil Foundation Material shall be used as the bedding and envelope material around the pipe,
2. The corrugated pipe shall be laid on grade on a layer of bedding material. Where sand is used as the bedding and backfill material it shall be well compacted in six (6") inch layers under, around the sides and above the pipe to the recommended minimum height of cover as provided by the pipe manufacturer.
3. Coupling of the pipes shall be performed using Standard ADC (Advanced Drainage Systems) N-12 split coupler PRO LINK ST, or PRO LINK 10.8, or PRO LINK 5; or the pipe manufacture's approved equivalent.

(B) Submit product data for each material specified above.

BMP-GI-9.13HDP.4. MEASUREMENT:

- (A) The quantities to be measured for payment under these Items shall be the number of LINEAR FEET (laying length) of each type of HIGH DENSITY POLYETHYLENE PIPE of the required size actually laid in their final position to the satisfaction of the Engineer.

BMP-GI-9.13HDP.5. PRICES TO COVER:

- (A) The prices bid shall be a unit price per LINEAR FOOT of each type of HIGH DENSITY POLYETHYLENE PIPE furnished and installed 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 backfill, furnishing and installing pipe, fittings, end caps, sand, and cleanouts, 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.

- (B) Engineered Soil will be paid separately under other items.

Payment will be made under:

Item No.	Item	Pay Unit
BMP-GI-9.13HDPP	6" PERFORATED HIGH-DENSITY POLYETHYLENE UNDERDRAIN PIPE	L.F.
BMP-GI-9.13HDPS	6" SOLID HIGH-DENSITY POLYETHYLENE DRAINAGE PIPE	L.F.

**SECTION PK-35
SHREDDED BARK MULCH
(Not a Bid Item)**

PK-35.1. DESCRIPTION: Under this Section the Contractor shall furnish and place SHREDDED BARK MULCH in accordance with the plans, specifications, and directions of the Engineer.

PK-35.2. RELATED SECTIONS:

- (A) Section 4.16 of NYCDOT STANDARD HIGHWAY SPECIFICATIONS VOL.I (LATEST)
- (B) Section 4.17 of NYCDOT STANDARD HIGHWAY SPECIFICATIONS VOL.I (LATEST)

PK-35.3. MATERIAL: Shall be a natural forest product composed of shredded bark or wood not exceeding three inches (3") in length and one inch (1") in width. Mulch shall be derived from tree material, not from wood waste or by-products like sawdust, shredded palettes, or other debris. Mulch shall be natural in color and not dyed. It shall be of a uniform grade with no additives or any other treatment. Mulch with leaves, twigs, and/or debris shall not be acceptable. The pH factor should range from 5.8 to 6.2.

PK-35.4. METHOD: Upon completion of planting and prior to application of shredded bark, Commercial Fertilizer Low Phosphorous (Slow Release) shall be incorporated into soil to a depth of three inches (3") at the rate of twenty pounds per thousand square feet. (20 lbs. /1,000 s.f.)

Shredded bark mulch shall be applied to the surface of the beds and tree pit areas, as shown on the plans or Standard Details and as directed by the Engineer. Mulch shall be applied to a uniform depth of three to four inches (3"-4") over the tree pit and shrub bed areas and two to three inches (2"-3") over groundcover beds, and shall be so distributed as to create a smooth level cover over the exposed soil. Plants shall not be covered.

PK-35.5. MEASUREMENT AND PAYMENT: No separate payment will be made for work under this Section. The cost of all work under this Section shall be deemed to be included in the cost of other planting work associated with this project.

**SECTION PK-435
PREPARATORY FERTILIZE EXISTING TREE**

PK-435.1. DESCRIPTION: Under this section, the Contractor shall PREPARATORY FERTILIZE EXISTING TREE in accordance with the plans, specifications, and as directed by the Engineer, in consultation with the Tree Consultant (Item 4.21).

Note: DBH is defined as Diameter at Breast Height, which is 4'-6" above mean grade.

PK-435.2. NOTIFICATION: Before any fertilization work can begin under this item, the Contractor must notify a minimum of 48 hours prior to beginning work both the Director of Forestry, Brooklyn, at (718) 965-7750 and the Engineer.

All of the following information and instructions are subject to the approval and direction of the Engineer, in consultation with the Tree Consultant (Item 4.21).

PK-435.3. QUALIFICATIONS REQUIRED: The Contractor/subcontractor (arborist) performing the work shall meet the tree pruning qualifications specified in Subsection 4.18.3. of the Standard Highway Specifications.

PK-435.4. MATERIALS:

- (A) Fertilizer: shall be dry, water-soluble micronutrient treatment that includes beneficial rhizosphere bacteria such as BioPak Plus as manufactured Plant Health Care, Inc., Pittsburgh, PA, or approved equal, and shall have the following composition by weight: Nitrogen - three (3%) percent, Phosphate - zero (0%) percent, Potassium - twenty (20%) percent, Magnesium - one and one-half (1.5%) percent, Sulfur - four (4%) percent, Boron - two one-hundredth (0.02%) percent, Iron - seven (7%) percent, Manganese - two tenths (0.2%) percent, and Zinc - two tenths (0.2%) percent.
- (B) Mycorrhizal Fungi Inoculant: shall be a combination inoculant containing mycorrhizal fungi (both ecto- and VAM) and beneficial rhizosphere bacteria such as "Injectable for Trees" as manufactured by Plant Health Care, Inc., Pittsburg , PA, or approved equal, and shall have the following guaranteed analysis of soil amending ingredients: Ectomycorrhizal fungi - one hundred and seventy eight billion (1,780,000,000) spores per one pound, Vesicular Arbuscular Endomycorrhizal (VAM) Fungi - eighty thousand (80,000) spores per one pound, Microbial Content - twenty-four billion (24,000,000,000) colony forming units (cfu) per one pound, Hunic acids - fifteen and eight tenths percent (15.8%), and Microbial Nutrients - sixty- eight and nine tenths percent (68.9%)
- (C) Wetting agent and Soil penetrant: shall be 90% derived from *Yucca schidigera* such as Yuccah, as manufactured by Plant Health Care, Inc., Pittsburgh, P A, or approved equal, and shall have the following guaranteed analysis percent by weight: Yucca schidigera plant extract - ninety percent (90%) and Copolymerized alkane oxides (non-ionic surfactant) - ten percent (10%).

PK-435.5. METHODS: Fertilization shall be implemented after completion of construction operations and after removal of all ground protection and wood chips unless otherwise directed by the Engineer, in consultation with the Tree Consultant (Item 4.21).

Rates of application shall follow manufacturers' recommendations based on tree DBH and

fertilization area. Fertilizer safety precautions shall be followed for all products and used in accordance with the manufacturers' recommendations. Fertilizer ratios should be adjusted based on local knowledge, site conditions, species, age, and health of the tree. The fertilization area shall be defined prior to the application with consideration given to the root accessibility, root location, plant species, and site considerations.

- (A) In open lawn areas and areas where there is no root restricting infrastructure: The fertilization area should be from near the trunk, no closer than 3 feet, to near or just beyond the drip line.
- (B) In areas where infrastructure has restricted or limited root growth and development: The fertilization area shall be determined by either of two ways, whichever is greatest - Either the fertilization area should be the area of exposed soil within the dripline, or the fertilization area radius shall be determined by multiplying the DBH measured in inches, by 1 foot. For example, a 15-inch tree would have a fertilization area radius of 15 feet.
- (C) Surface Applications: Shall be used in instances where there is **NO** existing turf or ground cover and surface run off is **NOT** likely to occur. Fertilizer shall be uniformly distributed within the defined fertilization area and watered into the soil appropriately.
- (D) Sub-surface Fertilization applications shall be used in instances where turf or ground covers exist and surface runoff is likely to occur and performed with standard soil injection equipment. Damage to buttress should be avoided. Holes shall be evenly spaced within the defined fertilization area. Liquid injection sites shall be spaced 12 - 36-inches apart and 4 - 8-inches deep, not to exceed 12-inches. The fertilizer shall be evenly distributed among the holes or injection sites and no closer than 2-inches to the soil surface.

PK-435.6. SUBMITTALS: The Contractor shall submit to the Engineer for approval, the name and qualifications of the proposed tree care subcontractor (Arborist) prior to performing any work under this section.

The approved subcontractor (Arborist) shall submit proposed materials and methods for each individual tree scheduled to be fertilized under this item for approval by the Engineer, in consultation with the Tree Consultant (Item 4.21). For material substitutions, a written request must be submitted to the Tree Consultant (Item 4.21), copy to the Engineer. Contractor shall submit this request, along with manufacturer's data sheets for approval, a minimum of two weeks prior to the intended date of application. All substitutes must be approved in writing.

PK-435.7. PAYMENT SCHEDULE: The Contractor will be paid based on Inch DBH fertilized. For example, fertilizing of one thirty-one inch (31") DBH tree would receive payment for 31 inches, fertilizing of one twenty-two inch (22") DBH tree would receive payment for 22 inches and fertilizing of one seven inch (7") DBH tree would receive payment for 7 inches.

PK-435.8. MEASUREMENT: The quantity of PREPARATORY FERTILIZE EXISTING TREE to be paid for under this Item shall be the number of INCH DBH fertilized, calculated in accordance with the payment schedule above, to the satisfaction of the Engineer.

PK-435.9. PRICE TO COVER: The price bid shall be a unit price per INCH DBH fertilized and shall include by the cost of all labor, materials, equipment, insurance, and incidents necessary for fertilizing trees, by applying fertilizer where directed to complete the work, in accordance with the plans, the specifications and directions of the Engineer.

Where shown in the Tree Mitigation plan and/or Demolition plan, the Contractor shall protect existing tree roots with mulch and the cost shall be included under all scheduled items.

Payment will be made under:

Item No.	Item	Pay Unit
PK-435	PREPARATORY FERTILIZE EXISTING TREE	INCH

SECTION T-60000B

Cable spec. for 120 volt power supply

Cable Name

This cable shall be called 2c-10 B (breakdown 2c-10 B= 2 number 10awg conductors with a third wire for grounding.)

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.

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.

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.

Payment will be made under:

Item No.	Item	Pay Unit
T-60000B	FURNISH 2 c #10B (BREAKDOWN=2#10 WITH 3 RD WIRE FOR GROUNDING)	L.F.

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. 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.

G. 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.

H. 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.

I. 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.

J. THE CONTRACTOR IS NOTIFIED that all electrical work required under this project shall be performed only by a licensed electrician registered with the Department of Buildings and all plumbing work required under this project shall be performed by a licensed plumber under the rules and regulations of the City of New York.

K. THE CONTRACTOR IS NOTIFIED that for use of City water under this project the Contractor shall be required to obtain all necessary permits from the Department of Environmental Protection, at no cost to the Contractor in accordance with the NYC Department of Environmental Protection, Standard Water Main Specifications, dated August 1, 2009, Section 1.08.4 "TEMPORARY USE OF CITY WATER ON CONSTRUCTION PROJECTS."

L. 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

August 1, 2012

OCMC FILE NO: BNEC-12-249
 CONTRACT NO: HWPLZ001K
 PROJECT: MYRTLE AVENUE RECONSTRUCTION

LOCATION(S): MYRTLE AVENUE BETWEEN WASHINGTON AVENUE AND CLASSON AVENUE

PERMISSION IS HEREBY GRANTED TO THE **NEW YORK CITY DEPARTMENT OF DESIGN AND CONSTRUCTION** 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, MYRTLE AVENUE BROOKLYN PARTNERSHIP (BID), 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 DURING WATER AND SEWER WORK AND THE INSTALLATION OF SIDEWALK AND CURB EXTENSIONS AT THE INTERSECTIONS OF MYRTLE AVENUE WITH HALL STREET AND EMERSON STREET: TWO (2) POSTS PLUS RELIEF MONDAY TO FRIDAY ON POST FROM 7 AM TO 4 PM.
 - 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 **"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. THE CONTRACTOR OR AGENCY PROVIDING PUBLIC OUTREACH SHALL POST AND MAINTAIN ADVISORY SIGNS A MINIMUM OF 48-HOURS PRIOR TO CHANGING EXISTING PARKING REGULATION SIGNS TO APPROVED TEMPORARY CONSTRUCTION PARKING REGULATION SIGNS. THE ADVISORY SIGNS SHOULD BE POSTED ON ALL POLES AND DRIVE RAILS ON THE SEGMENT AFFECTED INDICATING THE DATE OF THE CHANGE, THE NEW REGULATIONS AND A TELEPHONE NUMBER TO OBTAIN INFORMATION.
 - 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

August 1, 2012
Page 2 of 3OCMC FILE NO: BNEC-12-249
CONTRACT NO: HWPLZ001K
PROJECT: MYRTLE AVENUE RECONSTRUCTION**B. MAINTENANCE AND PROTECTION OF TRAFFIC****1. Myrtle Avenue between Washington Avenue and Classon Avenue**

- Work hours shall be as follows: 7AM to 4PM Monday through Friday
8AM to 6PM Saturday
9AM to 6PM Sunday
- The contractor shall maintain two 11-foot wide lanes, one lane in each direction for traffic on Myrtle Avenue, except for water and sewer work and curb extension work as stipulated below. The contractor shall maintain one 11-foot wide lane for traffic on all cross streets.
- During water and sewer main work and the installation of sidewalk and curb extensions at the intersections of Myrtle Ave with Hall Street and Emerson Street the contractor may maintain one 12-foot lane for two-way traffic with flaggers at each end of work zone on Myrtle Avenue. Two NYPD agents, plus relief, shall be required during working hours. The contractor must notify and coordinate with NYCT short-range bus services before working. After working hours the contractor shall maintain two 11-foot wide lanes, one lane in each direction for traffic.
- The contractor shall maintain a 5-foot clear sidewalk at all times.

2. Myrtle Avenue Service Road between Hall Street and Emerson Street

- Work hours shall be as follows: 7AM to 6PM Monday through Friday
8AM to 6PM Saturday
9AM to 6PM Sunday
- During working hours, the contractor may fully close the service road between Hall Street and Grand Street to vehicular traffic by placing signs meeting NYS MUTCD standards stating "Road Closed to Thru Traffic". The contractor shall notify in writing by letter Police, Fire, EMS, Community Board and all property owners on the affected street segment a minimum of seven (7) calendar days prior to the closure. Local and emergency access must be provided from each end of the block at the intersections with the use of flaggers and signage.
- After working hours the contractor shall provide one 12-foot lane for traffic on the service road between Hall Street and Grand Street.
- The contractor may fully close the portion of the service road between Grand Street and Emerson Place to vehicular traffic for the duration of the project. The contractor shall notify in writing by letter Police, Fire, EMS, Community Board and all property owners on the affected street segment a minimum of seven (7) calendar days prior to the closure.
- The contractor shall maintain a 5-foot clear sidewalk at all times.

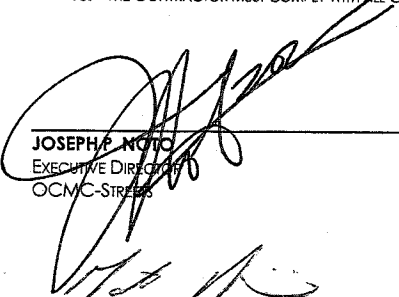
C. GENERAL NOTES

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.
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.

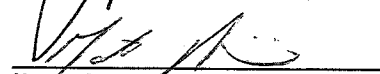
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August 1, 2012
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9. THE OCMC-STREETS RESERVES THE RIGHT TO VOID OR MODIFY THESE STIPULATIONS SHOULD CONSTRUCTION FAIL TO COMMENCE WITHIN TWO (2) YEARS OF THE SIGNED DATE OF THESE STIPULATIONS.
10. THE CONTRACTOR MUST COMPLY WITH ALL CONSTRUCTION EMBARGOS ISSUED BY THE NYCDOT INCLUDING THE HOLIDAY EMBARGO.



JOSEPH F. NOTO
EXECUTIVE DIRECTOR
OCMC-STREETS



MATTHEW D. ARCIERI
PROJECT MANAGER
OCMC-STREETS

JPN/ma



THE CITY OF NEW YORK Department of Sanitation

S. ELIZABETH SEARLE
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Department of Sanitation Rules and Regulations Governing Non-Putrescible Solid Waste Transfer Stations

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.

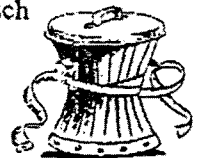
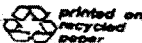
1. When No Transfer Station Permit is Required

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.

(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: HWPLZ001K

RECONSTRUCTION OF

MYRTLE AVENUE FROM HALL STREET TO EMERSON PLACE

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

Together With All Work Incidental Thereto

BOROUGH OF THE BROOKLYN

ADDENDUM NO. 2

DATED: April 2, 2013

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 advised that any City owned light poles, traffic signals, street name signs, traffic signs and encumbrances including, but not limited to, underground conduit displaced as the result of the installation of the new sewers, water mains, catch basins, catch basin connections and appurtenances shall be replaced in kind and as directed by the Engineer. The cost of such work shall be deemed included in the prices bid for all items of work under this contract.
- (7) 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.

- (8) 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.

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 1.06.20 - 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., Assistant Commissioner, 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) 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.

(3) **Refer to Subsection 1.06.27 - Salvageable Materials, Page I-14:**

Delete the paragraph starting with the words, "No salvageable material...", and ending with the words, "...from the site.", in its entirety:

Substitute the following:

Except as specified below, no salvageable material shall be returned to the New York City Department of Environmental Protection regardless of condition. It shall become the property of the Contractor for removal and disposal, by the Contractor, away from the site.

The Contractor shall salvage and deliver to a designated NYCDEP yard all Metropolitan Valves (6" thru 20") removed during construction of the contract.

(4) **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. HWPLZ001K.

(5) **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.

(6) **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.

- (7) **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.

- (8) **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.

- (9) **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.

(10) 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).

(11) Refer to Section 2.15 - Concrete, Subsection 2.15.3 - Modifications, Page II-26:

Delete from Subsection 2.15.3, Reference Number D 16.8 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.

(12) 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.

- (13) 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":

- (14) 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":

- (15) 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".

- (16) 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.

- (17) 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.

- (18) 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 (Non-Skid Textured 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)**.

(19) **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 Specifications and directions of the Engineer for Highway Project ID. HWPLZ001K.

(20) **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 Subsection 1.06.27 - Salvageable Materials, Page I-14:

Delete the paragraph starting with the words, "No salvageable material...", and ending with the words, "...from the site.", in its entirety:

Substitute the following:

Except as specified below, no salvageable material shall be returned to the New York City Department of Environmental Protection regardless of condition. It shall become the property of the Contractor for removal and disposal, by the Contractor, away from the site.

The Contractor shall salvage and deliver to a designated NYCDEP yard all Metropolitan Valves (6" thru 20") removed during construction of the contract.

- (3) **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.

- (4) **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.

- (5) **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.

- (6) **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.

(7) **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.

(8) **Refer to Section 2.15 - Concrete, Subsection 2.15.3 - Modifications, Page II-14:**

Delete from **Subsection 2.15.3, Reference Number D 16.3** 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 pre-construction 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).

(9) **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.

(10) **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.

(11) 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".

(12) 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 AND INSTALLING TEMPORARY CAP ASSEMBLIES AND/OR BULKHEADS

- (1) 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.
- (2)
 - (a) Temporary cap assemblies on distribution water mains (20" and less in diameter) shall consist of a 2-foot long spigot/spigot ductile iron pipe with a mechanical joint cap restrained to the pipe with a "wedge-type" retainer gland and a minimum 2-inch tap on the pipe section.
 - (b) Temporary cap assemblies on distribution water mains (20" and less in diameter) shall be restrained and braced in a manner sufficient to support system working pressures, and thrust forces.
 - (c) The 2-inch tap required as part of the temporary cap assembly is to be utilized to allow air to escape while filling the main in addition to allow for proper flushing of the main.
 - (d) Restraint and bracing as well as temporary cap assemblies/bulkheads for water mains greater than 20" in diameter shall be submitted for approval by the Engineer prior to being utilized.

(13)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 separate or additional payment will be made to the Contractor for furnishing, delivering, installing, restraining, bracing and removing temporary cap assemblies/bulkheads for water mains as ordered by the Engineer. The costs thereof shall be deemed included in the unit 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.

(14)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":

(15)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":

(16) **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":

(17) **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.

(18) **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 (Non-Skid Textured 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)**.

(19) **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.

(20) 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. 2

This Addendum consists of nineteen (19) 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: HWPLZ001K

RECONSTRUCTION OF

MYRTLE AVENUE

FROM HALL STREET TO EMERSON PLACE

**INCLUDING SEWER, WATER MAIN, STREET LIGHTING,
AND TRAFFIC SIGNALWORK**

**Together With All Work Incidental Thereto
BOROUGH OF BROOKLYN
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. Sheeting 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

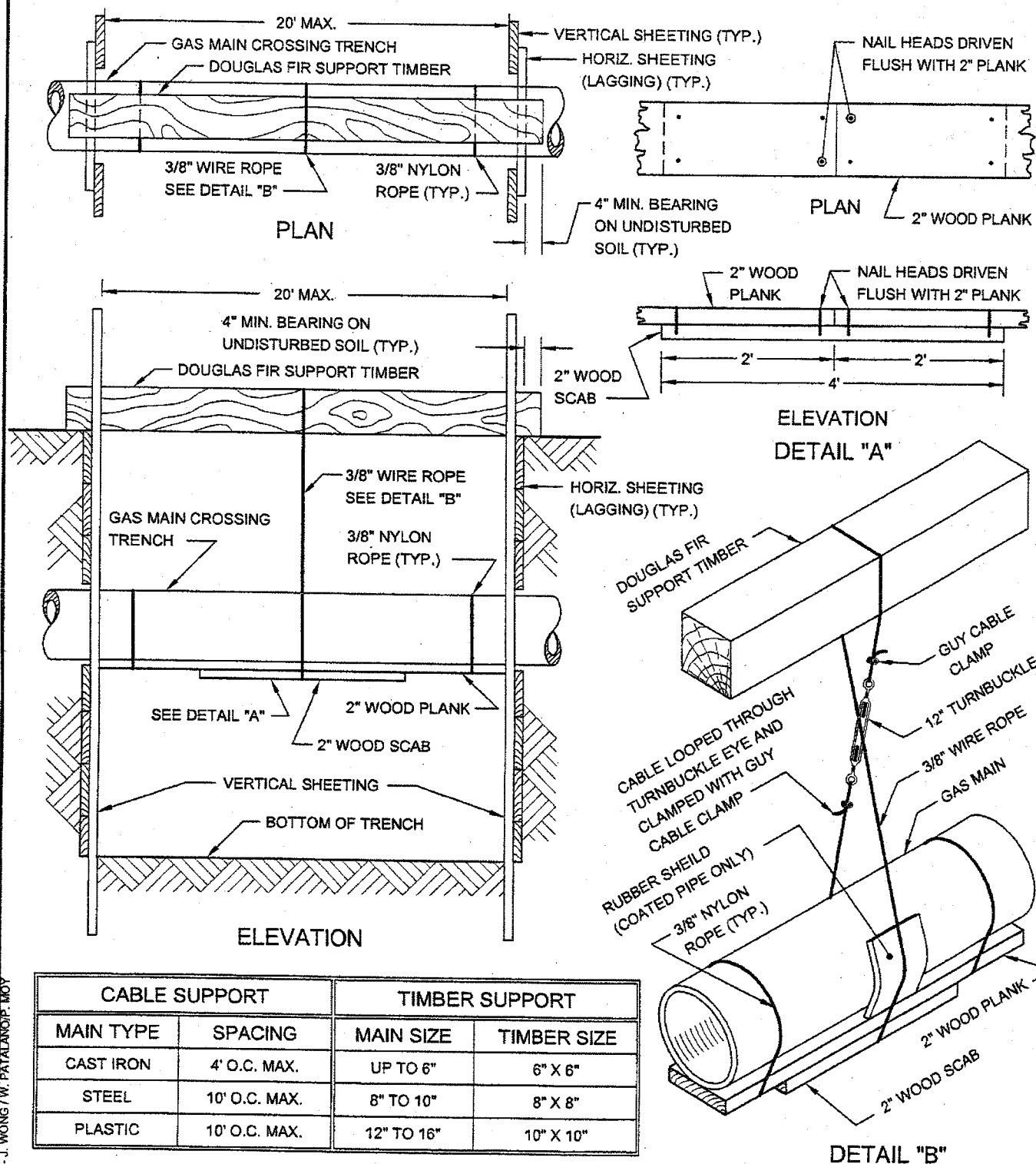
IV - STANDARD SKETCHES; GAS COST SHARING WORK

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)

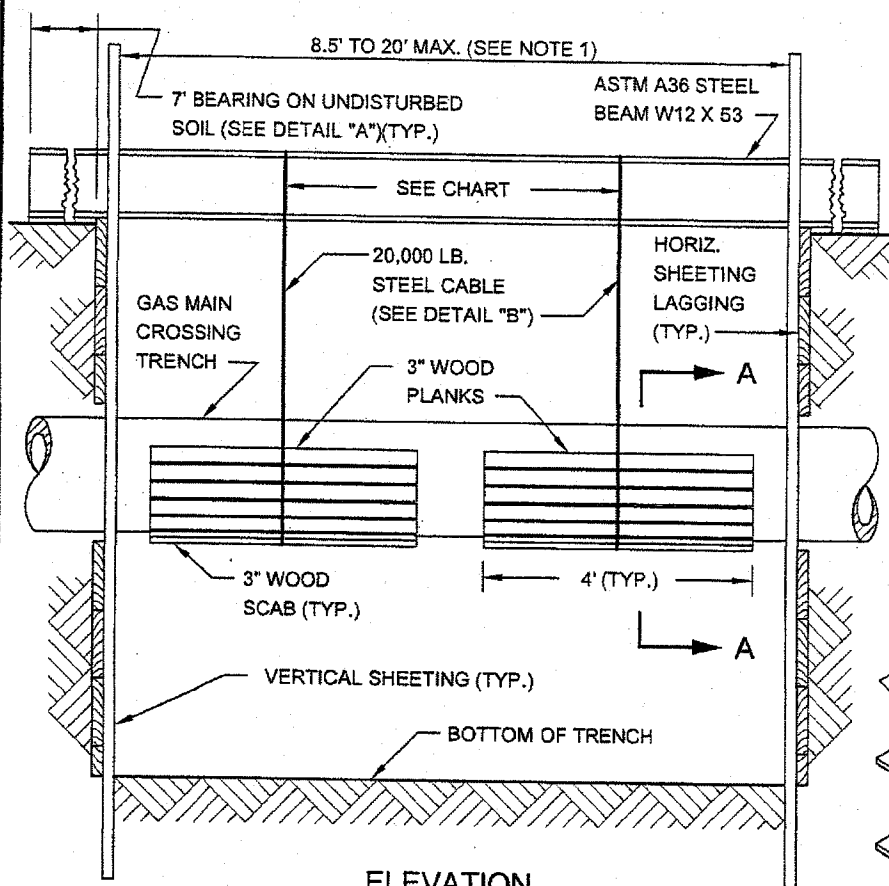
SUPPORT REQUIREMENTS FOR GAS MAINS AND SERVICES CROSSING EXCAVATION GREATER THAN 4'-0" WIDE AT ANY ANGLE



REVISED OCT. 2004 - L. ADRIEN
REVISED JUNE 1998 - J. WONG/W. PATALANOP, BOY

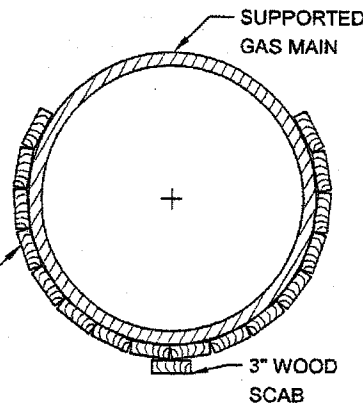
GAS COST SHARING WORK (SKETCH NO. 1A)

SUPPORT REQUIREMENTS FOR GAS MAINS OVER 16" DIAMETER UP TO AND INCLUDING 48" DIAMETER CROSSING EXCAVATION AT ANY ANGLE

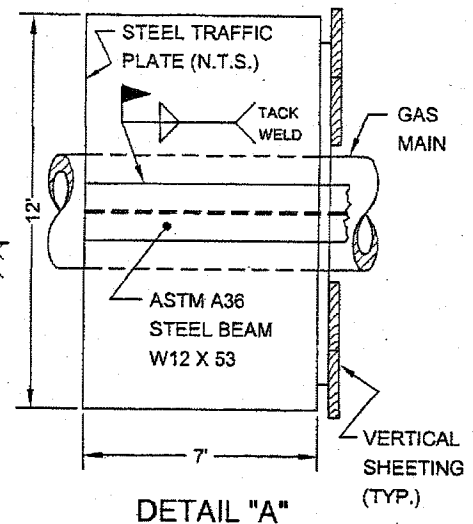


ELEVATION

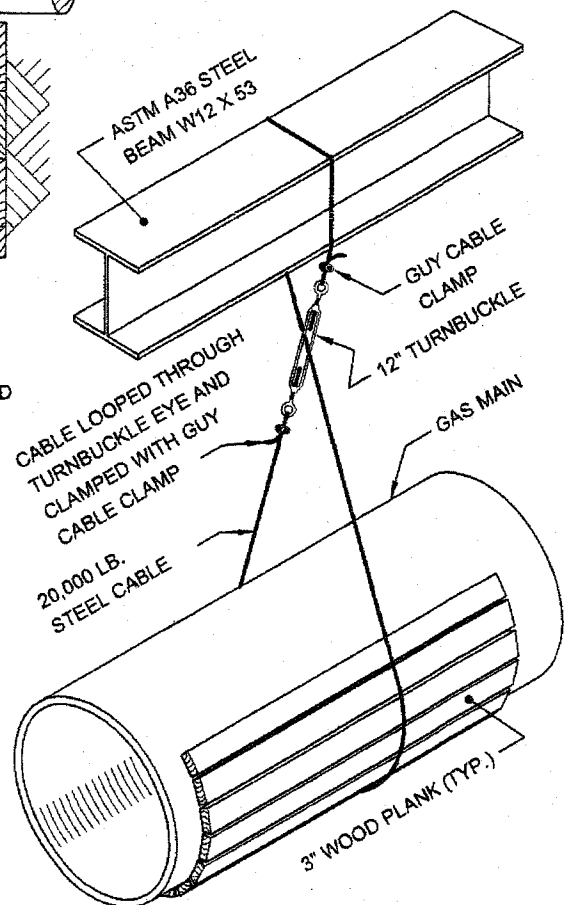
CABLE SUPPORT	
MAIN TYPE	SPACING
CAST IRON	4' O.C. MAX.
STEEL	10' O.C. MAX.



SECTION A-A



DETAIL "A"



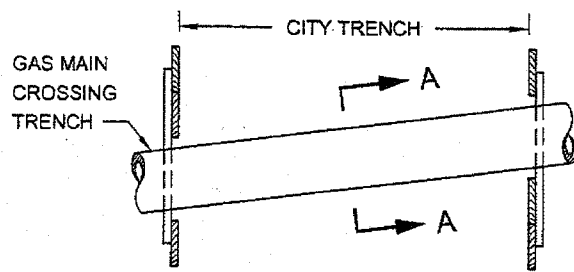
DETAIL "B"

NOTES:

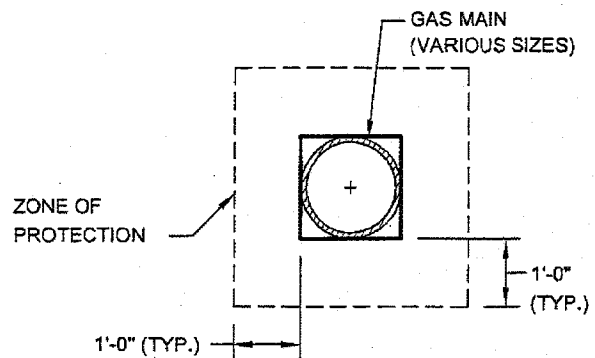
- (1) NO SUPPORT IS REQUIRED FOR GAS MAINS OVER 16" DIA. UP TO AND INCLUDING 48" DIA. CROSSING TRENCHES LESS THAN 8.5' WIDE.
- (2) UNDERMINE A MAXIMUM OF 8.5 L.F. OF CAST IRON GAS MAIN AT A TIME.
- (3) SET STEEL CABLE OVER 3" WOOD PROTECTIVE PLANKS AND PLACE AN ADDITIONAL 3" SCAB ON THE BOTTOM OF THE 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.

GAS COST SHARING WORK (SKETCH NO. 2)

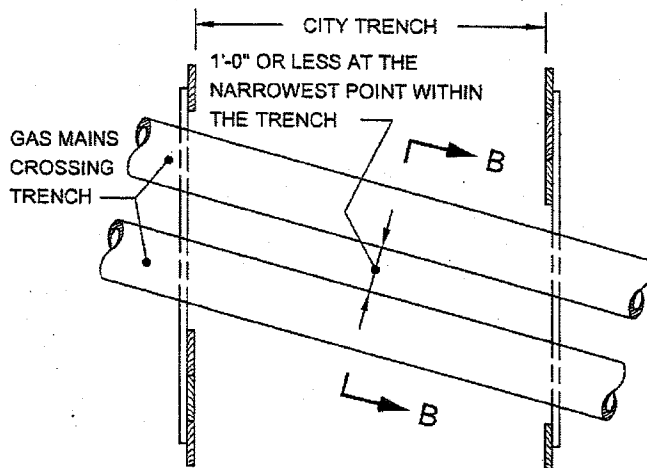
TYPICAL METHODS OF MEASUREMENT FOR GAS CROSSINGS



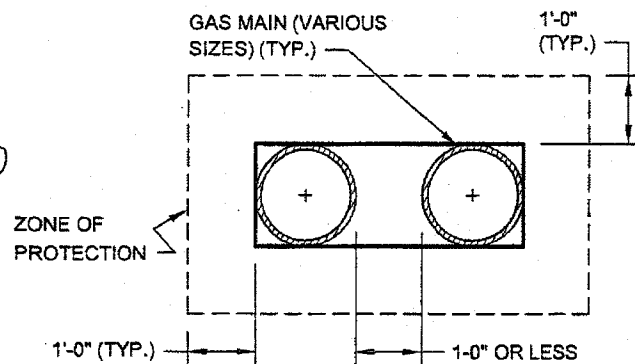
SINGLE FACILITY CROSSING



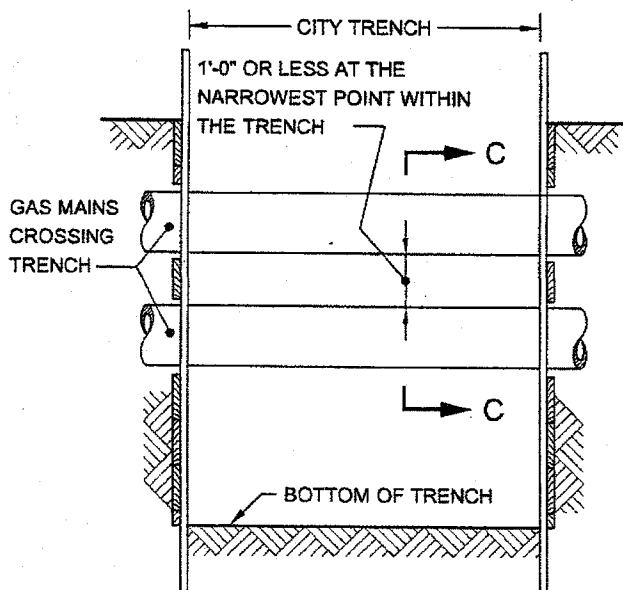
SECTION A-A



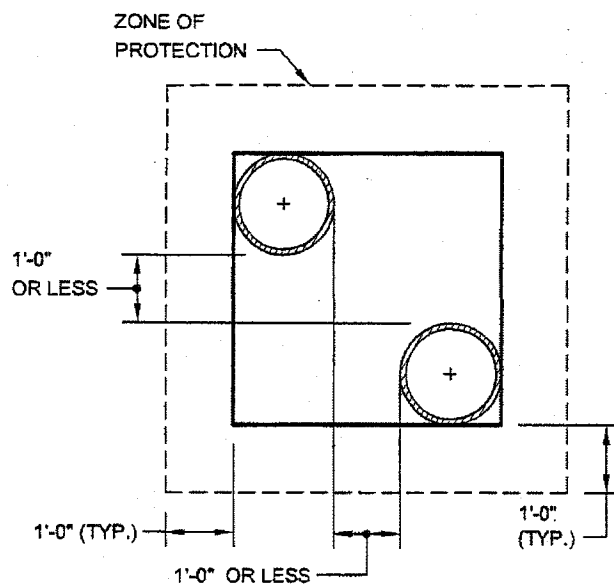
**MULTIPLE FACILITIES
(GAS MAINS AT SAME ELEVATION)**



SECTION B-B



**MULTIPLE FACILITIES
(ONE CROSSING AT DIFFERENT ELEVATIONS)**

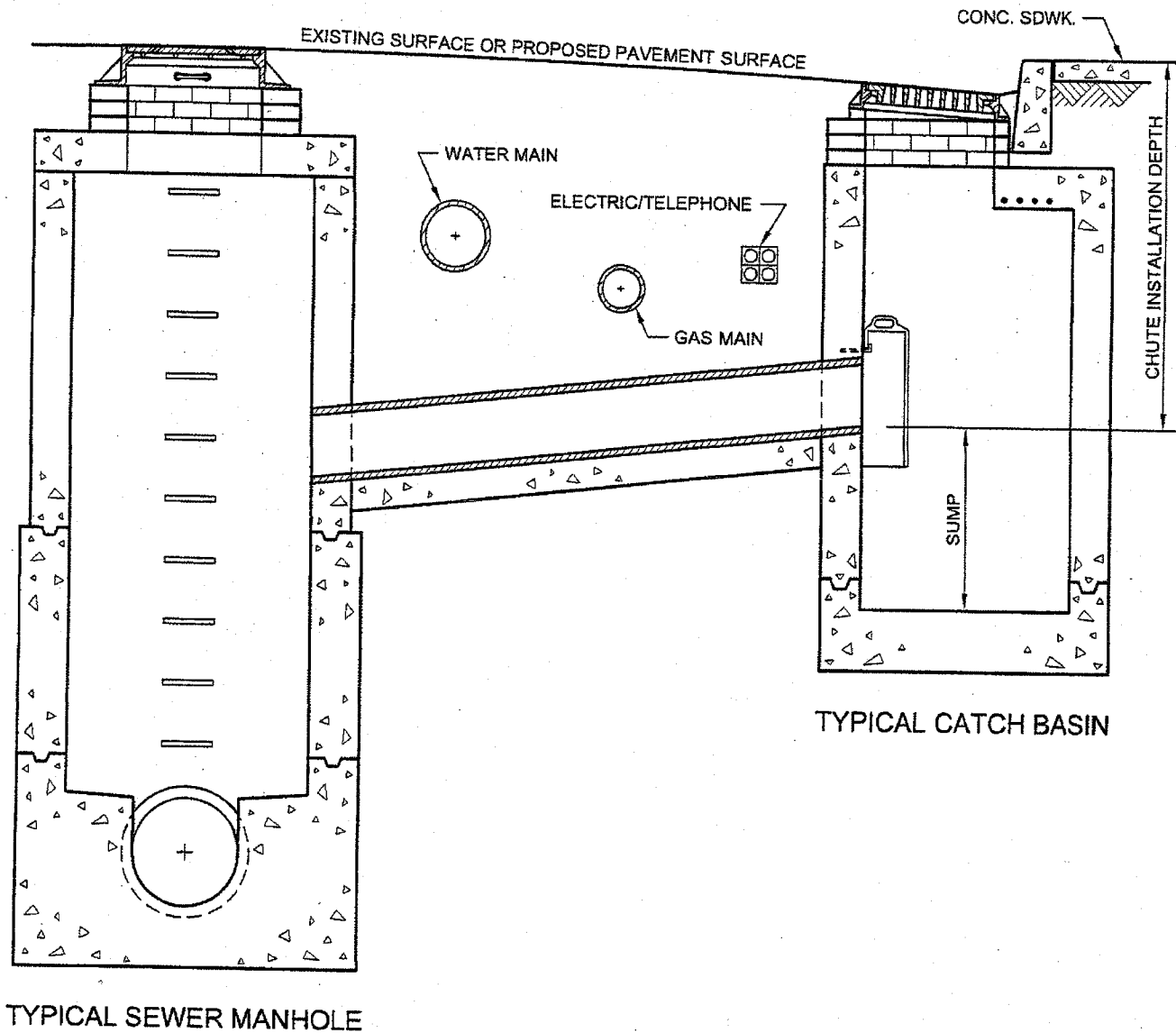


SECTION C-C

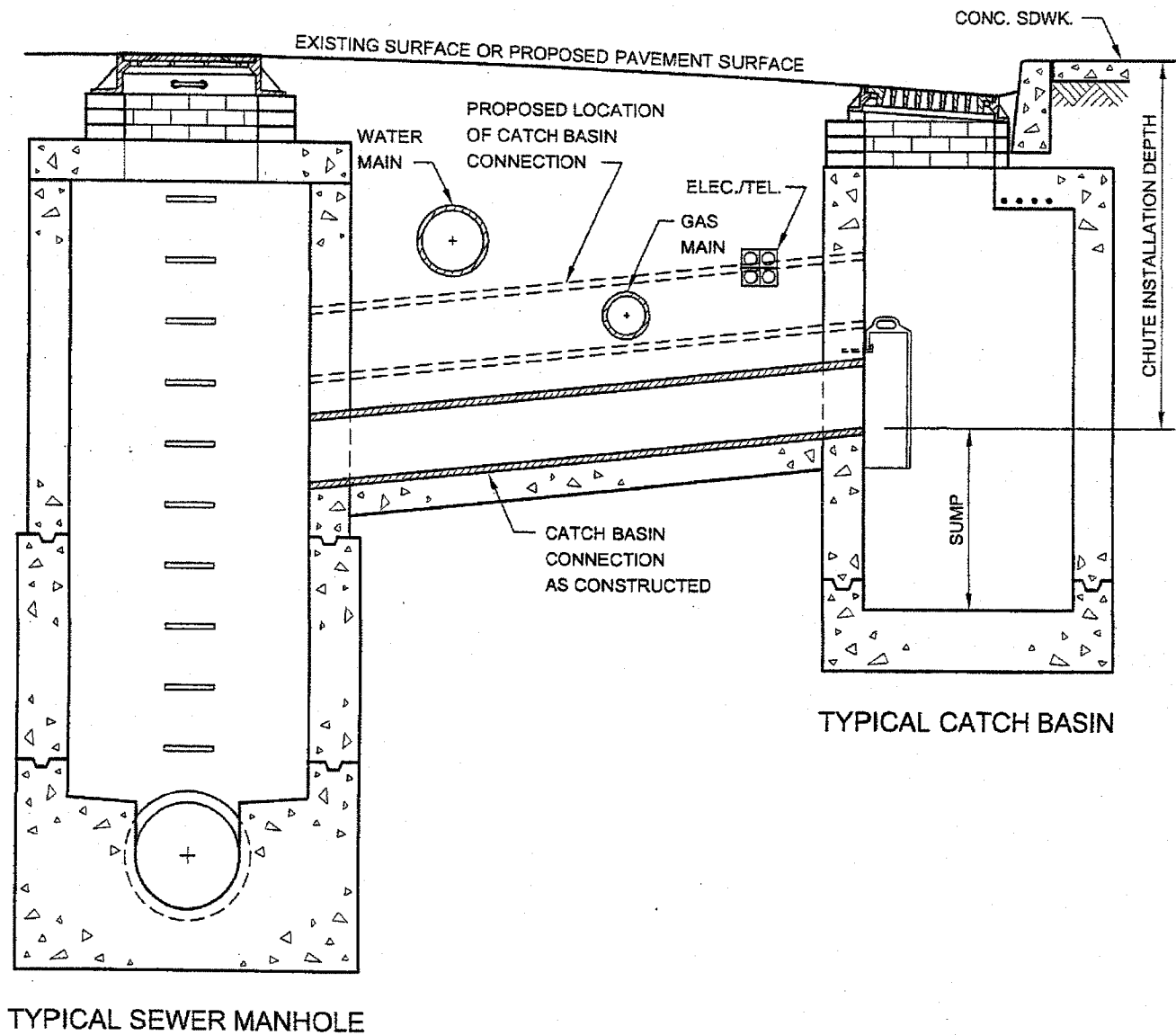
NOTE:

GAS MAINS MAY OR MAY NOT BE PARALLEL TO EACH OTHER.

GAS COST SHARING WORK (SKETCH NO. 3) UTILITY CROSSINGS DURING CATCH BASIN CHUTE CONNECTION PIPE INSTALLATION

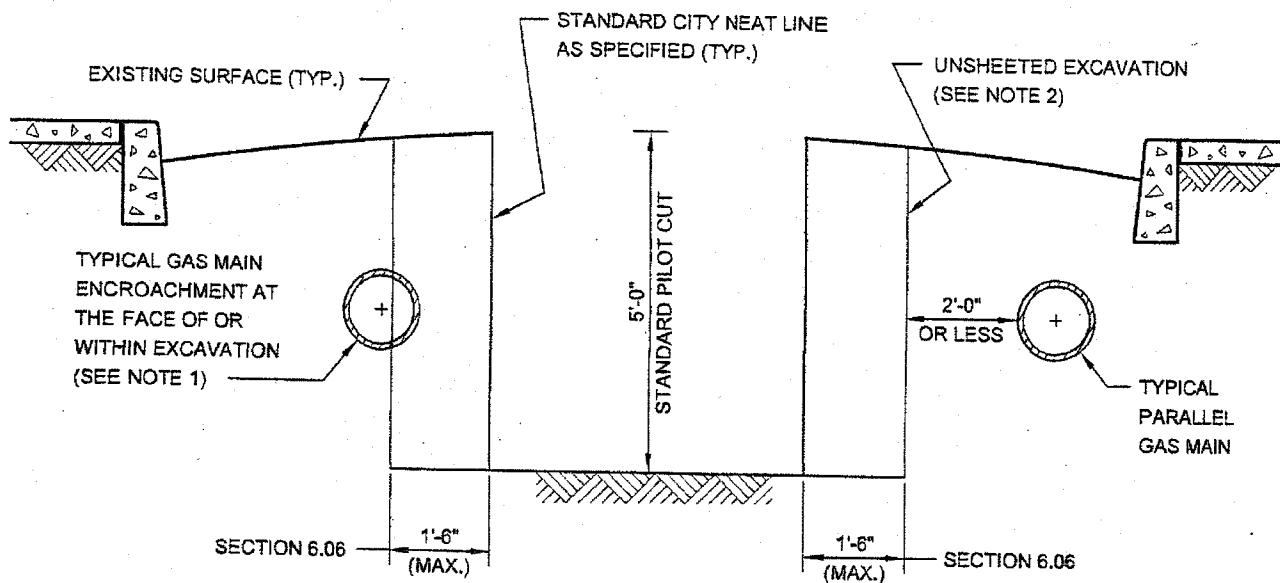


GAS COST SHARING WORK (SKETCH NO. 4) UTILITY CROSSINGS DURING CATCH BASIN CHUTE CONNECTION PIPE INSTALLATION (EXTRA DEPTH)



REVISED OCT. 2004 - L. ADRIEN
 REVISED OCT. 1998 - J. WONG/W. PATALANOP, 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'S RELOCATION WORK, THE CONTRACTOR IS ADVISED TO CONTACT THE GAS COMPANY REPRESENTATIVE:

NATIONAL GRID
287 MASPETH AVE
BROOKLYN, NY 11201
GERARD P. LUNDQUIST
TEL: (718) 963-5506

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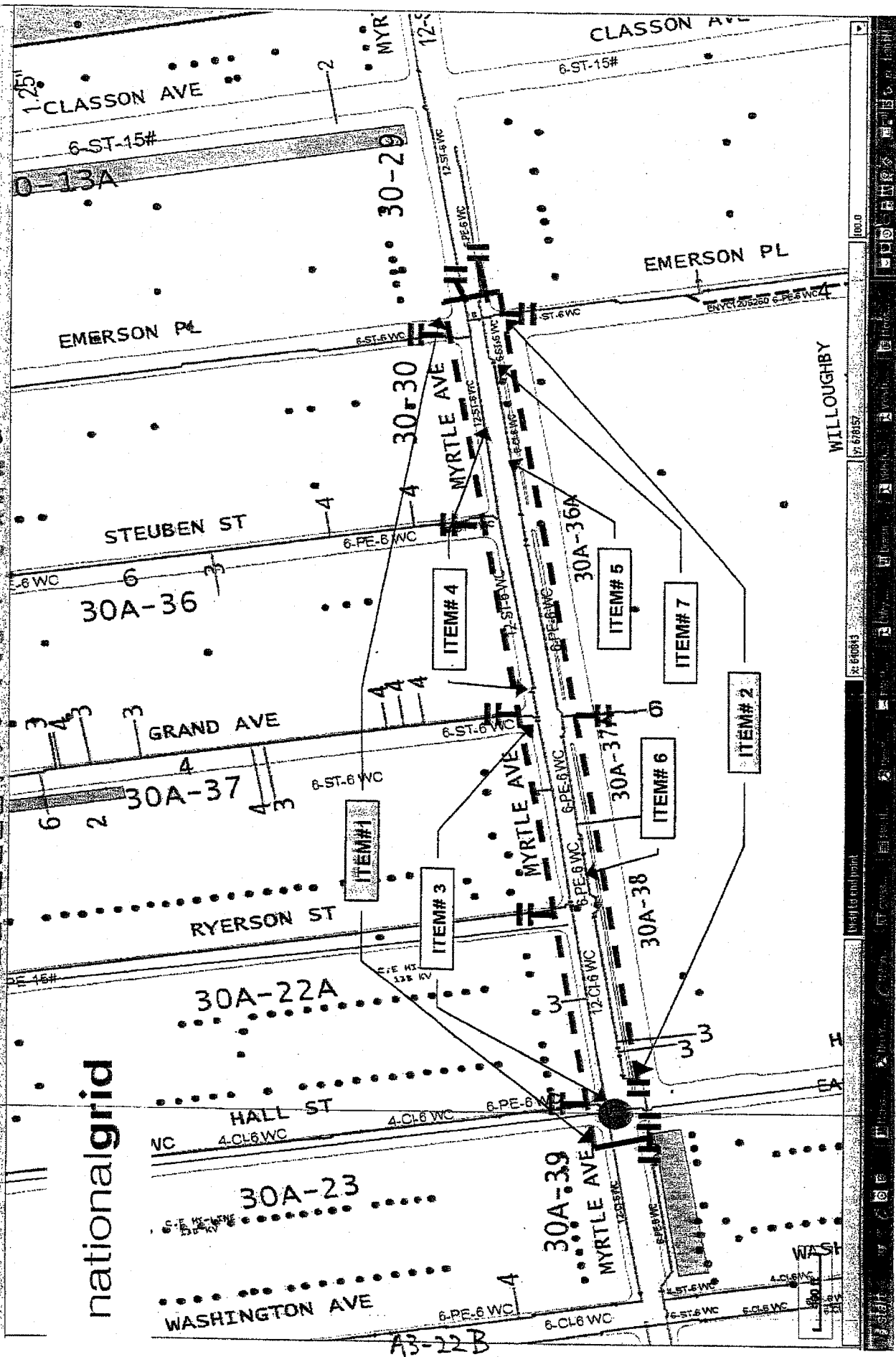
nationalgrid

HWPLZ001K

ITEM#:	SIZE:	MAT'L:	STATUS:	REIMB	PRESSURE	TOTAL FOOTAGE:
1	12"	STL	INSTALL	YES	LP	1,750'
2	6"	PL	INSTALL	YES	LP	1,100'
3	12"	CI	RETIRE	YES	LP	700'
4	12"	STL	RETIRE	YES	LP	450'
5	6"	CI	RETIRE	YES	LP	440'
6	6"	PL	RETIRE	YES	LP	550'
7	6"	STL	RETIRE	YES	LP	485'

A3-22A

nationalgrid



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 HWPLZ001K**

The City of New York Department of Design and Construction is proposing 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.

6.01.1 - Gas Main Crossing Sewer Up To 24" In Diameter. (Ea.)

1 in Hall St @ Myrtle Ave.

6.01.8 - Gas Services Crossing Trenches And / Or Excavations. (Ea.)

25 in Various Locations as Required.

6.01.9 - Gas Main Crossing Water Main Up To 20" In Diameter. (Ea.)

1 in Steuben St @ Myrtle Ave.

1 in Grand Ave @ Myrtle Ave.

1 in Ryerson St @ Myrtle Ave.

2 in Hall St @ Myrtle Ave.

2 in Emerson Pl @ Myrtle Ave.

6.02 - Extra Excavation For The Installation Of Catch Basin Sewer Drain Pipes With Gas Interferences. (Ea.)

2 in Hall St @ Myrtle Ave.

6.03 - Removal Of Abandoned Gas Facilities. All Sizes. (L.F.)

2000 in Various Locations As Required.

**SCOPE OF WORK
SUPPORT AND PROTECTION
FOR CONTRACT HWPLZ001K**

The City of New York Department of Design and Construction is proposing 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.

**6.03.1 - Removal Of Abandoned Gas Facilities With Possible Coal Tar Wrap. All Sizes. (L.F.)
(For National Grid Work Only)**

1000 in Various Locations As Required.

6.04 - Adjust Hardware To Grade Using Spacer Rings/Adaptors (Street Repaving). (Ea.)

50 in Various Locations As Required.

6.05 - Adjust Hardware To Grade By Resetting (Road Reconstruction). (Ea.)

50 in Various Locations As Required.

6.06 - Special Care Excavation And Backfill. (C.Y.)

600 in various locations as required, including but not limited
to all gas services crossing unsheeted water main trenches.

6.07 - Test Pits For Gas Facilities. (C.Y.)

100 in Various Locations As Required.

END OF ADDENDUM NO. 3

This addendum consists of thirty-nine (39) pages

A3-23B

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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: HWPLZ001K

RECONSTRUCTION OF

MYRTLE AVENUE

FROM HALL STREET TO EMERSON PLACE

INCLUDING SEWER, WATER MAIN, STREET LIGHTING,
AND TRAFFIC SIGNALWORK

Together With All Work Incidental Thereto
BOROUGH OF BROOKLYN
CITY OF NEW YORK

ADDENDUM NO. 4

DATED: March 11, 2013

THIS ADDENDUM IS HEREBY MADE A PART OF THE CONTRACT DOCUMENTS

Included herein are the Specifications for Electrical and Plumbing work.

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E262416	PANELBOARDS	A4-16
E262713	ELECTRICITY MERTERING	A4-23
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E262816	ENCLOSED SWITCHES	A4-32
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SECTION E260519
LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES

PART 1- GENERAL

1.1 SUMMARY

- A. 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.

1.2 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Field quality-control test reports.

1.3 QUALITY ASSURANCE

- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in the New York City Electrical Code, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
- B. Comply with New York City Electrical Code.

PART 2- PRODUCTS

2.1 CONDUCTORS AND CABLES

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include 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. AFC Cable Systems, Inc.
 - 7. Or an approved equivalent.
- B. Copper Conductors: Comply with NEMA WC 70.
- C. Conductor Insulation: Comply with NEMA WC70 for Types XHHW.

2.2 CONNECTORS AND SPLICES

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include the following:
 - 1. AFC Cable Systems, Inc.

2. Hubbell Power Systems, Inc.
3. 0-Z/Gedney; EGS Electrical Group LLC.
4. 3M; Electrical Products Division.
5. Tyco Electronics Corp.
6. Or an approved equivalent.

- B. Description: Factory-fabricated connectors and splices of size, ampacity rating, material, type, and class for application and service indicated.

PART 3- EXECUTION

3.1 CONDUCTOR MATERIAL APPLICATIONS

- A. Feeders: All feeders shall be copper. Solid for No. 10 AWG and smaller; stranded for No. 8 AWG and larger.
- B. Branch Circuits: Copper. Solid for No. 10 AWG and smaller; stranded for No. 8 AWG and larger.

3.2 CONDUCTOR INSULATION AND MULTICONDUCTOR CABLE APPLICATIONS AND WIRING METHODS

- A. Service Entrance: Type XHHW, single conductors in raceway.
- B. Feeders: Type XHHW, single conductors in raceway.
- C. Branch Circuits: Type XHHW, single conductors in raceway.

3.3 INSTALLATION OF CONDUCTORS AND CABLES

- A. 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.
- B. Use pulling means, including fish tape, cable, rope, and basket-weave wire/cable grips that will not damage cables or raceway.
- C. Install exposed conduits/cables parallel and perpendicular to surfaces of exposed structural members, and follow surface contours where possible.

3.4 CONNECTIONS

- A. 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.
- B. Make splices and taps that are compatible with conductor material and that possess equivalent or better mechanical strength and insulation ratings than unspliced conductors.
- C. Wiring at Outlets: Install conductor at each outlet, with at least 6 inches of slack.

3.5 FIELD QUALITY CONTROL

- A. Perform tests and inspections and prepare test reports.
- B. Tests and Inspections:
 - 1. After installing conductors and cables and before electrical circuitry has been energized, test service entrance and feeder conductors, and branch conductors for compliance with requirements.
 - 2. Perform each visual and mechanical inspection and electrical test stated in NETA Acceptance Testing Specification. Certify compliance with test parameters.
 - 3. 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.4 AWG and larger. Remove box and equipment covers so splices are accessible to portable scanner.
 - a. Instrument: Use an infrared scanning device designed to measure temperature or to detect significant deviations from normal values. Provide calibration record for device.
 - b. 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.
- C. Test Reports: Prepare a written report to record the following:
 - 1. Test procedures used.
 - 2. Test results that comply with requirements.
 - 3. 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.

PART 4- MEASUREMENT AND PAYMENT

4.1 MEASUREMENT

- A. The quantity of Conductors and Cables to be paid for under ITEMS E260519 A, E260519 B, E260519 C, E260519 D, and E260519 G shall be the actual number of linear feet of each size conductors and cables actually installed to complete the work, to the satisfaction of the Engineer. When multiple lengths of conductors are used as a cable, each length of conductor shall be measured separately.

4.2 PRICES TO COVER

- A. The unit price bid per linear foot of each size conductor or cable shall cover the cost of furnishing all labor, materials, equipment, insurance, and incidentals to complete the work including, but not limited to, furnishing and placing conductor and cable, and all associated connectors and splices, 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
E260519 A	LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS CABLES (NO. 3/0 AWG WIRE)	L.F.
E260519 B	LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS CABLES (NO. 2 AWG WIRE)	L.F.
E260519 C	LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS CABLES (NO. 4 AWG WIRE)	L.F.
E260519 D	LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS CABLES (NO. 6 AWG WIRE)	L.F.
E260519 G	LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS CABLES (NO. 10 AWG WIRE)	L.F.

SECTION E260526
GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS

PART 1- GENERAL

1.1 SUMMARY

- A. This Section includes methods and materials for grounding systems and equipment.

1.2 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Qualification Data: For testing agency and testing agencies' field supervisor.
- C. Field quality-control test reports.

1.3 QUALITY ASSURANCE

- 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 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 New York City Electrical Code, 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.

PART 2- PRODUCTS

2.1 CONDUCTORS

- A. Insulated Conductors: Copper wire or cable insulated for 600 V unless otherwise required by applicable Code or authorities having jurisdiction.
- B. Bare Copper Conductors:
1. Solid Conductors: ASTM B 3.
2. Stranded Conductors: ASTM B 8.
3. Tinned Conductors: ASTM B 33.

4. Bonding Cable: 28 kcmil, 14 strands of No. 17 AWG conductor, 1/4 inch in diameter.
5. Bonding Conductor: No. 4 or No. 6 AWG, stranded conductor.
6. Bonding Jumper: Copper tape, braided conductors, terminated with copper ferrules; 1-5/8 inches wide and 1/16 inch thick.
7. Tinned Bonding Jumper: Tinned-copper tape, braided conductors, terminated with copper ferrules; 1-5/8 inches wide and 1/16 inch thick.

2.2 CONNECTORS

- A. 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.
- B. Bolted Connectors for Conductors and Pipes: Copper or copper alloy, bolted pressure-type, with at least two bolts.
 1. Pipe Connectors: Clamp type, sized for pipe.
- C. Welded Connectors: Exothermic-welding kits of types recommended by kit manufacturer for materials being joined and installation conditions.

2.3 GROUNDING ELECTRODES

- A. Ground Rods: Copper-clad steel; 5/8"x 8'.

PART 3- EXECUTION

3.1 APPLICATIONS

- A. Conductors: Install solid conductor for No. 8 AWG and smaller, and stranded conductors for No. 6 AWG and larger, unless otherwise indicated.
- B. Conductor Terminations and Connections:
 1. Pipe and Equipment Grounding Conductor Terminations: Bolted connectors.
 2. Underground Connections: Welded connectors except at test wells and as otherwise indicated.

3.2 GROUNDING UNDERGROUND DISTRIBUTION SYSTEM COMPONENTS

- A. Comply with IEEE C2 grounding requirements.
- B. Grounding Manholes and Handholes: Install a driven ground rod through manhole or handhole floor, close to wall, and set rod depth so 4 inches 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 above

to 6 inches below concrete. Seal floor opening with waterproof, non-shrink grout.

- C. 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 comers and fasten to manhole walls. Connect to cable armor and cable shields as recommended by manufacturer of splicing and termination kits.

3.3 EQUIPMENT GROUNDING

- A. Install insulated equipment grounding conductors with all feeders and branch circuits.
- B. Metal and Wood Poles Supporting Outdoor Lighting Fixtures: Install grounding electrode and a separate insulated equipment grounding conductor in addition to grounding conductor installed with branch-circuit conductors.

3.4 INSTALLATION

- A. 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.
- B. Ground Rods: Drive rods until tops are 2 inches below finished floor or final grade, unless otherwise indicated.
 - 1. Interconnect ground rods with grounding electrode conductor below grade and as otherwise indicated. Make connections without exposing steel or damaging coating, if any.
 - 2. For grounding electrode system, install at least two 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.
- C. Bonding Straps and Jumpers: Install in locations accessible for inspection and maintenance, except where routed through short lengths of conduit.
 - 1. Bonding to Structure: Bond straps directly to basic structure, taking care not to penetrate any adjacent parts.
 - 2. Bonding to Equipment Mounted on Vibration Isolation Hangers and Supports: Install so vibration is not transmitted to rigidly mounted equipment.
 - 3. Use exothermic-welded connectors for outdoor locations, but if a disconnect-type connection is required, use a bolted clamp.

3.5 FIELD QUALITY CONTROL

- A. Testing Agency: Engage a qualified testing and inspecting agency to perform the following field tests and inspections and prepare test reports:
 - 1. After installing grounding system but before permanent electrical circuits have been energized, test for compliance with requirements.
 - 2. 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.

- a. 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.
 - b. Perform tests by fall-of-potential method according to IEEE 81.
- B. Report measured ground resistances that exceed the following values:
1. Power and Lighting Equipment or System with Capacity 500 kVA and less: 10 ohms.
 2. Substations and Pad-Mounted Equipment: 5 ohms.
 3. Manhole Grounds: 10 ohms.
- C. Excessive Ground Resistance: If resistance to ground exceeds specified values, notify Architect promptly and include recommendations to reduce ground resistance.

PART 4- MEASUREMENT AND PAYMENT

4.1 MEASUREMENT

- A. The quantity of Grounding and Bonding for Electrical Systems to be paid for under ITEM E 260526 shall be the actual number of linear feet of grounding conductors installed to complete the work, to the satisfaction of the Engineer.

4.2 PRICE TO COVER

- A. The unit price bid per linear foot of conductor shall cover the cost of furnishing all labor, materials, equipment, insurance, and incidentals to complete the work including, but not limited to, furnishing and placing grounding conductors, and all associated connectors, electrodes, ground rods, bonding straps, and Jumpers, 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
E260526	GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS.	L.F.

SECTION E260533
RACEWAY AND BOXES FOR ELECTRICAL SYSTEMS

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes raceways, fittings, boxes, enclosures, and cabinets for electrical wiring.

1.2 DEFINITIONS

- A. LFMC: Liquidtight flexible metal conduit.

1.3 SUBMITTALS

- A. Product Data: For surface raceways, wireways and fittings, floor boxes, hinged-cover enclosures, and cabinets.
- B. Shop Drawings: For the following raceway components. Include plans, elevations, sections, details, and attachments to other work.
1. Custom enclosures and cabinets.
 2. For handholes and boxes for underground wiring, including the following:
 - a. Duct entry provisions, including locations and duct sizes.
 - b. Frame and cover design.
 - c. Grounding details.
 - d. Dimensioned locations of cable rack inserts, and pulling-in and lifting irons.
 - e. Joint details.

1.4 QUALITY ASSURANCE

- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in New York City Electrical Code, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
- B. Comply with New York City Electrical Code.

PART 2 - PRODUCTS

2.1 METAL CONDUIT AND TUBING

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include the following:
1. PVC Coated Rigid Steel Conduit:
 - a. Thomas & Betts
 - b. Rob Roy
 - c. Perma-Cote

- d. Kor-Kap
- Or an approved equivalent

2. LFMC:

- a. AFC Cable Systems, Inc.
- b. Alflex Inc.
- c. Allied Tube & Conduit; a Tyco International Ltd. Co.
- d. Electri-Flex Co.
- e. Wheatland Tube Company.
- Or an approved equivalent

B. PVC-Coated Rigid Steel Conduit:

- 1. Rigid Steel Conduit: ANSI C80.1.
- 2. PVC coating shall comply with NEMA RN 1 with minimum 0.040 inch thickness.

C. LFMC: Flexible steel conduit with PVC jacket.

D. Joint Compound for Rigid Metal 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.

2.2 BOXES, ENCLOSURES, AND CABINETS

A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include the following:

- 1. Cooper Crouse-Hinds; Div. of Cooper Industries, Inc.
- 2. EGS/Appleton Electric.
- 3. Erickson Electrical Equipment Company.
- 4. Hoffman.
- 5. Hubbell Incorporated; Killark Electric Manufacturing Co. Division.
- 6. O-Z/Gedney; a unit of General Signal.
- 7. RACO; a Hubbell Company.
- 8. Robroy Industries, Inc.; Enclosure Division.
- 9. Scott Fetzer Co.; Adalet Division.
- 10. Spring City Electrical Manufacturing Company.
- 11. Thomas & Betts Corporation.
- 12. Walker Systems, Inc.; Wiremold Company (The).
- 13. Woodhead, Daniel Company; Woodhead Industries, Inc. Subsidiary.
- 14. Or an approved equivalent.

B. Sheet Metal Outlet and Device Boxes: NEMA OS 1.

C. Metal Floor Boxes: Cast or sheet metal, fully adjustable, rectangular.

D. Small Sheet Metal Pull and Junction Boxes: NEMA OS 1.

E. Cast-Metal Access, Pull, and Junction Boxes: NEMA FB 1, cast aluminum with gasketed cover.

- F. Hinged-Cover Enclosures: NEMA 250, Type 4X, with continuous-hinge cover with flush vandal resistant latch, unless otherwise indicated.
 - 1. Metal Enclosures: Type A316L Stainless Steel.

2.3 HANDHOLES AND BOXES FOR EXTERIOR UNDERGROUND WIRING

- A. Description: Comply with SCTE 77.
 - 1. Color of Frame and Cover: Gray in hardscaped areas and Green in landscaped areas.
 - 2. Configuration: Units shall be designed for flush burial and have open bottom, unless otherwise indicated.
 - 3. Cover: Weatherproof, secured by tamper-resistant locking devices and having structural load rating consistent with enclosure.
 - 4. Cover Finish: Nonskid finish shall have a minimum coefficient of friction of 0.50.
 - 5. Cover Legend: Molded lettering, as indicated for each service.
 - 6. Conduit Entrance Provisions: Conduit-terminating fittings shall mate with entering ducts for secure, fixed installation in enclosure wall.
 - 7. Handholes 12 inches wide by 24 inches long and larger shall have inserts for cable racks and pulling-in irons installed before concrete is poured.
- B. 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.
 - 1. Basis-of-Design Product: Subject to compliance with requirements, provide the product indicated on Drawings or a comparable product by one of the following:
 - a. Armorcast Products Company.
 - b. Carson Industries LLC.
 - c. CDR Systems Corporation.
 - d. NewBasis.
 - e. Or an approved equivalent.
- B. Electrical service property line splice box shall be provided per ConEd Standard EO-6210-B Rev. 23.

PART 3 –EXECUTION

3.1 RACEWAY APPLICATION

- A. Outdoors: Apply raceway products as specified below, unless otherwise indicated:
 - 1. Exposed Conduit: Rigid steel conduit.
 - 2. Concealed Conduit, Aboveground: Rigid steel conduit.
 - 3. Underground Conduit: Rigid steel conduit, direct buried.
 - 4. Connection to Vibrating Equipment (Including Transformers and Hydraulic, Pneumatic, Electric Solenoid, or Motor-Driven Equipment): LFMC.
 - 5. Boxes and Enclosures, Aboveground: NEMA 250, Type 4X.
- B. Minimum Raceway Size: 3/4-inch trade size.

- C. Raceway Fittings: Compatible with raceways and suitable for use and location.
 - 1. Rigid Steel Conduit: Use threaded rigid steel conduit fittings, unless otherwise indicated.

3.2 INSTALLATION

- A. Comply with NECA 1 for installation requirements applicable to products specified in Part 2 except where requirements on Drawings or in this Article are stricter.
- B. Keep raceways at least 6 inches away from parallel runs of flues and steam or hot-water pipes. Install horizontal raceway runs above water and steam piping.
- C. Complete raceway installation before starting conductor installation.
- D. Arrange stub-ups so curved portions of bends are not visible above the finished slab.
- E. Install no more than the equivalent of three 90-degree bends in any conduit run except for communications conduits, for which fewer bends are allowed.
- F. Conceal conduit, unless otherwise indicated.
- G. 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.
- H. Raceway Terminations at Locations Subject to Moisture or Vibration: Use insulating bushings to protect conductors, including conductors smaller than No. 4 AWG.
- I. 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.
- J. Raceways for Optical Fiber and Communications Cable: Install raceways, metallic and nonmetallic, rigid and flexible, as follows:
 - 1. 3/4-Inch Trade Size and Smaller: Install raceways in maximum lengths of 50 feet.
 - 2. 1-Inch Trade Size and Larger: Install raceways in maximum lengths of 75 feet.
 - 3. Install with a maximum of two 90-degree bends or equivalent for each length of raceway unless Drawings show stricter requirements. Separate lengths with pull or junction boxes or terminations at distribution frames or cabinets where necessary to comply with these requirements.
- K. 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:
 - 1. Where required by New York City Electrical Code.
- L. Flexible Conduit Connections: Use maximum of 72 inches of flexible conduit for equipment subject to vibration, noise transmission, or movement; and for transformers

and motors.

1. Use LFMC in damp or wet locations subject to severe physical damage.
 2. Use LFMC in damp or wet locations not subject to severe physical damage.
- M. Recessed Boxes in Masonry Walls: Saw-cut opening for box in center of cell of masonry block, and install box flush with surface of wall.
- N. Set metal floor boxes level and flush with finished floor surface.

3.3 INSTALLATION OF UNDERGROUND CONDUIT

A. Direct-Buried Conduit:

1. Excavate trench bottom to provide firm and uniform support for conduit. Prepare trench bottom for pipe less than 6 inches in nominal diameter.
2. Install backfill.
3. 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 tamps backfill around conduit to provide maximum supporting strength. After placing controlled backfill to within 12 inches of finished grade, make final conduit connection at end of run and complete backfilling with normal compaction.
4. Install manufactured rigid steel conduit elbows for stub-ups at poles and equipment and at building entrances through the floor.
 - a. Couple steel conduits to ducts with adapters designed for this purpose, and encase coupling with 3 inches of concrete.
 - b. 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.
5. 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.

3.4 INSTALLATION OF UNDERGROUND HANDHOLES AND BOXES

- A. 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.
- B. 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.
- C. Elevation: In paved areas, set so cover surface will be flush with finished grade. Set covers of other enclosures 1 inch above finished grade.
- D. Install removable hardware, including pulling eyes, cable stanchions, cable arms, and

insulators, as required for installation and support of cables and conductors and as indicated. Select arm lengths to be long enough to provide spare space for future cables, but short enough to preserve adequate working clearances in the enclosure.

- E. 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.

3.5 PROTECTION

- A. Provide final protection and maintain conditions that ensure coatings, finishes, and cabinets are without damage or deterioration at time of Substantial Completion.
 - 1. Repair damage to galvanized finishes with zinc-rich paint recommended by manufacturer.
 - 2. Repair damage to paint finishes with matching touchup coating recommended by manufacturer.
 - 3. Repair damage to PVC coating as recommended by manufacturer.

PART 4- MEASUREMENT AND PAYMENT

4.1 MEASUREMENT

- A. The quantity of Metal Conduit and Tubing to be paid for under ITEMS E260533 AA, E260533 AB, E260533 AC, E260533 AD, and E260533 AE shall be the actual number of linear feet of Metal Conduit and Tubing installed to complete the work, to the satisfaction of the Engineer.
- B. The quantity of Boxes, Enclosures, and Cabinets to be paid for under ITEMS E260533 BA and E260533 BB shall be the actual number of Boxes, Enclosures, and Cabinets installed to complete the work, to the satisfaction of the Engineer.
- C. The quantity of Handholes and Boxes for Exterior Underground Wiring to be paid for under ITEM E260533 CA, and E260533 CB shall be the actual number of Handholes or Boxes for Exterior Underground Wiring installed to complete the work, to the satisfaction of the Engineer.

4.2 PRICES TO COVER

- A. The unit price bid per linear foot of Metal Conduit and Tubing, under ITEMS E260533 AA, E260533 AB, E260533 AC, E260533 AD, and E260533 AE shall cover the cost of furnishing all labor, materials, equipment, insurance, and incidentals to complete the work including, but not limited to, excavation and backfill, furnishing and placing all Metal Conduit and Tubing, all associated connectors and splices, and joint compound, all in accordance with the Contract Drawings, the specifications, and the directions of the Engineer.
- B. The unit price bid per each Enclosure, under ITEMS E260533 BA, E260533 BB and E260533 BC, shall cover the cost of furnishing all labor, materials, equipment, insurance, and incidentals to complete the work including, but not limited to, excavation and backfill, furnishing and placing concrete foundations and footings and Electrical Enclosure Bollards, as per Section E260529, and furnishing and installing Enclosure, all in

accordance with the Contract Drawings, the specifications, and the directions of the Engineer.

- C. The unit price bid per each Handholes and Boxes for Exterior Underground Wiring, under ITEM E260533 CA, and E260533 CB shall cover the cost of furnishing all labor, materials, equipment, insurance, and incidentals to complete the work including, but not limited to, excavation and backfill, furnishing and placing the Handholes and Boxes for Exterior Underground Wiring, 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
E260533 AA	METAL CONDUIT AND TUBING (1" PVC COATED RIGID STEEL CONDUIT)	L.F.
E260533 AB	METAL CONDUIT AND TUBING (1-1/4" PVC COATED RIGID STEEL CONDUIT)	L.F.
E260533 AC	METAL CONDUIT AND TUBING (2" PVC COATED RIGID STEEL CONDUIT)	L.F.
E260533 AD	METAL CONDUIT AND TUBING (2-1/2" PVC COATED RIGID STEEL CONDUIT)	L.F.
E260533 AE	METAL CONDUIT AND TUBING (3" PVC COATED RIGID STEEL CONDUIT)	L.F.
E260533 BA	LOCKABLE STAINLESS STEEL ENCLOSURE FOR UTILITY SERVICE AND DISTRIBUTION PANEL	EACH
E260533 BB	FREESTANDING LOCKABLE STAINLESS STEEL EVENT BOX OUTLETS ENCLOSURE	EACH
E260533 CA	HANDHOLES AND BOXES FOR EXTERIOR UNDERGROUND WIRING	EACH
E260533 CB	CON EDISON PROPERTY LINE SPLICE BOX	EACH

SECTION E262416
PANELBOARDS

PART I-GENERAL

1.1 SUBMITTALS

- A. Product Data: For each type of panelboard, 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 panelboard 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 panelboards and overcurrent protective devices.
 - 5. Include evidence of NRTL listing for series rating of installed devices.
 - 6. Detail features, characteristics, ratings, and factory settings of individual overcurrent protective devices and auxiliary components.
 - 7. Include wiring diagrams for power, signal, and control wiring.
- C. 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.
- D. Panelboard Schedules: For installation in panelboards. Submit final versions after load balancing.
- E. Operation and Maintenance Data: For panelboards and components to include in operation and maintenance manuals. In addition to items specified 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.

1.2 QUALITY ASSURANCE

- A. Source Limitations: Obtain panelboards, overcurrent protective devices, components, and accessories from single source from single manufacturer.
- B. Product Selection for Restricted Space: Drawings indicate maximum dimensions for panelboards including clearances between panelboards and adjacent surfaces and other items. Comply with indicated maximum dimensions.
- C. Electrical Components, Devices, and Accessories: Listed and labeled as defined in

New York City Electrical Code, by a qualified testing agency, and marked for intended location and application.

- D. Comply with NEMA PB 1.
- E. Comply with New York City Electrical Code.

1.3 DELIVERY, STORAGE, AND HANDLING

- A. Remove loose packing and flammable materials from inside panelboards; install temporary electric heating (250 W per panelboard) to prevent condensation.
- B. Handle and prepare panelboards for installation according to NEMA PB 1.

1.4 PROJECT CONDITIONS

- A. Environmental Limitations:
 - 1. Do not deliver or install panelboards until spaces are enclosed and weathertight, wet work in spaces is complete and dry, work above panelboards is complete.
 - 2. Rate equipment for continuous operation under the following conditions unless otherwise indicated:
 - a. Ambient Temperature: Not exceeding 23° F to plus 104 ° F.
 - b. Altitude: Not exceeding 6600 feet.
- B. Service Conditions: NEMA PB 1, usual service conditions, as follows:
 - 1. Ambient temperatures within limits specified.
 - 2. Altitude not exceeding 6600 feet.

1.5 COORDINATION

- A. Coordinate layout and installation of panelboards and components with other construction that penetrates walls or is supported by them, 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.

1.6 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 from date of Substantial Completion.

PART 2 -PRODUCTS

2.1 GENERAL REQUIREMENTS FOR PANELBOARDS

A. Enclosures: Surface-mounted cabinets.

1. Rated for environmental conditions at installed location.
 - a. Inside Electric Service Cabinet: NEMA 250, Type 3R.
2. Hinged Front Cover: Entire front trim hinged to box and with standard door within hinged trim cover.
3. Gutter Extension and Barrier: Same gage and finish as panelboard enclosure; integral with enclosure body. Arrange to isolate individual panel sections.
4. Finishes:
 - a. Panels and Trim: Steel, factory finished immediately after cleaning and pretreating with manufacturer's standard two-coat, baked-on finish consisting of prime coat and thermosetting topcoat.
 - b. Back Boxes: Same finish as panels and trim.
5. Directory Card: Inside panelboard door, mounted in transparent card holder. B.

Phase, Neutral, and Ground Buses:

1. Material: Hard-drawn copper, 98 percent conductivity.
2. Equipment Ground Bus: Adequate for feeder and branch-circuit equipment grounding conductors; bonded to box.

C. Conductor Connectors: Suitable for use with conductor material and sizes.

1. Material: Tin-plated aluminum.
2. Main and Neutral Lugs: Mechanical type.
3. Ground Lugs and Bus-Configured Terminators: Mechanical type.

D. Service Equipment Label: NRTL labeled for use as service equipment for panelboards or load centers with one or more main service disconnecting and overcurrent protective devices.

E. Future Devices: Mounting brackets, bus connections, filler plates, and necessary appurtenances required for future installation of devices.

F. Panelboard Short-Circuit Current Rating: Fully rated to interrupt symmetrical short-circuit current available at terminals.

2.2 LIGHTING AND APPLIANCE BRANCH-CIRCUIT PANELBOARDS

A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include the following:

1. Eaton Electrical Inc.; Cutler-Hammer Business Unit.

2. General Electric Company; GE Consumer & Industrial- Electrical Distribution.
 3. Siemens Energy & Automation, Inc.
 4. Square D; a brand of Schneider Electric.
 5. Or an approved equivalent.
- B. Panelboards: NEMA PB 1, lighting and appliance branch-circuit type.
- C. Branch Overcurrent Protective Devices: Bolt-on circuit breakers, replaceable without disturbing adjacent units.
- D. Contactors in Main Bus: NEMA ICS 2, Class A, mechanically held, general-purpose controller, with same short-circuit interrupting rating as panelboard.
1. External Control-Power Source: 120-V branch circuit.
- E. Doors: Concealed hinges; secured with flush latch with tumbler lock; keyed alike.

2.3 DISCONNECTING AND OVERCURRENT PROTECTIVE DEVICES

- A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include the following:
1. Eaton Electrical Inc.; Cutler-Hammer Business Unit.
 2. General Electric Company; GE Consumer & Industrial - Electrical Distribution.
 3. Siemens Energy & Automation, Inc.
 4. Square D; a brand of Schneider Electric.
 5. Or an approved equivalent.
- B. Molded-Case Circuit Breaker (MCCB): Comply with UL 489, with series-connected rating interrupting capacity to meet available fault currents.
1. 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 250A and larger.
 2. Current-Limiting Circuit Breakers: Frame sizes 400 A and smaller; let-through ratings less than NEMA FU 1, RK-5.
 3. GFCI Circuit Breakers: Single- and two-pole configurations with Class A ground-fault protection (6-mA trip).
 4. Ground-Fault Equipment Protection (GFEP) Circuit Breakers: Class B ground fault protection (30-mA trip).
 5. Molded-Case Circuit-Breaker (MCCB) Features and Accessories:
 - a. Standard frame sizes, trip ratings, and number of poles.
 - b. Lugs: Mechanical style, suitable for number, size, trip ratings, and conductor materials.
 - c. Ground-Fault Protection: Integrally mounted relay and trip unit with adjustable pickup and time-delay settings, push-to-test feature, and ground-fault indicator.
 - d. Multipole units enclosed in a single housing or factory assembled to operate as a single unit.
 - e. Handle Padlocking Device: Fixed attachment for locking circuit-breaker

- handle in on or off position.
- f. Handle Clamp: Loose attachment, for holding circuit-breaker handle in on-position.

2.4 ACCESSORY COMPONENTS AND FEATURES

- A. Accessory Set: Include tools and miscellaneous items required for overcurrent protective device test, inspection, maintenance, and operation.

PART 3- EXECUTION

3.1 EXAMINATION

- A. Receive, inspect, handle, and store panelboards according to NEMA PB 1.1.
- B. Examine panelboards before installation. Reject panelboards that are damaged or rusted or have been subjected to water saturation.
- C. Examine elements and surfaces to receive panelboards for compliance with installation tolerances and other conditions affecting performance of the Work.
- D. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. Install panelboards and accessories according to NEMA PB 1.1.
- B. Mount top of trim 90 inches above finished floor unless otherwise indicated.
- C. Mount panelboard cabinet plumb and rigid without distortion of box. Mount recessed panelboards with fronts uniformly flush with wall finish and mating with back box.
- D. Install overcurrent protective devices and controllers not already factory installed. E.
Install filler plates in unused spaces.
- F. Arrange conductors in gutters into groups and bundle and wrap with wire ties after completing load balancing.
- G. Comply with NECA 1.

3.3 IDENTIFICATION

- A. Identify field installed conductors, interconnecting wiring, and components; provide warning signs.
- B. Create a directory to indicate installed circuit loads after balancing panelboard loads; incorporate Owner's final room designations. Obtain approval before installing. Use a computer or typewriter to create directory; handwritten directories are not acceptable.
- C. Panelboard Nameplates: Label each panelboard with a nameplate.

- D. Device Nameplates: Label each branch circuit device in distribution panelboards with a nameplate complying with requirements for identification specified in Division 26 Section "Identification for Electrical Systems."

3.4 FIELD QUALITY CONTROL

- A. Manufacturer's Field Service: Engage a factory-authorized service representative to inspect, test, and adjust components, assemblies, and equipment installations, including connections.
- B. Acceptance Testing Preparation:
 - 1. Test insulation resistance for each panelboard bus, component, connecting supply, feeder, and control circuit.
 - 2. Test continuity of each circuit.
- C. Tests and Inspections:
 - 1. Perform each visual and mechanical inspection and electrical test stated in NETA Acceptance Testing Specification. Certify compliance with test parameters.
 - 2. Correct malfunctioning units on-site, where possible, and retest to demonstrate compliance; otherwise, replace with new units and retest.
 - 3. Perform the following infrared scan tests and inspections and prepare reports:
 - a. Initial Infrared Scanning: After Substantial Completion, but not more than 60 days after Final Acceptance, perform an infrared scan of each panelboard. Remove front panels so joints and connections are accessible to portable scanner.
 - b. 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. Panelboards will be considered defective if they do not pass tests and inspections.
- E. Prepare test and inspection reports, including a certified report that identifies panelboards included and that describes scanning results. Include notation of deficiencies detected, remedial action taken, and observations after remedial action.

3.5 ADJUSTING

- A. Adjust moving parts and operable component to function smoothly, and lubricate as recommended by manufacturer.

3.6 PROTECTION

- A. Temporary Heating: Apply temporary heat to maintain temperature according to manufacturer's written instructions.

PART 4- MEASUREMENT AND PAYMENT

4.1 MEASUREMENT

- A. The quantity of Panelboards of each type to be paid for under ITEM E262416 A shall be the actual number of panelboards of each type installed to complete the work, to the satisfaction of the Engineer.

4.2 PRICE TO COVER

- A. The unit price bid per panelboard of each type shall cover the cost of furnishing all labor, materials, equipment, insurance, and incidentals to complete the work including, but not limited to, furnishing and placing the panelboard, and providing and installing the associated protective devices, circuit breakers, adjusting and load balancing, and testing and inspecting, 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
E262416 A	PANELBOARDS, 225A, 24 POLE WITH (24) IP-20A CB	EACH

SECTION E262713
ELECTRICITY METERING

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes equipment for electricity metering by utility company.

1.2 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.

1.3 QUALITY ASSURANCE

- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in New York City Electrical Code, by a qualified testing agency, and marked for intended location and application.

1.4 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.

PART 2 - PRODUCTS

2.1 EQUIPMENT FOR ELECTRICITY METERING BY UTILITY COMPANY

- A. Meters will be furnished by utility company.
- B. Meter Sockets: Comply with requirements of electrical-power utility company.
1. Comply with requirements of utility company for meter center.
2. Housing: NEMA 250, Type 1 enclosure.
3. Minimum Short-Circuit Rating: 65,000 A symmetrical at rated voltage.
4. Main Disconnect Device: Circuit breaker,- series-combination rated for use with downstream feeder and branch circuit breakers.
5. Meter Socket: Rating coordinated with indicated tenant feeder circuit rating.

PART 3- EXECUTION

3.1 INSTALLATION

- A. Comply with equipment installation requirements in NECA 1.
- B. 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.

3.2 IDENTIFICATION

- A. Comply with requirements for identification.
- B. Series Combination Warning Label: Self-adhesive type, with text as required by New York City Electrical Code.
 - 1. Equipment Identification Labels: Adhesive film labels with clear protective overlay. For residential meters, provide an additional card holder suitable for typewritten card with occupant's name.

3.3 FIELD QUALITY CONTROL

- A. Perform tests and inspections.
 - 1. Manufacturer's Field Service: Engage a factory-authorized service representative to inspect components, assemblies, and equipment installations, including connections, and to assist in testing.
- B. Tests and Inspections:
 - 1. Connect a load of known kilowatt rating, 1.5 kW minimum, to a circuit supplied by metered feeder.
 - 2. Turn off circuits supplied by metered feeder and secure them in off condition.
 - 3. 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.
 - 4. 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.
- C. Electricity metering will be considered defective if it does not pass tests and inspections.
- D. Prepare test and inspection reports.

PART 4- MEASUREMENT AND PAYMENT

- A. The quantity to be measured for payment shall be the number of EACH type of Electricity Meter actually installed to complete the work, to the satisfaction of the Engineer.
- B. Meters will be furnished by utility company.
- C. The price bid shall be a unit price for EACH type of Electricity Meter installation and shall include the cost of all labor, materials, equipment, insurance, and any incidental expenses necessary, including, but not limited to, installation of meter, meter equipment and socket, labels, testing and inspections, and coordination with the utility providing the meter, in

accordance with the plans, specifications, and directions of the Engineer, the Contractor shall receive the unit price bid.

Payment will be made under:

Item No.	Item	Pay Unit
E262713 A	ELECTRICITY METERING, 200 A UTILITY METER	EACH

SECTION E262726
WIRING DEVICES

PART 1- GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general conditions of the Contract apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:
1. Receptacles, receptacles with integral GFCI, and associated device plates.
 2. Spot Light

1.3 DEFINITIONS

- A. GFCI: Ground-fault circuit interrupter.
- B. Pigtail: Short lead used to connect a device to a branch-circuit conductor.

1.4 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. Field quality control test reports.
- D. Operation and Maintenance Data: For wiring devices to include in all manufacturers' packing label warnings and instruction manuals that include labeling conditions.

1.5 QUALITY ASSURANCE

- 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 the New York City Electrical Code, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
- C. Comply with the New York City Electrical Code.

PART 2 -PRODUCTS

2.1 MANUFACTURERS

A. Manufacturers' Names:

1. Cooper Wiring Devices; a division of Cooper Industries, Inc.
2. Hubbell Incorporated; Wiring Device-Kellems.
3. Leviton Mfg. Company Inc.
4. Pass & Seymour/Legrand; Wiring Devices & Accessories.
5. Or an approved equivalent manufacturer.

2.2 GFCI RECEPTACLES

A. 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.

B. Duplex GFCI Convenience Receptacles, 125 V, 20 A:

1. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include the following:
 - a. Cooper; GF20.
 - b. Pass & Seymour; 2084.
 - c. Hubbell;
 - d. Leviton;
 - e. Or an approved equivalent.

2.3 WALLPLATES

A. Single and combination types to match corresponding wiring devices.

1. Plate-Securing Screws: Metal with head color to match plate finish.
2. Material: 0.05-inch -thick, anodized aluminum.

B. Wet-Location, Weatherproof Cover Plates: NEMA 250, complying with type 3R weather-resistant, die-cast aluminum with lockable cover.

2.4 LOCKABLE COVER BOXES

A. Vertical mounting type for installation on median street light poles, and all other outdoor locations unless otherwise noted.

1. Complete with gasket, mounting hardware, and GFCI receptacle insert.
2. Material: Die cast powder coated aluminum.
3. Lockable whether in use or not.
4. Locks for cover boxes shall be as recommendation by the box manufacturer. Locks for all boxes shall be keyed alike. The Contractor shall furnish one key for each lock.

B. Weatherproof Lockable Cover Boxes: Meets NEC 406.8(B)(1) for receptacles in wet locations, and NEMA 4X rating.

2.5 SPOT LIGHT

A. The fixture shall meet the following requirements:

1. 15°-30° field-angle ranges
2. Yoke-mounted 100V to 277V auto-ranging electronic ballast
3. 150W ceramic metal-halide lamp
4. UL and cUL listed for wet locations
5. 12,000 hour lamp life at 3000° K color temperature
6. Multi-faceted glass reflector
7. One handed zoom operation
8. Positive zoom lock
9. Field angle and focus scale markings
10. Rotating barrel $\pm 25^\circ$
11. Three-plane stainless-steel shutter blade assembly
12. Easy access lens cleaning
13. Insulated rear handle
14. Rugged die-cast and extruded aluminum construction

B. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include the following:

1. ETC-Source Four XT HID Zoom 15-30Degrees 150 W-Exterior Series
Available from the following distributors:

Barbizon New York	212-586-1620
PRG New York	212-589-5434
SEE Factor	718-784-4200

 Or an approved equivalent

C. Provide bracket and mounting hardware for attaching the fixture with steel straps (or any other approved non-drilling method) on the new Type M pole in the plaza area. The spotlight should be located 20'-0" above the ground and positioned as ordered by the Engineer.

2.6 FINISHES

A. Color: Wiring device catalog numbers in Section Text do not designate device color.

1. Wiring Devices Connected to Normal Power System: As selected by City's Architect, unless otherwise indicated or required by the New York City Electrical Code or device listing.

PART 3 -EXECUTION

3.1 INSTALLATION

A. Comply with NECA 1, including the mounting heights listed in that standard, unless otherwise noted.

B. Coordination with Other Trades:

1. Take steps to insure that devices and their boxes are protected. Do not place wall finish materials over device boxes and do not cut holes for boxes with routers that are guided by riding against outside of the boxes.
2. Keep outlet boxes free of plaster, drywall joint compound, mortar, cement,

concrete, dust, paint, and other material that may contaminate the raceway system, conductors, and cables.

3. Install receptacle with weatherproof device boxes on the median street light poles. The installation detail is shown in the plans. The contractor should paint the device box the same color as the pole it's being attached to.
4. Planter outlets installation should be mounted as shown on the plan.
5. Install wiring devices after all preparation, including painting, is complete.

C. Conductors:

1. Do not strip insulation from conductors until just before they are spliced or terminated on devices.
2. 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.
3. The length of free conductors at outlets for devices shall meet provisions of the New York City Electrical Code, Article 300, without pigtails.
4. Existing Conductors:
 - a. Cut back and pigtail, or replace all damaged conductors.
 - b. Straighten conductors that remain and remove corrosion and foreign matter.
 - c. Pigtailing existing conductors is permitted provided the outlet box is large enough.

D. Device Installation:

1. Replace all devices that have been in temporary use during construction or that show signs that they were installed before finishing operations were complete.
2. Keep each wiring device in its package or otherwise protected until it is time to connect conductors.
3. Do not remove surface protection, such as plastic film and smudge covers, until the last possible moment.
4. Connect devices to branch circuits using pigtails that are not less than 6 inches (152 mm) in length.
5. 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.
6. Use a torque screwdriver when a torque is recommended or required by the manufacturer.
7. When conductors larger than No. 12 AWG are installed on 15- or 20-A circuits, splice No. 12 AWG pigtails for device connections.
8. Tighten unused terminal screws on the device.
9. When mounting into metal boxes, remove the fiber or plastic washers used to hold device mounting screws in yokes, allowing metal-to-metal contact.

E. Receptacle Orientation:

1. Install ground pin of vertically mounted receptacles down, and on horizontally mounted receptacles to the right.

F. Device Plates: Do not use oversized or extra-deep plates. Repair wall finishes and remount outlet boxes when standard device plates do not fit flush or do not cover rough wall opening.

- G. Arrangement of Devices: Unless otherwise indicated, mount flush, with long dimension vertical and with grounding terminal of receptacles on top. Group adjacent switches under single, multi-gang wall plates.
- H. Adjust locations of outlets and service poles as may be required.
- I. Lockable Cover Boxes: To be installed in median street light poles and all other outdoor locations as per the manufactures recommendations.
- J. Spot Light: to be mounted on new type M pole in the plaza area. The contractor shall coordinate with the Engineer for location of the pole and mounting height of fixture. The fixture shall be connected to the existing lighting circuit controlled by photocell. Contractor shall coordinate with NYCDOT Street Light Division for lighting circuit and connection. All the wiring shall be watertight.

3.2 FIELD QUALITY CONTROL

- A. Perform tests and inspections and prepare test reports.
 - 1. Test Instruments: Use instruments that comply with UL 1436.
 - 2. Test Instrument for Convenience Receptacles: Digital wiring analyzer with digital readout or illuminated LED indicators of measurement.
- B. Tests for Convenience Receptacles:
 - 1. Line Voltage: Acceptable range is 105 to 132 V.
 - 2. Percent Voltage Drop under 15-A Load: A value of 5 percent or higher is not acceptable.
 - 3. Ground Impedance: Values of up to 10 ohms are acceptable.
 - 4. GFCI Trip: Test for tripping values specified in UL 1436 and UL 943.
 - 5. Using the test plug, verify that the device and its outlet box are securely mounted.
 - 6. 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.

PART 4- MEASUREMENT AND PAYMENT

4.1 MEASUREMENT

- A. The quantity of GFCI Receptacles to be paid for under ITEM E262726 A shall be the actual number of GFCI receptacles, installed to complete the work, to the satisfaction of the Engineer.
- B. The quantity of Event Box Receptacles to be paid for under ITEM E262726 G shall be the actual number of Event Box Receptacles, installed to complete the work, to the satisfaction of the Engineer.
- C. The quantity of Spot Light to be paid for under ITEM E262726 H shall be the actual number of Spot Lights installed to complete the work, to the satisfaction of the Engineer.

4.2 PRICES TO COVER

- A. The unit price bid per GFCI Receptacle, under ITEM E262726 A, shall cover the cost of furnishing all labor, materials, equipment, insurance, and incidentals to complete the work including, but not limited to, furnishing and placing the GFCI receptacle, associated hardware, back boxes, cover plates, cover boxes, testing, and coordination, all in accordance with the Contract Drawings, the specifications, and the directions of the Engineer.
- B. The unit price bid per Event Box receptacle, under ITEM E262726 G, shall cover the cost of furnishing all labor, materials, equipment, insurance, and incidentals to complete the work including, but not limited to, furnishing and placing the event box receptacle assembly, associated hardware, junction boxes, testing, and coordination, all in accordance with the Contract Drawings, the specifications, and the directions of the Engineer.
- C. The unit price bid per Spot Light, under ITEM E262726 H, shall cover the cost of furnishing all labor, materials, equipment, insurance, and incidentals to complete the work including, but not limited to, furnishing and placing the spot light assembly, associated hardware, junction boxes, testing, and coordination, 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
E262726 A	GFCI RECEPTACLE (DUPLEX)	EACH
E262726 G	EVENT BOX RECEPTACLES (20A)	EACH
E262726 H	SPOT LIGHT (STREET LIGHT POLE MOUNTED)	EACH

SECTION E262816
ENCLOSED SWITCHES

PART 1- GENERAL

1.1 SUMMARY

A. Section Includes:

1. Fusible switches.

1.2 DEFINITIONS

- A. NC: Normally closed.
- B. NO: Normally open.
- C. SPDT: Single pole, double throw.

1.3 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. 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.
- D. Manufacturer's field service report.
- E. Operation and Maintenance Data: For enclosed switches and circuit breakers to include in emergency, operation, and maintenance manuals.
 - 1. Manufacturer's written instructions for testing and adjusting enclosed switches and

circuit breakers.

2. Time-current coordination curves (average melt) for each type and rating of overcurrent protective device; include selectable ranges for each type of overcurrent protective device. Submit on translucent log-log graph paper.

1.4 QUALITY ASSURANCE

- A. Source Limitations: Obtain enclosed switches and circuit breakers, overcurrent protective devices, components, and accessories, within same product category, from single source from single manufacturer.
- B. 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.
- C. Electrical Components, Devices, and Accessories: Listed and labeled as defined in New York City Electrical Code, by a qualified testing agency, and marked for intended location and application.
- D. Comply with New York City Electrical Code.

1.5 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° F and not exceeding 104° F.
 2. Altitude: Not exceeding 6600 feet.

1.6 COORDINATION

- A. Coordinate layout and installation of switches, circuit breakers, and components with equipment served and adjacent surfaces. Maintain required workspace clearances and required clearances for equipment access doors and panels.

PART 2 -PRODUCTS

2.1 FUSIBLE SWITCHES

- A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include the following:
 1. Eaton Electrical Inc.; Cutler-Hammer Business Unit.
 2. General Electric Company; GE Consumer & Industrial - Electrical Distribution.
 3. Siemens Energy & Automation, Inc.
 4. Square D; a brand of Schneider Electric.
 5. Or an approved equivalent.
- B. Type HD, Heavy Duty, Single Throw, 600-V ac, 1200 A and Smaller: UL 98 and NEMA KS 1, horsepower rated, with clips or bolt pads to accommodate specified fuses, lockable handle with capability to accept three padlocks, and interlocked with cover

in closed position.

C. Accessories:

1. Equipment Ground Kit: Internally mounted and labeled for copper and aluminum ground conductors.
2. Neutral Kit: Internally mounted; insulated, capable of being grounded and bonded; labeled for copper and aluminum neutral conductors.
3. Class R Fuse Kit: Provides rejection of other fuse types when Class R fuses are specified.
4. Lugs: Mechanical type, suitable for number, size, and conductor material.
5. Service-Rated Switches: Labeled for use as service equipment.

2.2 ENCLOSURES

- A. Enclosed Switches and Circuit Breakers: NEMA AB 1, NEMA KS 1, NEMA 250, and UL 50, to comply with environmental conditions at installed location.

1. Outdoor Locations: NEMA 250, Type 3R.

PART 3- EXECUTION

3.1 EXAMINATION

- A. Examine elements and surfaces to receive enclosed switches and circuit breakers for compliance with installation tolerances and other conditions affecting performance of the Work.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. Install individual wall-mounted switches and circuit breakers with tops at uniform height unless otherwise indicated.
- B. Comply with mounting and anchoring requirements.
- C. Temporary Lifting Provisions: Remove temporary lifting eyes, channels, and brackets and temporary blocking of moving parts from enclosures and components.
- D. Install fuses in fusible devices.
- E. Comply with NECA 1.

3.3 IDENTIFICATION

- A. Comply with requirements in Division 26 Section "Identification for Electrical Systems."
1. Identify field installed conductors, interconnecting wiring, and components; provide warning signs.

2. Label each enclosure with engraved metal or laminated-plastic nameplate.

3.4 FIELD QUALITY CONTROL

- A. Perform tests and inspections.
 1. Manufacturer's Field Service: Engage a factory-authorized service representative to inspect components, assemblies, and equipment installations, including connections, and to assist in testing.
- B. Acceptance Testing Preparation:
 1. Test insulation resistance for each enclosed switch and circuit breaker, component, connecting supply, feeder, and control circuit.
 2. Test continuity of each circuit.
- C. Tests and Inspections:
 1. Perform each visual and mechanical inspection and electrical test stated in NETA Acceptance Testing Specification. Certify compliance with test parameters.
 2. Correct malfunctioning units on-site, where possible, and retest to demonstrate compliance; otherwise, replace with new units and retest.
 3. Test and adjust controls, remote monitoring, and safeties. Replace damaged and malfunctioning controls and equipment.
- D. Enclosed switches and circuit breakers will be considered defective if they do not pass tests and inspections.
- E. Prepare test and inspection reports, including a certified report that identifies enclosed switches and circuit breakers and that describes scanning results. Include notation of deficiencies detected, remedial action taken and observations after remedial action.

3.5 ADJUSTING

- A. Adjust moving parts and operable components to function smoothly, and lubricate as recommended by manufacturer.

PART 4- MEASUREMENT AND PAYMENT

4.1 MEASUREMENT

- A. The quantity of Enclosed Switches of each type to be paid for under ITEM E262816 A shall be the actual number of enclosed switches of each type installed to complete the work, to the satisfaction of the Engineer.

4.2 PRICE TO COVER

- A. The unit price bid per enclosed switch of each type shall cover the cost of furnishing all labor, materials, equipment, insurance, and incidentals to complete the work

including, but not limited to, furnishing and placing the enclosed switch, and providing and installing the associated protective devices, fuses, hardware, adjusting, testing and inspecting, 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
E262816 A	ENCLOSED SWITCH, FUSED, 200A, 240V	EACH

SECTION P 220500
COMMON WORK RESULTS FOR PLUMBING
(Not a Bid Item)

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes the following:

1. Piping materials and installation instructions common to most piping systems:

- a. Transition fittings
- b. Dielectric fittings
- c. Supports and anchorages

1.2 DEFINITIONS

- A. Finished Spaces: Spaces other than mechanical and electrical equipment rooms, furred spaces, pipe chases, unheated spaces immediately below roof, spaces above ceilings, unexcavated spaces, crawlspaces, and tunnels.
- B. Exposed, Interior Installations: Exposed to view indoors. Examples include finished occupied spaces and mechanical equipment rooms.
- C. Exposed, Exterior Installations: Exposed to view outdoors or subject to outdoor ambient temperatures and weather conditions. Examples include rooftop locations.
- D. Concealed, Interior Installations: Concealed from view and protected from physical contact by building occupants. Examples include above ceilings and in chases.
- E. Concealed, Exterior Installations: Concealed from view and protected from weather conditions and physical contact by building occupants but subject to outdoor ambient temperatures.

1. Examples include installations within unheated shelters.

F. The following are industry abbreviations for plastic materials:

ABS: Acrylonitrile-butadiene-styrene plastic.
CPVC: Chlorinated polyvinyl chloride plastic.
PE: Polyethylene plastic.
PVC: Polyvinyl chloride plastic.

G. The following are industry abbreviations for rubber materials:

EPDM: Ethylene-propylene-diene terpolymer rubber.
NBR: Acrylonitrile-butadiene rubber.

PART 2 - SUBMITTALS

2.1 Product Data: For the following:

- A. Transition fittings.
- B. Dielectric fittings.
- C. Welding certificates.

PART 3 - QUALITY CONTROL

- 3.1 Steel Support Welding: Qualify processes and operators according to AWS D1.1, "Structural Welding Code--Steel."
- 3.2 Steel Pipe Welding: Qualify processes and operators according to ASME Boiler and Pressure Vessel Code: Section IX, "Welding and Brazing Qualifications."
- 3.3 Comply with provisions in ASME B31 Series, "Code for Pressure Piping."
- 3.4 Certify that each welder has passed AWS qualification tests for welding processes involved and that certification is current.
- 3.5 Electrical Characteristics for Plumbing Equipment: Equipment of higher electrical characteristics may be furnished provided such proposed equipment is approved in writing and connecting electrical services, circuit breakers, and conduit sizes are appropriately modified. If minimum energy ratings or efficiencies are specified, equipment shall comply with requirements.

PART 4 - DELIVERY, STORAGE, AND HANDLING

- 4.1 Deliver pipes and tubes with factory-applied end caps. Maintain end caps through shipping, storage, and handling to prevent pipe end damage and to prevent entrance of dirt, debris, and moisture.
- 4.2 Store plastic pipes protected from direct sunlight. Support to prevent sagging and bending.

PART 5- COORDINATION

Arrange for pipe spaces, chases, slots, and openings in building structure during progress of construction, to allow for plumbing installations

- 5.2 Coordinate installation of required supporting devices and set sleeves in poured-in-place concrete and other structural components as they are constructed.
- 5.3 Coordinate requirements for access panels and doors for plumbing items requiring access that are concealed behind finished surfaces. Access panels and doors are specified in Division 08 Section "Access Doors and Frames."
- A. Coordination: Coordinate construction operations included in different Sections of the Specifications to ensure efficient and orderly installation of each part of the Work. Coordinate construction operations included in different Sections that depend on each other for proper installation, connection, and operation.

- B. Coordination: Each contractor shall coordinate its construction operations with those of other contractors and entities to ensure efficient and orderly installation of each part of the Work. Each contractor shall coordinate its operations with operations, included in different Sections that depend on each other for proper installation, connection, and operation.

PART 6 - PRODUCTS

6.1 MANUFACTURERS

- A. In other Part 2 articles where subparagraph titles below introduce lists, the following requirements apply for product selection:
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 manufacturers specified.
 2. Manufacturers: Subject to compliance with requirements, provide products by the manufacturers specified.

6.2 PIPE, TUBE, AND FITTINGS

Refer to individual piping Sections for pipe, tube, and fitting materials and joining methods.

A. JOINING MATERIALS

Refer to individual piping Sections for special joining materials not listed below.

B. TRANSITION FITTINGS

1. AWWA Transition Couplings: Same size as, and with pressure rating at least equal to and with ends compatible with, piping to be joined.
2. Available Manufacturers:
 - Cascade Waterworks Mfg. Co.
 - Dresser Industries, Inc.; DMD Div.
 - Ford Meter Box Company, Incorporated (The); Pipe Products Div.
 - JCM Industries.
 - Smith-Blair, Inc.
 - Viking Johnson.
 - Or an approved equivalent manufacturer.
- a. Underground Piping NPS 1-1/2 and Smaller: Manufactured fitting or coupling.
- b. Underground Piping NPS 2 and Larger: AWWA C219, metal sleeve-type coupling.
- c. Aboveground Pressure Piping: Pipe fitting.

- d. Flexible Transition Couplings for Underground Nonpressure Drainage Piping: ASTM C 1173 with elastomeric sleeve, ends same size as piping to be joined, and corrosion-resistant metal band on each end.

- 1. Available Manufacturers:

Cascade Waterworks Mfg. Co.
 Fernco, Inc.
 Mission Rubber Company.
 Plastic Oddities, Inc.
 Or an approved equivalent manufacturer.

C. DIELECTRIC FITTINGS

- 1. Description: Combination fitting of copper alloy and ferrous materials with threaded, solder-joint, plain, or weld-neck end connections that match piping system materials.
- 2. Insulating Material: Suitable for system fluid, pressure, and temperature.
- 3. Dielectric Unions: Factory-fabricated, union assembly, for 250-psig minimum working pressure at 180 deg F.

- a. Available Manufacturers:

Central Plastics Company.
 Watts Industries, Inc.; Water Products Div.
 Zurn Industries, Inc.; Wilkins Div.
 Or an approved equivalent manufacturer.

- 4. Dielectric Flanges: Factory-fabricated, companion-flange assembly, for 150- or 300-psig minimum working pressure as required to suit system pressures.

- a. Available Manufacturers:

Central Plastics Company.
 Epco Sales, Inc.
 Watts Industries, Inc.; Water Products Div.
 Or an approved equivalent manufacturer.

- 5. Dielectric-Flange Kits: Companion-flange assembly for field assembly. Include flanges, full-face- or ring-type neoprene or phenolic gasket, phenolic or polyethylene bolt sleeves, phenolic washers, and steel backing washers.

- 1. Available Manufacturers:

Advance Products & Systems, Inc.
 Calpico, Inc.
 Central Plastics Company.
 Pipeline Seal and Insulator, Inc.

Or an approved equivalent.

6. Separate companion flanges and steel bolts and nuts shall have 150- or 300-psig minimum working pressure where required to suit system pressures.
7. Dielectric Couplings: Galvanized-steel coupling with inert and noncorrosive, thermoplastic lining; threaded ends; and 300-psig minimum working pressure at 225 deg F.

a. Available Manufacturers:

Calpico, Inc.

Lochinvar Corp.

Or an approved equivalent manufacturer.

8. Dielectric Nipples: Electroplated steel nipple with inert and noncorrosive, thermoplastic lining; plain, threaded, or grooved ends; and 300-psig minimum working pressure at 225 deg F.

a. Available Manufacturers:

Perfection Corp.

Precision Plumbing Products, Inc.

Sioux Chief Manufacturing Co., Inc.

Victaulic Co. of America.

Or an approved equivalent manufacturer.

PART 7- EXECUTION

7.1 PIPING SYSTEMS - COMMON REQUIREMENTS

- A. Install piping according to the following requirements and other Sections specifying piping systems.
- B. Drawing plans, schematics, and diagrams indicate general location and arrangement of piping systems. Indicated locations and arrangements were used to size pipe and calculate friction loss, expansion, pump sizing, and other design considerations. Install piping as indicated unless deviations to layout are approved on Coordination Drawings.
- C. Install piping in concealed locations, unless otherwise indicated and except in equipment rooms and service areas.
- D. Install piping indicated to be exposed and piping in equipment rooms and service areas at right angles or parallel to building walls. Diagonal runs are prohibited unless specifically indicated otherwise.
- E. Install piping above accessible ceilings to allow sufficient space for ceiling panel removal.

- F. Install piping to permit valve servicing.
- G. Install piping at indicated slopes.
- H. Install piping free of sags and bends.
- I. Install fittings for changes in direction and branch connections.
- J. Install piping to allow application of insulation.
- K. Select system components with pressure rating equal to or greater than system operating pressure.

7.2 PIPING JOINT CONSTRUCTION

- A. Join pipe and fittings according to the following requirements and other Sections specifying piping systems.
- B. Ream ends of pipes and tubes and remove burrs. Bevel plain ends of steel pipe.
- C. Remove scale, slag, dirt, and debris from inside and outside of pipe and fittings before assembly.
- D. Soldered Joints: Apply ASTM B 813, water-flushable flux, unless otherwise indicated, to tube end. Construct joints according to ASTM B 828 or CDA's "Copper Tube Handbook," using lead-free solder alloy complying with ASTM B 32.
- E. Brazed Joints: Construct joints according to AWS's "Brazing Handbook," "Pipe and Tube" Chapter, using copper-phosphorus brazing filler metal complying with AWS A5.8.
- F. Threaded Joints: Thread pipe with tapered pipe threads according to ASME B1.20.1. Cut threads full and clean using sharp dies. Ream threaded pipe ends to remove burrs and restore full ID. Join pipe fittings and valves as follows:
- G. Apply appropriate tape or thread compound to external pipe threads unless dry seal threading is specified.
- H. Damaged Threads: Do not use pipe or pipe fittings with threads that are corroded or damaged. Do not use pipe sections that have cracked or open welds.
- I. Welded Joints: Construct joints according to AWS D10.12, using qualified processes and welding operators according to Part 3 "Quality Control" Article.
- J. Flanged Joints: Select appropriate gasket material, size, type, and thickness for service application. Install gasket concentrically positioned. Use suitable lubricants on bolt threads.

7.3 PIPING CONNECTIONS

- A. Make connections according to the following, unless otherwise indicated.
- B. Install unions, in piping NPS 2 and smaller, adjacent to each valve and at final connection to each piece of equipment.
- C. Dry Piping Systems: Install dielectric unions and flanges to connect piping materials of dissimilar metals.

- D. Wet Piping Systems: Install dielectric coupling and nipple fittings to connect piping materials of dissimilar metals.

7.4 ERECTION OF METAL SUPPORTS AND ANCHORAGES

- A. Cut, fit, and place miscellaneous metal supports accurately in location, alignment, and elevation to support and anchor plumbing materials and equipment.
- B. Field Welding: Comply with AWS D1.1.

PART 8 - MEASUREMENT AND PAYMENT

- A. No separate payment will be made for work under this Section. The cost of all work under this Section shall be deemed to be included in the cost of other plumbing work associated with this project.

SECTION P 220517
SLEEVES AND SLEEVE SEALS FOR PLUMBING PIPING
(Not a Bid Item)

PART 1 - GENERAL

1.1 SUMMARY

A. This section includes the following:

1. Sleeves.
2. Sleeve-seal systems.
3. Grout.

1.2 SUBMITTALS

A. Product Data: For each type of product indicated.

PART 2 - PRODUCTS

2.1 SLEEVES

- A. Cast-Iron Wall Pipes: Cast or fabricated of cast or ductile iron and equivalent to ductile-iron pressure pipe, with plain ends and integral waterstop unless otherwise indicated.
- B. Galvanized-Steel Wall Pipes: ASTM A 53/A 53M, Schedule 40, with plain ends and welded steel collar; zinc coated.
- C. Galvanized-Steel-Pipe Sleeves: ASTM A 53/A 53M, Type E, Grade B, Schedule 40, zinc coated, with plain ends.
- D. Galvanized-Steel-Sheet Sleeves: 0.0239-inch minimum thickness; round tube closed with welded longitudinal joint.
- E. Molded-PE or -PP Sleeves: Removable, tapered-cup shaped, and smooth outer surface with nailing flange for attaching to wooden forms.

2.2 SLEEVE-SEAL SYSTEMS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

Advance Products & Systems, Inc.
CALPICO, Inc.
Metraflex Company (The).
Pipeline Seal and Insulator, Inc.
Proco Products, Inc.
Or an approved equivalent.

1. Description: Modular sealing-element unit, designed for field assembly, for filling annular space between piping and sleeve.
2. Sealing Elements: EPDM-rubber interlocking links shaped to fit surface of pipe. Include type and number required for pipe material and size of pipe.
3. Pressure Plates: Carbon steel or Stainless steel.
4. Connecting Bolts and Nuts: Carbon steel, with corrosion-resistant coating, or Stainless steel of length required to secure pressure plates to sealing elements.

2.3 GROUT

- A. Standard: ASTM C 1107/C 1107M, Grade B, post-hardening and volume-adjusting, dry, hydraulic-cement grout.
- B. Characteristics: Nonshrink; recommended for interior and exterior applications.
- C. 28-day compressive strength- 5000-psi.
- D. Packaging: Premixed and factory packaged.
- E. Certification: Manufacturer's Catalog Cut stating that the grout meets the strength requirement.

PART 3 - EXECUTION

3.1 SLEEVE INSTALLATION

- A. Install sleeves for piping passing through penetrations in floors, partitions, roofs, and walls.
- B. For sleeves that will have sleeve-seal system installed, select sleeves of size large enough to provide 1-inch annular clear space between piping and concrete slabs and walls.
- C. Install sleeves in concrete floors, and concrete walls as new slabs and walls are constructed.
- D. Cut sleeves to length for mounting flush with both surfaces.
 1. Exception: Extend sleeves installed in floors of mechanical equipment areas or other wet areas 2 inches above finished floor level.
- E. Using grout, seal the space outside of sleeves in slabs and walls without sleeve-seal system.
- F. Install sleeves for pipes passing through interior partitions.
- G. Cut sleeves to length for mounting flush with both surfaces.
- H. Seal annular space between sleeve and piping or piping insulation; use joint sealants appropriate for size, depth, and location of joint. Comply with requirements for sealants specified in Division 07 Section "Joint Sealants."

3.2 SLEEVE-SEAL-SYSTEM INSTALLATION

- A. Install sleeve-seal systems in sleeves in exterior concrete walls and slabs-on-grade at service piping entries into building.
- B. Select type, size, and number of sealing elements required for piping material and size and for sleeve ID or hole size.
- C. Position piping in center of sleeve.
- D. Center piping in penetration, assemble sleeve-seal system components, and install in annular space between piping and sleeve.
- E. Tighten bolts against pressure plates that cause sealing elements to expand and make a watertight seal.

3.3 SLEEVE AND SLEEVE-SEAL SCHEDULE

- A. Use sleeves and sleeve seals for the following piping-penetration applications:
 - 1. Exterior Concrete Walls above Grade:
 - 2. Piping Smaller Than NPS 6: Cast-iron wall sleeves Galvanized-steel wall sleeves or Galvanized-steel-pipe sleeves.
 - 3. Exterior Concrete Walls below Grade:
 - a. Piping Smaller Than NPS 6: Cast-iron wall sleeves with sleeve-seal system Galvanized-steel wall sleeves with sleeve-seal system Galvanized-steel-pipe sleeves with sleeve-seal system or Sleeve-seal fittings.
- B. Select sleeve size to allow for 1-inch annular clear space between piping and sleeve for installing sleeve-seal system.
 - 1. Concrete Slabs-on-Grade:
 - a. Piping Smaller Than NPS 6: Cast-iron wall sleeves with sleeve-seal system Galvanized-steel wall sleeves with sleeve-seal system Galvanized-steel-pipe sleeves with sleeve-seal system or Sleeve-seal fittings.
- C. Select sleeve size to allow for 1-inch annular clear space between piping and sleeve for installing sleeve-seal system.

PART 4 - MEASUREMENT AND PAYMENT

- 4.1 No separate payment will be made for work under this Section. The cost of all work under this Section shall be deemed to be included in the cost of other plumbing work associated with this project.

SECTION P 220523
GENERAL-DUTY VALVES FOR PLUMBING PIPING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general conditions of the Contract apply to this Section.

1.2 SUMMARY

- A. This section includes the following:

1. Bronze ball valves
2. Bronze globe valves

1.3 RELATED SECTIONS

- A. Section 220553 "Identification for Plumbing Piping and Equipment" for valve tags and schedules.

1.4 DEFINITIONS

CWP: Cold working pressure.

EPDM: Ethylene propylene copolymer rubber.

NBR: Acrylonitrile-butadiene, Buna-N, or nitrile rubber.

NRS: Nonrising stem.

OS&Y: Outside screw and yoke.

RS: Rising stem.

SWP: Steam working pressure.

1.5 SUBMITTALS

- A. Product Data: For each type of valve indicated.

1.6 QUALITY CONTROL

- A. Source Limitations for Valves: Obtain each type of valve from single source from single manufacturer.
- B. ASME Compliance:
1. ASME B16.10 and ASME B16.34 for ferrous valve dimensions and design criteria.
 2. ASME B31.1 for power piping valves.
 3. ASME B31.9 for building services piping valves.
 4. NSF Compliance: NSF 61 for valve materials for potable-water service.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Prepare valves for shipping as follows:
- B. Protect internal parts against rust and corrosion.

- C. Protect threads, flange faces, grooves, and weld ends.
- D. Set globe valves closed to prevent rattling.
- E. Set ball valves open to minimize exposure of functional surfaces.
 - 1. Use the following precautions during storage:
 - a. Maintain valve end protection.
 - b. Store valves indoors and maintain at higher than ambient dew point temperature.
 - c. If outdoor storage is necessary, store valves off the ground in watertight enclosures.
 - d. Use sling to handle large valves; rig sling to avoid damage to exposed parts. Do not use handwheels or stems as lifting or rigging points.

1.8 PRODUCTS

A. BRONZE BALL VALVES

- 1. Two-Piece, Full-Port, Bronze Ball Valves with Bronze Trim:
- 2. 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:

American Valve, Inc.
 Conbraco Industries, Inc.; Apollo Valves.
 Crane Co.; Crane Valve Group; Crane Valves.
 Hammond Valve.
 Lance Valves; a division of Advanced Thermal Systems, Inc.
 Legend Valve.
 Milwaukee Valve Company.
 NIBCO INC.
 Red-White Valve Corporation.
 Watts Regulator Co.; a division of Watts Water Technologies, Inc.
 Or an approved equivalent manufacturer.

3. Description:

Standard: MSS SP-110.
 SWP Rating: 150 psig.
 CWP Rating: 600 psig.
 Body Design: Two piece.
 Body Material: Bronze.
 Ends: Threaded.
 Seats: PTFE or TFE.
 Stem: Bronze.

Ball: Chrome-plated brass.

Port: Full.

B. BRONZE GLOBE VALVES

1. Class 125, Bronze Globe Valves with Bronze Disc:
2. 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:

Crane Co.; Crane Valve Group; Crane Valves.

Crane Co.; Crane Valve Group; Stockham Division.

Hammond Valve.

Kitz Corporation.

Milwaukee Valve Company.

NIBCO INC.

Powell Valves.

Red-White Valve Corporation.

Watts Regulator Co.; a division of Watts Water Technologies, Inc.

Zy-Tech Global Industries, Inc.

Or an approved equivalent manufacturer.

3. Description:

Standard: MSS SP-80, Type 1.

CWP Rating: 200 psig.

Body Material: ASTM B 62, bronze with integral seat and screw-in bonnet.

Ends: Threaded or solder joint.

Stem and Disc: Bronze.

Packing: Asbestos free.

Handwheel: Malleable iron, bronze, or aluminum.

1.9 GENERAL REQUIREMENTS FOR VALVES

- A. Refer to valve schedule articles for applications of valves.
- B. Valve Pressure and Temperature Ratings: Not less than indicated and as required for system pressures and temperatures.
- C. Valve Sizes: Same as upstream piping unless otherwise indicated.
- D. Valve Actuator Types:
 1. Handwheel: For valves other than quarter-turn types.
 2. Handlever: For quarter-turn valves NPS 6 and smaller valves.
 3. 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. Valve-End Connections:
- d. Solder Joint: With sockets according to ASME B16.18.
- e. Threaded: With threads according to ASME B1.20.1.

PART 3 – EXECUTION

3.1 EXAMINATION

- A. Examine valve interior for cleanliness, freedom from foreign matter, and corrosion. Remove special packing materials, such as blocks, used to prevent disc movement during shipping and handling.
- B. Operate valves in positions from fully open to fully closed. Examine guides and seats made accessible by such operations.
- C. Examine threads on valve and mating pipe for form and cleanliness.
- D. Examine mating flange faces for conditions that might cause leakage. Check bolting for proper size, length, and material. Verify that gasket is of proper size, that its material composition is suitable for service, and that it is free from defects and damage.
- E. Do not attempt to repair defective valves; replace with new valves.

3.2 VALVE INSTALLATION

- A. Install valves with unions or flanges at each piece of equipment arranged to allow service, maintenance, and equipment removal without system shutdown.
- B. Locate valves for easy access and provide separate support where necessary.
- C. Install valves in horizontal piping with stem at or above center of pipe.
- D. Install valves in position to allow full stem movement.

3.3 ADJUSTING

- A. 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.

3.4 GENERAL REQUIREMENTS FOR VALVE APPLICATIONS

- A. If valve applications are not indicated, use the following:
 - 1. Shutoff Service: Ball valves.
 - 2. Throttling Service: Globe valves.

- B. If valves with specified SWP classes or CWP ratings are not available, the same types of valves with higher SWP classes or CWP ratings may be substituted.
- C. Select valves, except wafer types, with the following end connections:
 - 1. For Copper Tubing, NPS 2½" and Smaller: Threaded ends except where solder-joint valve-end option is indicated in valve schedules below.
 - 2. For Steel Piping, NPS 2½" and Smaller: Threaded ends.

3.5 DOMESTIC, COLD-WATER VALVE SCHEDULE

- A. Pipe NPS 2½" and Smaller:
- B. Bronze and Brass Valves: May be provided with solder-joint ends instead of threaded ends.
- C. Ball Valves: Two piece, full port, bronze with bronze trim.
- D. Bronze Globe Valves: Class 125, bronze disc.

PART 4 - MEASUREMENT AND PAYMENT

4.1 MEASUREMENT

- A. The quantities of valves to be paid for shall be the actual number of valves of each type installed to the satisfaction of the Engineer.

4.2 PRICES TO COVER

- A. The unit price bid per each type valve shall cover the cost of furnishing all labor, materials, equipment, insurance, and incidentals to complete the work including, but not limited to, furnishing and placing valve, necessary support, and sealing; all in accordance with the Contract Drawings, the specifications, and the directions of the Engineer.
- B. Plumbing piping shall be paid separately under the appropriate "Type K Copper Tubing" item.

Payment will be made under:

Item No.	Item	Pay Unit
P 220523A	BRONZE BALL VALVE	EACH
P 220523B	BRONZE GLOBE VALVE	EACH

SECTION P 220529
HANGERS AND SUPPORTS FOR PLUMBING PIPING AND EQUIPMENT
(Not a Bid Item)

PART 1 - GENERAL

1.1 SUMMARY

- A. This section includes the following:
 - 1. Metal pipe hangers and supports
 - 2. Metal framing systems.
 - 3. Thermal-hanger shield inserts.
 - 4. Fastener systems.
 - 5. Pipe stands

1.2 DEFINITIONS

MSS: Manufacturers Standardization Society of The Valve and Fittings Industry Inc.

1.3 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Welding certificates.

1.4 QUALITY CONTROL

- A. Structural Steel Welding Qualifications: Qualify procedures and personnel according to AWS D1.1/D1.1M, "Structural Welding Code - Steel."
- B. Pipe Welding Qualifications: Qualify procedures and operators according to ASME Boiler and Pressure Vessel Code

PART 2 – PRODUCTS

2.1 METAL PIPE HANGERS AND SUPPORTS

- A. Carbon-Steel Pipe Hangers and Supports:
Description: MSS SP-58, Types 1 through 58, factory-fabricated components.
- B. Galvanized Metallic Coatings: Pregalvanized or hot dipped.
- C. Nonmetallic Coatings: Plastic coating, jacket, or liner.
- D. Padded Hangers: Hanger with fiberglass or other pipe insulation pad or cushion to support bearing surface of piping.
- E. Hanger Rods: Continuous-thread rod, nuts, and washer made of carbon steel

F. Copper Pipe Hangers:
Description: MSS SP-58, Types 1 through 58, copper-coated-steel, factory-fabricated components.

G. Hanger Rods: Continuous-thread rod, nuts, and washer made of copper-coated steel.

2.2 METAL FRAMING SYSTEMS

A. MFMA Manufacturer Metal Framing Systems:

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

Cooper B-Line, Inc.
Flex-Strut Inc.
Unistrut Corporation; Tyco International, Ltd.
Or an approved equivalent.

2. Description: Shop- or field-fabricated pipe-support assembly for supporting multiple parallel pipes.
3. Standard: MFMA-4
4. Channels: Continuous slotted steel channel with intumed lips.
5. Channel Nuts: Formed or stamped steel nuts or other devices designed to fit into channel slot and, when tightened, prevent slipping along channel.
6. Hanger Rods: Continuous-thread rod, nuts, and washer made of carbon steel.
7. Metallic Coating: Hot-dipped galvanized.

2.3 THERMAL-HANGER SHIELD INSERTS

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

TOLCO
PHS Industries, Inc.
Pipe Shields, Inc.; a subsidiary of Piping Technology & Products, Inc.
Or an approved equivalent.

- B. Insulation-Insert Material for Hot Piping: Water-repellent treated, ASTM C 533, Type I calcium silicate with 100-psig minimum compressive strength.
- C. For Trapeze or Clamped Systems: Insert and shield shall cover entire circumference of pipe.
- D. For Clevis or Band Hangers: Insert and shield shall cover lower 180 degrees of pipe.
- E. Insert Length: Extend 2 inches beyond sheet metal shield for piping operating below ambient air temperature.

2.4 FASTENER SYSTEMS

- A. 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.
- B. Mechanical-Expansion Anchors: Insert-wedge-type, zinc-coated steel anchors, for use in hardened portland cement concrete; with pull-out, tension, and shear capacities appropriate for supported loads and building materials where used.

2.5 PIPE STANDS

- A. General Requirements for Pipe Stands: Shop- or field-fabricated assemblies made of manufactured corrosion-resistant components to support roof-mounted piping.

2.6 MISCELLANEOUS MATERIALS

- A. Structural Steel: ASTM A 36/A 36M, carbon-steel plates, shapes, and bars; black and galvanized.
- B. Grout: see SECTION P 220517, 2.3 "Grout"

PART 3 – EXECUTION

3.1 HANGER AND SUPPORT INSTALLATION

- A. Metal 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 the building structure.
- B. Metal Framing System Installation: Arrange for grouping of parallel runs of piping, and support together on field-assembled metal framing systems.
- C. Thermal-Hanger Shield Installation: Install in pipe hanger or shield for insulated piping.
- D. Fastener System Installation:
 - 1. Install powder-actuated fasteners for use in lightweight concrete or concrete slabs less than 4 inches thick in concrete after concrete is placed and completely cured. Use operators that are licensed by powder-actuated tool manufacturer.
 - 2. Install fasteners according to powder-actuated tool manufacturer's operating manual.
 - 3. Install mechanical-expansion anchors in concrete after concrete is placed and completely cured. Install fasteners according to manufacturer's written instructions.
- E. Pipe Stand Installation:
 - 1. Pipe Stand Types except Curb-Mounted Type: Assemble components and mount on smooth roof surface. Do not penetrate roof membrane.

2. Install hangers and supports complete with necessary attachments, inserts, bolts, rods, nuts, washers, and other accessories.
3. 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.
4. Pipe Slopes: Install hangers and supports to provide indicated pipe slopes and to not exceed maximum pipe deflections allowed by ASME B31.9 for building services piping.
5. Insulated Piping:
 - a. Attach clamps and spacers to piping.
 - b. Piping Operating below Ambient Air Temperature: Use thermal-hanger shield insert with clamp sized to match OD of insert.
 - c. Do not exceed pipe stress limits allowed by ASME B31.9 for building services piping.
 - d. Install MSS SP-58, Type 39, protection saddles if insulation without vapor barrier is indicated. Fill interior voids with insulation that matches adjoining insulation.
 - e. Option: Thermal-hanger shield inserts may be used. Include steel weight-distribution plate for pipe NPS 4 and larger if pipe is installed on rollers.
 - f. Install MSS SP-58, Type 40, protective shields on cold piping with vapor barrier. Shields shall span an arc of 180 degrees.
 - g. Option: Thermal-hanger shield inserts may be used. Include steel weight-distribution plate for pipe NPS 4 and larger if pipe is installed on rollers.
 - h. Shield Dimensions for Pipe: Not less than the following:
 1. NPS 1/4 to NPS 3-1/2: 12 inches long and 0.048 inch thick.
 - i. Thermal-Hanger Shields: Install with insulation same thickness as piping insulation.

3.2 METAL FABRICATIONS

- A. Cut, drill, and fit miscellaneous metal fabrications for trapeze pipe hangers and equipment supports.
- B. Fit exposed connections together to form hairline joints. Field weld connections that cannot be shop welded because of shipping size limitations.
- C. Field Welding: Comply with AWS D1.1/D1.1M procedures for shielded, metal arc welding; appearance and quality of welds; and methods used in correcting welding work; and with the following:
- D. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
- E. Obtain fusion without undercut or overlap.
- F. Remove welding flux immediately.

- G. Finish welds at exposed connections so no roughness shows after finishing and so contours of welded surfaces match adjacent contours.

3.3 ADJUSTING

- A. Hanger Adjustments: Adjust hangers to distribute loads equally on attachments and to achieve indicated slope of pipe.
- B. Trim excess length of continuous-thread hanger and support rods to 1-1/2 inches .

3.4 HANGER AND SUPPORT SCHEDULE

- A. Specific hanger and support requirements are in Sections specifying piping systems and equipment.
- B. Comply with MSS SP-69 for pipe-hanger selections and applications that are not specified in piping system Sections.
- C. Use hangers and supports with galvanized metallic coatings for piping and equipment that will not have field-applied finish.
- D. Use nonmetallic coatings on attachments for electrolytic protection where attachments are in direct contact with copper tubing.
- E. Use carbon-steel pipe hangers and supports and metal framing systems and attachments for general service applications.
- F. Use copper-plated pipe hangers and copper attachments for copper piping and tubing.
- G. Use padded hangers for piping that is subject to scratching.
- H. Use thermal-hanger shield inserts for insulated piping and tubing.
- I. Horizontal-Piping Hangers and Supports: Unless otherwise indicated and except as specified in piping system Sections, install the following types:
 - 1. Adjustable, Steel Clevis Hangers (MSS Type 1): For suspension of noninsulated or insulated, stationary pipes NPS 1/2 to NPS 30.
 - 2. Carbon- or Alloy-Steel, Double-Bolt Pipe Clamps (MSS Type 3): For suspension of pipes NPS 3/4 to NPS 36, requiring clamp flexibility and up to 4 inches of insulation.
 - 3. Steel Pipe Clamps (MSS Type 4): For suspension of cold and hot pipes NPS 1/2 to NPS 24 if little or no insulation is required.
 - 4. Pipe Hangers (MSS Type 5): For suspension of pipes NPS 1/2 to NPS 4, to allow off-center closure for hanger installation before pipe erection.
 - 5. Adjustable, Swivel Split- or Solid-Ring Hangers (MSS Type 6): For suspension of noninsulated, stationary pipes NPS 3/4 to NPS 8.
 - 6. Adjustable, Steel Band Hangers (MSS Type 7): For suspension of noninsulated, stationary pipes NPS 1/2 to NPS 8.
 - 7. Adjustable Band Hangers (MSS Type 9): For suspension of noninsulated, stationary pipes NPS 1/2 to NPS 8.

8. Adjustable, Swivel-Ring Band Hangers (MSS Type 10): For suspension of noninsulated, stationary pipes NPS 1/2 to NPS 8.
9. Split Pipe Ring with or without Turnbuckle Hangers (MSS Type 11): For suspension of noninsulated, stationary pipes NPS 3/8 to NPS 8.
10. Extension Hinged or Two-Bolt Split Pipe Clamps (MSS Type 12): For suspension of noninsulated, stationary pipes NPS 3/8 to NPS 3.
11. U-Bolts (MSS Type 24): For support of heavy pipes NPS 1/2 to NPS 30.
12. Clips (MSS Type 26): For support of insulated pipes not subject to expansion or contraction.
13. Single-Pipe Rolls (MSS Type 41): For suspension of pipes NPS 1 to NPS 30, from two rods if longitudinal movement caused by expansion and contraction might occur.
14. Vertical-Piping Clamps: Unless otherwise indicated and except as specified in piping system Sections, install the following types:
15. Extension Pipe or Riser Clamps (MSS Type 8): For support of pipe risers NPS 3/4 to NPS 24.
16. Carbon- or Alloy-Steel Riser Clamps (MSS Type 42): For support of pipe risers NPS 3/4 to NPS 24 if longer ends are required for riser clamps.
17. Hanger-Rod Attachments: Unless otherwise indicated and except as specified in piping system Sections, install the following types:
18. Steel Turnbuckles (MSS Type 13): For adjustment up to 6 inches for heavy loads.
19. Steel Clevises (MSS Type 14): For 120 to 450 deg F piping installations.
20. Swivel Turnbuckles (MSS Type 15): For use with MSS Type 11, split pipe rings.
21. Malleable-Iron Sockets (MSS Type 16): For attaching hanger rods to various types of building attachments.
22. Steel Weldless Eye Nuts (MSS Type 17): For 120 to 450 deg F piping installations.
23. Building Attachments: Unless otherwise indicated and except as specified in piping system Sections, install the following types:
24. Steel or Malleable Concrete Inserts (MSS Type 18): For upper attachment to suspend pipe hangers from concrete ceiling.
25. Top-Beam C-Clamps (MSS Type 19): For use under roof installations with bar-joist construction, to attach to top flange of structural shape.
26. Side-Beam or Channel Clamps (MSS Type 20): For attaching to bottom flange of beams, channels, or angles.
27. Center-Beam Clamps (MSS Type 21): For attaching to center of bottom flange of beams.
28. Welded Beam Attachments (MSS Type 22): For attaching to bottom of beams if loads are considerable and rod sizes are large.
29. C-Clamps (MSS Type 23): For structural shapes.
30. Top-Beam Clamps (MSS Type 25): For top of beams if hanger rod is required tangent to flange edge.
31. Side-Beam Clamps (MSS Type 27): For bottom of steel I-beams.
32. Steel-Beam Clamps with Eye Nuts (MSS Type 28): For attaching to bottom of steel I-beams for heavy loads.
33. Linked-Steel Clamps with Eye Nuts (MSS Type 29): For attaching to bottom of steel I-beams for heavy loads, with link extensions.
34. Malleable-Beam Clamps with Extension Pieces (MSS Type 30): For attaching to structural steel.
35. 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:
 - a. Light (MSS Type 31): 750 lb.

- b. Medium (MSS Type 32): 1500 lb.
 - c. Heavy (MSS Type 33): 3000 lb.
- 36. Side-Beam Brackets (MSS Type 34): For sides of steel beams.
 - 37. Plate Lugs (MSS Type 57): For attaching to steel beams if flexibility at beam is required.
 - 38. Horizontal Travelers (MSS Type 58): For supporting piping systems subject to linear horizontal movement where headroom is limited.
 - 39. Saddles and Shields: Unless otherwise indicated and except as specified in piping system Sections, install the following types:
 - 40. Steel-Pipe-Covering Protection Saddles (MSS Type 39): To fill interior voids with insulation that matches adjoining insulation.
 - 41. Protection Shields (MSS Type 40): Of length recommended in writing by manufacturer to prevent crushing insulation.
 - 42. Thermal-Hanger Shield Inserts: For supporting insulated pipe.
- J. Comply with MSS SP-69 for trapeze pipe-hanger selections and applications that are not specified in piping system Sections.
 - K. Comply with MFMA-103 for metal framing system selections and applications that are not specified in piping system Sections.
 - L. Use mechanical-expansion anchors instead of building attachments where required in concrete construction.

PART 4 - MEASUREMENT AND PAYMENT

- 4.1 No separate payment will be made for work under this Section. The cost of all work under this Section shall be deemed to be included in the cost of other plumbing work associated with this project.

SECTION P 220553
IDENTIFICATION FOR PLUMBING PIPING AND EQUIPMENT
(Not a Bid Item)

PART 1 - GENERAL

1.1 SUMMARY

A. This section includes the following:

1. Warning signs and labels.
2. Pipe labels.
3. Stencils.
4. Valve tags.
5. Warning tags.

1.2 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Samples: For color, letter style, and graphic representation required for each identification material and device.
- C. Equipment and Piping Label Schedule: Include a listing of all and piping equipment to be labeled with the proposed content for each label.
- D. Valve numbering scheme.
- E. Valve Schedules: For each piping system to include in maintenance manuals.

1.3 COORDINATION

- 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 locations of access panels and doors.
- C. Install identifying devices before installing acoustical ceilings and similar concealment.

PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, available manufactures offering products that may be incorporated into the Work include, but are not limited to, the following:

W.H. Brady Co.
Seton Nameplate Corp.
Emedco.

Or an approved equivalent manufacturer.

B. WARNING SIGNS AND LABELS

1. Material and Thickness: Multilayer, multicolor, plastic labels for mechanical engraving, 1/8 inch thick, and having predrilled holes for attachment hardware.
2. Letter Color: Black.
3. Background Color: Orange.
4. Maximum Temperature: Able to withstand temperatures up to 160 deg F.
5. Minimum Label Size: Length and width vary for required label content, but not less than 2-1/2 by 3/4 inch.
6. Minimum Letter Size: 1/4 inch for name of units if viewing distance is less than 24 inches, 1/2 inch for viewing distances up to 72 inches, and proportionately larger lettering for greater viewing distances. Include secondary lettering two-thirds to three-fourths the size of principal lettering.
7. Fasteners: Stainless-steel self-tapping screws.
8. Adhesive: Contact-type permanent adhesive, compatible with label and with substrate.
9. Label Content: Include caution and warning information, plus emergency notification instructions.

C. PIPE LABELS

1. General Requirements for Manufactured Pipe Labels: Preprinted, color-coded, with lettering indicating service, and showing flow direction.
2. Self-Adhesive Pipe Labels: Printed plastic with contact-type, permanent-adhesive backing.
3. 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.
4. 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.
5. Lettering Size: At least 1-1/2 inches high.

D. VALVE TAGS

1. Valve Tags: Stamped or engraved with 1/4-inch letters for piping system abbreviation and 1/2-inch numbers.
2. Tag Material: Brass, 0.032-inch minimum thickness, and having predrilled or stamped holes for attachment hardware.
3. Fasteners: Brass wire-link or beaded chain; or S-hook.
4. Valve Schedules: For each piping system, on 8-1/2 by 11-inch bond paper. Tabulate valve number, piping system, system abbreviation (as shown on valve tag), location of valve (room or space), normal-operating position (open, closed, or modulating),

and variations for identification. Mark valves for emergency shutoff and similar special uses.

5. Valve-tag schedule shall be included in operation and maintenance data.

E. WARNING TAGS

1. Warning Tags: Preprinted or partially preprinted, accident-prevention tags, of plasticized card stock with matte finish suitable for writing.
2. Size: 4 inches wide by 7 inches high.
3. Fasteners: Brass grommet and wire.
4. Nomenclature: Large-size primary caption such as "DANGER," "CAUTION," or "DO NOT OPERATE."
5. Color: Yellow background with black lettering.

PART 3 – EXECUTION

3.1 PREPARATION

- A. 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.

3.2 PIPE LABEL INSTALLATION

- A. 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:
 1. Near each valve and control device.
 2. Near each branch connection, excluding short takeoffs for fixtures. Where flow pattern is not obvious, mark each pipe at branch.
 3. Near penetrations through walls, floors, ceilings, and inaccessible enclosures.
 4. At access doors, manholes, and similar access points that permit view of concealed piping.
 5. Near major equipment items and other points of origination and termination.
 6. Spaced at maximum intervals of 20 feet along each run. Reduce intervals to 10 feet in areas of congested piping and equipment.
 7. On piping above removable acoustical ceilings. Omit intermediately spaced labels.
 8. Pipe Label Color Schedule: Domestic Water Piping
 - a. Background Color: Green.
 - b. Letter Color: White.

3.3 VALVE-TAG INSTALLATION

- A. Install tags on valves and control devices in piping systems, except check valves; valves within factory-fabricated equipment units; faucets; convenience and lawn-watering hose

connections; and similar roughing-in connections of end-use fixtures and units. List tagged valves in a valve schedule.

B. Valve-Tag Application Schedule: Tag valves according to size, shape, and color scheme and with captions similar to those indicated in the following subparagraphs:

1. Valve-Tag Size and Shape: 1-1/2 inches, hexagon (Cold Water).
2. Valve-Tag Color: Natural (Cold Water).
3. Letter Color: Black (Cold Water)

3.4 WARNING-TAG INSTALLATION

A. Write required message on, and attach warning tags to, equipment and other items where required.

PART 4 – MEASUREMENT AND PAYMENT

4.1 No separate payment will be made for work under this Section. The cost of all work under this Section shall be deemed to be included in the cost of other plumbing work associated with this project.

SECTION P 220719
PLUMBING PIPING INSULATION
(Not a Bid Item)

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes insulating plumbing piping services for domestic cold-water piping.

1.2 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated. Include thermal conductivity, water-vapor permeance thickness, and jackets (both factory- and field-applied, if any).

1.3 QUALITY ASSURANCE

- A. Installer Qualifications: Skilled mechanics who have successfully completed an apprenticeship program or another craft training program certified by the Department of Labor, Bureau of Apprenticeship and Training.
- B. Surface-Burning Characteristics: For insulation and related materials, as determined by testing identical products according to ASTM E 84 by a testing 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 agency.
- C. Insulation Installed Indoors: Flame-spread index of 25 or less, and smoke-developed index of 50 or less.

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Packaging: Insulation material containers shall be marked by manufacturer with appropriate ASTM standard designation, type and grade, and maximum use temperature.

1.5 COORDINATION

- A. Coordinate sizes and locations of supports, hangers, and insulation shields specified in Section 220529 "Hangers and Supports for Plumbing Piping and Equipment."
- B. Coordinate clearance requirements with piping Installer for piping insulation application. Before preparing piping Shop Drawings, establish and maintain clearance requirements for installation of insulation and field-applied jackets and finishes and for space required for maintenance.

1.6 SCHEDULING

- A. Schedule insulation application after pressure testing systems and, where required, after installing and testing heat tracing. Insulation application may begin on segments that have satisfactory test results.
- B. Complete installation and concealment of plastic materials as rapidly as possible in each area of construction.

PART 2 – PRODUCTS

2.1 INSULATION MATERIALS

- A. Products shall not contain asbestos, lead, mercury, or mercury compounds.
- B. 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.
- C. Insulation materials for use on austenitic stainless steel shall be qualified as acceptable according to ASTM C 795.
- D. Foam insulation materials shall not use CFC or HCFC blowing agents in the manufacturing process.
- E. Mineral-Fiber, Preformed Pipe Insulation:
- F. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
 - 1. Fibrex Insulations Inc.; Coreplus 1200.
 - 2. Johns Manville; Micro-Lok.
 - 3. Knauf Insulation; 1000-Degree Pipe Insulation.
 - 4. Manson Insulation Inc.; Alley-K.
 - 5. Owens Corning; Fiberglas Pipe Insulation.
 - 6. Or an approved equivalent.
- G. Type I, 850 Deg F Materials: Mineral or glass fibers bonded with a thermosetting resin. Comply with ASTM C 547, Type I, Grade A, with factory-applied ASJ. Factory-applied jacket requirements are specified in "Factory-Applied Jackets" Article.

2.2 INSULATING CEMENTS

- A. Mineral-Fiber Insulating Cement: Comply with ASTM C 195.
- B. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
 - 1. Ramco Insulation, Inc.; Super-Stik.
 - 2. Or an approved equivalent.

2.3 ADHESIVES

- A. 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.
- B. Mineral-Fiber Adhesive: Comply with MIL-A-3316C, Class 2, Grade A.
 - 1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Childers Brand, Specialty Construction Brands, Inc., a business of H. B. Fuller Company; CP-127.
 - b. Eagle Bridges - Marathon Industries; 225.
 - c. Foster Brand, Specialty Construction Brands, Inc., a business of H. B. Fuller Company; 85-60/85-70.
 - d. Mon-Eco Industries, Inc.; 22-25.
 - e. Or an approved equivalent.
- C. ASJ Adhesive, and FSK Jacket Adhesive: Comply with MIL-A-3316C, Class 2, Grade A for bonding insulation jacket lap seams and joints.
- D. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
 - 1. Childers Brand, Specialty Construction Brands, Inc., a business of H. B. Fuller Company; CP-82.
 - 2. Eagle Bridges - Marathon Industries; 225.
 - 3. Foster Brand, Specialty Construction Brands, Inc., a business of H. B. Fuller Company; 85-20.
 - 4. Mon-Eco Industries, Inc.; 22-25.
 - 5. Or an approved equivalent.
- E. PVC Jacket Adhesive: Compatible with PVC jacket.
- F. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
 - 1. Dow Corning Corporation; 739, Dow Silicone.
 - 2. Johns Manville; Zeston Perma-Weld, CEEL-TITE Solvent Welding Adhesive.
 - 3. P.I.C. Plastics, Inc.; Welding Adhesive.
 - 4. Speedline Corporation; Polyco VP Adhesive.
 - 5. Or an approved equivalent.

2.4 MASTICS

- A. Materials shall be compatible with insulation materials, jackets, and substrates; comply with MIL-PRF-19565C, Type II.
 - 1. Vapor-Barrier Mastic: Solvent based; suitable for outdoor use on below-ambient services.

Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:

- a. Childers Brand, Specialty Construction Brands, Inc., a business of H. B. Fuller Company; Encacel.
 - b. Eagle Bridges - Marathon Industries; 570.
 - c. Foster Brand, Specialty Construction Brands, Inc., a business of H. B. Fuller Company; 60-95/60-96.
 - d. Or an approved equivalent.
 - e. Water-Vapor Permeance: ASTM F 1249, 0.05 perm at 30-mil dry film thickness.
 - f. Service Temperature Range: Minus 50 to plus 220 deg F.
 - g. Solids Content: ASTM D 1644, 33 percent by volume and 46 percent by weight.
 - h. Color: White.
2. Breather Mastic: Water based; suitable for indoor and outdoor use on above-ambient services.

Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:

- a. Childers Brand, Specialty Construction Brands, Inc., a business of H. B. Fuller Company; CP-10.
- b. Eagle Bridges - Marathon Industries; 550.
- c. Foster Brand, Specialty Construction Brands, Inc., a business of H. B. Fuller Company; 46-50.
- d. Mon-Eco Industries, Inc.; 55-50.
- e. Vimasco Corporation; WC-1/WC-5.
- f. Or an approved equivalent.
- g. Water-Vapor Permeance: ASTM F 1249, 1.8 perms at 0.0625-inch dry film thickness.
- h. Service Temperature Range: Minus 20 to plus 180 deg F.
- i. Solids Content: 60 percent by volume and 66 percent by weight.
- j. Color: White.

2.5 LAGGING ADHESIVES

- A. Description: Comply with MIL-A-3316C, Class I, Grade A, and shall be compatible with insulation materials, jackets, and substrates.
- B. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
- C. Childers Brand, Specialty Construction Brands, Inc., a business of H. B. Fuller Company; CP-50 AHV2.
- D. Foster Brand, Specialty Construction Brands, Inc., a business of H. B. Fuller Company; 30-36.
- E. Vimasco Corporation; 713 and 714.
- F. Or an approved equivalent.

- G. Fire-resistant, water-based lagging adhesive and coating for use indoors to adhere fire-resistant lagging cloths over pipe insulation.
- H. Service Temperature Range: 0 to plus 180 deg F.
- I. Color: White.

2.6 SEALANTS

- A. Joint Sealants:
- B. FSK and Metal Jacket Flashing Sealants:
- C. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
 - 1. Childers Brand, Specialty Construction Brands, Inc., a business of H. B. Fuller Company; CP-76
 - 2. Eagle Bridges - Marathon Industries; 405.
 - 3. Foster Brand, Specialty Construction Brands, Inc., a business of H. B. Fuller Company; 95-44.
 - 4. Mon-Eco Industries, Inc.; 44-05.
 - 5. Or an approved equivalent.
- D. Materials shall be compatible with insulation materials, jackets, and substrates.
- E. Fire- and water-resistant, flexible, elastomeric sealant.
- F. Service Temperature Range: Minus 40 to plus 250 deg F.
- G. Color: Aluminum.
- H. ASJ Flashing Sealants, and Vinyl, PVDC, and PVC Jacket Flashing Sealants:
- I. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
 - 1. Childers Brand, Specialty Construction Brands, Inc., a business of H. B. Fuller Company; CP-76.
 - 2. Or an approved equivalent
- J. Materials shall be compatible with insulation materials, jackets, and substrates.
- K. Fire- and water-resistant, flexible, elastomeric sealant.
- L. Service Temperature Range: Minus 40 to plus 250 deg F.
- M. Color: White.

2.7 FACTORY-APPLIED JACKETS

- A. Insulation system schedules indicate factory-applied jackets on various applications. When factory-applied jackets are indicated, comply with the following:
- B. ASJ: White, kraft-paper, fiberglass-reinforced scrim with aluminum-foil backing; complying with ASTM C 1136, Type I.
- C. ASJ-SSL: ASJ with self-sealing, pressure-sensitive, acrylic-based adhesive covered by a removable protective strip; complying with ASTM C 1136, Type I.
- D. FSK Jacket: Aluminum-foil, fiberglass-reinforced scrim with kraft-paper backing; complying with ASTM C 1136, Type II.

2.8 FIELD-APPLIED JACKETS

- A. Field-applied jackets shall comply with ASTM C 921, Type I, unless otherwise indicated.
- B. 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.
- C. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
 - 1. Johns Manville; Zeston.
 - 2. P.I.C. Plastics, Inc.; FG Series.
 - 3. Proto Corporation; LoSmoke.
 - 4. Speedline Corporation; SmokeSafe.
 - 5. Or an approved equivalent.
- D. Adhesive: As recommended by jacket material manufacturer.
- E. Color: White.
- F. Factory-fabricated fitting covers to match jacket if available; otherwise, field fabricate.
- G. 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.

2.9 TAPES

- A. ASJ Tape: White vapor-retarder tape matching factory-applied jacket with acrylic adhesive, complying with ASTM C 1136.
 - 1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
 - a. ABI, Ideal Tape Division; 428 AWF ASJ.
 - b. Avery Dennison Corporation, Specialty Tapes Division; Fasson 0836.
 - c. Compac Corporation; 104 and 105.

- d. Venture Tape; 1540 CW Plus, 1542 CW Plus, and 1542 CW Plus/SQ.
 - e. Or an approved equivalent
 - 2. Width: 3 inches.
 - 3. Thickness: 11.5 mils.
 - 4. Adhesion: 90 ounces force/inch in width.
 - 5. Elongation: 2 percent.
 - 6. Tensile Strength: 40 lbf/inch in width.
 - 7. ASJ Tape Disks and Squares: Precut disks or squares of ASJ tape
- B. IFSK Tape: Foil-face, vapor-retarder tape matching factory-applied jacket with acrylic adhesive; complying with ASTM C 1136.
- 1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
 - a. ABI, Ideal Tape Division; 491 AWF FSK.
 - b. Avery Dennison Corporation, Specialty Tapes Division; Fasson 0827.
 - c. Compac Corporation; 110 and 111.
 - d. Venture Tape; 1525 CW NT, 1528 CW, and 1528 CW/SQ.
 - e. Or an approved equivalent.
 - 2. Width: 3 inches.
 - 3. Thickness: 6.5 mils.
 - 4. Adhesion: 90 ounces force/inch in width.
 - 5. Elongation: 2 percent.
 - 6. Tensile Strength: 40 lbf/inch in width.
 - 7. FSK Tape Disks and Squares: Precut disks or squares of FSK tape.
- C. PVC Tape: White vapor-retarder tape matching field-applied PVC jacket with acrylic adhesive; suitable for indoor and outdoor applications..
- 1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
 - a. ABI, Ideal Tape Division; 370 White PVC tape.
 - b. Compac Corporation; 130.
 - c. Venture Tape; 1506 CW NS.
 - d. Or an approved equivalent.
 - 2. Width: 2 inches.
 - 3. Thickness: 6 mils.
 - 4. Adhesion: 64 ounces force/inch in width.
 - 5. Elongation: 500 percent.
 - 6. Tensile Strength: 18 lbf/inch in width.
- D. Aluminum-Foil Tape: Vapor-retarder tape with acrylic adhesive.
- 1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
 - a. ABI, Ideal Tape Division; 488 AWF.

- b. Avery Dennison Corporation, Specialty Tapes Division; Fasson 0800.
- c. Compac Corporation; 120.
- d. Venture Tape; 3520 CW.
- e. Or an approved equivalent.

- 2. Width: 2 inches.
- 3. Thickness: 3.7 mils.
- 4. Adhesion: 100 ounces force/inch in width.
- 5. Elongation: 5 percent.
- 6. Tensile Strength: 34 lbf/inch in width.

2.10 SECUREMENTS

- A. Bands:
- B. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
- C. ITW Insulation Systems; Gerrard Strapping and Seals.
- D. RPR Products, Inc.; Insul-Mate Strapping and Seals.
- E. Or an approved equivalent.
- F. Stainless Steel: ASTM A 167 or ASTM A 240/A 240M, Type 304 or Type 316; 0.015 inch thick, 1/2 inch wide with wing seal.
- G. Aluminum: ASTM B 209, Alloy 3003, 3005, 3105, or 5005; Temper H-14, 0.020 inch thick, 1/2 inch wide with wing seal.
- H. Staples: Outward-clinching insulation staples, nominal 3/4-inch- wide, stainless steel or Monel.
- I. Wire: 0.062-inch soft-annealed, stainless steel.
- J. 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:
 - 1. C & F Wire.
 - 2. Or an approved equivalent.

2.11 PROTECTIVE SHIELDING GUARDS

- A. Protective Shielding Pipe Covers,
- B. 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:
 - 1. Engineered Brass Company.
 - 2. Insul-Tect Products Co.; a subsidiary of MVG Molded Products.
 - 3. McGuire Manufacturing.
 - 4. Plumberex.
 - 5. Truebro; a brand of IPS Corporation.

- 6. Zurn Industries, LLC; Tubular Brass Plumbing Products Operation.
- 7. Or an approved equivalent.
- D. Description: Manufactured plastic wraps for covering plumbing fixture hot- and cold-water supplies and trap and drain piping. Comply with Americans with Disabilities Act (ADA) requirements.
- E. Protective Shielding Piping Enclosures,
- F. 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:
- G. Truebro; a brand of IPS Corporation.
- H. Zurn Industries, LLC; Tubular Brass Plumbing Products Operation.
- I. Or an approved equivalent.
- J. Description: Manufactured plastic enclosure for covering plumbing fixture hot- and cold-water supplies and trap and drain piping. Comply with ADA requirements.

PART 3 -EXECUTION

3.1 EXAMINATION

- A. Examine substrates and conditions for compliance with requirements for installation tolerances and other conditions affecting performance of insulation application.
- B. Verify that systems to be insulated have been tested and are free of defects.
- C. Verify that surfaces to be insulated are clean and dry.
- D. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Surface Preparation: Clean and dry surfaces to receive insulation. Remove materials that will adversely affect insulation application.
- B. Coordinate insulation installation with the trade installing heat tracing. Comply with requirements for heat tracing that apply to insulation.
- C. Mix insulating cements with clean potable water; if insulating cements are to be in contact with stainless-steel surfaces, use demineralized water.

3.3 GENERAL INSTALLATION REQUIREMENTS

- A. Install insulation materials, accessories, and finishes with smooth, straight, and even surfaces; free of voids throughout the length of piping including fittings, valves, and specialties.

- B. Install insulation materials, forms, vapor barriers or retarders, jackets, and thicknesses required for each item of pipe system as specified in insulation system schedules.
- C. 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.
- D. Install insulation with longitudinal seams at top and bottom of horizontal runs.
- E. Install multiple layers of insulation with longitudinal and end seams staggered.
- F. Do not weld brackets, clips, or other attachment devices to piping, fittings, and specialties.
- G. Keep insulation materials dry during application and finishing.
- H. Install insulation with tight longitudinal seams and end joints. Bond seams and joints with adhesive recommended by insulation material manufacturer.
- I. Install insulation with least number of joints practical.
- J. Where vapor barrier is indicated, seal joints, seams, and penetrations in insulation at hangers, supports, anchors, and other projections with vapor-barrier mastic.
- K. Install insulation continuously through hangers and around anchor attachments.
- L. 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.
- M. 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.
- N. 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.
- O. Apply adhesives, mastics, and sealants at manufacturer's recommended coverage rate and wet and dry film thicknesses.
- P. Install insulation with factory-applied jackets as follows:
 - 1. Draw jacket tight and smooth.
 - 2. 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.
 - 3. 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 2 inches o.c.
 - 4. For below-ambient services, apply vapor-barrier mastic over staples.
 - 5. Cover joints and seams with tape, according to insulation material manufacturer's written instructions, to maintain vapor seal.
 - 6. Where vapor barriers are indicated, apply vapor-barrier mastic on seams and joints and at ends adjacent to pipe flanges and fittings.

7. Cut insulation in a manner to avoid compressing insulation more than 75 percent of its nominal thickness.
8. Finish installation with systems at operating conditions. Repair joint separations and cracking due to thermal movement.
9. 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.

3.4 PENETRATIONS

- A. Insulation Installation at Underground Exterior Wall Penetrations: Terminate insulation flush with sleeve seal. Seal terminations with flashing sealant.
- B. Insulation Installation at Aboveground Exterior Wall Penetrations: Install insulation continuously through wall penetrations.
- C. Seal penetrations with flashing sealant.
- D. 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.
- E. Extend jacket of outdoor insulation outside wall flashing and overlap wall flashing at least 2 inches.
- F. Seal jacket to wall flashing with flashing sealant.

3.5 GENERAL PIPE INSULATION INSTALLATION

- A. Requirements in this article generally apply to all insulation materials except where more specific requirements are specified in various pipe insulation material installation articles.
- B. Insulation Installation on Fittings, Valves, Strainers, Flanges, and Unions:
- C. Install insulation over fittings, valves, strainers, flanges, unions, and other specialties with continuous thermal and vapor-retarder integrity unless otherwise indicated.
- D. 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.
- E. 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.
- F. 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.

- G. 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.
- H. 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.
- I. 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.
- J. For services not specified to receive a field-applied jacket, 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.
- K. Stencil or label the outside insulation jacket of each union with the word "union." Match size and color of pipe labels.
- L. Insulate instrument connections for thermometers, pressure gages, pressure temperature taps, test connections, flow meters, sensors, switches, and transmitters on insulated pipes. 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.
- M. Install removable insulation covers at locations indicated. Installation shall conform to the following:
- N. 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.
- O. 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.
- P. 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.
- Q. 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.

- R. Unless a PVC jacket is indicated in field-applied jacket schedules, finish exposed surfaces with a metal jacket.

3.6 INSTALLATION OF MINERAL-FIBER INSULATION

- A. Insulation Installation on Straight Pipes and Tubes:
 - B. Secure each layer of preformed pipe insulation to pipe with wire or bands and tighten bands without deforming insulation materials.
 - C. Where vapor barriers are indicated, seal longitudinal seams, end joints, and protrusions with vapor-barrier mastic and joint sealant.
 - D. For insulation with factory-applied jackets on above-ambient surfaces, secure laps with outward clinched staples at 6 inches o.c.
 - E. For insulation with factory-applied jackets on below-ambient surfaces, do not staple longitudinal tabs. Instead, secure tabs with additional adhesive as recommended by insulation material manufacturer and seal with vapor-barrier mastic and flashing sealant.
- F. Insulation Installation on Pipe Flanges:
 - G. Install preformed pipe insulation to outer diameter of pipe flange.
 - H. Make width of insulation section same as overall width of flange and bolts, plus twice the thickness of pipe insulation.
 - I. Fill voids between inner circumference of flange insulation and outer circumference of adjacent straight pipe segments with mineral-fiber blanket insulation.
 - J. Install jacket material with manufacturer's recommended adhesive, overlap seams at least 1 inch, and seal joints with flashing sealant.
- K. Insulation Installation on Pipe Fittings and Elbows:
 - L. Install preformed sections of same material as straight segments of pipe insulation when available.
 - M. 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.
- N. Insulation Installation on Valves and Pipe Specialties:
 - O. Install preformed sections of same material as straight segments of pipe insulation when available.
 - P. When preformed sections are not available, install mitered sections of pipe insulation to valve body.
 - Q. Arrange insulation to permit access to packing and to allow valve operation without disturbing insulation.
 - R. Install insulation to flanges as specified for flange insulation application.

3.7 FIELD-APPLIED JACKET INSTALLATION

- A. Where PVC jackets are indicated, install with 1-inch overlap at longitudinal seams and end joints. Seal with manufacturer's recommended adhesive.
- B. Apply two continuous beads of adhesive to seams and joints, one bead under lap and the finish bead along seam and joint edge.
- C. Where metal jackets are indicated, install with 2-inch overlap at longitudinal seams and end joints. Overlap longitudinal seams arranged to shed water. Seal end joints with weatherproof sealant recommended by insulation manufacturer. Secure jacket with stainless-steel bands 12 inches o.c. and at end joints.

3.8 FIELD QUALITY CONTROL

- A. Testing Agency: Engage a qualified testing agency to perform tests and inspections.
- B. Perform tests and inspections.
- C. Tests and Inspections:
 - 1. Inspect pipe, fittings, strainers, and valves, randomly selected by Architect, by removing field-applied jacket and insulation in layers in reverse order of their installation. Extent of inspection shall be limited to three locations of straight pipe, three locations of threaded fittings, three locations of welded fittings, two locations of threaded strainers, three locations of threaded valves, and three locations of flanged valves for each pipe service defined in the "Piping Insulation Schedule, General" Article.
- D. All insulation applications will be considered defective Work if sample inspection reveals noncompliance with requirements.

3.9 PIPING INSULATION SCHEDULE, GENERAL

- A. Items Not Insulated: Unless otherwise indicated, do not install insulation on the following:
- B. Drainage piping located in crawl spaces.

3.10 OUTDOOR, FIELD-APPLIED JACKET SCHEDULE

- A. Install jacket over insulation material. For insulation with factory-applied jacket, install the field-applied jacket over the factory-applied jacket.
- B. If more than one material is listed, selection from materials listed is Contractor's option.
- C. Piping, Exposed:
 - 1. Aluminum, Smooth with Z-Shaped Locking Seam: 0.024 inch thick.

PART 4 - MEASUREMENT AND PAYMENT

- 4.1 No separate payment will be made for work under this Section. The cost of all plumbing piping insulation shall be deemed to be included in the cost of the plumbing equipment furnished and installed under other contract items, as appropriate.

SECTION PK-12**WATER TAP, 2½" DIAMETER**

1. **WORK:** 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.
2. **PERMIT:** The Contractor shall employ a NYC licensed plumbing contractor 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.
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.

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. Also see Sections P 220500, P220517, P220529, P220553, and P220719.

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 tap and shall include the cost of all labor, materials, equipment, insurance, and incidental expenses, including, but not limited to, excavation, gravel bedding and backfill, disconnection and abandonment of the existing wet connection or water/tap, the cost of permits and the amounts paid to the D.E.P. necessary to complete the work in accordance with the plans, the specifications and directions of the Engineer.

Sawcutting and Restoration of Street Pavement (where applicable) will be paid separately under the appropriately scheduled items.

Payment will be made under:

Item No.	Item	Pay Unit
PK-12E	WATER TAP, 2½ " DIAMETER	EACH

**SECTION PK-13
TYPE "K" COPPER TUBING**

1. **WORK:** Under this item 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.
2. **PIPE:** The water service pipe shall be rigid hard temper type "k" copper tubing in straight lengths meeting the specification for ASTM designation No. B88.
3. **FITTINGS:** Fittings shall be approved wrought copper and bronze solder - joint pressure fittings (ANSI B 16.22), Di-Electric fittings as required.
4. **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.
5. **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, or 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.

Also see Sections P 220500, P220517, P220529, P220553, and P220719.

6. **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.
7. **MEASUREMENT AND PAYMENT:** 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, including fittings, furnished and incorporated in the work in accordance with the plans, specifications and directions of the Engineer.

The price bid shall be unit price per linear foot, and shall include the cost of all labor, materials, equipment and incidental expenses necessary to complete the work, including excavation, backfill, and fine gravel, in accordance with the plans and specifications to the satisfaction of the Engineer.

Water tap and restoration will be paid for under other items.

Payment will be made under:

Item No.	Item	Pay Unit
PK-13AA	TYPE "K" COPPER TUBING, 1/8" DIAMETER	Linear Feet.
PK-13D	TYPE "K" COPPER TUBING, 1" DIAMETER	Linear Feet
PK-13E	TYPE "K" COPPER TUBING, 1-1/2" DIAMETER	Linear Feet
PK-13F	TYPE "K" COPPER TUBING, 2" DIAMETER	Linear Feet
PK-13G	TYPE "K" COPPER TUBING, 2-1/2" DIAMETER	Linear Feet

SECTION PK-143
RPZ, Water Meter with Remote and Structure

PK-143.1 INTENT. Under this section the Contractor shall provide all labor, materials and equipment necessary or required to furnish and install a complete RPZ. Water Meter with Remote system including but not limited to:

- (a) Reduced Pressure Zone (RPZ) device is also known as a Backflow Preventer
- (b) Water Meter with 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 tees, and test tee valves, 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) Pipe Tracing and/or Insulation of water meter, backflow preventer, piping and all equipment
- (e) Provide a vandal resistant meter pit and valve boxes
- (f) Above ground RPZ enclosure (HotBox)
- (g) Coordinate with electrical service to provide proper power supply to controller, valves, heat systems, and all other systems requiring electric power
- (h) Provide labor for winterizing the system for the first winter after the system is operational and accepted by the owner.

PK-143.2 SUBMITTALS

Submittals shall be submitted in accordance with the requirements of the **General Conditions**.

(A) SHOP DRAWINGS

The Contractor shall submit Shop Drawings when required in accordance with the requirements of the **General Conditions** 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 RPZ, water meter, meter reading system, Control valve, HotBox, 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 regulations for R.P.Z.'s (after installation), including Certification by Backflow Prevention Device Tester; Certification of NYC licensed plumbing contractor 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. The DPR Design Division; Environmental Engineering Section shall be copied on all such submittals. In addition to the requirements stated herein, **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-143.3 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

Resident Engineer, for acceptability. Submittal of "or approved equivalent" specifications does not guarantee acceptance of the product. All product acceptances 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, approved by NYC Department of Environmental Protection, 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:

- A.C. Miller Concrete Products Inc., 31 E. Bridge Street, Spring City, PA 19475
Kistner Concrete Products Inc., 8713 Read Road, P.O. Box 218, East
Pembroke, NY
14056
- 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 more than six (6) nor less than four (4) parts of aggregate. The fine and course aggregates shall conform to ASTM C-33. Aggregates shall be free of all deleterious substances which cause reactivity with oxidized hydrogen sulfides. Aggregates 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 and shall follow OSHA regulations as stated under OSHA 1910.27:

- M.A. Industries, 303 Dividend Drive, Peachtree City, GA 30269
- American Step Company, P.O. Box 137, 830 East Broadway, Griffin, GA 30224
- Parson Environmental Products, Inc., P.O. Box 4474, Reading, PA 19606

(E) RPZ ABOVE GROUND ENCLOSURE (HotBox)

RPZ above ground enclosures shall be as manufactured by one of the following manufacturers, or approved equivalent:

- Hubbell Power Systems, 3621 Industrial Park Drive, Lenoir City, TN 37771
- Hydrocowl Inc., 2710 Landers Avenue, Nashville, TN 37211
- Dekorra Products LLC., PO Box, 338, 218 Hwy 16, Rio, WI, 53960
- Safe-T-cover, 2710 Landers Avenue, Nashville, TN 37211

(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:

- Pennsylvania Insert Corp., 31 E. Bridge Street, P.O. Box 199 Spring City, PA 19475
- Babcock-Davis, 9300 73rd Avenue, N. Brooklyn Park, MN 55428
- 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 degree 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 RPZ STRUCTURE

Security Bolts for RPZ Structure shall be NYC DPR pattern # 83 registration # "116183", Part # H11777155, as manufactured by McGard, Orchard Park, N.Y. 14127, or approved

equal. 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 $\pm .01$ ".
7. Bolt threads are to be class UNC-2A.

(J) WATER PIPING

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 No. B88-1974. Fittings shall be approved wrought copper and bronze solder-joint pressure fittings (ANSI B 16.22).

(K) RPZ

The RPZ (Reduced Pressure Zone, Backflow Prevention device) shall be a Watts Model 909 OS&Y or approved equal. 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.

The 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

The MOCV shall be a Class 125, all bronze gate valve, with non-rising stem and solid

disc, with screwed bonnet and threaded ends, such as Stockham Figure B-103, or approved equal. The MOCV shall be capped for testing. For testing the 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, Type CG for 2" and 2-1/2" dia. pipe, or approval equal. Electrical grounding work will be completed 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 equal. 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 approved 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

The meter maincase shall be 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 equal. The Remote Reader shall be a selfcontained 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: 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 hand 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 springtype 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.

(W) PIPE TRACING SYSTEM

- 1) Cables and Controllers: Racken, Nelson Electric and Chromalox
- 2) Cables:
 - Provide hot section consisting of two conductor copper alloy resistance wire, mineral insulated, covered by annealed seamless copper sheath and of a size and length as indicated.
 - Provide cold section consisting of two conductor, copper, size as required, mineral insulated, covered by annealed seamless copper sheath and a minimum 7 ft. long.
- 3) Connections and Terminations: Provide silver soldered connections and terminations including end cap to end of hot section, hot to cold cable sections and sleeve connector and cold cable end to insulated leads.
- 4) Control thermostat assembly: Provide in-line type, similar to Rackem #AMC-F5 4X NEMA 4 enclosure with voltage as required, 10ft. long capillary, nickel-chrome plated copper bulb and 0-100 degree F. temperature limits at 40°F.
- 5) Heat Cable: Self-regulating type 208V.
- 6) Tags: Supply cables with tag indicating length, voltage, wattage, resistance, size of hot and cold sections, and pipe system protected.

PK-143.4 METHOD

(A) GENERAL

All plumbing work shall be performed by NYC licensed plumbing contractor. 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, RPZ or double check valve, 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) SUBSTITUTION

The City reserves the right to substitute, add or delete any material or work as the work progresses. Adjustment to the contract price shall be negotiated if deemed necessary by the City.

(G) 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.

(H) 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.

(I) 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 (12") inch x twelve (12") inch drain sleeve to the top of the bottom slab. The RPZ 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 shall allow sufficient Water Meter Remote Reader cable slack for manhole cover removal. The RPZ shall be installed as shown on the Contract Drawings and per manufacturer's instructions.

(J) 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 RPZ shall be as shown on the Contract Drawings and per manufacturer's instructions.

(K) PIPE TRACING

1) Installation:

1. Unroll cables in straight line without kinking.
2. Lay hot section for single row on top side of pipe and for double run on top side, 60 degree down on either side of vertical.
3. Secure in place by stainless steel straps at 18 inch intervals.
4. Install sensing bulbs at underside of pipe.
5. No cable bends shall be installed within 6 inches of silver soldered joints.
6. Protect cables from damage.
7. Connect cold end to junction boxes with acceptable fittings.

2) Testing:

1. Prior to shipment, subject each cable to high potential test of 1600 volt 60 Hz for one minute from conductor to sheath. Resistance readings shall be not less than 20 megohms with 500 volt DC ohmmeter. Subject each cable to 140 percent of rated voltage for one hour.
2. After cables are secured in place and prior to application of insulation, megger cables with 500 volt DC megger from conductor to sheath. Resistance readings

shall be not less than 20 megohms. After application of insulation, retest cables.

(L) "AS-BUILT" DRAWINGS

The Contractor shall prepare an "As-Built" drawing as per the **General Requirements** in the Standard Specifications. Drawing shall show all items installed during construction, including the RPZ, water Meter, main line or connection pipe, precast structures, all valves, remote equipment, and electrical conduit, and 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 trouble-shooting 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.

(M) 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.

(N) 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-143.5 GUARANTEE AND WARRANTEE

All work, materials and equipment shall be guaranteed for eighteen (18) months, from date of substantial completion of the project, against all defects in material, equipment and workmanship. Guarantee shall also cover repair of damage to any part of the premises resulting from leaks or other defects in material, equipment and workmanship to the satisfaction of the Owner. Repairs, if required, shall be done promptly at no cost to the City.

PK-143.6 MEASUREMENT AND PAYMENT

The quantity of RPZ & WATER METER WITH REMOTE & STRUCTURE – 2-1/2" DIA. to be measured for payment shall be the number actually installed to the satisfaction of the Engineer.

The price bid shall be a unit price for each RPZ & WATER METER WITH REMOTE & STRUCTURE – 2-1/2" DIA. and shall include the cost of all labor, materials, equipment, insurance, and incidentals necessary including, but not limited to, obtaining certifications, 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.

"Excavation, "Temporary Sheeting, and Broken Stone and all other materials and work required for the proper installation shall be deemed included in the price bid for **Item No. PK-143D**. Copper tubing and all water service beyond the exterior face of the concrete structure shall be paid for under Item No. PK-13G.

Payment will be made under:

Item No.	Description	Pay Unit
PK-143D	RPZ & WATER METER WITH REMOTE & STRUCTURE – 2-1/2" DIA.	EACH

SECTION PK-159C
CURB & PROPERTY LINE VALVES – 2-1/2" DIAMETER

1. **WORK:** Under this Item, the Contractor shall furnish and install CURB & PROPERTY LINE VALVES set of the size shown on the plans, in strict accordance with the plans, specifications, and directions of the Engineer. Each set shall consist of one curb valve and one adjacent property line valve.
2. **INTENT:** The Property Line Valve is intended for use as an on-site, shut-off valve to decrease use of the Curb Valve, and shall be located in an accessible area inside the Park's property line.
3. **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 approved equal. Curb Gate Valves shall have bronze body, bronze bonnet, inside screw, non-rising stem, solid wedge disk, and threaded ends.
4. **PROPERTY LINE VALVES:** Property Line Valves 2½" and under shall be of the cylindrical Plug Type with a closed bottom and a top seal, fully enclosed one-quarter (1/4) turn check, straight through flow way which is resistant to turbulence of the flow stream, one piece cast bronze cylindrical plug and "T" head that aligns with the ports to provide a visual check of valve position, inside screw ends with I.P. threads, as is manufactured by Mueller Co. No. H-10283, or approved equal. Adaptors are required for connecting to copper tubing.
5. **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 2½" diameter, the operating key shall be Stockham No. 1V437 for Stockham Valves, or the appropriate key for an approved equal valve. For valves 1" to 1-1/2" diameter, handwheel operating nut is to remain.
6. **SUBMITTALS:** All submittals shall be in accordance with the requirements of the General Conditions, Section 1.06, of the NYCDOT Standard Highway Specifications. The Contractor shall submit the following for the Engineer's review and approval, in consultation with the City's Architect, prior to manufacture.

Shop Drawings: All submittals shall be in accordance with the requirements of the General Conditions, Section 1.06.13, of the NYCDOT Standard Highway Specification. The Contractor shall submit catalog cuts of the curb and property line gate valve for approval.
7. **MEASUREMENT AND PAYMENT:** The quantity of CURB & PROPERTY LINE VALVES to be paid for under this Item shall be the number of SETS consisting of both valves of each size, actually installed to the satisfaction of the Engineer.

The price bid shall be a unit price for each SET of CURB & PROPERTY LINE VALVES (two valves) of each size, and shall include the cost of all labor, materials, equipment, insurance, and other

incidentals necessary to complete the Work in accordance with the plans, the specifications and directions of the Engineer.

Valve box extensions shall be paid under the separate Item No. PK-17.

Piping, including the pipe between the curb and property line gate valves shall be paid for under Item No. PK-13G.

Payment will be made under:

Item No.	Item	Pay Unit
PK-159C	CURB & PROPERTY LINE VALVES – 2-1/2" DIAMETER	1 SET

**SECTION PK-17
CAST IRON VALVE BOX 5-1/4" DIAMETER**

PK-17.1. WORK: 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 valve boxes shall be Bingham & Taylor Fig. No. 4908 with a Fig No. 4904 L locking cover, 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 & PAYMENT: 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.

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.	Description	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) Stainless Steel Pins: T304
- (F) 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).
- (G) Geotextile Filter Fabric: Geotextiles used in drainage applications shall be Class 2 and shall conform to the following AASHTO-M288 properties for drainage geotextiles:

STRUCTURE	ASTM Test	TYPE	
		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	

1. Manufacturers:

- a. Advanced Drainage Systems, Inc., Hillard, OH.
- b. Carthage Mills, Cincinnati, OH.
- c. Mirafi, Inc., Charlotte, NC.
- d. 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, stainless steel pins, 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

END OF ADDENDUM NO. 4

This addendum consists of ninety-nine (99) pages.

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

JANUARY 15, 2013

ADDENDUM NO. 5

PROJECT ID: HWPLZ001K

**RECONSTRUCTION OF
MYRTLE AVENUE
FROM HALL STREET TO EMERSON PLACE
INCLUDING SEWER, WATER MAIN, STREET LIGHTING,
AND TRAFFIC SIGNALWORK**

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

**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 NYCDEP 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.

ATTACHMENT 4

Phase II Subsurface Corridor Investigation Report

- Final -

**Phase II Subsurface Corridor Investigation Report
For
Myrtle Avenue between Hall Street and Emerson Place
Brooklyn, New York**

DDC PROJECT NO. HWPLZ-001K
WORK ORDER NO. 8035-ATC-7538
CONTRACT REGISTRATION NO. 20090016802

Prepared for:



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PROJECT NO. 015.38500.0127

February 28, 2012



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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 Myrtle Avenue between Hall Street and Emerson Place (hereinafter referred to as the Corridor). The Corridor is located in the Clinton Hill/Fort Greene neighborhood of Brooklyn, New York. Infrastructure improvements consisting of excavation for the reconstruction of Myrtle Avenue is proposed for the Corridor. The Corridor is approximately 1,056 linear feet (LF) (0.2 mile).

Louis Berger and Assoc., P.C. (LBA) prepared a Phase I Corridor Assessment Report (Phase I CAR) dated June 16, 2011, 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 LBA Phase I CAR identified 20 sites that had a potential "High" risk and 26 sites that had a potential "Moderate" risk to impact the subsurface (soil and/or groundwater) of the Corridor and recommended the performance of a Phase II SCI. The objective of the Phase II SCI was to assess the presence of subsurface contamination that might impact proposed construction activities. The Phase II SCI consisted of the following components:

- The advancement of six (6) borings: five (5) borings (SB-1, SB-2, SB-4, SB-5, and SB-6) to a depth of 20 feet below grade (ftbg) and one (1) boring (SB-3) to 14 ftbg; which was terminated due to a broken drill rod in the borehole. Field screening of soil samples, including photo-ionization detector (PID) readings and visual and olfactory indicators of contamination (staining, odors) was performed at each boring location;
- The collection of six (6) soil samples (SB-1, SB-2, SB-3, SB-4, SB-5, and SB-6), 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 and hexavalent chromium; (4) TCL pesticides; and (5) TCL polychlorinated biphenyls (PCBs);
- The collection of one (1) waste characterization soil sample (WC-1), 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); 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 quality, the laboratory analytical results for soils were compared with the regulatory standards identified in: (1) New York State Department of Environmental Conservation (NYSDEC) Policy CP-51/Soil Cleanup Guidance Supplemental Soil Cleanup Objectives (SSCOs); (2) NYSDEC Subpart 375-6: Remedial Program Unrestricted and Restricted-Residential Use Soil Cleanup Objectives (SCOs); and (3) the Toxicity Characteristic Regulatory Levels for Hazardous Waste published in RCRA and NYSDEC Part 371.

The subsurface soils encountered during this Phase II SCI consisted of fill material consisting of bricks and cobbles with some medium fine sand from grade to approximately six (6) ftbg in each of the six (6)



borings advanced. The underlying subsurface soils consisted of varying gradations of brown sand, brown silty sand, brown silt, brown clayey silt, and brown silty clay. Man-made materials (brick), which are indicative of urban fill, were encountered in each of the borings to a depth of six (6) ftbg. Bedrock was not encountered during the Phase II SCI.

Field screening did not identify petroleum-impacted soils throughout the Corridor. The review of laboratory analytical results did not suggest the presence of petroleum-impacted soils throughout the Corridor. PID readings were not detected in any of the borings.

Concentrations of PCBs and pesticides were not detected in any of the soil samples collected.

Methylene chloride was detected at a concentration below its Unrestricted Use SCO in one (1) grab sample and its detection is considered to be attributed to laboratory cross-contamination and is not considered to be representative of subsurface concentrations.

Benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, chrysene, and indeno(1,2,3-cd)pyrene were detected at concentrations above their Unrestricted Use and Restricted-Residential Use SCOs in sample SB-2. SVOCs were detected in samples SB-1, SB-2, and SB-3 at concentrations below Unrestricted Use SCOs. The presence of SVOCs is attributable to the presence of fill materials.

Subsurface soils contain elevated concentrations of iron in each of the soil samples collected. Mercury was detected at a concentration above its Unrestricted Use and Restricted-Residential Use SCO. Other metals were detected in each of the soil samples collected at concentrations below their Unrestricted Use SCOs. The presence of metals is attributable to natural (background) levels and/or the presence of fill materials.

DRO and GRO were detected at low levels in the waste characterization samples collected. There are no NYSDEC regulatory standards for DRO and GRO. The presence of DRO and GRO may be attributed to the detection of organic compounds that are within the diesel and gasoline ranges, but not necessarily diesel and gasoline constituents.

The subsurface soils did not exhibit hazardous waste characteristics.

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 petroleum-impacted soils throughout the Corridor. The review of laboratory analytical results did not suggest the presence of petroleum-impacted soils throughout the Corridor. PID readings were not detected in any of the borings. Fill material was identified in each of the borings to a depth of six (6) ftbg.
- Benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, chrysene, and indeno(1,2,3-cd)pyrene were detected at concentrations above their Unrestricted Use and in composite sample SB-2. The presence of SVOCs is attributable to the presence of fill materials.
- Subsurface soils contain elevated concentrations of iron in each of the soil samples collected. Mercury was detected at a concentration above its Unrestricted Use and Restricted-Residential Use



SCO. The presence of metals is attributable to natural (background) levels and/or the presence of fill materials.

- DRO and GRO were detected at low levels in the waste characterization samples collected. There are no NYSDEC regulatory standards for DRO and GRO. The presence of DRO and GRO may be attributed to the detection of organic compounds that are within the diesel and gasoline ranges, but not necessarily diesel and gasoline constituents. In addition, the presence of DRO and GRO may be attributed to fill material.
- The subsurface soils did not exhibit hazardous waste characteristics.

Based on the results of the field investigation and laboratory analytical results, ATC recommends the following:

- The Contract documents should identify provisions for managing, handling, transporting and disposing of non-hazardous contaminated soil for SVOCs and metals, including lead and chromium. The Contractor should be required to submit a Material Handling Plan, which should identify the specific protocol and procedures that will be employed to manage the waste in accordance with applicable regulations.
- Due to the presence of SVOCs and metals 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 is not anticipated to be performed as part of proposed construction activities. If groundwater or perched water is encountered during construction activities and dewatering is required, the Contractor will be required to obtain a NYCDEP sewer discharge permit if water will be discharged to the sanitary and/or combined sewer. Groundwater was not encountered during the Phase II SCI.
- If discharge into storm sewers is required during dewatering, it may be done under the appropriate NYSDEC State Pollutant Discharge Elimination System (SPDES) permit. Additional sampling and laboratory analysis may be required to satisfy NYSDEC requirements prior to discharge into storm sewers.
- 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 SVOCs and 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 Myrtle Avenue between Hall Street and Emerson Place (hereinafter referred to as the Corridor). The Corridor is located in the Clinton Hill/Fort Greene neighborhood of Brooklyn, New York. Infrastructure improvements consisting of excavation for the reconstruction of Myrtle Avenue is proposed for the Corridor. The Corridor is approximately 1,056 linear feet (LF) (0.2 mile). The Phase II SCI was conducted to determine if the Corridor's environmental condition might impact proposed construction activities.

1.1 Summary of Previous Environmental Investigations

Louis Berger and Assoc., P.C. (LBA) prepared a Phase I Corridor Assessment Report (Phase I CAR) dated June 16, 2011, 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 LBA Phase I CAR identified 20 sites that had a Final "High" risk and 26 sites that had a Final "Moderate" risk to impact the subsurface of the Corridor and recommended advancing a total of six (6) borings, installing temporary well points and collecting soil and groundwater samples to assess potential impacts. The final "High" risk sites and "Moderate" risk site identified in the LBA CAR is listed below:

HIGH RISK SITES:

1. Gas Station, 535 Myrtle Avenue (Map ID A4 and A9)
2. New Fantastic Dry Cleaners, 500-510 Myrtle Avenue (Map ID C6, A11 and A26)
3. Pratt Institute, 536 Myrtle Avenue (Map ID A13 and A28)
4. Brooklyn USPS, 524 Myrtle Avenue (Map ID A15 and A16)
5. Windhorse Gas Station Inc., 569 Myrtle Avenue (aka 184 Classon Avenue) (Map ID B39, B40, B41 and F49)
6. 195 Classon Avenue (Map ID F52)
7. Willoughby Walk Co-op Apartments, 185 Hall Street (Map ID G61 and G62)
8. Willoughby Walk Co-op Apartments, 195 Willoughby Avenue (Map ID N90)
9. Pratt Institute/Leclair Institute, 200 Willoughby Avenue (Map ID M100, M101, M102, M103, M104 and M105)
10. Pratt Institute, 203 Grand Avenue (Map ID M106)
11. Pratt Institute, 395 Dekalb Avenue (Map ID M107)
12. 134 Emerson Place
13. 520 Myrtle Avenue
14. 145 Grand Avenue
15. 116-120 Grand Avenue
16. 543 Myrtle Avenue
17. 542 Myrtle Avenue
18. 503 Myrtle Avenue
19. 89-99 Steuben Street



MODERATE RISK SITES:

1. 555 Myrtle Avenue (Map ID B2)
2. 557 Myrtle Avenue (Map ID B3)
3. 513 Myrtle Avenue (Map ID A10)
4. 490 Myrtle Avenue (Map ID C12)
5. 509 Myrtle LLC, 509 Myrtle Avenue (Map ID A17, A18 and A23)
6. 507 Myrtle Avenue (Map ID A20)
7. 515 Myrtle Avenue (Map ID A21)
8. 566 Myrtle Avenue (Map ID B22)
9. 504 Myrtle Avenue (Map ID C24)
10. 481 Myrtle Avenue (Map ID C25)
11. 479 Myrtle Avenue (Map ID C27)
12. 549 Myrtle Avenue (Map ID B30)
13. 559 Myrtle Avenue (Map ID B32)
14. 561 Myrtle Avenue (Map ID B33)
15. 475 Myrtle Avenue (Map ID D34)
16. 570 Myrtle Avenue (Map ID B35)
17. 572-572A Myrtle Avenue (Map ID B36 and B37)
18. 473 Myrtle Avenue (Map ID D38)
19. 215 Willoughby Avenue (Map ID M84)
20. Bridge Tow, 105-111 Emerson Place (Map ID B42)
21. Mega Millwork Corp., 206 Classon Avenue (Map ID 53)
22. Stat Vik Interiors, 172 Classon Avenue (Map ID F55, F56, F57, F58 and F59)
23. Pratt Institute/Institute for Community Living, 161 Emerson Place (Map ID J67 and J68)
24. 97 Grand Avenue
25. 98 Steuben Street
26. 105 Steuben Street



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 Zebra Environmental Corporation (Zebra) of Lynbrook, NY. Oversight of drilling activities 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). The field investigation was conducted on January 26, 27, 30, and 31, 2012 and consisted of the following components.

- The advancement of six (6) borings: five (5) borings (SB-1, SB-2, SB-4, SB-5, and SB-6) to a depth of 20 feet below grade (ftbg); and one (1) boring (SB-3) to 14 ftbg, which was terminated due to a broken drill rod in the borehole. The borings were advanced using a Geoprobe direct push drill rig. Prior to direct push advancement, the borings were cleared to a depth of six (6) feet using a vactron and post hole digger. Soil samples were collected using 4-foot long, 2-inch diameter Macro Core stainless steel samplers equipped with polyvinyl chloride (PVC) liners.
- 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 sample and one (1) grab sample from each of the “High” and “Moderate” risk borings (SB-1 through SB-6). The composite samples were comprised of soil from the entire boring column. Since no evidence of field contamination (petroleum odor and elevated PID measurements) was detected and groundwater was not encountered, the grab samples were collected from 19.5-20 ftbg in borings SB-1, SB-2, SB-4, SB-5, and SB-6 and 13.5-14 ftbg in SB-3.
- Laboratory analysis of the composite soil 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 and hexavalent chromium by EPA Method 7196A ; (3) TCL pesticides by EPA Method 8081; and (4) TCL polychlorinated biphenyls (PCBs) by EPA Method 8082.
- Laboratory analysis of the grab soil samples for TCL volatile organic compounds (VOCs) by EPA Method 8260.
- The collection of one (1) composite waste characterization (WC) sample as follows:
 - WC-1 composited of soil from borings SB-1 through SB-6 (grade to bottom).
- Laboratory analysis of the waste characterization samples 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 Clinton Hill/Fort Greene fort neighborhood of Brooklyn, New York, and consists of Myrtle Avenue between Hall Street and Emerson Place. The Corridor location is shown on Figure 1.

Property usage within the area of the Corridor consists of a mix of residential, commercial and institutional properties. Along the south side of the Corridor, between Hall Street and Steuben Street, are several large residential apartment buildings ("High" risk sites), including the Pratt Institute's Willoughby Hall. The complexes consist of multistory buildings, playgrounds, ball fields, parking lots, walkways and landscaped areas. Multiple commercial properties are located throughout the Corridor with residential apartments above the storefronts. The Corridor is approximately 1,056 LF long (0.2 mile) and consists of paved roadways and existing infrastructure systems.

2.2 Description of Surrounding Properties

The Corridor is surrounded by a mix of residential, commercial and institutional properties. A Citgo gas station ("High" risk site) is located on the corner of Myrtle Avenue and Classon Avenue near the eastern boundary but off the Corridor. To the north of Myrtle Avenue is mainly a mixture of residential, commercial and industrial properties. The Pratt Institute's campus, which includes residence halls, playgrounds, ball fields, parking lots and classroom buildings, occupies a large area immediately to the south of the Corridor between Hall Street and Classon Avenue. Surrounding the Corridor to the east and west are residential and commercial properties.

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 Brooklyn, NY-NJ (dated 1995), the Corridor exhibits a vertical change of approximately 10 feet along the length of the Corridor. The elevation of the Corridor ranges from approximately 55 feet above mean sea level (amsl) at the intersection of Myrtle Avenue and Hall Street to approximately 45 feet amsl at the intersection of Myrtle Avenue and Emerson Place. The surface topography of the immediate Corridor area slopes to the east and the regional topography slopes in a northerly direction. Surface runoff is expected to flow east within the Corridor into storm drains, ultimately discharging to Wallabout Bay. A copy of the topographic map is presented on Figure 1.

2.4 Corridor and Regional Geology

According to the USGS *Ground Water in Bronx, New York, and Richmond Counties, with Summary Data on Kings and Queens Counties, New York City, New York* (1953), the area's geology is expected to consist of Pleistocene-age glacial till and moraine deposits and glaciofluvial sediments derived from melt-water of the retreating glaciers. According to the New York State Geological Survey *Surficial Geologic Map of New York, Lower Hudson Sheet*, dated 1989, the area's surficial geology consists till with variable textures (e.g., clay, silt-clay, boulder clay). 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. Typically, these soils have been mixed with other materials, such as brick and concrete.



The subsurface soils encountered during this Phase II SCI consisted of fill material consisting bricks and cobbles with some medium fine sand from grade to approximately six (6) ftbg in each of the six (6) borings advanced. The underlying subsurface soils consisted of varying gradations of brown sand, brown silty sand, brown silt, brown clay silt, and brown silty clay. Man-made materials (brick), which are indicative of urban fill, were encountered in each of the borings to a depth of six (6) ftbg. Bedrock was not encountered during the Phase II SCI. Geologic Boring Logs are provided in Appendix B.

2.5 Corridor and Regional Hydrogeology

The nearest surface water body is Navy Yard Basin, located approximately 0.5 mile to the northwest of the Corridor. Groundwater was not encountered during the Phase II SCI. Based on topography, the regional groundwater flow direction is anticipated to be to the northwest, toward the Navy Yard Basin.

Estimated groundwater levels and/or 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 provided oversight for the advancement of six (6) soil borings and the collection of soil samples during the field investigation at the designated areas in the vicinity of the planned construction. The soil samples from the borings 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

Six (6) borings (SB-1 through SB-6) were advanced using a Geoprobe direct push drill rig: five (5) borings (SB-1, SB-2, SB-4, SB-5, and SB-6) to a depth of 20 feet below grade (ftbg) and one (1) boring (SB-3) to 14 ftbg; which was terminated due to a broken drill rod in the borehole. Prior to direct push advancement, borings were cleared to a depth of six (6) ftbg using a vactron and post hole digger. Soil samples were collected using 4-foot long, 2-inch diameter Macro Core stainless steel samplers equipped with polyvinyl chloride (PVC) liners. 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:

- **SB-1** – Advanced in Myrtle Avenue, 36 feet east of the eastern curbline of Hall Street and 6 feet north of the southern curbline of Myrtle Avenue.
- **SB-2** – Advanced in Myrtle Avenue, 40 feet east of the eastern curbline of Ryerson Street and 5 feet north of the southern curbline of Myrtle Avenue.
- **SB-3** – Advanced in Myrtle Avenue, 35 feet west of the western curbline of Grand Avenue and 6 feet north of the southern curbline of Myrtle Avenue.
- **SB-4** – Advanced in Myrtle Avenue, 20 feet west of the western curbline of Steuben Street and 4 feet north of the southern curbline of Myrtle Avenue.
- **SB-5** – Advanced in Myrtle Avenue, 6 feet east of the eastern curbline of Steuben Street and 6 feet north of the southern curbline of Myrtle Avenue.
- **SB-6** – Advanced in Myrtle Avenue, 5 feet west of the western curbline of Emerson Place and 6 feet north of the southern curbline of Myrtle Avenue.

Soil from each boring was classified and examined for visual evidence (i.e. staining, discoloration) and any olfactory indications (i.e. odors) of contamination. Continuous soil samples were collected from each of the borings at 4-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 over the entire soil column in each boring, composite soil samples were collected by mixing the soil

from the entire column in a stainless steel bowl. Boring composite samples were collected from each of the "High" and "Moderate" risk borings (SB-1 through SB-6) in accordance with the Phase II SCI Work Plan prepared by ATC and dated November 10, 2011.

In order to identify representative conditions relative to the presence of VOCs, grab soil samples were collected from the bottom six (6) inch interval in borings SB-1, SB-2, SB-4, SB-5, and SB-6 (19.5-20) ftbg and in boring SB-3 (13.5-14 ftbg).

In order to identify representative conditions for disposal purposes, waste classification (WC) samples were collected as follows:

- WC-1 composited of soil from borings SB-1 through SB-6 (grade to bottom); and

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. In addition, a clear PVC liner was used inside the sampler for neat recovery of the soil cores. Following the completion of each boring, the boreholes were back-filled with drill cuttings, and, where appropriate, sealed with asphalt to match the existing surface.

3.2 Laboratory Analyses

The soil samples were submitted to CHEMTECH Consulting Group (CHEMTECH), of Mountainside, New Jersey, a NYSDOH-approved laboratory (No. 11376). Field derived Quality Assurance/Quality Control samples (trip blanks, field blanks and 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 and hexavalent chromium by EPA method 7196A; (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 EPA Full 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.

3.3 Data Evaluation

In order to evaluate the subsurface soil quality, the laboratory analytical results for soils were compared with the regulatory standards identified in: (1) New York State Department of Environmental Conservation (NYSDEC) Policy CP-51/Soil Cleanup Guidance Supplemental Soil Cleanup Objectives (SSCOs). NYSDEC Policy CP-51, which was issued on October 21, 2010 and became effective on December 3, 2010, replaced the NYSDEC Technical and Administrative Guidance Memorandum #4046 (TAGM) Recommended Soil Cleanup Objectives (RSCOs) and the NYSDEC Spill Technology and Remediation Series (STARS) 1992 Memo #1, Petroleum Contamination Soil Guidance Policy Toxicity Characteristic Leaching Procedure (TCLP) Alternative Guidance Values (AGVs). (2) NYSDEC Subpart 375-6: Remedial Program Unrestricted and Restricted-Residential Use Soil Cleanup Objectives (SCOs); and (3) the Toxicity Characteristic Regulatory Levels for Hazardous Waste published in RCRA and NYSDEC Part 371.



4.0 FINDINGS

This section discusses the analytical data and findings for the activities discussed in Section 3. Boring logs can be found in Appendix B. Complete analytical data reports are included in Appendix C.

4.1 Field Screening

Field screening did not identify petroleum-impacted soils throughout the Corridor. The review of laboratory analytical results did not suggest the presence of petroleum-impacted soils throughout the Corridor. PID readings were not detected in any of the borings. Refer to Table 1 for a summary of environmental boring data.

4.2 Soil Laboratory Analytical Results

4.2.1 Volatile Organic Compounds (VOCs) in Soil

Methylene chloride was detected at a concentration of 0.0062 milligrams per kilogram (mg/kg) in grab sample SB-3, which is below its Unrestricted Use SCO of 0.05 mg/kg and Restricted-Residential Use SCO of 100 mg/kg. Methylene chloride is commonly used by laboratories, and its detection is considered to be attributed to laboratory cross-contamination and is not considered to be representative of subsurface concentrations. No other VOCs were detected at concentrations above the method detection limit (MDL) in any of the remaining grab samples collected. Refer to Table 2 for a summary of TCL VOC detections.

4.2.2 Semi-Volatile Organic Compounds (SVOCs) in Soil

Several SVOCs were detected above their respective MDLs in composite samples SB-1, SB-2, and SB-3. In SB-2, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, chrysene, and indeno(1,2,3-cd)pyrene were detected at concentrations above their Unrestricted Use and Restricted-Residential Use SCOs. These compounds do not have an established Restricted-Residential SSCO. The remaining detected compounds in composite sample SB-2 and in the detected compounds in composite samples SB-1 and SB-3 were below their respective Unrestricted Use SCOs, Restricted-Residential Use SCOs, and Restricted-Residential SSCOs. SVOCs were not detected above their respective MDLs in composite samples SB-4, SB-5, and SB-6. The presence of SVOCs is attributable to the presence of fill materials. Refer to Table 3 for a summary of TCL SVOC detections.

4.2.3 Target Analyte List Metals (TAL Metals) in Soil

Metals were detected in all six (6) composite samples collected. Iron was detected at a concentration above its Restricted-Residential SSCO in each of the soil samples collected. Iron does not have an established Unrestricted Use SCO or Restricted-Residential Use SCO. Mercury was detected at a concentration of 2.16D mg/kg in composite sample SB-3, which is above its Unrestricted Use and Restricted-Residential Use SCO. The remaining detected concentrations of mercury are below its Unrestricted Use and Restricted-Residential Use SCO. Mercury does not have an established Restricted-Residential SSCO. Other metals were detected in each of the composite samples collected at concentrations below their Unrestricted Use SCOs, Restricted-Residential Use SCOs, and Restricted Residential SSCOs. Hexavalent chromium was detected at a concentration range of 0.22 to 0.39 mg/kg, trivalent chromium at a concentration range of 12.13 to 24.24 mg/kg, and lead at a concentration range of 4.75 to 26.3 mg/kg, which are all below the applicable standards. The presence of metals is attributable to natural (background) levels and/or the presence of fill materials. Refer to Table 4 for a summary of TAL metals detections.

4.2.4 Pesticides in Soil

Pesticides were not detected at concentrations above the MDL in any of the composite samples 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 at concentrations above the MDL in any of the composite samples 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. TCLP VOCs, SVOCs, herbicides, pesticides, and PCBs were not detected in the waste classification soil sample (WC-1). DRO were detected at concentration of 12.258 mg/kg and GRO at a concentration of 0.075 mg/kg. There are no NYSDEC regulatory standards for DRO and GRO. The presence of DRO and GRO in the soil sample may be attributed to the detection of organic compounds that are within the diesel and gasoline ranges, but not necessarily diesel and gasoline constituents. Barium was detected at a concentration of 0.456J milligrams per liter (mg/L), which is significantly below its corresponding RCRA hazardous waste level of 100 mg/L. Lead was detected at a concentration of 0.0376J, which is below its RCRA hazardous waste level of 5.0 mg/L. 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.



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:

- Field screening did not identify petroleum-impacted soils throughout the Corridor. The review of laboratory analytical results did not suggest the presence of petroleum-impacted soils throughout the Corridor. PID readings were not detected in any of the borings. Fill material was identified in each of the borings to a depth of six (6) ftbg.
- Benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, chrysene, and indeno(1,2,3-cd)pyrene were detected at concentrations above their Unrestricted Use and in composite sample SB-2. The presence of SVOCs is attributable to the presence of fill materials.
- Subsurface soils contain elevated concentrations of iron in each of the soil samples collected. Mercury was detected at a concentration above its Unrestricted Use and Restricted-Residential Use SCO. The presence of metals is attributable to natural (background) levels and/or the presence of fill materials.
- DRO and GRO were detected at low levels in the waste characterization samples collected. There are no NYSDEC regulatory standards for DRO and GRO. The presence of DRO and GRO may be attributed to the detection of organic compounds that are within the diesel and gasoline ranges, but not necessarily diesel and gasoline constituents. In addition, the presence of DRO and GRO may be attributed to fill material.
- The subsurface soils did not exhibit hazardous waste characteristics.

Based on the results of the field investigation and laboratory analytical results, ATC recommends the following:

- The Contract documents should identify provisions for managing, handling, transporting and disposing of non-hazardous contaminated soil for SVOCs and metals, including lead and chromium. The Contractor should be required to submit a Material Handling Plan, which should identify the specific protocol and procedures that will be employed to manage the waste in accordance with applicable regulations.
- Due to the presence of SVOCs and metals 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 is not anticipated to be performed as part of proposed construction activities. If groundwater or perched water is encountered during construction activities and dewatering is required, the Contractor will be required to obtain a NYCDEP sewer discharge permit if water will be discharged to the sanitary and/or combined sewer. Groundwater was not encountered during the Phase II SCI.
- If discharge into storm sewers is required during dewatering, it may be done under the appropriate NYSDEC State Pollutant Discharge Elimination System (SPDES) permit. Additional sampling and laboratory analysis may be required to satisfy NYSDEC requirements prior to discharge into storm sewers.
- 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 SVOCs and 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:

Matthew Mankovich
Senior Project Manager

Report Reviewed By:

Michael Abramowitz
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 PESTICIDE ANALYTICAL RESULTS IN SOIL**
- TABLE 6 - SUMMARY OF PCBs ANALYTICAL RESULTS IN SOIL**
- TABLE 7 - SUMMARY OF WASTE CHARACTERIZATION SAMPLE
ANALYSIS OF SOIL**



Table 1. Summary of Environmental Boring Data
Phase II Subsurface Corridor Investigation for Reconstruction of Myrtle Avenue
Brooklyn, New York

Boring No.	Sample ID	PID (ppm)	Sample Interval (ftbg)	Total VOCs (mg/kg)	Total SVOCs (mg/kg)	Metals Exceed (Yes/No)	Total Pesticides (mg/kg)	Total PCBs (mg/kg)	Depth to Water (ftbg)	Total Depth (ftbg)	Other Comments
SB-1	SB-1	0	19.5-20	ND	NA	NA	NA	NA	-	20	Grab Sample Boring composite sample and aliquot for waste characterization composite sample collected.
	SB-1		0-20	NA	3.22	Yes	ND	ND			
SB-2	SB-2	0	19.5-20	ND	NA	NA	NA	NA	-	20	Grab Sample Boring composite sample and aliquot for waste characterization composite sample collected.
	SB-2		0-20	NA	20.64	Yes	ND	ND			
SB-3	SB-3	0	13.5-14	0.062	NA	NA	NA	NA	-	14	Grab Sample Boring composite sample and aliquot for waste characterization composite sample collected.
	SB-3		0-14	NA	12.69	Yes	ND	ND			
SB-4	SB-4	0	19.5-20	ND	NA	NA	NA	NA	-	20	Grab Sample Boring composite sample and aliquot for waste characterization composite sample collected.
	SB-4		0-20	NA	ND	Yes	ND	ND			
SB-5	SB-5	0	19.5-20	ND	NA	NA	NA	NA	-	20	Grab Sample Boring composite sample and aliquot for waste characterization composite sample collected.
	SB-5		0-20	NA	ND	Yes	ND	ND			
SB-6	SB-6	0	19.5-20	ND	NA	NA	NA	NA	-	20	Grab Sample Boring composite sample and aliquot for waste characterization composite sample collected.
	SB-6		0-20	NA	ND	Yes	ND	ND			

Notes:
1. Metal(s) exceeds SCOs or SSCOs
All soil samples were analyzed for Target Compound List (TCL) Volatile Organic Compounds, Semi-Volatile Organic Compounds (SVOCs)
Pesticides, PCBs and Target Analyte List (TAL) Metals.
ND = Not Detected
NA = Not Analyzed or Not Applicable
ftbg = feet below grade
ppm = parts per million
mg/kg = milligrams per kilogram



Table 2. Summary of Target Compound List Volatile Organic Compounds Analytical Results in Soil
Phase II Subsurface Corridor Investigation for Reconstruction of Myrtle Avenue
Brooklyn, New York

TCL VOC	Subpart 375-6 Unrestricted Use Soil Cleanup Objectives (SCOs)	Subpart 375-6 Restricted Residential Use Soil Cleanup Objectives (SCOs)	CP-51 Restricted Residential Supplemental Soil Cleanup Objectives (SSCOs)	Sample ID, Date Collected and Depth				
				SB-1	SB-2	SB-3	SB-4	SB-5
				1/31/2012 19.5-20'	1/31/2012 19.5-20'	1/30/2012 13.5-14'	1/31/2012 19.5-20'	1/30/2012 19.5-20'
Methylene Chloride	0.05	100	NS	ND	ND	0.0062	ND	ND

Notes:

All concentrations are reported in 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

B = Compound was detected in an associated laboratory blank

BOLD = Concentration exceeds CP-51 SSCOs

Shading = Concentration exceeds Subpart 375-6 Unrestricted Use SCOs

Underline = Concentration exceeds Subpart 375-6 Restricted-Residential Use SCOs

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Table 3. Summary of Target Compound List Semi-Volatile Organic Compounds Analytical Results in Soil
Phase II Subsurface Corridor Investigation for Reconstruction of Myrtle Avenue
Brooklyn, New York

TCL SVOC	Subpart 375-6 Unrestricted Use Soil Cleanup Objectives (SCOs)	Subpart 375-6 Restricted- Residential Use Soil Cleanup Objectives (SCOs)	CP-51 Restricted Residential Supplemental Soil Cleanup Objectives (SSCOs)	Sample ID, Date Collected and Depth					
				SB-1	SB-2	SB-3	SB-4	SB-5	SB-6
				1/31/2012 0-20"	1/31/2012 0-20"	1/30/2012 0-14"	1/31/2012 0-20"	1/30/2012 0-20"	1/30/2012 0-20"
2-Methylnaphthalene	NS	NS	0.41	ND	0.28	ND	ND	ND	ND
Acenaphthene	20	100	NS	ND	0.41	0.23J	ND	ND	ND
Anthracene	100	100	NS	0.17J	0.92	0.47	ND	ND	ND
Benzo(a)anthracene	1	1	NS	0.25J	1.4	0.91	ND	ND	ND
Benzo(a)pyrene	1	1	NS	0.2J	1.1	0.77	ND	ND	ND
Benzo(b)fluoranthene	1	1	NS	0.25J	1.3	0.95	ND	ND	ND
Benzo(g,h,i)perylene	100	100	NS	ND	0.66	0.49	ND	ND	ND
Benzo(k)fluoranthene	0.8	3.9	NS	ND	0.45	0.38	ND	ND	ND
Carbazole	NS	NS	NS	ND	0.32J	0.24J	ND	ND	ND
Chrysene	1	3.9	NS	0.25J	1.4	0.91	ND	ND	ND
Dibenz(a,h)anthracene	0.33	0.33	NS	ND	0.16J	ND	ND	ND	ND
Dibenzofuran	NS	NS	NS	ND	0.31J	0.19J	ND	ND	ND
Fluoranthene	100	100	NS	0.87	3	2.2	ND	ND	ND
Fluorene	30	100	NS	ND	0.48	0.19J	ND	ND	ND
Indeno(1,2,3-cd)pyrene	0.5	0.5	NS	ND	0.56	0.42	ND	ND	ND
Naphthalene	12	100	NS	ND	0.59	0.24J	ND	ND	ND
Phenanthrene	100	100	NS	0.83	4.3D	2.2	ND	ND	ND
Pyrene	100	100	NS	0.6	3	1.9	ND	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

J = Compound detected below the quantitation limit

B = Compound was detected in an associated laboratory blank

BOLD = Concentration exceeds CP-51 SSCOs

Shading = Concentration exceeds Subpart 375-6 Unrestricted Use SCOs

Underline = Concentration exceeds Subpart 375-6 Restricted-Residential Use SCOs

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Table 4. Summary of Target Analyte List Metals Detected in Soil
Phase II Subsurface Corridor Investigation for Reconstruction of Myrtle Avenue
Brooklyn, New York

Target Analyte List Metal	CP-51 Restricted Residential Cleanup Objectives (SSCOs)	Subpart 375-6 Unrestricted Use Soil Cleanup Objectives (SCOs)	Subpart 375-6 Restricted- Residential Use Soil Cleanup Objectives (SCOs)	Sample ID, Date Collected and Depth					
				SB-1	SB-2	SB-3	SB-4	SB-5	SB-6
				1/31/2012	1/31/2012	1/30/2012	1/31/2012	1/30/2012	1/30/2012
				0-20'	0-20'	0-14'	0-20'	0-20'	0-20'
Aluminum	NS	NS	NS	4,980	6,200	3,720	6,820	4,700	7,250
Arsenic	NS	13	16	1.59	1.69	1.28	2.35	1.54	1.59
Barium	NS	350	400	60.6	70.9	47.8	66.7	31.4	35.2
Beryllium	NS	7.2	72	0.233J	0.245J	0.16J	0.39	0.215J	0.295
Cadmium	NS	2.5	4.3	0.109J	0.098J	0.064J	0.115J	0.074J	ND
Calcium	NS	NS	NS	3,710	5,330	4,980	1,940	997	840
Chromium	NS	NS	NS	16.4	23.6	12.4	24.6	15.5	22.1
Hexavalent Chromium	NS	1	110	0.22	0.28	0.27	0.36	0.32	0.39
Trivalent Chromium	NS	30	180	16.18	23.32	12.13	24.24	15.18	21.71
Cobalt	30	NS	NS	7.33	11.9	6.01	10.8	6.91	6.68
Copper	NS	50	270	16.5	17	12	21	13.8	13.3
Iron	2,000	NS	NS	15,600	19,900	11,300	21,800	20,400	15,900
Lead	NS	63	400	26.3	8.98	24.8	6.68	4.75	5.4
Magnesium	NS	NS	NS	2,710	5,000	3,450	3,420	1,710	2,600
Manganese	NS	1,600	2,000	231	276	202	323	439	194
Mercury	NS	0.18	0.81	0.026	0.02	2.16D	0.012	0.007J	0.002J
Nickel	NS	30	310	15.8	22.5	11.5	22.3	16.3	12
Potassium	NS	NS	NS	1,600	2,960	1,500	2,140	666	1,040
Sodium	NS	NS	NS	295	546	338	282	132	158
Vanadium	NS	NS	NS	24.5	32.4	18.9	34.1	20.5	26.4
Zinc	100	109	10,000	72.1	69.9	51.9	66.9	34	40.2

Notes:

All concentrations are in milligrams per kilogram (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

B = Compound was detected in an associated laboratory blank

N = Presumptive Evidence of Compound

BOLD = Concentration exceeds CP-51 SSCOs

Shading = Concentration exceeds Subpart 375-6 Unrestricted Use SCOs

Underline = Concentration exceeds Subpart 375-6 Restricted-Residential Use SCOs

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Table 5. Summary of Pesticide Analytical Results in Soil
Phase II Subsurface Corridor Investigation for Reconstruction of Myrtle Avenue
Brooklyn, New York

Pesticides	Subpart 375-6 Unrestricted Use Soil Cleanup Objectives (SCOs)	Subpart 375-6 Restricted- Residential Use Soil Cleanup Objectives (SCOs)	CP-51 Restricted Residential Supplemental Soil Cleanup Objectives (SSCOs)	Sample ID, Date Collected and Depth					
				SB-1	SB-2	SB-3	SB-4	SB-5	SB-6
				1/31/2012 0-20"	1/31/2012 0-20"	1/30/2012 0-14"	1/31/2012 0-20"	1/30/2012 0-20"	1/30/2012 0-20"
4,4'-DDT	0.0033	7.9	NS	ND	ND	ND	ND	ND	ND
4,4'-DDD	0.0033	13	NS	ND	ND	ND	ND	ND	ND
4,4'-DDE	0.0033	8.9	NS	ND	ND	ND	ND	ND	ND
Aldrin	0.005	0.097	NS	ND	ND	ND	ND	ND	ND
alpha-BHC	0.02	0.48	NS	ND	ND	ND	ND	ND	ND
beta-BHC	0.036	0.36	NS	ND	ND	ND	ND	ND	ND
alpha-Chlordane	0.094	4.2	NS	ND	ND	ND	ND	ND	ND
delta-BHC	0.04	100	NS	ND	ND	ND	ND	ND	ND
Dieldrin	0.005	0.2	NS	ND	ND	ND	ND	ND	ND
Endosulfan sulfate	2.4	24	NS	ND	ND	ND	ND	ND	ND
Endosulfan-I	2.4	24	NS	ND	ND	ND	ND	ND	ND
Endosulfan-II	2.4	24	NS	ND	ND	ND	ND	ND	ND
Endrin	0.014	11	NS	ND	ND	ND	ND	ND	ND
Endrin aldehyde	NS	NS	NS	ND	ND	ND	ND	ND	ND
Endrin ketone	NS	NS	NS	ND	ND	ND	ND	ND	ND
gamma-BHC (Lindane)	NS	NS	NS	ND	ND	ND	ND	ND	ND
gamma-Chlordane	NS	NS	NS	ND	ND	ND	ND	ND	ND
Heptachlor	0.042	2.1	NS	ND	ND	ND	ND	ND	ND
Heptachlor epoxide	NS	NS	NS	ND	ND	ND	ND	ND	ND
Methoxychlor	NS	NS	NS	ND	ND	ND	ND	ND	ND
Toxaphene	NS	NS	NS	ND	ND	ND	ND	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 md/s)

NS = No Standard

J = Compound detected below the quantitation limit

B = Compound was detected in an associated laboratory blank

BOLD = Concentration exceeds CP-51 SSCO

Shading = Concentration exceeds Subpart 375-6 Unrestricted Use SSCO

Underling = Concentration exceeds Subpart 375-6 Restricted-Residential Use SSCO

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New York City Department of Design and Construction
Final Phase II Subsurface Corridor Investigation
Reconstruction of Myrtle Avenue, Brooklyn, New York

Table 6. Summary of Polychlorinated Biphenyls Analytical Results in Soil
Phase II Subsurface Corridor Investigation for Reconstruction of Myrtle Avenue
Brooklyn, New York

Polychlorinated Biphenyls	Subpart 375-5 Unrestricted Use Soil Cleanup Objectives (SCOs)	Subpart 375-6 Restricted-Residential Use Soil Cleanup Objectives (SCOs)	CP-51 Restricted Residential Cleanup Objectives (SSCOs)	Sample ID, Date Collected and Depth					
				SB-1	SB-2	SB-3	SB-4	SB-5	SB-6
				1/31/2012 0-20"	1/31/2012 0-20"	1/30/2012 0-14"	1/31/2012 0-20"	1/30/2012 0-20"	1/30/2012 0-20"
Aroclor-1016	0.1	1	NS	ND	ND	ND	ND	ND	ND
Aroclor-1221	0.1	1	NS	ND	ND	ND	ND	ND	ND
Aroclor-1232	0.1	1	NS	ND	ND	ND	ND	ND	ND
Aroclor-1242	0.1	1	NS	ND	ND	ND	ND	ND	ND
Aroclor-1248	0.1	1	NS	ND	ND	ND	ND	ND	ND
Aroclor-1254	0.1	1	NS	ND	ND	ND	ND	ND	ND
Aroclor-1260	0.1	1	NS	ND	ND	ND	ND	ND	ND
Aroclor-1262	0.1	1	NS	ND	ND	ND	ND	ND	ND
Aroclor-1268	0.1	1	NS	ND	ND	ND	ND	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
J = Compound detected below the quantitation limit
B = Compound was detected in an associated laboratory blank
BOLD = Concentration exceeds CP-51 SSCOs
Shading = Concentration exceeds Subpart 375-6 Unrestricted Use SCOs
Underline = Concentration exceeds Subpart 375-6 Restricted-Residential Use SCOs

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Table 7. Summary of Waste Characterization Sample Analysis of Soil
Phase II Subsurface Corridor Investigation for Reconstruction of Myrtle Avenue
Brooklyn, New York

Parameter	RCRA Hazardous Waste Levels		Sample ID, Date Collected and Borings	
			WC-1	
			1/31/2012	
			SB-1, SB-2, SB-3, SB-4, SB-5, SB-6	
RCRA Characteristics				
Reactivity Cyanide	250	mg/kg	ND	
Reactivity Sulfide	500 mg/lg	mg/kg	ND	
Flash Point - Liquid/Solid	140	°F	ND	
pH (Corrosivity)	>2 and < 12.5	S.U.	8.1	
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	0.456J	
Cadmium	1	mg/L	ND	
Chromium	5	mg/L	ND	
Lead	5	mg/L	0.0376J	
Mercury	0.2	mg/L	ND	
Selenium	1	mg/L	ND	
Silver	5	mg/L	ND	
GRO	NS	mg/kg	0.075	
DRO	NS	mg/kg	12.258	

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

N = Presumptive Evidence of a Compound

ATC Associates Inc.

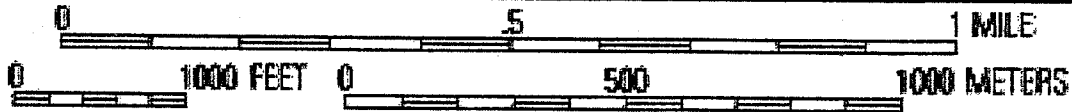
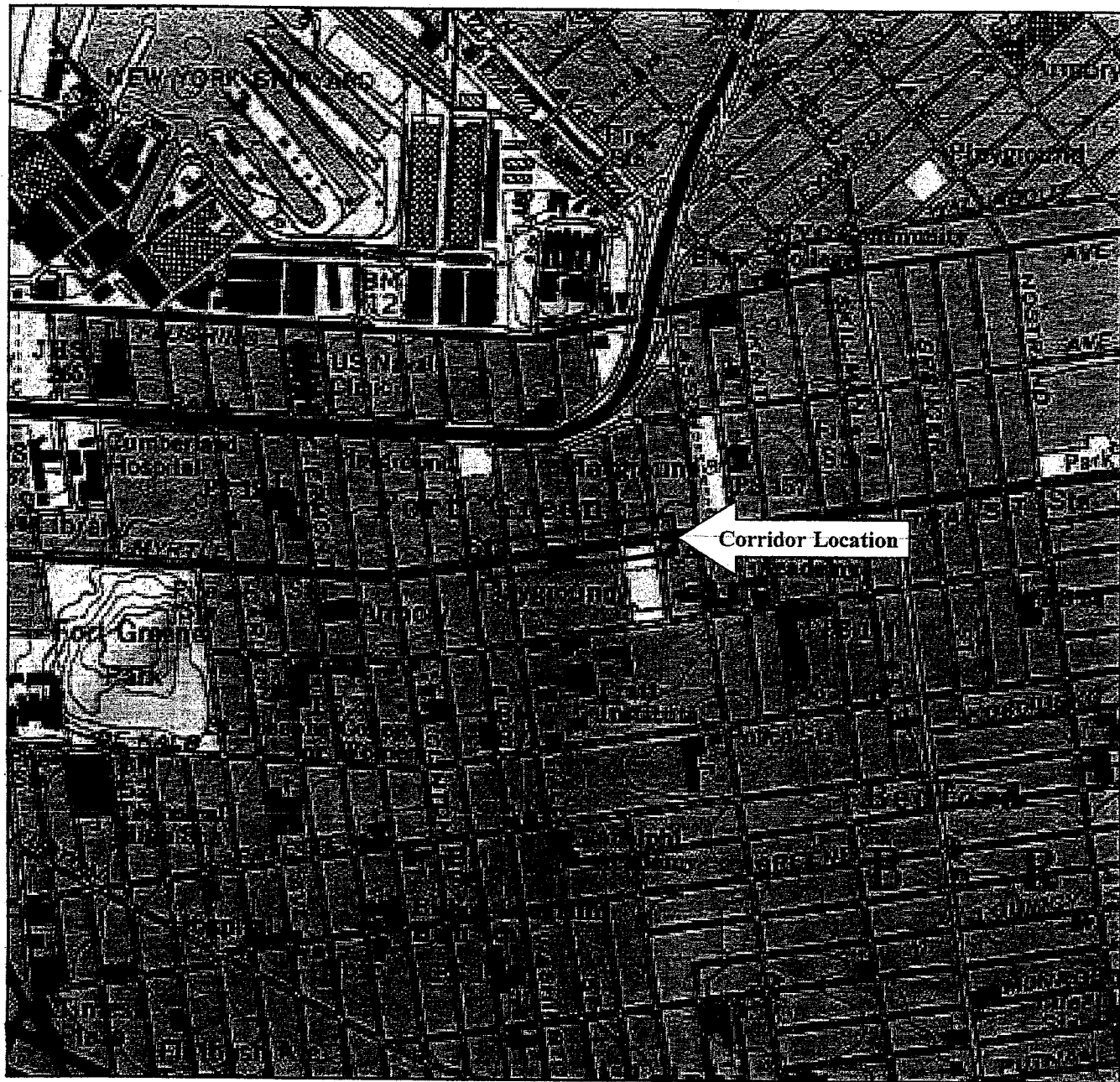
DDC Project Number: HWPLZ-001K

February 28, 2012

Work Order Letter No. 8035-ATC-7538



FIGURE 1 – TOPOGRAPHIC CORRIDOR LOCATION MAP



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USGS Brooklyn, NY
Quadrangle (1995)

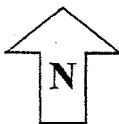


FIGURE 1 – TOPOGRAPHIC CORRIDOR LOCATION MAP

PROJECT NAME: Myrtle Avenue between Hall Street and Emerson Place

BOROUGH, STATE: Staten Island, NY

ATC PROJECT NO. : 015.38500.127

DDC REGISTRATION CONTRACT NO. : 20090016802

DDC PROJECT NO. : HWPLZ-001K

DDC WORK ORDER NO.: 8035-ATC-7538



FIGURE 2 – SAMPLE LOCATION PLAN

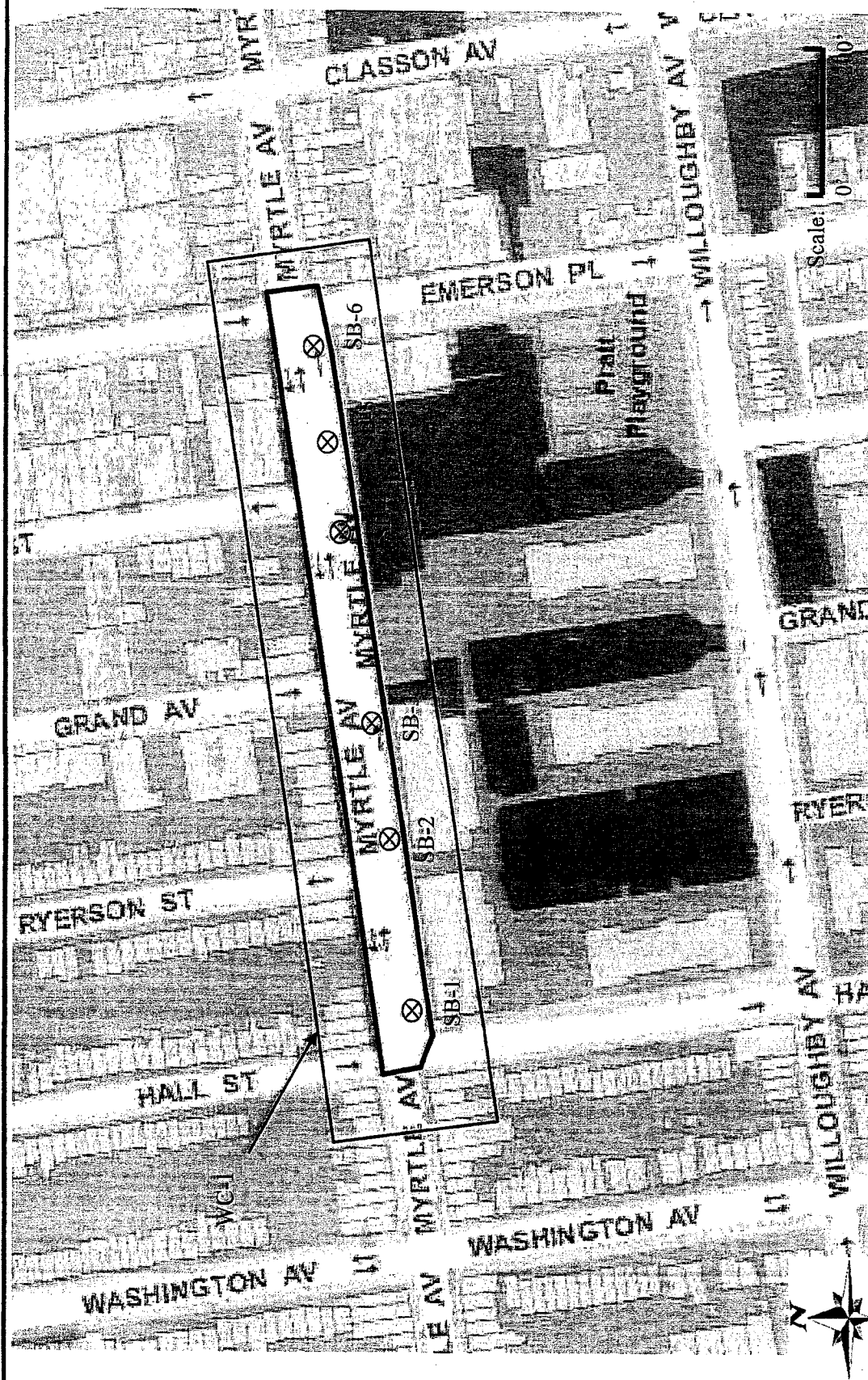




FIGURE 2 – SAMPLE LOCATION PLAN

PROJECT NAME: Myrtle Avenue between Hall Street and Emerson Place
BOROUGH, STATE: Brooklyn, NY
ATC PROJECT NO.: 015.38500.0127
DDC REGISTRATION CONTRACT NO.: 20090016802
DDC PROJECT NO.: HWPLZ-001K
DDC WORK ORDER NO.: 8035-ATC-7538

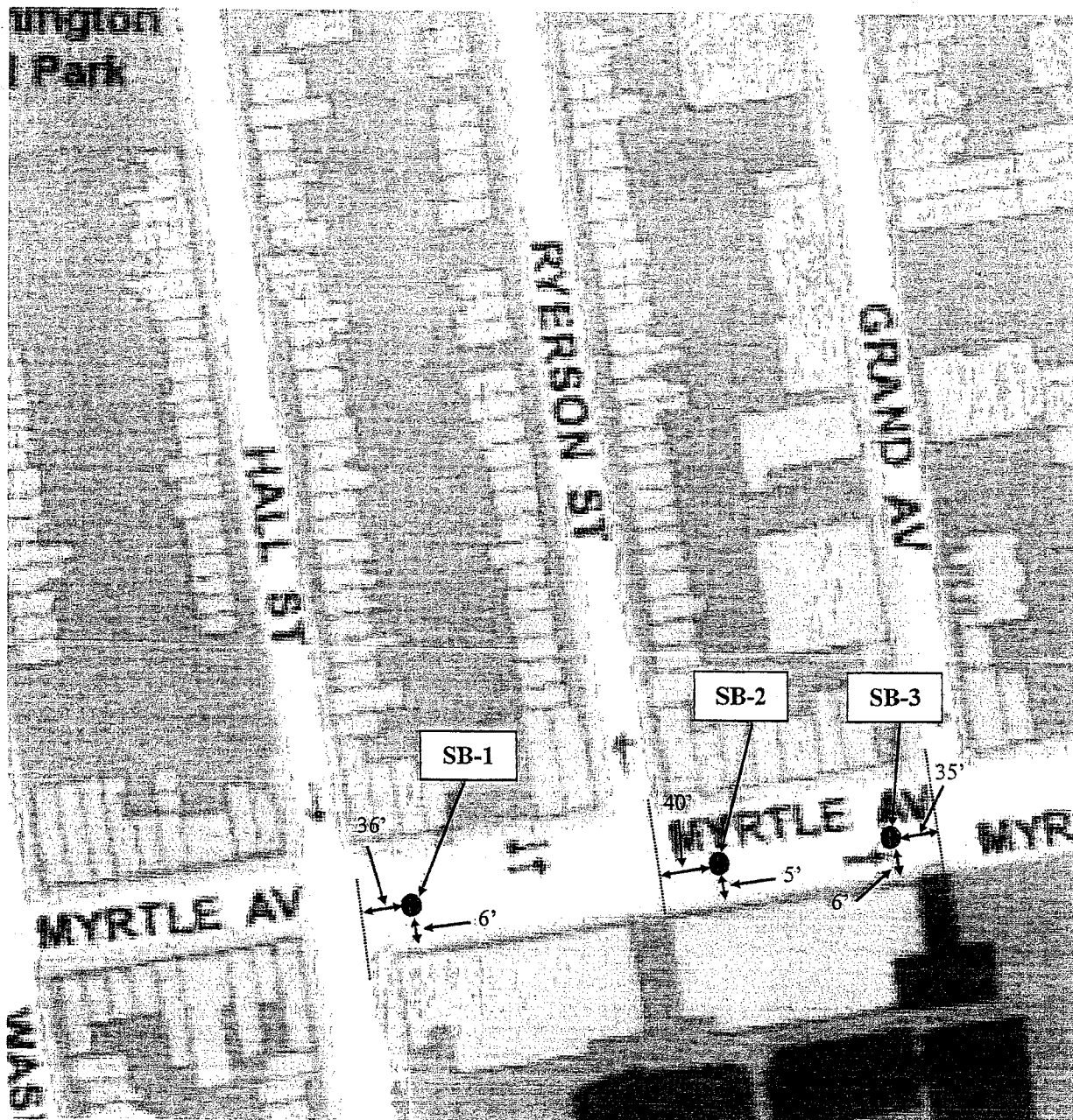
LEGEND:

-  Corridor
-  Soil Boring Location





APPENDIX A
BORING LOCATION SKETCHES



- Not To Scale -



Appendix A - Boring Location Sketch



LEGEND:

- High and Moderate Risk Soil Borings

PROJECT NAME: Myrtle Avenue between Hall Street and Emerson Place

BOROUGH, STATE: Brooklyn, NY

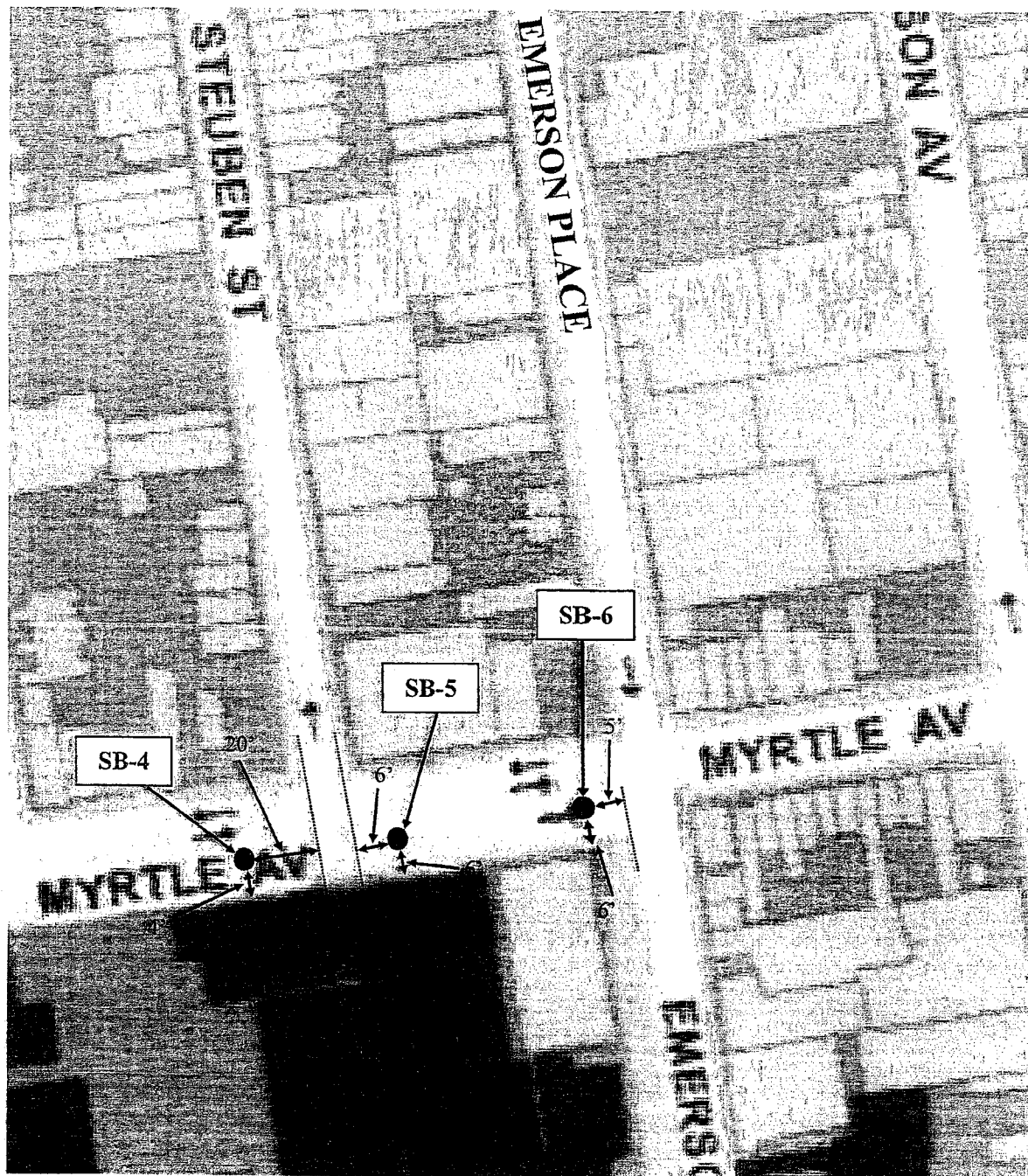
ATC PROJECT NO. : 015.38500.0127

DDC REGISTRATION CONTRACT NO. : 20090016802

DDC PROJECT NO. : HWPLZ-001K

DDC WORK ORDER NO. : 8035-ATC-7538





- Not To Scale -



Appendix A - Boring Location Sketch

LEGEND:

- High and Moderate Risk Soil Borings

PROJECT NAME: Myrtle Avenue between Hall Street and Emerson Place

BOROUGH, STATE: Brooklyn, NY

ATC PROJECT NO. : 015.38500.0127


DDC REGISTRATION CONTRACT NO. : 20090016802

DDC PROJECT NO. : HWPLZ-001K

DDC WORK ORDER NO. : 8035-ATC-7538



APPENDIX B
GEOLOGIC BORING LOGS

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.: SB - 1
			DDC Project No.: HWPLZ-001K			Project Location: Brooklyn, NY
			DDC Task No.: 8035-ATC-7538		Boring Location: Advanced in Myrtle Avenue, 36 feet east of the eastern curbline of Hall Street and 6 feet north of the southern curbline of Myrtle Avenue.	
			ATC Project No.: 015.38500.0127			
Driller: Warren George, Inc.			Drilling Method: Vactron and Post Hole Digger / Geoprobe			
Inspector: Jed Myers			Sampling Method: Macro Core			
Groundwater: No groundwater encountered					Date: January 31, 2012	
Depth (ft.)	Well Point Construction	Sample Interval	Recovery (ft.)	PID Reading (ppm)	Lithology and Field Observations	
0			4	0	0 - 6' - Asphalt, bricks and cobbles with some medium to fine SAND - Fill material	
4					0 - 6' - Cleared via Vactron and Post Hole Digger	
8			3	0	6 - 8' - Brown, fine to medium SAND, little gravel	
					8 - 10' - Brown, silty fine SAND	
12			4	0	10 - 13' - Brown, SILT	
16			4	0	13 - 20' - Brown, clayey SILT	
20		19.5-20' 0-20'	2	0	Boring completed at a depth of 20 feet	

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.:
SB - 2

DDC Project No.: HWPLZ-001K

Project Location: Brooklyn, NY

DDC Task No.: 8035-ATC-7538

Boring Location:

ATC Project No.: 015.38500.0127

Advanced in Myrtle Avenue, 40 feet east of
the eastern curbline of Ryerson Street and 5
feet north of the southern curbline of Myrtle
Avenue.

Driller: Warren George, Inc.

Drilling Method: Vactron and Post Hole Digger
/ Geoprobe


Inspector: Jed Myers


Sampling Method: Macro Core


Groundwater: No groundwater encountered

Date: January 31, 2012


Depth (ft.)	Well Point Construction	Sample Interval	Recovery (ft.)	PID Reading (ppm)	Lithology and Field Observations
0			4	0	0 - 6' - Asphalt, bricks and cobbles with some medium to fine SAND - Fill material
4					0 - 6' - Cleared via Vactron and Post Hole Digger
8			2	0	6 - 14' - Brown, silty fine SAND
12			3	0	
16			4	0	14 - 18' - Brown, SILT
20		19.5-20' 0-20'	2	0	18 - 20' - Brown, silty CLAY
					Boring completed at a depth of 20 feet

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.: SB-3
			DDC Project No: HWPLZ-001K		
			DDC Task No.: 8035-ATC-7538		Boring Location: Advanced in Myrtle Avenue, 35 feet west of the western curbline of Grand Avenue and 6 feet north of the southern curbline of Myrtle Avenue.
			ATC Project No.: 015.38500.0127		
Driller: Warren George, Inc.			Drilling Method: Vactron and Post Hole Digger / Geoprobe		
Inspector: Jed Myers			Sampling Method: Macro Core		
Groundwater: No groundwater encountered			Date: January 30, 2012		
Depth (ft.)	Well Point Construction	Sample Interval	Recovery (ft.)	PID Reading (ppm)	Lithology and Field Observations
0			4	0	0 - 6' - Asphalt, bricks and cobbles with some medium to fine SAND - Fill material 0 - 6' - Cleared via Vactron and Post Hole Digger
4			3	0	6 - 14' - Brown, silty fine SAND
8			2	0	
12			1	0	Boring completed at a depth of 14 feet
		13.5-14'			
16		0-14'			
20					

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.: SB - 4
			DDC Project No.: HWPLZ-001K		
			DDC Task No.: 8035-ATC-7538		Boring Location: Advanced in Myrtle Avenue, 20 feet west of the western curbline of Steuben Street and 4 feet north of the southern curbline of Myrtle Avenue.
			ATC Project No.: 015.38500.0127		
Driller: Warren George, Inc.			Drilling Method: Vactron, Air Knife, and Post Hole Digger / Geoprobe		
Inspector: Jed Myers			Sampling Method: Macro Core		
Groundwater: No groundwater encountered					Date: January 31, 2012
Depth (ft.)	Well Point Construction	Sample Interval	Recovery (ft.)	PID Reading (ppm)	Lithology and Field Observations
0			4	0	0 - 6' - Asphalt, bricks and cobbles with some medium to fine SAND - Fill material
4					0 - 6' - Cleared via Vactron and Post Hole Digger
8			4	0	6 - 10' - Brown, fine SAND, trace silt
12			4	0	10 - 12' - Brown, fine SAND
16			4	0	12 - 14' - Brown, silty fine SAND 14 - 20' - Brown, clayey SILT
20		19.5-20' 0-20'	2	0	Boring completed at a depth of 20 feet

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.: SB - 5
			DDC Project No.: HWPLZ-001K		
			DDC Task No.: 8035-ATC-7538		Boring Location:
			ATC Project No.: 015.38500.0127		
Driller: Warren George, Inc.			Drilling Method: Vactron, Air Knife, and Post Hole Digger / Geoprobe		
Inspector: Jed Myers			Sampling Method: Macro Core		
Groundwater: No groundwater encountered					Date: January 30, 2012
Depth (ft.)	Well Point Construction	Sample Interval	Recovery (ft.)	PID Reading (ppm)	Lithology and Field Observations
0			4	0	0 - 6' - Asphalt, bricks and cobbles with some medium to fine SAND - Fill material
4					0 - 6' - Cleared via Vactron and Post Hole Digger
8			1	0	6 - 10' - Brown, medium to fine(+) SAND, little gravel
12			4	0	10 - 20' - Brown, fine SAND, trace gravel
16			1	0	
20		19.5-20' 0-20'	1	0	Boring completed at a depth of 20 feet

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.: SB - 6
					DDC Project No.: HWPLZ-001K		Project Location: Brooklyn, NY
					DDC Task No.: 8035-ATC-7538	Boring Location:	
					ATC Project No.: 015.38500.0127	Advanced in Myrtle Avenue, 5 feet west of the western curbline of Emerson Place and 6 feet north of the southern curbline of Myrtle Avenue.	
Driller: Warren George, Inc.					Drilling Method: Vactron, Air Knife, and Post Hole Digger / Geoprobe		Date: January 30, 2012
Inspector: Jed Myers					Sampling Method: Macro Core		
Groundwater: No groundwater encountered							
Depth (ft.)	Well Point Construction	Sample Interval	Recovery (ft.)	PID Reading (ppm)	Lithology and Field Observations		
0			4	0	0 - 6' - Asphalt, bricks and cobbles with some medium to fine SAND - Fill material		
4					0-6' - Cleared via Vactron and Post Hole Digger		
8			2	0	6 - 10' - Brown, silty CLAY		
12			3	0	10 - 14' - Brown, silty fine SAND, trace gravel		
16			3	0	14 - 20' - Brown, SILT		
20		19.5-20' 0-20'			Boring completed at a depth of 20 feet		



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. 5

This addendum consists of eighty-one (81) pages

NO TEXT ON THIS PAGE

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

PROJECT ID: HWPLZ001K

RECONSTRUCTION OF MYRTLE AVENUE
HALL STREET TO EMERSON PLACE

INCLUDING SEWER, WATER MAIN, STREET LIGHTING, AND TRAFFIC WORK
TOGETHER WITH ALL WORK INCIDENTAL THERETO

BOROUGH OF BROOKLYN
CITY OF NEW YORK

ADDENDUM NO. 6
DATED: JANUARY 28, 2013

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 A6-3 through A6-13).
 - B. Schedule U-1 (Page A6-14).
 - C. Schedules U-2 (one for each Utility Company) (Pages A6-15 through A6-44).
 - D. Section U-3 Page A6-45 (as per the Private Utilities reference document for SECTION U called "CET SPECIFICATIONS AND SKETCHES", dated November 2010, and Test Pits , Sketches Pages (A6-46 through A6-54) in this Addendum.
 - E. Utility drawings (4 drawings) consisting of: Con Edison Conduit and Duct Occupancy Plate (1 sheet); Con Edison Low Tension Mains and Service Plate (1 sheet); Con Edison CET-700 Location (1 sheet); and Verizon Special Care Excavation (1 sheet). All (4 sheets) are 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 A6-13, 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).

6. *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.

7. *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.

8. *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.

9. *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

HWPLZ001K

Reconstruction of Myrtle Avenue

Listing of Companies for this Contract

COMPANY NAME	CONTACT NAME	TELEPHONE NUMBER
Consolidated Edison	Theresa Kong	212-460-4834
Time Warner	John Piazza	(718) 888-4261
National Grid	Neville Jacobs	(718) 963-5612
Verizon	Aubrey Makhanlal	(718) 977-8165

SCHEDULE U-2
FOR INFORMATION ONLY
ENGINEER'S ESTIMATE OF QUANTITY AND TYPES OF INTERFERENCE
FOR CONSOLIDATED EDISON

HWPLZ001K

Myrtle Avenue btwn Hall St & Emerson Place

CET ITEM	DESCRIPTION	UNITS	ESTIMATED QUANTITY
CET 100.1	UTILITIES CROSSING TRENCH FOR CATCH BASIN CHUTE CONNECT. AND/OR TESTPIT (TYPE .1)	EA	3
CET 100.2	UTILITIES CROSSING TRENCH FOR CATCH BASIN CHUTE CONNECT. AND/OR TESTPIT (TYPE .2)	EA	6
CET 100.3	UTILITIES CROSSING TRENCH FOR CATCH BASIN CHUTE CONNECT. AND/OR TESTPIT (TYPE .3)	EA	6
CET 101.1	UTILITIES CROSSING TRENCH FOR SEWERS UP TO AND INCL. 24" DIAMETER (TYPE .1)	EA	5
CET 108.1	UTILITIES CROSSING TRENCH FOR WATERMAIN UP TO AND INCL. 12" DIAMETER (TYPE .1)	EA	4
CET 108.2	UTILITIES CROSSING TRENCH FOR WATERMAIN UP TO AND INCL. 12" DIAMETER (TYPE .2)	EA	1
CET 108.3	UTILITIES CROSSING TRENCH FOR WATERMAIN UP TO AND INCL. 12" DIAMETER (TYPE .3)	EA	2
CET 108.4	UTILITIES CROSSING TRENCH FOR WATERMAIN UP TO AND INCL. 12" DIAMETER (TYPE .4)	EA	1
CET 109.2	UTILITIES CROSSING TRENCH FOR WATERMAIN OVER 12" AND UP TO 24" (TYPE .2)	EA	3
CET 200.1	EXTRA DEPTH EXCAVATION OF CATCH BASIN CHUTE CONNECTIONSS (INVERT DEPTH 4'-6" TO 5' FOR TYPE 2 OR UP TO 5'-6" FOR TYPE 3)	L.F.	32
CET 200.2	EXTRA DEPTH EXCAVATION OF CATCH BASIN CHUTE CONNECTIONSS (INVERT DEPTH 5' TO 6' FOR TYPE 2 OR > 5'-6" TO 6'-6" FOR TYPE 3)	L.F.	32
CET 225.1A	INSTALLATION AND REMOVAL OF CATCH BASINS WITH UTILITY INTERFERENCES	EA	8
CET 225.1B	INSTALLATION OF CATCH BASINS WITH UTILITY INTERFERENCES	EA	1
CET 300	SPECIAL CARE EXCAVATION AND BACKFILING	C.Y.	55
CET 301	SPECIAL CARE HAND EXCAVATION OIL-O-STATIC ENCROACHMENT	C.Y.	84
CET 302	FIELD COATING OF OIL-O-STATIC FEEDER PIPES	L.F.	70
CET 303	FURNISH, DELIVER AND INSTALL 3/8" CLEAN SAND BACKFILL	C.Y.	16

SCHEDULE U-2
FOR INFORMATION ONLY
ENGINEER'S ESTIMATE OF QUANTITY AND TYPES OF INTERFERENCE
FOR CONSOLIDATED EDISON

HWPLZ001K
Myrtle Avenue btwn Hall St & Emerson Place

CET ITEM	DESCRIPTION	UNITS	ESTIMATED QUANTITY
CET 304 B	FURNISH, DELIVER AND INSTALL CONCRETE SIDEWALK	C.Y.	7
CET 330E-A.1	SUPPORT & PROTECT ELEC, GAS & STEAM FAC. DURING EXCAVATION OF CITY TRENCH WHEN FAC. LIE W/IN TRENCH LIMITS W/O SHEETING (TYPE .1)	L.F.	9
CET 330E-A.3	SUPPORT & PROTECT ELEC, GAS & STEAM FAC. DURING EXCAVATION OF CITY TRENCH WHEN FAC. LIE W/IN TRENCH LIMITS W/O SHEETING (TYPE .3)	L.F.	35
CET 400	TEST PITS FOR UTILITY FACILITIES	C.Y.	19
CET 401	TRENCH EXCAVATION FOR ADJUSTMENT OF UTILITIES	C.Y.	40
CET 402.1A	EXISTING OCCUPIED CONCRETE ENCASED CONDUITS PLACED IN FINAL POSITION WITH CONCRETE ENCASEMENT	L.F.	20
CET 402.2	EXISTING OCCUPIED NON-CONCRETE ENCASED CONDUITS PLACED IN FINAL POSITION W/O CONCRETE ENCASEMENT	L.F.	70
CET 403	PLACING STEEL PROTECTION PLATES FOR UTILITY FACILITIES	S.F.	200
CET 450.3	CONSTRUCTION FIELD SUPPORT REQUIRING AVERAGE MEDIUM SIZE CREW CAPABLE OF PERFORMING VARIOUS TASKS (TYPE .3)	CRHRS	2
CET 500	REMOVAL OF ABANDONED UTILITY CONDUITS (NON-CONCRETE ENCASED)	L.F.	130
CET 601.1	INSTALL CONDUIT IN PAVED AREA (1 EA. 2", 4" OR 5" CONDUIT - ALL TYPES)	L.F.	85
CET 636 ED RD	ADJUSTMENT OF UTILITY HARDWARE IN ROADWAY (30" TO UNDER 34" WIDTH)	EA	21
CET 636 ED SW	ADJUSTMENT OF UTILITY HARDWARE IN SIDEWALK (30" TO UNDER 34" WIDTH)	EA	5
CET 636 EE RD	ADJUSTMENT OF UTILITY HARDWARE IN ROADWAY (34" TO UNDER 41" WIDTH)	EA	1
CET 636 EE SW	ADJUSTMENT OF UTILITY HARDWARE IN SIDEWALK (34" TO UNDER 41" WIDTH)	EA	3
CET 636 EH SW	ADJUSTMENT OF UTILITY HARDWARE IN SIDEWALK (75" TO UNDER 125" WIDTH)	EA	4
CET 636 RM	REBUILDING & MODIFICATIONS OF UTILITY STRUCTURE	C.Y.	22

SCHEDULE U-2
FOR INFORMATION ONLY
ENGINEER'S ESTIMATE OF QUANTITY AND TYPES OF INTERFERENCE
FOR CONSOLIDATED EDISON

HWPLZ001K
Myrtle Avenue btwn Hall St & Emerson Place

CET ITEM	DESCRIPTION	UNITS	ESTIMATED QUANTITY
CET 700	SPECIAL MOD. OF WORK METHODS TO ACCOMM./ PROTECT U.G. FACILITIES WITH LIMITED COVER	C.Y.	71
CET 802A	SPECIAL MODIFICATION OF WORK FOR INSTALLATION OF NEW SIDEWALKS	S.F.	3,461
CET 802B	SPECIAL MODIFICATION OF WORK FOR INSTALLATION OF NEW CURBS	L.F.	1,362
CET 803.2	LINE CUT BY PNEUMATIC TOOLS IN LIEU OF SAW CUT ASSOCIATED W/ ROADWAY REMOVAL (ASPHALT & CONCRETE)	L.F.	140
CET 1006V	6" VERTICAL OR ROLLED WATER MAIN OFFSET	EA	3
CET 1008V	8" VERTICAL OR ROLLED WATER MAIN OFFSET	EA	7
CET 1020V	20" VERTICAL OR ROLLED WATER MAIN OFFSET	EA	4

CON EDISON SCOPE OF WORK
SUPPORT AND PROTECTION
HWPLZ001K
Myrtle Avenue btwn Hall St & Emerson Place

CET 100.1 UTILITIES CROSSING TRENCH FOR CATCH BASIN CHUTE CONNECT. AND/OR TESTPIT (TYPE .1) EA

At the following locations:

S/C Myrtle Avenue, W/W/C Hall Street
W/C Hall Street, S/S/C Myrtle Avenue
W/S Emerson Place, S/O Myrtle Avenue

Total quantity for CET 100.1 = 3

CET 100.2 UTILITIES CROSSING TRENCH FOR CATCH BASIN CHUTE CONNECT. AND/OR TESTPIT (TYPE .2) EA

At the following locations:

N/C Myrtle Avenue, W/W/C Grand Avenue
NW/C Myrtle Avenue & Emerson Place
Opp Intersection Of Myrtle Ave & Grand Avenue
S/S Myrtle Avenue Between Steuben Street and Emerson Place
NW/C Myrtle Avenue & Hall Street

Total quantity for CET 100.2 = 6

CET 100.3 UTILITIES CROSSING TRENCH FOR CATCH BASIN CHUTE CONNECT. AND/OR TESTPIT (TYPE .3) EA

At the following locations:

18' S/S/C Myrtle Avenue, 22' E/W/C Hall Street
Opp Intersection Of Myrtle Ave & Reyerson St
NW/C Myrtle Avenue & Steuben Street
W/C Emerson Place, S/O Myrtle Avenue
N/E/C Myrtle Avenue & Emerson Place
SW/C Myrtle Avenue & Hall Street
AS ENCOUNTERED AND DIRECTED BY A CON EDISON REPRESENTATIVE

Total quantity for CET 100.3 = 6

CET 101.1 UTILITIES CROSSING TRENCH FOR SEWERS UP TO AND INCL. 24" DIAMETER (TYPE .1) EA

At the following locations:

SW/C Myrtle Avenue & Hall Street
Intersection @ Myrtle Avenue & Hall Street

Total quantity for CET 101.1 = 5

CON EDISON SCOPE OF WORK
SUPPORT AND PROTECTION

HWPLZ001K

Myrtle Avenue btwn Hall St & Emerson Place

CET 108.1	UTILITIES CROSSING TRENCH FOR WATERMAIN UP TO AND INCL. 12" DIAMETER (TYPE .1) <i>At the following locations:</i> F/O #531 Myrtle Avenue F/O #541 Myrtle Avenue S/E/C Myrtle Avenue & Emerson Place Total quantity for CET 108.1 = 4	EA
CET 108.2	UTILITIES CROSSING TRENCH FOR WATERMAIN UP TO AND INCL. 12" DIAMETER (TYPE .2) <i>At the following locations:</i> W/S Reyerson Street, N/O Myrtle Avenue Total quantity for CET 108.2 = 1	EA
CET 108.3	UTILITIES CROSSING TRENCH FOR WATERMAIN UP TO AND INCL. 12" DIAMETER (TYPE .3) <i>At the following locations:</i> Hydrant N/S Myrtle Ave Btwn Grand Ave & Steuben St Hydrant N/S Myrtle Ave Btwn Steuben St & Emerson Pl Total quantity for CET 108.3 = 2	EA
CET 108.4	UTILITIES CROSSING TRENCH FOR WATERMAIN UP TO AND INCL. 12" DIAMETER (TYPE .4) <i>At the following locations:</i> Intersection @ Myrtle Avenue & Hall Street Total quantity for CET 108.4 = 1	EA
CET 109.2	UTILITIES CROSSING TRENCH FOR WATERMAIN OVER 12" AND UP TO 24" (TYPE .2) <i>At the following locations:</i> Intersection @ Myrtle Avenue & Hall Street N/W/C Myrtle Avenue & Reyerson Street N/E/C Myrtle Avenue & Reyerson Street Total quantity for CET 109.2 = 3	EA

CON EDISON SCOPE OF WORK
SUPPORT AND PROTECTION

HWPLZ001K

Myrtle Avenue btwn Hall St & Emerson Place

CET 200.1 EXTRA DEPTH EXCAVATION OF CATCH BASIN CHUTE CONNECTIONSS (INVERT DEPTH 4'-6" TO 5' FOR TYPE 2 OR UP TO 5'-6" FOR TYPE 3) L.F.

At the following locations:

N/C Myrtle Avenue, W/W/C Hall Street
N/W/C Myrtle Avenue & Emerson Place
W/C Emerson Place, S/O Myrtle Avenue

Total quantity for CET 200.1 = 32

CET 200.2 EXTRA DEPTH EXCAVATION OF CATCH BASIN CHUTE CONNECTIONSS (INVERT DEPTH 5' TO 6' FOR TYPE 2 OR > 5'-6" TO 6'-6" FOR TYPE 3) L.F.

At the following locations:

Opp Intersection Of Myrtle Ave & Reyerson St

Total quantity for CET 200.2 = 32

CET 225.1A INSTALLATION AND REMOVAL OF CATCH BASINS WITH UTILITY INTERFERENCES EA

At the following locations:

N/C Myrtle Avenue, W/W/C Hall Street
S/C Myrtle Avenue, W/W/C Hall Street
W/C Hall Street, S/S/C Myrtle Avenue
N/C Myrtle Avenue, W/W/C Reyerson Street
N/C Myrtle Avenue, W/W/C Grand Avenue
N/W/C Myrtle Avenue & Emerson Place
Opp Intersection Of Myrtle Ave & Reyerson St
S/W/C Myrtle Avenue & Emerson Place

Total quantity for CET 225.1A = 8

CET 225.1B INSTALLATION OF CATCH BASINS WITH UTILITY INTERFERENCES EA

At the following locations:

W/C Emerson Place, S/O Myrtle Avenue

Total quantity for CET 225.1B = 1

CON EDISON SCOPE OF WORK
SUPPORT AND PROTECTION

HWPLZ001K

Myrtle Avenue btwn Hall St & Emerson Place

CET 300

SPECIAL CARE EXCAVATION AND BACKFILING

C.Y.

At the following locations:

N/E/C Myrtle Avenue & Grand Avenue
Tree Pits On S/S Myrtle Avenue Plaza W/O Steuben Street
8" Wm @n/E/C Myrtle Avenue & Steuben Street
20" Wm @ N/E/C Myrtle Avenue & Steuben Street
Mh In Plaza @ S/W/C Myrtle Avenue & Emerson Place
N/E/C Myrtle Avenue & Hall Street
6' N/S/C Myrtle Avenue, 18' W/W/C Emerson Place
N/S Of Myrtle Avenue & Reyerson Street
Opp Intersection Of Myrtle Ave & Stueben St
Hydrant S/C Myrtle Ave Btwn Grand Ave and Steuben St
Mh Opposite Int Myrtle Ave and Steuben St
S/E/C Myrtle Avenue & Emerson Place

Total quantity for CET 300 = 55

CET 301

SPECIAL CARE HAND EXCAVATION OIL-O-STATIC ENCROACHMENT

C.Y.

At the following locations:

Intersection @ Myrtle Avenue & Hall Street
Intersection @ Myrtle Avenue & Hall Street
Intersection @ Myrtle Avenue & Hall Street
E/S Hall Street, S/O Myrtle Avenue
W/S Reyerson Street, N/O Myrtle Avenue
Intersection @ Myrtle Avenue & Reyerson Street
Swr Mh @ Myrtle Avenue & Hall Street
AS ENCOUNTERED AND DIRECTED BY A CON EDISON REPRESENTATIVE

Total quantity for CET 301 = 84

CET 302

FIELD COATING OF OIL-O-STATIC FEEDER PIPES

L.F.

At the following locations:

Intersection @ Myrtle Avenue & Hall Street
Intersection @ Myrtle Avenue & Hall Street
E/S Hall Street, S/O Myrtle Avenue
W/S Reyerson Street, N/O Myrtle Avenue
Intersection @ Myrtle Avenue & Reyerson Street

Total quantity for CET 302 = 70

CON EDISON SCOPE OF WORK
SUPPORT AND PROTECTION
HWPLZ001K
Myrtle Avenue btwn Hall St & Emerson Place

CET 303 FURNISH, DELIVER AND INSTALL 3/8" CLEAN SAND BACKFILL

C.Y.

At the following locations:

Intersection @ Myrtle Avenue & Hall Street
Intersection @ Myrtle Avenue & Hall Street
E/S Hall Street, S/O Myrtle Avenue
W/S Reyerson Street, N/O Myrtle Avenue
Intersection @ Myrtle Avenue & Reyerson Street

Total quantity for CET 303 = 16

CET 304 B FURNISH, DELIVER AND INSTALL CONCRETE SIDEWALK

C.Y.

At the following locations:

Mh Opposite Int Myrtle Ave and Grand Ave
Opp Intersection Of Myrtle Ave & Stueben St

Total quantity for CET 304 B = 7

CET 330E-A.1 SUPPORT & PROTECT ELEC, GAS & STEAM FAC. DURING EXCAVATION OF CITY TRENCH WHEN FAC. LIE W/IN TRENCH LIMITS W/O SHEETING (TYPE .1)

L.F.

At the following locations:

Swr Mh @ Myrtle Avenue & Hall Street

Total quantity for CET 330E-A.1 = 9

CET 330E-A.3 SUPPORT & PROTECT ELEC, GAS & STEAM FAC. DURING EXCAVATION OF CITY TRENCH WHEN FAC. LIE W/IN TRENCH LIMITS W/O SHEETING (TYPE .3)

L.F.

At the following locations:

S/E/C Myrtle Avenue & Hall Street
S/S Myrtle Avenue 35' W/W/C Hall Street

Total quantity for CET 330E-A.3 = 35

CET 400 TEST PITS FOR UTILITY FACILITIES

C.Y.

At the following locations:

N/C Myrtle Avenue, W/W/C Reyerson Street
7 Tree Pits @roadway Median Between Reyerson St & Grand Ave
Tree Pit N/C Myrtle Avenue, E/O Hall Street
4 Tree Pits @roadway Median Between Hall St & Reyerson St
3 Tree Pits Opp Myrtle Ave & Steuben St

Total quantity for CET 400 = 19

CON EDISON SCOPE OF WORK
SUPPORT AND PROTECTION

HWPLZ001K

Myrtle Avenue btwn Hall St & Emerson Place

CET 401	TRENCH EXCAVATION FOR ADJUSTMENT OF UTILITIES	C.Y.
	<i>At the following locations:</i> Planter W/Seat Wall @ S/E/C Myrtle Ave & Hall St Mh Opposite Int Myrtle Ave and Grand Ave Opp Intersection Of Myrtle Ave & Stueben St AS ENCOUNTERED AND DIRECTED BY A CON EDISON REPRESENTATIVE	
	Total quantity for CET 401 = 40	
CET 402.1A	EXISTING OCCUPIED CONCRETE ENCASED CONDUITS PLACED IN FINAL POSITION WITH CONCRETE ENCASEMENT	L.F.
	<i>At the following locations:</i> Mh Opposite Int Myrtle Ave and Grand Ave AS ENCOUNTERED AND DIRECTED BY A CON EDISON REPRESENTATIVE	
	Total quantity for CET 402.1A = 20	
CET 402.2	EXISTING OCCUPIED NON-CONCRETE ENCASED CONDUITS PLACED IN FINAL POSITION W/O CONCRETE ENCASEMENT	L.F.
	<i>At the following locations:</i> Opp Intersection Of Myrtle Ave & Stueben St AS ENCOUNTERED AND DIRECTED BY A CON EDISON REPRESENTATIVE	
	Total quantity for CET 402.2 = 70	
CET 403	PLACING STEEL PROTECTION PLATES FOR UTILITY FACILITIES	S.F.
	<i>At the following locations:</i> Tree Pits On S/S Myrtle Avenue Plaza W/O Steuben Street AS ENCOUNTERED AND DIRECTED BY A CON EDISON REPRESENTATIVE	
	Total quantity for CET 403 = 200	
CET 450.3	CONSTRUCTION FIELD SUPPORT REQUIRING AVERAGE MEDIUM SIZE CREW CAPABLE OF PERFORMING VARIOUS TASKS (TYPE .3)	CRHRS
	<i>At the following locations:</i> Cb @ N/W/C Myrtle Ave & Reyerson St	
	Total quantity for CET 450.3 = 2	

CON EDISON SCOPE OF WORK
SUPPORT AND PROTECTION
HWPLZ001K
Myrtle Avenue btwn Hall St & Emerson Place

- CET 500** **REMOVAL OF ABANDONED UTILITY CONDUITS (NON-CONCRETE ENCASED)** **L.F.**
At the following locations:
S/E/C Myrtle Avenue & Emerson Place
AS ENCOUNTERED AND DIRECTED BY A CON EDISON REPRESENTATIVE
Total quantity for CET 500 = 130
- CET 601.1** **INSTALL CONDUIT IN PAVED AREA (1 EA. 2", 4" OR 5" CONDUIT - ALL TYPES)** **L.F.**
At the following locations:
Various Locations
AS ENCOUNTERED AND DIRECTED BY A CON EDISON REPRESENTATIVE
Total quantity for CET 601.1 = 85
- CET 636 ED RD** **ADJUSTMENT OF UTILITY HARDWARE IN ROADWAY (30" TO UNDER 34" WIDTH)** **EA**
At the following locations:
25' N/S/C Myrtle Avenue, 87' E/E/C Hall Street
Various Locations
AS ENCOUNTERED AND DIRECTED BY A CON EDISON REPRESENTATIVE
Total quantity for CET 636 ED R = 21
- CET 636 ED SW** **ADJUSTMENT OF UTILITY HARDWARE IN SIDEWALK (30" TO UNDER 34" WIDTH)** **EA**
At the following locations:
Opp Intersection Of Myrtle Ave & Reyerson St
25' N/S/C Myrtle Avenue, 95' E/E/C Reyerson Street
S/C Myrtle Avenue, Between Grand Ave and Emerson Pl
S/C Myrtle Avenue, Opposite Int Of Reyerson St
AS ENCOUNTERED AND DIRECTED BY A CON EDISON REPRESENTATIVE
Total quantity for CET 636 ED S = 5
- CET 636 EE RD** **ADJUSTMENT OF UTILITY HARDWARE IN ROADWAY (34" TO UNDER 41" WIDTH)** **EA**
At the following locations:
Opp Intersection Of Myrtle Ave & Grand Avenue
AS ENCOUNTERED AND DIRECTED BY A CON EDISON REPRESENTATIVE
Total quantity for CET 636 EE R = 1

CON EDISON SCOPE OF WORK
SUPPORT AND PROTECTION

HWPLZ001K

Myrtle Avenue btwn Hall St & Emerson Place

CET 636 EE SW ADJUSTMENT OF UTILITY HARDWARE IN SIDEWALK (34" TO UNDER 41" WIDTH)

EA

At the following locations:

N/E/C Myrtle Avenue & Hall Street

S/C Myrtle Avenue, Opposite Int Of Steuben St

Plaza @ S/W/C Myrtle Avenue & Emerson Place

AS ENCOUNTERED AND DIRECTED BY A CON EDISON REPRESENTATIVE

Total quantity for CET 636 EE S = 3

CET 636 EH SW ADJUSTMENT OF UTILITY HARDWARE IN SIDEWALK (75" TO UNDER 125" WIDTH)

EA

At the following locations:

Vaults On S/S Myrtle Avenue Plaza W/O Steuben Street

Vault @ S/W/C Myrtle Avenue & Emerson Place

AS ENCOUNTERED AND DIRECTED BY A CON EDISON REPRESENTATIVE

Total quantity for CET 636 EH S = 4

CET 636 RM REBUILDING & MODIFICATIONS OF UTILITY STRUCTURE

C.Y.

At the following locations:

N/E/C Myrtle Avenue & Hall Street

Mh Opp Intersection Of Myrtle Ave & Reyerson St

Mh Opposite Int Myrtle Ave and Grand Ave

N/E/C Myrtle Avenue & Grand Avenue

AS ENCOUNTERED AND DIRECTED BY A CON EDISON REPRESENTATIVE

Total quantity for CET 636 RM = 22

CET 700 SPECIAL MOD. OF WORK METHODS TO ACCOMM./ PROTECT U.G. FACILITIES WITH LIMITED COVER

C.Y.

At the following locations:

Intersection @ Myrtle Avenue and Reyerson Street

Intersection @ Myrtle Avenue & Hall Street

N/E/C Myrtle Avenue & Emerson Place

N/E/C Myrtle Avenue & Grand Avenue

Mh S/S Intersection Of Myrtle Ave & Emerson Pl

AS SHOWN ON CONTRACT DRAWINGS AND DIRECTED BY A CON EDISON REP.

Total quantity for CET 700 = 71

CON EDISON SCOPE OF WORK
SUPPORT AND PROTECTION

HWPLZ001K

Myrtle Avenue btwn Hall St & Emerson Place

CET 802A

SPECIAL MODIFICATION OF WORK FOR INSTALLATION OF NEW SIDEWALKS

S.F.

At the following locations:

N/C Myrtle Avenue, W/W/C Hall Street
S/E/C Myrtle Avenue & Hall Street (SI Srvce)
S/C Myrtle Avenue, 85' E/E/C Hall Street
N/E/C Myrtle Avenue & Hall Street
F/O #483 Myrtle Avenue
F/O #485 Myrtle Avenue
F/O #487 Myrtle Avenue
F/O #489 Myrtle Avenue
F/O #493 Myrtle Avenue
F/O #497 Myrtle Avenue
F/O #499 Myrtle Avenue
Median On S/S Myrtle Ave Btwn Hall St and Grand Ave
F/O #501 Myrtle Avenue
F/O #503 Myrtle Avenue
F/O #507 Myrtle Avenue
F/O #511 Myrtle Avenue
F/O #505 Myrtle Avenue
F/O #513 Myrtle Avenue
F/O #519 Myrtle Avenue
F/O #521 Myrtle Avenue
F/O #525 Myrtle Avenue
F/O #531 Myrtle Avenue
S/C Myrtle Avenue, W/W/C Hall Street
Median Opposite Int Of Myrtle Ave & Reyerson St
S/C Roadway Median F/O #518 Myrtle Ave
S/C Myrtle Avenue, F/O#518 Myrtle Ave
S/C Myrtle Ave, Oppostie Grand Ave Intersection
Rdwy Median @intersection Of Myrtle Ave & Grand Ave
Sb @plaza Between Grand Ave & Steuben St
Sb @plaza Between Grand Ave & Steuben St
F/O #541 Myrtle Avenue
F/O #545 Myrtle Avenue
SI Opposite Int Of Myrtle Ave & Steuben Street
SI S/C Myrtle Avenue Btwn Steuben St & Emerson Place
Mh In Plaza @ S/W/C Myrtle Avenue & Emerson Place
Vault @ S/W/C Myrtle Avenue & Emerson Place
SI @ E/C Emerson Place, S/O Myrtle Avenue

CON EDISON SCOPE OF WORK
SUPPORT AND PROTECTION

HWPLZ001K

Myrtle Avenue btwn Hall St & Emerson Place

N/W/C Myrtle Avenue & Steuben Street

Mh Opposite Int Myrtle Ave and Steuben St

Mh In Plaza @ S/W/C Myrtle Avenue & Emerson Place

AS ENCOUNTERED AND DIRECTED BY A CON EDISON REPRESENTATIVE

Total quantity for CET 802A = 3,461

CON EDISON SCOPE OF WORK
SUPPORT AND PROTECTION

HWPLZ001K

Myrtle Avenue btwn Hall St & Emerson Place

CET 802B

SPECIAL MODIFICATION OF WORK FOR INSTALLATION OF NEW CURBS

L.F.

At the following locations:

N/C Myrtle Avenue, W/W/C Hall Street
S/C Myrtle Avenue, W/W/C Hall Street
S/E/C Myrtle Avenue & Hall Street
S/E/C Myrtle Avenue & Hall Street (SI Srvce)
S/C Myrtle Avenue, 65' E/E/C Hall Street
S/C Myrtle Avenue, 85' E/E/C Hall Street
N/E/C Myrtle Avenue & Hall Street
F/O #483 Myrtle Avenue
F/O #485 Myrtle Avenue
F/O #487 Myrtle Avenue
F/O #489 Myrtle Avenue
F/O #493 Myrtle Avenue
F/O #497 Myrtle Avenue
F/O #499 Myrtle Avenue
Median On S/S Myrtle Ave Btwn Hall St and Grand Ave
F/O #501 Myrtle Avenue
F/O #503 Myrtle Avenue
F/O #507 Myrtle Avenue
F/O #511 Myrtle Avenue
F/O #505 Myrtle Avenue
F/O #513 Myrtle Avenue
F/O #507 Myrtle Avenue
N/E/C Myrtle Avenue & Grand Avenue
W/C Grand Avenue, N/N/C Myrtle Avenue
N/E/C Myrtle Avenue & Grand Avenue
F/O #519 Myrtle Avenue
F/O #521 Myrtle Avenue
F/O #525 Myrtle Avenue
F/O #531 Myrtle Avenue
Median Opposite Int Of Myrtle Ave & Reyerson St
S/C Myrtle Avenue, Opposite Int Of Reyerson St
S/C Roadway Median F/O #518 Myrtle Ave
S/C Myrtle Avenue, F/O#518 Myrtle Ave
SI Opposite Int Of Myrtle Ave & Grand Ave
S/C Myrtle Ave, Oppostie Grand Ave Intersection
Rdwy Median @intersection Of Myrtle Ave & Grand Ave
W/C Plaza Opposite Intersection @myrtle Ave & Grand Ave

CON EDISON SCOPE OF WORK
SUPPORT AND PROTECTION

HWPLZ001K

Myrtle Avenue btwn Hall St & Emerson Place

Sb @plaza Between Grand Ave & Steuben St
Sb & SI @plaza Between Grand Ave & Steuben St
S/C Myrtle Avenue, F/O Platform Seating Area
S/C Myrtle Avenue, Opposite Int Of Steuben St
N/W/C Myrtle Avenue & Steuben Street
W/C Steuben Street, N/O Myrtle Avenue
SI @ N/W/C Myrtle Avenue & Steuben Street
F/O #541 Myrtle Avenue
F/O #545 Myrtle Avenue
SI @ N/W/C Myrtle Avenue & Emerson Place
SI Opposite Int Of Myrtle Ave & Steuben Street
SI S/C Myrtle Avenue Btwn Steuben St & Emerson Place
Mh In Plaza @ S/W/C Myrtle Avenue & Emerson Place
SI @ S/W/C Myrtle Avenue & Emerson Place
SI @ E/C Emerson Place, S/O Myrtle Avenue
S/E/C Myrtle Avenue & Emerson Place
Planter Area Opp Myrtle Ave & Steuben St
Planter Area Opp Myrtle Ave & Emerson Pl
AS ENCOUNTERED AND DIRECTED BY A CON EDISON REPRESENTATIVE

Total quantity for CET 802B = 1,362

CET 803.2

LINE CUT BY PNEUMATIC TOOLS IN LIEU OF SAW CUT ASSOCIATED W/ ROADWAY REMOVAL
(ASPHALT & CONCRETE)

L.F.

At the following locations:

Intersection @ Myrtle Avenue & Hall Street
Intersection @ Myrtle Avenue & Hall Street
18' S/S/C Myrtle Avenue, 22' E/W/C Hall Street
W/S Reyerson Street, N/O Myrtle Avenue
Myrtle Avenue & Ryerson Street
Opp Intersection Of Myrtle Ave & Reyerson St
Opp Intersection Of Myrtle Ave & Reyerson St
AS ENCOUNTERED AND DIRECTED BY A CON EDISON REPRESENTATIVE

Total quantity for CET 803.2 = 140

CON EDISON SCOPE OF WORK
SUPPORT AND PROTECTION

HWPLZ001K

Myrtle Avenue btwn Hall St & Emerson Place

CET 1006V 6" VERTICAL OR ROLLED WATER MAIN OFFSET

EA

At the following locations:

Median Opposite Int Of Myrtle Ave & Reyerson St

Hydrant N/S Myrtle Ave Btwn Hall St and Reyerson St

Hydrant On N/S Myrtle Ave Btwn Reyerson St and Grand Ave

AS ENCOUNTERED AND DIRECTED BY A CON EDISON REPRESENTATIVE

Total quantity for CET 1006V = 3

CET 1008V 8" VERTICAL OR ROLLED WATER MAIN OFFSET

EA

At the following locations:

N/E/C Myrtle Avenue & Hall Street

N/S Of Myrtle Avenue & Hall Street

N/S Intersection At Myrtle Ave & Grand Ave

N/E/C Myrtle Avenue & Steuben Street

Myrtle Avenue & Emerson Place

S/E/C Myrtle Avenue & Hall Street

N/S Of Myrtle Avenue & Reyerson Street

AS ENCOUNTERED AND DIRECTED BY A CON EDISON REPRESENTATIVE

Total quantity for CET 1008V = 7

CET 1020V 20" VERTICAL OR ROLLED WATER MAIN OFFSET

EA

At the following locations:

Intersection @ Myrtle Avenue & Hall Street

N/E/C Myrtle Avenue & Grand Avenue

N/W/C Myrtle Avenue & Steuben Street

Myrtle Avenue & Emerson Place

AS ENCOUNTERED AND DIRECTED BY A CON EDISON REPRESENTATIVE

Total quantity for CET 1020V = 4

TIME WARNER CABLE
SUPPORT & PROTECTION
HWPLZ001K
RECONSTRUCTION OF MYRTLE AVENUE FROM HALL STREET TO EMERSON PLACE
Borough of Brooklyn

CET ITEM	DESCRIPTION	UNITS	ESTIMATED QUANTITY
CET 100.1	UTILITIES CROSSING TRENCH FOR CATCH BASIN CHUTE CONNECTION	EA	1
CET 101.1	UTILITIES CROSSING TRENCH FOR SEWERS UP TO AND INCLUDING 24" DIAMETER	EA	1
CET 108.1	UTILITIES CROSSING TRENCH FOR WATER MAIN UP TO AND INCLUDING 12" DIAMETER	EA	4
CET 109.1	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 12" TO 24" DIAMETER	EA	6
CET 225.1	INSTALLATION AND REMOVAL OF CATCH BASINS WITH UTILITY INTERFERENCES	EA	1
CET 300A	SPECIAL CARE EXCAVATION AND BACKFILLING	LF	5
CET 400	TEST PITS FOR UTILITY FACILITIES	CY	10
CET 401	TRENCH EXCAVATION FOR ADJUSTMENT OF UTILITY FACILITIES	CY	6
CET 402.1	EXISTING OCCUPIED CONCRETE ENCASED CONDUITS PLACED IN FINAL POSITION WITHOUT CONCRETE	LF	33
CET 403	PLACING STEEL PROTECTION PLATES FOR UTILITY FACILITIES	SF	33
CET 636EG	ADJUSTMENT OF UTILITY HARDWARE	EA	3
CET 700	SPECIAL MODIFICATION OF WORK METHODS TO ACCOMMODATE/ PROTECT UNDERGROUND FACILITIES WITH LIMITED COVER	CY	297
CET 802A	SPECIAL CARE EXCAVATION AND RESTORATION FOR SIDEWALK WORK	SF	242
CET 802B	SPECIAL CARE EXCAVATION AND RESTORATION FOR CURB WORK	LF	12

TIME WARNER CABLE
SUPPORT & PROTECTION
HWPLZ001K
RECONSTRUCTION OF MYRTLE AVENUE FROM HALL STREET TO EMERSON PLACE
Borough of Brooklyn

CET 100.1	UTILITES CROSSING TRENCH FOR CATCH BASIN CHUTE CONNECTION At the following locations: SEC Myrtle Avenue & Hall Street	EA
		1
	Total Quantity for CET 100.1	1
CET 101.1	UTILITES CROSSING TRENCH FOR SEWERS UP TO AND INCLUDING 24" DIAMETER At the following locations: SEC Myrtle Avenue & Hall Street	EA
		1
	Total Quantity for CET 101.1	1
CET 108.1	UTILITIES CROSSING TRENCH FOR WATER MAIN UP TO AND INCLUDING 12" DIAMETER At the following locations: SEC Myrtle Avenue & Hall Street SS Myrtle Avenue & EO Grand Avenue SEC Myrtle Avenue & Emerson Place	EA
		2
		1
		1
	Total Quantity for CET 108.1	4
CET 109.1	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 12" TO 24" DIAMETER At the following locations: SWC Myrtle Avenue & Hall Street NEC Myrtle Avenue & Hall Street NEC Myrtle Avenue & Ryerson Street NWC Myrtle Avenue & Grand Avenue NS Myrtle Avenue WO Emerson Place SEC Myrtle Avenue & Emerson Place	EA
		1
		1
		1
		1
		1
		1
	Total Quantity for CET 109.1	6
CET 225.1	INSTALLATION AND REMOVAL OF CATCH BASINS WITH UTILITY INTERFERENCES At the following locations: SWC Myrtle Avenue & Hall Street	EA
		1
	Total Quantity for CET 225.1	1
CET 300A	SPECIAL CARE EXCAVATION AND BACKFILLING At the following locations: NS Myrtle Avenue WO Emerson Place	LF
		5
	Total Quantity for CET 300A	5
CET 400	TEST PITS FOR UTILITY FACILITIES At the following locations: As directed by the Time Warner Cable Representative	CY
		10
	Total Quantity for CET 400	10
CET 401	TRENCH EXCAVATION FOR ADJUSTMENT OF UTILITY FACILITIES At the following locations: SWC Myrtle Avenue & Hall Street	CY
		6
	Total Quantity for CET 401	6

TIME WARNER CABLE
SUPPORT & PROTECTION
HWPLZ001K
RECONSTRUCTION OF MYRTLE AVENUE FROM HALL STREET TO EMERSON PLACE
Borough of Brooklyn

CET 402.1	EXISTING OCCUPIED CONCRETE ENCASED CONDUITS PLACED IN FINAL POSITION WITHOUT CONCRETE At the following locations: SWC Myrtle Avenue & Hall Street	LF 33
	Total Quantity for CET 402.1	33
CET 403	PLACING STEEL PROTECTION PLATES FOR UTILITY FACILITIES At the following location: SWC Myrtle Avenue & Hall Street	SF 33
	Total Quantity for CET 403	33
CET 636EG	ADJUSTMENT OF UTILITY HARDWARE (41" TO UNDER 75" WIDTH) At the following location: NEC Myrtle Avenue & Hall Street NEC Myrtle Avenue & Ryerson Street NS Myrtle Avenue WO Emerson Place	EA 1 1 1
	Total Quantity for CET 636EG	3
CET 700	SPECIAL MODIFICATION OF WORK METHODS TO ACCOMMODATE/PROTECT UNDERGROUND FACILITIES WITH LIMITED COVER At the following locations: NS Myrtle Avenue EO Hall Street Intersection of Myrtle Avenue & Hall Street SEC Myrtle Avenue & Hall Street SS Myrtle Avenue EO Hall Street NEC Myrtle Avenue & Ryerson Street NEC Grand Street & Myrtle Avenue SS Myrtle Avenue WO Grand Street SS Myrtle Avenue EO Grand Street Intersection of Myrtle Avenue & Steuben Street Intersection of Myrtle Avenue & Emerson Place	CY 14 31 20 18 3 12 36 40 65 58
	Total Quantity for CET 700	297
CET 802A	SPECIAL CARE EXCAVATION AND RESTORATION FOR SIDEWALK WORK At the following locations: SWC Myrtle Avenue & Hall Street NEC Myrtle Avenue & Hall Street NEC Myrtle Avenue & Ryerson Street NS Myrtle Avenue WO Emerson Place	SF 38 77 91 36
	Total Quantity for CET 802A	242
CET 802B	SPECIAL CARE EXCAVATION AND RESTORATION FOR CURB At the following location: SWC Myrtle Avenue & Hall Street NEC Myrtle Avenue & Hall Street NEC Myrtle Avenue & Ryerson Street NS Myrtle Avenue WO Emerson Place	LF 3 3 3 3
	Total Quantity for CET802B	12

Support & Protection
CONTRACT NO. HWPLZ001K
Myrtle Avenue Streetscape & Plaza
Borough of Brooklyn

CET Item Number	Description	Unit	Estimated Quantity
100.2	Utilities Crossing Trench For Catch Basin Chute Connect, And/Or Test Pit (Type . 2)	Each	1
200	Extra Depth Excavation Of Catch Basin Chute Connection Pipes	LF	10
225	Installation And/Or Removal Of Catch Basins With Utility Interferences	Each	1
300	Special Care Excavation & Backfilling	CY	10
400	Test Pits	CY	10
636EA	Adjustment Of Utility Hardware (Under 7")	Each	10
636EB	Adjustment Of Utility Hardware (7" To 14")	Each	4
636EC	Adjustment Of Utility Hardware (14" To 30")	Each	1
700	Special Modification Of Work To Accommodate Utilities	CY	10
710.1	Removal of Abandoned Utility Steel/Cast Iron Pipes	LF	50
802A	Special Care For Installation Of New Sidewalks	SF	100
802B	Special Care For Installation Of New Curbs	LF	50
800	Modification of Trolley Structures Removal	LF	10

CET Item Number	Description
100.2	<p>Utilities Crossing Trench For Catch Basin Chute Connect, And/Or Test Pit (Type . 2) 4" to 10" dia.</p> <p>At the following locations: AS ENCOUNTERED AND REQUIRED BY NATIONAL GRID Quantity – 1 Ea.</p>
200	<p>Extra Depth Excavation Of Catch Basin Chute Connection Pipes</p> <p>At the following locations: AS ENCOUNTERED AND REQUIRED BY NATIONAL GRID Quantity – 10 LF</p>
225	<p>Installation And/Or Removal Of Catch Basins With Utility Interferences</p> <p>At the following locations: AS ENCOUNTERED AND REQUIRED BY NATIONAL GRID Quantity – 1 Ea.</p>
300	<p>Special Care Excavation & Backfilling</p> <p>At the following locations: AS ENCOUNTERED AND REQUIRED BY NATIONAL GRID Quantity – 10 CY</p>
400	<p>Excavation of Test Pits</p> <p>At the following locations: AS ENCOUNTERED AND REQUIRED BY NATIONAL GRID Quantity – 10 CY</p>
636EA	<p>Adjustment Of Utility Hardware (under 7" width)</p> <p>At the following locations: AS ENCOUNTERED AND REQUIRED BY NATIONAL GRID Quantity – 10 Ea.</p>
636EB	<p>Adjustment Of Utility Hardware (7" To 14")</p> <p>At the following locations: AS ENCOUNTERED AND REQUIRED BY NATIONAL GRID Quantity – 4 Ea.</p>

CET Item Number	Description
636EC	Adjustment Of Utility Hardware (14" To 30") At the following locations: AS ENCOUNTERED AND REQUIRED BY NATIONAL GRID Quantity - 1 Ea
700	Special Modification Of Work To Accommodate Underground Utilities with Limited Cover At the following locations: AS ENCOUNTERED AND REQUIRED BY NATIONAL GRID Quantity - 10 CY
710.1	Removal of Abandoned Utility Steel/Cast Iron Pipes At the following locations: AS ENCOUNTERED AND REQUIRED BY NATIONAL GRID Quantity - 50 LF
802A	Special Care For Installation Of New Sidewalks At the following locations: AS ENCOUNTERED AND REQUIRED BY NATIONAL GRID Quantity - 100 SF
802B	Special Care For Installation Of New Curbs At the following locations: AS ENCOUNTERED AND REQUIRED BY NATIONAL GRID Quantity - 50 LF
800	Modification of Trolley Structures Removal At the following locations: AS ENCOUNTERED AND REQUIRED BY NATIONAL GRID Quantity - 10 LF

SCHEDULE U-2
FOR INFORMATION ONLY
ENGINEER'S ESTIMATE OF QUANTITY AND TYPES OF INTERFERENCE
FOR EMPIRE CITY SUBWAY CO., LTD.
HWPLZ001K
Reconstruction of Myrtle Avenue

CET ITEM NUMBER	DESCRIPTION	UNITS	ESTIMATED QUANTITY
CET 100.1	UTILITIES CROSSING TRENCH FOR CATCH BASIN CHUTE CONNECT. AND/OR TEST PIT (TYPE .1)	EA.	4
CET 100.2	UTILITIES CROSSING TRENCH FOR CATCH BASIN CHUTE CONNECT. AND/OR TEST PIT (TYPE .2)	EA.	4
CET 100.3	UTILITIES CROSSING TRENCH FOR CATCH BASIN CHUTE CONNECT. AND/OR TEST PIT (TYPE .3)	EA.	2
CET 101.1	UTILITIES CROSSING TRENCH FOR SEWERS OVER 12" TO 24" DIAMETER (TYPE .1)	EA.	1
CET 101.2	UTILITIES CROSSING TRENCH FOR SEWERS OVER 12" TO 24" DIAMETER (TYPE .2)	EA.	1
CET 101.4	UTILITIES CROSSING TRENCH FOR SEWERS OVER 12" TO 24" DIAMETER (TYPE .4)	EA.	1
CET 108.1	UTILITIES CROSSING TRENCH FOR WATERMAIN UP TO AND INCL. 12" DIAMETER (TYPE .1)	EA.	5
CET 108.2	UTILITIES CROSSING TRENCH FOR WATERMAIN UP TO AND INCL. 12" DIAMETER (TYPE .2)	EA.	4
CET 108.3	UTILITIES CROSSING TRENCH FOR WATERMAIN UP TO AND INCL. 12" DIAMETER (TYPE .3)	EA.	3
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.	11
CET 109.2	UTILITIES CROSSING TRENCH FOR WATERMAIN OVER 12" AND UP TO 24" DIAMETER (TYPE .2)	EA.	3
CET 109.3	UTILITIES CROSSING TRENCH FOR WATERMAIN OVER 12" AND UP TO 24" DIAMETER (TYPE .3)	EA.	2
CET 200.1	EXTRA DEPTH EXCAVATION OF CATCH BASIN CHUTE CONNECTION PIPES	L.F.	36
CET 225.1A	INSTALLATION AND REMOVAL OF CATCH BASINS WITH UTILITY INTERFERENCES	EA.	2
CET 225.1B	INSTALLATION OF CATCH BASINS WITH UTILITY INTERFERENCES	EA.	4
CET 225.1C	REMOVAL OF CATCH BASINS WITH UTILITY INTERFERENCES	EA.	4
CET 300	SPECIAL CARE EXCAVATION & BACKFILLING	CY	41
CET 304A	FURNISH, DELIVER & INSTALL CONCRETE PAVEMENT FOR ROADWAY	C.Y.	12
CET 305	FURNISH & INSTALL ASPHALT PAVING MIXTURE	TONS	0.5

6/26/2013

HWPLZ001K - Myrtle Avenue

**ENGINEER'S ESTIMATE OF QUANTITY AND TYPES OF INTERFERENCE
FOR EMPIRE CITY SUBWAY CO., LTD.**

HWPLZ001K

Reconstruction of Myrtle Avenue

CET ITEM NUMBER	DESCRIPTION	UNITS	ESTIMATED QUANTITY
CET 330T1	SUPPORT & PROTECTION OF COMMUNICATION UTILITY FACILITIES DURING EXCAVATION OF CITY TRENCH WHEN OVERHEAD ACCOMMODATION, PROTECTION OF OH FACILITIES & APPURTENANCES	LF	90
CET 350	TEST PITS FOR UTILITY FACILITIES	L.S.	1
CET 400	TRENCH EXCAVATION FOR ADJUSTMENT OF UTILITY FACILITIES	CY	50
CET 401	EXIST. OCCUPIED NON-CONCR. ENCASED CONDUITS PLCD. IN FINAL POS. WITH CONCR. ENCSMNT.	CY	396
CET 402T.2A	EXIST. VACANT NON-CONCR. ENCASED CONDUITS PLCD. IN FINAL POS. WITH CONCR. ENCSMNT.	L.F.	4870
CET 402T.V2A	EXIST. OCCUPIED NON-CONCR. ENCASED CONDUITS PLCD. IN FINAL POS. WITHOUT CONCR. ENCSMNT.	L.F.	245
CET 402T.2	ADJUSTMENT OF UTILITY HARWARE (30" TO UNDER 34" WIDTH)	L.F.	195
CET 636 ED	REBUILDING AND MODIFICATIONS TO UTILITY STRUCTURES	EA.	5
CET 636 RM	SPECIAL MOD. OF WORK MTHDS TO ACCOM./PROTECT U.G. FACIL. W. LMTD CVR.	C.Y.	13
CET 700	REMOVABLE CURB SIDEWALK PANEL FOR ACCESS TO UTILITY STRUCTURE OPENINGS	C.Y.	750
CET 781	MODIFICATION OF NON CONCRETE YOKE TROLLEY STRUCTURES REMOVAL WHEN CROSSING UTILITY	EA.	1
CET 798	MODIFICATION OF NON CONCRETE YOKE TROLLEY STRUCTURES REMOVAL WHEN PARALELL TO UTILITY	L.F.	108
CET 799	SPECIAL MODIFICATION OF WORK METHODS FOR INSTALLATION OF NEW SIDEWALKS	L.F.	500
CET 802A	SPECIAL MODIFICATION OF WORK METHODS FOR INSTALLATION OF NEW CURB	S.F.	2500
CET 802B	6" VERTICAL OR ROLLED WATERMAIN OFFSET	L.F.	210
CET 1006V	8" VERTICAL OR ROLLED WATERMAIN OFFSET	EA.	2
CET 1008V	20" VERTICAL OR ROLLED WATERMAIN OFFSET	EA.	2
CET 1020V		EA.	2

EMPIRE CITY SUBWAY CO., LTD. CET SCOPE OF WORK

SUPPORT & PROTECTION

HWPLZ001K

Reconstruction of Myrtle Avenue

CET 100.1 UTILITIES CROSSING TRENCH FOR CATCH BASIN CHUTE CONNECT. AND/OR TEST PIT (TYPE .1)

4

Sheet #	Station	Locations
U-1	NA	SEC Myrtle Avenue and Hall Street
U-2	NA	SWC Myrtle Avenue and Emerson Place

2
2

Total quantity for CET 100.1 = 4 EA.

CET 100.2 UTILITIES CROSSING TRENCH FOR CATCH BASIN CHUTE CONNECT. AND/OR TEST PIT (TYPE .2)

4

Sheet #	Station	Locations
U-2	NA	SWC Myrtle Avenue and Emerson Place
U-2	NA	SEC Myrtle Avenue and Emerson Place - On Myrtle
U-2	NA	SEC Myrtle Avenue and Emerson Place - On Emerson
U03	NA	Intersection Myrtle Avenue and Steuben Avenue
U04	NA	Myrtle Avenue between Steuben Street and Emerson Place

1
1
1
1
1

Total quantity for CET 100.2 = 4 EA.

CET 100.3 UTILITIES CROSSING TRENCH FOR CATCH BASIN CHUTE CONNECT. AND/OR TEST PIT (TYPE .3)

2

Sheet #	Station	Locations
U-2	NA	SWC Myrtle Avenue and Steuben Street
U-2	NA	SEC Myrtle Avenue and Emerson Place - On Myrtle

1
1

Total quantity for CET 100.3 = 2 EA.

CET 101.1 UTILITIES CROSSING TRENCH FOR SEWERS OVER 12" TO 24" DIAMETER (TYPE .1)

1

Sheet #	Station	Locations
U-1	NA	SWC Myrtle Avenue and Hall Street

1

Total quantity for CET 101.1 = 1 EA.

CET 101.2 UTILITIES CROSSING TRENCH FOR SEWERS OVER 12" TO 24" DIAMETER (TYPE .2)

1

Sheet #	Station	Locations
U-1	NA	SWC Myrtle Avenue and Hall Street

1

Total quantity for CET 101.2 = 1 EA.

CET 101.4 UTILITIES CROSSING TRENCH FOR SEWERS OVER 12" TO 24" DIAMETER (TYPE .4)

1

Sheet #	Station	Locations
U-1	NA	SWC Myrtle Avenue and Hall Street

1

Total quantity for CET 101.4 = 1 EA.

CET 108.1 UTILITIES CROSSING TRENCH FOR WATERMAIN UP TO AND INCL. 12" DIAMETER (TYPE .1)

5

Sheet #	Station	Locations
U-1	NA	Intersection Myrtle Avenue and Hall Street
U-2	NA	Myrtle Avenue between Grand Avenue and Steuben Street

4
1

Total quantity for CET 108.1 = 5 EA.

CET 108.2 UTILITIES CROSSING TRENCH FOR WATERMAIN UP TO AND INCL. 12" DIAMETER (TYPE .2)

Sheet #	Station	Locations
U-1	NA	Intersection Myrtle Avenue and Hall Street
U-1	NA	Intersection Myrtle Avenue and Ryerson Street
U-2	NA	Myrtle Avenue between Grand Avenue and Steuben Street

4

2
1
1

Total quantity for CET 108.2 = 4 EA.

CET 108.3 UTILITIES CROSSING TRENCH FOR WATERMAIN UP TO AND INCL. 12" DIAMETER (TYPE .3)

Sheet #	Station	Locations
U-1	NA	Intersection Myrtle Avenue and Hall Street
U-1	NA	Intersection Myrtle Avenue and Ryerson Street

3

2
1

Total quantity for CET 108.3 = 3 EA.

CET 108.4 UTILITIES CROSSING TRENCH FOR WATERMAIN UP TO AND INCL. 12" DIAMETER (TYPE .4)

Sheet #	Station	Locations
U-1	NA	Intersection Myrtle Avenue and Hall Street
U-1	NA	Intersection Myrtle Avenue and Ryerson Street

2

1
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)

Sheet #	Station	Locations
U-1	NA	SWC Myrtle Avenue and Hall Street
U-1	NA	Intersection Myrtle Avenue and Hall Street
U-1	NA	Myrtle Avenue betw Hall Street and Ryerson Street
U-1	NA	Intersection Myrtle Avenue and Ryerson Street
U-1	NA	Myrtle Avenue betw Ryerson Street and Grand Avenue
U-2	NA	Intersection Myrtle Avenue and Grand Avenue
U-2	NA	Myrtle Avenue between Grand Avenue and Steuban Street
U-2	NA	Intersection Myrtle Avenue and Steuban Street
U-2	NA	Intersection Myrtle Avenue and Emerson Place

11

1
4
3
1
2
2
4
1
1

Total quantity for CET 109.1 = 11 EA.

CET 109.2 UTILITIES CROSSING TRENCH FOR WATERMAIN OVER 12" AND UP TO 24" DIAMETER (TYPE .2)

Sheet #	Station	Locations
U-1	NA	SWC Myrtle Avenue and Hall Street
U-2	NA	Intersection Myrtle Avenue and Emerson Place

3

2
1

Total quantity for CET 109.2 = 3 EA.

CET 109.3 UTILITIES CROSSING TRENCH FOR WATERMAIN OVER 12" AND UP TO 24" DIAMETER (TYPE .3)

Sheet #	Station	Locations
U-1	NA	SWC Myrtle Avenue and Hall Street
U-2	NA	Intersection Myrtle Avenue and Emerson Place

2

1
1

Total quantity for CET 109.3 = 2 EA.

CET 200.1	EXTRA DEPTH EXCAVATION OF CATCH BASIN CHUTE CONNECTION PIPES		36
Sheet #	Station	Locations	
U-2	NA	SWC Myrtle Avenue and Steuben Street	12
U-2	NA	SWC Myrtle Avenue and Emerson Place	12
U-2	NA	SEC Myrtle Avenue and Emerson Place - On Myrtle	12

Total quantity for CET 200.1 = 36 L.F.

CET 225.1A	INSTALLATION AND REMOVAL OF CATCH BASINS WITH UTILITY INTERFERENCES		2
Sheet #	Station	Locations	
U-1	NA	SEC Myrtle Avenue and Hall Street	1
U-1	NA	SWC Myrtle Avenue and Ryerson Street	1

Total quantity for CET 225.1A = 2 EA.

CET 225.1B	INSTALLATION OF CATCH BASINS WITH UTILITY INTERFERENCES		4
Sheet #	Station	Locations	
U-2	NA	SWC Myrtle Avenue and Steuben Street	1
U-2	NA	SWC Myrtle Avenue and Emerson Place	1
U-2	NA	SEC Myrtle Avenue and Emerson Place - On Myrtle	1
U-2	NA	SEC Myrtle Avenue and Emerson Place - On Emerson	1

Total quantity for CET 225.1B = 4 EA.

CET 225.1C	REMOVAL OF CATCH BASINS WITH UTILITY INTERFERENCES		4
Sheet #	Station	Locations	
U-2	NA	SWC Myrtle Avenue and Steuben Street	1
U-2	NA	SWC Myrtle Avenue and Emerson Place	1
U-2	NA	SEC Myrtle Avenue and Emerson Place - On Myrtle	1
U-2	NA	SEC Myrtle Avenue and Emerson Place - On Emerson	1

Total quantity for CET 225.1C = 4 EA.

CET 300	SPECIAL CARE EXCAVATION & BACKFILLING		41
Sheet #	Station	Locations	
U-1	NA	SWC Myrtle Avenue and Hall Street	13
U-1	NA	Intersection Myrtle Avenue and Hall Street	13
U-2	NA	Intersection Myrtle Avenue and Grand Avenue	5
U-2	NA	Myrtle Avenue between Grand Avenue and Steuben Street	10
U03	NA	SEC Myrtle Avenue and Grand Avenue	4

Total quantity for CET 300 = 41 CY

CET 304A	FURNISH, DELIVER & INSTALL CONCRETE PAVEMENT FOR ROADWAY		12
Sheet #	Station	Locations	
U-1	NA	SWC Myrtle Avenue and Hall Street	6
U-2	NA	SEC Myrtle Avenue and Emerson Place - On Emerson	6

Total quantity for CET 304A = 12 C.Y.

CET 305	FURNISH & INSTALL ASPHALT PAVING MIXTURE		0.5
Sheet #	Station	Locations	
U-1	NA	SWC Myrtle Avenue and Hall Street	0.25
U-2	NA	SEC Myrtle Avenue and Emerson Place - On Emerson	0.25

Total quantity for CET 305 = 0.5 TONS

CET 330T1 SUPPORT & PROTECTION OF COMMUNICATION UTILITY FACILITIES DURING EXCAVATION OF CITY TRENCH WHEN FACILITIES LIE IN OR CLOSE PROXIMITY TO TRENCH LIMITS

90

Sheet #	Station	Locations	
U-1	NA	Intersection Myrtle Avenue and Hall Street	20
U-2	NA	Intersection Myrtle Avenue and Grand Avenue	20
U-2	NA	Myrtle Avenue between Grand Avenue and Steuben Street	50

Total quantity for CET 330T1 = 90 LF

CET 350 OVERHEAD ACCOMMODATION, PROTECTION OF OH FACILITIES & APPURTENANCES

1

Sheet #	Station	Locations	
NA	NA	Contract Limits	1

Total quantity for CET 350 = 1 L.S.

CET 400 TEST PITS FOR UTILITY FACILITIES

50

Sheet #	Station	Locations	
NA	NA	As directed by Verizon Field Representative	50

Total quantity for CET 400 = 50 CY

CET 401 TRENCH EXCAVATION FOR ADJUSTMENT OF UTILITY FACILITIES

396

Sheet #	Station	Locations	
U-1	NA	SEC Myrtle Avenue and Hall Street	32
U-1	NA	SWC Myrtle Avenue and Hall Street	80
U-1	NA	SWC Myrtle Avenue and Hall Street	44
U-2	NA	SWC Myrtle Avenue and Steuben Street	56
U-2	NA	SWC Myrtle Avenue and Emerson Place	56
U-2	NA	SEC Myrtle Avenue and Emerson Place - On Myrtle	52
U-2	NA	SEC Myrtle Avenue and Emerson Place - On Emerson	32
U-2	NA	SEC Myrtle Avenue and Emerson Place - On Emerson	44

Total quantity for CET 401 = 396 CY

CET 402T.2A EXIST. OCCUPIED NON-CONCR. ENCASED CONDUITS PLCD. IN FINAL POS. WITH CONCR. ENCSMNT.

4870

Sheet #	Station	Locations	
U-1	NA	SEC Myrtle Avenue and Hall Street	70
U-1	NA	SWC Myrtle Avenue and Hall Street	1350
U-1	NA	SWC Myrtle Avenue and Hall Street	810
U-2	NA	SWC Myrtle Avenue and Steuben Street	630
U-2	NA	SWC Myrtle Avenue and Emerson Place	630
U-2	NA	SEC Myrtle Avenue and Emerson Place - On Myrtle	630
U-2	NA	SEC Myrtle Avenue and Emerson Place - On Emerson	210
U-2	NA	SEC Myrtle Avenue and Emerson Place - On Emerson	540

Total quantity for CET 402T.2A = 4870 L.F.

CET 402T.V2A EXIST. VACANT NON-CONCR. ENCASED CONDUITS PLCD. IN FINAL POS. WITH CONCR. ENCSMNT.

245

Sheet #	Station	Locations	
U-1	NA	SWC Myrtle Avenue and Hall Street	135
U-2	NA	SWC Myrtle Avenue and Emerson Place	60
U-2	NA	SEC Myrtle Avenue and Emerson Place - On Emerson	50

Total quantity for CET 402T.V2A = 245 L.F.

CET 402T.2 EXIST. OCCUPIED NON-CONCR. ENCASED CONDUITS PLCD. IN FINAL POS. WITHOUT CONCR. ENCSMNT.

Sheet #	Station	Locations	
U-1	NA	SWC Myrtle Avenue and Hall Street	90
U-2	NA	SWC Myrtle Avenue and Emerson Place	105
U-2	NA	SEC Myrtle Avenue and Emerson Place - On Myrtle	35

Total quantity for CET 402T.2 = 195 L.F.

CET 636 ED ADJUSTMENT OF UTILITY HARWARE (30" TO UNDER 34" WIDTH)

Sheet #	Station	Locations	
U-1	NA	Intersection Myrtle Avenue and Hall Street	1
U-1	NA	Intersection Myrtle Avenue and Ryerson Street	1
U-2	NA	Intersection Myrtle Avenue and Grand Avenue	1
U-2	NA	Intersection Myrtle Avenue and Steuben Street	1
U-2	NA	Intersection Myrtle Avenue and Emerson Place	1

Total quantity for CET 636 ED = 5 EA.

CET 636 RM REBUILDING AND MODIFICATIONS TO UTILITY STRUCTURES

Sheet #	Station	Locations	
U-1	NA	Intersection Myrtle Avenue and Hall Street	13

Total quantity for CET 636 RM = 13 C.Y.

CET 700 SPECIAL MOD. OF WORK MTHDS TO ACCOM./PROTECT U.G. FACIL. W. LMTD CVR.

Sheet #	Station	Locations	
NA	NA	As shown on special care excavation plan	750

Total quantity for CET 700 = 750 C.Y.

CET 781 REMOVABLE CURB SIDEWALK PANEL FOR ACCESS TO UTILITY STRUCTURE OPENINGS

Sheet #	Station	Locations	
NA	NA	Intersection of Myrtle Avenue and Steuben Street	1

Total quantity for CET 781 = 1 EA.

CET 798 MODIFICATION OF NON CONCRETE YOKE TROLLEY STRUCTURES REMOVAL WHEN CROSSING UTILITY FACILITIES

Sheet #	Station	Locations	
NA	NA	As determined by Verizon field representative	108

Total quantity for CET 798 = 108 L.F.

CET 799 MODIFICATION OF NON CONCRETE YOKE TROLLEY STRUCTURES REMOVAL WHEN PARALELL TO UTILITY FACILITIES

Sheet #	Station	Locations	
NA	NA	As determined by Verizon field representative	500

Total quantity for CET 799 = 500 L.F.

CET 802A SPECIAL MODIFICATION OF WORK METHODS FOR INSTALLATION OF NEW SIDEWALKS

Sheet #	Station	Locations	
U-1	NA	Myrtle Avenue between Hall Street and Ryerson Street	700
U-1	NA	Myrtle Avenue between Ryerson Street and Grand Avenue	420
U-2	NA	Intersection Myrtle Avenue and Grand Avenue	300
U-2	NA	Myrtle Avenue between Grand Avenue and Steuben Street	480
U-2	NA	Intersection Myrtle Avenue and Emerson Place	600

2500

Total quantity for CET 802A = 2500 S.F.

CET 802B SPECIAL MODIFICATION OF WORK METHODS FOR INSTALLATION OF NEW CURB

Sheet #	Station	Locations	
U-1	NA	Myrtle Avenue between Hall Street and Ryerson Street	36
U-1	NA	Myrtle Avenue between Ryerson Street and Grand Avenue	50
U-2	NA	Intersection Myrtle Avenue and Grand Avenue	30
U-2	NA	Myrtle Avenue between Grand Avenue and Steuben Street	24
U-2	NA	Myrtle Avenue between Steuben Street and Emerson Place	18
U-2	NA	Intersection Myrtle Avenue and Steuben Street	40
U-2	NA	Intersection Myrtle Avenue and Emerson Place	12

210

Total quantity for CET 802B = 210 L.F.

CET 1006V 6" VERTICAL OR ROLLED WATERMAIN OFFSET

Sheet #	Station	Locations	
NA	NA	As Determined by Verizon Field Rep	2

2

Total quantity for CET 1006V = 2 EA.

CET 1008V 8" VERTICAL OR ROLLED WATERMAIN OFFSET

Sheet #	Station	Locations	
NA	NA	As Determined by Verizon Field Rep	2

2

Total quantity for CET 1008V = 2 EA.

CET 1020V 20" VERTICAL OR ROLLED WATERMAIN OFFSET

Sheet #	Station	Locations	
NA	NA	As Determined by Verizon Field Rep	2

2

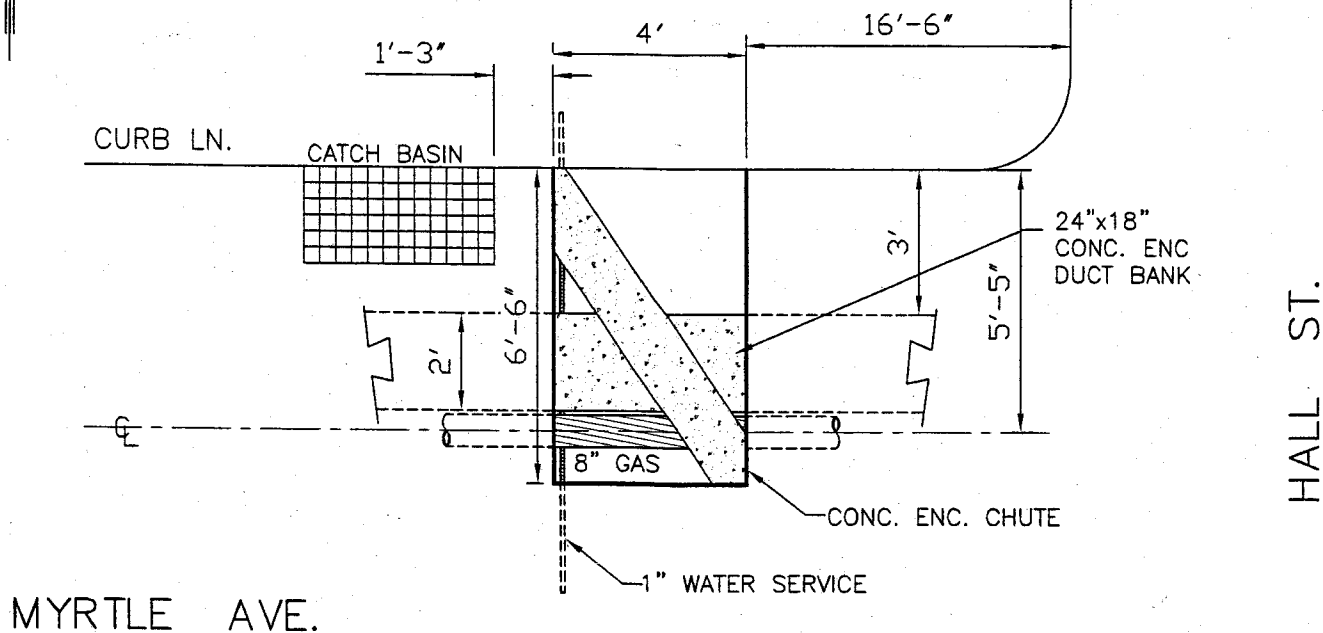
Total quantity for CET 1020V = 2 EA.

SECTION U-3

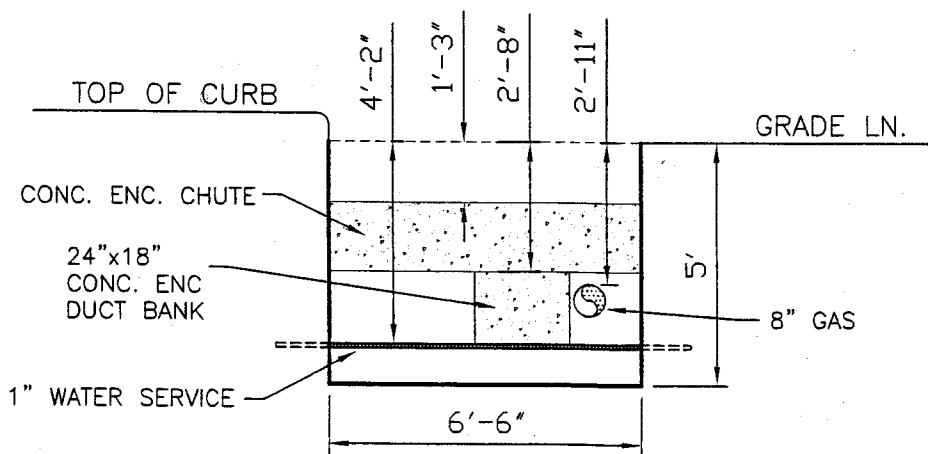
(NO TEXT IN THIS SECTION)

TEST PITS

- (1) **THESE TEST PITS DETAIL EXISTING CONDITIONS (AS OF BID DATE) OF UTILITIES AND OTHER SUBSURFACE FACILITIES AT LOCATIONS AS SHOWN ON THE TEST PIT LOCATIONS PLAN OF THE CONTRACT DRAWINGS.**
- (2) **DEPTHS OF FACILITIES ARE FROM EXISTING ROADWAY AND SIDEWALK ELEVATIONS AS SHOWN, OFFSETS ARE FROM EXISTING CURB, PROPERTY AND BUILDING LINES, AS SHOWN.**
- (3) **RELEVANT ITEMS ARE NOTED ON EACH TEST PIT DIAGRAM.**

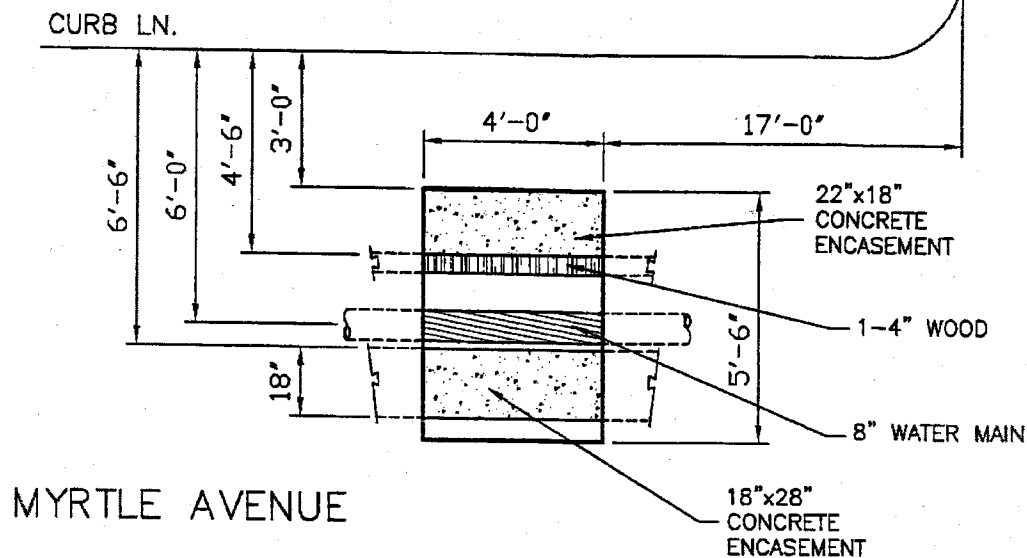
JOB NO: HWPLZ001KTEST PIT # 5PREPARED BY: R. STEINDATE: 5/25/12CHECKED BY: A. IANNIDATE: 08/10/12JOB NAME: Reconstruction of Myrtle Ave.LOCATION: Intersection of Myrtle Ave
& Hall St.PURPOSE: Locate ElectricDATE OF EXCAVATION: 5/10/12CONTRACT SHEET NO: 15 OF 48**PLAN**

N.T.S.

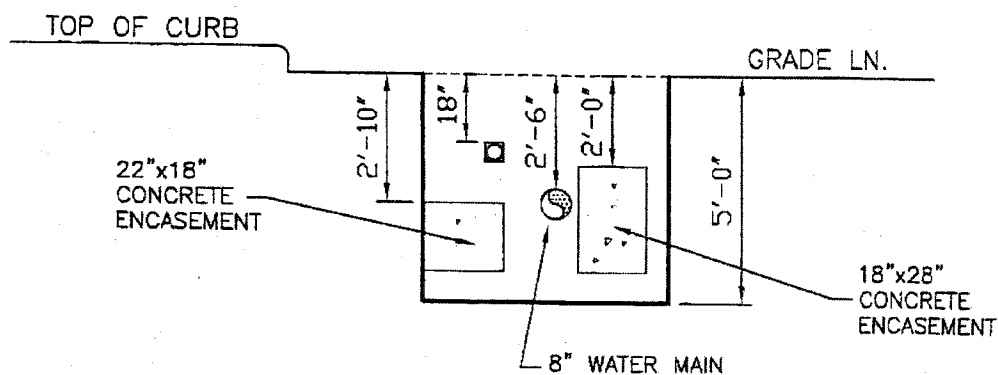
**PROFILE - LOOKING EAST**

N.T.S.

AG-47

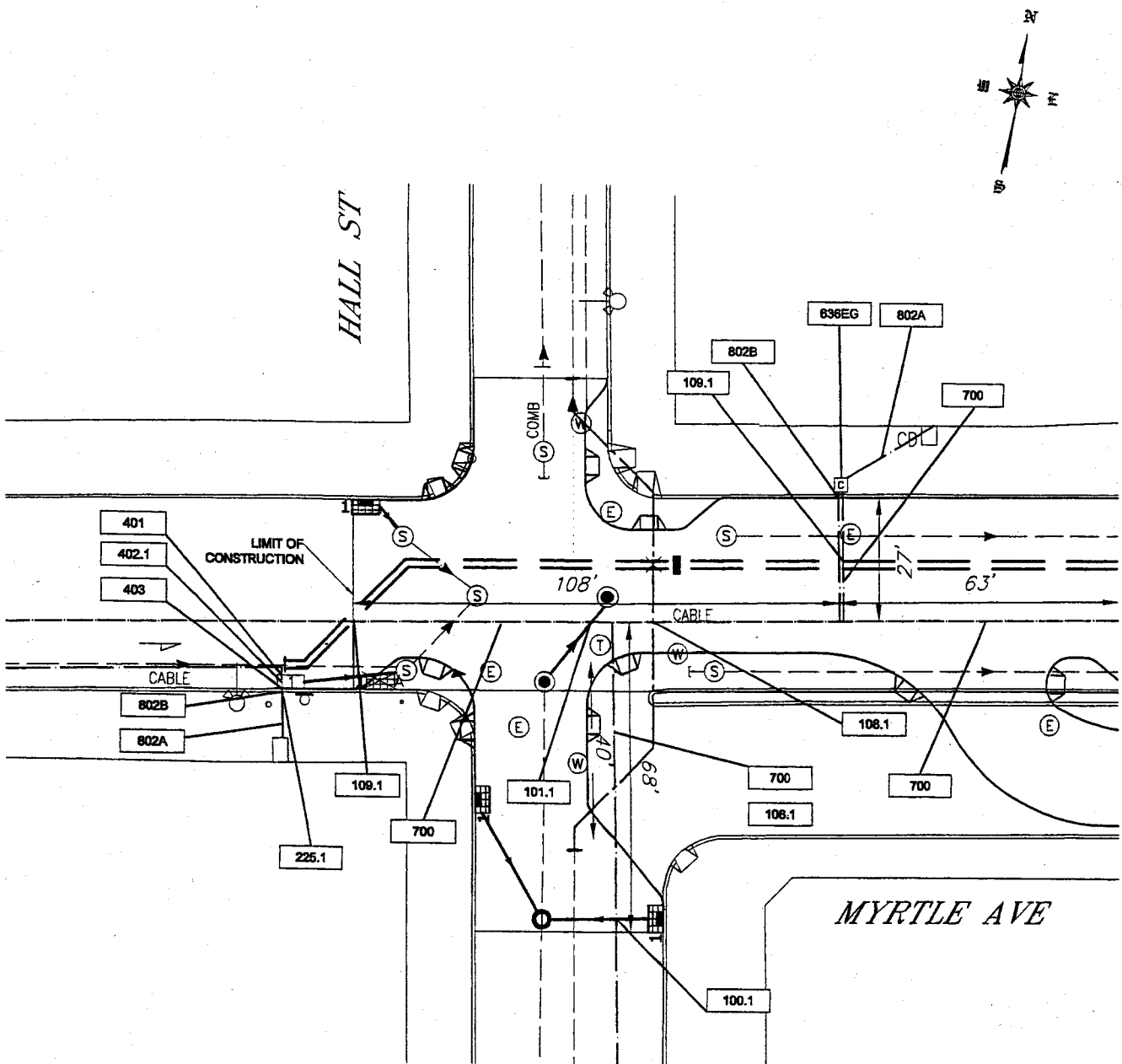
JOB NO: HWPLZ001KTEST PIT # 34PREPARED BY: C. ALUNANDATE: 05/31/12CHECKED BY: A. IANNIDATE: 08/10/12JOB NAME: RECONSTRUCTION OF MYRTLE AVELOCATION: MYRTLE AVENUE &PURPOSE: LOCATE ELECTRICEMERSON PLACEDATE OF EXCAVATION: 05/24/12CONTRACT SHEET NO: 16 OF 48**PLAN**

N.T.S.

**PROFILE - LOOKING EAST**

N.T.S.

SKETCHES



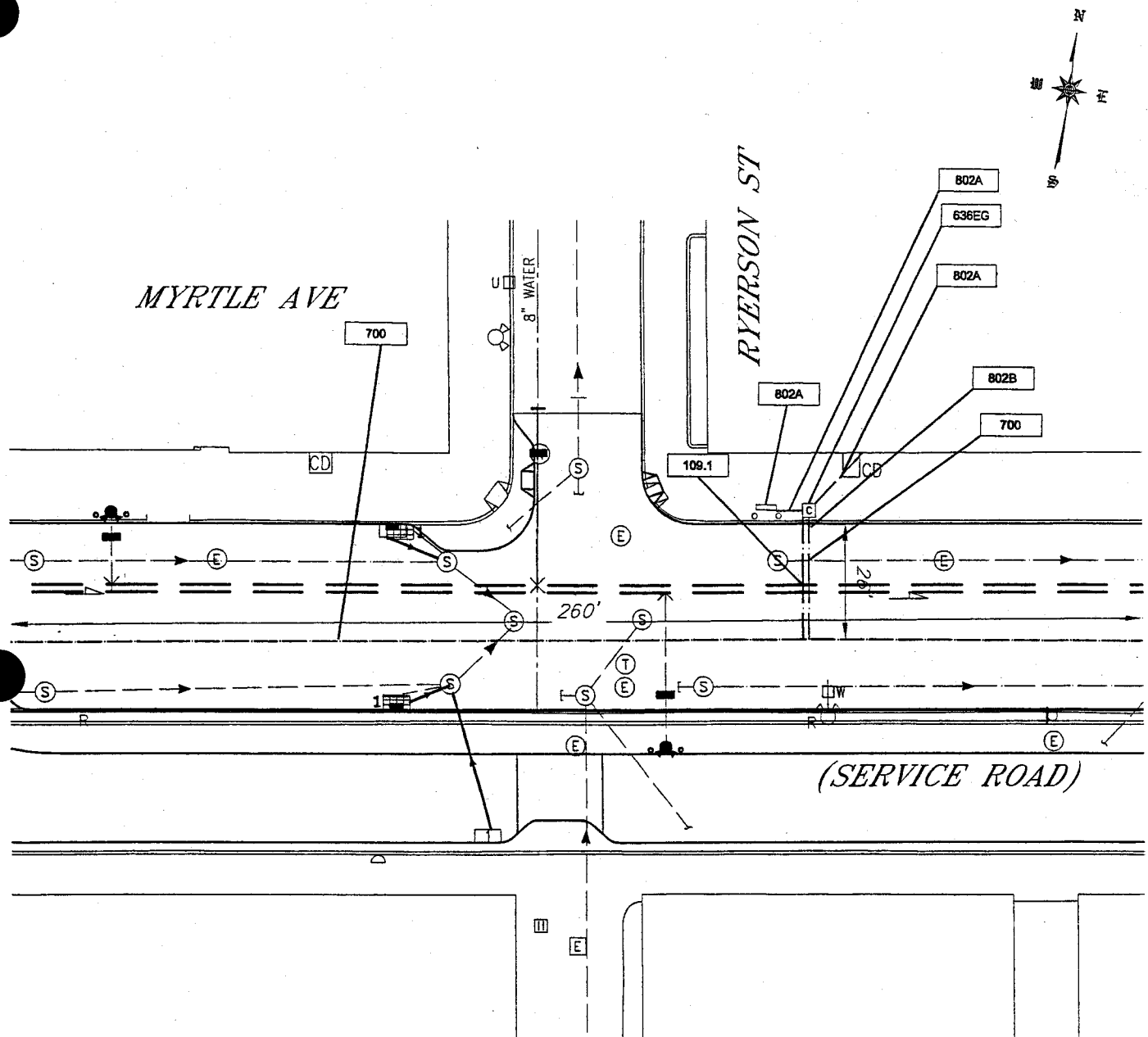
TIMEWARNER
CABLE OF NEW YORK CITY

HWPLZ001K Reconstruction of Myrtle Ave
Myrtle Ave & Hall St

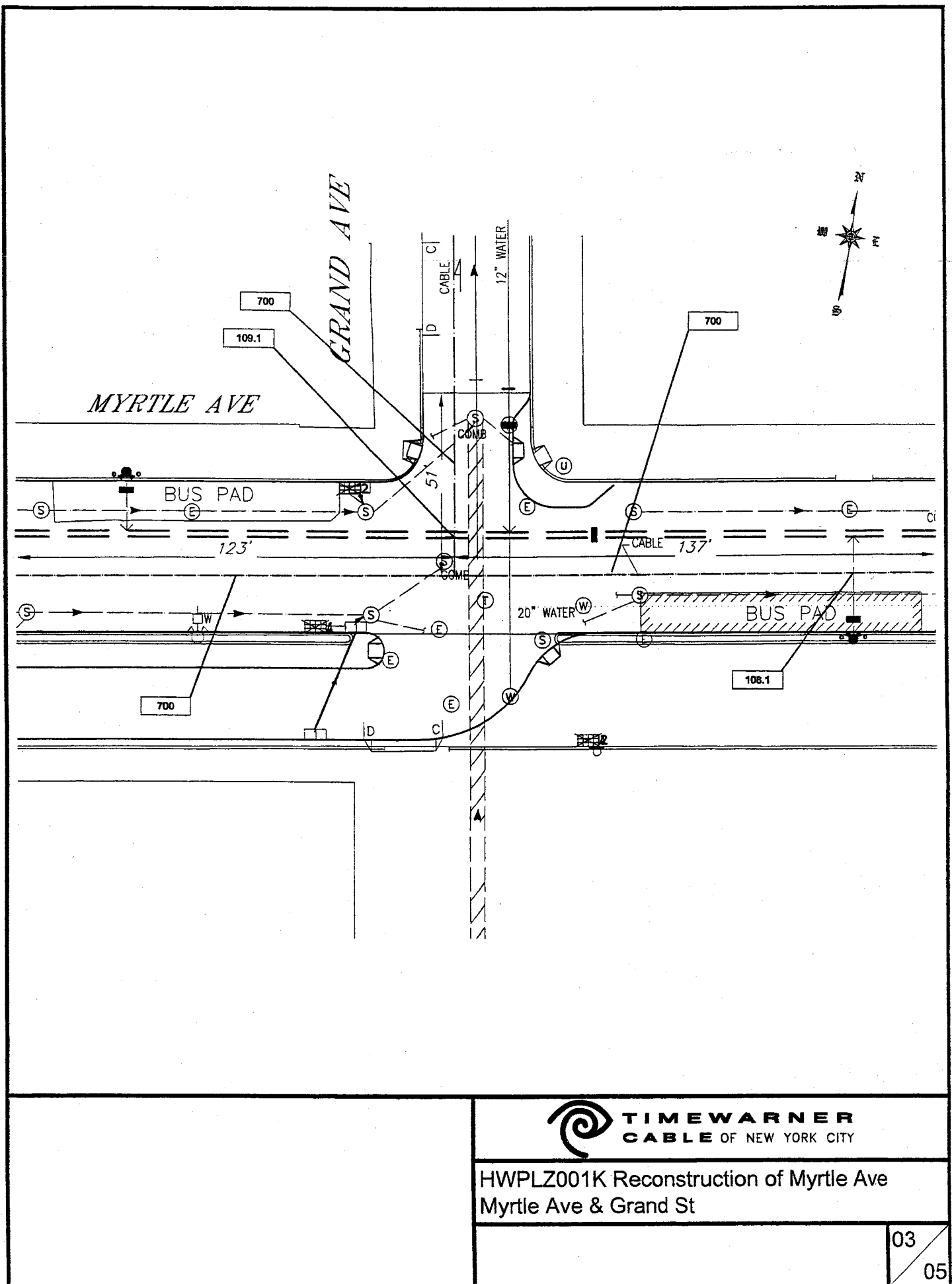
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HWPLZ001K Reconstruction of Myrtle Ave
Myrtle Ave & Ryerson St

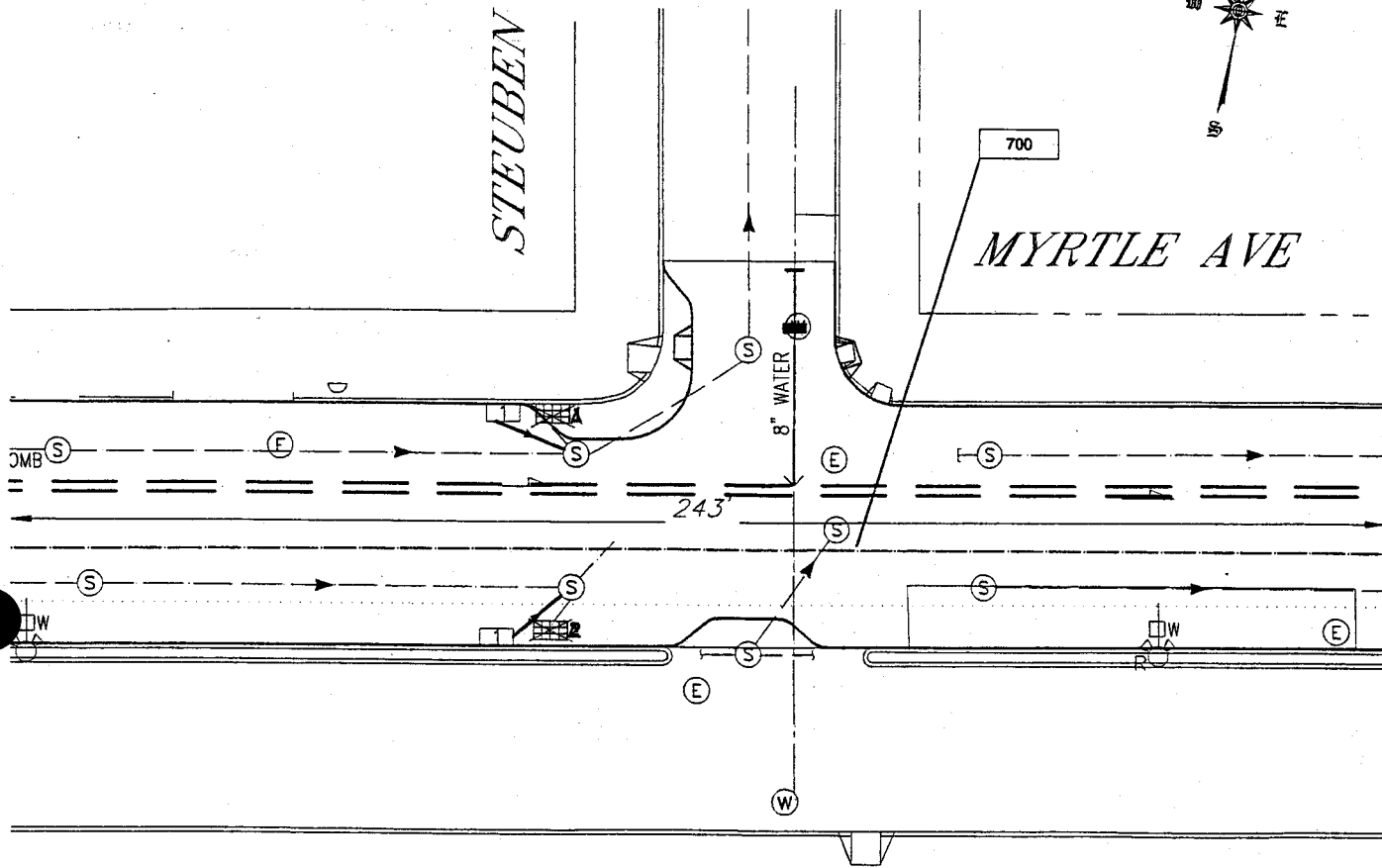


STEUBEN ST

MYRTLE AVE



700

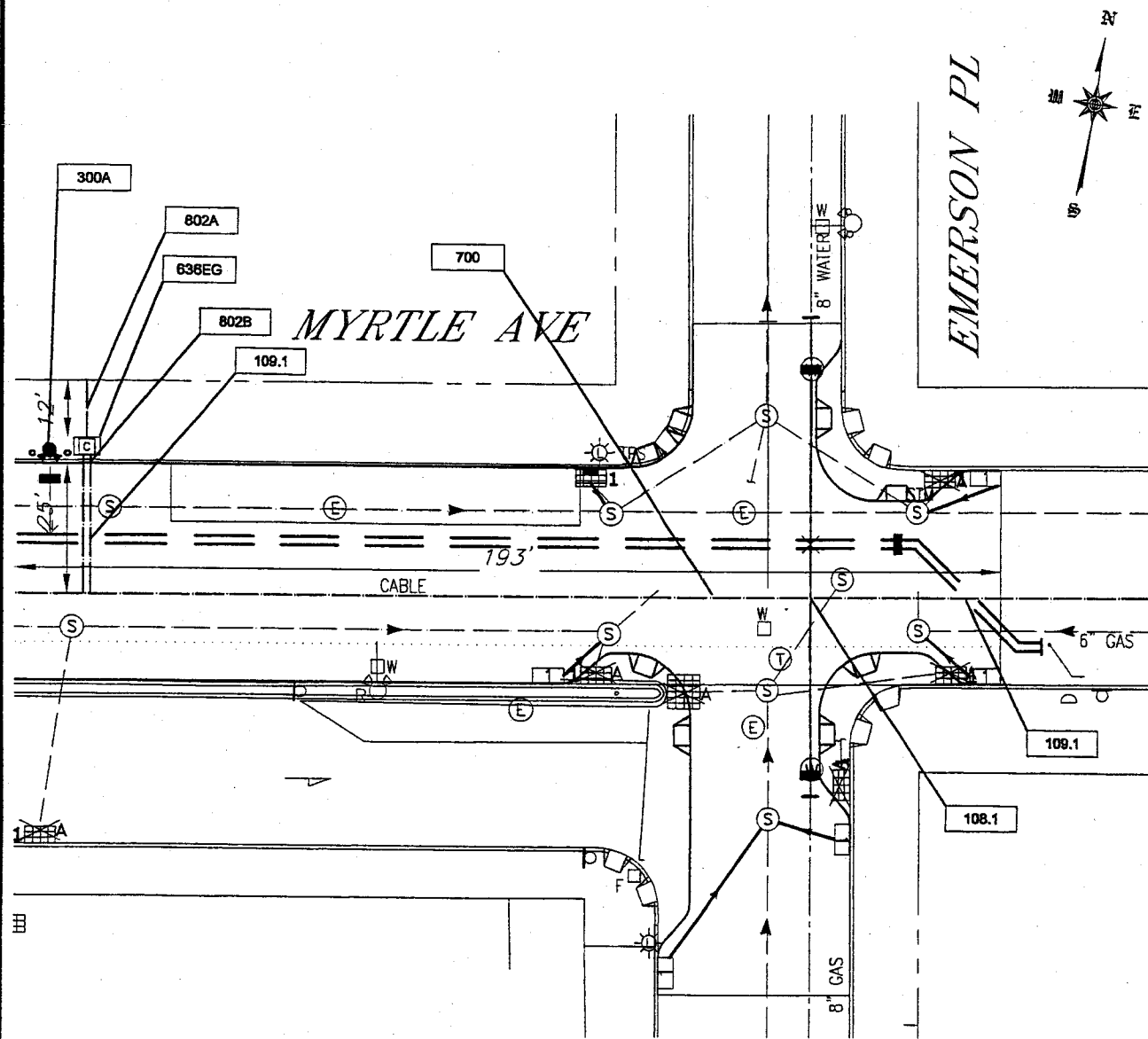


TIMEWARNER
CABLE OF NEW YORK CITY

HWPLZ001K Reconstruction of Myrtle Ave
Myrtle Ave & Steuben St

04

05



TIMEWARNER
CABLE OF NEW YORK CITY

HWPLZ001K Reconstruction of Myrtle Ave
Myrtle Ave & Steuben St

05

05

END OF ADDENDUM No. 6

This Addendum consists of Fifty Five (55) Pages
And Four (4) Pages of Contract Drawings

NO TEXT ON THIS PAGE



NEW YORK CITY DEPARTMENT OF
DESIGN + CONSTRUCTION

INFRASTRUCTURE DIVISION
BUREAU OF DESIGN

VOLUME 3 OF 3

PROJECT ID: HWPLZ001K

RECONSTRUCTION OF

MYRTLE AVENUE

FROM HALL STREET TO EMERSON PLACE

INCLUDING SEWER, WATER MAIN, STREET LIGHTING,
AND TRAFFIC SIGNALWORK

Together With All Work Incidental Thereto
BOROUGH OF BROOKLYN
CITY OF NEW YORK

Contractor.

Dated _____, 20____
