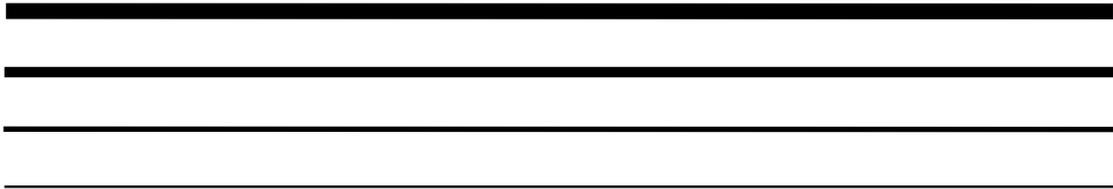


# CONTRACT DOCUMENTS

**QUINCY, MASSACHUSETTS  
DEPARTMENT OF PUBLIC WORKS**

**REPAIRS TO THE BROAD STREET TIDE GATE & STORMWATER  
TRIBUTARY SYSTEM**

**April 2012**



**BID SET NO. \_\_\_\_\_**



**THE HONORABLE THOMAS P. KOCH, MAYOR**

**DANIEL G. RAYMONDI  
COMMISSIONER OF PUBLIC WORKS**

**KATHRYN HOBIN  
CHIEF PROCUREMENT OFFICER**





**CITY OF QUINCY, MA  
DEPARTMENT OF PUBLIC WORKS  
REPAIRS TO THE BROAD STREET TIDE GATE &  
STORMWATER TRIBUTARY SYSTEM**



Prepared by:  
Woodard & Curran Inc.  
Consulting Engineers  
980 Washington St., Suite 325  
Dedham, MA 02026  
781-251-0200

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**CITY OF QUINCY, MA  
DEPARTMENT OF PUBLIC WORKS**

**REPAIRS TO THE BROAD STREET TIDE GATE & STORMWATER TRIBUTARY SYSTEM**

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# CITY OF QUINCY, MASSACHUSETTS

## Department of Public Works

**Thomas P. Koch**  
Mayor

**Lawrence Prendeville**  
Superintendent of Public Works

### **INVITATION TO BID**

The Department of Public Works for the City of Quincy, Massachusetts is seeking sealed bids for the **Repairs to the Broad Street Tide Gate & Stormwater Tributary System Project** until 11:00 a.m. local time **Wednesday, May 16, 2012**, in the offices of the Purchasing Agent, 1305 Hancock St., Quincy, Massachusetts 02169, at which time all bids will be publicly opened and read aloud at the City Hall Council chambers.

The Repairs to the Broad Street Tide Gate & Stormwater Tributary System Project involves rehabilitation of the concrete drainage structure and installation of a tide gate at the Broad Street outfall to eliminate tidal surcharge into the tributary drainage infrastructure. Additionally, construction of drainage infrastructure spot repairs and realigned pipe segments tributary to the Broad Street outfall are included in the Project.

Drainage repairs consist of work located in the public right-of-ways of Southern Artery, Woodward Avenue, Edgemere Road, and Edgewood Circle, as well as within a portion of the Quincy High School Property. Drainage repair work includes complete replacement of drainage structures, open cut repairs and installation of 1,750 linear feet of drainage pipe, curb removal and reset, sidewalk removal and replacement, pavement markings, temporary bypass pumping, plugging of flows, appurtenances, excavation, trench support, backfilling, restoration, paving, environmental protection, and all related work to complete the project.

The contract time shall be **90 consecutive days** from start date fixed in the Notice to Proceed.

Electronic versions of the Contract Documents are available on the City's Web Site as of April 25, 2012 at no cost. A **non-refundable printing cost of \$100.00** in cash or check payable to the City of Quincy shall be required for each hard copy set of Contract Documents. Bidders requesting hard copy Contract Documents by mail may call with their Federal Express or UPS account number. The contract documents may be obtained during the business hours of 8:30 a.m. to 4:30 p.m. Mondays through Friday at the office of the Purchasing Agent, Quincy City Hall, 1305 Hancock St. Quincy, MA 02169. Contract Documents will be available on-line and in the Purchasing Department starting on April 25, 2012.

Each bid shall be accompanied by a bid security in the amount of five percent (5%) of the total value of the bid in the form of a bid bond or certified/treasurer's check.

The bidding and award of this contract shall be in full compliance with Massachusetts General Laws, Chapter 30, Section 39M, as last revised. All Federal, State and City of Quincy regulations in relation to Equal Employment Opportunity, OSHA, Employment of Quincy Residents and subject to the minimum wage rates set under the Massachusetts Prevailing Wage Law Chapter 149, §26. The City reserves the right to waive any informality in or to reject any or all bids when such an action is deemed in the best interests of the City.

**Non-responsive and/or unbalanced bids may be rejected.**

All questions regarding this bid should be directed to Kathryn R. Hobin, Purchasing Agent, via fax or email ([khobin@quincyma.gov](mailto:khobin@quincyma.gov)) and cc to Kim Trillcott ([Ktrillcott@quincyma.gov](mailto:Ktrillcott@quincyma.gov)). Inquiries must be submitted no later than 4:00 a.m. on May 9, 2012.

The Purchasing Department requests that if you print out a copy of this bid, you send a confirming email so

that we may maintain an updated planholders list. If you have received this bid from the City Website or through an email it is your responsibility to check for addenda at [www.quincyma.gov](http://www.quincyma.gov) before you submit your proposal. The City is not responsible for any bids that omit the acknowledgement of addenda.

Thomas P. Koch  
Mayor

Daniel G. Raymondi  
Commissioner of Public Works

**Advertise**  
The Quincy Sun  
The Central Register

April 26, 2012

April 25, 2012

**1305 Hancock St., Quincy MA 02169**  
**Telephone: (617) 376-1060 Fax: (617) 376-1074**

## NOTICE TO CONTRACTORS

1. RECEIPT OF BIDS:

The Quincy Department of Public Works is seeking sealed General Bids in accordance with the Invitation to Bid.

2. PROJECT DESCRIPTION:

The Work covered by this contract consists of the following:

The Repairs to the Broad Street Tide Gate & Stormwater Tributary System Project involves rehabilitation of the concrete drainage structure and installation of a tide gate at the Broad Street outfall to eliminate tidal surcharge into the tributary drainage infrastructure. Additionally, construction of drainage infrastructure spot repairs and realigned pipe segments tributary to the Broad Street outfall are included in the Project.

Drainage repairs consist of work located in the public right-of-ways of Southern Artery, Woodward Avenue, Edgemere Road, and Edgewood Circle, as well as within a portion of the Quincy High School Property. Drainage repair work includes complete replacement of drainage structures, open cut repairs and installation of 1,750 linear feet of drainage pipe, curb removal and reset, sidewalk removal and replacement, pavement markings, temporary bypass pumping, plugging of flows, appurtenances, excavation, trench support, backfilling, restoration, paving, environmental protection, and all related work to complete the project.

The contract time shall be 90 days from start date fixed in the Notice to Proceed to the date of substantial completion.

Normal hours of operation for work on the project will be 7:30 AM to 3:30 PM, week days, unless modified by the OWNER for traffic management purposes.

Work on the area referenced as Resource Area Improvements, on the contract drawings shall not commence prior to June 19, 2012 nor finish after August 10, 2012 and shall be performed from 7:30 AM to 3:30 PM, Monday through Friday, excluding holidays unless modified by the OWNER.

Work within the limits of work indicated on Plan sheet C-206 entitled Broad Street Tide Gate Improvement Plan, as shown on the drawings, will be allowed between 3:30 PM and 7:30 AM, Mondays through Thursdays to accommodate work off-peak of the tide cycle, unless otherwise modified by the OWNER as noted herein

Work shall be scheduled/sequenced such that one means of controlled vehicular access to the western most parking lot of Quincy High School is maintained during normal hours of operation from 5:00 AM to 8:00 PM, Monday through Friday, unless modified by the OWNER for traffic management purposes.

3. CONTRACT DOCUMENTS:

The Contract Documents have been prepared by Woodard & Curran Inc., Consulting Engineers, 980 Washington St., Suite 325, Dedham, MA 02026, telephone no. (781) 251-0200. These documents may be downloaded from the City Website ([www.quincyma.gov](http://www.quincyma.gov)) or obtained in hard

copy form for a \$100 fee during the business hours of 8:30 a.m. to 4:30 p.m. at the office of the Purchasing Agent, Quincy City Hall, 1305 Hancock St. Quincy, MA 02169. Specifications will be available as described in the Invitation to Bid.

The Contract Documents that will form the basis of this Contract are as defined in the General Conditions. Bidders must examine each of these documents, visit the location(s) of the work, and inform themselves of the difficulties attending the execution of the work prior to the submission of their Bids.

4. BID SECURITY:

All Bids shall be accompanied by a Bid Security in accordance with the Invitation to Bid.

5. APPLICABLE LAW:

Bids for this project are being solicited under the provisions of M.G.L., Chapter 30, Section 39M as described in the Invitation to Bid. The Project will be subject to all applicable laws and regulations and described herein.

6. PERFORMANCE AND PAYMENT BONDS:

All Bidders are advised that this Contract will require Performance and Payment Bonds. Each Bond shall be for 100% of the amount Bid and must be furnished at the time of contract award. Bonds shall remain in force for the warranty period or a minimum of one year after Substantial Completion.

7. GENERAL BIDDER SUBMISSION AND CERTIFICATION:

General Bids shall be submitted on the prescribed forms, enclosed in a sealed envelope bearing the General Bidders name, address, the title of the project, and bid date and time on the outside of the envelope.

8. WITHDRAWAL OF BID:

No Bid may be withdrawn for at least thirty (30) days after receipt of Bids unless released by the Owner.

9. PRE-BID CONFERENCE:

A Pre-bid Conference will not be held for this project.

10. MINIMUM WAGE RATES:

Minimum Wage Rates as determined by the Commissioner of Department of Workforce Development under the provision of Massachusetts General Laws, Chapter 149, Sections 26 to 27D, as amended, apply to this project. It is the responsibility of the Contractor, before bid opening, to request if necessary, any additional information on Minimum Wage Rates for those trades people who may be employed for the proposed work under this Contract.

11. PROJECT FUNDING:

The Work under this Contract is funded by City of Quincy funds.

12. PERMITS:

All fees for permits or licenses required for this project by the City, or any other agency, shall be an expense of the CONTRACTOR and shall **not** be waived.

13. AWARD OF CONTRACT:

The Owner reserves the right to waive any informality in or to reject any and all Bids if it deems it to be in the public interest to do so.

\*\*\* END OF SECTION \*\*\*

**INSTRUCTIONS TO BIDDERS**

**ARTICLE 1 PROJECT IDENTIFICATION**

- 1.1 Owner: City of Quincy, Massachusetts
  
- 1.2 Awarding Authority: Kathryn Hobin  
Purchasing Agent  
1305 Hancock St., Quincy, MA 02169
  
- 1.3 Project Name: Repairs To The Broad Street Tide Gate & Stormwater Tributary System
  
- 1.4 Funding: City of Quincy

1.5 The following Documents are required to be submitted with the Bids. Failure to comply with these requirements may render the Bid non-responsive and thus be disqualified.

- a. Bid Forms (all B- pages with original signatures) including but not limited to:
  - Form for General Bid..... B-1
  - Certificate as to Corporate Bidder..... B-14
  - Certificate of Compliance with Tax Laws ..... B-15
  - Non-Collusive Affidavit of Bidder ..... B-17
  - Contractor’s Certifications with Bid ..... B-18
  - OSHA Ten Form..... B-19
  - Certification of Bidder Regarding Equal Opportunity..... B-20
  - Right-To-Know Law Certification..... B-21
  - Certification of Non-Segregated Facilities..... B-22
  - Affidavit Regarding Prior Labor Disputes ..... B-23
  - CPA Certification..... B-24
  - Certification of Internal Accounting ..... B-25
  - Bid Bond ..... B-26

**ARTICLE 2 QUALIFICATIONS OF BIDDERS**

- 2.1 General Bids must be qualified to submit bids under Massachusetts General Law C. 30, S. 39M.
  
- 2.2 Bidders may be investigated by the City to determine if they are qualified to perform the work. Bidders shall submit within five (5) calendar days of the City's or Engineer's request, written evidence of such information and data necessary to make this determination.
  
- 2.3 The investigation of a Bidder will seek to determine whether the organization is adequate in size, is authorized to do business in the project jurisdiction, has had previous experience and whether available equipment and financial resources are adequate to assure the City that the work

will be completed in accordance with the terms of the Agreement. The amount of other work to which the Bidder is already committed may also be considered.

2.4 The City reserves the right to reject any Bid if the evidence submitted by, or the investigation of such Bidder fails to satisfy the City that such Bidder is properly qualified to carry out the obligations and the work included in the Contract Documents.

### **ARTICLE 3 COPIES OF CONTRACT DOCUMENTS**

3.1 Complete sets of Contract Documents shall be used in preparing Bids; neither the City nor the Engineer assumes any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Contract Documents.

3.2 The City and the Engineer in making copies of Contract Documents available do so only for the purpose of obtaining bids on the Work and do not confer a license or grant permission for any other use.

### **ARTICLE 4 EXAMINATION OF CONTRACT DOCUMENTS AND SITE**

4.1 Before submitting a Bid, each Bidder must (a) examine the Contract Documents thoroughly, (b) visit the site to familiarize himself with local conditions that may in any manner affect cost, progress or performance of the Work, (c) familiarize himself with Federal, State and local laws, ordinances, rules and regulations that may in any manner affect cost, progress, or performance of the Work; and (d) study and carefully correlate Bidder's observations with the requirements of the Contract Documents.

4.2 All information given in the Drawings and the other Contract Documents relating to sub-surface and other conditions, natural phenomena, existing utilities, pipelines, other structures, etc. is from the best sources available to the City. All such information is furnished only for the information and convenience of the Bidders and is not guaranteed.

4.3 Before submitting the Bid, each Bidder may, at his own expense, make such additional investigations and tests as the Bidder may deem necessary to determine the accuracy of his Bid for performance of the Work in accordance with the time, price and other terms and conditions of the Contract Documents.

4.4 On request, the City will provide each Bidder access to the site to conduct such investigations and tests as each Bidder may deem necessary for submission of the Bid.

4.5 The lands upon which the work is to be performed and rights-of-way for access thereto are identified on the Drawings.

4.6 The submission of a Bid will constitute an incontrovertible representation by the Bidder that he has complied with every requirement of this Article 4 and that the Contract Documents are sufficient in scope and detail to indicate and convey understanding of all terms and conditions for performance of the Work.

## ARTICLE 5 INTERPRETATIONS

5.1 All questions regarding this bid should be directed to Kathryn Hobin, Purchasing Agent through fax: 617-376-1074 and email: [khobin@quincyma.gov](mailto:khobin@quincyma.gov) and cc to [ktrillcott@quincyma.gov](mailto:ktrillcott@quincyma.gov) Questions will be accepted until 4 PM on Wednesday, May 9.

5.2 Written clarifications or interpretations will be issued through Addenda. Only questions answered by formal written Addenda will be binding. Oral and other clarifications or interpretations will be without legal effect. Addenda will be mailed via certified mail, with return receipt requested, to all parties recorded to have received the Contract Documents.

5.3 Each Bidder shall be responsible for determining all Addenda issued have been received and incorporated into the Bid.

5.4 **A BID WHICH INCLUDES, FOR ANY ITEM, A BID PRICE THAT IS ABNORMALLY HIGH OR LOW, MAY BE REJECTED AS AN UNBALANCED BID.**

5.5 The quantities in the Bid Form are being set forth as a basis for the comparison of bids only and the actual amount of work may not correspond therewith.

5.6 The City reserves the right to delete all or any portion of the work or add new work or to decrease or increase the scope of any item of the work to be done under this Contract either prior to executing the Contract or at any time during the life of the Contract. Exercise by the City of the above rights shall not constitute any grounds or basis of claims for damages or for a loss of anticipated profits.

Also, an increase or a decrease of quantity for any bid item (regardless of its magnitude) shall not be regarded as a grounds or basis for any increase or decrease in the Contract unit prices, nor in the time allowed for the completion of the work except as provided for in the Contract.

**ARTICLE 6 PRE-BID CONFERENCE:** No pre-Bid Conference will be held for this project.

## ARTICLE 7 BID SECURITY

7.1 Each bid must be accompanied by a bid bond, in cash or certified check or a treasurer's/cashiers check issued by a bona fide bank or trust company, payable to the City of Quincy. The Bid Security shall be in the amount of five percent (5%) of the Total Bid Price. The Bid Security shall be sealed in a separate envelope from the Bid and then attached to the envelope containing the Bid. All Bid Securities except those of the three lowest responsible and eligible bidders will be returned after the opening of bids. All Bid securities will be returned on the execution of the Agreement, or if no award is made, within sixty calendar days after the actual Bid Opening Date, unless the bid security is forfeited under the conditions stipulated herein.

7.2 In case a party to whom a Contract is awarded shall fail or neglect to execute the Agreement and furnish the satisfactory bonds within the time specified, the City may determine that the bidder has abandoned the Contract, and thereupon the Bid Forms and acceptance thereof shall be null and void, and the Bid Security accompanying the Bid form shall be forfeited to the City as liquidated damages for such failure or neglect and to indemnify the said City for any loss which may be sustained by failure of the Bidder to execute the Agreement and furnish the bonds

aforesaid, provided that the amount forfeited to the City shall not exceed the difference between the Bid Price of said Bidder and that of the next lowest responsible and eligible Bidder and provided further that, in case of death, disability or other unforeseen circumstances affecting the Bidder, such Bid Security may be returned. After execution of the Agreement and acceptance of bonds by the City, the Bid Security accompanying the Bid Form of the Successful Bidder will be returned.

## **ARTICLE 8 PERFORMANCE, PAYMENT AND OTHER BONDS**

8.1 Performance, Payment and other required bonds and project Insurance Certificates shall be provided in accordance with Article 5 of the General Conditions of the Contract.

8.2 All Bonds required, as Contract Security shall be furnished prior to the execution of the Agreement.

## **ARTICLE 9 BID FORMS**

9.1 Each Bid shall be submitted on the Bid Form included in these Contract Documents. All blank spaces for Bid prices must be filled in with unit or lump sum prices for each of the items for which the bid is requested.

9.2 Bid Forms shall be completed in ink or be typewritten. The Bid price of each item on the form shall be stated in words, and figures. Discrepancies between unit prices and their respective total amounts will be resolved in favor of the unit prices. Discrepancies between words and figures will be resolved in favor of words. Discrepancies between the indicated sum of any column of figures and correct sum thereof shall be resolved in favor of the correct arithmetic sum, based on words.

9.3 Bids by corporations shall be executed in the corporation name, by the Chief Executive Officer (or other corporate officer). The bid must be accompanied by evidence of authority to sign the bid and the corporate seal shall be affixed and attested to by the secretary. The corporate address and state of incorporation shall be shown below the signature.

9.4 Bids by partnership shall be executed in the partnership name and signed by a partner, whose title shall appear under the signature. The official address of the partnership shall be shown below the signature.

9.5 All names shall be typed or printed below the signature.

9.6 The Bid shall confirm the receipt of all Addenda. Actual number of Addenda received shall be filled in on the Bid Form.

9.7 The address, telephone number of the person to whom communications regarding the Bid are to be directed shall be shown.

9.8 Bids shall be submitted (original signatures) in a sealed opaque envelope bearing on the outside the Bidder's name, address, and the Project Title for which the Bid is submitted. If forwarded by mail, the Bid shall be enclosed in a sealed envelope with the notation "**BID ENCLOSED**" on the face and addressed as above. The Bid Security shall be submitted in a separate envelope from the Bid and attached to the sealed envelope containing the bid.

## **ARTICLE 10 RECEIPT OF BIDS**

10.1 Sealed bids for the work under this Contract will be received at the time and place indicated in the Invitation to Bid.

10.2 The City may consider informal any Bid not prepared and submitted in accordance with the provisions hereof.

10.3 Bidders are cautioned that it is the responsibility of each individual Bidder to insure that the bid is in the possession of the responsible official or a designated alternate prior to the stated time and at the place of the Bid Opening. The City is not responsible for bids delayed by mail and/or other forms of delivery.

## **ARTICLE 11 MODIFICATION AND WITHDRAWAL OF BIDS**

11.1 Bids may be modified only by an appropriate document duly executed and delivered to the place where Bids are to be submitted at any time prior to the opening of Bids.

11.2 Bids may be withdrawn in writing prior to the scheduled Bid Opening time or the authorized postponement thereof.

11.3 Bids, once officially opened, cannot be withdrawn and shall remain open for a period of thirty (30) calendar days from the date of the opening. The City, at its sole discretion, may release any bid and return the Bid Security prior to that date.

## **ARTICLE 12 AWARD OF CONTRACT**

12.1 The Contract will be awarded to the lowest responsible and eligible bidder (Successful Bidder). Such a Bidder shall possess the skill, ability, job-related prior work experience, and integrity necessary for the faithful performance of the work and the bid, apart from being complete and responsive, is the lowest in price of all the bids opened.

12.2 The City reserves the right to reject any and all Bids, to waive any and all informalities, if it is in the City's best interest to do so, and the right to disregard all nonconforming, non-responsive, unbalanced and conditional Bids.

12.3 The City also reserves the right to reject the Bid of any Bidder who is considered to be unqualified in accordance with Article 2, above.

12.4 If the Contract is to be awarded, the City intends to give the Successful Bidder a Notice of Award within thirty (30) calendar days after the actual Bid Opening Date. The Notice of Award will have to be formally acknowledged and accepted by the Bidder within the time period stipulated herein.

12.5 The acceptance of the above Notice of Award shall be accompanied by a complete list of sub-contractors (specialty, suppliers, and sub-consultants, etc.) selected by the Bidder to work on the project. The list shall contain information on the percentage of total work (material, labor, equipment and services) allocated to each sub-contractor.

### **ARTICLE 13 EXECUTION OF AGREEMENT**

13.1 When the City gives a Notice of Award to the Successful Bidder, at least six (6) unsigned copies of the Agreement and all other applicable Contract Documents will accompany it. Within ten (10) calendar days from the date of such notification, Contractor shall execute and return all copies of the Agreement and all other applicable Contract Documents to the City. Within ten (10) calendar days thereafter, the City intends to deliver one fully signed copy along with the "Notice to Proceed" to the Contractor.

13.2 If for any reason the Notice to Proceed cannot be issued within such period, the time may be extended by mutual agreement between the City and the Contractor. If the Notice to Proceed has not been issued within the ten (10) calendar days after signing of the Agreement, or within the time period mutually agreed upon, the Contractor may terminate the Agreement without further liability on the part of either party.

13.3 The Bidder's attention is especially directed to special requirements in relation to project construction work and completion schedule, specified in Sections 01010 and 01155 in this Project Manual. Each Bidder is urged to study these requirements to insure compliance with the same before submitting the Bid.

### **ARTICLE 14 SAFETY AND HEALTH REGULATIONS**

14.1 This Project is subject to all of the Safety and Health Regulations (CFR 29, Part 1926 and all subsequent amendments) as promulgated by the U.S. Department of Labor on June 24, 1974, and CFR 29, Part 1910, General Industry Safety and Health Regulations Identified as Applicable to Construction.

14.2 The Successful Bidder shall comply with the Department of Labor Safety and Health Regulations for Construction promulgated under the Occupational Safety and Health Act of 1970 (PL-91-596) and under Section 107 of the Contract Work Hours and Safety Standards Act (PL-91-54).

14.3 The Successful Bidder shall have a competent person or persons, as required under the Occupational Safety and Health Act on the site to inspect the Work and to supervise the conformance of the Work with the regulations of the Act.

14.4 This project is also subject to the Massachusetts Department of Labor and Industries Division of Industrial Safety "Rules and Regulations for the Prevention of Accidents in Construction Operations (Industrial Bulletin No. 12)".

### **ARTICLE 15 SALES TAX**

15.1 The materials and supplies to be used in the Work shall be exempt from all applicable Federal, State and local sales taxes.

### **ARTICLE 16 UTILITY UNDERGROUND PLANT DAMAGE PREVENTION SYSTEM**

16.1 All excavations within public or private ways are subject to the requirements of Massachusetts General Laws, Acts of 1983, Chapter 252, included in Part II of the Supplementary Conditions.

## **ARTICLE 17 WAGE RATES**

17.1 All work done under this Contract shall be subject to compliance with the minimum wage rates as mandated by the Commonwealth of Massachusetts Department of Labor and Industries and the U.S. Department of Labor Wage Rates issued in the most recent wage decisions applicable to the project area.

17.2 The Commonwealth of Massachusetts Minimum Wage Rates issued under the provisions of the Massachusetts General Laws, Chapter 149, Section 26 to 27G, as amended, shall apply to the projects when the use of Federal funds is not involved on a particular project.

17.3 The Schedule of Minimum Wage Rates is included in these specifications and shall be strictly enforced.

17.4 It is the responsibility of the Contractor, before submitting the Bid, to verify the minimum wage rates and to request, if necessary, any additional and/or the latest information on wage rates for all tradespeople to be employed under this contract.

## **ARTICLE 18 COMPETITIVE BIDDING**

18.1 The Bidding and award of this contract shall be in full compliance with the Federal Procurement Act and with MGL Chapter 30, Section 39M, as last revised.

## **ARTICLE 19 GUARANTEES**

19.1 In addition to other guarantees due the City, the Contractor guarantees that the Work and services to be performed under the Contract, and all workmanship, materials, and equipment furnished, used or installed shall be free from defects and flaws, and shall be in strict accordance with the Drawings, Specifications, and other Contract Documents. Also, the strength of all parts of all manufactured equipment shall be adequate and as specified and that the performance test requirements of the Contract shall be fulfilled. This guarantee shall be for a period of one year from and after the date of Substantial Completion and acceptance of the Work unless otherwise specified herein.

**The Performance Bond shall remain in full force and effect throughout the Guarantee Period.**

19.2 If at any time within the said period of guarantee, any part of the Work requires repairs, correction and/or replacement, the City may notify the Contractor in writing to make the required repairs, correction or replacement. If the Contractor neglects to commence making such repairs, corrections, or replacements to the satisfaction of the City within ten (10) days from the date of receipt of such notice, or having commenced said repairs, corrections or replacement, fails to prosecute such work with diligence, the City may employ other person(s) to make the same, and all direct and indirect costs of making said repairs, corrections or replacements, including compensation for additional professional services, shall be paid by the Contractor.

## **ARTICLE 20 LABOR DISPUTES**

20.1 The Bidder shall submit a written statement as to whether it has been the subject of, or otherwise been involved in any labor dispute during the past five (5) years. If the bidder has been

the subject of, or otherwise been involved in any labor dispute during this period, the Bidder must also provide a detailed description of each labor dispute, including the name and location of the project worked on, the nature of the dispute, the duration and dates during which the dispute took place and how the dispute was resolved. For these purposes, "labor disputes" shall include picketing or any other activity which disrupted or delayed the Work.

## **ARTICLE 21 RECORD KEEPING**

21.1 The Contractor is reminded that the provisions of Chapter 30, Section 39R relative to record keeping apply to this Contract. A copy of c.30, s.39R is included in the Supplementary Conditions. A brief summary of the requirements is as follows:

- a. The Contractor and all sub-contractors shall maintain books, records and accounts at least six (6) years after the final payment. They will be subject to inspection by the awarding authority, officers of the Inspector General, or the DCAM.
- b. Any changes in record keeping or recording transactions, which affect the awarding authority, shall be explained along with a letter from the Contractor's independent certified public accountant approving or otherwise commenting on the change.
- c. The Contractor shall file with the awarding authority a statement of management as to whether the system of internal accounting controls has been established.
- d. The Contractor shall file with the awarding authority a statement prepared and signed by an independent certified public account that an examination has been made of internal accounting controls.

## **ARTICLE 22 LAWS AND REGULATIONS**

22.1 All applicable laws, ordinances and rules and regulations of all Public Agencies having jurisdiction over construction of the project shall apply to the Contract throughout.

22.2 This project is subject to all of the OSHA Safety and Health Regulations (see CFR Part 1926/1910 and all subsequent amendments), as promulgated by the United States Department of Labor on June 24, 1974 and MGL Chapter 454 CMR 10.00, et.seq.; The Prevention of Accidents and Illnesses in Construction Operations. Contractors shall become familiar with the requirements of these regulations.

22.3 This Contract is subject to all the Federal Government, Commonwealth of Massachusetts, and City of Quincy Equal Employment Opportunity, Anti-discrimination and Affirmative Action Programs. The text of the program is set forth in these specifications. The City prior to execution of the Contract will require contractor's and sub-contractors certifications.

\*\*\* END OF SECTION \*\*\*



<b>Item No.</b>	<b>Unit or Lump Sum Price in Both Words &amp; Figures</b>	<b>Estimated Quantity</b>	<b>Unit Bid Price</b>	<b>Extended Cost Figures</b>
<b>1a.</b>	<b>BROAD STREET TIDE GATE REPAIR</b>	1 LS	\$	\$
	Lump sum.			
	Dollars and			
	Cents			
	Unit Price Bid Items per Concrete Repair Schedule indicated on Plan Sheet C-300.			
<b>1b.</b>	Repair Type A1: Shallow Spall Repair.	150 SF	\$	\$
<b>1c.</b>	Repair Type A2: Deep Spall Repair.	200 SF	\$	\$
<b>1d.</b>	Repair Type B: Polyurethane Injection Crack Repair.	75 LF	\$	\$
<b>2.</b>	<b>RESOURCE AREA IMPROVEMENTS</b>	1 LS		\$
	Lump sum			
	Dollars and			
	Cents			
<b>3.</b>	<b>EDGEMERE RD, EDGEWOOD CIRCLE, AND WOODWARD AVENUE IMPROVEMENTS</b>	-----	-----	-----
<b>3a.</b>	10-Inch PVC Drainage Pipe per linear foot.	45 LF	\$	\$
	Dollars and			
	Cents			
<b>3b.</b>	12-Inch PVC Drainage Pipe per linear foot.	142 LF	\$	\$
	Dollars and			
	Cents			
<b>3c.</b>	15-Inch PVC Drainage Pipe per linear foot.	94 LF	\$	\$
	Dollars and			
	Cents			
<b>3d.</b>	18-Inch PVC Drainage Pipe per linear foot.	178 LF		
	Dollars and			
	Cents			

<b>Item No.</b>	<b>Unit or Lump Sum Price in Both Words &amp; Figures</b>	<b>Estimated Quantity</b>	<b>Unit Bid Price</b>	<b>Extended Cost Figures</b>
<b>3e.</b>	24-Inch PVC Drainage Pipe per linear foot.	293 LF		
	Dollars and			
	Cents			
<b>3f.</b>	Curb Remove and Reset per linear foot	281 LF		
	Dollars and			
	Cents			
<b>3g.</b>	Granite Transition Curb For Wheelchair Ramps – Curved per linear foot	27 LF		
	Dollars and			
	Cents			
<b>3h.</b>	Bituminous Sidewalk per ton.	6 Ton		
	Dollars and			
	Cents			
<b>3i.</b>	Concrete sidewalk per square yard.	6 SY		
	Dollars and			
	Cents			
<b>3j.</b>	Drainage Structure Removed per each.	7 Ea.		
	Dollars and			
	Cents			
<b>3k.</b>	Drainage Structure Remodeled per each.	4 Ea.		
	Dollars and			
	Cents			
<b>3l.</b>	Catch Basins per each.	4 Ea.		
	Dollars and			
	Cents			
<b>3m.</b>	Catch Basin Drain Pipe Hood per each.	4 Ea.		
	Dollars and			
	Cents			
<b>3n.</b>	Drain Manholes per each.	3 Ea.		
	Dollars and			
	Cents			

<b>Item No.</b>	<b>Unit or Lump Sum Price in Both Words &amp; Figures</b>	<b>Estimated Quantity</b>	<b>Unit Bid Price</b>	<b>Extended Cost Figures</b>
<b>3o.</b>	Frame with Grate or Cover per each.	7 Ea.		
	Dollars and			
	Cents			
<b>3p.</b>	Frame with Grate or Cover Removed and Stacked per each.	7 Ea.		
	Dollars and			
	Cents			
<b>3q.</b>	Accessible Curb Ramp per each.	3 Ea.		
	Dollars and			
	Cents			
<b>3r.</b>	Environmental Protection Sedimentation Controls at Storm Drains per each.	13 Ea.		
	Dollars and			
	Cents			
<b>3s.</b>	Decorative Bollard Remove, Stack, and Reset per each.	3 Ea.		
	Dollars and			
	Cents			
<b>3t.</b>	Miscellaneous Signs Removed, Stored, and protected per each	3 Ea.		
	Dollars and			
	Cents			
<b>3u.</b>	Miscellaneous Signs Reset per each.	3 Ea.		
	Dollars and			
	Cents			
<b>3v.</b>	Loam Borrow per cubic yard.	8 CY.		
	Dollars and			
	Cents			
<b>3w.</b>	Seeding per square yard.	36 SY,		
	Dollars and			
	Cents			

<b>Item No.</b>	<b>Unit or Lump Sum Price in Both Words &amp; Figures</b>	<b>Estimated Quantity</b>	<b>Unit Bid Price</b>	<b>Extended Cost Figures</b>
<b>3x.</b>	Class I Bituminous Concrete Type I-1 (Base Course) per ton.	50 Ton		
	Dollars and			
	Cents			
<b>3y.</b>	Class I Bituminous Concrete Type I-1 (Top Course) per ton.	85 Ton		
	Dollars and			
	Cents			
<b>3z.</b>	Hot Mix Asphalt for Misc. Use per ton.	5 Ton		
	Dollars and			
	Cents			
<b>3aa.</b>	12-in Reflectorized White Line (Thermoplastic) per square foot.	133 SF		
	Dollars and			
	Cents			
<b>3bb.</b>	Tree Removed, Store, Protected, and Reset per each.	1 Ea.		
	Dollars and			
	Cents			
<b>3cc.</b>	Tree Protection per each.	9 Ea.		
	Dollars and			
	Cents			
<b>3dd.</b>	Safety Controls for Construction Operations per unit day.	30 Day		
	Dollars and			
	Cents			
<b>3ee.</b>	Bike Rack Protection, Removed, Stored, and Reset per each.	5 Ea.		
	Dollars and			
	Cents			

	<b>Unit or Lump Sum Price in Both Words &amp; Figures</b>	<b>Estimated Quantity</b>	<b>Unit Bid Price</b>	<b>Extended Cost Figures</b>
<b>3ff.</b>	Edgemere, Edgewood, & Woodward Improvements Mobilization/ Demobilization per lump sum.	1 LS		
	Dollars and			
	Cents			
<b>4.</b>	<b>SOUTHERN ARTERY IMPROVEMENTS</b>			
<b>4a.</b>	12-Inch Ductile Iron Drainage Pipe per linear foot.	36 LF		
	Dollars and			
	Cents			
<b>4b.</b>	12-Inch Reinforced Concrete Drainage Pipe Class V per linear foot.	19 LF		
	Dollars and			
	Cents			
<b>4c.</b>	12-Inch PVC Drainage Pipe per linear foot.	63 LF		
	Dollars and			
	Cents			
<b>4d.</b>	15-Inch PVC Drainage Pipe per linear foot.	165 LF		
	Dollars and			
	Cents			
<b>4e.</b>	18-Inch Reinforced Concrete Drainage Pipe per linear foot.	147 LF		
	Dollars and			
	Cents			
<b>4f.</b>	24-Inch Reinforced Concrete Drainage Pipe Class V per linear foot.	194 LF		
	Dollars and			
	Cents			
<b>4g.</b>	24-Inch PVC Drainage Pipe per linear foot.	345 LF		
	Dollars and			
	Cents			

<b>Item No.</b>	<b>Unit or Lump Sum Price in Both Words &amp; Figures</b>	<b>Estimated Quantity</b>	<b>Unit Bid Price</b>	<b>Extended Cost Figures</b>
<b>4h.</b>	12 Inch diameter and Under Pipe Removed and Stacked per linear foot.	32 LF		
	Dollars and			
	Cents			
<b>4i.</b>	Curb Remove and Reset per linear foot.	108 LF		
	Dollars and			
	Cents			
<b>4j.</b>	Class I Bituminous Concrete Type I-1 (Base Course) per ton	300 Ton		
	Dollars and			
	Cents			
<b>4k.</b>	Class I Bituminous Concrete Type I-1 (Top Course) per ton.	100 Ton		
	Dollars and			
	Cents			
<b>4l.</b>	Hot Mix Asphalt for Misc. Use per ton.	5 Ton		
	Dollars and			
	Cents			
<b>4m.</b>	8 Inch Ductile Iron Water Pipe (Mechanical Joint) per linear foot.	20 LF		
	Dollars and			
	Cents			
<b>4n.</b>	Ductile Iron Fittings For Water Pipe per pound	440 lb		
	Dollars and			
	Cents			
<b>4o.</b>	Water Line Disinfection/ Testing in Accordance with City of Quincy Specifications & Requirements per lump sum.	1 LS		
	Dollars and			
	Cents			
<b>4p.</b>	Drainage Structure Removed per each.	8 Ea.		
	Dollars and			
	Cents			

<b>Item No.</b>	<b>Unit or Lump Sum Price in Both Words &amp; Figures</b>	<b>Estimated Quantity</b>	<b>Unit Bid Price</b>	<b>Extended Cost Figures</b>
<b>4q.</b>	Catch Basins – 4-foot diameter per each.	5 Ea.		
	Dollars and			
	Cents			
<b>4r.</b>	Catch Basins – special (shallow) per each.	2 Ea.		
	Dollars and			
	Cents			
<b>4s.</b>	Catch Basin Drain Pipe Hood per each.	7 Ea.		
	Dollars and			
	Cents			
<b>4t.</b>	Drain Manholes - 4-foot diameter per each.	7 Ea.		
	Dollars and			
	Cents			
<b>4u.</b>	Drain Manhole - 6-foot diameter per each.	1 Ea.		
	Dollars and			
	Cents			
<b>4v.</b>	Drain Manhole – Special (Doghouse) 7-foot diameter per each.	1 Ea.		
	Dollars and			
	Cents			
<b>4w.</b>	Drain Manhole – Special (shallow) 4-foot diameter per each.	1 Ea.		
	Dollars and			
	Cents			
<b>4x.</b>	Drainage Structure Remodeled per each.	4 Ea.		
	Dollars and			
	Cents			
<b>4y.</b>	Drainage Structure Adjusted per each.	2 Ea.		
	Dollars and			
	Cents			

<b>Item No.</b>	<b>Unit or Lump Sum Price in Both Words &amp; Figures</b>	<b>Estimated Quantity</b>	<b>Unit Bid Price</b>	<b>Extended Cost Figures</b>
<b>4z.</b>	Frame with Grate or Cover per each.	12 Ea.		
	Dollars and			
	Cents			
<b>4aa.</b>	Frame with Grate or Cover Removed and Stacked per each	8 Ea.		
	Dollars and			
	Cents			
<b>4bb.</b>	Wire Loop Installed In Roadway per linear foot	200 LF		
	Dollars and			
	Cents			
<b>4aa.</b>	Gas Utility Relocation per linear foot.	20 LF		
	Dollars and			
	Cents			
<b>4bb.</b>	Environmental Protection Sedimentation controls at storm drains, per each.	8 Ea.		
	Dollars and			
	Cents			
<b>4cc.</b>	Miscellaneous Signs Removed, and Stored per each.	4 Ea.		
	Dollars and			
	Cents			
<b>4dd.</b>	Miscellaneous Signs Reset per each.	4 Ea.		
	Dollars and			
	Cents			
<b>4ee.</b>	Loam Borrow per cubic yard.	20 CY.		
	Dollars and			
	Cents			
<b>4ff.</b>	Seeding per square yard.	121 SY.		
	Dollars and			
	Cents			

<b>Item No.</b>	<b>Unit or Lump Sum Price in Both Words &amp; Figures</b>	<b>Estimated Quantity</b>	<b>Unit Bid Price</b>	<b>Extended Cost Figures</b>
<b>4gg.</b>	12-in Reflectorized White Line (Thermoplastic) per square foot.	1040 SF.		
	Dollars and			
	Cents			
<b>4hh.</b>	Tree Stump Removed per each.	1 Ea.		
	Dollars and			
	Cents			
<b>4ii.</b>	Tree Protection per each.	21 Ea.		
	Dollars and			
	Cents			
<b>4jj.</b>	Safety Controls for Construction Operations per unit day.	30 Day		
	Dollars and			
	Cents			
<b>4kk.</b>	Southern Artery Improvements Mobilization/ Demobilization per lump sum.	1 LS		
	Dollars and			
	Cents			
<b>5.</b>	<b>TRAFFIC POLICE DETAILS</b>	1	\$30,000.00	\$30,000.00
	Per allowance.			
	<u>Thirty Thousand Five Hundred Dollars</u> and			
	Zero Cents			
	(\$30,000.00)			
<b>6.</b>	<b>UNSUITABLE MATERIALS EXCAVATION AND BACKFILL</b>			
<b>6a.</b>	Unsuitable material, per cubic yard.	100 CY.		
	Dollars and			
	Cents			
<b>6b.</b>	Rock and boulders, per cubic yard.	50 CY.		
	Dollars and			
	Cents			

Item No.	Unit or Lump Sum Price in Both Words & Figures	Estimated Quantity	Unit Bid Price	Extended Cost Figures
6c.	Control Density Fill, Type 2E, flowable (excavatable), per cubic yard.	450 CY.		
	Dollars and			
	Cents			
7.	<b>COMPACTION TESTING</b>	1	\$10,000.00	\$10,000.00
	Per allowance.			
	<u>Ten Thousand Dollars</u> and			
	Zero Cents			

E. The undersigned agrees that, if he/she is selected as General Contractor, he/she will within ten (10) days, Saturdays, Sundays and legal holidays excluded, after presentation thereof by the Awarding Authority, execute a contract in accordance with the terms of this Bid and furnish a Performance Bond and also a Labor and Materials or Payment Bond, each of a surety company qualified to do business under the laws of the Commonwealth and satisfactory to the Awarding Authority and each in the sum of the Contract Price, the premiums for which are to be paid by the General Contractor and are included in the Contract Price.

The undersigned hereby certifies that he/she is able to furnish labor that can work in harmony with all other elements of labor employed or to be employed on the work and that he/she will comply fully with all laws and regulations applicable to awards made subject to M.G.L. Section 44 A.

The undersigned certifies under penalties of perjury that there have been no substantial changes in his financial position or business organization other than those changes noted within the application since the applicant's most recent prequalification statement and that the bid is in all respects bonafide, fair and made without collusion or fraud with any other person. "Person" shall mean any natural person, joint venture, partnership, corporation or other business or legal entity which sells materials, equipment or supplies used in or for, or engages in the performance of, the same or similar construction, reconstruction, installation, demolition, maintenance or repair work or any part thereof.

The undersigned further certifies under the penalties of perjury that this Bid is in all respects bona fide, fair and made without collusion or fraud with any other person. As used in this subsection, the word "person" shall mean any natural person, joint venture, partnership, corporation or other business or legal entity.

The undersigned further certifies under penalty of perjury that the said undersigned is not presently debarred from doing public construction work in the Commonwealth under the provision of Section Twenty-Nine F of Chapter Twenty-Nine, or any other applicable debarment provisions of any other Chapter of the General Laws or any rule or regulation promulgated thereunder.

- F. A Labor and Material or Payment Bond in the amount of 100% of the total Contract Price must be provided by the General Contractor. A Performance Bond in the amount of 100% of the total Contract Price must be provided by the General Contractor.
- G. The time for holding bids, where Federal approval is not required is thirty (30) days, Saturdays, Sundays and legal holidays excluded, after opening of bids and where Federal approval is required, the time period for holding bids is sixty (60) days, Saturdays, Sundays and holidays excluded after Federal approval.
- H. This project is subject to all requirements of M.G.L. Chapter 30, Section 39M and applicable requirements of MGL Chapter 149.
- I. The time for substantial completion of this Contract is as set forth in the Invitation to Bid. Liquidated damages shall be assessed as set forth in the agreement. The Work will be considered complete and ready for final payment after warranty inspection is completed.
- J. Interest of Officers and Employees of the City of Quincy or Members of the City Council or Other Public Officials: No officer, member or employee of the City of Quincy or its designees or agents, and no member of its governing body, and no other public official of the governing body of the locality or localities in which the project is situated or being carried out, who exercises any function or responsibilities in the review or approval or the undertaking or carrying out of this project, shall participate in any decisions relating to this Contract, which affects his personal interest or the interest of any corporation, partnership, or associations in which he is directly or indirectly interested or have any personal or pecuniary interest, direct or indirect, in this contract or proceeds thereof.
- K. The undersigned, as Bidder, declares that he understands that information relative to sub-surface and other conditions, natural phenomena, existing pipes and other structures (surface and/or sub-surface) has been furnished only for his information and convenience without any warranty or guarantee, expressed or implied, that the structures (surface and/or sub-surface) actually encountered will be the same as those shown on the drawings or in any of the other contract documents, and he agrees that he shall not use or be entitled to use any such information made available to him through the contract documents or otherwise, or obtained by him in his own examination or the site, as a basis or grounds for any claim against the City of the Engineer arising from or by reason or any variance which may exist between the aforesaid information made available to or acquired by him and the sub-surface and/or other conditions, natural phenomena, existing pipes and other structures (surface and/or sub-surface) encountered during construction, and that due allowance therefore has been made in this bid.

Date \_\_\_\_\_

A Corporation

\_\_\_\_\_  
(Name of General Bidder)

\_\_\_\_\_  
(State of Incorporation)

By

\_\_\_\_\_  
(Name of Person Signing Bid and Title)

(Corporate Seal)

Attest

\_\_\_\_\_  
(Secretary)

\_\_\_\_\_  
(Business Address)

\_\_\_\_\_  
(City and State)

\_\_\_\_\_  
(Telephone No.)

A Partnership

\_\_\_\_\_  
(Name of General Bidder)

By

\_\_\_\_\_  
(General Partner)

(Seal)

\_\_\_\_\_  
(Business Address)

\_\_\_\_\_  
(City and State)

\_\_\_\_\_  
(Telephone No.)



Phone: 617- 376-1060  
Fax: 617-376-1074

**CERTIFICATE AS TO CORPORATE BIDDER**  
(To be submitted by all General Bidders)

I, \_\_\_\_\_,  
certify that I am the \_\_\_\_\_  
of the corporation named as Bidder in the Form for General Bid: that  
\_\_\_\_\_ who signed the said Form for General Bid on behalf of the Bidder  
was then \_\_\_\_\_ of said corporation; that the signature thereto is genuine;  
and that said Form for General Bid was duly signed, sealed and executed for and in behalf of said  
corporation by authority of its governing body.

(CORPORATE SEAL)

Dated \_\_\_\_\_

*CITY OF QUINCY*  
**Purchasing Department**  
*1305 Hancock Street, Quincy, MA 02169*

**TAX COMPLIANCE CERTIFICATE**

**MASS. GENERAL LAWS, CH. 62C, S: 49A(b)**

(To be submitted by all General Bidders)

I hereby certify that I have complied with all laws of the Commonwealth of Massachusetts relating to taxes, reporting of employees and contractors, and withholding of child support.

Signed under the pains and penalties of perjury.

(1) Individual Contractor

\_\_\_\_\_  
(Contractor's Name and Signature)

Social Security Number

\_\_\_\_\_

(2) Corporation, Association or Partnership

\_\_\_\_\_  
(Contractor's Name)

Federal Tax ID Number, or  
Social Security Number

\_\_\_\_\_

By: \_\_\_\_\_  
(Authorized Signature)

**Note to Contractor: Please sign at (1) or (2), whichever applies.**

**CHAPTER 62C. ADMINISTRATIVE PROVISIONS RELATIVE TO STATE TAXATION**  
**Chapter 62C: Section 49A Certification of compliance with tax laws as prerequisite to obtaining license or governmental contract**

Section 49A. (a) Any person applying to any department, board, commission, division, authority, district or other agency of the commonwealth or any subdivision of the commonwealth, including a city, town or district, for a right or license to conduct a profession, trade or business, or for the renewal of such right or license, shall certify upon such application, under penalties of perjury, that he has complied with all laws of the commonwealth relating to taxes, reporting of employees and contractors, and withholding and remitting child support. Such right or license shall not be issued or renewed unless such certification is made.

(b) No contract or other agreement for the purposes of providing goods, services or real estate space to any of the foregoing agencies shall be entered into, renewed or extended with any person unless such person certifies in writing, under penalties of perjury, that he had complied with all laws of the commonwealth relating to taxes, reporting of employees and contractors, and withholding and remitting child support.

(c) Any such agency, which has been notified by the commissioner pursuant to section forty-seven A that a person who holds a license or certificate of authority issued by such agency or who has agreed to furnish goods, services or real estate space to such agency has neglected or refused to file any returns or to pay any tax required under this chapter and that such person has not filed in good faith a pending application for abatement of such tax or a pending petition before the appellate tax board contesting such tax or has been penalized pursuant to section 9 of chapter 62E for failure to comply with the provisions under said chapter 62E relating to reporting of employees and contractors, or has been penalized pursuant to paragraph (3) of subsection (f) of section 12 of chapter 119A for failure to comply with the provisions under said chapter 119A relating to withholding and remitting child support, shall refuse to reissue, renew or extend such license, certificate of authority, contract or agreement until the agency receives a certificate issued by the commissioner that the person is in good standing with respect to any and all returns due and taxes payable to the commissioner as of the date of issuance of said certificate, including all returns and taxes referenced in the initial notification or, if the licensee has been penalized for failure to comply with the provisions relating to reporting of employees and contractors under chapter 62E or withholding and remitting child support under chapter 119A, a certificate issued by the commissioner that the licensee is in compliance with said provisions.

(d) Any person who owns or leases a motor vehicle or trailer that is required to be registered in the commonwealth under chapter 90 and improperly registers the motor vehicle or trailer in another state or misrepresents the place of garaging of the motor vehicle or trailer in another city or town, shall be considered in violation of laws of the commonwealth relating to taxes under chapter 60A, chapter 64H or chapter 64I. The right, license or contract provided for in subsections (a) and (b) shall not be issued or renewed until the person or business entity has paid all taxes due at the time of application for such right, license or contract.

(e) Any person who, for the purpose of evading payment of a tax pursuant to chapters 59 to 64J, inclusive, willfully makes and subscribes any return, form, statement or other document pursuant to subsection (a), (b) or (d) that contains or is verified by a written declaration that is made under the penalties of perjury, and that contains information that he does not believe to be true and correct as to every matter material to his compliance with all laws of the commonwealth relating to taxes, shall be subject to section 73.

**NON-COLLUSION AFFIDAVIT OF BIDDER**  
(to be submitted by all General Bidders)

State of \_\_\_\_\_

County of \_\_\_\_\_

\_\_\_\_\_, being duly sworn, deposes and says that:

- (1) He/She is (owner, partner, officer, representative or agent) of \_\_\_\_\_, the Bidder that has submitted the attached bid;
- (2) He/She is fully informed respecting the preparation and contents of the attached bid and of all pertinent circumstances respecting such bid;
- (3) Such bid is genuine and is not a collusive or sham bid;
- (4) Neither the said Bidder, nor any of its officers, partners, owners, agents, representatives, employees or parties in interest, including this affidavit, has in any way colluded, conspired, connived or agreed directly or indirectly, with any other Bidder, firm or person to submit a collusive or sham bid in connection with such Contract, or has in any manner, directly or indirectly, sought by agreement or communication or conference with any other Bidder, firm or person to fix any overhead, profit or cost element of the bid price, or the bid price of any other Bidder; or to secure through any collusion, conspiracy, connivance or unlawful agreement any advantage against the City of Quincy or any other person interested in the proposed Contract;
- (5) The price or prices quoted in the attached are fair and proper and are not tainted by a collusion, conspiracy, connivance or unlawful agreement on the part of the Bidder or any of its agents, representatives, owners, employees, or parties in interest, including this affidavit.

Signed: \_\_\_\_\_

Title: \_\_\_\_\_

Subscribed and sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_.

Title: \_\_\_\_\_

My Commission Expires: \_\_\_\_\_

Contractor' Certification

A contractor will not be eligible for award of a contract unless such contractor has submitted the following certification, which is deemed a part of the resulting contract:

**CONTRACTOR'S CERTIFICATION**  
(To be submitted by all General Contractors)

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Name of the General Contractor

Certifies that:

1. It intends to use the following listed construction trades in the work under contract:

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2. Will comply with the minority workforce ratio and specific affirmative action steps contained herein: and
3. Will obtain from each of its subcontractors and submit to the contracting or administering agency prior to the award of any subcontract under this contract the subcontractor's certification required by these bid conditions.

---

Signature of Authorized  
Representative

**OSHA CERTIFICATION**

(To be submitted by all General Contractors)

I. CERTIFICATION REGARDING HEALTH AND SAFETY

The undersigned hereby certifies that he is able to furnish labor that can work in harmony with all other elements of labor employed or to be employed on the work; that all employees to be employed at the worksite will have successfully completed a course in construction safety and health approved by the United States Occupational Safety and Health Administration that is at least ten hours in duration at the time the employee begins work and who shall furnish documentation of successful completion of said course with the first certified payroll report for each employee; and that he will comply fully with all laws and regulations application to awards made subject to section 44A.

Date: \_\_\_\_\_

\_\_\_\_\_  
Name of General Bidder

By \_\_\_\_\_  
Signature

\_\_\_\_\_  
Print name and title

\_\_\_\_\_  
Business Address

\_\_\_\_\_  
Street Address City and State



## **RIGHT-TO-KNOW LAW**

(To be submitted by all General Contractors)

A bidder will not be eligible for award of this contract under this invitation for bids unless such bidder has submitted as part of its bid the following certification which will be deemed a part of the resulting contract.

### **CERTIFICATION**

The Bidder hereby certifies that, if awarded this contract, he will fully comply with the Massachusetts Right-To-Know Law, c.470 of the Acts of 1983, (the Act). In addition, he shall:

1. obtain a Material Safety Data Sheet (MSDS), for all substances or mixtures of which appear on the Massachusetts Substance List that he or any of his subcontractors brings to or uses on the work site and will keep a copy of the MSDS on the work site of this contract;
2. label each container of a substance or mixture of substances on the Massachusetts Substance List, as required, in section 7 of the Act;
3. provide the same training and non-technical instruction that he is required to provide under section 15 of the Act to all Quincy personnel. Training shall include instructing on the nature and effects of any substance or mixture of substances listed on the Massachusetts Substance List which the Bidder or any of his subcontractors brings to or uses on the worksite.
4. provide to Quincy employees on the work site the same protective equipment that the bidder or any of his subcontractors provides to his employees.

---

Signature of Authorized Representative of Bidder

Bidder's Name:

Bidder's Address:

### **CERTIFICATION**

## NON-SEGREGATED FACILITIES

(To be submitted by all General Contractors)

The Bidder certifies that he does not maintain or provide for his employees any segregated facilities at any of his establishments, and that he does not permit his employees to perform their services at any location, under this control, where segregated facilities are maintained. The Bidder certifies further that he will not maintain or provide for his employees any segregated facilities at any of his establishments and that he will not permit his employees to perform their services at any location under his control where segregated facilities are maintained. The Bidder agrees that a breach of this certification will be a violation of the Equal Opportunity clause in any contract resulting from acceptance of this bid. As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, restrooms, and washrooms, restaurants and other eating areas, timeclocks, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation and housing facilities provided for employees which are segregated by explicit directive or are in fact segregated on the basis of race, color, religion or national origin, because of habit, local custom or otherwise. The Bidder agrees that (except where he has obtained identical certification from proposed subcontractors for specific time periods) he will obtain identical certifications from proposed subcontractors prior to the award of subcontracts exceeding \$10,000.00 which are not exempt from the provisions of the Equal Opportunity clause, and that he will retain such certifications in his file.

Note:           The penalty for making false statements in offers is prescribed in 18 U.S.C. ss.1001.

Date: \_\_\_\_\_, 20 \_\_\_\_\_

\_\_\_\_\_  
(Name of Bidder)

Official Address (including Zip Code) \_\_\_\_\_

By: \_\_\_\_\_

\_\_\_\_\_  
(Title)

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**AFFIDAVIT  
REGARDING PRIOR LABOR DISPUTES**

(To be submitted by all General Contractors)

The Bidder must execute and complete the following statements as to whether it has been the subject of, or otherwise been involved in, any labor dispute during the past five (5) years. If the Bidder has been the subject of, or otherwise been involved in any labor dispute during this period, the bidder must also provide a detailed description of each labor dispute, including the name and location of the project worked on, the nature of the dispute was resolved. For these purposes, "labor disputes" shall include picketing or any other activity which disrupted or delayed the work.

I \_\_\_\_\_, being first duly sworn, do hereby  
depose/state: (Name)

1. I make each of the following statements with full authorization to bind

\_\_\_\_\_ to each of the representations made  
below. (Name of Bidder)

2. \_\_\_\_\_ has/has not been involved in a labor  
dispute (Name of Bidder)

as described above, within the past five (5) years.

3. (Complete only if bidder has been involved in dispute).

The dispute(s) occurred on the following project(s). (Use separate sheet if  
necessary)

<u>Name and Location of Project</u>	<u>Date Dispute Began</u>	<u>Date Concluded</u>
-------------------------------------	---------------------------	-----------------------

a.

b.

Attach separate sheet and give full description of the nature of each dispute and an explanation of  
how it was resolved. (Please give a full description below, for each such dispute).

Signed under the penalty of perjury this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_ .

BY:

on behalf of:

(company name)

**(To be typed onto letterhead of the Certified Public Accountant)**

City of Quincy  
City Solicitor's Office  
1305 Hancock Street  
Quincy, MA 02169

Attn: James S. Timmins  
City Solicitor

RE: Repairs to the Broad Street Tide Gate & Stormwater Tributary System

Dear Mr. Timmins:

Please be advised that I have reviewed the statement on internal accounting controls prepared by/for

\_\_\_\_\_ (name of company), in connection with the above captioned project. This statements is required under Massachusetts General Laws, Chapter 30, Section 39R. In our opinion, representations of management are consistent with our evaluation of the system of internal accounting controls. In addition, we believe that they are reasonable with respect to transactions and assets in amounts which would be material when measured in relation to the firm's financial statements.

Yours sincerely,

Certified Public Accountant

Note: This form is to be completed only when the contract exceeds \$100,000 and is for the purchase of materials or for the construction, renovation, etc. of public works or public buildings.

# CERTIFICATION

## Internal Accounting

(To be submitted by all General Contractors)

The Contractor certifies that it has internal accounting controls, as required by Chapter 30, Section 39R and that the Contractor will:

1. maintain accurate and detailed accounts for a six (6) year period after the final payment;
2. file regular statements of management concerning internal auditing controls;
3. file an annual audited financial statement; and
4. submit a statement from an independent certified public accountant that such CPA has examined management's internal auditing controls and expresses an opinion as to their consistency with management's statements in (2) above, and whether such statements are reasonable with respect to transactions and assets that are substantial in relation to designer's financial statements. General Laws, Chapter 7, Section 301 (e).

Signed under the pains and penalties of perjury:

Name of Company

Authorized Signature

Note: This form is to be completed only when the contract exceeds \$100,000 and is for the purchase of materials or for the construction, renovation, etc. of public works or public buildings.

**BID BOND**

[NOTE: This form may be substituted for the standard forms issued by bonding company.]

KNOW ALL MEN BY THESE PRESENTS, that we, the undersigned \_\_\_\_\_  
\_\_\_\_\_ as Principal, and \_\_\_\_\_ as Surety, are hereby held and firmly bound unto the City of Quincy, Massachusetts as OWNER in the

penal sum of \_\_\_\_\_ for the payment of which, well and truly to be made, we hereby jointly and severally bind ourselves, successors and assigns.

Signed, this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_.

The Condition of the above obligation is such that whereas the Principal has submitted to the City of Quincy, Massachusetts, a certain BID, attached hereto and hereby made a part hereof to enter into a contract in writing, for Construction of the Coastal Manhole I/I Reduction Program.

\_\_\_\_\_  
NOW, THEREFORE,

- (a) If said Bid shall be rejected, or
- (b) If said Bid shall be accepted and the Principal shall execute and deliver an Agreement in the Form of Agreement attached hereto (properly completed in accordance with said Bid) and shall furnish a Bond for faithful performance of said Contract, and for the payment of all persons performing labor and furnishing materials in connection therewith, and shall in all other respects perform the Agreement created by the acceptance of said Bid, then this obligation shall be void, otherwise the same shall remain in force and effect; it being 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.

The Surety, for value received, hereby stipulates and agrees that the obligations of said Surety and its Bond shall be in no way impaired or affected by any extension of the time within which the OWNER may accept such Bid: and said Surety does hereby waive notice of any such extension.

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 officer, the day and year first set forth above.

\_\_\_\_\_  
Principal

\_\_\_\_\_  
Surety

By: \_\_\_\_\_

IMPORTANT: Surety companies executing Bonds must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the State where the project is located.

OFFEROR \_\_\_\_\_ AUTHORIZED SIGNATURE \_\_\_\_\_

\_\_\_\_\_ Printed Name and Title \_\_\_\_\_

\_\_\_\_\_ Date Offered \_\_\_\_\_

COUNTY \_\_\_\_\_

STATE OF INCORPORATION \_\_\_\_\_

PHONE \_\_\_\_\_

TAX I.D. NUMBER \_\_\_\_\_

## AGREEMENT

THIS AGREEMENT made and entered into this \_\_\_\_\_ day of \_\_\_\_\_, 2012, by and between the City of Quincy, Massachusetts, acting through the Department of Public Works, hereinafter called the "City" and with legal address and principle place of business at 55 Sea St., Quincy, Massachusetts 02169, and

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(name and address)

hereinafter called the "Contractor." The City and the Contractor, in consideration of the mutual covenants hereinafter set forth, agree as follows:

### ARTICLE 1 - WORK

- 1.1. Contractor shall perform the Work as specified or indicated in the Contract Documents. The work is as described in Section 01010, Summary.

### ARTICLE 2 – ENGINEER

- 2.1. The project design and construction documents have been prepared by Woodard & Curran, Inc., 980 Washington St., Suite 325, Dedham, MA 02026.
- 2.2. Woodard & Curran, Inc. in conjunction with the City of Quincy Department of Public Works, 55 Sea Street, Quincy, Massachusetts will act as the Engineer and Owners Representative in connection with the execution of the project work, in accordance with the Contract Documents.

### ARTICLE 3 – CONTRACT TIME

- 3.1. The Contractor shall fully complete the project within 90 **consecutive days** of the start date fixed in the "Notice to Proceed". The Owner reserves the right to stop work due to inclement weather or coordination of other construction activities in the area. If work is stopped, the Contractor shall not have a claim for additional costs due to the City stopping the work, however the contract time will be amended.
- 3.2. The Contractor agrees that the Work shall be prosecuted regularly, diligently, and uninterrupted and at such rate of progress as will insure full completion thereof within the Contract Time stated above. It is expressly understood and agreed, by and between the Contractor and the City, that the Contract Time is reasonable for the completion of the Work, taking into consideration the average climatic range and usual business/commercial and industrial activities prevailing in this locality.

#### **ARTICLE 4 – CONTRACT PRICE**

- 4.1. The City will pay the Contractor for performance of the Work in accordance with the Contract Documents, in current funds at the itemized unit prices of work items, a total agreed sum of \$ \_\_\_\_\_ (state the total amount in words):

\_\_\_\_\_ as submitted in the Contractor's Form for General Bid attached to the Agreement.

#### **ARTICLE 5 – APPLICATIONS FOR PAYMENT**

- 5.1. Applications for payment shall be submitted by the Contractor and processed by the Engineer in accordance with the Conditions of the Contract included in the Contract Documents.

#### **ARTICLE 6 – PROGRESS AND FINAL PAYMENTS**

- 6.1. The City will make progress payments on account of the Contract Price on the basis of the Contractor's Application for Payment, as recommended by the Engineer, monthly during construction as provided below. All progress payments will be on the basis of the progress of the Work measured by the schedule of values provided for in the Conditions of the Contract.
- 6.2. The City will make progress and final payments as provided for in the Conditions of the Contract and in accordance with the applicable Massachusetts General Laws.

#### **ARTICLE 7 – LIQUIDATED DAMAGES**

- 7.1. The City and the Contractor recognize that time is of the essence for this Agreement and that the City will suffer financial loss if the Work is not completed within the Contract Time specified in Article 3 above, plus any extensions thereof allowed in accordance with Article 12 of the General Conditions. They also recognize the delays, expense and difficulties involved in providing, in a legal or arbitration proceeding, the actual loss suffered by the City if the Work is not completed on time. Accordingly, instead of requiring any such proof, the City and the Contractor agree that as liquidated damages or delay (but not as a penalty) the Contractor shall pay the City **one thousand and two hundred dollars (\$1,200) per day** for each calendar day beyond the completion date that work remains uncompleted.
- 7.2. Provided, that the Contractor shall not be charge with liquidated damages or any excess cost when the delay in completion of the Work is for reasons included in Article 12 of the General Conditions.
- 7.3. Provided further, that the Contractor shall furnish the City the required notification of such delays in accordance with the applicable Conditions of the Contract.

**ARTICLE 8 – ASSURANCE**

- 8.1. The Contractor has familiarized himself with the nature and extent of the Contract Documents, Work, locality, and with all local conditions and Federal, State and local laws, ordinances, rules and regulations that in any manner may affect cost, progress or performance of the Work.
- 8.2. The Contractor has studied carefully all reports of investigations and tests of sub-surface and latent physical conditions at the site or otherwise affecting cost, progress or performance of the Work which were relied upon by the Engineer in the preparation of the Drawings and Specifications and which have been identified in the Supplementary Conditions.
- 8.3. The Contractor has made or caused to be made examinations, investigations and tests and studies of such reports and related data in addition to those referred to in the above paragraph as he deems necessary for the performance of the work at the Contract Price within the Contract Time and in accordance with the other terms and conditions of the Contract Documents; and no additional examinations, investigations, tests, reports or similar data are or will be required by him for such purposes.
- 8.4. The Contractor has correlated the results of all such observations, examinations, tests, reports and data with the terms and conditions of the Contract Documents.
- 8.5. The Contractor has given the Engineer written notice of any conflict, error or discrepancy that he has discovered in the Contract Documents and the written resolution thereof by the Engineer is acceptable to the Contractor.
- 8.6. The Contractor agrees that the Contract Documents are sufficient in scope and detail to indicate and convey understanding of all terms and conditions for performance of the Work.
- 8.7. The Contractor shall not discriminate against or exclude any person from participation herein on grounds of race, religion, color, sex, age, or national origin; and that it shall take affirmative actions to insure that applicants are employed, and that employees are treated during their employment, without regard to race, religion, color, sex, age, handicapped status, or national origin.
- 8.8. The Contractor shall not participate in or cooperate with an international boycott, as defined in Section 999 (b)(3) and (4) of the Internal Revenue Code 1986, as amended, or engage in conduct declared to be unlawful by Section 2 of Chapter 151E of the Massachusetts General Laws.

**IN WITNESS WHEREOF**, the parties hereto have executed, or caused to be executed, by their duly authorized officials, this Agreement in six (6) copies, each of which shall be deemed an original on the date first above written. The Party of the First Part agrees to pay the Party of the Second Part, upon satisfactory completion and delivery of the aforementioned, the sum of:

Amount in Figures: \$ \_\_\_\_\_

Amount in Words \_\_\_\_\_

**WITNESS:**

**OWNER: The City of Quincy**

BY: \_\_\_\_\_  
Name: James S. Timmins, Esq.  
Title: City Solicitor

BY: \_\_\_\_\_  
Name: Thomas P. Koch  
Title: Mayor

BY: \_\_\_\_\_  
Name: Daniel G. Raymondi  
Title: Commissioner of Public Works

BY: \_\_\_\_\_  
Name: Kathryn Hobin  
Title: Chief Procurement Officer

Contract No.: \_\_\_\_\_

P.O. No.: \_\_\_\_\_

Code: \_\_\_\_\_

MUNIS Project No.: \_\_\_\_\_

The undersigned in compliance with MGL, Chapter 44, Section 31C, certifies that an appropriation in the amount required for this contract is available

**CONTRACTOR:**

BY: \_\_\_\_\_

BY: \_\_\_\_\_

Name: Mark Cavanagh  
Title: Director of Municipal Finance

Name:  
Title:  
Address:

**PERFORMANCE BOND**

Any singular reference to CONTRACTOR, Surety, OWNER or other party shall be considered plural where applicable.

CONTRACTOR (Name and Address):                      SURETY (Name and Principal Place of Business):

OWNER (Name and Address):

AGREEMENT BETWEEN OWNER AND CONTRACTOR ON THE BASIS OF UNIT PRICES (“AGREEMENT”):

Date:

Amount:

Description (Name and Location):

**CITY OF QUINCY, MASSACHUSETTS  
REPAIRS TO THE BROAD STREET TIDE GATE & STORMWATER TRIBUTARY SYSTEM  
BOND**

Date (Not earlier than Agreement Date):

Amount:

Modifications to this Bond Form:

1.     The CONTRACTOR and the Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to the OWNER for the performance of the Agreement, which is incorporated herein by reference.
  
2.     If the CONTRACTOR performs the Agreement, the Surety and the CONTRACTOR shall have no obligation under this Bond, except to participate in conferences as provided in Subparagraph 3.1.
  
3.     If there is no OWNER Default, the Surety's obligation under this Bond shall arise after:
  - 3.1. The OWNER has notified the CONTRACTOR and the Surety at its address described in Paragraph 10 below, that the OWNER is considering declaring a CONTRACTOR Default and has requested and attempted to arrange a conference with the CONTRACTOR and the Surety to be held not later than fifteen days after receipt of such notice to discuss methods of performing the Agreement. If the OWNER, the CONTRACTOR and the Surety agree, the CONTRACTOR shall be allowed a reasonable time to perform the Agreement, but such an agreement shall not waive the OWNER's right, if any, subsequently to declare a CONTRACTOR Default; and

- 3.2. The OWNER has declared a CONTRACTOR Default and formally terminated the CONTRACTOR's right to complete the Agreement. Such CONTRACTOR Default shall not be declared earlier than twenty days after the CONTRACTOR and the Surety have received notice as provided in Subparagraph 3.1; and
  - 3.3. The OWNER has agreed to pay the Balance of the Contract Price to the Surety in accordance with the terms of the Agreement or to a CONTRACTOR selected to perform the Agreement in accordance with the terms of the contract with the OWNER.
4. When the OWNER has satisfied the conditions of Paragraph 3, the Surety shall promptly and at the Surety's expense take one of the following actions:
  - 4.1. Arrange for the CONTRACTOR, with consent of the OWNER, to perform and complete the Agreement; or
  - 4.2. Undertake to perform and complete the Agreement itself, through its agents or through independent contractors; or
  - 4.3. Obtain bids or negotiated proposals from qualified contractors acceptable to the OWNER for a contract for performance and completion of the Agreement, arrange for a contract to be prepared for execution by the OWNER and the contractor selected with the OWNER's concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Agreement, and pay to the OWNER the amount of damages as described in paragraph 6 in excess of the Balance of the Contract Price incurred by the OWNER resulting from the CONTRACTOR's default; or
  - 4.4. Waive its right to perform and complete, arrange for completion, or obtain a new CONTRACTOR and with reasonable promptness under the circumstances:
    - a. After investigation, determine the amount for which it may be liable to the OWNER and, as soon as practicable after the amount is determined, tender payment therefore to the OWNER; or
    - b. Deny liability in whole or in part and notify the OWNER citing reasons therefore.
5. If the Surety does not proceed as provided in Paragraph 4 with reasonable promptness, the Surety shall be deemed to be in default on this Bond fifteen days after receipt of an additional written notice from the OWNER to the Surety demanding that the Surety perform its obligations under this Bond, and the OWNER shall be entitled to enforce any remedy available to the OWNER. If the Surety proceeds as provided in Subparagraph 4.4, and the OWNER refuses the payment tendered or the Surety has denied liability, in whole or in part, without further notice the OWNER shall be entitled to enforce any remedy available to the OWNER.
6. After the OWNER has terminated the CONTRACTOR's right to complete the Agreement, and if the Surety elects to act under Subparagraph 4.1, 4.2, or 4.3 above, then the responsibilities of the Surety to the OWNER shall not be greater than those of the CONTRACTOR under the Agreement, and the responsibilities of the Owner to the Surety shall not be greater than those of the OWNER under the Agreement. To the limit of the amount of this Bond, but subject to commitment by the OWNER for the Balance of the Contract Price to mitigation of costs and damages on the Contract, the Surety is obligated without duplication for:
  - 6.1. The responsibilities of the CONTRACTOR for correction of defective work and completion of the
  - 6.2. Additional legal, design professional and delay costs resulting from the CONTRACTOR's Default, and resulting from the actions or failure to act of the Surety under Paragraph 4; and;

- 6.3. Liquidated damages, or if no liquidated damages are specified in the Agreement, actual damages caused by delayed performance or non-performance of the CONTRACTOR.
7. The Surety shall not be liable to the OWNER or others for obligations of the CONTRACTOR that are unrelated to the Agreement, and the Balance of the Contract Price shall not be reduced or set off on account of any such unrelated obligations. No right of action shall accrue on this Bond to any person or entity other than the OWNER or its heirs, executors, administrators, or successors.
8. The Surety hereby waives notice of any change, including changes of time, to the Agreement or to related subcontracts, purchase orders and other obligations.
9. Any proceeding, legal or equitable, under this Bond may be instituted in any court of competent jurisdiction in the location in which the work or part of the work is located and shall be instituted within two years after CONTRACTOR Default or within two years after CONTRACTOR Default or within two years after the CONTRACTOR ceased working or within two years after the Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this Paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.
10. Notice to the Surety, the OWNER or the CONTRACTOR shall be mailed or delivered to the address shown on the signature page.
11. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. The intent is that this Bond shall be construed as a statutory bond and not as a common law bond.
12. DEFINITIONS
- 12.1. Balance of the Contract Price: The total amount payable by the OWNER to the CONTRACTOR under the Agreement after all proper adjustments have been made, including allowance to the CONTRACTOR of any amounts received or to be received by the OWNER in settlement of insurance or other claims for damages to which the CONTRACTOR is entitled, reduced by all valid and proper payments made to or on behalf of the CONTRACTOR under the Agreement.
- 12.2. Agreement: The agreement between the OWNER and the CONTRACTOR identified on the signature page, including all Contract Documents and changes thereto.
- 12.3. CONTRACTOR Default: Failure of the CONTRACTOR, which has neither been remedied nor waived, to perform or otherwise to comply with the terms of the Agreement.
- 12.4. OWNER Default: Failure of the OWNER, which has neither been remedied nor waived, to pay the CONTRACTOR as required by the Agreement or to perform and complete or comply with the other terms thereof.

CONTRACTOR AS PRINCIPAL

Company: \_\_\_\_\_ (Corp. Seal)  
\_\_\_\_\_ (Corp. Seal)

Signature: \_\_\_\_\_  
Name and Title:

SURETY

Company: \_\_\_\_\_

Signature: \_\_\_\_\_  
Name and Title:

CONTRACTOR AS PRINCIPAL

Company: \_\_\_\_\_ (Corp. Seal)  
\_\_\_\_\_ (Corp. Seal)

Signature: \_\_\_\_\_  
Name and Title:

SURETY

Company: \_\_\_\_\_

Signature: \_\_\_\_\_  
Name and Title:

## CERTIFICATE OF INSURANCE

This is to certify that the \_\_\_\_\_ (Company) has issued the policies listed below, that these policies are written in accordance with the Company's standard policies and endorsements, except as indicated below or as noted in the attachments herewith, which policies and endorsements will be made available to ENGINEER and OWNER UPON request, that they provide coverage and limits of liability shown with respect to the insurance indicated that they are in force on this date, that all deductible amounts are indicated below, and that this Certificate is furnish in accordance with and for the purpose of satisfying the requirements of OWNER and ENGINEER in connection with the award and performance of a contract or agreement between \_\_\_\_\_

\_\_\_\_\_ (OWNER), and \_\_\_\_\_

1. Name of Insured \_\_\_\_\_
2. Address of Insured \_\_\_\_\_
3. Location and Description of Work \_\_\_\_\_

Project Contract No. \_\_\_\_\_

Policy Number	Effective Date	Expiration Date	Each Occurrence	Each Aggregate	Coverage and Limits of Liability (at least as shown below)		
					Bodily Injury Liability	Property Damage Liability	
					Occurrence	Aggregate	
A. Owner's Protective Liability has been issued at the expense of Above Insured to _____ Owner.							
			\$1,000,000.	\$1,000,000.	\$1,000,000.	\$1,000,000.	
B. Comprehensive General Liability							
			\$1,000,000.	\$1,000,000.	\$1,000,000.	\$1,000,000.	
Including: 1. Operations Premises 2. Contractor's Protective 3. Contractual as Below 4. Products/Completed Operations 5. Personal Injury							
Property Damage Ins. under policies A & B above includes Cover. for Explosion/Collapse/Underground Prop. Damage.							
C. Auto Liability					Each Person	Each Accident	Each Accident
Including 1. Owner 2. Hired 3. Non-owned					\$1,000,000.00	\$1,000,000.	\$1,000,000.00
D. Workmen's Compensation					Compensation Statutory State's Coverage B Limits \$1,000,000. if applicable		
E. Builder's Risk Insurance - All Risk Completed Value form					As called for in Contract or Agreement		

### CONTRACTUAL LIABILITY

CONTRACTOR shall at all times indemnify and save harmless OWNER, ENGINEER and their respective officers, agents and employees on account of any and all claims, damages, losses, litigation, expenses, counsel fees and compensation arising out of injuries (including death) sustained by or alleged to have been sustained by the officers, agents and employees of said OWNER or ENGINEER or of CONTRACTOR, his subcontractors, or material men, and from injuries (including death sustained by or alleged to have been sustained by the public, any or all persons on or near the Work, or by any other person or property, real or personal (including property of said OWNER or ENGINEER caused in whole or in part by the acts, omissions, or neglect of CONTRACTOR including but not limited to any neglect in safeguarding the work or through the use of unacceptable materials in contracting the Work by CONTRACTOR, any subcontractor, material man, or anyone directly or indirectly employed by them or any of them while engaged in the performance of the contract, including the entire elapsed time from the date ordered to start work or the actual start, whichever occurs first, until completion of the one year correction period, as certified by OWNER or ENGINEER.

Policies A, B, C & D shall remain in effect during the one year correction period.

Such insurer as is herein certified applies to all operations of the insured in connection with, and necessary and incidental to, the work herein described at the locations stated.

It is hereby understood and agreed that the above policies will not be restricted, suspended, materially changed, nor canceled without 15 days advance notice by registered mail to OWNER and ENGINEER.

\_\_\_\_\_  
Authorized Representative Signature

\_\_\_\_\_  
Address



1. The CONTRACTOR and the Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to the OWNER to pay for labor, materials and equipment furnished for use in the performance of the Construction Contract, which is incorporated herein by reference.
2. With respect to the OWNER, this obligation shall be null and void if the CONTRACTOR:
  - 2.1. Defends, indemnifies and holds harmless the OWNER from all claims, demands, liens or suits by any person or entity who furnished labor, materials or equipment for use in the performance of the Construction Contract, provided the OWNER has promptly notified the CONTRACTOR and the Surety (at the address described in Paragraph 12) of any claims, demands, liens or suits and tendered defense of such claims, demands, liens or suits to the CONTRACTOR and the Surety, and provided there is no OWNER Default.
3. With respect to Claimants, this obligation shall be null and void if the CONTRACTOR promptly makes payment, directly or indirectly, for all sums due.
4. The Surety shall have no obligation to Claimants under this Bond until;
  - 4.1. Claimants who are employed by or have a direct contract with the CONTRACTOR have given notice to the Surety (at the address described in Paragraph 12) and sent a copy, or notice thereof, to the OWNER, stating that a claim is being made under this Bond and, with substantial accuracy, the amount of the claim.
  - 4.2. Claimants who do not have a direct contract with the CONTRACTOR:
    1. Have furnished written notice to the CONTRACTOR and sent a copy, or notice thereof, to the OWNER, within 90 days after having last performed labor or last furnished materials or equipment included in the claim and the name of the party to whom the materials were furnished or supplied or from whom the labor was done or performed; and
    2. Have either received a rejection in whole or in part from the CONTRACTOR, or not received within 30 days of furnishing the above notice any communication from the CONTRACTOR by which the CONTRACTOR has indicated the claim will be paid directly or indirectly; and
    3. Not having been paid within the above 30 days, have sent a written notice to the surety (at the address described in paragraph 12) and sent a copy, or notice thereof, to the OWNER, stating that a claim is being made under this Bond and enclosing a copy of the previous written notice furnished to the CONTRACTOR.
5. If a notice required by Paragraph 4 is given by the OWNER to the CONTRACTOR or to the Surety that is sufficient compliance.
6. When the Claimant has satisfied the conditions of Paragraph 4, the Surety shall promptly and at the Surety's expense take the following actions:
  - 6.1. Send an answer to the Claimant, with a copy to the OWNER, within 45 days after receipt of the claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed.
  - 6.2. Pay or arrange for payment of any undisputed amounts.
7. The Surety's total obligation shall not exceed the amount of this Bond, and the amount of this Bond shall be credited for any payments made in good faith by the Surety.
8. Amounts owed by the OWNER to the CONTRACTOR under the Construction Contract shall be used for the performance of the Construction Contract and to satisfy claims, if any, under any construction Performance Bond. By the CONTRACTOR furnishing and the OWNER accepting this Bond, they agree that all funds earned by the CONTRACTOR in the performance of the Construction Contract are dedicated to satisfy obligations of the CONTRACTOR and the Surety under this Bond, subject to the OWNER's priority to use the funds for the completion of the work.
9. The Surety shall not be liable to the OWNER, Claimants or other for obligations of the CONTRACTOR that are unrelated to the Construction Contract. The OWNER shall not be liable for payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligations to make payments to, give notices on behalf of, or otherwise have obligations to Claimants under this Bond.
10. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders and other obligations.
11. No suit or action shall be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the location in which the work or part of the work is located or after the expiration of one year from the date (1) on which the Claimant gave the notice required by Subparagraph 4.1 or Clause 4.2 (iii), or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Construction Contract, whichever of (1) furnished by anyone under the Construction Contract, whichever of (1) or (2) first occurs. If the provisions of this Paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.
12. Notice to the Surety, the OWNER or the CONTRACTOR shall be mailed or delivered to the address shown on the signature page. Actual receipt of notice by Surety, the OWNER or the CONTRACTOR, however accomplished, shall be sufficient compliance as of the date received at the address shown on the signature page.
13. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted here from and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. The intent is that this Bond shall be construed as a statutory bond and not as a common law bond.
14. Upon request by any person or entity appearing to be a potential beneficiary of this Bond, the CONTRACTOR shall promptly furnish a copy of this Bond or shall permit a copy to be made.
15. DEFINITIONS
  - 15.1. Claimant: An individual or entity having a direct contract with the CONTRACTOR or with a subcontractor of the CONTRACTOR to furnish labor, materials or equipment for use in the performance of the Contract. The intent of this Bond shall be to include without limitation in the terms "labor, materials or equipment" that part of water, gas, power, light, heat, oil, gasoline, telephone service or rental equipment used in the Construction Contract, architectural and engineering services required for performance of the work of the CONTRACTOR and the CONTRACTOR's subcontractors, and all other items for which a mechanic's lien may be asserted in the jurisdiction where the labor, materials or equipment were furnished.
  - 15.2. Construction Contract: The agreement between the OWNER and the CONTRACTOR identified on the signature page, including all Contract Documents and changes thereto.
  - 15.3. OWNER Default: Failure of the OWNER, which has neither been remedied nor waived, to pay the CONTRACTOR as required by the Construction Contract or to perform and complete or comply with the other terms thereof

**NOTICE OF AWARD**

Dated \_\_\_\_\_, 2012

TO: \_\_\_\_\_  
(BIDDER)

ADDRESS: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

OWNER'S PROJECT NO. \_\_\_\_\_

OWNER'S CONTRACT NO. \_\_\_\_\_

PROJECT: City of Quincy, Massachusetts, Department of Public Works, Repairs To The Broad Street Tide Gate & Stormwater Tributary System.

-----  
You are notified that your Bid dated \_\_\_\_\_, 2012, for the above Contract has been considered. You are the apparent successful bidder and have been awarded a contract.

The Contract Price of your contract is \_\_\_\_\_ Dollars and \_\_\_\_\_ Cents (\$\_\_\_\_\_).

Three copies of each of the proposed Contract Documents (except Drawings) accompany this Notice of Award. Three sets of the Drawings will be delivered separately or otherwise made available to you immediately.

You must comply with the following conditions precedent within ten days of the date of this Notice of Award, that is by \_\_\_\_\_, 2012.

1. You must deliver to the OWNER three fully executed counterparts of the Agreement including all the Contract Documents. This includes the triplicate sets of Drawings. Each of the Contract Documents must bear your signature on (the cover) (every) page.
2. You must deliver with the executed Agreement the Contract Security (Bonds) and Insurance as specified in the Instructions to Bidders, General Conditions and Supplementary Conditions.

3. (List other conditions precedent).

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Failure to comply with these conditions within the time specified will entitle OWNER to consider your bid abandoned, to annul this Notice of Award and to declare your Bid Security forfeited.

Within ten days after you comply with those conditions, OWNER will return to you one fully signed counterpart of the Agreement with the Contract Documents attached.

\_\_\_\_\_  
(OWNER)

By

\_\_\_\_\_  
(AUTHORIZED SIGNATURE)

\_\_\_\_\_  
(TITLE)

ACKNOWLEDGED:

\_\_\_\_\_  
(CONTRACTOR)

By

\_\_\_\_\_  
(AUTHORIZED SIGNATURE)

\_\_\_\_\_  
(TITLE)

On

\_\_\_\_\_  
(DATE)

Copy to ENGINEER  
(Use Certified Mail, Return Receipt Requested)

**NOTICE TO PROCEED**

Dated \_\_\_\_\_, 2012

TO: \_\_\_\_\_

(BIDDER)

ADDRESS: \_\_\_\_\_

\_\_\_\_\_

OWNER'S PROJECT NO. \_\_\_\_\_

OWNER'S CONTRACT NO. \_\_\_\_\_

PROJECT: City of Quincy, Massachusetts, Department of Public Works, Repairs To The Broad Street Tide Gate & Stormwater Tributary System.

-----  
You are notified that the Contract Time under the above contract will commence to run on \_\_\_\_\_, 2012. By that date, you are to start performing your obligations under the Contract Documents. In accordance with Article 3 of the Agreement the dates of Substantial Completion and Final Completion are \_\_\_\_\_ 20\_\_ and \_\_\_\_\_, 20\_\_, respectively.

Before you may start any Work at the site, paragraph 5.03 of the General Conditions provides that you must deliver to the OWNER (with copies to ENGINEER) certificates of insurance which it is required to purchase and maintain in accordance with the Contract Documents.

Also before you may start any Work at the site, you must:  
(add other requirements)

\_\_\_\_\_

\_\_\_\_\_  
(OWNER)

By \_\_\_\_\_  
(AUTHORIZED SIGNATURE)

\_\_\_\_\_  
(TITLE)

ACKNOWLEDGED:

\_\_\_\_\_  
(CONTRACTOR)

By \_\_\_\_\_  
(AUTHORIZED SIGNATURE)

\_\_\_\_\_  
(TITLE)

On \_\_\_\_\_  
(DATE)

Copy to ENGINEER

This document has important legal consequences; consultation with an attorney is encouraged with respect to its use or modification. This document should be adapted to the particular circumstances of the contemplated Project and the Controlling Law.

# STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

Prepared by

**ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE**

and

Issued and Published Jointly By



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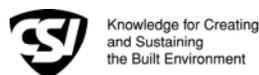
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Construction Specifications Institute

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These General Conditions have been prepared for use with the Suggested Forms of Agreement Between Owner and Contractor Nos. C-520 or C-525 (2002 Editions). Their provisions are interrelated and a change in one may necessitate a change in the other. Comments concerning their usage are contained in the EJCDC Construction Documents, General and Instructions (No. C-001) (2002 Edition). For guidance in the preparation of Supplementary Conditions, see Guide to the Preparation of Supplementary Conditions (No. C-800) (2002 Edition).

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## GENERAL CONDITIONS

### ARTICLE 1 - DEFINITIONS AND TERMINOLOGY

---

#### 1.01 *Defined Terms*

A. Wherever used in the Bidding Requirements or Contract Documents and printed with initial capital letters, the terms listed below will have the meanings indicated which are applicable to both the singular and plural thereof. In addition to terms specifically defined, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs, and the titles of other documents or forms.

1. *Addenda*--Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the proposed Contract Documents.

2. *Agreement*--The written instrument which is evidence of the agreement between Owner and Contractor covering the Work.

3. *Application for Payment*--The form acceptable to Engineer which is to be used by Contractor during the course of the Work in requesting progress or final payments and which is to be accompanied by such supporting documentation as is required by the Contract Documents.

4. *Asbestos*--Any material that contains more than one percent asbestos and is friable or is releasing asbestos fibers into the air above current action levels established by the United States Occupational Safety and Health Administration.

5. *Bid*--The offer or proposal of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.

6. *Bidder*--The individual or entity who submits a Bid directly to Owner.

7. *Bidding Documents*--The Bidding Requirements and the proposed Contract Documents (including all Addenda).

8. *Bidding Requirements*--The Advertisement or Invitation to Bid, Instructions to Bidders, bid security of acceptable form, if any, and the Bid Form with any supplements.

9. *Change Order*--A document recommended by Engineer which is signed by Contractor and Owner and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times, issued on or after the Effective Date of the Agreement.

10. *Claim*--A demand or assertion by Owner or Contractor seeking an adjustment of Contract Price or Contract Times, or both, or other relief with respect to the terms of the Contract. A demand for money or services by a third party is not a Claim.

11. *Contract*--The entire and integrated written agreement between the Owner and Contractor concerning the Work. The Contract supersedes prior negotiations, representations, or agreements, whether written or oral.

12. *Contract Documents*-- Those items so designated in the Agreement. Only printed or hard copies of the items listed in the Agreement are Contract Documents. Approved Shop Drawings, other Contractor's submittals, and the reports and drawings of subsurface and physical conditions are not Contract Documents.

13. *Contract Price*--The moneys payable by Owner to Contractor for completion of the Work in accordance with the Contract Documents as stated in the Agreement (subject to the provisions of Paragraph 11.03 in the case of Unit Price Work).

14. *Contract Times*--The number of days or the dates stated in the Agreement to: (i) achieve Milestones, if any, (ii) achieve Substantial Completion; and (iii) complete the Work so that it is ready for final payment as evidenced by Engineer's written recommendation of final payment.

15. *Contractor*--The individual or entity with whom Owner has entered into the Agreement.

16. *Cost of the Work*--See Paragraph 11.01.A for definition.

17. *Drawings*--That part of the Contract Documents prepared or approved by Engineer which graphically shows the scope, extent, and character of the Work to be performed by Contractor. Shop Drawings and other Contractor submittals are not Drawings as so defined.

18. *Effective Date of the Agreement*--The date indicated in the Agreement on which it becomes effective, but if no such date is indicated, it means the date on which the Agreement is signed and delivered by the last of the two parties to sign and deliver.

19. *Engineer*--The individual or entity named as such in the Agreement.

20. *Field Order*--A written order issued by Engineer which requires minor changes in the Work but which does not involve a change in the Contract Price or the Contract Times.

21. *General Requirements*--Sections of Division 1 of the Specifications. The General Requirements pertain to all sections of the Specifications.

22. *Hazardous Environmental Condition*--The presence at the Site of Asbestos, PCBs, Petroleum, Hazardous Waste, or Radioactive Material in such quantities or circumstances that may present a substantial danger to persons or property exposed thereto in connection with the Work.

23. *Hazardous Waste*--The term Hazardous Waste shall have the meaning provided in Section 1004 of the Solid Waste Disposal Act (42 USC Section 6903) as amended from time to time.

24. *Laws and Regulations; Laws or Regulations*--Any and all applicable laws, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.

25. *Liens*--Charges, security interests, or encumbrances upon Project funds, real property, or personal property.

26. *Milestone*--A principal event specified in the Contract Documents relating to an intermediate completion date or time prior to Substantial Completion of all the Work.

27. *Notice of Award*--The written notice by Owner to the Successful Bidder stating that upon timely compliance by the Successful Bidder with the conditions precedent listed therein, Owner will sign and deliver the Agreement.

28. *Notice to Proceed*--A written notice given by Owner to Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform the Work under the Contract Documents.

29. *Owner*--The individual or entity with whom Contractor has entered into the Agreement and for whom the Work is to be performed.

30. *PCBs*--Polychlorinated biphenyls.

31. *Petroleum*--Petroleum, including crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute), such as oil, petroleum, fuel oil, oil sludge, oil refuse, gasoline, kerosene, and oil mixed with other non-Hazardous Waste and crude oils.

32. *Progress Schedule*--A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising the Contractor's plan to accomplish the Work within the Contract Times.

33. *Project*--The total construction of which the Work to be performed under the Contract Documents may be the whole, or a part.

34. *Project Manual*--The bound documentary information prepared for bidding and constructing the Work. A listing of the contents of the Project Manual, which may be bound in one or more volumes, is contained in the table(s) of contents.

35. *Radioactive Material*--Source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954 (42 USC Section 2011 et seq.) as amended from time to time.

36. *Related Entity* -- An officer, director, partner, employee, agent, consultant, or subcontractor.

37. *Resident Project Representative*--The authorized representative of Engineer who may be assigned to the Site or any part thereof.

38. *Samples*--Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and which establish the standards by which such portion of the Work will be judged.

39. *Schedule of Submittals*--A schedule, prepared and maintained by Contractor, of required submittals and the time requirements to support scheduled performance of related construction activities.

40. *Schedule of Values*--A schedule, prepared and maintained by Contractor, allocating portions of the Contract Price to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.

41. *Shop Drawings*--All drawings, diagrams, illustrations, schedules, and other data or information which are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work.

42. *Site*--Lands or areas indicated in the Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements for access thereto, and such other lands furnished by Owner which are designated for the use of Contractor.

43. *Specifications*--That part of the Contract Documents consisting of written requirements for materials, equipment, systems, standards and workmanship as applied to the Work, and certain

administrative requirements and procedural matters applicable thereto.

44. *Subcontractor*--An individual or entity having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work at the Site.

45. *Substantial Completion*--The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms "substantially complete" and "substantially completed" as applied to all or part of the Work refer to Substantial Completion thereof.

46. *Successful Bidder*--The Bidder submitting a responsive Bid to whom Owner makes an award.

47. *Supplementary Conditions*--That part of the Contract Documents which amends or supplements these General Conditions.

48. *Supplier*--A manufacturer, fabricator, supplier, distributor, materialman, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or any Subcontractor.

49. *Underground Facilities*--All underground pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities, including those that convey electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, water, wastewater, storm water, other liquids or chemicals, or traffic or other control systems.

50. *Unit Price Work*--Work to be paid for on the basis of unit prices.

51. *Work*--The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction, and furnishing, installing, and incorporating all materials and equipment into such construction, all as required by the Contract Documents.

52. *Work Change Directive*--A written statement to Contractor issued on or after the Effective Date of the Agreement and signed by Owner and recommended by Engineer ordering an addition, deletion, or revision in the Work, or responding to differing or unforeseen subsurface or physical conditions under which the Work is to be performed or to emergencies. A Work Change Directive will not change the Contract Price or the Contract Times

but is evidence that the parties expect that the change ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order following negotiations by the parties as to its effect, if any, on the Contract Price or Contract Times.

## 1.02 Terminology

A. The following words or terms are not defined but, when used in the Bidding Requirements or Contract Documents, have the following meaning.

### B. Intent of Certain Terms or Adjectives

1. The Contract Documents include the terms "as allowed," "as approved," "as ordered," "as directed" or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, the adjectives "reasonable," "suitable," "acceptable," "proper," "satisfactory," or adjectives of like effect or import are used to describe an action or determination of Engineer as to the Work. It is intended that such exercise of professional judgment, action or determination will be solely to evaluate, in general, the Work for compliance with the requirements of and information in the Contract Documents and conformance with the design concept of the completed Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to Engineer any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility contrary to the provisions of Paragraph 9.09 or any other provision of the Contract Documents.

### C. Day

1. The word "day" means a calendar day of 24 hours measured from midnight to the next midnight.

### D. Defective

1. The word "defective," when modifying the word "Work," refers to Work that is unsatisfactory, faulty, or deficient in that it:

- a. does not conform to the Contract Documents, or
- b. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents, or
- c. has been damaged prior to Engineer's - recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with Paragraph 14.04 or 14.05).

### *E. Furnish, Install, Perform, Provide*

1. The word “furnish,” when used in connection with services, materials, or equipment, shall mean to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.

2. The word “install,” when used in connection with services, materials, or equipment, shall mean to put into use or place in final position said services, materials, or equipment complete and ready for intended use.

3. The words “perform” or “provide,” when used in connection with services, materials, or equipment, shall mean to furnish and install said services, materials, or equipment complete and ready for intended use.

4. When “furnish,” “install,” “perform,” or “provide” is not used in connection with services, materials, or equipment in a context clearly requiring an obligation of Contractor, “provide” is implied.

F. Unless stated otherwise in the Contract Documents, words or phrases which have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

## ARTICLE 2 - PRELIMINARY MATTERS

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### *2.01 Delivery of Bonds and Evidence of Insurance*

A. When Contractor delivers the executed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner such bonds as Contractor may be required to furnish.

B. *Evidence of Insurance:* Before any Work at the Site is started, Contractor and Owner shall each deliver to the other, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance which either of them or any additional insured may reasonably request) which Contractor and Owner respectively are required to purchase and maintain in accordance with Article 5.

### *2.02 Copies of Documents*

A. Owner shall furnish to Contractor up to ten printed or hard copies of the Drawings and Project Manual. Additional copies will be furnished upon request at the cost of reproduction.

### *2.03 Commencement of Contract Times; Notice to Proceed*

A. The Contract Times will commence to run on the thirtieth day after the Effective Date of the Agreement

or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed. A Notice to Proceed may be given at any time within 30 days after the Effective Date of the Agreement. In no event will the Contract Times commence to run later than the sixtieth day after the day of Bid opening or the thirtieth day after the Effective Date of the Agreement, whichever date is earlier.

### *2.04 Starting the Work*

A. Contractor shall start to perform the Work on the date when the Contract Times commence to run. No Work shall be done at the Site prior to the date on which the Contract Times commence to run.

### *2.05 Before Starting Construction*

A. *Preliminary Schedules:* Within 10 days after the Effective Date of the Agreement (unless otherwise specified in the General Requirements), Contractor shall submit to Engineer for timely review:

1. a preliminary Progress Schedule; indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract Documents;

2. a preliminary Schedule of Submittals; and

3. a preliminary Schedule of Values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and subdivides the Work into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.

### *2.06 Preconstruction Conference*

A. Before any Work at the Site is started, a conference attended by Owner, Contractor, Engineer, and others as appropriate will be held to establish a working understanding among the parties as to the Work and to discuss the schedules referred to in Paragraph 2.05.A, procedures for handling Shop Drawings and other submittals, processing Applications for Payment, and maintaining required records.

### *2.07 Initial Acceptance of Schedules*

A. At least 10 days before submission of the first Application for Payment a conference attended by Contractor, Engineer, and others as appropriate will be held to review for acceptability to Engineer as provided below the schedules submitted in accordance with Paragraph 2.05.A. Contractor shall have an additional 10 days to make corrections and adjustments and to complete and resubmit the schedules. No progress payment shall be made to Contractor until acceptable schedules are submitted to Engineer.

1. The Progress Schedule will be acceptable to Engineer if it provides an orderly progression of the Work to completion within the Contract Times. Such acceptance will not impose on Engineer responsibility for the Progress Schedule, for sequencing, scheduling, or progress of the Work nor interfere with or relieve Contractor from Contractor's full responsibility therefor.

2. Contractor's Schedule of Submittals will be acceptable to Engineer if it provides a workable arrangement for reviewing and processing the required submittals.

3. Contractor's Schedule of Values will be acceptable to Engineer as to form and substance if it provides a reasonable allocation of the Contract Price to component parts of the Work.

ARTICLE 3 - CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE

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3.01 *Intent*

A. The Contract Documents are complementary; what is required by one is as binding as if required by all.

B. It is the intent of the Contract Documents to describe a functionally complete Project (or part thereof) to be constructed in accordance with the Contract Documents. Any labor, documentation, services, materials, or equipment that may reasonably be inferred from the Contract Documents or from prevailing custom or trade usage as being required to produce the intended result will be provided whether or not specifically called for at no additional cost to Owner.

C. Clarifications and interpretations of the Contract Documents shall be issued by Engineer as provided in Article 9.

3.02 *Reference Standards*

A. Standards, Specifications, Codes, Laws, and Regulations

1. Reference to standards, specifications, manuals, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, shall mean the standard, specification, manual, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Agreement if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.

2. No provision of any such standard, specification, manual or code, or any instruction of a Supplier shall be effective to change the duties or

responsibilities of Owner, Contractor, or Engineer, or any of their subcontractors, consultants, agents, or employees from those set forth in the Contract Documents. No such provision or instruction shall be effective to assign to Owner, or Engineer, or any of, their Related Entities, any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility inconsistent with the provisions of the Contract Documents.

3.03 *Reporting and Resolving Discrepancies*

A. Reporting Discrepancies

1. *Contractor's Review of Contract Documents Before Starting Work:* Before undertaking each part of the Work, Contractor shall carefully study and compare the Contract Documents and check and verify pertinent figures therein and all applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy which Contractor may discover and shall obtain a written interpretation or clarification from Engineer before proceeding with any Work affected thereby.

2. *Contractor's Review of Contract Documents During Performance of Work:* If, during the performance of the Work, Contractor discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents or between the Contract Documents and any provision of any Law or Regulation applicable to the performance of the Work or of any standard, specification, manual or code, or of any instruction of any Supplier, Contractor shall promptly report it to Engineer in writing. Contractor shall not proceed with the Work affected thereby (except in an emergency as required by Paragraph 6.16.A) until an amendment or supplement to the Contract Documents has been issued by one of the methods indicated in Paragraph 3.04.

3. Contractor shall not be liable to Owner or Engineer for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents unless Contractor knew or reasonably should have known thereof.

B. Resolving Discrepancies

1. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the Contract Documents shall take precedence in resolving any conflict, error, ambiguity, or discrepancy between the provisions of the Contract Documents and:

a. the provisions of any standard, specification, manual, code, or instruction (whether or not specifically incorporated by reference in the Contract Documents); or

b. the provisions of any Laws or Regulations applicable to the performance of the Work

(unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).

### 3.04 *Amending and Supplementing Contract Documents*

A. The Contract Documents may be amended to provide for additions, deletions, and revisions in the Work or to modify the terms and conditions thereof by either a Change Order or a Work Change Directive.

B. The requirements of the Contract Documents may be supplemented, and minor variations and deviations in the Work may be authorized, by one or more of the following ways:

1. A Field Order;

2. Engineer's approval of a Shop Drawing or Sample; (Subject to the provisions of Paragraph 6.17.D.3); or

3. Engineer's written interpretation or clarification.

### 3.05 *Reuse of Documents*

A. Contractor and any Subcontractor or Supplier or other individual or entity performing or furnishing all of the Work under a direct or indirect contract with Contractor, shall not:

1. have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of Engineer or Engineer's consultants, including electronic media editions; or

2. reuse any of such Drawings, Specifications, other documents, or copies thereof on extensions of the Project or any other project without written consent of Owner and Engineer and specific written verification or adaption by Engineer.

B. The prohibition of this Paragraph 3.05 will survive final payment, or termination of the Contract. Nothing herein shall preclude Contractor from retaining copies of the Contract Documents for record purposes.

### 3.06 *Electronic Data*

A. Copies of data furnished by Owner or Engineer to Contractor or Contractor to Owner or Engineer that may be relied upon are limited to the printed copies (also known as hard copies). Files in electronic media format of text, data, graphics, or other types are furnished only for the convenience of the receiving party. Any conclusion or information obtained or derived from such electronic files will be at the user's

sole risk. If there is a discrepancy between the electronic files and the hard copies, the hard copies govern.

B. Because data stored in electronic media format can deteriorate or be modified inadvertently or otherwise without authorization of the data's creator, the party receiving electronic files agrees that it will perform acceptance tests or procedures within 60 days, after which the receiving party shall be deemed to have accepted the data thus transferred. Any errors detected within the 60-day acceptance period will be corrected by the transferring party..

C. When transferring documents in electronic media format, the transferring party makes no representations as to long term compatibility, usability, or readability of documents resulting from the use of software application packages, operating systems, or computer hardware differing from those used by the data's creator.

## ARTICLE 4 - AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS; REFERENCE POINTS

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### 4.01 *Availability of Lands*

A. Owner shall furnish the Site. Owner shall notify Contractor of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Contractor must comply in performing the Work. Owner will obtain in a timely manner and pay for easements for permanent structures or permanent changes in existing facilities. If Contractor and Owner are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, as a result of any delay in Owner's furnishing the Site or a part thereof, Contractor may make a Claim therefor as provided in Paragraph 10.05.

B. Upon reasonable written request, Owner shall furnish Contractor with a current statement of record legal title and legal description of the lands upon which the Work is to be performed and Owner's interest therein as necessary for giving notice of or filing a mechanic's or construction lien against such lands in accordance with applicable Laws and Regulations.

C. Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

#### 4.02 *Subsurface and Physical Conditions*

A. *Reports and Drawings:* The Supplementary Conditions identify:

1. those reports of explorations and tests of subsurface conditions at or contiguous to the Site that Engineer has used in preparing the Contract Documents; and

2. those drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site (except Underground Facilities) that Engineer has used in preparing the Contract Documents.

B. *Limited Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the general accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "technical data," Contractor may not rely upon or make any claim against Owner or Engineer, or any of their Related Entities with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto; or

2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or

3. any Contractor interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions, or information.

#### 4.03 *Differing Subsurface or Physical Conditions*

A. *Notice:* If Contractor believes that any subsurface or physical condition at or contiguous to the Site that is uncovered or revealed either:

1. is of such a nature as to establish that any "technical data" on which Contractor is entitled to rely as provided in Paragraph 4.02 is materially inaccurate; or

2. is of such a nature as to require a change in the Contract Documents; or

3. differs materially from that shown or indicated in the Contract Documents; or

4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

then Contractor shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by Paragraph 6.16.A), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except as aforesaid) until receipt of written order to do so.

B. *Engineer's Review:* After receipt of written notice as required by Paragraph 4.03.A, Engineer will promptly review the pertinent condition, determine the necessity of Owner's obtaining additional exploration or tests with respect thereto, and advise Owner in writing (with a copy to Contractor) of Engineer's findings and conclusions.

#### C. Possible Price and Times Adjustments

1. The Contract Price or the Contract Times, or both, will be equitably adjusted to the extent that the existence of such differing subsurface or physical condition causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:

a. such condition must meet any one or more of the categories described in Paragraph 4.03.A; and

b. with respect to Work that is paid for on a Unit Price Basis, any adjustment in Contract Price will be subject to the provisions of Paragraphs 9.07 and 11.03.

2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times if:

a. Contractor knew of the existence of such conditions at the time Contractor made a final commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract; or

b. the existence of such condition could reasonably have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such final commitment; or

c. Contractor failed to give the written notice as required by Paragraph 4.03.A.

3. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, a Claim may be made therefor as provided in Paragraph 10.05. However, Owner and Engineer, and any of their Related Entities shall not be liable to Contractor for any claims, costs, losses, or damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Contractor on or in connection with any other project or anticipated project.

#### 4.04 *Underground Facilities*

A. *Shown or Indicated:* The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or contiguous to the Site is based on information and data furnished to Owner or Engineer by the owners of such Underground Facilities, including Owner, or by others. Unless it is otherwise expressly provided in the Supplementary Conditions:

1. Owner and Engineer shall not be responsible for the accuracy or completeness of any such information or data; and

2. the cost of all of the following will be included in the Contract Price, and Contractor shall have full responsibility for:

a. reviewing and checking all such information and data,

b. locating all Underground Facilities shown or indicated in the Contract Documents,

c. coordination of the Work with the owners of such Underground Facilities, including Owner, during construction, and

d. the safety and protection of all such Underground Facilities and repairing any damage thereto resulting from the Work.

#### B. *Not Shown or Indicated*

1. If an Underground Facility is uncovered or revealed at or contiguous to the Site which was not shown or indicated, or not shown or indicated with reasonable accuracy in the Contract Documents, Contractor shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by Paragraph 6.16.A), identify the owner of such Underground Facility and give written notice to that owner and to Owner and Engineer. Engineer will

promptly review the Underground Facility and determine the extent, if any, to which a change is required in the Contract Documents to reflect and document the consequences of the existence or location of the Underground Facility. During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.

2. If Engineer concludes that a change in the Contract Documents is required, a Work Change Directive or a Change Order will be issued to reflect and document such consequences. An equitable adjustment shall be made in the Contract Price or Contract Times, or both, to the extent that they are attributable to the existence or location of any Underground Facility that was not shown or indicated or not shown or indicated with reasonable accuracy in the Contract Documents and that Contractor did not know of and could not reasonably have been expected to be aware of or to have anticipated. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment in Contract Price or Contract Times, Owner or Contractor may make a Claim therefor as provided in Paragraph 10.05.

#### 4.05 *Reference Points*

A. Owner shall provide engineering surveys to establish reference points for construction which in Engineer's judgment are necessary to enable Contractor to proceed with the Work. Contractor shall be responsible for laying out the Work, shall protect and preserve the established reference points and property monuments, and shall make no changes or relocations without the prior written approval of Owner. Contractor shall report to Engineer whenever any reference point or property monument is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points or property monuments by professionally qualified personnel.

#### 4.06 *Hazardous Environmental Condition at Site*

A. *Reports and Drawings:* Reference is made to the Supplementary Conditions for the identification of those reports and drawings relating to a Hazardous Environmental Condition identified at the Site, if any, that have been utilized by the Engineer in the preparation of the Contract Documents.

B. *Limited Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the general accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "technical data," Contractor may not rely upon or make any claim against Owner or Engineer, or any of their Related Entities with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures of construction to be employed by Contractor and safety precautions and programs incident thereto; or

2. other data, interpretations, opinions and information contained in such reports or shown or indicated in such drawings; or

3. any Contractor interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions or information.

C. Contractor shall not be responsible for any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work. Contractor shall be responsible for a Hazardous Environmental Condition created with any materials brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible.

D. If Contractor encounters a Hazardous Environmental Condition or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, Contractor shall immediately: (i) secure or otherwise isolate such condition; (ii) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 6.16.A); and (iii) notify Owner and Engineer (and promptly thereafter confirm such notice in writing). Owner shall promptly consult with Engineer concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take corrective action, if any.

E. Contractor shall not be required to resume Work in connection with such condition or in any affected area until after Owner has obtained any required permits related thereto and delivered to Contractor written notice: (i) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work; or (ii) specifying any special conditions under which such Work may be resumed safely. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, or both, as a result of such Work stoppage or such special conditions under which Work is agreed to be resumed by Contractor, either party may make a Claim therefor as provided in Paragraph 10.05.

F. If after receipt of such written notice Contractor does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special conditions, then Owner may order the portion of the Work that is in the area affected by such condition to be deleted from the Work. If Owner and Contractor cannot agree as to

entitlement to or on the amount or extent, if any, of an adjustment in Contract Price or Contract Times as a result of deleting such portion of the Work, then either party may make a Claim therefor as provided in Paragraph 10.05. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 7.

G. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, Subcontractors, and Engineer, and the officers, directors, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition: (i) was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be included within the scope of the Work, and (ii) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06. G shall obligate Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

H. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06.H shall obligate Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

I. The provisions of Paragraphs 4.02, 4.03, and 4.04 do not apply to a Hazardous Environmental Condition uncovered or revealed at the Site.

## ARTICLE 5 - BONDS AND INSURANCE

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### 5.01 *Performance, Payment, and Other Bonds*

A. Contractor shall furnish performance and payment bonds, each in an amount at least equal to the Contract Price as security for the faithful performance and payment of all of Contractor's obligations under the Contract Documents. These bonds shall remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified

in Paragraph 13.07, whichever is later, except as provided otherwise by Laws or Regulations or by the Contract Documents. Contractor shall also furnish such other bonds as are required by the Contract Documents.

B. All bonds shall be in the form prescribed by the Contract Documents except as provided otherwise by Laws or Regulations, and shall be executed by such sureties as are named in the current list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (amended) by the Financial Management Service, Surety Bond Branch, U.S. Department of the Treasury. All bonds signed by an agent must be accompanied by a certified copy of the agent's authority to act.

C. If the surety on any bond furnished by Contractor is declared bankrupt or becomes insolvent or its right to do business is terminated in any state where any part of the Project is located or it ceases to meet the requirements of Paragraph 5.01.B, Contractor shall promptly notify Owner and Engineer and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which shall comply with the requirements of Paragraphs 5.01.B and 5.02.

#### 5.02 *Licensed Sureties and Insurers*

A. All bonds and insurance required by the Contract Documents to be purchased and maintained by Owner or Contractor shall be obtained from surety or insurance companies that are duly licensed or authorized in the jurisdiction in which the Project is located to issue bonds or insurance policies for the limits and coverages so required. Such surety and insurance companies shall also meet such additional requirements and qualifications as may be provided in the Supplementary Conditions.

#### 5.03 *Certificates of Insurance*

A. Contractor shall deliver to Owner, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Owner or any other additional insured) which Contractor is required to purchase and maintain.

B. Owner shall deliver to Contractor, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Contractor or any other additional insured) which Owner is required to purchase and maintain.

#### 5.04 *Contractor's Liability Insurance*

A. Contractor shall purchase and maintain such liability and other insurance as is appropriate for the Work being performed and as will provide protection

from claims set forth below which may arise out of or result from Contractor's performance of the Work and Contractor's other obligations under the Contract Documents, whether it is to be performed by Contractor, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable:

1. claims under workers' compensation, disability benefits, and other similar employee benefit acts;

2. claims for damages because of bodily injury, occupational sickness or disease, or death of Contractor's employees;

3. claims for damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees;

4. claims for damages insured by reasonably available personal injury liability coverage which are sustained:

a. by any person as a result of an offense directly or indirectly related to the employment of such person by Contractor, or

b. by any other person for any other reason;

5. claims for damages, other than to the Work itself, because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom; and

6. claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance or use of any motor vehicle.

B. The policies of insurance required by this Paragraph 5.04 shall:

1. with respect to insurance required by Paragraphs 5.04.A.3 through 5.04.A.6 inclusive, include as additional insured (subject to any customary exclusion regarding professional liability) Owner and Engineer, and any other individuals or entities identified in the Supplementary Conditions, all of whom shall be listed as additional insureds, and include coverage for the respective officers, directors, partners, employees, agents, consultants and subcontractors of each and any of all such additional insureds, and the insurance afforded to these additional insureds shall provide primary coverage for all claims covered thereby;

2. include at least the specific coverages and be written for not less than the limits of liability provided in the Supplementary Conditions or required by Laws or Regulations, whichever is greater;

3. include completed operations insurance;

4. include contractual liability insurance covering Contractor's indemnity obligations under Paragraphs 6.11 and 6.20;

5. contain a provision or endorsement that the coverage afforded will not be canceled, materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other additional insured identified in the Supplementary Conditions to whom a certificate of insurance has been issued (and the certificates of insurance furnished by the Contractor pursuant to Paragraph 5.03 will so provide);

6. remain in effect at least until final payment and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work in accordance with Paragraph 13.07; and

7. with respect to completed operations insurance, and any insurance coverage written on a claims-made basis, remain in effect for at least two years after final payment.

a. Contractor shall furnish Owner and each other additional insured identified in the Supplementary Conditions, to whom a certificate of insurance has been issued, evidence satisfactory to Owner and any such additional insured of continuation of such insurance at final payment and one year thereafter.

#### 5.05 *Owner's Liability Insurance*

A. In addition to the insurance required to be provided by Contractor under Paragraph 5.04, Owner, at Owner's option, may purchase and maintain at Owner's expense Owner's own liability insurance as will protect Owner against claims which may arise from operations under the Contract Documents.

#### 5.06 *Property Insurance*

A. Unless otherwise provided in the Supplementary Conditions, Owner shall purchase and maintain property insurance upon the Work at the Site in the amount of the full replacement cost thereof (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). This insurance shall:

1. include the interests of Owner, Contractor, Subcontractors, and Engineer, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as an insured or additional insured;

2. be written on a Builder's Risk "all-risk" or open peril or special causes of loss policy form that shall at least include insurance for physical loss or damage to the Work, temporary buildings, false work, and materials and equipment in transit, and shall insure against at least the following perils or causes of loss: fire, lightning, extended coverage, theft, vandalism and malicious mischief, earthquake, collapse, debris removal, demolition occasioned by enforcement of Laws and Regulations, water damage, (other than caused by flood) and such other perils or causes of loss as may be specifically required by the Supplementary Conditions;

3. include expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects);

4. cover materials and equipment stored at the Site or at another location that was agreed to in writing by Owner prior to being incorporated in the Work, provided that such materials and equipment have been included in an Application for Payment recommended by Engineer;

5. allow for partial utilization of the Work by Owner;

6. include testing and startup; and

7. be maintained in effect until final payment is made unless otherwise agreed to in writing by Owner, Contractor, and Engineer with 30 days written notice to each other additional insured to whom a certificate of insurance has been issued.

B. Owner shall purchase and maintain such boiler and machinery insurance or additional property insurance as may be required by the Supplementary Conditions or Laws and Regulations which will include the interests of Owner, Contractor, Subcontractors, and Engineer, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as an insured or additional insured.

C. All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained in accordance with Paragraph 5.06 will contain a provision or endorsement that the coverage afforded will not be canceled or materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other additional insured to whom a certificate of insurance has been issued and will contain waiver provisions in accordance with Paragraph 5.07.

D. Owner shall not be responsible for purchasing and maintaining any property insurance specified in this Paragraph 5.06 to protect the interests of Contractor, Subcontractors, or others in the Work to the extent of any

deductible amounts that are identified in the Supplementary Conditions. The risk of loss within such identified deductible amount will be borne by Contractor, Subcontractors, or others suffering any such loss, and if any of them wishes property insurance coverage within the limits of such amounts, each may purchase and maintain it at the purchaser's own expense.

E. If Contractor requests in writing that other special insurance be included in the property insurance policies provided under Paragraph 5.06, Owner shall, if possible, include such insurance, and the cost thereof will be charged to Contractor by appropriate Change Order. Prior to commencement of the Work at the Site, Owner shall in writing advise Contractor whether or not such other insurance has been procured by Owner.

#### 5.07 *Waiver of Rights*

A. Owner and Contractor intend that all policies purchased in accordance with Paragraph 5.06 will protect Owner, Contractor, Subcontractors, and Engineer, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or additional insureds (and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them) in such policies and will provide primary coverage for all losses and damages caused by the perils or causes of loss covered thereby. All such policies shall contain provisions to the effect that in the event of payment of any loss or damage the insurers will have no rights of recovery against any of the insureds or additional insureds thereunder. Owner and Contractor waive all rights against each other and their respective officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them for all losses and damages caused by, arising out of or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Subcontractors, and Engineer, and all other individuals or entities identified in the Supplementary Conditions to be listed as insured or additional insured (and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them) under such policies for losses and damages so caused. None of the above waivers shall extend to the rights that any party making such waiver may have to the proceeds of insurance held by Owner as trustee or otherwise payable under any policy so issued.

B. Owner waives all rights against Contractor, Subcontractors, and Engineer, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them for:

1. loss due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to Owner's property or the Work caused by, arising out of, or resulting from fire or other perils whether or not insured by Owner; and

2. loss or damage to the completed Project or part thereof caused by, arising out of, or resulting from fire or other insured peril or cause of loss covered by any property insurance maintained on the completed Project or part thereof by Owner during partial utilization pursuant to Paragraph 14.05, after Substantial Completion pursuant to Paragraph 14.04, or after final payment pursuant to Paragraph 14.07.

C. Any insurance policy maintained by Owner covering any loss, damage or consequential loss referred to in Paragraph 5.07.B shall contain provisions to the effect that in the event of payment of any such loss, damage, or consequential loss, the insurers will have no rights of recovery against Contractor, Subcontractors, or Engineer, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them.

#### 5.08 *Receipt and Application of Insurance Proceeds*

A. Any insured loss under the policies of insurance required by Paragraph 5.06 will be adjusted with Owner and made payable to Owner as fiduciary for the insureds, as their interests may appear, subject to the requirements of any applicable mortgage clause and of Paragraph 5.08.B. Owner shall deposit in a separate account any money so received and shall distribute it in accordance with such agreement as the parties in interest may reach. If no other special agreement is reached, the damaged Work shall be repaired or replaced, the moneys so received applied on account thereof, and the Work and the cost thereof covered by an appropriate Change Order .

B. Owner as fiduciary shall have power to adjust and settle any loss with the insurers unless one of the parties in interest shall object in writing within 15 days after the occurrence of loss to Owner's exercise of this power. If such objection be made, Owner as fiduciary shall make settlement with the insurers in accordance with such agreement as the parties in interest may reach. If no such agreement among the parties in interest is reached, Owner as fiduciary shall adjust and settle the loss with the insurers and, if required in writing by any party in interest, Owner as fiduciary shall give bond for the proper performance of such duties.

#### 5.09 *Acceptance of Bonds and Insurance; Option to Replace*

A. If either Owner or Contractor has any objection to the coverage afforded by or other provisions of the bonds or insurance required to be purchased and maintained by the other party in accordance with Article 5 on the basis of non-conformance with the Contract

Documents, the objecting party shall so notify the other party in writing within 10 days after receipt of the certificates (or other evidence requested) required by Paragraph 2.01.B. Owner and Contractor shall each provide to the other such additional information in respect of insurance provided as the other may reasonably request. If either party does not purchase or maintain all of the bonds and insurance required of such party by the Contract Documents, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage. Without prejudice to any other right or remedy, the other party may elect to obtain equivalent bonds or insurance to protect such other party's interests at the expense of the party who was required to provide such coverage, and a Change Order shall be issued to adjust the Contract Price accordingly.

#### 5.10 *Partial Utilization, Acknowledgment of Property Insurer*

A. If Owner finds it necessary to occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work as provided in Paragraph 14.05, no such use or occupancy shall commence before the insurers providing the property insurance pursuant to Paragraph 5.06 have acknowledged notice thereof and in writing effected any changes in coverage necessitated thereby. The insurers providing the property insurance shall consent by endorsement on the policy or policies, but the property insurance shall not be canceled or permitted to lapse on account of any such partial use or occupancy.

## ARTICLE 6 - CONTRACTOR'S RESPONSIBILITIES

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#### 6.01 *Supervision and Superintendence*

A. Contractor shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction. Contractor shall not be responsible for the negligence of Owner or Engineer in the design or specification of a specific means, method, technique, sequence, or procedure of construction which is shown or indicated in and expressly required by the Contract Documents.

B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who shall not be replaced without written notice to Owner and Engineer except under extraordinary circumstances. The superintendent will be Contractor's representative at the Site and shall have authority to act on behalf of Contractor. All communications given to or

received from the superintendent shall be binding on Contractor.

#### 6.02 *Labor; Working Hours*

A. Contractor shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. Contractor shall at all times maintain good discipline and order at the Site.

B. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site shall be performed during regular working hours. Contractor will not permit the performance of Work on a Saturday, Sunday, or any legal holiday without Owner's written consent (which will not be unreasonably withheld) given after prior written notice to Engineer.

#### 6.03 *Services, Materials, and Equipment*

A. Unless otherwise specified in the Contract Documents, Contractor shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the performance, testing, start-up, and completion of the Work.

B. All materials and equipment incorporated into the Work shall be as specified or, if not specified, shall be of good quality and new, except as otherwise provided in the Contract Documents. All special warranties and guarantees required by the Specifications shall expressly run to the benefit of Owner. If required by Engineer, Contractor shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment.

C. All materials and equipment shall be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise may be provided in the Contract Documents.

#### 6.04 *Progress Schedule*

A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.07 as it may be adjusted from time to time as provided below.

1. Contractor shall submit to Engineer for acceptance (to the extent indicated in Paragraph 2.07) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times. Such adjustments will comply with any provisions of the General Requirements applicable thereto.

2. Proposed adjustments in the Progress Schedule that will change the Contract Times shall be submitted in accordance with the requirements of Article 12. Adjustments in Contract Times may only be made by a Change Order.

#### 6.05 *Substitutes and "Or-Equals"*

A. Whenever an item of material or equipment is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the specification or description is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or-equal" item or no substitution is permitted, other items of material or equipment or material or equipment of other Suppliers may be submitted to Engineer for review under the circumstances described below.

1. "*Or-Equal*" Items: If in Engineer's sole discretion an item of material or equipment proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, it may be considered by Engineer as an "or-equal" item, in which case review and approval of the proposed item may, in Engineer's sole discretion, be accomplished without compliance with some or all of the requirements for approval of proposed substitute items. For the purposes of this Paragraph 6.05.A.1, a proposed item of material or equipment will be considered functionally equal to an item so named if:

a. in the exercise of reasonable judgment Engineer determines that:

1) it is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;

2) it will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole,

3) it has a proven record of performance and availability of responsive service; and

b. Contractor certifies that, if approved and incorporated into the Work:

1) there will be no increase in cost to the Owner or increase in Contract Times, and

2) it will conform substantially to the detailed requirements of the item named in the Contract Documents.

#### 2. Substitute Items

a. If in Engineer's sole discretion an item of material or equipment proposed by Contractor does not qualify as an "or-equal" item under Paragraph 6.05.A.1, it will be considered a proposed substitute item.

b. Contractor shall submit sufficient information as provided below to allow Engineer to determine that the item of material or equipment proposed is essentially equivalent to that named and an acceptable substitute therefor. Requests for review of proposed substitute items of material or equipment will not be accepted by Engineer from anyone other than Contractor.

c. The requirements for review by Engineer will be as set forth in Paragraph 6.05.A.2.d, as supplemented in the General Requirements and as Engineer may decide is appropriate under the circumstances.

d. Contractor shall make written application to Engineer for review of a proposed substitute item of material or equipment that Contractor seeks to furnish or use. The application:

1) shall certify that the proposed substitute item will:

a) perform adequately the functions and achieve the results called for by the general design,

b) be similar in substance to that specified, and

c) be suited to the same use as that specified;

2) will state:

a) the extent, if any, to which the use of the proposed substitute item will prejudice Contractor's achievement of Substantial Completion on time;

b) whether or not use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for other work on the Project) to adapt the design to the proposed substitute item; and

c) whether or not incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty;

3) will identify:

a) all variations of the proposed substitute item from that specified, and

b) available engineering, sales, maintenance, repair, and replacement services;

4) and shall contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including costs of redesign and claims of other contractors affected by any resulting change,

**B. Substitute Construction Methods or Procedures:** If a specific means, method, technique, sequence, or procedure of construction is expressly required by the Contract Documents, Contractor may furnish or utilize a substitute means, method, technique, sequence, or procedure of construction approved by Engineer. Contractor shall submit sufficient information to allow Engineer, in Engineer's sole discretion, to determine that the substitute proposed is equivalent to that expressly called for by the Contract Documents. The requirements for review by Engineer will be similar to those provided in Paragraph 6.05.A.2.

**C. Engineer's Evaluation:** Engineer will be allowed a reasonable time within which to evaluate each proposal or submittal made pursuant to Paragraphs 6.05.A and 6.05.B. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No "or equal" or substitute will be ordered, installed or utilized until Engineer's review is complete, which will be evidenced by either a Change Order for a substitute or an approved Shop Drawing for an "or equal." Engineer will advise Contractor in writing of any negative determination.

**D. Special Guarantee:** Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.

**E. Engineer's Cost Reimbursement:** Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor pursuant to Paragraphs 6.05.A.2 and 6.05.B. Whether or not Engineer approves a substitute item so proposed or submitted by Contractor, Contractor shall reimburse Owner for the charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the charges of Engineer for making changes in the Contract

Documents (or in the provisions of any other direct contract with Owner) resulting from the acceptance of each proposed substitute.

**F. Contractor's Expense:** Contractor shall provide all data in support of any proposed substitute or "or-equal" at Contractor's expense.

#### 6.06 Concerning Subcontractors, Suppliers, and Others

**A.** Contractor shall not employ any Subcontractor, Supplier, or other individual or entity (including those acceptable to Owner as indicated in Paragraph 6.06.B), whether initially or as a replacement, against whom Owner may have reasonable objection. Contractor shall not be required to employ any Subcontractor, Supplier, or other individual or entity to furnish or perform any of the Work against whom Contractor has reasonable objection.

**B.** If the Supplementary Conditions require the identity of certain Subcontractors, Suppliers, or other individuals or entities to be submitted to Owner in advance for acceptance by Owner by a specified date prior to the Effective Date of the Agreement, and if Contractor has submitted a list thereof in accordance with the Supplementary Conditions, Owner's acceptance (either in writing or by failing to make written objection thereto by the date indicated for acceptance or objection in the Bidding Documents or the Contract Documents) of any such Subcontractor, Supplier, or other individual or entity so identified may be revoked on the basis of reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor, Supplier, or other individual or entity, and the Contract Price will be adjusted by the difference in the cost occasioned by such replacement, and an appropriate Change Order will be issued. No acceptance by Owner of any such Subcontractor, Supplier, or other individual or entity, whether initially or as a replacement, shall constitute a waiver of any right of Owner or Engineer to reject defective Work.

**C.** Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of the Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work just as Contractor is responsible for Contractor's own acts and omissions. Nothing in the Contract Documents:

1. shall create for the benefit of any such Subcontractor, Supplier, or other individual or entity any contractual relationship between Owner or Engineer and any such Subcontractor, Supplier or other individual or entity, nor

2. shall anything in the Contract Documents create any obligation on the part of Owner or Engineer to pay or to see to the payment of any moneys due any such Subcontractor, Supplier, or other individual

or entity except as may otherwise be required by Laws and Regulations.

D. Contractor shall be solely responsible for scheduling and coordinating the Work of Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work under a direct or indirect contract with Contractor.

E. Contractor shall require all Subcontractors, Suppliers, and such other individuals or entities performing or furnishing any of the Work to communicate with Engineer through Contractor.

F. The divisions and sections of the Specifications and the identifications of any Drawings shall not control Contractor in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade.

G. All Work performed for Contractor by a Subcontractor or Supplier will be pursuant to an appropriate agreement between Contractor and the Subcontractor or Supplier which specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of Owner and Engineer. Whenever any such agreement is with a Subcontractor or Supplier who is listed as an additional insured on the property insurance provided in Paragraph 5.06, the agreement between the Contractor and the Subcontractor or Supplier will contain provisions whereby the Subcontractor or Supplier waives all rights against Owner, Contractor, and Engineer, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or additional insureds (and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them) for all losses and damages caused by, arising out of, relating to, or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work. If the insurers on any such policies require separate waiver forms to be signed by any Subcontractor or Supplier, Contractor will obtain the same.

#### 6.07 *Patent Fees and Royalties*

A. Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If a particular invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if to the actual knowledge of Owner or Engineer its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights shall be disclosed by Owner in the Contract Documents.

B. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device not specified in the Contract Documents.

#### 6.08 *Permits*

A. Unless otherwise provided in the Supplementary Conditions, Contractor shall obtain and pay for all construction permits and licenses. Owner shall assist Contractor, when necessary, in obtaining such permits and licenses. Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work which are applicable at the time of opening of Bids, or, if there are no Bids, on the Effective Date of the Agreement. Owner shall pay all charges of utility owners for connections for providing permanent service to the Work.

#### 6.09 *Laws and Regulations*

A. Contractor shall give all notices required by and shall comply with all Laws and Regulations applicable to the performance of the Work. Except where otherwise expressly required by applicable Laws and Regulations, neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.

B. If Contractor performs any Work knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work. However, it shall not be Contractor's primary responsibility to make certain that the Specifications and Drawings are in accordance with Laws and Regulations, but this shall not relieve Contractor of Contractor's obligations under Paragraph 3.03.

C. Changes in Laws or Regulations not known at the time of opening of Bids (or, on the Effective Date of the Agreement if there were no Bids) having an effect on the cost or time of performance of the Work shall be the subject of an adjustment in Contract Price or Contract Times. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

## 6.10 Taxes

A. Contractor shall pay all sales, consumer, use, and other similar taxes required to be paid by Contractor in accordance with the Laws and Regulations of the place of the Project which are applicable during the performance of the Work.

## 6.11 Use of Site and Other Areas

### A. Limitation on Use of Site and Other Areas

1. Contractor shall confine construction equipment, the storage of materials and equipment, and the operations of workers to the Site and other areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and other areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for any damage to any such land or area, or to the owner or occupant thereof, or of any adjacent land or areas resulting from the performance of the Work.

2. Should any claim be made by any such owner or occupant because of the performance of the Work, Contractor shall promptly settle with such other party by negotiation or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law.

3. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such owner or occupant against Owner, Engineer, or any other party indemnified hereunder to the extent caused by or based upon Contractor's performance of the Work.

*B. Removal of Debris During Performance of the Work:* During the progress of the Work Contractor shall keep the Site and other areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris shall conform to applicable Laws and Regulations.

*C. Cleaning:* Prior to Substantial Completion of the Work Contractor shall clean the Site and the Work and make it ready for utilization by Owner. At the completion of the Work Contractor shall remove from the Site all tools, appliances, construction equipment and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.

*D. Loading Structures:* Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Contractor subject any part of the Work or adjacent property to stresses or pressures that will endanger it.

## 6.12 Record Documents

A. Contractor shall maintain in a safe place at the Site one record copy of all Drawings, Specifications, Addenda, Change Orders, Work Change Directives, Field Orders, and written interpretations and clarifications in good order and annotated to show changes made during construction. These record documents together with all approved Samples and a counterpart of all approved Shop Drawings will be available to Engineer for reference. Upon completion of the Work, these record documents, Samples, and Shop Drawings will be delivered to Engineer for Owner.

## 6.13 Safety and Protection

A. Contractor shall be solely responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:

1. all persons on the Site or who may be affected by the Work;

2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and

3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.

B. Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection. Contractor shall notify owners of adjacent property and of Underground Facilities and other utility owners when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property.

C. All damage, injury, or loss to any property referred to in Paragraph 6.13.A.2 or 6.13.A.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor (except damage or loss attributable to the fault of Draw-

ings or Specifications or to the acts or omissions of Owner or Engineer or , or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them).

D. Contractor's duties and responsibilities for safety and for protection of the Work shall continue until such time as all the Work is completed and Engineer has issued a notice to Owner and Contractor in accordance with Paragraph 14.07.B that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).

#### 6.14 *Safety Representative*

A. Contractor shall designate a qualified and experienced safety representative at the Site whose duties and responsibilities shall be the prevention of accidents and the maintaining and supervising of safety precautions and programs.

#### 6.15 *Hazard Communication Programs*

A. Contractor shall be responsible for coordinating any exchange of material safety data sheets or other hazard communication information required to be made available to or exchanged between or among employers at the Site in accordance with Laws or Regulations.

#### 6.16 *Emergencies*

A. In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, Contractor is obligated to act to prevent threatened damage, injury, or loss. Contractor shall give Engineer prompt written notice if Contractor believes that any significant changes in the Work or variations from the Contract Documents have been caused thereby or are required as a result thereof. If Engineer determines that a change in the Contract Documents is required because of the action taken by Contractor in response to such an emergency, a Work Change Directive or Change Order will be issued.

#### 6.17 *Shop Drawings and Samples*

A. Contractor shall submit Shop Drawings and Samples to Engineer for review and approval in accordance with the acceptable Schedule of Submittals (as required by Paragraph 2.07). Each submittal will be identified as Engineer may require.

##### 1. Shop Drawings

a. Submit number of copies specified in the General Requirements.

b. Data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Engineer the services, materials, and equipment Contractor proposes to provide and to enable Engineer to review the information for the limited purposes required by Paragraph 6.17.D.

2. *Samples*: Contractor shall also submit Samples to Engineer for review and approval in accordance with the acceptable schedule of Shop Drawings and Sample submittals.

a. Submit number of Samples specified in the Specifications.

b. Clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Engineer may require to enable Engineer to review the submittal for the limited purposes required by Paragraph 6.17.D.

B. Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals , any related Work performed prior to Engineer's review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.

##### C. Submittal Procedures

1. Before submitting each Shop Drawing or Sample, Contractor shall have determined and verified:

a. all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect thereto;

b. the suitability of all materials with respect to intended use, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work;

c. all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto; and

d. shall also have reviewed and coordinated each Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents.

2. Each submittal shall bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents

with respect to Contractor's review and approval of that submittal.

3. With each submittal, Contractor shall give Engineer specific written notice of any variations, that the Shop Drawing or Sample may have from the requirements of the Contract Documents. This notice shall be both a written communication separate from the Shop Drawing's or Sample Submittal; and, in addition, by a specific notation made on each Shop Drawing or Sample submitted to Engineer for review and approval of each such variation.

#### D. Engineer's Review

1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the Schedule of Submittals acceptable to Engineer. Engineer's review and approval will be only to determine if the items covered by the submittals will, after installation or incorporation in the Work, conform to the information given in the Contract Documents and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.

2. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction (except where a particular means, method, technique, sequence, or procedure of construction is specifically and expressly called for by the Contract Documents) or to safety precautions or programs incident thereto. The review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.

3. Engineer's review and approval shall not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 6.17.C.3 and Engineer has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample. Engineer's review and approval shall not relieve Contractor from responsibility for complying with the requirements of Paragraph 6.17.C.1.

#### E. Resubmittal Procedures

1. Contractor shall make corrections required by Engineer and shall return the required number of corrected copies of Shop Drawings and submit, as required, new Samples for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Engineer on previous submittals.

#### 6.18 Continuing the Work

A. Contractor shall carry on the Work and adhere to the Progress Schedule during all disputes or

disagreements with Owner. No Work shall be delayed or postponed pending resolution of any disputes or disagreements, except as permitted by Paragraph 15.04 or as Owner and Contractor may otherwise agree in writing.

#### 6.19 Contractor's General Warranty and Guarantee

A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Engineer and its Related Entities shall be entitled to rely on representation of Contractor's warranty and guarantee.

B. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:

1. abuse, modification, or improper maintenance or operation by persons other than Contractor, Subcontractors, Suppliers, or any other individual or entity for whom Contractor is responsible; or

2. normal wear and tear under normal usage.

C. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents or a release of Contractor's obligation to perform the Work in accordance with the Contract Documents:

1. observations by Engineer;

2. recommendation by Engineer or payment by Owner of any progress or final payment;

3. the issuance of a certificate of Substantial Completion by Engineer or any payment related thereto by Owner;

4. use or occupancy of the Work or any part thereof by Owner;

5. any review and approval of a Shop Drawing or Sample submittal or the issuance of a notice of acceptability by Engineer;

6. any inspection, test, or approval by others; or

7. any correction of defective Work by Owner.

#### 6.20 Indemnification

A. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or

arbitration or other dispute resolution costs) arising out of or relating to the performance of the Work, provided that any such claim, cost, loss, or damage is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom but only to the extent caused by any negligent act or omission of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work or anyone for whose acts any of them may be liable .

B. In any and all claims against Owner or Engineer or any of their respective consultants, agents, officers, directors, partners, or employees by any employee (or the survivor or personal representative of such employee) of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 6.20.A shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.

C. The indemnification obligations of Contractor under Paragraph 6.20.A shall not extend to the liability of Engineer and Engineer's officers, directors, partners, employees, agents, consultants and subcontractors arising out of:

1. the preparation or approval of, or the failure to prepare or approve, maps, Drawings, opinions, reports, surveys, Change Orders, designs, or Specifications; or
2. giving directions or instructions, or failing to give them, if that is the primary cause of the injury or damage.

#### 6.21 *Delegation of Professional Design Services*

A. Contractor will not be required to provide professional design services unless such services are specifically required by the Contract Documents for a portion of the Work or unless such services are required to carry out Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. Contractor shall not be required to provide professional services in violation of applicable law.

B. If professional design services or certifications by a design professional related to systems, materials or equipment are specifically required of Contractor by the Contract Documents, Owner and Engineer will specify all performance and design criteria that such services must satisfy. Contractor shall cause such services or certifications to be provided by a properly licensed professional, whose signature and seal

shall appear on all drawings, calculations, specifications, certifications, Shop Drawings and other submittals prepared by such professional. Shop Drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to Engineer.

C. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy and completeness of the services, certifications or approvals performed by such design professionals, provided Owner and Engineer have specified to Contractor all performance and design criteria that such services must satisfy.

D. Pursuant to this Paragraph 6.21, Engineer's review and approval of design calculations and design drawings will be only for the limited purpose of checking for conformance with performance and design criteria given and the design concept expressed in the Contract Documents. Engineer's review and approval of Shop Drawings and other submittals (except design calculations and design drawings) will be only for the purpose stated in Paragraph 6.17.D.1.

E. Contractor shall not be responsible for the adequacy of the performance or design criteria required by the Contract Documents.

## ARTICLE 7 - OTHER WORK AT THE SITE

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### 7.01 *Related Work at Site*

A. Owner may perform other work related to the Project at the Site with Owner's employees, or via other direct contracts therefor, or have other work performed by utility owners. If such other work is not noted in the Contract Documents, then:

1. written notice thereof will be given to Contractor prior to starting any such other work; and
2. if Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times that should be allowed as a result of such other work, a Claim may be made therefor as provided in Paragraph 10.05.

B. Contractor shall afford each other contractor who is a party to such a direct contract, each utility owner and Owner, if Owner is performing other work with Owner's employees, proper and safe access to the Site, a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work, and shall properly coordinate the Work with theirs. Contractor shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and

properly integrate with such other work. Contractor shall not endanger any work of others by cutting, excavating, or otherwise altering their work and will only cut or alter their work with the written consent of Engineer and the others whose work will be affected. The duties and responsibilities of Contractor under this Paragraph are for the benefit of such utility owners and other contractors to the extent that there are comparable provisions for the benefit of Contractor in said direct contracts between Owner and such utility owners and other contractors.

C. If the proper execution or results of any part of Contractor's Work depends upon work performed by others under this Article 7, Contractor shall inspect such other work and promptly report to Engineer in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of Contractor's Work. Contractor's failure to so report will constitute an acceptance of such other work as fit and proper for integration with Contractor's Work except for latent defects and deficiencies in such other work.

#### 7.02 *Coordination*

A. If Owner intends to contract with others for the performance of other work on the Project at the Site, the following will be set forth in Supplementary Conditions:

1. the individual or entity who will have authority and responsibility for coordination of the activities among the various contractors will be identified;
2. the specific matters to be covered by such authority and responsibility will be itemized; and
3. the extent of such authority and responsibilities will be provided.

B. Unless otherwise provided in the Supplementary Conditions, Owner shall have sole authority and responsibility for such coordination.

#### 7.03 *Legal Relationships*

A. Paragraphs 7.01.A and 7.02 are not applicable for utilities not under the control of Owner.

B. Each other direct contract of Owner under Paragraph 7.01.A shall provide that the other contractor is liable to Owner and Contractor for the reasonable direct delay and disruption costs incurred by Contractor as a result of the other contractor's actions or inactions.

C. Contractor shall be liable to Owner and any other contractor for the reasonable direct delay and disruption costs incurred by such other contractor as a result of Contractor's action or inactions.

## ARTICLE 8 - OWNER'S RESPONSIBILITIES

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### 8.01 *Communications to Contractor*

A. Except as otherwise provided in these General Conditions, Owner shall issue all communications to Contractor through Engineer.

### 8.02 *Replacement of Engineer*

A. In case of termination of the employment of Engineer, Owner shall appoint an engineer to whom Contractor makes no reasonable objection, whose status under the Contract Documents shall be that of the former Engineer.

### 8.03 *Furnish Data*

A. Owner shall promptly furnish the data required of Owner under the Contract Documents.

### 8.04 *Pay When Due*

A. Owner shall make payments to Contractor when they are due as provided in Paragraphs 14.02.C and 14.07.C.

### 8.05 *Lands and Easements; Reports and Tests*

A. Owner's duties in respect of providing lands and easements and providing engineering surveys to establish reference points are set forth in Paragraphs 4.01 and 4.05. Paragraph 4.02 refers to Owner's identifying and making available to Contractor copies of reports of explorations and tests of subsurface conditions and drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site that have been utilized by Engineer in preparing the Contract Documents.

### 8.06 *Insurance*

A. Owner's responsibilities, if any, in respect to purchasing and maintaining liability and property insurance are set forth in Article 5.

### 8.07 *Change Orders*

A. Owner is obligated to execute Change Orders as indicated in Paragraph 10.03.

### 8.08 *Inspections, Tests, and Approvals*

A. Owner's responsibility in respect to certain inspections, tests, and approvals is set forth in Paragraph 13.03.B.

#### 8.09 *Limitations on Owner's Responsibilities*

A. The Owner shall not supervise, direct, or have control or authority over, nor be responsible for, Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Owner will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

#### 8.10 *Undisclosed Hazardous Environmental Condition*

A. Owner's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 4.06.

#### 8.11 *Evidence of Financial Arrangements*

A. If and to the extent Owner has agreed to furnish Contractor reasonable evidence that financial arrangements have been made to satisfy Owner's obligations under the Contract Documents, Owner's responsibility in respect thereof will be as set forth in the Supplementary Conditions.

### ARTICLE 9 - ENGINEER'S STATUS DURING CONSTRUCTION

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#### 9.01 *Owner's Representative*

A. Engineer will be Owner's representative during the construction period. The duties and responsibilities and the limitations of authority of Engineer as Owner's representative during construction are set forth in the Contract Documents and will not be changed without written consent of Owner and Engineer.

#### 9.02 *Visits to Site*

A. Engineer will make visits to the Site at intervals appropriate to the various stages of construction as Engineer deems necessary in order to observe as an experienced and qualified design professional the progress that has been made and the quality of the various aspects of Contractor's executed Work. Based on information obtained during such visits and observations, Engineer, for the benefit of Owner, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. Engineer will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. Engineer's efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, Engineer will keep

Owner informed of the progress of the Work and will endeavor to guard Owner against defective Work.

B. Engineer's visits and observations are subject to all the limitations on Engineer's authority and responsibility set forth in Paragraph 9.09. Particularly, but without limitation, during or as a result of Engineer's visits or observations of Contractor's Work Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work.

#### 9.03 *Project Representative*

A. If Owner and Engineer agree, Engineer will furnish a Resident Project Representative to assist Engineer in providing more extensive observation of the Work. The authority and responsibilities of any such Resident Project Representative and assistants will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in Paragraph 9.09. If Owner designates another representative or agent to represent Owner at the Site who is not Engineer's consultant, agent or employee, the responsibilities and authority and limitations thereon of such other individual or entity will be as provided in the Supplementary Conditions.

#### 9.04 *Authorized Variations in Work*

A. Engineer may authorize minor variations in the Work from the requirements of the Contract Documents which do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. These may be accomplished by a Field Order and will be binding on Owner and also on Contractor, who shall perform the Work involved promptly. If Owner or Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, or both, and the parties are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

#### 9.05 *Rejecting Defective Work*

A. Engineer will have authority to reject Work which Engineer believes to be defective, or that Engineer believes will not produce a completed Project that conforms to the Contract Documents or that will prejudice the integrity of the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Engineer will also have authority to require special inspection or testing of the Work as provided in Paragraph 13.04, whether or not the Work is fabricated, installed, or completed.

9.06 *Shop Drawings, Change Orders and Payments*

A. In connection with Engineer's authority, and limitations thereof, as to Shop Drawings and Samples, see Paragraph 6.17.

B. In connection with Engineer's authority, and limitations thereof, as to design calculations and design drawings submitted in response to a delegation of professional design services, if any, see Paragraph 6.21.

C. In connection with Engineer's authority as to Change Orders, see Articles 10, 11, and 12.

D. In connection with Engineer's authority as to Applications for Payment, see Article 14.

9.07 *Determinations for Unit Price Work*

A. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor. Engineer will review with Contractor the Engineer's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). Engineer's written decision thereon will be final and binding (except as modified by Engineer to reflect changed factual conditions or more accurate data) upon Owner and Contractor, subject to the provisions of Paragraph 10.05.

9.08 *Decisions on Requirements of Contract Documents and Acceptability of Work*

A. Engineer will be the initial interpreter of the requirements of the Contract Documents and judge of the acceptability of the Work thereunder. All matters in question and other matters between Owner and Contractor arising prior to the date final payment is due relating to the acceptability of the Work, and the interpretation of the requirements of the Contract Documents pertaining to the performance of the Work, will be referred initially to Engineer in writing within 30 days of the event giving rise to the question

B. Engineer will, with reasonable promptness, render a written decision on the issue referred. If Owner or Contractor believe that any such decision entitles them to an adjustment in the Contract Price or Contract Times or both, a Claim may be made under Paragraph 10.05. The date of Engineer's decision shall be the date of the event giving rise to the issues referenced for the purposes of Paragraph 10.05.B.

C. Engineer's written decision on the issue referred will be final and binding on Owner and Contractor, subject to the provisions of Paragraph 10.05.

D. When functioning as interpreter and judge under this Paragraph 9.08, Engineer will not show

partiality to Owner or Contractor and will not be liable in connection with any interpretation or decision rendered in good faith in such capacity.

9.09 *Limitations on Engineer's Authority and Responsibilities*

A. Neither Engineer's authority or responsibility under this Article 9 or under any other provision of the Contract Documents nor any decision made by Engineer in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Engineer shall create, impose, or give rise to any duty in contract, tort, or otherwise owed by Engineer to Contractor, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.

B. Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Engineer will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

C. Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.

D. Engineer's review of the final Application for Payment and accompanying documentation and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by Paragraph 14.07.A will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals that the results certified indicate compliance with the Contract Documents.

E. The limitations upon authority and responsibility set forth in this Paragraph 9.09 shall also apply to, the Resident Project Representative, if any, and assistants, if any.

ARTICLE 10 - CHANGES IN THE WORK; CLAIMS

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10.01 *Authorized Changes in the Work*

A. Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work by a Change Order, or a Work Change Directive. Upon receipt of any such document, Contractor shall

promptly proceed with the Work involved which will be performed under the applicable conditions of the Contract Documents (except as otherwise specifically provided).

B. If Owner and Contractor are unable to agree on entitlement to, or on the amount or extent, if any, of an adjustment in the Contract Price or Contract Times, or both, that should be allowed as a result of a Work Change Directive, a Claim may be made therefor as provided in Paragraph 10.05.

#### 10.02 *Unauthorized Changes in the Work*

A. Contractor shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents as amended, modified, or supplemented as provided in Paragraph 3.04, except in the case of an emergency as provided in Paragraph 6.16 or in the case of uncovering Work as provided in Paragraph 13.04.B.

#### 10.03 *Execution of Change Orders*

A. Owner and Contractor shall execute appropriate Change Orders recommended by Engineer covering:

1. changes in the Work which are: (i) ordered by Owner pursuant to Paragraph 10.01.A, (ii) required because of acceptance of defective Work under Paragraph 13.08.A or Owner's correction of defective Work under Paragraph 13.09, or (iii) agreed to by the parties;

2. changes in the Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive; and

3. changes in the Contract Price or Contract Times which embody the substance of any written decision rendered by Engineer pursuant to Paragraph 10.05; provided that, in lieu of executing any such Change Order, an appeal may be taken from any such decision in accordance with the provisions of the Contract Documents and applicable Laws and Regulations, but during any such appeal, Contractor shall carry on the Work and adhere to the Progress Schedule as provided in Paragraph 6.18.A.

#### 10.04 *Notification to Surety*

A. If notice of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Times) is required by the provisions of any bond to be given to a surety, the giving of any such notice will be Contractor's responsibility. The amount of each applicable bond will be adjusted to reflect the effect of any such change.

#### 10.05 *Claims*

A. *Engineer's Decision Required:* All Claims, except those waived pursuant to Paragraph 14.09, shall be referred to the Engineer for decision. A decision by Engineer shall be required as a condition precedent to any exercise by Owner or Contractor of any rights or remedies either may otherwise have under the Contract Documents or by Laws and Regulations in respect of such Claims.

B. *Notice:* Written notice stating the general nature of each Claim, shall be delivered by the claimant to Engineer and the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto. The responsibility to substantiate a Claim shall rest with the party making the Claim. Notice of the amount or extent of the Claim, with supporting data shall be delivered to the Engineer and the other party to the Contract within 60 days after the start of such event (unless Engineer allows additional time for claimant to submit additional or more accurate data in support of such Claim). A Claim for an adjustment in Contract Price shall be prepared in accordance with the provisions of Paragraph 12.01.B. A Claim for an adjustment in Contract Time shall be prepared in accordance with the provisions of Paragraph 12.02.B. Each Claim shall be accompanied by claimant's written statement that the adjustment claimed is the entire adjustment to which the claimant believes it is entitled as a result of said event. The opposing party shall submit any response to Engineer and the claimant within 30 days after receipt of the claimant's last submittal (unless Engineer allows additional time).

C. *Engineer's Action:* Engineer will review each Claim and, within 30 days after receipt of the last submittal of the claimant or the last submittal of the opposing party, if any, take one of the following actions in writing:

1. deny the Claim in whole or in part,

2. approve the Claim, or

3. notify the parties that the Engineer is unable to resolve the Claim if, in the Engineer's sole discretion, it would be inappropriate for the Engineer to do so. For purposes of further resolution of the Claim, such notice shall be deemed a denial.

D. In the event that Engineer does not take action on a Claim within said 30 days, the Claim shall be deemed denied.

E. Engineer's written action under Paragraph 10.05.C or denial pursuant to Paragraphs 10.05.C.3 or 10.05.D will be final and binding upon Owner and Contractor, unless Owner or Contractor invoke the dispute resolution procedure set forth in Article 16 within 30 days of such action or denial.

F. No Claim for an adjustment in Contract Price or Contract Times will be valid if not submitted in accordance with this Paragraph 10.05.

ARTICLE 11 - COST OF THE WORK;  
ALLOWANCES; UNIT PRICE WORK

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11.01 *Cost of the Work*

A. *Costs Included:* The term Cost of the Work means the sum of all costs, except those excluded in Paragraph 11.01.B, necessarily incurred and paid by Contractor in the proper performance of the Work. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, the costs to be reimbursed to Contractor will be only those additional or incremental costs required because of the change in the Work or because of the event giving rise to the Claim. Except as otherwise may be agreed to in writing by Owner, such costs shall be in amounts no higher than those prevailing in the locality of the Project, shall include only the following items, and shall not include any of the costs itemized in Paragraph 11.01.B.

1. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by Owner and Contractor. Such employees shall include, without limitation, superintendents, foremen, and other personnel employed full time at the Site. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits, which shall include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, bonuses, sick leave, vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, shall be included in the above to the extent authorized by Owner.

2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts shall accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts shall accrue to Owner. All trade discounts, rebates and refunds and returns from sale of surplus materials and equipment shall accrue to Owner, and Contractor shall make provisions so that they may be obtained.

3. Payments made by Contractor to Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from subcontractors acceptable to Owner and

Contractor and shall deliver such bids to Owner, who will then determine, with the advice of Engineer, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee shall be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 11.01.

4. Costs of special consultants (including but not limited to Engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed for services specifically related to the Work.

5. Supplemental costs including the following:

a. The proportion of necessary transportation, travel, and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.

b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, and hand tools not owned by the workers, which are consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of Contractor.

c. Rentals of all construction equipment and machinery, and the parts thereof whether rented from Contractor or others in accordance with rental agreements approved by Owner with the advice of Engineer, and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs shall be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts shall cease when the use thereof is no longer necessary for the Work.

d. Sales, consumer, use, and other similar taxes related to the Work, and for which Contractor is liable, imposed by Laws and Regulations.

e. Deposits lost for causes other than negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.

f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by Contractor in connection with the performance of the Work (except losses and damages within the deductible amounts of property insurance established in accordance with Paragraph 5.06.D), provided such losses and damages have

resulted from causes other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses shall be included in the Cost of the Work for the purpose of determining Contractor's fee.

g. The cost of utilities, fuel, and sanitary facilities at the Site.

h. Minor expenses such as telegrams, long distance telephone calls, telephone service at the Site, expresses, and similar petty cash items in connection with the Work.

i. The costs of premiums for all bonds and insurance Contractor is required by the Contract Documents to purchase and maintain.

**B. Costs Excluded:** The term Cost of the Work shall not include any of the following items:

1. Payroll costs and other compensation of Contractor's officers, executives, principals (of partnerships and sole proprietorships), general managers, safety managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 11.01.A.1 or specifically covered by Paragraph 11.01.A.4, all of which are to be considered administrative costs covered by the Contractor's fee.

2. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.

3. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.

4. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.

5. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraphs 11.01.A and 11.01.B.

**C. Contractor's Fee:** When all the Work is performed on the basis of cost-plus, Contractor's fee shall

be determined as set forth in the Agreement. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, Contractor's fee shall be determined as set forth in Paragraph 12.01.C.

**D. Documentation:** Whenever the Cost of the Work for any purpose is to be determined pursuant to Paragraphs 11.01.A and 11.01.B, Contractor will establish and maintain records thereof in accordance with generally accepted accounting practices and submit in a form acceptable to Engineer an itemized cost breakdown together with supporting data.

## 11.02 Allowances

A. It is understood that Contractor has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be performed for such sums and by such persons or entities as may be acceptable to Owner and Engineer.

### B. Cash Allowances

1. Contractor agrees that:

a. the cash allowances include the cost to Contractor (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and

b. Contractor's costs for unloading and handling on the Site, labor, installation, overhead, profit, and other expenses contemplated for the cash allowances have been included in the Contract Price and not in the allowances, and no demand for additional payment on account of any of the foregoing will be valid.

### C. Contingency Allowance

1. Contractor agrees that a contingency allowance, if any, is for the sole use of Owner to cover unanticipated costs.

D. Prior to final payment, an appropriate Change Order will be issued as recommended by Engineer to reflect actual amounts due Contractor on account of Work covered by allowances, and the Contract Price shall be correspondingly adjusted.

## 11.03 Unit Price Work

A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement.

B. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Determinations of the actual quantities and classifications of Unit Price Work performed by Contractor will be made by Engineer subject to the provisions of Paragraph 9.07.

C. Each unit price will be deemed to include an amount considered by Contractor to be adequate to cover Contractor's overhead and profit for each separately identified item.

D. Owner or Contractor may make a Claim for an adjustment in the Contract Price in accordance with Paragraph 10.05 if:

1. the quantity of any item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement; and

2. there is no corresponding adjustment with respect any other item of Work; and

3. Contractor believes that Contractor is entitled to an increase in Contract Price as a result of having incurred additional expense or Owner believes that Owner is entitled to a decrease in Contract Price and the parties are unable to agree as to the amount of any such increase or decrease.

## ARTICLE 12 - CHANGE OF CONTRACT PRICE; CHANGE OF CONTRACT TIMES

### 12.01 *Change of Contract Price*

A. The Contract Price may only be changed by a Change Order. Any Claim for an adjustment in the Contract Price shall be based on written notice submitted by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 10.05.

B. The value of any Work covered by a Change Order or of any Claim for an adjustment in the Contract Price will be determined as follows:

1. where the Work involved is covered by unit prices contained in the Contract Documents, by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 11.03); or

2. where the Work involved is not covered by unit prices contained in the Contract Documents, by a mutually agreed lump sum (which may include an

allowance for overhead and profit not necessarily in accordance with Paragraph 12.01.C.2); or

3. where the Work involved is not covered by unit prices contained in the Contract Documents and agreement to a lump sum is not reached under Paragraph 12.01.B.2, on the basis of the Cost of the Work (determined as provided in Paragraph 11.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 12.01.C).

C. *Contractor's Fee:* The Contractor's fee for overhead and profit shall be determined as follows:

1. a mutually acceptable fixed fee; or

2. if a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:

a. for costs incurred under Paragraphs 11.01.A.1 and 11.01.A.2, the Contractor's fee shall be 15 percent;

b. for costs incurred under Paragraph 11.01.A.3, the Contractor's fee shall be five percent;

c. where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraph 12.01.C.2.a is that the Subcontractor who actually performs the Work, at whatever tier, will be paid a fee of 15 percent of the costs incurred by such Subcontractor under Paragraphs 11.01.A.1 and 11.01.A.2 and that any higher tier Subcontractor and Contractor will each be paid a fee of five percent of the amount paid to the next lower tier Subcontractor;

d. no fee shall be payable on the basis of costs itemized under Paragraphs 11.01.A.4, 11.01.A.5, and 11.01.B;

e. the amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in cost will be the amount of the actual net decrease in cost plus a deduction in Contractor's fee by an amount equal to five percent of such net decrease; and

f. when both additions and credits are involved in any one change, the adjustment in Contractor's fee shall be computed on the basis of the net change in accordance with Paragraphs 12.01.C.2.a through 12.01.C.2.e, inclusive.

### 12.02 *Change of Contract Times*

A. The Contract Times may only be changed by a Change Order. Any Claim for an adjustment in the Contract Times shall be based on written notice submitted

by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 10.05.

B. Any adjustment of the Contract Times covered by a Change Order or any Claim for an adjustment in the Contract Times will be determined in accordance with the provisions of this Article 12.

### 12.03 *Delays*

A. Where Contractor is prevented from completing any part of the Work within the Contract Times due to delay beyond the control of Contractor, the Contract Times will be extended in an amount equal to the time lost due to such delay if a Claim is made therefor as provided in Paragraph 12.02.A. Delays beyond the control of Contractor shall include, but not be limited to, acts or neglect by Owner, acts or neglect of utility owners or other contractors performing other work as contemplated by Article 7, fires, floods, epidemics, abnormal weather conditions, or acts of God.

B. If Owner, Engineer, or other contractors or utility owners performing other work for Owner as contemplated by Article 7, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Contractor shall be entitled to an equitable adjustment in the Contract Price or the Contract Times, or both. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.

C. If Contractor is delayed in the performance or progress of the Work by fire, flood, epidemic, abnormal weather conditions, acts of God, acts or failures to act of utility owners not under the control of Owner, or other causes not the fault of and beyond control of Owner and Contractor, then Contractor shall be entitled to an equitable adjustment in Contract Times, if such adjustment is essential to Contractor's ability to complete the Work within the Contract Times. Such an adjustment shall be Contractor's sole and exclusive remedy for the delays described in this Paragraph 12.03.C.

D. Owner, Engineer and the Related Entities of each of them shall not be liable to Contractor for any claims, costs, losses, or damages (including but not limited to all fees and charges of Engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Contractor on or in connection with any other project or anticipated project.

E. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delays within the control of Contractor. Delays attributable to and within the control of a Subcontractor or Supplier shall be deemed to be delays within the control of Contractor.

## ARTICLE 13 - TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK

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### 13.01 *Notice of Defects*

A. Prompt notice of all defective Work of which Owner or Engineer has actual knowledge will be given to Contractor. All defective Work may be rejected, corrected, or accepted as provided in this Article 13.

### 13.02 *Access to Work*

A. Owner, Engineer, their consultants and other representatives and personnel of Owner, independent testing laboratories, and governmental agencies with jurisdictional interests will have access to the Site and the Work at reasonable times for their observation, inspecting, and testing. Contractor shall provide them proper and safe conditions for such access and advise them of Contractor's Site safety procedures and programs so that they may comply therewith as applicable.

### 13.03 *Tests and Inspections*

A. Contractor shall give Engineer timely notice of readiness of the Work for all required inspections, tests, or approvals and shall cooperate with inspection and testing personnel to facilitate required inspections or tests.

B. Owner shall employ and pay for the services of an independent testing laboratory to perform all inspections, tests, or approvals required by the Contract Documents except:

1. for inspections, tests, or approvals covered by Paragraphs 13.03.C and 13.03.D below;

2. that costs incurred in connection with tests or inspections conducted pursuant to Paragraph 13.04.B shall be paid as provided in said Paragraph 13.04.C; and

3. as otherwise specifically provided in the Contract Documents.

C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish Engineer the required certificates of inspection or approval.

D. Contractor shall be responsible for arranging and obtaining and shall pay all costs in connection with any inspections, tests, or approvals required for Owner's and Engineer's acceptance of materials or equipment to

be incorporated in the Work; or acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work. Such inspections, tests, or approvals shall be performed by organizations acceptable to Owner and Engineer.

E. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Engineer, it must, if requested by Engineer, be uncovered for observation.

F. Uncovering Work as provided in Paragraph 13.03.E shall be at Contractor's expense unless Contractor has given Engineer timely notice of Contractor's intention to cover the same and Engineer has not acted with reasonable promptness in response to such notice.

#### 13.04 *Uncovering Work*

A. If any Work is covered contrary to the written request of Engineer, it must, if requested by Engineer, be uncovered for Engineer's observation and replaced at Contractor's expense.

B. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, Contractor, at Engineer's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as Engineer may require, that portion of the Work in question, furnishing all necessary labor, material, and equipment.

C. If it is found that the uncovered Work is defective, Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05.

D. If, the uncovered Work is not found to be defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Times, or both, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the amount or extent thereof, Contractor may make a Claim therefor as provided in Paragraph 10.05.

#### 13.05 *Owner May Stop the Work*

A. If the Work is defective, or Contractor fails to supply sufficient skilled workers or suitable materials or equipment, or fails to perform the Work in such a way that the completed Work will conform to the Contract Documents, Owner may order Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of Owner to stop the Work shall not give rise to any duty on the part of Owner to exercise this right for the benefit of Contractor, any Subcontractor, any Supplier, any other individual or entity, or any surety for, or employee or agent of any of them.

#### 13.06 *Correction or Removal of Defective Work*

A. Promptly after receipt of notice, Contractor shall correct all defective Work, whether or not fabricated, installed, or completed, or, if the Work has been rejected by Engineer, remove it from the Project and replace it with Work that is not defective. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or removal (including but not limited to all costs of repair or replacement of work of others).

B. When correcting defective Work under the terms of this Paragraph 13.06 or Paragraph 13.07, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.

#### 13.07 *Correction Period*

A. If within one year after the date of Substantial Completion (or such longer period of time as may be prescribed by the terms of any applicable special guarantee required by the Contract Documents) or by any specific provision of the Contract Documents, any Work is found to be defective, or if the repair of any damages to the land or areas made available for Contractor's use by Owner or permitted by Laws and Regulations as contemplated in Paragraph 6.11.A is found to be defective, Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:

1. repair such defective land or areas; or
2. correct such defective Work; or
3. if the defective Work has been rejected by Owner, remove it from the Project and replace it with Work that is not defective, and
4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others or other land or areas resulting therefrom.

B. If Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. All claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others) will be paid by Contractor.

C. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications .

D. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this Paragraph 13.07, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.

E. Contractor's obligations under this Paragraph 13.07 are in addition to any other obligation or warranty. The provisions of this Paragraph 13.07 shall not be construed as a substitute for or a waiver of the provisions of any applicable statute of limitation or repose.

#### 13.08 *Acceptance of Defective Work*

A. If, instead of requiring correction or removal and replacement of defective Work, Owner (and, prior to Engineer's recommendation of final payment, Engineer) prefers to accept it, Owner may do so. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) attributable to Owner's evaluation of and determination to accept such defective Work (such costs to be approved by Engineer as to reasonableness) and the diminished value of the Work to the extent not otherwise paid by Contractor pursuant to this sentence. If any such acceptance occurs prior to Engineer's recommendation of final payment, a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work, and Owner shall be entitled to an appropriate decrease in the Contract Price, reflecting the diminished value of Work so accepted. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05. If the acceptance occurs after such recommendation, an appropriate amount will be paid by Contractor to Owner.

#### 13.09 *Owner May Correct Defective Work*

A. If Contractor fails within a reasonable time after written notice from Engineer to correct defective Work or to remove and replace rejected Work as required by Engineer in accordance with Paragraph 13.06.A, or if Contractor fails to perform the Work in accordance with the Contract Documents, or if Contractor fails to comply with any other provision of the Contract Documents, Owner may, after seven days written notice to Contractor, correct or remedy any such deficiency.

B. In exercising the rights and remedies under this Paragraph 13.09, Owner shall proceed expeditiously. In connection with such corrective or remedial action, Owner may exclude Contractor from all or part of the Site, take possession of all or part of the Work and suspend Contractor's services related thereto, take possession of Contractor's tools, appliances, construction equipment and machinery at the Site, and incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere. Contractor shall allow Owner, Owner's representatives, agents and employees, Owner's other contractors, and Engineer and Engineer's consultants access to the Site to enable Owner to exercise the rights and remedies under this Paragraph.

C. All claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 13.09 will be charged against Contractor, and a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount of the adjustment, Owner may make a Claim therefor as provided in Paragraph 10.05. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of Contractor's defective Work.

D. Contractor shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to the exercise by Owner of Owner's rights and remedies under this Paragraph 13.09.

### ARTICLE 14 - PAYMENTS TO CONTRACTOR AND COMPLETION

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#### 14.01 *Schedule of Values*

A. The Schedule of Values established as provided in Paragraph 2.07.A will serve as the basis for progress

payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments on account of Unit Price Work will be based on the number of units completed.

#### 14.02 *Progress Payments*

##### A. Applications for Payments

1. At least 20 days before the date established in the Agreement for each progress payment (but not more often than once a month), Contractor shall submit to Engineer for review an Application for Payment filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment shall also be accompanied by a bill of sale, invoice, or other documentation warranting that Owner has received the materials and equipment free and clear of all Liens and evidence that the materials and equipment are covered by appropriate property insurance or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.

2. Beginning with the second Application for Payment, each Application shall include an affidavit of Contractor stating that all previous progress payments received on account of the Work have been applied on account to discharge Contractor's legitimate obligations associated with prior Applications for Payment.

3. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.

##### B. *Review of Applications*

1. Engineer will, within 10 days after receipt of each Application for Payment, either indicate in writing a recommendation of payment and present the Application to Owner or return the Application to Contractor indicating in writing Engineer's reasons for refusing to recommend payment. In the latter case, Contractor may make the necessary corrections and resubmit the Application.

2. Engineer's recommendation of any payment requested in an Application for Payment will constitute a representation by Engineer to Owner, based on Engineer's observations on the Site of the executed Work as an experienced and qualified design professional and on Engineer's review of the Application for Payment and the accompanying data and schedules, that to the best of Engineer's knowledge, information and belief:

a. the Work has progressed to the point indicated;

b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, to the results of any subsequent tests called for in the Contract Documents, to a final determination of quantities and classifications for Unit Price Work under Paragraph 9.07, and to any other qualifications stated in the recommendation); and

c. the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe the Work.

3. By recommending any such payment Engineer will not thereby be deemed to have represented that:

a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in the Contract Documents; or

b. that there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.

4. Neither Engineer's review of Contractor's Work for the purposes of recommending payments nor Engineer's recommendation of any payment, including final payment, will impose responsibility on Engineer:

a. to supervise, direct, or control the Work, or

b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or

c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work, or

d. to make any examination to ascertain how or for what purposes Contractor has used the moneys paid on account of the Contract Price, or

e. to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.

5. Engineer may refuse to recommend the whole or any part of any payment if, in Engineer's opinion, it would be incorrect to make the representations to Owner stated in Paragraph 14.02.B.2. Engineer may also refuse to recommend any such payment or, because of subsequently discovered evidence or the results of subsequent

inspections or tests, revise or revoke any such payment recommendation previously made, to such extent as may be necessary in Engineer's opinion to protect Owner from loss because:

- a. the Work is defective, or completed Work has been damaged, requiring correction or replacement;
- b. the Contract Price has been reduced by Change Orders;
- c. Owner has been required to correct defective Work or complete Work in accordance with Paragraph 13.09; or
- d. Engineer has actual knowledge of the occurrence of any of the events enumerated in Paragraph 15.02.A.

#### *C. Payment Becomes Due*

1. Ten days after presentation of the Application for Payment to Owner with Engineer's recommendation, the amount recommended will (subject to the provisions of Paragraph 14.02.D) become due, and when due will be paid by Owner to Contractor.

#### *D. Reduction in Payment*

1. Owner may refuse to make payment of the full amount recommended by Engineer because:

- a. claims have been made against Owner on account of Contractor's performance or furnishing of the Work;
- b. Liens have been filed in connection with the Work, except where Contractor has delivered a specific bond satisfactory to Owner to secure the satisfaction and discharge of such Liens;
- c. there are other items entitling Owner to a set-off against the amount recommended; or
- d. Owner has actual knowledge of the occurrence of any of the events enumerated in Paragraphs 14.02.B.5.a through 14.02.B.5.c or Paragraph 15.02.A.

2. If Owner refuses to make payment of the full amount recommended by Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action and promptly pay Contractor any amount remaining after deduction of the amount so withheld. Owner shall promptly pay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, when Contractor corrects to Owner's satisfaction the reasons for such action.

3. If it is subsequently determined that Owner's refusal of payment was not justified, the amount wrongfully withheld shall be treated as an amount due as determined by Paragraph 14.02.C.1.

#### *14.03 Contractor's Warranty of Title*

A. Contractor warrants and guarantees that title to all Work, materials, and equipment covered by any Application for Payment, whether incorporated in the Project or not, will pass to Owner no later than the time of payment free and clear of all Liens.

#### *14.04 Substantial Completion*

A. When Contractor considers the entire Work ready for its intended use Contractor shall notify Owner and Engineer in writing that the entire Work is substantially complete (except for items specifically listed by Contractor as incomplete) and request that Engineer issue a certificate of Substantial Completion.

B. Promptly after Contractor's notification, , Owner, Contractor, and Engineer shall make an inspection of the Work to determine the status of completion. If Engineer does not consider the Work substantially complete, Engineer will notify Contractor in writing giving the reasons therefor.

C. If Engineer considers the Work substantially complete, Engineer will deliver to Owner a tentative certificate of Substantial Completion which shall fix the date of Substantial Completion. There shall be attached to the certificate a tentative list of items to be completed or corrected before final payment. Owner shall have seven days after receipt of the tentative certificate during which to make written objection to Engineer as to any provisions of the certificate or attached list. If, after considering such objections, Engineer concludes that the Work is not substantially complete, Engineer will within 14 days after submission of the tentative certificate to Owner notify Contractor in writing, stating the reasons therefor. If, after consideration of Owner's objections, Engineer considers the Work substantially complete, Engineer will within said 14 days execute and deliver to Owner and Contractor a definitive certificate of Substantial Completion (with a revised tentative list of items to be completed or corrected) reflecting such changes from the tentative certificate as Engineer believes justified after consideration of any objections from Owner.

D. At the time of delivery of the tentative certificate of Substantial Completion, Engineer will deliver to Owner and Contractor a written recommendation as to division of responsibilities pending final payment between Owner and Contractor with respect to security, operation, safety, and protection of the Work, maintenance, heat, utilities, insurance, and warranties and guarantees. Unless Owner and Contractor agree otherwise in writing and so inform Engineer in writing prior to Engineer's issuing the definitive certificate of Substantial

Completion, Engineer's aforesaid recommendation will be binding on Owner and Contractor until final payment.

E. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to complete or correct items on the tentative list.

#### 14.05 *Partial Utilization*

A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which Owner, Engineer, and Contractor agree constitutes a separately functioning and usable part of the Work that can be used by Owner for its intended purpose without significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions.

1. Owner at any time may request Contractor in writing to permit Owner to use or occupy any such part of the Work which Owner believes to be ready for its intended use and substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor will certify to Owner and Engineer that such part of the Work is substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.

2. Contractor at any time may notify Owner and Engineer in writing that Contractor considers any such part of the Work ready for its intended use and substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.

3. Within a reasonable time after either such request, Owner, Contractor, and Engineer shall make an inspection of that part of the Work to determine its status of completion. If Engineer does not consider that part of the Work to be substantially complete, Engineer will notify Owner and Contractor in writing giving the reasons therefor. If Engineer considers that part of the Work to be substantially complete, the provisions of Paragraph 14.04 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.

4. No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of Paragraph 5.10 regarding property insurance.

#### 14.06 *Final Inspection*

A. Upon written notice from Contractor that the entire Work or an agreed portion thereof is complete, Engineer will promptly make a final inspection with Owner and Contractor and will notify Contractor in writing of all particulars in which this inspection reveals

that the Work is incomplete or defective. Contractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

#### 14.07 *Final Payment*

##### A. Application for Payment

1. After Contractor has, in the opinion of Engineer, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance certificates of inspection, marked-up record documents (as provided in Paragraph 6.12), and other documents, Contractor may make application for final payment following the procedure for progress payments.

2. The final Application for Payment shall be accompanied (except as previously delivered) by:

a. all documentation called for in the Contract Documents, including but not limited to the evidence of insurance required by Paragraph 5.04.B.7;

b. consent of the surety, if any, to final payment;

c. a list of all Claims against Owner that Contractor believes are unsettled; and

d. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of or Liens filed in connection with the Work.

3. In lieu of the releases or waivers of Liens specified in Paragraph 14.07.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (i) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (ii) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner or Owner's property might in any way be responsible have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien.

##### B. *Engineer's Review of Application and Acceptance*

1. If, on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor's other obligations

under the Contract Documents have been fulfilled, Engineer will, within ten days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of payment and present the Application for Payment to Owner for payment. At the same time Engineer will also give written notice to Owner and Contractor that the Work is acceptable subject to the provisions of Paragraph 14.09. Otherwise, Engineer will return the Application for Payment to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application for Payment.

### C. Payment Becomes Due

1. Thirty days after the presentation to Owner of the Application for Payment and accompanying documentation, the amount recommended by Engineer, less any sum Owner is entitled to set off against Engineer's recommendation, including but not limited to liquidated damages, will become due and , will be paid by Owner to Contractor.

#### 14.08 *Final Completion Delayed*

A. If, through no fault of Contractor, final completion of the Work is significantly delayed, and if Engineer so confirms, Owner shall, upon receipt of Contractor's final Application for Payment (for Work fully completed and accepted) and recommendation of Engineer, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance to be held by Owner for Work not fully completed or corrected is less than the retainage stipulated in the Agreement, and if bonds have been furnished as required in Paragraph 5.01, the written consent of the surety to the payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by Contractor to Engineer with the Application for such payment. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of Claims.

#### 14.09 *Waiver of Claims*

A. The making and acceptance of final payment will constitute:

1. a waiver of all Claims by Owner against Contractor, except Claims arising from unsettled Liens, from defective Work appearing after final inspection pursuant to Paragraph 14.06, from failure to comply with the Contract Documents or the terms of any special guarantees specified therein, or from Contractor's continuing obligations under the Contract Documents; and

2. a waiver of all Claims by Contractor against Owner other than those previously made in accordance

with the requirements herein and expressly acknowledged by Owner in writing as still unsettled.

## ARTICLE 15 - SUSPENSION OF WORK AND TERMINATION

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### 15.01 *Owner May Suspend Work*

A. At any time and without cause, Owner may suspend the Work or any portion thereof for a period of not more than 90 consecutive days by notice in writing to Contractor and Engineer which will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be granted an adjustment in the Contract Price or an extension of the Contract Times, or both, directly attributable to any such suspension if Contractor makes a Claim therefor as provided in Paragraph 10.05.

### 15.02 *Owner May Terminate for Cause*

A. The occurrence of any one or more of the following events will justify termination for cause:

1. Contractor's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment or failure to adhere to the Progress Schedule established under Paragraph 2.07 as adjusted from time to time pursuant to Paragraph 6.04);

2. Contractor's disregard of Laws or Regulations of any public body having jurisdiction;

3. Contractor's disregard of the authority of Engineer; or

4. Contractor's violation in any substantial way of any provisions of the Contract Documents.

B. If one or more of the events identified in Paragraph 15.02.A occur, Owner may, after giving Contractor (and surety ) seven days written notice of its intent to terminate the services of Contractor:

1. exclude Contractor from the Site, and take possession of the Work and of all Contractor's tools, appliances, construction equipment, and machinery at the Site, and use the same to the full extent they could be used by Contractor (without liability to Contractor for trespass or conversion),

2. incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere, and

3. complete the Work as Owner may deem expedient.

C. If Owner proceeds as provided in Paragraph 15.02.B, Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Owner arising out of or relating to completing the Work, such excess will be paid to Contractor. If such claims, costs, losses, and damages exceed such unpaid balance, Contractor shall pay the difference to Owner. Such claims, costs, losses, and damages incurred by Owner will be reviewed by Engineer as to their reasonableness and, when so approved by Engineer, incorporated in a Change Order. When exercising any rights or remedies under this Paragraph Owner shall not be required to obtain the lowest price for the Work performed.

D. Notwithstanding Paragraphs 15.02.B and 15.02.C, Contractor's services will not be terminated if Contractor begins within seven days of receipt of notice of intent to terminate to correct its failure to perform and proceeds diligently to cure such failure within no more than 30 days of receipt of said notice.

E. Where Contractor's services have been so terminated by Owner, the termination will not affect any rights or remedies of Owner against Contractor then existing or which may thereafter accrue. Any retention or payment of moneys due Contractor by Owner will not release Contractor from liability.

F. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 5.01.A, the termination procedures of that bond shall supersede the provisions of Paragraphs 15.02.B, and 15.02.C.

#### 15.03 *Owner May Terminate For Convenience*

A. Upon seven days written notice to Contractor and Engineer, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid for (without duplication of any items):

1. completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;

2. expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses;

3. all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred in settlement of terminated contracts with Subcontractors, Suppliers, and others; and

4. reasonable expenses directly attributable to termination.

B. Contractor shall not be paid on account of loss of anticipated profits or revenue or other economic loss arising out of or resulting from such termination.

#### 15.04 *Contractor May Stop Work or Terminate*

A. If, through no act or fault of Contractor, (i) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (ii) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (iii) Owner fails for 30 days to pay Contractor any sum finally determined to be due, then Contractor may, upon seven days written notice to Owner and Engineer, and provided Owner or Engineer do not remedy such suspension or failure within that time, terminate the Contract and recover from Owner payment on the same terms as provided in Paragraph 15.03.

B. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Engineer has failed to act on an Application for Payment within 30 days after it is submitted, or Owner has failed for 30 days to pay Contractor any sum finally determined to be due, Contractor may, seven days after written notice to Owner and Engineer, stop the Work until payment is made of all such amounts due Contractor, including interest thereon. The provisions of this Paragraph 15.04 are not intended to preclude Contractor from making a Claim under Paragraph 10.05 for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to Contractor's stopping the Work as permitted by this Paragraph.

## ARTICLE 16 - DISPUTE RESOLUTION

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### 16.01 *Methods and Procedures*

A. Either Owner or Contractor may request mediation of any Claim submitted to Engineer for a decision under Paragraph 10.05 before such decision becomes final and binding. The mediation will be

governed by the Construction Industry Mediation Rules of the American Arbitration Association in effect as of the Effective Date of the Agreement. The request for mediation shall be submitted in writing to the American Arbitration Association and the other party to the Contract. Timely submission of the request shall stay the effect of Paragraph 10.05.E.

B. Owner and Contractor shall participate in the mediation process in good faith. The process shall be concluded within 60 days of filing of the request. The date of termination of the mediation shall be determined by application of the mediation rules referenced above.

C. If the Claim is not resolved by mediation, Engineer's action under Paragraph 10.05.C or a denial pursuant to Paragraphs 10.05.C.3 or 10.05.D shall become final and binding 30 days after termination of the mediation unless, within that time period, Owner or Contractor:

1. elects in writing to invoke any dispute resolution process provided for in the Supplementary Conditions, or

2. agrees with the other party to submit the Claim to another dispute resolution process, or

3. gives written notice to the other party of their intent to submit the Claim to a court of competent jurisdiction.

## ARTICLE 17 - MISCELLANEOUS

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### 17.01 *Giving Notice*

A. Whenever any provision of the Contract Documents requires the giving of written notice, it will be deemed to have been validly given if:

1. delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended, or

2. delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the giver of the notice.

### 17.02 *Computation of Times*

A. When any period of time is referred to in the Contract Documents by days, it will be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.

### 17.03 *Cumulative Remedies*

A. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee, or by other provisions of the Contract Documents. The provisions of this Paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right, and remedy to which they apply.

### 17.04 *Survival of Obligations*

A. All representations, indemnifications, warranties, and guarantees made in, required by, or given in accordance with the Contract Documents, as well as all continuing obligations indicated in the Contract Documents, will survive final payment, completion, and acceptance of the Work or termination or completion of the Contract or termination of the services of Contractor.

### 17.05 *Controlling Law*

A. This Contract is to be governed by the law of the state in which the Project is located.

### 17.06 *Headings*

A. Article and paragraph headings are inserted for convenience only and do not constitute parts of these General Conditions.

## Chapter 12.28

## PUBLIC CONSTRUCTION PROJECTS

## Sections:

- 12.28.010 Employment of city residents—Required—Ratio.
- 12.28.020 Employment of city residents—Required—Posting of advertisements.
- 12.28.030 Employment of city residents—Resident defined.
- 12.28.040 Requirements—Prevailing wages.
- 12.28.050 Requirements—Hiring of minorities and women.
- 12.28.060 Requirements—Employee information—Provided to equal opportunity administrator.
- 12.28.070 Enforcement of chapter provisions—Violations—Penalties.
- 12.28.080 Severability.

**12.28.010 Employment of city residents—Required—Ratio.**

On any construction project funded in whole or in part by city funds, funds from a federal grant or loan, or city-approved M.I.F.A. applications, or projects for which the city administers the construction contract, and when a project has a projected cost of more than two hundred fifty thousand dollars, residents of Quincy who are qualified to perform the work to which the employment relates shall be given preference in hiring on a one-of-every-three ratio, after the employer's foreman or supervisor and two key employees have been employed for a one-week payroll period. (Ord. 1989-532 (part); prior code Ch. 13, § 54 (part))

**12.28.020 Employment of city residents—Required—Posting of advertisements.**

Prior to entering into a construction agreement involving more than two hundred fifty thousand dollars, the owner, developer or contractor shall place a reasonable size advertisement, at least three inches by five inches in size, at least twice, in at least one newspaper having a local distribution, on a craft-by-craft basis, indicating that bids are sought and that qualified residents of Quincy shall be given preference consideration in hiring on a three-to-one ratio. (Ord. 1989-532 (part); prior code Ch. 13, § 54 (part))

**12.28.030 Employment of city residents—Resident defined.**

For purposes of this chapter, a resident of Quincy means an individual who is domiciled in the city. Individuals who temporarily live in the city during the term of the project shall not be considered residents of Quincy for the purposes of this chapter. (Ord. 1990-245 (part); Ord. 1989-532 (part); prior code Ch. 13, § 54 (part))

**12.28.040 Requirements—Prevailing wages.**

In any project with a projected cost of more than two hundred fifty thousand dollars, companies receiving public assistance through the financing agencies listed in Section 12.28.010 should be in concurrence with the prevailing wages in the area, including wages in the Davis-Bacon Act. No revenue bond applications are to be approved unless the applicant agrees to all of the aforementioned conditions. (Ord. 1989-532 (part); prior code Ch. 13, § 54 (part))

December 19, 1988

CITY OF QUINCY

RECEIVED

IN COUNCIL

OCT 17 1989

ORDER NO. 532

QUINCY BUILDING DEPT.

ORDERED:

Be it ordained by the City Council of the City of Quincy, that the revised ordinances of the City of Quincy, 1976, are further amended in Chapter 13 Offenses - Miscellaneous, by adding the following new section:

SECTION 54 - RESIDENCY FOR CITY SUPPORTED CONSTRUCTION PROJECTS:

On any construction project funded in whole or in part by City funds, or funds from a federal grant or loan, or City-approved M.I.F.A. applications, or projects for which the City administers the construction contract, and when a project has a projected cost of more than \$250,000.00 residents of Quincy who are qualified to perform the work to which the employment relates shall be given preference in hiring on a 1-of-every-3 ratio, after the employer's foreman or supervisor and two key employees have been employed for a one-week payroll period.

In any project with a projected cost of more than \$250,000.00, companies receiving public assistance through these financing agencies should be in concurrence with the prevailing wages in the area, including wages in the Davis-Bacon Act. No revenue bond applications are to be approved unless the applicant agrees to all of the aforementioned conditions.

Prior to entering into a construction agreement involving more than \$250,000.00 the owner, developer or contractor shall place a reasonable size advertisement, at least 3" x 5" in size, at least twice, in at least one newspaper having a local distribution, on a craft-by-craft basis, indicating that bids are sought and the qualified residents of Quincy shall be given preference consideration in hiring on a 3-to-1 ratio.

Minorities and women shall additionally be accorded preference for their hiring, as provided for in the federal, state or municipal laws, shall either be included or the same will be deemed included in all construction agreements.

The Quincy Equal Opportunity Administrator will be furnished copies of names and home addresses of employees, upon request, and will be furnished such other proof compliance as said Director may request, upon written request for the same, within seven days of such request.

In the event that any section of this ordinance is deemed illegal, unenforceable, or unconstitutional, then the remaining sections shall remain in full force and effect.

APPROVED

PASSED TO BE ORDAINED JUNE 5, 1989

ATTEST

CLERK OF COUNCIL

IN 12 1989

MAYOR

YEAS Cahill, Cheney, Chretien, DeCristofaro, McGrath, Nutley, Phelan, Sheets, Toland

NAYS Cahill, Cheney, Chretien, DeCristofaro, McGrath, Nutley, Phelan, Sheets, Toland

*Handwritten notes and signatures in the top right corner, including names like P.W. and others.*

# CITY OF QUINCY

IN COUNCIL

October 15, 1990

ORDER NO. 245

ORDERED: Insert the following additional subsections in Chapter 13, Sec. 54 (Replaces page two of Council Order #532 of 1989)

- 6. Any bidder for work covered by this section must notify the Quincy Equal Opportunity Administrator of the names and addresses of any individuals currently employed by the bidder who are not residents of Quincy and who the bidder intends to employ on the project. Such notice shall be in writing at least 48 hours prior to the opening of the bids. Failure to so notify the Administrator shall be deemed an admission by the bidder that the composition of the work force for the project will be in accordance with Section 1 of this ordinance.
- 7. This ordinance shall be enforced by the Commissioner of Public Works or his designee in conjunction with the Quincy Equal Opportunity Administrator. A \$300 fine shall be levied and withheld from the payment of any contractor who violates this ordinance for each day the contract remains in violation.
- 8. For purposes of this ordinance, a resident of Quincy shall mean an individual who is domiciled in the City of Quincy. Individuals who temporarily live in the City of Quincy during the term of the project shall not be considered residents of Quincy for the purpose of this ordinance.
- 9. In the event that any section of this ordinance is deemed illegal, unenforceable, or unconstitutional, then the remaining sections shall remain in full force and effect.

PASSED TO BE ORDAINED OCTOBER 15, 1990

ATTEST:

*Handwritten signature of the Clerk of Council*  
CLERK OF COUNCIL

APPROVED

UCI 18 1990  
*Handwritten signature of James H. Shults*  
MAYOR

YEAS Cahill, Cheney, Chretien.

ip, Kolson, Nutley, Phelan, Toland

NAYS Cahill, Cheney, Chretien.

Nutley, Phelan, Toland

INTRODUCED BY

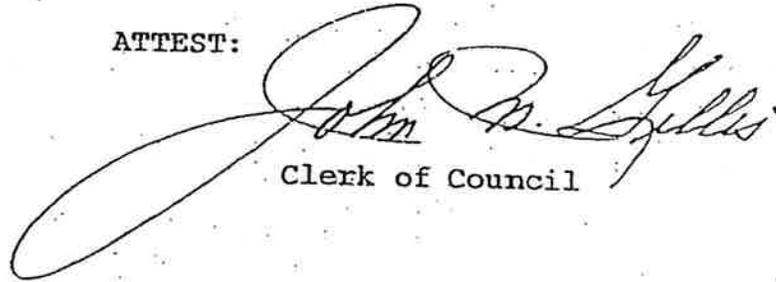
CITY OF QUINCY  
IN COUNCIL

ORDER NO. 264

ORDERED:

This order was returned to the City Council on June 20, 1989, with the Mayor's disapproval with a statement in writing giving his objections to the order. On October 2, 1989 the order was passed to be ordained notwithstanding the veto of the Mayor. Eight voting YES and one voting NO - Councillor Timothy P. Cahill voting in the negative.

ATTEST:



Clerk of Council

YEAS Cahill, Cheney, Chretien, DeCristofaro, McGrath, Nutley, Phelan, Sheets, Toland

NAYS Cahill, Cheney, Chretien, DeCristofaro, McGrath, Nutley, Phelan, Sheets, Toland

**SOLICITORS  
AUDITORS  
ASSESSORS**

INTRODUCED BY JAMES A. SHEETS, MAYOR  
COUNCILLOR MICHAEL D'AMICO

**CITY OF QUINCY  
IN COUNCIL**

ORDER NO. 97-104  
ORDERED:

April 7, 1997

Be it ordained by the City Council of the City of Quincy that the Quincy Municipal Code is hereby amended as follows:

Chapter 12.28 is hereby amended by adding Section 12.28.090 - Apprenticeship Program.

All bidders and all subcontractors under the bidder for projects subject to M.G.L. c.149, section 44A(2) shall, as a condition precedent for bidding substantially agree in writing that they shall comply with the following obligations:

A. The bidder and all subcontractors under the bidder must maintain or participate in a bona fide apprentice training program as defined by M.G.L. c.23, sections 11H and 11I for each apprenticeable trade or occupation represented in their workforce that is approved by the Division of Apprentice Training of the Department of Labor and Industries and must abide by the apprentice to journeymen ratio for each trade prescribed therein in the performance of the contract.

B. All bidders and subcontractors under the bidder who are awarded or who otherwise obtain contracts on projects subject to M.G.L. c.149, section 44A(2) shall comply with this obligation as set forth in paragraph A above for the entire duration of their work on the project, and an officer of each such bidder or subcontractor under the bidder shall certify under oath and in writing on a weekly basis that they are in compliance with such obligation.

C. Any bidder or subcontractor under the bidder who fails to comply with this obligation as set forth in paragraphs above for any period of time shall be subject to one or more of the following sanctions which shall be ordered by the Mayor or his designee:

YEAS Ayers, Cahill, Cheney, D'Amico, Durkin, Harold, Kolson, McDermott, Raymond  
NAYS Ayers, Cahill, Cheney, D'Amico, Durkin, Harold, Kolson, McDermott, Raymond

INTRODUCED BY

JAMES A. SHEETS, MAYOR  
COUNCILLOR MICHAEL D'AMICO

CITY OF QUINCY  
IN COUNCIL

-2-

ORDER NO. 97-104  
ORDERED:

April 7, 1997

(1) cessation of work on the project until compliance is obtained; (2) withholding of payment due under any contract or subcontract until compliance is obtained; (3) permanent removal from any further work on the project; (4) liquidated damages payable to the City in the amount of 5% of the dollar value of the contract.

D. In addition to the sanctions outlined in paragraph C above, a general bidder or contractor shall be equally liable for the violations of its subcontractor with the exception of violations arising from work performed pursuant to subcontracts that are subject to M.G.L. c.149, section 44F. Any contractor or subcontractor who has been determined to have violated any of the obligations set forth in paragraphs A and B above shall be barred from performing any work on any future projects for six months for a first violation, for three years for a second violation, and permanently for a third violation.

E. The provisions of this section 12.28.090 shall not apply to construction projects for which the low general bid was less than \$100,000 or to work performed pursuant to subcontracts that are subject to M.G.L. c.149, section 44F and that were bid for less than \$25,000, or to re-bids for construction projects for which the City receives fewer than three (3) qualified general contract bidders in the original bid.

F. If any provision of this ordinance, or the application of such provision to any person or circumstances, shall be enjoined or held to be invalid, the remaining provisions of this ordinance, or the application of such provisions to persons or circumstances, other than that which is enjoined or held invalid shall not be affected thereby.

APPROVED

PASSED TO BE ORDAINED, MAY 5, 1997

ATTEST:

*Joseph Shea*  
CLERK OF COUNCIL

MAY - 6 1997

*James A. Sheets*  
MAYOR

YEAS Ayers, Cahill, Cheney, D'Amico, Durkin, Harold, Kolson, McDermott, Raymond  
NAYS Ayers, Cahill, Cheney, D'Amico, Durkin, Harold, Kolson, McDermott, Raymond

**17.36.070 Fencing and screening—Industrial and Business districts—Requirements.**

- A. **Required when—Permitted Types.** In an Industrial or Business district, the outdoor storage of goods, products, materials or equipment shall, if visible at normal eye level from any point beyond the boundaries of the premises and less than five hundred feet distant, be screened from such view. Screening, as defined herein, shall be an ornamental lattice, opaque fence, plantings or sight-obscuring screening which shall not be less than six nor more than ten feet high and not less than fifty percent opaque. Plantings shall be at least ten feet in width and contain at least two rows of alternate live deciduous and evergreen trees. Said trees shall not be more than five feet apart, shall have an original planting height of at least six feet, shall be able to attain a height of at least ten feet, and shall be maintained in a healthy growing condition by the property owner. Any existing open storage in any district shall within one year of the effective date of the ordinance codified in this title be properly screened or removed.
- B. **Adjacent to Residential Districts.** Where an Industrial district is located adjacent to a Residence district or a public park or playground and is not separated therefrom by a public way, a compact planting screen as defined in subsection A of this section along the property or lot line adjoining said district boundary shall be provided and maintained by the owners of said premises. Said screening area shall contain no structures or parking or be devoted to any other use or purpose, and shall be maintained in a healthy growing condition by the property owner.

(Prior code Ch. 24, § 84)

**17.36.080 Traffic visibility across corners.**

In any district, no structure, fence or sign shall be constructed and no vegetation shall be planted or maintained between a plane two and one-half feet above curb level and a plane ten feet above curb level, so as to interfere with traffic visibility across a corner within that part of the lot which is within a triangle formed by the street lines and a third line joining points on the street lot lines twenty-five feet from their intersection. (Ord. 1988-6: prior code Ch. 24, § 85)

**17.36.090 Blasting—Permits—Pre-blasting survey—Required—Requirements.**

- A. **Permitted Surveyors.** For all permits issued for blasting (rock excavation) in the city, a pre-blast survey must be made by the contractor or by an approved firm in this kind of work and satisfactory to the contractor's insurance company.
- B. **Requirements.**
1. **Approval.** The pre-blast survey will include a survey of the interior and exterior of existing buildings and stone walls adjacent to the project as specified herein, before any excavation or blasting is done. Written approval must be secured from the fire chief, city engineer and building inspector serving as the committee on blasting.
  2. **Adjacent Area.** The adjacent area requiring the pre-blast survey is specified as all buildings and stone walls within a radius of three hundred fifty feet from said blast.
  3. **Structural Defects.** The survey shall record all visible structural defects such as cracks, settlement and lines out of plumb.

(Ord. 1988-236 (part): prior code Ch. 24, § 87 (part))

**17.36.100 Blasting—Pre-blasting survey—Disposition of survey data.**

The survey data shall be recorded in a permanent manner in approved hardbound notebooks. The survey data shall include polaroid photographs showing the building constructions surveyed referenced to the notebook pages. Also a tape recording of all data pertinent to the survey shall be made. The scope and format of the record survey data shall be satisfactory to the committee on blasting. Before commencing any blasting or ledge excavation, copies of the survey must be on file at the offices of the Quincy city engineer and the Quincy city clerk, City Hall, Quincy, MA. (Ord. 1988-236 (part); prior code Ch. 24, § 87 (part))

**17.36.110 Blasting—Pre-blasting survey—Not required when.**

No pre-blasting survey shall be required if blasting is within the following limits: The total charge weight per blast does not exceed five pounds and the maximum weight per delay does not exceed two pounds per delay. (Ord. 1988-236 (part); prior code Ch. 24, § 87 (part))

**17.36.120 Blasting—Posting of bond—Required when—Amount.**

If blasting is designed to excavate more than a ten-cubic-yard area, the contractor must post a bond with the city. The amount of said bond shall be determined by the committee on blasting. The committee on blasting will not release the bond until it is convinced that all judgments and claims have been reasonably dealt with by the contractor. (Ord. 1988-236 (part); prior code Ch. 24, § 87 (part))

**17.36.130 Blasting—Fire department supervision—Required—Costs.**

All blasting is to be supervised on site by an authorized member of the fire department, assigned by the chief, and the cost of said supervision shall be the sole responsibility of the contractor. (Ord. 1988-236 (part); prior code Ch. 24, § 87 (part))

**17.36.140 Blasting—Violations—Penalties.**

Any person who shall violate any of the provisions of Sections 17.36.090 through 17.36.130, as determined by the committee on blasting, or who fails to comply therewith, shall severally, for each and every violation and noncompliance respectively, be liable to a penalty of two hundred dollars for each offense. (Ord. 1988-236 (part); prior code Ch. 24, § 87 (part))

May 16, 1988

*Public Works  
Adv.*

Be it ordered that Chapter 24 of the Zoning Ordinance of the City of Quincy as amended, be further amended in Art. VIII, by adding a new section 87: Blasting.

Section 87

1. Pre-blast Survey

- a. For all permits issued for blasting (rock excavation) in the City of Quincy, a pre-blast survey must be made by the contractor or by an approved firm in this kind of work and satisfactory to the contractor's insurance company.
- b. The pre-blast survey will include a survey of the interior and exterior of existing buildings and stone walls adjacent to the project as specified herein, before any excavation or blasting is done. Written approval must be secured from the Fire Chief, City Engineer and Building Inspector serving as the Committee on Blasting.
- c. The survey shall record all visible structural defects such as cracks, settlement and lines out of plumb.
- d. The survey data shall be recorded in a permanent manner in approved hardbound notebooks. The survey data shall include polaroid photographs showing the building constructions surveyed referenced to the notebook pages. Also a tape recording of all data pertinent to the survey shall be made. The scope and format of the record survey data shall be satisfactory to the Committee on Blasting. Before commencing any blasting or ledge excavation, copies of the survey must be on file at the offices of the Quincy City Engineer, and Quincy City Clerk, City Hall, Quincy, MA.
- e. The adjacent area requiring the pre-blasting survey is specified as all buildings and stone walls within a radius of three hundred fifty feet (350) from said blast.
- f. Provided, however, that no pre-blasting survey shall be required if blasting is within the following limits: The total charge weight per blast does not exceed five (5) pounds and the maximum weight per delay does not exceed two pounds per delay.

YEAS Cahill, Cheney, Chretien, DeCristofaro, McGrath, Nulley, Phelan, Sheets, Toland

NAYS Cahill, Cheney, Chretien, DeCristofaro, McGrath, Nulley, Phelan, Sheets, Toland

- ORDER NO. 100-11-1000  
ORDERED:
- g. If blasting is designed to excavate more than a ten (10) cubic yard area, the contractor must post a bond with the City of Quincy. The amount of said bond shall be determined by the Committee on Blasting. The Committee on Blasting will not release the bond until it is convinced that all judgments and claims have been reasonably dealt with by the contractor.
  - h. All blasting is to be supervised on site by an authorized member of the Fire Department, assigned by the Chief, and the cost of said supervision shall be the sole responsibility of the contractor.
  - i. Any person who shall violate any of the provisions of this ordinance, as determined by the Committee on Blasting, or who fails to comply therewith, shall severally, for each and every violation and noncompliance respectively, be liable to a penalty of two hundred dollars (\$200.00) for each offense.

PASSED TO BE ORDAINED OCTOBER 16, 1989

ATTEST

*John M. Gillis*  
CLERK OF COUNCIL

APPROVED

OCT 23 1989

*Francis McAuley*  
MAYOR

YEAS Cahill, Cheney, Chretien, DeCristofaro, McGrath, Nutley, Phelan, Sheets, Toland

NAYS Cahill, Cheney, Chretien, DeCristofaro, McGrath, Nutley, Phelan, Sheets, Toland

CITY OF QUINCY  
IN COUNCIL

ORDER NO.

2000-078

February 22, 2000

ORDERED:

Be it ordained by the City Council that the Revised Ordinances of the City of Quincy, 1993, as amended, be further amended by adding in Title 15 a new section, Section 15.26 entitled *City of Quincy Responsible Employer Ordinance*.

RESPONSIBLE EMPLOYER ORDINANCE

SECTION 15.26.1

All bidders and all subcontractors under the bidders for projects subject to M.G.L.A. C149, S44A(2) shall as a condition for bidding, agree in writing that they shall comply with the following:

- A. The bidder and all subcontractors under the bidder shall comply with the Quincy Responsible Employer Policy as it currently exists and as it may, from time to time, be amended.
- B. The bidder and all subcontractors under the bidder shall comply with provisions of M.G.L.A. C149 and shall pay the appropriate lawful prevailing wage rates to their employees.
- C. The bidder and all subcontractors under the bidder shall maintain or participate in a bona fide apprentice training program as defined by M.G.L.A. C23, S11H AND 11I for each apprenticeable trade or occupation represented in their workforce that is approved by the Division of Apprentice Training of the Department of Labor and Industries and shall abide by the apprentice to journeymen ratio for each trade prescribed therein in the performance of the contract.
- D. In a manner that is consistent with applicable law and regulations, any bidder and all subcontractors under the bidder awarded a contract subject to this ordinance, shall recruit workers who are residents of the City of Quincy for each apprenticeable trade or occupation represented in their workforce that is approved by the Division of Apprentice Training of the Department of Labor and Industries, and shall hire qualified residents of the City of Quincy in filling the apprentice to journeymen ratio for each trade prescribed therein in the performance of the contract.
- E. The bidder and all subcontractors under the bidder shall furnish, at their own expense, hospitalization and medical benefits at least equivalent to the hospitalization and medical benefits provided by the health and welfare plans in the applicable craft recognized by M.G.L.A. C149, S26 in establishing minimum wage rates for all their employees employed on the project.

YEAS Cahill, D'Amico, Durkin, Hanley, Harold, McCauley, McDermott, Newton, Raymondí

NAYS Cahill, D'Amico, Durkin, Hanley, Harold, McCauley, McDermott, Newton, Raymondí

CITY OF QUINCY  
IN COUNCIL

ORDER NO. 2000-078

- 2 -

February 22, 2000

ORDERED:

- F. The bidder and all subcontractors under the bidder shall maintain appropriate industrial accident insurance coverage for all the employees employed on the project in accordance with M.G.L.A. C152.
- G. The bidder and all subcontractors under the bidder shall properly classify employees as employees rather than independent contractors and shall treat said employees accordingly for purposes of workers' compensation insurance coverage, employment taxes, social security taxes and income tax withholding pursuant to M.G.L.A.C149, S148B.
- H. All bidders and all subcontractors under the bidders who are awarded contracts or who otherwise obtain contracts on projects subject to M.G.L.A.C149, S44A(2) shall comply with the provisions of the within ordinance and the City of Quincy Responsible Employer Policy for the duration of their work on the project, and an officer of each such bidder or subcontractor under the bidder shall certify under oath and in writing on a weekly basis that they are in compliance with said ordinance and/or policy.
- I. Any bidder or subcontractor under the bidder who fails to comply with any of the obligations set forth in the within ordinance and/or the City of Quincy Responsible Employer Policy shall, by vote of the City Council, be subject to one or more of the following: (A) cessation of work on the project until compliance is obtained; (B) withholding of payment due under any contract or subcontract until compliance is obtained; (C) permanent removal from any further work on the project; and (D) liquidated damages payable to the City of Quincy in the amount of 5% of the dollar value of the contract.
- J. In addition to the sanctions outlined in subparagraph I above, a general bidder or contractor shall be equally liable for the violations of its subcontractor with the exception of violations arising from work performed pursuant to subcontracts that are subject to M.G.L.A. C149, S44F. Any contractor or subcontractor who has been determined to have violated any of the obligations set forth in this ordinance shall be barred from performing any work on any future projects for six months for a first violation, for three years for a second violation, and permanently for a third violation.

YEAS Cahill, D'Amico, Durkin, Hanley, Harold, McCauley, McDermott, Newton, Raymondi

NAYS Cahill, D'Amico, Durkin, Hanley, Harold, McCauley, McDermott, Newton, Raymondi

**CITY OF QUINCY**  
IN COUNCIL

ORDFR NO. 2000-078  
ORDERED:

- 3 -

February 22, 2000

SECTION 15.26.2

The provisions of this ordinance shall not apply to: (A) construction projects when the low general bid is less than \$100,000.00; (B) work performed pursuant to subcontracts that are subject to M.G.L.A. C149, S44F and that were bid for less than \$25,000; and (C) re-bids for construction projects for which the City of Quincy receives fewer than three qualified general contract bidders in the original bid.

SECTION 15.26.3

In the event any part of this ordinance shall be held invalid, such invalidity shall not invalidate the whole ordinance but the remaining provisions of this ordinance shall not be affected thereby.

SECTION 15.26.4

All bidders and all subcontractors under the bidders shall provide documentation that they are in compliance with the provisions of this ordinance prior to the bid opening and all bidders and all subcontractors under the bidders shall complete and submit prior to the bid opening the certificate which is attached hereto and made a part of this ordinance.

SECTION 15.26.5

The bidder and all subcontractors under the bidder shall certify in writing that their employees shall be able to work in harmony with employees of all other subcontractors on the job site. "Harmony" shall be defined to mean that the presence of any subcontractor's employees shall not result in any picket line, work stoppage or any other form of labor demonstrated on the job site or labor organizations representing the trades and/or crafts of the employees on the job sites.

SECTION 15.26.6

Any bidder or subcontractor under the bidder who fails to comply with the harmony requirement outlined above shall be at the sole discretion of the awarding authority, subject to one or more of the following sanctions:

YEAS Cahill, D'Amico, Durkin, Hanley, Harold, McCauley, McDermott, Newton, Raymondi

NAYS Cahill, D'Amico, Durkin, Hanley, Harold, McCauley, McDermott, Newton, Raymondi

INTRODUCED BY WARD TWO COUNCILLOR DANIEL G. RAYMONDI  
WARD ONE COUNCILLOR GREGORY M. HANLEY

CITY OF QUINCY  
IN COUNCIL

ORDER NO.

ORDERED:

2000-078

- 4 -

February 22, 2000

- (A) Cessation of work on the project until compliance with the harmony clause is assured subject to the sole and exclusive judgement of the awarding authority;
- (B) Withholding of payment due under any contract or subcontract until compliance with the harmony clause is achieved under the sole and exclusive judgement of the awarding authority;
- (C) Permanent removal from any further work on the project;
- (D) Those costs incurred by the awarding authority or the bidder or subcontractors under the bidder to provide security which may or may not be in the form of police details, security fences, establishment of separate gates, etc., lost work days for every employee who is prevented from working on the job site by the establishment of picket lines, work stoppage or other labor demonstrations;
- (E) Liquidated damages payable to the awarding authority in the amount of 5% of the dollar value of the contract entered into by the bidder or subcontractor under the under the bidder who cannot comply with the harmony clause.

PASSED TO BE ORDAINED JUNE 5, 2000

ATTEST:

APPROVED  
JUN 05 2000  
*James A. Sheets*  
MAYOR

*Joseph Shea*  
CLERK OF COUNCIL

YEAS Cahill, D'Amico, Durkin, Hanley, Harold, McCauley, McDermott, Newton, Raymondi

NAYS Cahill, D'Amico, Durkin, Hanley, Harold, McCauley, McDermott, Newton, Raymondi

INTRODUCED BY WARD ONE COUNCILLOR GREGORY M. HANLEY  
WARD TWO COUNCILLOR DANIEL G. RAYMONDI

CITY OF QUINCY  
IN COUNCIL

ORDER NO. 2001-192

August 9, 2001

ORDERED:

Be it ordained by the City Council, that the Municipal Code is hereby amended as follows:

In Title 15 Building & Construction, Chapter 15.26 Responsible Employer Ordinance, Section 15.26.010 add the following language in line 2 after Sections 44A(2)

ADD THE FOLLOWING:

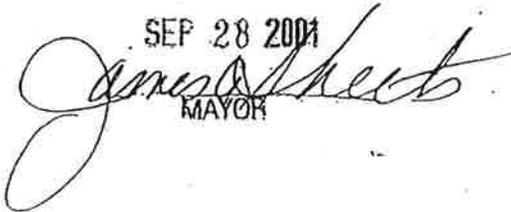
Section 15.26.01 "and M.G.L. Chapter 30, Section 39M"

PASSED TO BE ORDAINED SEPTEMBER 24, 2001

ATTEST:

  
CLERK OF COUNCIL

APPROVED

SEP 28 2001  
  
MAYOR

YEAS Cahill, D'Amico, Durkin, Hanley, Harold, McCauley, McDermott, Newton, Raymondi

NAYS Cahill, D'Amico, Durkin, Hanley, Harold, McCauley, McDermott, Newton, Raymondi

MAYOR'S  
SOLICITORS  
AUDITORS  
ASSESSORS

**CITY OF QUINCY**  
IN COUNCIL

*Purchasing*

ORDER NO.

ORDERED:

**2006-034**

January 17, 2006

**Be it ordained that the Municipal Code is amended as follows:**

**In Title 15 Building and Construction Chapter 15.26 Responsible Employer Ordinance Section 15.26.010 (H) is amended as follows:**

**In line 2 after MCLAC 149,544 add "and MGL Chapter 30, Section 39 M"**

**And**

**In Title 15 Building and Construction Chapter 15.26 Responsible Employer Ordinance Section 15.26.010 (H) is amended as follows:**

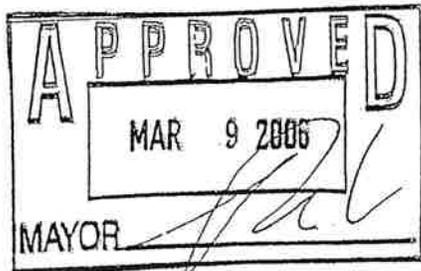
**In line 6 after "ordinance and/or policy" add**

**Said certification shall be provided to the City of Quincy Purchasing Agent and shall include wages paid and health and welfare benefits offered and accepted regarding all contractors/subcontractors who are contracted on projects subject to MGL Chapter 149, Section 44A(2) and MGLA Chapter 30, Section 39M. Said reports shall be made available to the City Council and general public upon request. Any violations of any provision of this ordinance shall be reported by the City Purchasing Agent to the City Council and follow the enforcement procedures outlines therein.**

**PASSED TO BE ORDAINED MARCH 6, 2006**

**ATTEST:**

*Joseph Shea*  
**CLERK OF COUNCIL**



**YEAS** Coughlin, Davis, Finn, Gardner, Gutro, Keenan, Kelly, McCauley, Raymond

**NAYS** Coughlin, Davis, Finn, Gardner, Gutro, Keenan, Kelly, McCauley, Raymond



CERTIFICATION CONCERNING  
RESPONSIBLE EMPLOYER ORDINANCE

It is hereby certified as a condition for bidding that the bidder and all subcontractors under the bidder shall comply with all of the provisions of the Quincy Responsible Employer Ordinance and with all amendments thereto.

\_\_\_\_\_  
Name of Bidder or Sub-contractor

By: \_\_\_\_\_  
Authorized Agent

\_\_\_\_\_  
Print or Type Name



**City of Quincy**  
**City Hall**  
**1305 Hancock Street**  
**Quincy, Massachusetts 02169**  
**Purchasing Department**



**William J. Phelan**  
 Mayor

**Laurie M. Allen**  
 Purchasing Agent  
 Phone: (617) 376-1060  
 Fax: (617) 376-1074

**CERTIFICATION PURSUANT TO RESPONSIBLE EMPLOYER ORDINANCE**  
 (Upon Award of Contract)

City Contract Number \_\_\_\_\_

Name of Contract \_\_\_\_\_

Contractor Name \_\_\_\_\_

Contractor Address \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Certification for the Week Ending \_\_\_\_\_

I hereby certify as follows:

1. The Contractor is in compliance with the Responsible Employer Ordinance of the City of Quincy.
2. The following wages have been paid by the Contractor (please list by classification and hourly rate)

<u>Classification</u>	<u>Hourly Rate</u>
_____	\$ _____
_____	\$ _____
_____	\$ _____
_____	\$ _____
_____	\$ _____
_____	\$ _____

3. The following health and welfare benefits have been offered by the Contractor and accepted: (e.g. Harvard Pilgrim, Delta Dental, Boston Mutual Life Insurance etc.)

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4. That I am duly authorized by the Contractor to sign this Certification.

Signed under the Pains and Penalties of Perjury this \_\_\_\_\_ day of \_\_\_\_\_, 200 \_\_\_\_.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Print Name

(Use additional sheets as necessary)

3

## SUPPLEMENTARY CONDITIONS – PART 1

Engineers' Joint Contract Documents Committee Document No. C-700 (2002 Edition), "Standard General Conditions of the Construction Contract" constitutes the General Conditions of this Contract. These Supplementary Conditions supplement and amend the General Conditions. All provisions of the General Conditions not specifically amended, deleted, or superseded by these Supplementary Conditions shall remain in full effect.

### ARTICLE 1 - DEFINITIONS

#### *Paragraph 1.01(A)(44) – Subcontractor*

In the definition of *Subcontractor*, revise the definition to read as follows:

An individual or entity, including filed sub-bidders, having a direct contract with CONTRACTOR or with any other Subcontractor for the performance of a part of the Work at the Site.

#### *Paragraph 1.01(A)(45) -- Substantial Completion*

In the definition of *Substantial Completion*, add the following at the end of the first sentence:

, and either (i) the Work required by the Contract has been completed except for work having a contract price of less than one percent of the then-adjusted total Contract Sum, or (ii) substantially all of the Work has been completed and opened for public use except for minor incomplete or unsatisfactory work items that do not materially impair the usefulness of the Work required by the Contract.

Insert the following additional definitions:

*Paragraph 1.01(A)(31A) Plans* - Shall have the identical definition as the term "Drawings" and may be used interchangeably in the Contract Documents.

*Paragraph 1.01(A)(32A) Proposal* - Shall have the identical definition as the term "Bid" and may be used interchangeably in the Contract Documents.

### ARTICLE 2 - PRELIMINARY MATTERS

#### Paragraph 2.01

Revise Paragraph 2.01A to read as follows:

CONTRACTOR shall deliver to the OWNER, prior to execution of the Contract, such Bonds and Insurance as CONTRACTOR may be required to furnish.

#### Paragraph 2.02

Revise Paragraph 2.02 to read as follows:

Owner shall furnish to Contractor up to five copies of the Contract Documents as are reasonably necessary for the execution of the Work. Additional copies will be furnished, upon request, at the cost of \$100.00 per set.

Paragraph 2.05

In the final line of Paragraph 2.05(A)(3), add the following after “Work:”, which will be confirmed in writing by Contractor at the time of submission.

Add a new paragraph immediately after paragraph 2.05(A)(3) of the General Conditions, which is to read as follows:

A(4). A complete listing of equipment and materials, and shall determine lead time between placing orders and delivery including normal allowances of time for processing and correcting Shop Drawings. The construction schedule shall reflect these delivery dates. All orders for long lead items shall be placed within thirty- (30) days after Effective Date of the Agreement if delivery is critical to scheduling. Failure to place orders promptly will result in full liability for liquidated damages if schedules are not met.

Revise Paragraph 2.05(C) to read as follows:

C. *Evidence of Insurance:* Before any Work at the Site is started, CONTRACTOR shall deliver to the OWNER, with copies of additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance which the OWNER or any additional insured may reasonably request) which CONTRACTOR is required to purchase and maintain in accordance with Article 5.

Paragraph 2.08

Insert new Paragraph 2.08 as follows:

2.08 *Compliance with Laws.* This Contract is subject to all Laws and Regulations of the United States of America, the Commonwealth of Massachusetts, the City of Quincy and other public authorities, and all amendments thereto, and where any requirements contained herein do not conform to or are inconsistent with such Laws and Regulations to which the Contract is subject or by which it is governed, such Laws and Regulations shall have precedence over any matters set forth herein. Statutes, regulations, and portions and summaries thereof which are set forth or referred to in the Contract Documents shall be construed to include all amendments thereto effective as of the date of issuance of the Invitation to Bid for the Contract. The Owner makes no representation as to and assumes no responsibility for the correctness or completeness of such statutory matters referred to or set forth herein.

**ARTICLE 3 - CONTRACT DOCUMENTS; INTENT, AMENDING, REUSE**

Paragraph 3.01

Add the following at the end of Paragraph 3.01(A):

The Contract Documents comprise the entire agreement between Owner and Contractor concerning the Work. The Contract Documents will be construed in accordance with the law of the Commonwealth of Massachusetts. If any term or provision of any of the Contract Documents, or the application thereof to any party or circumstance shall, to any extent, be determined to be invalid or unenforceable, the remaining provisions of the Contract Documents, or the application of such term or provision to parties or circumstances other than those as to which it is held invalid or unenforceable, shall not be affected thereby, and each term and provision of each of the Contract Documents shall be valid and shall be enforced to the fullest extent permitted by law.

Paragraph 3.03

Insert new Paragraph 3.03(B)(1)(c) after Paragraph 3.03(B)(1)(b) as follows:

c. In the event of conflicts, inconsistencies or discrepancies among the Contract Documents or within any of the Contract Documents, to the extent applicable, the better quality or greater quantity of work shall be provided without change in the Contract Price. In the event of such conflicts, inconsistencies or discrepancies which do not relate to the quality or quantity of work, the Contractor shall request instructions or interpretations from the Engineer as provided in the Contract Documents, and shall be governed by the Engineer's directions.

Paragraph 3.04

Add the following sentence at the end of Paragraph 3.04(A):

Contract Price and Contract Times (or Milestones) may only be changed by a Change Order or a Written Amendment.

**ARTICLE 4 - AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; REFERENCE POINTS**

Paragraph 4.01

Delete Paragraph 4.01(B) in its entirety.

Paragraph 4.02

In the first sentence of Paragraph 4.02(A) replace the term "Supplementary Conditions" with "Contract Documents."

Paragraph 4.03

Delete Paragraph 4.03(A) and substitute the following:

A. *Statutory Provisions Governs.*

Changes in the Work arising out of differing subsurface or latent physical conditions shall be governed by Massachusetts General Laws, Chapter 30, §39N.

Delete Paragraph 4.03(C)(1)(a) in its entirety.

Delete Paragraph 4.03(C)(2)(c) and substitute the following:

c. CONTRACTOR failed to give timely written notice as required by MGL C. 30, §39N.

Paragraph 4.04

Add the following sentence at the end of Paragraph 4.04(B)(2):

However, Owner, Engineer and Engineer's Consultants shall not be liable to Contractor for any claims, losses, or damages (including but not limited to all fees and changes of engineers, architects, attorneys,

and other professionals and all court or arbitration or other dispute resolution costs) sustained by Contractor or in connection with any other project or anticipated projects.

#### Paragraph 4.06

In the first sentence of Paragraph 4.06(A), replace the term “Supplementary Conditions” with “Contract Documents”.

Delete the second sentence of Paragraph 4.06(B) in its entirety.

Delete Paragraph 4.06(G) in its entirety.

### **ARTICLE 5 - BONDS AND INSURANCE**

#### Paragraph 5.01(C)

In the sixth line of Paragraph 5.01(C), change “20 days” to “5 days”.

#### Paragraph 5.02

Delete the first sentence of Paragraph 5.02 and substitute the following:

All Bonds and insurance required of the Contractor by the Contract Documents shall be obtained from surety or insurance companies qualified to do business under the laws of the Commonwealth of Massachusetts and acceptable to the Owner. The premiums for all Bonds are to be included in the Contract Price and paid by the Contractor. All Bonds shall be executed in the required number of counterparts and shall be submitted to the Owner for insertion into the Contract Documents prior to the execution of the Agreement. The security required by Section 29 of Chapter 149 of the General Laws shall be provided exclusively by the Bonds referred to in this Paragraph 5.02 and not by any money retained by the Owner under other provisions of the Contract Documents, such retention being solely for the benefit of the Owner.

#### Paragraph 5.04

In the second line of Paragraph 5.04(A) replace “is appropriate for the Work being performed” with “required by Paragraph 5.04(A)(7)”.

Insert new Paragraph 5.04(A)(7) as follows:

7. claims arising out of operation of Laws or Regulations for damages because of bodily injury or death of any person or for damage to property;

Delete Paragraph 5.04(B)(1) in its entirety.

Add the following new Paragraph 5.04(C) after Paragraph 5.04(B):

C. The insurance coverages to be maintained by the Contractor under this Paragraph shall include the following:

1. Workers’ compensation insurance with statutory limits in accordance with applicable state laws. (including employer’s liability insurance with a minimum limit per accident

or disease not less than \$1,000,000). The attention of the Contractor and all Subcontractors is drawn to M.G.L., Chapter 149 §34A concerning insurance requirements.

2. Commercial general liability insurance, including so-called comprehensive broad form endorsement, with limits, alone or in combination with “umbrella” excess liability insurance, not less than \$1,000,000 per occurrence and aggregate for personal or bodily injury and \$1,000,000 per occurrence and aggregate for property damage. A combined single limit per occurrence of \$3,000,000 is acceptable. The commercial general liability insurance shall include, but not necessarily be limited to, coverage for:
  - (a) Premises - operations and completed operations liability (this coverage to be maintained for no less than two (2) years after final acceptance of the Project by Owner).
  - (b) Independent contractors, covering operations of any and all Subcontractors.
  - (c) Blanket contractual liability covering all liabilities assumed under the Contract Documents, including without limitation the Contractor’s obligations to the Owner and the Engineer and their agents and employees as provided in Paragraph 6.20 of the Conditions of the Contract.
  - (d) Coverage for explosion, collapse, undermining and damage to underground utilities and property.
  - (e) Personal and advertising injury liability (\$1,000,000 limit).
  - (f) Broad form coverage for damage to property of the Owner, as well as third parties, while in the care, custody or control of the Contractor.
3. Comprehensive automobile liability insurance with limits of not less than \$1,000,000 for any person and \$1,000,000 for any one accident for bodily injury including death and \$1,000,000 for property damage covering:
  - (a) All owned vehicles.
  - (b) Hired cars and trucks.
  - (c) All other non-owned vehicles.
  - (d) Loading and unloading of any motor vehicle.

The Owner, Engineer and Engineer’s subconsultants, such other parties as may be designated by the Owner shall be named as additional insured’s in the policies of insurance and so identified on insurance binders or certificates evidencing insurance. Contractor shall deliver such insurance binders or certificates evidencing insurance (and such other evidence of insurance requested by Owner or any other additional insured) to Owner, with copies to each additional insured. All such policies shall contain provisions or endorsements necessary to assure coverage of claims by one insured against another. All required insurance policies are to be endorsed to state that the Contractor’s policies shall be primary to all other insurance available to the Owner and other specified additional insureds for liability arising out

of or resulting from the Contractor's operations under the Contract, whether such operations are by Contractor, Subcontractor, anyone directly or indirectly employed by any of them, or anyone for whose acts any of them may be liable. The Owner is to be furnished originals or certified copies of the policy or policies including all endorsements required to provide stated coverage prior to execution of the Contract by the CONTRACTOR. The purchase of insurance to satisfy the above requirements, or the furnishing of insurance binders or certificates evidencing insurance, shall not be a satisfaction of Contractor's liability under this Contract or in any way modify Contractor's indemnification of the Owner.

Paragraphs 5.05 - 5.08

Delete Paragraphs 5.05 through 5.08 in their entirety and substitute the following Paragraph 5.05:

5.05 Property Insurance

Property insurance to the full insurable value of the Work will not be provided by the Owner in the form of 100% Builder's Risk, "all risk" or open peril or special causes of loss policy. Contractor shall obtain an installation floater in the full contract amount.

Revise Paragraph 5.09 to read as follows:

A. If OWNER has any objection to the coverage afforded by or other provisions of the Bonds or insurance required to be purchased and maintained by the CONTRACTOR in accordance with Article 5 on the basis of nonconformance with the Contract Documents, the objecting party shall so notify the other party in writing within 10 days after receipt of the certificates (or other evidence requested) required by paragraph 2.05.C. CONTRACTOR shall provide OWNER such additional information in respect of insurance provided as the OWNER may reasonably request. If the CONTRACTOR does not purchase or maintain all of the Bonds and insurance required of such party by the Contract Documents, the CONTRACTOR shall notify the OWNER in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage. Without prejudice to any other right or remedy, the OWNER may elect to obtain equivalent Bonds or insurance to protect its interests at the expense of the CONTRACTOR and a Change Order shall be issued to adjust the Contract Price accordingly.

**ARTICLE 6 - CONTRACTOR'S RESPONSIBILITIES**

Paragraph 6.01(B)

Revise Paragraph 6.01(B) to read as follows:

At all times during the progress of the Work, CONTRACTOR shall assign a competent resident superintendent thereto who shall not be replaced except under extraordinary circumstances and upon prior written notice to the OWNER. The superintendent will be CONTRACTOR's representative at the Site and shall have authority to act on behalf of CONTRACTOR. All communications given to or received from the superintendent shall be binding on CONTRACTOR.

Add the following at the end of Paragraph 6.01(B):

The Contractor's superintendent shall be satisfactory to the Engineer and the Owner and shall be replaced by the Contractor upon reasonable request by the Engineer or the Owner. The Contractor's superintendent shall keep a daily log of the progress of the Work and make this accessible to the Owner at all times; a copy shall be submitted to the Owner for its records upon completion of the Work. The

Contractor shall furnish to both the Owner and Engineer the names, addresses and telephone numbers of his job superintendent, the job superintendents of all subcontractors and at least two other authorized representatives indicating where they may be contacted at times other than normal working hours in case of emergency. The Contractor's superintendent shall remain in attendance at the site, and, except for illness or other reason excusable to the Owner, shall be present at all times when Work of any kind is being done, including Work done during overtime. If absent for illness or other reason excusable to Owner, a replacement shall be named for the period of absence, such replacement having full authority and responsibility of the full-time superintendent. Upon written request by the Owner, the Contractor shall replace its Superintendent with an individual satisfactory to the Owner.

#### Paragraph 6.02

Add the following to the end of Paragraph 6.02(A):

Whenever the engineer notifies the Contractor in writing that, in his opinion, any worker on the job employed by the Contractor, or any of his Subcontractors is incompetent, unfaithful, or otherwise unsatisfactory, such workers shall be discharged from the Contract Work and shall not be employed on it except with the written consent of the Engineer.

In Paragraph 6.02(B),. delete the remainder of the first sentence after the phrase "during regular working hours," and add to following at the end thereof:

Regular working hours shall be considered to be 7:00 a.m. through 6:00 p.m., Monday through Friday. Any work performed after regular working hours, on Saturdays or Sundays, or on state and federal holidays, shall be allowed only with express written permission of Owner. Requests to work at these times must be made in writing and received by the Engineer at least three (3) days prior to date work is to begin. Not allowing work outside of regular working hours as defined herein shall not be a basis for claims against the Owner. The attention of the Contractor and all Subcontractors is drawn to M.G.L., Chapter 149 §30 and 34 concerning duration of workday.

Work within the limits of work indicated on Plan sheet C-206 entitled Broad Street Tide Gate Improvement Plan, as shown on the drawings, will be allowed between 8:00 PM and 5:00 AM, Mondays through Thursdays to accommodate work off-peak of the tide cycle, unless otherwise modified by the OWNER as noted herein.

Add the following new Paragraph 6.02(C) at the end of Paragraph 6.02(B):

C. The Contractor shall furnish labor that can work in harmony with all other elements of labor employed or to be employed in the Work. The requirements and provisions of all applicable Laws and Regulations concerning the employment of labor (including without limitation Massachusetts General Laws, Chapter 149, §§ 26-27 and §29), and minimum wage rates established in accordance with law shall be a part of and are hereby incorporated by reference in these Conditions. Copies of the minimum wage rates are included in the Contract Documents. If it becomes necessary to employ any person in a trade or occupation not classified in the minimum wage rates included in the Contract Documents, the Contractor shall notify the Owner of his intention to employ persons in such unclassified trade or occupation in sufficient time for the Owner to obtain approved minimum wage rates for such trade or occupation. Such person shall be paid at not less than such rates as shall be determined by the Department of Labor and Industries or other proper officials in accordance with law, and such approved minimum wage rates shall be retroactive to the time of the initial employment of such person in such trade or occupation. The wage rates included in the Contract Documents are minimum rates only, and the Owner will not consider any

claim for an increase in the Contract Price made by the Contractor because of payment by the Contractor of any wage rate in excess of the applicable rate contained in the Contract Documents or any increase in applicable rates. Such schedule of wage rates shall continue to be the minimum rates to be paid during the life of this Contract, and a legible copy of such schedule shall be kept posted in a conspicuous place at the site of the Work.

#### Paragraph 6.03

Amend Paragraph 6.03(A) to read as follows:

Contractor shall furnish and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities and all other facilities and incidentals necessary for the furnishing, performance, execution, testing, start-up and completion of the Work.

#### Paragraph 6.05

Delete the first paragraph under Paragraph 6.05(A) in its entirety and substitute the following:

Reference in the Specifications or Drawings to any product, material, equipment, method or process by proprietary name, manufacturer, vendor, supplier, make or catalogue number shall be interpreted as establishing a standard of quality and function. An item will be considered an “or equal” item if (1) it is at least equal in quality, durability, appearance, strength and design to the item so named or described in the Specifications; (2) it will perform at least equally the function imposed by the general design for the Work; and (3) it conforms substantially, even with deviations, to the detailed requirements for the item named or described in the Specifications (See M.G.L. Chapter 30, Section 39M (b)). The Engineer shall be the sole judge of whether any proposed substitute product, material, equipment, process or method is an “or equal” item according to this standard, and the Engineer’s decision shall be final and binding on the Contractor and any Subcontractor. After the Contract has been executed, the Owner and the Engineer will consider formal requests for the substitution of products in place of those specified only under the conditions set forth in the Specifications and these Conditions. Any additional cost, or any loss or damage arising from the substitution of any material or any method for those originally specified shall be borne by the Contractor, including, without limitation, the costs of modifying documents, additional fees of the Owner’s consultants or engineers, and the costs of data provided by Contractor in support of any proposed “or equal” or substitute item, notwithstanding approval or acceptance of such substitution by the Owner or the Engineer, unless such substitution was made at the written request or direction of the Owner or the Engineer.

Delete Paragraphs 6.05(A)(1) its entirety.

In the fourth line of Paragraph 6.05(A)(2)(a), change “Paragraph 6.05(A)(1)” to “Paragraph 6.05(A)”.

#### Paragraph 6.06

Add the following at the end of Paragraph 6.06(A):

The Contractor shall submit within ten (10) days following receipt of Notice of Award, a list of all suppliers and Subcontractors, with a description of the equipment or work they will provide.

Delete Paragraph 6.06(F) in its entirety.

Delete the second and third sentences of Paragraph 6.06(G) in their entirety.

Paragraph 6.07

Add the following at the end of Paragraph 6.07(A):

At the Owner's option, Contractor shall defend all such claims in connection with any alleged infringement of such rights.

Paragraph 6.08

Amend Paragraph 6.08 to read as follows:

The Contractor shall be responsible for obtaining all required permits and approvals relating to the construction of the project except as noted in Section 01010.

Paragraph 6.09.

Amend Paragraph 6.09(B) to read as follows:

If Contractor observes that the Specifications or Drawings are at variance with any Laws or Regulations, Contractor shall give Engineer prompt written notice thereof, and any necessary changes will be authorized by one of the methods set forth in Paragraph 3.04. If CONTRACTOR performs any Work knowing or having reason to know that it is contrary to Laws or Regulations, CONTRACTOR shall bear all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work.

Delete Paragraph 6.09(C)

Paragraph 6.10

Delete Paragraph 6.10 and substitute the following:

A Section 6(f) of Chapter 64H of the Massachusetts General Laws exempts from Massachusetts sales tax building materials and supplies to be used in the Project, and bidders shall not include in their bids any amount therefor. The words "building materials and supplies" shall include all materials and supplies consumed, employed or expended in the construction, reconstruction, alteration, remodeling or repair of any building, structure, public highway, bridge, or other such public work, as well as such materials and supplies physically incorporated therein. Said words shall also include rental charges for construction vehicles, equipment and machinery rented specifically for use on the Project site, or while being used exclusively for the transportation of materials for the Project. The number of the certificate granted by the Commissioner of Revenue for use in obtaining the exemption will be furnished to the Contractor upon request. The Contractor will not be paid for any sales taxes paid by the Contractor for which such exemption is or would have been applicable. The Contractor shall pay all sales, consumer, use and other similar taxes assessed upon the Work or portions thereof provided by the Contractor, or otherwise attributable to the Project, which are legally enacted at the time bids are received, whether or not yet effective, to which such exemption is not applicable.

Paragraph 6.11

In Paragraph 6.11(A)(2), change “negotiation” to “agreement”.

#### Paragraph 6.12

Add new paragraph 6.12(B) as follows:

The attention of the Contractor and all Subcontractors is drawn to M.G.L., Chapter 30 §39R concerning retainment of records.

#### Paragraph 6.13

Add the following at the end of Paragraph 6.13(B):

The Contractor shall have on the job and comply with the recommendations of the most recent edition of Industrial Bulletin No. 12, “Rules and Regulations for the Prevention of Accidents in Construction Operations” of the Commonwealth of Massachusetts Department of Labor and Industries, and the “Manual of Accident Prevention in Construction” of the Association of General Contractors. In the event the Contractor discovers any active utility line not disclosed in any plan or survey, he shall cease all Work in the immediate area which may affect such line, and shall promptly notify the Owner, the Engineer, and the affected utility company. The Contractor shall not restart Work without notice from and approval of the Engineer. The Owner places special emphasis on the protection of persons and existing structures, and there shall be no compromise as to the degree of protection required. The attention of the Contractor and all Subcontractors is drawn to M.G.L., Chapter 149 §44F(1)(a) regarding weather protection of property.

#### Paragraph 6.14

Add the following at the end of Paragraph 6.14:

This person shall be Contractor’s superintendent unless otherwise designated in writing by Contractor to Owner.

#### Paragraph 6.17

Add the following at the end of the first sentence of Paragraph 6.17(A):

, or for other appropriate action if so indicated in the Supplementary Conditions.

In Paragraph 6.17(A)(1)(a):

Replace the term “General Requirements” with “Section 01300 of the Contract Documents”.

Add to the end of the final sentence of Paragraph 6.17(D)(3) “or for errors or omissions in the Shop Drawings.”

Add a new Paragraph immediately following Paragraph 6.19 (C)(7) as follows:

8. Any acceptance by Owner or any failure to do so.

Add a new Paragraph immediately following Paragraph 6.19(C)(8) as follows:

C. The Contractor guarantees that the work and services to be performed under the Contract, and all workmanship, materials and equipment performed, furnished, used or installed in the construction of the same shall be free from defects and flaws, and shall be performed and furnished in strict accordance with the Drawings, Specifications, and other Contract Documents, that the strength of all parts of all manufactured equipment shall be adequate and as specified and that the performance test requirements of the Contract shall be fulfilled. This guarantee shall be for a period of one year from and after the date of completion and acceptance of the work as issued by the Engineer. If part of the work is accepted in accordance with the Contract Documents, the guarantee for that part of the work shall be for a period of one year from the date fixed for such acceptance by the Engineer.

If at any time within the said period of guarantee any part of the work requires repairing, correction or replacement, the Owner may notify the Contractor in writing to make the required repairs, correction or replacements. If the Contractor neglects to commence making such repairs, corrections or replacements to the satisfaction of the Owner within ten (10) days from the date of receipt of such notice, or having commenced fails to prosecute such work to the Owner's satisfaction, the Owner may employ other persons to make said repairs, correction or replacements, including compensation for additional professional services, shall be paid by the Contractor.

#### Paragraph 6.20

Insert the following in the second line of Paragraph 6.20(A) after the word "indemnify":

“, defend with counsel designated by the insurer accepting liability for the claim or damage or, in lieu thereof, counsel acceptable to the Owner”.

Add a new Paragraph immediately after paragraph 6.20(A) as follows:

Without limiting the generality of the preceding paragraph, the Contractor hereby specifically agrees to indemnify, defend, and hold harmless the Owner from all such claims, losses or expenses which arise out of work-related injuries of employees of the Contractor or any of its Subcontractors or suppliers of any tier. It is the Owner intention that all financial risk of jobsite injuries be borne by the Contractor, and that the Owner have no financial responsibility, direct or indirect, for any such claims.

Add the following at the end of Paragraph 6.20(C)(2)

“, provided however, that if the claim, cost, loss or damage referred to in this Paragraph 6.20 results from failure of the Engineer to discover a condition or object which is underground or otherwise not reasonably observable by the Engineer, and if said failure to discover either was or should have been apparent to the Contractor in that the said condition or object is omitted from the Engineer's maps, drawings, opinions, reports, surveys, change orders, designs or specifications, then the Contractor shall be liable for indemnification of the Engineer and Owner under Paragraph 6.20 for claims, costs, losses and damages resulting from said failure to discover unless Contractor shall have notified Engineer of the existence and location of such condition or object prior to the occurrence of such claims, costs, losses and damages and in sufficient time for Engineer to have made provisions therefor.”

#### **ARTICLE 7 – OTHER WORK**

Add a new Paragraph immediately after Paragraph 7.02 as follows:

Owner shall perform other work related to the Project at the site by his own forces or let other direct contracts to have said work performed concurrently with Work under this Contract.

## **ARTICLE 8 - OWNER'S RESPONSIBILITIES**

### **Paragraph 8.02**

Revise Paragraph 8.02(A) as follows:

In case of termination of the employment of ENGINEER, OWNER shall appoint a new engineer whose status under the Contract Documents shall be that of the former ENGINEER.

### **Paragraph 8.06**

Delete Paragraph 8.06.

## **ARTICLE 9 - ENGINEER'S STATUS DURING CONSTRUCTION**

### **Paragraph 9.03**

In Paragraph 9.03(A) insert "and duties" after "responsibilities".

Add the following sentence to the end of Paragraph 9.03:

Unless otherwise agreed, the responsibilities and duties and authority and limitations of the Resident Project Representative shall be contained in "Duties, Responsibilities and Limitations of Authority of Resident Project Representative," EJCDC Document No. 1910-1-A [(1983) edition]. Additionally, Owner may designate a Resident Project Representative or Resident Engineer to observe the performance of the Work. It shall be the duty of the Resident Project Representative to observe the Work and render decisions as to its acceptability. The responsibilities and limitations of authority of the Resident Project Representative shall be the same as set forth in Article 9 of the General Conditions.

### **Paragraph 9.08**

Add the following new Paragraph 9.08(E) as follows:

Pursuant to Massachusetts General Laws, Chapter 30, §39P, the Engineer will render decisions on interpretation of the Specifications, approval of equipment, material or any other approval, or progress of the Work promptly and, in any event, no later than thirty (30) days after the written submission for decision; but if such decision requires extended investigation and study, the Engineer shall, within thirty (30) days after the receipt of the submission, give the party making the submission written notice of the reasons why the decision cannot be made within the thirty-day period and the date by which the decision will be made. Either party to the Contract may make written submission to the Engineer for such decisions.

## **ARTICLE 10 - CHANGES IN THE WORK; CLAIMS**

Add the following new paragraph 10.02(B) as follows:

The attention of the Contractor and all Subcontractors is drawn to M.G.L., Chapter 30 §39I concerning deviations from plans and specifications.

Revise Paragraph 10.05(B) as follows:

B. *Notice:* The CONTRACTOR shall deliver written notice stating the general nature of each Claim, dispute, or other matter to ENGINEER and the OWNER to the Contract promptly (but in no event later than 14 days) after the start of the event giving rise thereto. CONTRACTOR's failure to comply with this notice requirement shall constitute a waiver of the Claim. Notice of the amount or extent of the Claim, dispute, or other matter with supporting data shall be delivered to the ENGINEER and the OWNER to the Contract within 30 days after the start of such event (unless ENGINEER allows additional time for claimant to submit additional or more accurate data in support of such Claim, dispute, or other matter). A Claim for an adjustment in Contract Price shall be prepared in accordance with the provisions of paragraph 12.01.B. A Claim for an adjustment in Contract Time shall be prepared in accordance with the provisions of paragraph 12.02.B. Each Claim shall be accompanied by CONTRACTOR's written statement that the adjustment claimed is the entire adjustment to which the CONTRACTOR believes it is entitled as a result of said event.

## **ARTICLE 11 – COST OF THE WORK**

### **Paragraph 11.03**

Delete Subparagraphs 11.0.3(D)(1), (2) and (3), and substitute the following:

11.0.3(D) When the accepted quantity of any item of Unit Price Work performed by the Contractor differs from the estimated quantity of such item in the Contractor's bid schedule, payment shall be made at the original Contract Unit Price for the accepted quantity of work done. No adjustment or allowance will be made for any increased expenses, loss of expected reimbursement or loss of anticipated profits suffered or claimed by the Contractor resulting either directly or indirectly from such increased or decreased quantities, or from unbalanced allocation among the Contract items of overhead expense on the part of the bidder and subsequent loss of expected reimbursements therefor, or from any other cause.

## **ARTICLE 12 - CHANGE OF CONTRACT PRICE; CHANGE OF CONTRACT TIMES**

### **Paragraph 12.01**

In Paragraph 12.01(C)(2)(a) change "15" to "10".

In Paragraph 12.01(C)(2)(c) change "15" to "10".

In Paragraph 12.01(C)(2)(e) change "five" to "ten".

Delete Paragraphs 12.02 through 12.03 and substitute the following:

12.02 *Change of Contract Times.* If the Contractor is delayed in the commencement, prosecution or completion of the Work by any act or omission of the Owner or the Engineer, or an employee of either, or a separate contractor employed by the Owner (except when the contract with such separate contractor has been assigned to the Contractor), or by changes in the Work duly ordered by the Owner, or by strikes, acts of war or terrorism, unusually severe weather not anticipatable and preventing any continuation of operations by the Contractor, unavoidable casualties, or such other unforeseeable causes as are beyond the control of the Contractor and are not caused in whole or in part by any fault or negligence of the Contractor (other than delays occasioned by financial difficulties of the Contractor), then, except as provided in Paragraph 12.04 in the case of certain delays caused by the Owner, the

Contractor's sole remedy shall be that the Contract Time (or Milestone) shall be extended by Change Order for such reasonable period of time, if any, as the Engineer may determine is required due to the nature of the delay, all subject to the provisions of this Article 12, and the Contractor shall not be entitled to claim damages or any increase in the Contract Price on account of such delay. The procedures set forth in, and all other provisions contained in, this Article 12 are in addition to the provisions of the Contract Documents relating to procedures for Change Orders.

12.03 *Notice.* The Contractor shall notify the Engineer as soon as possible of any cause that may delay the Work. The Contractor shall give written notice to the Engineer within ten (10) days after the time that he knows or should know of any cause which will result (or has resulted) in delay for which he claims or intends to claim an extension of the Contract Time (or Milestone) (including those causes which the Owner or the Engineer is responsible for or has knowledge of). Any such written notice shall (1) state that an extension is claimed; (2) identify the cause of delay; and (3) describe as fully as practicable at the time the nature and expected duration of the delay and its effect on the various portions of the Work. The submission of such written notice within the time period provided above shall be a condition precedent to any extension of the Contract Time (or Milestone). Failure to submit such written notice shall constitute a waiver of such extension of the Contract Time (or milestone).

12.04 *Statutory Provisions.* The following clauses (a) and (b) of this Paragraph 12.3 are included herein pursuant to requirements of Massachusetts General Laws, Chapter 30, §390. In the event that suspension, delay, interruption or failure to act of the Owner increases the cost of performance to any Subcontractor, the Subcontractor shall have the same rights against the Contractor for payment for an increase in the cost of his performance as provisions (a) and (b) give the Contractor against the Owner, but nothing in provisions (a) and (b) shall in any way change, modify or alter any other rights which the Contractor or the Subcontractor may have against each other.

- (a) The Owner may order the Contractor in writing to suspend, delay, or interrupt all or any part of the Work for such period of time as it may determine to be appropriate for the convenience of the Owner; provided, however, that if there is a suspension, delay or interruption for fifteen days or more or due to a failure of the Owner to act within the time specified in this Contract, the Owner shall make an adjustment in the Contract Price for any increase in the cost of performance of this Contract but shall not include any profit to the Contractor on such increase; and provided further, that the Owner shall not make any adjustment in the Contract Price under this provision for any suspension, delay, interruption or failure to act to the extent that such is due to any cause for which this Contract provides for an equitable adjustment of the Contract Price under any other contract provisions.
- (b) The Contractor must submit the amount of a claim under provision (a) to the Owner in writing as soon as practicable after the end of the suspension, delay, interruption or failure to act and, in any event, not later than the date of final payment under this Contract and, except for costs due to a suspension order, the Owner shall not approve any costs in the claim incurred more than twenty (20) days before the Contractor notified the Owner in writing of the act or failure to act involved in the claim.

## **ARTICLE 13 - TESTS AND INSPECTIONS; CORRECTION, ETC.**

### **Paragraph 13.01**

Delete Paragraph 13.01 and substitute the following:

13.01 *Defective Work*. Contractor warrants and guarantees to Owner and Engineer that all Work will be in accordance with the Contract Documents and will not be defective. Prompt notice of all defective work of which Owner or Engineer has actual knowledge shall be given to Contractor. All defective work may be rejected, corrected or accepted as provided in this Article 13. The Contractor shall obtain and preserve for the benefit of the Owner manufacturer's warranties on materials incorporated into the Work, and the Contractor shall prepare and execute a written guarantee and warranty applicable to all phases of the Work in accordance with the provisions of this Paragraph 13.01 and all other applicable provisions of the Contract Documents pertaining to warranties and guarantees, and shall also secure and pass through to the Owner written guarantees and warranties prepared in a similar manner from each Subcontractor engaged in the performance of the Work and, prior to Substantial Completion, shall deliver two (2) sets of all such guarantees and warranties to the Engineer for review. All materials, equipment and supplies requiring replacement during any guarantee period specified in the Contract Documents shall be subject to a supplementary guarantee and warranty extending the guarantee period to cover all such items for the full guarantee period specified, beginning as of the date of acceptance of each such replacement item or element of work. The warranty and guarantee provisions of this Paragraph 13.01 shall be in addition to and not in limitation of any other warranties, guarantees or remedies allowed by law or the Contract Documents.

Paragraph 13.02

Add the following after Paragraph 13.02:

13.02(B). Inspection by State and Federal Officials

Representatives of the State and Federal Government shall have access to the Work wherever it is in preparation or progress. The Contractor shall provide facilities for access and inspection.

Paragraph 13.03

Add the following at the end of Paragraph 13.03(A):

Contractor shall furnish written information to Engineer stating the original sources of supply of all materials procured or manufactured away from the actual site of the Work. In order to ensure a proper time sequence for required inspection and approval, this information shall be furnished at least two (2) weeks (or as otherwise directed by Engineer) in advance of the incorporation in the Work of any such materials.

Add as new Subparagraph 13.03(B)(4) the following :

4. and; the costs of tests, inspections and approvals related to remedial operations performed to correct defective Work shall be borne by Contractor.

Insert at the end of Paragraph 13.03(C) the following:

All inspections, tests or approvals other than those required by Laws and Regulations of any public body having jurisdiction shall be performed by organizations acceptable to Owner, Contractor and Engineer.

In the first line of Paragraph 13.03(E), change "or" to "including".

Revise Paragraph 13.03(F) to read as follows:

F. Uncovering Work as provided in paragraph 13.03E shall be at CONTRACTOR's expense.

Insert new Paragraph 13.03(G) as follows:

G. Neither observations by Engineer nor inspections, tests or approvals by others shall relieve Contractor from Contractor's obligations to perform the work in accordance with the Contract Documents.

#### Paragraph 13.07

At the end of Paragraph 13.07(B) add the following:

Or may be deducted from amounts otherwise due the CONTRACTOR.

At the end of Paragraph 13.07(D) add the following:

Or may be deducted from amounts otherwise due the Contractor, and the terms of this Paragraph 13.07 will continue to apply.

#### Paragraph 13.09

Revise paragraph 13.09(A) to read as follows:

A. If CONTRACTOR fails after written notice from ENGINEER or OWNER to correct defective Work or to remove and replace rejected Work as required by ENGINEER in accordance with paragraph 13.06.A, or if CONTRACTOR fails to perform the Work in accordance with the Contract Documents, or if CONTRACTOR fails to comply with any other provision of the Contract Documents, OWNER may, immediately, correct and remedy any such deficiency.

### **ARTICLE 14 - PAYMENTS TO CONTRACTOR AND COMPLETION**

#### Paragraph 14.02

Insert the following at the end of the first sentence of Paragraph 14.02(A)(1):

“, or by the Owner or the Engineer, including, without limitation, evidence of payment by Contractor for all materials and equipment included in such Application for Payment.”

Add the following new Paragraph 14.02(A)(4) after Paragraph 14.02(A)(3):

Payments will be made in accordance with Massachusetts General Laws, Chapter 30, §39K. The attention of the Contractor and all Subcontractors is drawn to M.G.L., Chapter 30 §39F(a)-(i) concerning Contractor's payment to Subcontractors and Owner's obligations in regard to Subcontractors' payment. The attention of the Contractor and all Subcontractors is drawn to Massachusetts General Laws, Chapter 266, §§67A, 67B and 67C, and Chapter 93, §9B, concerning penalties for false or fraudulent claims, representations and records.

Add the following to the end of Paragraph 14.02(B)(1):

The Contractor's sole remedy for the Engineer's delay in approving a progress payment or the Owner's delay in paying the Contractor shall be the payment of interest as provided in Massachusetts General Laws, Chapter 30, §§39F.

Add the following to the end of Paragraph 14.02(B)(4)(e):

Except to the extent otherwise provided in the Contract Documents.

Delete Paragraph 14.02(C)(1) and replace with the following:

Fifteen (15) days after presentation of the Application for Payment to Owner with Engineer's recommendation, the amount recommended will (subject to the provisions of Paragraph 14.02(D)) become due, and when due will be paid by Owner to Contractor.

In the fourth line of Paragraph 14.02(D)(1)(b), add the following:

and provides an indemnity satisfactory to Owner for all claims, costs, losses and damages arising out of the Liens,

Delete Paragraph 14.02(D)(3)

#### Paragraph 14.05

Add Paragraph 14.05(A)(5) as follows:

3. Owner may at any time request Contractor in writing to permit Owner to take over operation of any such part of the Work although it is not substantially complete. A copy of such request will be sent to Engineer and, within a reasonable time thereafter, Owner, Contractor and Engineer shall make an inspection of that part of the Work to determine its status of completion and will prepare a list of the items remaining to be completed or corrected thereon before final payment. If Contractor does not object in writing to Owner and Engineer that such part of the Work is not ready for separate operation by Owner, Engineer will finalize the list of items to be completed or corrected and will deliver such list to Owner and Contractor together with a written recommendation as to the division of responsibilities pending final payment between Owner and Contractor with respect to security, operation, safety, maintenance, utilities, insurance, warranties and guarantees for that part of the Work which will become binding upon Owner and Contractor at the time when Owner takes over such operation (unless they shall have otherwise agreed in writing and so informed Engineer). During such operation and prior to Substantial Completion of such part of the Work, Owner shall allow Contractor reasonable access to complete or correct items on said list and to complete other related Work.

#### Paragraph 14.07

In the tenth line of Paragraph 14.07(A)(1), insert the following after "documents,":

and Engineer has indicated that the Work is acceptable (subject to the provisions of Paragraph 14.09),

Revise Paragraph 14.07(C) to read as follows:

1. Payment under this paragraph shall be made in the time specified by MGL C. 30, § 39K.

#### Paragraph 14.10

Add Paragraph 14.10 as follows:

14.10 *Contractor's Continuing Obligation.* Contractor's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. Neither: (i) recommendation of any progress of final payment by Engineer, (ii) the issuance of a certificate of Substantial Completion, (iii) any payment by Owner to Contractor under the Contract Documents, (iv) any use or occupancy of the Work or any part thereof by Owner, (v) any act of acceptance by Owner or any failure to do so, (vi) any review and approval of a Shop Drawing or sample submission, (vii) the issuance of a notice of acceptability by Engineer pursuant to Paragraph 14.07, nor (viii) any correction of defective Work by Owner will constitute an acceptance of Work not in accordance with the Contract Documents, or a release of Contractor's obligation to perform the Work in accordance with the Contract Documents (except as provided in Paragraph 14.09).

## **ARTICLE 15 - SUSPENSION OF WORK AND TERMINATION**

### **Paragraph 15.01**

Delete Paragraph 15.01(A) in its entirety and substitute the following:

Owner may, at any time and without cause order the Contractor in writing to suspend, delay, or interrupt all or any part of the work for such period of time as it may determine to be appropriate for the convenience of the Owner; provided, however, that if there is a suspension, delay or interruption for fifteen days or more or due to a failure of the Owner to act within the time specified in this Contract, the Owner shall make an adjustment in the contract price for any increase in the cost of performance of this Contract but shall not include any profit to the general contractor on such increase; and provided further, that the Owner shall not make any adjustment in the contract price under this provision for any suspension, delay, interruption or failure to act to the extent that such is due to any cause for which this Contract provides for an equitable adjustment of the contract price under any other Contract provision.

### **Paragraph 15.02**

In Paragraph 15.02(A)(1) line one, delete the word "persistent".

Insert the following after Subparagraph 15.02(A)(4) as Subparagraphs 15.02(A)(5) through 15.02(A)(9):

5. if Contractor commences a voluntary case under any chapter of the Bankruptcy Code (Title 11, United States Code), as now or hereafter in effect, or if Contractor takes any equivalent or similar action by filing a petition or otherwise under any other federal or state law in effect at such time relating to the bankruptcy or insolvency; or

6. if a petition is filed against Contractor under any chapter of the Bankruptcy Code as now or hereafter in effect at the time of filing, or if a petition is filed seeking any such equivalent or similar relief against Contractor under any other federal or state law in effect at the time relating to bankruptcy or insolvency; or

7. if Contractor makes a general assignment for the benefit of creditors; or

8. if a trustee, receiver, custodian or agent of Contractor is appointed under applicable law or under contract, whose appointment or authority to take charge of property of Contractor is for the

purpose of enforcing a Lien against such property or for the purpose of general administration of such property for the benefit of Contractor's creditors; or

9. if Contractor admits in writing an inability to pay its debts generally as they become due.

#### Paragraph 15.03

In the third line of Paragraph 15.03(A), insert "abandon the Work and" after "elect to".

In the second line of Paragraph 15.03(A)(3), insert the word "reasonable" after the word "all".

#### Paragraph 15.04

Delete Paragraph 15.04 in its entirety.

### **ARTICLE 16 - DISPUTE RESOLUTION**

Delete Paragraph 16.01 in its entirety and replace with the following:

16.01 All claims, disputes or other matters in controversy between the Contractor and the Owner relating to the execution and progress of the Work or the interpretation of the Contract Documents, which cannot be resolved by agreement between them, shall be referred to the Engineer in writing, with a copy to the other party, for determination. The Engineer shall afford both parties a reasonable opportunity to present evidence in support of their respective positions. The Engineer shall render his decision in writing to each of the parties within a reasonable time.

16.02 No such claim, dispute or other matter shall constitute grounds for the Contractor to delay progress of the Work, and the Contractor shall carry on the Work and maintain its progress during consideration of any such claim, dispute or other matter by the Engineer. The decision of the Engineer with respect to any and all such claims, disputes or other matters in questions shall be final and conclusive, subject to the provisions of Paragraph 16.03 below.

16.03 The decision of the Engineer on any such claim, dispute or other matter in question shall be final and binding upon the Owner and the Contractor unless the Owner or the Contractor gives written notice to the other and to the Engineer of its objection to such decision within ten (10) days after receipt by such aggrieved party of the Engineer's decision.

16.04 In the event that either party is aggrieved by the decision of the ENGINEER, the dispute resolution procedures set forth below shall be followed:

A. The OWNER and CONTRACTOR intend to endeavor to resolve claims, disputes and other matters in question between them by negotiation and mediation which, unless the parties mutually agree otherwise, shall be in accordance with the Construction Industry Mediation Rules of the American Arbitration Association currently in effect. Request for mediation shall be filed in writing with the other party to this Contract and with the American Arbitration Association. Under no circumstances shall the Contractor have the right to stop the performance of the Work pending the resolution of a dispute between the parties.

B. The parties shall share the mediator's fee and any filing fees equally. The mediation shall be held in Boston, Massachusetts, unless another location is mutually agreed upon. Agreements reached in mediation shall be enforceable as settlement agreements in any Court having jurisdiction thereof.

C. If negotiation or mediation fail to bring about resolution, then, at the OWNER's sole discretion, any claim, dispute or other matter in question arising out of or related to this Contract shall be subject to arbitration.

D. If the OWNER in its sole discretion elects to arbitrate, such arbitration shall be in accordance with the Construction Industry Arbitration Rules of the American Arbitration Association currently in effect. The demand for arbitration shall be filed in writing with the other party to this Contract and with the American Arbitration Association.

E. A demand for arbitration shall be made within reasonable time after the claim, dispute or other matter in question has arisen. In no event shall the demand for arbitration be made after the date when institution of legal or equitable proceedings based on such claim, dispute or other matter in question would be barred by the applicable statute of limitations.

F. The award rendered by the arbitrator or arbitrators shall be final, and judgment may be entered upon it in accordance with the applicable law in any court having jurisdiction thereof.

G. Arbitration, under this Contract, shall be consolidated with the arbitration proceedings between other parties if such arbitration proceedings arise out of the same transaction or relate to the same subject matter. Consolidation shall be by order of the arbitrator(s) in any pending case, or if the arbitrator(s) fail to make an order, a party may apply to a court of competent jurisdiction for such order. Any arbitration proceeding shall take place in Boston, Massachusetts.

H. The CONTRACTOR will require each of its subcontractors to have a similar arbitration clause in their respective subcontract. The foregoing agreement to arbitrate and other agreements to arbitrate with an additional person or entity shall be specifically enforceable in accordance with applicable law in any court having jurisdiction thereof.

I. If the OWNER in its sole discretion declines to arbitrate, such claims, disputes and other matters shall be decided by a court of the Commonwealth of Massachusetts having jurisdiction thereof. This Contract shall be governed by the laws of the Commonwealth of Massachusetts.

J. Notwithstanding any provision contained in this Article or elsewhere in the Contract Documents, the OWNER reserves the following rights in connection with claims and disputes between the OWNER and the CONTRACTOR:

1. The right to institute legal action against the CONTRACTOR in any Court of competent jurisdiction in lieu of demanding arbitration pursuant to this Article, in which case the dispute or disputes which are the subject of such action shall be decided by such court, and not by arbitration.

2. The right to obtain from any Court of competent jurisdiction a stay of any arbitration instituted by the CONTRACTOR, provided that the application for such stay is made before the appointment of the neutral arbitrator in such arbitration, in which case the dispute or disputes which are the subject of such arbitration shall be decided by such court, and not by arbitration.

3. The right to require the CONTRACTOR to join as a party in any arbitration between the OWNER and the ENGINEER relating to the Project, in which case the CONTRACTOR agrees to be bound by the decision of the arbitrator or arbitrators in such arbitration.

## **SUPPLEMENTARY CONDITIONS – PART II**

### Massachusetts Statutory Provisions For Public Construction Building Contracts

The following are statutory citations governing public construction building contracts in the Commonwealth of Massachusetts. Any other provisions required by statute to be included herein shall be deemed to be so included. In addition, the parties recognize that other rights, duties, and obligations with respect to public construction building contracts are provided for by statute, notwithstanding the fact that they are not provided for in the Contract Documents. The term, “Awarding Authority” referred to in the statutes shall mean “Owner” in the Contract Documents.

In case of conflict between:

\*The provisions of these Supplementary Conditions-Part II – Massachusetts Statutory Provisions For Public Construction Building Contracts (hereinafter “Supp. Cond. Of MA Statutes”) and

\*other provisions in the Contract Documents,

the provisions of these Supp. Cond. of MA Statutes shall govern.

In case of conflict between:

\*The provisions of these Supp. Cond. of MA Statutes and

\*The provisions of any applicable statute,

the statutory provisions shall govern.

### STATUTORY CITATIONS:

1. Massachusetts General Laws, Chapter 30, §39F.
2. Massachusetts General Laws, Chapter 30, §39H.
3. Massachusetts General Laws, Chapter 30, §39I.
4. Massachusetts General Laws, Chapter 30, §39J.
5. Massachusetts General Laws, Chapter 30, §39K.
6. Massachusetts General Laws, Chapter 30, §39L.
7. Massachusetts General Laws, Chapter 30, §39M(b).
8. Massachusetts General Laws, Chapter 30, §39N.
9. Massachusetts General Laws, Chapter 30, §39O.
10. Massachusetts General Laws, Chapter 30, §39P.

11. Massachusetts General Laws, Chapter 30, §39R.
12. Massachusetts General Laws, Chapter 149, §25-27.
13. Massachusetts General Laws, Chapter 149, §29, 30, 34, 34A, 34B.
14. Massachusetts General Laws, Chapter 149, §44F.
15. Massachusetts General Laws, Chapter 149, §129A.
16. Massachusetts General Laws, Chapter 149, §148.

### **EXCERPTS FROM MASSACHUSETTS STATUTES**

1. Particular attention is directed to certain stipulations of Chapter 149 of the General Laws of Massachusetts as amended to date as follows which apply to this contract:

**Section 25.** “Every employee in public work shall lodge, board and trade where and with whom he elects; and no person or his agents or employees under contract with the Commonwealth, a county, city or town, or with a department, board, commission or officer acting therefore, for the doing of public work shall directly or indirectly require, as a condition of employment therein, that the employee shall lodge, board or trade at a particular place or with a particular person. This section shall be made a part of the contract for such employment.

**Section 26.** “In the employment of mechanics, teamsters, chauffeurs and laborers in the construction of public works by the Commonwealth, or by a county, city, town or district, or by persons contracting or subcontracting for such works, preference shall first be given to citizens of the Commonwealth who have been residents of the Commonwealth for at least six months at the commencement of their employment who are male veterans as defined in clause forty-third of section seven of chapter four, and who are qualified to perform the work to which the employment relates; and secondly, to citizens of the Commonwealth generally who have been residents of the Commonwealth for at least six months at the commencement of their employment, and if they cannot be obtained in sufficient numbers, then to citizens of the United States, and every contract for such work shall contain a provision to this effect...”

**Section 34.** “Every contract, except for the purchase of material or supplies, involving the employment of laborers, workmen, mechanics, foremen or inspectors, to which the Commonwealth or any county or any town, subject to section thirty, is a party, shall contain a stipulation that no laborer workman, mechanic, foreman or inspector working within the Commonwealth in the employ of the CONTRACTOR, Subcontractor or other persons doing or contracting to do the whole or a part of the work contemplated by the Contract, shall be required or permitted to work more than eight hours in any one day or more than forty-eight hours in any one week, except in cases of emergency, or, in case any town subject to section thirty-one is a party to such a contract, more than eight hours in any one day except as aforesaid...”

**Section 34A.** “Every contract for the construction, alteration, maintenance, repair or demolition of, or addition to, any public building or other public works for the Commonwealth or any political subdivision thereof shall contain stipulations requiring that the CONTRACTOR shall, before commencing performance of such contract, provide by insurance for the payment of compensation and the furnishing of other benefits under chapter one hundred and fifty-two to all

persons to be employed under the contract, and that the CONTRACTOR shall continue such insurance in full force and effect during the term of the contract. No officer or agent contracting in behalf of the Commonwealth or any political subdivision thereof shall award such a contract until he has been furnished with sufficient proof of compliance with the aforementioned stipulations. Failure to provide and continue in force such insurance as aforesaid shall be deemed a material breach of the contract and shall operate as an immediate termination thereof. No cancellation of such insurance, whether by the insurer or by the insured, shall be valid unless written notice thereof is given by the party proposed cancellation to the other party and to the officer or agent who awarded the contract at least fifteen days prior to the intended effected date thereof, which date shall be expressed in said notice. Notice of cancellation sent by the party proposing cancellation by registered mail, postage prepaid, with a return receipt of the addressee requested, shall be sufficient notice..."

**Section 34B.** "Every contract for the construction, alteration, maintenance, repair or demolition of, or addition to, any public works for the Commonwealth or any political subdivision thereof shall contain stipulations requiring that the CONTRACTOR shall pay to any reserve police officer employed by him in any city or town the prevailing rate of wage paid to regular police officers in such city or town."

**Section 44F.** (1) (a) Every contract subject to Chapter 149 section forty-four A shall include specifications and, if deemed necessary or convenient by the awarding authority, plans, detailing all labor and materials to be furnished thereunder. Such specifications shall have a separate section for each of the following classes of work if in the estimate of the awarding authority such class of work will exceed ten thousand dollars: (a) roofing and flashing; (b) metal windows; (c) waterproofing, damp-proofing and caulking; (d) miscellaneous and ornamental iron; (e) lathing and plastering; (f) acoustical tile; (g) marble; (h) tile; (i) terrazzo; (j) resilient floors; (k) glass and glazing; (l) painting; (m) plumbing; (n) heating, ventilating and air-conditioning; (o) electrical work, including direct electrical radiation for heating; (p) elevators; (q) masonry work; and (r) any other class of work for which the awarding authority deems it necessary or convenient to receive sub-bids, provided that the awarding authority may, in addition, receive a combined sub-bid on the marble, tile and terrazzo work, but in that event, the marble, tile and terrazzo work shall each be a class of work for which the sub-bidder must list the information in a clearly designated place on the bid form for that purpose. Each separate section in the specifications prescribed or provided for by this paragraph shall state the time limit for filing sub-bids with the awarding authority, shall specify by number each sheet of plans showing work to be done by the subcontractor under such section, and shall require the subcontractor to install all materials to be furnished by him under such section other than materials which in the opinion of the awarding authority it is not customary under then current trade practices for such subcontractor to install and the installation of which is expressly required by another section of the specifications. Each class of work set forth in a separate section of the specifications pursuant to this section shall be a sub-trade designated in the appropriate category of the general bid form and shall be the matter of sub-contract made on the basis of sub-bids in accordance with the procedure set forth in sections forty-four F(1)--(5).

Each separate section of the specifications required by the provisions of this section shall contain a paragraph describing by class of work and by reference to paragraph numbers in that section, each class of work, if any, requiring labor and materials which, in the opinion of the awarding authority based upon an investigation of the work involved, is customarily performed in that sub-trade under subcontract with a sub-bidder for that sub-trade, and which is estimated by the

awarding authority to cost in excess of ten thousand dollars, and only each class of work so described shall be a class of work for which sub-bidder for that sub-trade must list the information required in the appropriate place designated on the bid form for that purpose.

Every contract subject to Chapter 149 section forty-four A shall include specifications for the installation of weather protection and shall require that the general contractor shall install the same and that he shall furnish adequate heat in the area so protected during the months of November through March. Standards for such specifications shall be established by the commissioner of planning and operations in the executive office for administration and finance.

**Section 44G.** "(A) "Allowance" as used herein means a sum of money covering one or more items of labor or labor and materials which is designated in bid documents and which general bidders are required to use in computing their bids. The use of such allowances shall be prohibited in the award of any contract subject to the provisions of section forty-four A. Whenever the ENGINEER is unable to supply specifications for any item prior to the solicitation of bids, such item shall not be included in any contract subject to the provisions of section forty-four A. The Awarding Authority shall solicit bids for every such item separately pursuant to the provisions of section forty-four A after specifications for that item are prepared.

(B) Every alternate contained in the Form for General Bids shall be listed in a numerical sequence in order of priority. When the Awarding Authority decides to consider alternates in determining the lowest eligible and responsible bidder, the awarding authority shall consider the alternates in descending numerical sequence, such that no single alternate shall be considered unless every alternate preceding it on the list has been added to or subtracted from the base bid price.

(C) The use of options other than alternates in bid documents or bid forms subject to section forty-four A shall be prohibited under all circumstances.

(D) Every contract subject to section forty-four A shall include specifications for the installation of weather protection and shall require that the CONTRACTOR shall install the same and that he shall furnish adequate heat in the area so protected during the months of November through March. Standards for such specifications shall be established by the commissioner or his designee.

**Section 44J.** "(1) No public agency or authority of the Commonwealth or any political subdivision thereof shall award any contract for which competitive bids are required pursuant to section forty-four A of this chapter or section thirty-nine M of chapter thirty, or for which competitive proposals are required pursuant to subsection (4) of section forty-four E of this chapter or section eleven C of chapter twenty-five A, unless a notice inviting bids or proposals therefor shall have been posted no less than one week prior to the time specified in such notice for the receipt of said bids or proposals in a conspicuous place in or near the offices of the awarding authority, and shall have remained posted until the time so specified, and unless such notice shall also have been published at least once not less than two weeks prior to the time so specified in the central register published by the secretary of state pursuant to section twenty A of chapter nine and in a newspaper of general circulation in the locality of the proposed project. Said notice shall also be published at such other times and in such other newspapers or trade periodicals as the commissioner of capital planning and operations may require, having regard to the locality of the work involved.

"(2) Said notice shall specify the time and place where plans and specifications of the proposed work may be had; the time and place of submission of general bids; and the time and place for opening of the general bids. For contracts subject to the provisions of sections forty-four A to H, inclusive, of this chapter, said notice shall also specify the time and place for submission of filed sub-bids, where required pursuant to section forty-four F; and the time and place for opening of said filed sub-bids.

"Said notice shall also provide sufficient facts concerning the nature and scope of such project, the type and elements of construction, and such other information as will assist applicants in deciding to bid on such contract.

"(3) No contract or preliminary plans and specifications shall be split or divided for the purpose of evading the provisions of this section.

"(4) General bids and filed sub-bids for any contract subject to this section shall be in writing and shall be opened in public at the time and place specified in the posted or published notice, and after being so opened shall be open to public inspection.

"(5) The provisions of this section shall not apply to any transaction between the Commonwealth and any public service corporation.

"(6) The provisions of this section may be waived in cases of extreme emergency involving the health and safety of the people and their property, upon the written approval of said commissioner. The written approval shall contain a description of the circumstances and the reasons for the commissioner's determination.

"(7) Whoever violates any provision of this section shall be punished by a fine of not more than ten thousand dollars or by imprisonment in the state prison for not more than three years or in a jail or house of correction for not more than two and one-half years, or by both said fine and imprisonment; and in the event of final conviction, said person shall be incapable of holding any office of honor, trust or profit under the Commonwealth or under any county, district of municipal agency.

"Each and every person who shall cause or conspire to cause any contract or preliminary plans and specifications to be split or divided for the purpose of evading the provisions of this section shall forfeit and pay to the Commonwealth, a political subdivision thereof or other awarding authority subject to this section, the sum of not more than five thousand dollars and, in addition, such person or persons shall pay, apportioned among them, double the amount of damages which the Commonwealth or political subdivision thereof or other awarding authority may have sustained by reason of the doing of such act, together with the costs of the action.

"(8) If an awarding authority rejects all general bids or does not receive any general bids, and advertises for a second opening of general bids with the original filed sub-bids as set forth in subsection (1) of section forty-four E the notice for receipt of such general bids may be published in the central register and elsewhere as required not less than one week prior to the time specified for such second opening of general bids."

2. Particular attention is also directed to Chapter 774 of the Acts of 1972 amending Section 39F of Chapter 30 which applies to this contract and which reads as follows:

**Section 39F.** “1. Every contract awarded shall contain the following subparagraphs (a) through (h) and in each case those subparagraphs shall be binding between the General Contractor and each Subcontractor.

- a. Forthwith after the General Contractor receives payment on account of a periodic estimate, the General Contractor shall pay to each Subcontractor the amount paid for the labor performed and the materials furnished by that Subcontractor, less any amount specified in any court proceedings barring such payment and less than any amount claimed due from the Subcontractor by the General Contractor.
- b. Not later than the sixty-fifth day after each Subcontractor substantially completes his work in accordance with the plans and specifications, the entire balance due under the subcontract less amounts retained by the Awarding Authority as the estimated cost of completing the incomplete and unsatisfactory items of work, shall be due the Subcontractor; and the Awarding Authority shall pay that amount to the General Contractor. The General Contractor shall forthwith pay to the Subcontractor the full amount received from the Awarding Authority less any amount specified in any court proceedings barring such payment and also less any amount claimed due from the Subcontractor by the General Contractor.
- c. Each payment made by the Awarding Authority to the General Contractor pursuant to subparagraphs (a) and (b) of this paragraph for the labor performed and the materials furnished by a Subcontractor shall be made to the General Contractor for the account of that Subcontractor; and the Awarding Authority shall take reasonable steps to compel the General Contractor to make each such payment to each such Subcontractor. If the Awarding Authority has received a demand for direct payment from a Subcontractor for any amount which has already been included in a payment to the General Contractor or which is to be included in a payment to the General Contractor for payment to the Subcontractor as provided in subparagraphs (a) and (b), the Awarding Authority shall act upon the demand as provided in this section.
- d. If, within seventy days after the Subcontractor has substantially completed the subcontract work, the Subcontractor has not received from the General Contractor the balance due under the subcontract including any amount due for extra labor and materials furnished to the General Contractor, less any amount retained by the Awarding Authority as the estimated cost of completing the incomplete and unsatisfactory items of work the Subcontractor may demand direct payment of that balance from the Awarding Authority. The demand shall be by a sworn statement delivered to or sent by certified mail to the Awarding Authority, and a copy shall be delivered or sent by certified mail to the General Contractor at the same time. The demand shall contain a detailed breakdown of the balance due under the subcontract and also a statement of the status of completion of the subcontract work. Any demand made after substantial completion of the subcontract work shall be valid even if delivered or mailed prior to the seventieth day after the Subcontractor has substantially completed the subcontract work. Within ten days after the Subcontractor has delivered or so mailed the demand to the Awarding Authority and delivered or so mailed a copy to the General Contractor, the General Contractor may reply to the demand. The reply shall be by a sworn statement delivered to or sent by certified mail to the Awarding Authority and a copy shall be delivered to or

sent by certified mail to the Subcontractor at the same time. The reply shall contain a detailed breakdown of the balance due under the subcontract including any amount due for extra labor and materials furnished to the General Contractor and of the amount due for each claim made by the General Contractor against the Subcontractor.

- e. Within fifteen days after receipt of the demand by the Awarding Authority, but in no event prior to the seventieth day after substantial completion of the subcontract work, the Awarding Authority shall make the direct payment to the Subcontractor of the balance due under the subcontract including any amount due for extra labor and materials furnished to the General Contractor, less any amount (i) retained by the Awarding Authority as the estimated cost of completing the incomplete or unsatisfactory items or work, (ii) specified in any court proceedings barring such payment, or (iii) disputed by the General Contractor in the sworn reply; provided, that the Awarding Authority shall not deduct from a direct payment any amount as provided in part (iii) if the reply is not sworn to, or for which the sworn reply does not contain the detailed breakdown required by subparagraph (d). The Awarding Authority shall make further direct payments to the Subcontractor forthwith after the removal of the basis for deductions from direct payments made as provided in parts (i) and (ii) of this subparagraph.
  - f. The Awarding Authority shall forthwith deposit the amount deducted from a direct payment as provided in part (iii) of subparagraph (e) in an interest-bearing joint account in the names of the General Contractor and the Subcontractor in a bank in Massachusetts selected by the Awarding Authority or agreed upon by the General Contractor and the Subcontractor and shall notify the General Contractor and the Subcontractor of the date of the deposit and the bank receiving the deposit. The bank shall pay the amount in the account, including accrued interest, as provided in an agreement between the General Contractor and the Subcontractor or as determined by decree of a court of competent jurisdiction.
  - g. All direct payments and all deductions from demands for direct payments deposited in an interest-bearing account or accounts in a bank pursuant to subparagraph (f) shall be made out of amounts payable to the General Contractor at the time of receipt of a demand for direct payment from a Subcontractor and out of amounts which later become payable to the General Contractor and in the order of receipt of such demands from Subcontractors. All direct payments shall discharge the obligation of the Awarding Authority to the General Contractor to the extent of such payment.
  - h. The Awarding Authority shall deduct from payments to a General Contractor amounts which, together with the deposits in interest-bearing accounts pursuant to subparagraph (f), are sufficient to satisfy all unpaid balances of demands for direct payment received from Subcontractors. All such amounts shall be earmarked for such direct payments, and the Subcontractors shall have a right in such deductions prior to any claims against such amounts by creditors of the General Contractor.
3. Particular attention is directed to stipulations of Chapter 30, Section 39I, which applies to this Contract.

**Section 39I.** "Every CONTRACTOR having a contract for the construction, alteration, maintenance, repair or demolition of, or addition to, any public building or public works for the

Commonwealth, or of any political subdivision thereof, shall perform all the work required by such contract in conformity with the plans and specifications contained therein. No willful and substantial deviation from said plans and specifications shall be made unless authorized in writing by the awarding authority or by the engineer or architect in charge of the work who is duly authorized by the awarding authority to approve such deviations. In order to avoid delays in the prosecution of the work required by such contract such deviation from the plans or specifications may be authorized by a written order of the awarding authority or such engineer or architect so authorized to approve such deviation. Within thirty days thereafter, such written order shall be confirmed by a certificate of the awarding authority stating: (1) If such deviation involves any substitution or elimination of materials, fixtures or equipment, the reasons why such materials, fixtures or equipment were included in the first instance and the reasons for substitution or elimination, and, if the deviation is of any other nature, the reasons for such deviation, giving justification therefor; (2) that the specified deviation does not materially injure the project as a whole; (3) that either the work substituted for the work specified is of the same cost and quality, or that an equitable adjustment has been agreed upon between the contracting agency and the CONTRACTOR and the amount in dollars of said adjustment; and (4) that the deviation is in the best interest of the contracting authority.

"Such certificate shall be signed under the penalties of perjury and shall be a permanent part of the file record of the work contracted for.

"Whoever violates any provision of this section willfully and with intent to defraud shall be punished by a fine of not more than five thousand dollars or by imprisonment for not more than six months, or both."

**Section 39J.** "Notwithstanding any contrary provision of any contract for the construction, reconstruction, alteration, remodeling, repair or demolition of any public building or public works by the Commonwealth, or by any county, city, town, district, board, commission or other public body, when the amount of the contract is more than five thousand dollars in the case of the Commonwealth and more than two thousand dollars in the case of any county, city, town, district, board, commission or other public body, a decision, by the contracting body or by any administrative board, official or agency, or by any architect or engineer, on a dispute, whether of fact or of law, arising under said contract shall not be final or conclusive if such decision is made in bad faith, fraudulently, capriciously, or arbitrarily is unsupported by substantial evidence, or is based upon error of law. "

4. Particular attention is, directed to stipulations of chapter 30, Section 39K, which applies to this Contract.

Every contract for the construction, reconstruction, alteration, remodeling, repair or demolition of any public building by the Commonwealth, or by any county, city, town, district, board, commission or other public body, when the amount is more than five thousand dollars in the case of the Commonwealth and more than two thousand dollars in the case of any county, city, town, district, board, commission or other public body, shall contain the following paragraph: - Within fifteen days (twenty-four days in the case of the Commonwealth) after receipt from the CONTRACTOR, at the place designated by the awarding authority if such a place is so designated, of a periodic estimate requesting payment of the amount due for the preceding month, the awarding authority will make periodic payment to the CONTRACTOR for the work performed during the preceding month and for the materials not incorporated in the work but

delivered and suitably stored at the site (or at some location agreed upon in writing) to which the CONTRACTOR has title or to which a Subcontractor has title and has authorized the CONTRACTOR to transfer title to the awarding authority, less (1) a retention based on its estimate of the fair value of its claims against the CONTRACTOR and less (2) a retention for direct payments to Subcontractors based on demands for same in accordance with the provisions of section thirty-nine F, and less (3) a retention not exceeding five per cent of the approved amount of the periodic payment. After the receipt of a periodic estimate requesting final payment and within sixty-five days after (a) the CONTRACTOR fully completes the work or substantially completes the work so that the value of the work remaining to be done is, in the estimate of the awarding authority, less than one percent of the original contract price, or (b) the CONTRACTOR substantially completes the work and the awarding authority takes possession for occupancy, whichever occurs first, the awarding authority shall pay the CONTRACTOR the entire balance due on the contract less (1) a retention based on its estimate of the fair value of its claims against the CONTRACTOR and of the cost of completing the incomplete and unsatisfactory items of work and less (2) a retention for direct payments to Subcontractors based on demands for same in accordance with the provisions of section thirty-nine F, or based on the record of payments by the CONTRACTOR to the Subcontractor under this contract if such record of payment indicates that the CONTRACTOR has not paid Subcontractors as provided in section thirty-nine F. If the awarding authority fails to make payment as herein provided, there shall be added to each such payment daily interest at the rate of three percentage points above the rediscount rate then charged by the Federal Reserve Bank of Boston commencing on the first day after said payment is due and continuing until the payment is delivered or mailed to the CONTRACTOR; provided, that no interest shall be due, in any event, on the amount due on a periodic estimate for final payment until fifteen days (twenty-four days in the case of the Commonwealth) after receipt of such a periodic estimate from the CONTRACTOR, at the place designated by the awarding authority if such a place is so designated. The CONTRACTOR agrees to pay each Subcontractor a portion of any such interest paid in accordance with the amount due each Subcontractor.

The awarding authority may make changes in any periodic estimate submitted by the CONTRACTOR and the payment due on said periodic estimate shall be computed in accordance with the changes so made, but such changes or any requirement for a corrected periodic estimate shall not affect the due date for the periodic payment or the date for the commencement of interest charges on the amount of the periodic payment computed in accordance with the changes made, as provided herein, that the awarding authority may, within seven days after receipt, return to the CONTRACTOR for correction, any periodic estimate which is not in the required form or which contains computations not arithmetically correct and, in that event, the date of receipt of such periodic estimate shall be the date of receipt of the corrected periodic estimate in proper form and with arithmetically correct computations. The date of receipt of such a periodic estimate received on a Saturday shall be the first working day thereafter. The provisions of section thirty-nine G shall not apply to any contract for the construction, reconstruction, alteration, remodeling, repair, or demolition of any public building to which this section applies.

All periodic estimates shall be submitted to the awarding authority, or its designee as set forth in writing to the CONTRACTOR, and the date of receipt by the awarding authority or its designee shall be marked on the estimate. All periodic estimates shall contain a separate item for each filed sub-trade and a column listing the amount paid to each filed Subcontractor as of the date the periodic estimate is filed. The person making payment for the awarding authority shall add the daily interest provided for herein to each payment for each day beyond the due date based on the date of receipt marked on the estimate.

A certificate of the architect to the effect that the CONTRACTOR has fully or substantially completed the work shall, subject to the provisions of section thirty-nine J, be conclusive for the purposes of this section.

5. Particular attention is directed to the stipulation of Chapter 30, Section 39L, which applies to this Contract.

**Section 39L.** The Commonwealth and every county, city, town, district, board, commission or other public body which, as the Awarding Authority, requests proposals, bids or sub-bids for any work in the construction, reconstruction, alteration, remodeling, repair or demolition of any public building or other public works (1) shall not enter into a contract for such work with, and shall not approve as a Subcontractor furnishing labor and materials for a part of any such work, a foreign corporation which has not filed with such Awarding Authority a certificate of the state secretary stating that such corporation has complied with sections three and five of chapter one hundred and eighty-one and the date of such compliance, and (2) shall report to the state secretary and to the department of corporations and taxation any foreign corporation performing work under such contract or subcontract, and any other person, other than a corporation, performing work under such contract or subcontract, and residing or having a principal place of business outside the Commonwealth.

**Section 39M.** "(b) Specifications for such contracts, and specifications for contracts awarded pursuant to the provisions of said sections forty-four A to forty-four L of said chapter one hundred and forty-nine, shall be written to provide for full competition for each item of material to be furnished under the contract; except, however, that said specifications may be otherwise written for sound reasons in the public interest stated in writing in the public records of the awarding authority or promptly given in writing by the awarding authority to anyone making a written request therefor, in either instance such writing to be prepared after reasonable investigation. Every such contract shall provide that an item equal to that named or described in the said specifications may be furnished; and an item shall be considered equal to the item so named or described if (1) it is at least equal in quality, durability, appearance, strength and design, (2) it will perform at least equally the function imposed by the general design for the public work being contracted for or the material being purchased, and (3) it conforms substantially, even with deviations, to the detailed requirements for the item in the said specifications. For each item of material the specifications shall provide for either a minimum of three named brands of material or a description of material which can be met by a minimum of three manufacturers or producers, and for the equal of any one of said named or described materials. "

6. Attention is also directed to Chapter 774 of the Acts of 1972 further amending Chapter 30 by adding after Section 39M the following section:

**Section 39N.** "Every contract subject to section forty-four A of chapter one hundred and forty-nine or subject to section thirty-nine M of chapter thirty shall contain the following paragraph in its entirety and an Awarding Authority may adopt reasonable rules or regulations in conformity with that paragraph concerning the filing investigation and settlement of such claims:

"If, during the progress of the work, the CONTRACTOR or the Awarding Authority discovers that the actual subsurface or latent physical conditions encountered at the site differ substantially

or materially from those shown on the plans or indicated in the contract documents either the CONTRACTOR or the contracting authority may request an equitable adjustment in the contract price of the contract applying to work affected by the differing site conditions. A request for such an adjustment shall be in writing and shall be delivered by the party making such claim to the other party as soon as possible after such conditions are discovered. Upon receipt of such a claim from a CONTRACTOR, or upon its own initiative, the Awarding Authority shall make an investigation of such physical conditions, and if they differ substantially or materially from those shown on the plans or indicated in the contract documents or from those ordinarily encountered and generally recognized as inherent in work of the character provided for in the plans and contract documents and are of such a nature as to cause an increase or decrease in the cost performance of the work or a change in the construction methods required for the performance of the work which results in an increase or decrease in the cost of the work, the Awarding Authority shall make an equitable adjustment in the contract price and the contract shall be modified in writing accordingly.”

7. Attention is also directed to Chapter 1164 of the Acts of 1973 further amending Chapter 30 by adding after Section 39N the following two sections:

**Section 39O.** “Every contract subject to the provisions of section thirty-nine M of this chapter or subject to section forty-four A of chapter one hundred forty-nine shall contain the following provisions (a) and (b) in their entirety and, in the event a suspension, delay, interruption or failure to act of the Awarding Authority increases the cost of performance to any Subcontractor, that Subcontractor shall have the same rights against the General Contractor for payment for an increase in the cost of his performance as provisions (a) and (b) give the General Contractor against the Awarding Authority, but nothing in provisions (a) and (b) shall in any way change, modify or alter other rights which the General Contractor or the Subcontractor may have against each other.

(a) The Awarding Authority may order the General Contractor in writing to suspend, delay, or interrupt all or any part of the work for such period of time as it may determine to be appropriate for the convenience of the Awarding Authority; provided however, that if there is a suspension, delay or interruption for fifteen days or more due to a failure of the Awarding Authority to act within the time specified in this contract, the Awarding Authority shall make an adjustment in the contract price for any increase in the cost performance of this contract but shall not include any profit to the General Contractor on such increase; and provided further, that the Awarding Authority shall not make any adjustment in the contract price under this provision for any suspension, delay, interruption or failure to act to the extent that such is due to any cause for which this contract provides for any equitable adjustment of the contract price under any other contract provisions.

(b) The General Contractor must submit the amount of a claim under provision (a) to the Awarding Authority in writing as soon as practicable after the end of suspension, delay, interruption or failure to act and, in any event not later than the date of final payment under this contract and, except for costs due to a suspension order, the Awarding Authority shall not approve any costs in the claim incurred more than twenty days before the General Contractor notified the Awarding Authority in writing of the act or failure to act involved in the claim.”

**Section 39P.** “Every contract subject to section thirty-nine M of this chapter or section forty-four A of chapter one hundred forty-nine which requires the Awarding Authority, any official, its

architect or engineer to make a decision on interpretation of the specifications, approval of equipment, material or any other approval, or progress of the work, shall require that the decision be made promptly and in any event, no later than thirty days after the written submission for decision; but if such decision requires extended investigation and study, the Awarding Authority, the official, architect or engineer shall, within thirty days after the receipt of the submission, give the party making the submission written notice of the reasons why the decision cannot be made within the thirty day period and the date by which the decision will be made.”

**Section 39Q.** "(1) Every contract awarded by any state agency as defined by section thirty-nine A of chapter seven for the construction, reconstruction, alteration, remodeling, repair or demolition of any capital facility as defined by the aforesaid section thirty-nine A shall contain the following subparagraphs (a) through (d) in their entirety:

"(a) Disputes regarding changes in and interpretations of the terms or scope of the contract and denials of or failures to act upon claims for payment for extra work or materials shall be resolved according to the following procedures, which shall constitute the exclusive method for resolving such disputes. Written notice of the matter in dispute shall be submitted promptly by the claimant to the chief executive official of the state agency which awarded the contract or his designee. No person or business entity having a contract with a state agency shall delay, suspend, or curtail performance under that contract as a result of any dispute subject to this section. Any disputed order, decision or action by the agency or its authorized representative shall be fully performed or complied with pending resolution of the dispute.

"(b) Within thirty days of submission of the dispute to the chief executive official of the state agency or his designee, he shall issue a written decision stating the reasons therefor, and shall notify the parties of their right of appeal under this section. If the official or his designee is unable to issue a decision within thirty days, he shall notify the parties to the dispute in writing of the reasons why a decision cannot be issued within thirty days and of the date by which the decision shall issue. Failure to issue a decision within the thirty-day period or within the additional time period specified in such written notice shall be deemed to constitute a denial of the claim and shall authorize resort to the appeal procedure described below. The decision of the chief executive official or his designee shall be final and conclusive unless an appeal is taken as provided below.

"(c) Within twenty-one calendar days of the receipt of a written decision or of the failure to issue a decision as stated in the preceding subparagraph, any aggrieved party may file a notice of claim for an adjudicatory hearing with the division of hearing officers or the aggrieved party may file an action directly in a court of competent jurisdiction and shall serve copies thereof upon all other parties in the form and manner prescribed by the rules governing the conduct of adjudicatory proceedings of the division of hearing officers. In the event an aggrieved party exercises his option to file an action directly in court as provided in the previous sentence, the twenty-one day period shall not apply to such filing and the period of filing such action shall be the same period otherwise applicable for filing a civil action in superior court. The appeal shall be referred to a hearing officer experienced in construction law and shall be prosecuted in accordance with the formal rules of procedure for the conduct of adjudicatory hearings of the division of hearing officers, except as provided below. The hearing officer shall issue a final decision as expeditiously as possible, but in no event more than one hundred and twenty calendar days after conclusion of the adjudicatory hearing, unless the decision is delayed by a request for extension of time for filing post-hearing briefs or other submissions assented to by all parties.

Whenever, because an extension of time has been granted, the hearing officer is unable to issue a decision within one hundred and twenty days, he shall notify all parties of the reasons for the delay and the date when the decision will issue. Failure to issue a decision within the one hundred and twenty-day period or within the additional period specified in such written notice shall give the petitioner the right to pursue any legal remedies available to him without further delay.

"(d) When the amount in dispute is less than ten thousand dollars, a CONTRACTOR who is party to the dispute may elect to submit the appeal to a hearing officer experienced in construction law for expedited hearing in accordance with the informal rules of practice and procedure of the division of hearing officers. An expedited hearing under this subparagraph shall be available at the sole option of the CONTRACTOR. The hearing officer shall issue a decision no later than sixty days following the conclusion of any hearing conducted pursuant to this subparagraph. The hearing officer's decision shall be final and conclusive, and shall not be set aside except in cases of fraud.

"(2) The commissioner of administration shall require the division of hearings officers to prepare annually a report concerning the construction contract claims submitted to the division during the preceding twelve months, in such form as the commissioner shall prescribe. The report shall contain, at a minimum, the following information: the number of claims submitted; the names of all parties to each such claim; a brief description of the claim; the date of submission and of disposition of the claim; its disposition, whether by settlement, withdrawal, default or written decision; and the number of claims currently pending. The original of the report shall be submitted to the commissioner of administration by January fifteenth, and a copy shall be filed with the state librarian and shall be a public document.

8. Particular attention is directed to stipulations of Chapter 30, Section 39R, which applies to this Contract.

**Section 39R.** "(a) The words defined herein shall have the meaning stated below whenever they appear in this section:

(1) "CONTRACTOR" means any person, corporation, partnership, joint venture, sole proprietorship, or other entity awarded a contract pursuant to section thirty-nine M of chapter thirty, sections forty-four A through H, inclusive, of chapter one hundred and forty-nine and sections thirty B through thirty P, inclusive, of chapter seven.

(2) "Contract" means any contract awarded or executed pursuant to sections thirty B through thirty P, inclusive, of chapter seven and any contract awarded or executed pursuant to section thirty-nine M of chapter thirty, or sections forty-four A through H, inclusive, of chapter one hundred and forty-nine, which is for an amount or estimated amount greater than one hundred thousand dollars.

(3) "Records" means books of original entry, accounts, checks, bank statements and all other banking documents, correspondence, memoranda, invoices, computer printouts, tapes, discs, papers and other documents or transcribed information of any type, whether expressed in ordinary or machine language.

(4) "Independent Certified Public Accountant" means a person duly registered in good standing and entitled to practice as a certified public accountant under the laws of the place of his/her residence or principal office and who is in fact independent. In determining whether an accountant is independent with respect to a particular person, appropriate consideration should be given to all relationships between the accountant and that person or any affiliate thereof. Determination of an accountant's independence shall not be confined to the relationships existing in connection with the filing of reports with the Awarding Authority.

(5) "Audit," when used in regard to financial statements, means an examination of records by an independent certified public accountant in accordance with generally accepted accounting principles and auditing standards for the purpose of expressing a certified opinion thereon, or, in the alternative, a qualified opinion or a declination to express an opinion for stated reasons.

(6) "Accountant's Report," when used in regard to financial statements, means a document in which an independent certified public accountant indicates the scope of the audit which s/he has made and sets forth his/her opinion regarding the financial statements taken as a whole with a listing of noted exceptions and qualifications, or an assertion to the effect that an overall opinion cannot be expressed. When an overall opinion cannot be expressed the reason therefor shall be stated. An accountant's report shall include as a part thereof a disclosed all material facts to the independent certified public accountant, and that the audited financial statement is a true and complete statement of the financial condition of the CONTRACTOR.

(7) "Management," when used herein, means the chief executive officers, partners, principals or other person or persons primarily responsible for the financial and operational policies and practices of the CONTRACTOR.

(8) Accounting terms, unless otherwise defined herein, shall have a meaning in accordance with generally accepted accounting principles and auditing standards.

(b) Subsection (a)(2) hereof notwithstanding, every agreement or contract awarded or executed pursuant to sections thirty B through thirty P, inclusive, of chapter seven, and pursuant to section thirty-nine M of chapter thirty or to section forty-four A through H, inclusive, of chapter one hundred and forty-nine, shall provide that:

(1) The CONTRACTOR shall make, and keep for at least six years after final payment, books, records, and accounts which in reasonable detail accurately and fairly reflect the transactions and dispositions of the CONTRACTOR, and

(2) until the expiration of six years after final payment, the Awarding Authority, office of inspector general, and the deputy commissioner of capital planning and operations shall have the right to examine any books, documents, papers or records of the CONTRACTOR or of his/her Subcontractors that directly pertain to, and involve transactions relating to, the CONTRACTOR or his/her Subcontractors, and

(3) if the agreement is a contract as defined herein, the CONTRACTOR shall describe any change in the method of maintaining records or recording transactions which materially affect any statements filed with the Awarding Authority, including in his/her description the date of the change and reasons therefor, and shall accompany said description with a letter from the CONTRACTOR's independent certified public accountant approving or otherwise commenting on the changes, and

(4) if the agreement is a contract as defined herein, the CONTRACTOR has filed a statement of management on internal accounting controls as set forth in paragraph (c) below prior to the execution of the contract, and

(5) if the agreement is a contract as defined herein, the CONTRACTOR has filed prior to the execution of the contracts and will continue to file annually, an audited financial statement for the most recent completed fiscal year as set forth in paragraph d below.

(c) Every CONTRACTOR awarded a contract shall file with the Awarding Authority a statement of management as to whether the system of internal accounting controls of the CONTRACTOR and its subsidiaries reasonably assures that:

(1) transactions are executed in accordance with management's general and specific authorization;

(2) transactions are recorded as necessary (i) to permit preparation of financial statements in conformity with generally accepted accounting principles, and (ii) to maintain accountability for assets;

(3) access to assets is permitted only in accordance with management's general or specific authorization; and

(4) the recorded accountability for assets is compared with the existing assets at reasonable intervals and appropriate action was taken with respect to any difference.

(d) Every CONTRACTOR awarded a contract shall also file with the Awarding Authority a statement prepared a signed by an independent certified public accountant, stating that s/he has examined the statement of management on internal accounting controls, and expressing an opinion as to:

(1) whether the representations of management in response to this paragraph and paragraph (b) above are consistent with the result of management's evaluation of the system of internal accounting controls; and

(2) whether such representations of management are, in addition, reasonable with respect to transactions and assets in amounts which would be material when measured in relation to the applicant's financial statements.

(e) Every CONTRACTOR awarded a contract by the Commonwealth or by any political subdivision thereof shall annually file with the Awarding Authority during the term of the contract a financial statement prepared by an independent certified public accountant on the basis of an audit by such accountant. The final statement filed shall include the date of final payment. All statements shall be accompanied by an accountant's report.

(f) The office of inspector general, the deputy commissioner for capital planning and operations and any other Awarding Authority shall enforce the provisions of this section. The deputy commissioner of capital planning and operations may after providing an opportunity for the inspector general and other interested parties to comment, promulgate pursuant to the provisions of chapter thirty A such rules, regulations and guidelines as are necessary to effectuate the

purposes of this section. Such rules, regulations and guidelines may be applicable to all awarding authorities. A CONTRACTOR's failure to satisfy any of the requirements of this section may be grounds for disqualification pursuant to section forty-four C of chapter one hundred and forty-nine.

9. Particular attention is directed to Chapter 82, Section 40, which applies to this contract.

**Section 40.** "No person shall, except in an emergency, contract for, or make an excavation, which shall include, but not be limited to, the discharge of explosives and the demolition of any structure but which shall not be deemed to include gardening or tilling the soil in the case of privately owned land, in any public way, any public utility company right of way or easement, or any privately owned land under which any public utility company, municipal utility department, natural gas pipeline company, or cable television company maintains underground facilities, including pipes, mains, wires or conduits, unless at least seventy-two hours, exclusive of Saturdays, Sundays and legal holidays, but not more than thirty days, before the proposed excavation is to be made such person has given an initial notice in writing of the proposed excavation to such natural gas pipeline companies, public utility companies, cable television companies and municipal utility departments as supply gas, electricity, telephone or cable television service in or to the city or town where such excavation is to be made. Such notice shall set forth the name of the street or the route number of said way and a reasonably accurate description of the location in said way or on private property the excavation is to be made. In addition, such initial notice shall indicate whether any such excavation will involve blasting and, if so, the date on which the specific location at which such blasting is to occur; provided, however, that in no event shall any excavation by blasting take place unless written notice thereof, either in the initial notice or a subsequent notice, accurately specifying the date and location of such blasting shall have been given and received at least twenty-four hours in advance, except in the case of an unanticipated obstruction requiring blasting when such notice should not be less than four hours in advance to such natural gas pipeline companies, public utility companies, cable television companies and municipal utility departments as supply gas, electricity, telephone or cable television services in or to the city or town where such excavation by blasting is to be made. If any such notice cannot be given as aforesaid because of an emergency, it shall be given as soon as may be practicable. Copies of such notices together with a statement certifying that they have been mailed or delivered to such cable television companies and public utility companies as required by this section shall be filed with the officer or board having charge of any such public way before a permit to excavate or to blast may be approved or issued, except in case of an emergency.

"Where an excavation is to be made by a CONTRACTOR as part of the work required by a contract with the Commonwealth or with any political subdivision thereof or other public agency, for the construction, reconstruction, relocation or improvement of a public way or for the installation of a railway track, conduit, sewer or water main, such CONTRACTOR shall be deemed to have complied with the requirements of this section by giving such notices as required by this section setting forth the location and the approximate time required to perform the work involved to each of said companies.

"Within seventy-two hours, exclusive of Saturdays, Sundays and legal holidays, from the time said initial notice is received or at such time as said company and the excavator agree in writing, said company shall respond to the original written notice or to subsequent oral or written notice by designating at the locus, the location of pipes, mains, wires or conduits, in that portion of the

public way, public utility company right-of-way or easement or privately owned land in which the excavation is to be made; provided, however, that in the event that the excavator has given notice of proposed excavation as aforesaid at a locus at which because of its length or size the company cannot reasonably designate the location of all such pipes, mains, wires or conduits within such seventy-two hour period, then the excavator shall notify the company of the portion of the locus in which excavation is to be first made and the company shall designate the location of such pipes, mains, wires or conduits in such portion within seventy-two hours and shall designate the location of the pipes, mains, wires or conduits in the remaining portion of the locus within a reasonable time thereafter; and the providing of such designation by the company shall constitute prima facie evidence of an exercise of reasonable precaution by the company as required by this section. After a company has designated the location of such pipes, mains, wires and conduits at the locus of the excavation in accordance with the provisions of this section, the excavator shall be responsible for maintaining the designation markings at such locus, unless the said excavator requests re-marking at the locus due to the obliteration, destruction or other removal of such markings and the company shall then have twenty-four hours following the receipt of such request to re-mark such locus.

"Any such excavation shall be performed in such manner, and such reasonable precautions taken to avoid damage to the pipes, mains, wires or conduits in use under the surface of said public way, public utility company right-of-way or easement, or privately owned land, including, but not limited to, any substantial weakening of structural or lateral support of such pipe, main, wire, or conduit, penetration or destruction of any pipe, main, wire or the protective coating thereof, or the severance of any pipe, main or conduit.

"When any damage of any such pipe, main, wire or conduit or its protective coating occurs, the public utility company, natural gas pipeline company, cable television company or municipal utility department shall be notified immediately by the person or public agency responsible for the excavation causing the damage.

"The making of an excavation without providing any or all notice or notices required by this section with respect to any proposed excavation which results in any damage to a pipe, main, wire or conduit or its protective coating shall be prima facie evidence in any legal or administrative proceeding that such damage was caused by the negligence of such person.

"Notice to the public utility underground plant damage prevention system pursuant to section seventy-six D of chapter one hundred and sixty-four, which notice is given during normal business hours each day of the year exclusive of Saturdays, Sundays and legal holidays, and which notice is given with the time periods established in this section, shall constitute compliance with the written notice requirements of this section.

Nothing contained in this section shall be construed to affect or impair local ordinances or by-laws requiring permits to be obtained before excavation in a public way, except that, notwithstanding any contrary provision of local ordinances or by-laws, no permit to excavate in a public way shall be approved or issued by the officer or board having charge of any such way, except in any emergency, until such time as copies of such notices to public utility companies and cable television companies are filed with said officer or board by the applicant for a permit as required by this section and copies of such notices are served by said officer or board upon the appropriate water and sewer department.

"Any person, CONTRACTOR or company found by the department of telecommunications and energy, after a hearing, to have violated any provision of this section shall forfeit to the Commonwealth the sum of two hundred dollars for the first offense and not less than five hundred nor more than one thousand dollars for any subsequent offense. "

\*\*\*END OF SECTION\*\*\*

## SUPPLEMENTARY CONDITIONS - PART II

### **ARTICLE 1            STATUTORY REQUIREMENTS IN GENERAL**

- 1.1 The Contractor shall keep himself fully informed of all existing and future State and Federal Laws and Municipal Ordinances and Regulations in any manner affecting those engaged or employed in the work or in any way affecting the conduct of the work, and of all such orders and decrees of bodies or tribunals having jurisdiction or authority over same and of all provisions required by law to be made a part of this contract, all of which provisions are hereby incorporated by reference and made a part thereof. If any discrepancy or inconsistency is discovered in the drawings or specifications or contract documents for this work in relation to any such law, ordinance, regulation, order or decree, he shall forthwith report the same to the Engineer in writing. He shall at all times himself observe and comply with, and shall cause all his agents and employees to observe and comply with, all such existing and future laws, ordinances, regulations, orders and decrees; and he shall protect and indemnify the City and Engineer and all of its and their officers, agents and servants against any claim of liability arising from or based on the violation of any such law, ordinance, regulation, order or decree, whether by himself or his employees or sub-contractors.
- 1.2 All materials furnished and work done are to comply with all State, Federal and local laws and regulations.
- 1.3 All applicable laws, ordinances, and rules and regulations of all authorities having jurisdiction over the construction of the project shall apply to the contract throughout.

ARTICLE 2            DELETED

ARTICLE 3            DELETED

### **ARTICLE 4            SAFETY AND HEALTH REGULATIONS**

- 4.1 The Successful Bidder shall comply with the Department of Labor Safety and Health Regulations for Construction promulgated under the Occupational Safety and Health Act of 1970 (PS-91-569) and under Section 107 of the Contract Work Hours and Safety Standards Act (PL-91-54).
- 4.2 This project is subject to the Safety and Health Regulations of the Massachusetts Department of Labor and Industries, Division of Industrial Safety "Rules and Regulations for the Prevention of Accidents in Construction Operations (Chapter

454 CMR, 10.0 et. seq.)".

- 4.3 This project is subject to all of the Safety and Health Regulations (CFR, Part 1926, and all subsequent amendments) as promulgated by the U.S. Department of Labor on June 24, 1974 and CFR 29, Part 1910, General Industry Safety and Health Regulations Identified as Applicable to Construction.
- 4.4 The Successful Bidder shall have a competent person or persons, as required under the Occupational Safety and Health Act on the site to inspect the work and to supervise the conformance of the work with the regulations of the Act.
- 4.5 All excavations within public or private ways are subject to the requirements of the Massachusetts General Law, Acts of 1983, Chapter 353, included in Part II of the Supplementary Conditions.

#### ARTICLE 5 PERMITS AND LICENSES

- 5.1 Deleted
- 5.2 The Contractor shall procure all permits and licenses required, pay all charges and fees therefore, and shall give all notices necessary and incidental to the due and lawful prosecution of the Project. The cost thereof shall be included in the prices bid for the various items listed in the proposal.

The permits shall also include all building and other permits required for his equipment, work force or particular operations (such as blasting or local street opening permits), in the performance of the work.

#### ARTICLE 6 CHANGE ORDERS

- 6.1 Change Orders will be completed by the Contractor using the form enclosed on the following page. The City will **not** accept any other form as a substitute.

(continued on next page)



CHANGE ORDER/AMENDMENT #

I in Quintuplicate this day (DATE) \_\_\_\_\_ between the City of Quincy, Massachusetts, a  
Municipal Corporation, within the County of Norfolk, Party of the first part and: (print name & address of Company below)

Party of the second part.

WITNESSETH: That for and in consideration of the following mutual covenants contained herein the  
parties agree to amend Contract # \_\_\_\_\_ of the City of Quincy,  
dated \_\_\_\_\_ between the same parties as follows:

ARTICLE I: In Article I, we are INCREASING/DECREASING the Contract  
by \$ \_\_\_\_\_ because: (LIST BELOW REASON)  
Justification: \_\_\_\_\_

ARTICLE II: In Article II of the Contract for (SPECIFY COMMODITY) \_\_\_\_\_  
between the same parties, strike out the words and figures \$ \_\_\_\_\_

AMOUNT IN WORDS

and substitute the words and figures \$ \_\_\_\_\_

AMOUNT IN WORDS

WITNESS:

CITY OF QUINCY

\_\_\_\_\_  
WITNESS (CITY OF QUINCY)

\_\_\_\_\_  
MAYOR

\_\_\_\_\_  
Sufficient funds are available to cover this  
contract in the account to be charged.

\_\_\_\_\_  
CITY SOLICITOR

\_\_\_\_\_  
CITY AUDITOR

\_\_\_\_\_  
PURCHASING AGENT

\_\_\_\_\_  
VENDOR SIGNATURE

DEPT: \_\_\_\_\_

P. O. #: \_\_\_\_\_

\_\_\_\_\_  
COMMISSIONER OF PUBLIC WORKS

CODE: \_\_\_\_\_

ARTICLE 7

SUPPLEMENTARY CONDITIONS - COMMONWEALTH OF MASSACHUSETTS

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SUPPLEMENTARY CONDITIONS - COMMONWEALTH OF MASSACHUSETTS

**SUB-ARTICLE 1. METHOD OF PAYING SUBCONTRACTORS**

(General Laws: Chapter 30, Section 39F, as most recently amended by Chapter 579 of the Acts of 1980).

(1) Every contract awarded pursuant to section forty-four A to H, inclusive of chapter one hundred and fort-nine shall contain the following subparagraphs (a) through (i) and every contract awarded pursuant to section thirty-nine M of chapter thirty shall contain the following subparagraphs (a) through (h) and in each case those subparagraphs shall be binding between the general contractor and each subcontractor.

(a) Forthwith, after the general contractor receives payment on account of a periodic estimate, the general contractor shall pay to each subcontractor the amount paid for the labor performed and the materials furnished by the subcontractor, less any amount specified in any court proceedings barring such payment and also less any amount claimed due from the subcontractor by the general contractor.

(b) No later than the sixty-five days after each subcontractor substantially completes his work in accordance with the plans and specifications, the entire balance due under the subcontract less amounts retained by the awarding authority as the estimated cost of completing the incomplete and unsatisfactory items of work, shall be due the subcontractor, and the awarding authority shall pay that amount to the general contractor. The general contractor shall forthwith pay to the subcontractor the full amount received from the awarding authority less any amount specified in any court proceedings barring such payment and also less any amount claimed due from the subcontractor by the general contractor.

(c) Each payment made by the awarding authority to the general contractor pursuant to subparagraphs (a) and (b) of this paragraph for the labor performed and the materials furnished by a subcontractor shall be made to the general contractor for the account of that subcontractor and the awarding authority shall take reasonable steps to compel the general contractor to make each such payment to each such subcontractor. If the awarding authority has received a demand for a direct payment from a subcontractor for any amount which has already been included in a payment to the general contractor or which is to be included in included in a payment to the general contractor for payment to the subcontractor as provided in subparagraphs (a) and (b), the awarding authority shall act upon the demand as provided in this section.

(d) If, within seventy days after the subcontractor has substantially completed the subcontract work, the subcontractor has not received from the general contractor the balance due under the subcontract including any amount due for extra labor and materials

furnished to the general contractor, less any amount retained by the awarding authority as the estimated cost of completing the incomplete and unsatisfactory items of work, the subcontractor may demand by a sworn statement delivered to or sent by certified mail to the awarding authority, and a copy shall be delivered to or sent by certified mail to the general contractor at the same time. The demand shall contain a detailed breakdown of the balance due under the subcontract and also a statement of the status of completion of the subcontract work. Any demand made after substantial completion of the subcontract work shall be valid even if delivered or mailed prior to the seventieth day after the subcontractor has substantially completed the subcontract work. Within ten days after the subcontractor has delivered or so mailed the demand to the awarding authority and delivered or so mailed a copy to the general contractor, the general contractor may reply to the demand.

The reply shall be by a sworn statement delivered to or sent by certified mail to the awarding authority and a copy shall be delivered to or sent by certified mail to the subcontractor at the same time. The reply shall contain a detailed breakdown of the balance due under the subcontract including any amount due for extra labor and materials furnished to the general contractor and of the amount due for each claim made by the general contractor against the subcontractor.

(e) Within fifteen days after receipt of the demand by the awarding authority, but in no event prior to the seventieth day after substantial completion of the subcontract work, the awarding authority shall make direct payment to the subcontractor of the balance due under the subcontract including any amount due for extra labor and materials furnished to the general contractor, less any amount (i) retained by the awarding authority as the estimated cost of completing the incomplete or unsatisfactory items of work, (ii) specified in any court proceedings barring such payment, or (iii) disputed by the general contractor in the sworn reply; provided, that the awarding authority shall not deduct from a direct payment any amount as provided in part (iii) if the reply is not sworn to, or for which the sworn reply does not contain the detailed breakdown required by subparagraph (d). The awarding authority shall make further direct payment to the subcontractor forthwith after the removal of the basis for deductions from the direct payments made as provided in parts (i) and (ii) of the subparagraph.

(f) The awarding authority shall forthwith deposit the amount deducted from a direct payment as provided in part (iii) of subparagraph (e) in an interest-bearing joint account in the names of the general subcontractor and the subcontractor in a bank in Massachusetts selected by the awarding authority or agreed upon by the general contractor and the subcontractor and shall notify the general contractor and the subcontractor of the date of the deposit and the bank receiving the deposit. The bank shall pay the amount in the account, including accrued interest, as provided in an agreement between the general contractor and the subcontractor or as determined by a decree of a court of competent jurisdiction.

(g) All direct payments and all deductions for direct payments deposited in an interest-bearing bank account for accounts in a bank pursuant to subparagraph (f) shall be made out of amount payable to the general contractor at the time of receipt of a demand for direct payment from a subcontractor and out of amounts which later become payable to the general contractor and in the order of receipt of such demands from subcontractors. All direct payments shall discharge the obligation of the awarding authority to the general contractor to the extent of the such payment.

(h) The awarding authority shall deduct to a general contractor amount which, together with the deposits in interest-bearing accounts pursuant to subparagraph (f), are sufficient to satisfy all unpaid balances of demands for direct payment received from subcontractors. All such amounts shall be earmarked for such direct payments, and the subcontractors shall have a right in such deductions prior to any claims against such amounts by creditors of the general contractor.

(i) If the subcontractor does not receive payment as provided in subparagraph (a) or if the general contractor does not submit a periodic estimate for the value of the labor or materials performed or furnished by the subcontractor and the subcontractor does not receive payment for same when due less the deductions provided for in subparagraph (a), the subcontractor may demand direct payment by the following procedure in subparagraph (d) and the general contractor may file a sworn reply as provided in that same subparagraph. A demand made after the first day of the month following that for which the subcontractor seeks payment shall be valid even if delivered or mailed prior to the time payment was due on a periodic estimate from the general contractor. Thereafter the awarding authority shall proceed as provided in subparagraph (e), (f), (g), and (h).

SUB-ARTICLE 2: COMPLETION OF PUBLIC WORKS: SEMI-FINAL AND FINAL ESTIMATES  
PAYMENTS: EXTRA WORK: DISPUTED ITEMS

(General Laws, Chapter 30, Section 39G, as most recently amended by Chapter 460 of the Acts of 1978.)

Upon substantial completion of the work required by a contract with the Commonwealth, or any agency or political subdivision thereof, for the construction, reconstruction, alteration, remodeling, repair or improvement of public ways, including bridges, and other highway structures, sewers and watermains, airports and other public works, the contractor shall present to the contractor either a written declaration that the unsatisfactory work items required by the contract sufficient to demonstrate that the work has not been substantially completed. The awarding authority may include with such a list a notice setting forth a reasonable time, which shall not in any event be prior to the contract completion date, within which the contractor must achieve substantial completion of the work. In the event that the awarding authority fails to respond, by presentation of

a written declaration or itemized list as aforesaid, to the contractor's certification within the twenty-one day period the contractor's certification shall take effect as the awarding authority's declaration that the work has been substantially completed.

Within sixty-five days after the effective date of a declaration of a substantial completion, the awarding authority shall prepare and forthwith send to the contractor for acceptance a substantial completion estimate for the quantity and price of work done and all but one percent retainage for the undisputed part of each work item and extra work item in dispute by excluding the disputed part thereof, less the estimated cost of completing all incomplete and unsatisfactory work items and less the total periodic payments made to date for the work. The awarding authority also shall deduct from the substantial completion estimate an amount equal to the sum of all demands for direct payments filed by the subcontractors and not yet paid to subcontractors or deposited in a joint account pursuant to section thirty-nine F, but no contract subject to said section thirty-nine F shall contain any other provision authorizing the awarding authority to deduct any amount by virtue of claims asserted against the contract by subcontractors, material suppliers or others.

If the awarding authority fails to prepare and send to the contractor any substantial completion estimate required by this section on or before the date herein above set forth, the awarding authority will pay to the contractor interest on the amount which would have been due to the contractor pursuant to such substantial completion estimate at the rate of three percentage points above the rediscount rate then charged by the Federal Reserve Bank of Boston from such date to the date on which the awarding authority sends that substantial completion estimate to the contractor for acceptance or to the date of payment therefor, whichever occurs first. The awarding authority shall include the amount of such interest in the substantial completion estimate.

Within fifteen days after the effective date of the declaration of substantial completion, the awarding authority shall send to the contractor by certified mail, return receipt requested, a complete list of all incomplete or unsatisfactory work items, and, unless delayed by causes beyond his control, the contractor shall complete all such work items within forty-five days after the receipt of such list or before the then contract completion date, whichever is later. If the contractor fails to complete such work within such time, the awarding authority may, subsequent to seven days' written notice to the contractor by certified mail, return receipt requested, terminate the contract and complete the incomplete or unsatisfactory work items and charge the cost of same to the contractor.

Within thirty days after receipt by the awarding authority of a notice from the contractor stating that all of the work required by the contract has been completed, the awarding authority shall prepare and forthwith send to the contractor for acceptance a final estimate for the quantity and price of the work done and all retainage on that work less all payments made to date, unless the awarding authority's inspection shows that work items

required by the contract remain incomplete or unsatisfactory, or that documentation required by the contract has not been complete. If the awarding authority fails to prepare and send to the contractor the final estimate within thirty days after receipt of notice of completion, the awarding authority shall pay to the contractor interest on the amount which would have been due to the contractor pursuant to such final estimate at the rate hereinabove provided from the thirtieth day after such completion until the date on which the awarding authority sends the final estimate to the contractor for acceptance or the date of payment therefore, whichever occurs first, provided that the awarding authority's inspection shows that not work items required by the contract remain for which interest is required to be paid in connection with the substantial completion estimate as hereinabove provided. The awarding authority shall include the amount of the interest required to be paid hereunder in the final estimate.

The awarding authority shall pay the amount due pursuant to any periodic substantial or final estimate within thirty-five days after receipt of written acceptance for such estimate from the contractor and shall pay interest in the amount due pursuant to such estimate at the rate hereinabove provided from that thirty-fifth day to the date of payment. In the case of periodic payment, the contracting authority may deduct from its payment a retention based on its estimate of the fair value of its claims against the contractor, a retention for direct payments to subcontractors based on demand for same in accordance with the provisions of section thirty-nine F, and a retention to secure satisfactory performance of the contractual work not exceeding five percent of the approved amount of any periodic payment, and the same right to retention shall apply to bonded subcontractors entitled to direct payment under section thirty-nine F of chapter thirty, provided, that a five percent value of all items that are planted in the ground shall be deducted from the periodic payments until final acceptance.

No periodic, substantial completion or final estimate or acceptance or payment thereof shall bar a contractor from reserving all rights to dispute the quantity and amount of, or the failure of the awarding authority to approve a quantity and amount of, all or part of any work item or extra work item.

Substantial completion, for the purposes of this section, shall mean either that the work required by the contract has been completed except for work having a contract price of less than one percent of the then adjusted total contract price, or substantially all of the work has been completed and opened to public use except for minor incomplete or unsatisfactory work items that do not materially impair the usefulness of the work required by the contract.

### SUB-ARTICLE 3: CLAIMS FOR UNFORESEEN CONDITIONS

(General Laws, Chapter 30, Section 29N, as most recently amended by Chapter 774 of the Acts of 1972.)

Every contract subject to section forty-four A of chapter one hundred and forty-nine or subject to section thirty-nine M shall contain the following paragraph in its entirety and an awarding authority may adopt reasonable rules or regulations in conformity with that paragraph concerning the filing, investigations and settlement of such claim:

If, during the progress of the work, the contractor or awarding authority discovers that the actual sub-surface or latent physical conditions encountered at the site differ substantially or materially from those shown on the plans or indicated in the contract documents either the contractor or the contracting authority may request an equitable adjustment in the contract price of the contract applying to work affected by the differing site conditions. A request for such an adjustment shall be in writing and shall make an investigation of such physical conditions, and, if they differ substantially or materially from those shown on the plans or indicated in the contract documents or from those ordinarily encountered and generally recognized as inherent in work of the character provided for in the plans and contract documents and are of such a nature as to cause an increase or decrease in the cost of performance of the work or a change in the construction methods required for the performance of the work which results in an increase or decrease in the cost of the work, the contracting authority shall make an equitable adjustment in the contract price and the contract shall be modified in writing accordingly.

#### SUB-ARTICLE 4: CLAIMS FOR DELAY

(General laws, Chapter 30, Section 390, as added by Chapter 116 of the Acts of 1973).

Every contract subject to the provisions of section thirty nine M of this chapter or subject to section forty-four A of chapter one hundred forty-nine shall contain the following provisions (a) and (b) in their entirety and, in the event a suspension, delay, interruption or failure to act of the awarding authority increases the cost of performance to any subcontract, that subcontractor shall have the same rights against the general contractor for payment for an increase in the cost of his performance as provisions (a) and (b) give the general contractor against the awarding authority, but nothing in provisions (a) and (b) shall in any way change, modify or alter any other rights which the general contractor or the subcontractor may have against each other.

(a) The awarding authority may order the general contractor in writing to suspend, delay, or interrupt all or any part of the work for such period of time as it may determine to be appropriate for the convenience of the awarding authority: provided, however, that if there is a suspension, delay, or interruption for fifteen days or more or due to a failure of the awarding authority to act within the time specified in the contract, the awarding authority shall make an adjustment in the contract price for any increase in the cost of performance of this contract but shall not include any profit to the general contractor on such increase and provided further, that the awarding authority shall not make any adjustment in the contract price under this provision for any suspension, delay,

interruption, or failure to act to the extent that such is due to any cause for which this contract provides for an equitable adjustment of the contract price under any other contract provisions.

(b) The general contractor must submit the amount of a claim under provision (a) to the awarding authority in writing, as soon as practicable after the end of the suspension, delay, interruption or failure to act, and in any event, no later than the date of final payment under this contract and, except for costs due to suspension order, the awarding authority shall not approve any costs in the claim incurred more than twenty days before the general contractor notified the awarding authority in writing of the act of failure to act involved in the claim.

**SUB-ARTICLE 5. DECISIONS AND APPROVALS BY THE ENGINEER OR ARCHITECT**  
(Mass. General Law, Chapter 30, Section 39P, as added by Chapter 116 of the Acts of 1973.)

Every contract subject to section thirty-nine M of this chapter or section forty-four A of chapter one hundred forty-nine, which requires the awarding authority, any official, its architect or engineer to make a decision on interpretations of the specifications, approval of equipment, materials or any other approval, or progress of the work, shall require that the decision be made promptly and in any event, no later than thirty days after the written submission for decision; but if such decision requires extended investigation and study, the awarding authority, the official, architect or engineer shall, within thirty days after receipt of the submission, give the party making the submission written notice of the reasons why the decision cannot be made within the thirty day period and the date by which the decision will be made.

**SUB-ARTICLE 6. PREFERENCE IN EMPLOYMENT**

DELETED

**SUB-ARTICLE 7. HOURS OF WORK**

(Mass. General Laws, chapter 149, Section 34, as most recently amended by Chapter 680 of the Acts of 1947.)

Every contract, except for the purchase of material or supplies involving the employment of laborers, workmen, mechanics, foremen or inspectors, to which the Commonwealth or any county or town, subject to section thirty, is a party, shall contain a stipulation that no laborer, workman, mechanic, foreman or inspector working within the Commonwealth, 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 the contract, shall be required or permitted to work more than eight hours in any one day or more than forty-eight hours in any one week, or more than six days in any one week, except in case of

emergency or in case any town subject to section thirty-one is a party to such a contract, more than eight hours in any one day, except as aforesaid, provided that in contracts entered in to by the Department of Public Works for the construction or reconstruction of highways there may be inserted in said stipulation a provision that said department, or any contractor or subcontractor for said department, any employ laborers, workmen, mechanics, foremen and inspectors for more than eight hours in any one day in such construction or reconstruction when, in the opinion of the Commissioner of Labor and Industries, public necessity so requires. Every such contract not containing the aforesaid stipulation shall be null and void.

#### SUB-ARTICLE 8. WORK BY FOREIGN CORPORATIONS

(Mass. General Laws, Chapter 30, Section 39L, Public Construction Work by Foreign Corporations, Restrictions and Reports)

The Commonwealth and every county, city, town, district, board, commission or other public body which, as the awarding authority, requests proposals, bids or sub-bids for any work in the construction, reconstruction, alteration, remodeling, repair or demolition of any public building or other public works (1) shall not enter into a contract for such work with, and shall not approve as a subcontractor furnishing labor and materials for a part of any such work, a foreign corporation which has not filed with such awarding authority a certificate of the state secretary stating that such corporation has complied with sections three and five of chapter one hundred and eighty-one and the date of such compliance, and (2) shall report to the state secretary and to the department of corporations and taxation any foreign corporation performing work under such contract or subcontract, and residing or having a principal place of business outside the Commonwealth.

#### SUB-ARTICLE 9. REQUIREMENTS OF THE PREVAILING WAGE LAW

##### I. GENERAL

1. Awarding authorities must fill out a Prevailing Wage Rate Request Form and mail it to the Department of Labor and Industries for each project going out to bid. Do not use rates that you may have on file, or from similar projects or from neighboring cities and towns.
2. The Department strives to process all Prevailing Wage Rate Requests within one business day of receipt. Once you have received the wage rates, it is your obligation to make them available to all prospective bidders.
3. The Prevailing Wage Rates shall become part of the contract signed between the low bidder and awarding authority or the contract shall be invalid.

4. Prevailing Wages must be paid to all persons employed on the public works project, regardless of whether they are employed by the low bidder or a subcontractor. The wage rates issued for each project shall be the rates paid for the entire project.
5. Payroll records must be kept for all persons employed on the project. A separate Statement of Compliance must be submitted to the Department of Labor and Industries by every employer, including all prime contractors and subcontractors, when its portion of the work is completed. The enclosed form (see Appendix A) entitled "Weekly Payroll Records Report & Statement of Compliance" clearly details these requirements.
6. Once prevailing wages have been issued for a project, the bid opening must occur within 90 days or the Prevailing Wages become invalid. If the bid opening does not occur within 90 days, the awarding authority shall once again request rates for the project.
7. If the awarding authorities have any questions regarding the Prevailing Wage Law, please reference the enclosed copy of Massachusetts General Law, c.149, s. 26 and 27. Additional questions may be directed to the Director of the Division of Occupational Statistics at (617) 727-3492.

II. **MASSACHUSETTS GENERAL LAWS, Chapter 149, Section 26**

1. Section 26. In the employment of mechanics and apprentices; teamsters, chauffeurs and laborers in the construction of public works by the Commonwealth, or by a county, town or district, or by persons contracting or subcontracting for such works, preference shall first be given to citizens of the Commonwealth who have been residents of the Commonwealth for at least six months at the commencement of their employment who are male veterans as defined in clause forty-three of Section seven of chapter four, and who are qualified to perform the work to which the employment relates, and secondly, to citizens of the Commonwealth generally who have been residents of the Commonwealth for at least six months at the commencement of their employment, and if they cannot be obtained in sufficient numbers, then to citizens of the United States, and every contract for such work shall contain a provision to this effect. Each county, town, or district in the construction of public works, or persons contracting or sub-contracting for such works, shall give preference to veterans and citizens who are residents of such county, town or district. The rate per hour of the wages paid to said mechanics and apprentices, teamsters, chauffeurs and laborers in the construction of public works shall not be less than the rate or rates of wages to be determined by the commissioner as hereinafter provided; provided, that the wages paid to laborers employed on said works shall not be less than those paid to laborers in the municipal service of the town or towns where said works are being constructed; provided further, that where the same public work is to be constructed in two or more towns, the wages paid to laborers shall not be less than those paid to laborers in the municipal service to the town paying the highest rate; provided, further that if, in any of the towns where the works are to be constructed, a wage rate or wage rates have been established in certain trades and occupations by collective agreements or understandings the rate or rates to be paid on said works shall not be less than the rates so established; provided further, that in towns where no such rate or rates have been so established, the wages paid to mechanics, teamsters, chauffeurs and laborers on public works, shall not be less than the wages paid to the employees in the same trades and occupations by private employers engaged in the construction industry. This section shall also apply to regular employees of the Commonwealth or of a county, town or district, when such employees are employed in the construction, addition to or alteration of public buildings for which special appropriations or more than one thousand dollars are provided. Payments by employers to health and welfare plans, pension plans and supplementary unemployment benefit plans under collective bargaining agreements or understandings between organized labor and employers shall be included for the purpose of establishing minimum wage rates as herein provided. Permanent and

temporary laborers employed by the State Department of Public Works and by the Metropolitan District Commission shall receive such salary or compensation as may be fixed under and in accordance with Sections Forty-five to Fifty, inclusive of Chapter 30.

**Massachusetts General Laws, Chapter 149, Section 27**

2. Section 27. The Commissioner shall prepare, for the use of such public officials or public bodies whose duty it shall be to cause public works to be constructed, a list of the several jobs usually performed on various types of public works upon which mechanics and apprentices, teamsters, chauffeurs and laborers are employed, including the transportation of gravel or fill to the site of said public works or the removal of surplus gravel or fill from such site. The commissioner shall classify said jobs, and he may revise such classification from time to time, as he may deem advisable. Prior to awarding public body shall submit to the commissioner a list of the jobs upon which mechanics and apprentices, teamsters, chauffeurs and laborers are to be employed, and shall request the commissioner to determine the rate of wages to be paid on each job. Said rates shall apply to all persons engaged in transporting gravel or fill from such site, regardless of whether such persons are employed by a contractor or subcontractor or are independent contractors or owner-operators. The commissioner, subject to the provisions of section twenty-six, shall proceed forthwith to determine the same, and shall furnish said official or public body with a schedule of such rate or rates of wages as soon as said determination shall have been made. In advertising or calling for bids for said works, the awarding official or public body shall incorporate said schedule in the advertisement or call for bids by an appropriate reference thereto, and shall furnish a copy of said schedule, without cost, to any person requesting the same. Said schedule shall be made a part of the contract for said works and shall continue to be the minimum rate or rates of wages for said employees during the life of the contract. Any person engaged in the construction of said works shall cause a legible copy of said schedule to be kept posted in a conspicuous place at the site or said works during the life of the contract. The aforesaid rates of wages in the schedule of wage rates shall include payments by employers to healths and welfare plans, pension plans and supplementary unemployment benefit plans as provided in said section twenty-six, and such payment shall be considered as payments to persons under this section performing work as herein provided. Any employer engaged in the construction of such works who does not make payments to a health and welfare plan, a pension plan and a supplementary unemployment benefit plan, where such payments are included in said rates of wages, shall pay the amount of said payments directly to each employee engaged in said construction. Whoever shall pay less than said rate or rates of wages, including

payments to health and welfare funds and pension funds, or the equivalent payment in wages, on said works to any person performing work within classifications as determined by the commissioner, and whoever, for himself, or as representative, agent or officer or any other, shall take or receive for his own use or the use of any other person, as a rebate, refund, or gratuity, or in any other guise, any part or portion of the wages, including payments to health and welfare funds and pension funds, or the equivalent payment in wages, paid to any such person for work done or service rendered on said public works, shall be punished by a fine of not more than ten thousand dollars.

Offers of restitution or payment or restitution shall not be considered in imposing such punishment.

III.

**POLICY STATEMENT - APPLICABILITY OF PREDETERMINED WAGE RATES TO TEAMSTERS WHO PARTICIPATE IN THE ON-SITE INSTALLATION OF THE MATERIALS BEING DELIVERED: DATED June 26, 1993**

SIGNED BY: Thomas F. Dengenis, Commissioner  
Department of Labor & Industries  
Commonwealth of Massachusetts

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1. **BACKGROUND:** The Department of Labor and Industries (DLI) enforces the Commonwealth's predetermined wage rate law, commonly known as the "prevailing wage" law. The prevailing wage law applies to all state and local public works construction in the Commonwealth. The Commissioner of the Department of Labor and Industries (The Commissioner) is required to set a wage rate for all mechanics and apprentices, teamsters, chauffeurs and laborers employed "in the construction of public works" and "on said works".

This policy statement will define when the predetermined wage must be paid to teamsters who participate in the on-site installation of the materials being delivered, including but not limited to, teamsters who are hauling and applying bituminous concrete or ready-mix concrete, and teamsters who are hauling and installing jersey barriers, on highway, road and other construction projects in the Commonwealth, excluding teamsters who only haul to and from the site.

2. **AUTHORITY:** This policy is based on Massachusetts General Law, Chapter 149, Sections 26, 27 and 27A through F, the Department's historical enforcement of the statute, and on the Supreme Judicial Court's decision in Construction Industries of Massachusetts v. Commissioner of Labor and Industries, 546 N.E. 2d 367, 406 Mass. 162 (1989)
3. **SCOPE OF APPLICATION:** This policy applies to all teamsters who participate in on-site installation of materials being delivered to state and local public works construction sites.
4. **DEFINITIONS:** "Bituminous concrete" is in general a mixture of fine sand and stone held together by a heavy crude oil which acts as glue. Bituminous concrete is generally referred to as asphalt. It ranges from coarse to fine depending on the size of the stone used in its manufacture. Several layers of bituminous concrete are used in the construction of roads and highways. These range from very coarse consistency in the lower levels to a fine layer on top. Sometimes an old road surface is ripped up, transported to the manufacturing plant and reprocessed, and then reapplied to the site. See C.I.M. v. Commissioner. Bituminous Concrete, for

the purpose of enforcing this policy, "bituminous concrete" and "asphalt" are identical terms, and may be used interchangeably.

"Ready-Mix Concrete" is in general a mixture of sand, gravel, portland cement and water, and is delivered to the job site for immediate unloading and installation.

"Jersey barrier" is a device constructed of concrete and mortar, used to restrict traffic and access to highways, roads and other public ways and is often delivered, unloaded and installed by the driver involved.

5. **POLICY:** Any teamster who is engaged in the hauling of materials to a public works project located in the Commonwealth of Massachusetts must be paid the wage rate determined by the commissioner pursuant to M.G.L. c. 149, § 26, at all times when the teamster is engaged in activity that has a significant nexus or connection to the construction project.

A. SIGNIFICANT NEXUS OR CONNECTION

There is a significant nexus to the project beginning when the truck driver reports for the first duty of the day and commences work related to the project, whether the driver goes to the site first, or whether the driver picks up the first load of materials before the first appearance at the job site.

There is a significant nexus to the project when the truck driver is responsible for and all inclusive of the delivery, unloading, and installation of the materials carried at the project site.

If a truck breaks down while engaged on the project, the wage rate must be paid for the time the driver is required to spend waiting for repairs and the repair itself, but not if the truck is reporting to the site for the first time or making its final return from the site.

The significant nexus to the project ends when the driver leaves the site for the last time on any given day, whether the driver returns home or to some other work-related location including non-public works projects.

B. WORK IN VARYING CLASSIFICATIONS

The wage rate for a teamster must be paid for all time the driver is driving the truck as defined above. If the driver leaves the truck to manually rake or otherwise spread the asphalt, or to engage in other labor that is not related to driving the truck, the worker is engaged in a different job classification for which the Commissioner has set a wage rate. In the event the teamster is

engaged in a different classification for more than one hour during one given day, the employee must be paid the wage rate appropriate for that classification. All required recordkeeping is the requirement of the employer.

C. TRUE AND ACCURATE PAYROLL RECORDS

Pursuant to M.G.L. c.149, § 27B, the employer is required to keep true and accurate records for all employees employed on the project, showing the name, address and occupational classification, the hours worked by, and the wages paid to each employee.

If the employer fails to differentiate the time spent driving from the time spent in other duties, the higher wage rate must be paid for all time worked.

It is the employer's responsibility to keep a true and accurate record of lunch and breaks and unrelated travel time.

D. APPLICABLE WAGE RATE

The wage rate that must be paid is listed on the minimum wage rate schedule furnished by the Commissioner and may vary from project to project, as the Commissioner determines. Applicable descriptions for teamsters include, but are not limited to: Oper 3 axle equipment, Oper 4 & 5 axle equipment, and Truck Driver. The wage rate paid is determined by applying the appropriate description to the actual piece of equipment that is being driven.

E. TIME NOT CONSIDERED SIGNIFICANTLY CONNECTED TO THE PROJECT

Travelling to the project site for the first time each day, and travelling home after the work day is not considered time on the project for the purpose of this law. Any employee may be paid his or her regular rate of pay for travel time but not less than the law will allow.

Lunch time and break time is not considered time on the project.

F. EFFECTIVE DATE

This policy shall apply to all public works projects for which the awarding authority has advertised for bids beginning on or after Thursday, July 1, 1993.

#### G. ON-GOING INVESTIGATIONS

This policy does not apply to on-going investigations or projects out to bid or awarded before the effective date.

Note: Policy questions regarding trade jurisdictions not covered by this statement should be directed to the Commissioner of Labor and Industries, 100 Cambridge Street, 11th Floor, Boston, Massachusetts 02202.

#### IV. WEEKLY PAYROLL REPORTS AND STATEMENT OF COMPLIANCE

In accordance with Massachusetts General Law, c. 149, § 27B, a true and accurate record must be kept of all persons employed on the public works construction project for which the enclosed rates have been provided. A Payroll Form is provided in Appendix "A" (included with State Minimum Wage Rates) and includes all information required to be kept by law. Every contractor or subcontractor is required to keep these records and preserve them for a period of three (3) years from the date of completion of the contract.

Awarding authorities may also request the information contained in the Payroll Forms from each contractor or subcontractor for their records. Once collected, the Awarding Authority is then required to preserve the records for three (3) years, as well.

These payroll records shall be open to inspection by any authorized representative of the department at any reasonable time, and as often as may be necessary. If awarding authorities, contractors or subcontractors wish to substitute the Payroll Form provided with one of their own, it must first be approved in writing by the Commissioner of Labor and Industries.

In addition, each such contractor, subcontractor or public body shall furnish to the Commissioner of Labor and Industries, within fifteen (15) days after completion of its portion of the work, a statement of wages, in the following form: (See Statement of Compliance included in Appendix A)

SUB-ARTICLE 10. RECORD KEEPING (MGL C30, S 39R)

(Definitions: Contract Provisions, Management and Financial Statements,  
and Enforcement)

I. Section 39R.

A. The works defined herein shall have the meaning stated below whenever they appear in this section:

1. **Contractor** means any person, corporation, partnership, joint venture, sole proprietorship, or other entity awarded a contract pursuant to Section 39M of Chapter 30; Sections 44A-H, inclusive, of Chapter 149; and Sections 30B-P, inclusive of Chapter 7.
2. **Contract** means any contract awarded or executed pursuant to Sections 30B-P, inclusive of Chapter 7 and any contract awarded or executed pursuant to Section 39M of Chapter 30 or Sections 44A-H, inclusive of Chapter 149, which is for an amount or estimated amount greater than \$100,000.00.
3. **Records** means books of original entry, accounts, checks, bond statements and all other banking documents, tapes, discs, papers and other documents or transcribed information of any kind, whether expressed in ordinary or machine language.
4. **Independent Certified Public Accountant** means a person duly registered in good standing and entitled to practice as a certified public accountant under the laws of the place of his/her residence or principal office and who is in fact, independent. In determining whether an accountant is independent with respect to a particular person, appropriate consideration should be given to all relationships between the accountant and that person or any affiliate thereof. Determination of an accountant's independence shall not be confined to the relationships existing in connection with the filing of reports with the awarding authority.
5. **Audit** when used in regard to financial statements, means an examination of records by an independent certified public accountant in accordance with generally accepted accounting principles and auditing standards for the purpose of expressing a certified opinion thereon, or in the alternative, a qualified opinion thereon, or, in the alternative, a qualified opinion or a declination to express an opinion for stated reasons.

6. **Accountant's Report** when used in regard to financial statements means a document in which an independent certified public accountant indicates the scope of the audit which he/she has made and sets forth his/her opinion regarding the financial statements taken as a whole with a listing of noted exceptions and qualifications, or an assertion to the effect that an overall opinion cannot be expressed.

When an overall opinion cannot be expressed, the reason therefor shall be stated. An accountant's report shall include as a part thereof a signed statement by a responsible corporate officer attesting that management has fully disclosed all material facts to the independent certified public accountant, and that the audited financial statement is a true and complete statement of the financial condition of the contractor.

7. **Management** when used herein, means the chief executive officer, partners, principals, or other person or persons primarily responsible for the financial and operational policies and practices of the contractor.
8. Accounting terms, unless otherwise defined herein, shall have a meaning in accordance with generally accepted accounting principles and auditing standards.

B. Subsection A (2) notwithstanding, every agreement or contract awarded or executed pursuant to sections 30B-P, inclusive of Chapter 7, and pursuant to Section 39M of Chapter 30 or to Section 44A-H, inclusive, of chapter 149, shall provide that:

1. The contractor shall make, and keep for at least six years after final payment, books, records and accounts which in reasonable detail accurately and fairly reflect the transactions and dispositions of the contractor, and
2. until the expiration of six years after final payment, the office of inspector general and the deputy commissioner of capital planning and operations shall have the right to examine any books, documents, papers or records of the contractor or of his/her subcontractors that directly pertain to, and involve transactions relating to, the contractor or his/her subcontractors and
3. if the agreement is a contract as defined herein, the contractor shall describe any change in the method of maintaining records or

recording transactions which materially affect any statements filed with the awarding authority, including in his/her description the date of the change and reasons therefor, and shall accompany said description with a letter from the contractor's independent certified public accountant approving or otherwise commenting on the changes, and

4. if the agreement is a contract as defined herein, the contractor has filed a statement of management on internal accounting controls, as set forth in paragraph 9c below, prior to the execution of the contract, and
5. if the agreement is a contract as defined herein, the contractor has filed prior to the execution of the contracts and will continue to file annually, an audited financial statement for the most recent completed fiscal year as set forth in paragraph D below.

C. Every contractor awarded a contract shall file with the awarding authority a statement of management as to whether the system of internal accounting controls of the contractor and its subsidiaries reasonably assures that:

1. Transactions are executed in accordance with management's general and specific authorization;
2. transactions are recorded as necessary:
  - a. to permit preparation of financial statements in conformity with generally accepted accounting principles, and
  - b. to maintain accountability for assets;
3. access to assets is permitted only in accordance with management's general or specific authorization; and
4. the recorded accountability for assets is compared with the existing assets at reasonable intervals and appropriate action was taken with respect to any difference.

Every contractor awarded a contract shall also file with the awarding authority a statement prepared and signed by an independent certified public accountant, stating that she/he has examined the statement of management on internal accounting controls, and expressing an opinion as to:

1. whether the representatives of management in response to this paragraph and paragraph B above are consistent with the result of management's evaluation of the system of internal accounting controls; and
  2. whether such representations of management are, in addition, reasonable with respect to transactions and assets in amounts which would be material when measured in relation to the applicant's financial statements.
- D. Every contractor awarded a contract by the Commonwealth or by any political subdivision thereof shall annually file with the deputy commissioner of capital planning and operations during the term of the contract a financial statement prepared by an independent certified public accountant on the basis of an audit by such accountant. The final statement filed shall include the date of final payment. All statements shall be accompanied by an accountant's report. Such statements shall be made available to the awarding authority upon request.
- E. The office of inspector general, the deputy commissioner for capital planning and operations and any other awarding authority shall enforce the provisions of this section. The deputy commissioner of capital planning and operations may after providing an opportunity for the inspector general and other interested parties to comment, promulgate pursuant to the provisions of Chapter 30A such rules, regulations and guidelines as are necessary to effectuate the purposes of this section. Such rules, regulations and guidelines may be applicable to all awarding authorities.
- A contractor's failure to satisfy any of the requirements of this section may be grounds for debarment pursuant to Section 44C of Chapter 149.
- F. Records and statements required to be made, kept or filed under the provisions of this section shall not be public records as defined in Section 7 of Chapter 4 and shall not be open to public inspection; provided, however, that such records and statements shall be made available pursuant to the provision of clause (2) of paragraph B.

## ARTICLE 8

### THE COMMONWEALTH OF MASSACHUSETTS

#### SUPPLEMENTAL EQUAL EMPLOYMENT OPPORTUNITY ANTI-DISCRIMINATION AND AFFIRMATIVE ACTION PROGRAM

- I. For purposes of this contract, "minority" refers to Asian-Americans, Blacks, Spanish Surnamed Americans, North American Indians, and Cape Verdeans. "Commission" refers to the Massachusetts Commission Against Discrimination.
- II. During the performance of this contract, the contractor and all of his subcontractors (hereinafter collectively referred to as the Contractor), for himself, his assignees and successors in interest, agree as follows:
  1. In connection with the performance of work under this contract, the Contractor shall not discriminate against any employee or applicant for employment because of race, color, religious creed, national origin, age or sex. The aforesaid provision shall include, but not be limited to the following: employment upgrading, demotion or transfer, recruitment advertising, recruitment layoff, termination, rates of pay or other forms of compensation, conditions or privileges of employment, and selection for apprenticeship. The Contractor shall post hereafter in conspicuous places, available for employees and applicants for employment, notices to be provided by the Commission setting forth the provisions of the Fair Employment Practices Law of the Commonwealth (M.G.L. Chapter 151B).
  2. In connection with the performance of work under this Contract, the Contractor shall undertake in good faith affirmative action measures designed to eliminate any discriminatory barriers in the terms and conditions of employment on the grounds of race, color, religious creed, national origin, age or sex, and to eliminate and remedy any effects of such discrimination in the past. Such affirmative action shall entail positive and aggressive measures to ensure equal opportunity in the areas of hiring, upgrading, demotion or transfer, recruitment, layoff or termination, rate of compensation, and in-service or apprenticeship training programs. This affirmative action shall include all action required to guarantee equal employment opportunity for all persons, regardless of race, color, religious creed, national origin, age or sex. A purpose of this provision is to ensure to the fullest extent possible an adequate supply of skilled tradesmen for this and future Commonwealth public construction projects.

1. As part of his obligation of remedial action under the foregoing section, the Contractor shall maintain on this project a not less than 10% ratio of minority employee man hours to total man hours in each job category including but not limited to bricklayers, carpenters, cement masons, electricians, ironworkers, operating engineers, and those "classes of work" enumerated in Section 44C of Chapter 149 of the Massachusetts General Laws.
2. In the hiring of minority journeymen, apprentices, trainees and advanced trainees, the Contractor shall rely on referrals from a multi-employer affirmative action program approved by the Commission, traditional referral methods utilized by the construction industry, and referrals from agencies, not more than three in number at any one time, designated by the Liaison Committee or the Commission.
1. At the discretion of the Commission there may be established for the life of this contract a body to be known as the Liaison Committee. The Liaison Committee shall be composed of one representative each from the agency or agencies administering this project, hereinafter called the administering agency, the Commission and such other representatives as may be designated by the Commission in conjunction with the administering agency.
2. The Contractor (or his agent, if any, designated by him as the on-site equal employment opportunity officer) shall recognize the Liaison Committee as an affirmative action body, and shall establish a continuing working relationship with the Liaison Committee, consulting with the Liaison Committee on all matters related to minority recruitment, referral, employment and training.
3. The Contractor shall prepare projected manning tables on a quarterly basis. These shall be broken down into projections, by week, or workers required in each trade. Copies shall be furnished one week in advance of the commencement of the period covered, and also when updated to the Commission and Liaison Committee.
4. Records of employment referral orders, prepared by the Contractor, shall be made available to the Commission and to the Liaison Committee on request.
5. The Contractor shall prepare weekly reports in a form approved by the Commission of hours worked in each trade by each employee, identified as minority or non-minority. Copies of these shall be provided at the end of each such week to the Commission and to the Liaison Committee.

- V. If the Contractor shall use any subcontractor on any work performed under this contract, he shall take affirmative action to negotiate with qualified minority subcontractors. This affirmative action shall cover both pre-bid and post-bid periods. It shall include modification to the Office of Minority Business Assistance (within the Executive Office of Communities and Development) or its designee, while bids are in preparation, of all products, work or services for which the Contractor intends to negotiate bids.
- VI. In the employment of journeymen, apprentices, trainees and advanced trainees, the Contractor shall give preference, first, to citizens of the Commonwealth who have served in the armed forces of the United States in time of war and have been honorably discharged therefrom or released from active duty therein, and who are qualified to perform the work to which the employment related, and, secondly, to citizens of the Commonwealth generally, and, if such cannot be obtained in sufficient numbers, then to citizens of the United States.
- VII. A designee of the commonwealth and a designee of the Liaison Committee shall each have right of access to the construction site.

VIII Compliance with Requirements

The Contractor shall comply with the provision of Executive Order No. 74 as amended by Executive Order No. 116 dated May 1, 1975, and of Chapter 151B, as amended, of the Massachusetts General Laws, both of which are herein incorporated by referenced and made a part of this contract.

IX Non-Discrimination

The Contractor, in the performance of all work after award, and prior to completion of the contract work, will not discriminate on grounds of race, color, religious creed, national origin, age or sex in employment practices in the selection or retention of subcontractors, or in the procurement of materials and rentals of equipment.

X. Solicitations for Sub-Contracts,  
and for the Procurement of Materials and Equipment

In all solicitations either by competitive bidding or negotiation made by the Contractor either for work to be performed under a subcontract or for the procurement of materials or equipment, each potential subcontractor or supplier shall be notified in writing by the Contractor of the Contractor's obligations under this Contract relative to non-discrimination and affirmative action.

## XI Bidders Certification Requirement

1. The bidders certification form currently in use will be deleted from all future bid documents.
2. The following certification statement will be inserted in the bid document just above the bidder's signature, as a substitute for the present bidder certification form.

"The bidder hereby certifies he shall comply with the minority manpower ratio and specific action steps contained in the appendix EEO attached hereto, including compliance with the minority contractor compliance specified in Section V of said appendix. The contractor receiving the award of the contract shall be required to obtain from each of its subcontractors and submit to the contracting or administering agency prior to the performance of any work under said contract a certification by said subcontractor, regardless of tier that it will comply with the minority manpower ratio and specific affirmative action steps contained in the appendix EEO.

## XII Contractor's Certification

The Contractors certification form must be signed by all successful low-bidder(s) prior to award by the contracting agency.

## XIII Compliance-Information, Reports and Sanctions

1. The Contractor will provide all information and reports required by the administering agency or the Commission on instructions issued by either of them and will permit access to its facilities and any books, records, accounts and other sources of information which may be determined by the Commission to affect the employment of personnel. This provision shall apply only to information pertinent to the Commonwealth's supplementary affirmative action contract requirements. Where information required is in the exclusive possession of another who fails or refuses to furnish this information, the Contractor shall so certify to the administering agency or the Commission as appropriate and shall set forth what efforts he has made to obtain the information.
2. Whenever the administering agency, the Commission, or the Liaison Committee believes the General Contractor or any Subcontractor may not be operating in compliance with the terms of this Section, the Commission directly, or through its designated agent, shall conduct an appropriate

investigation, and may confer with the parties, to determine if such Contractor is operating in compliance with the terms of this Section. If the Commission or its agent finds the General Contractor or any subcontractor not in compliance, it shall make a preliminary report on non-compliance, and notify such Contractor in writing of such steps as will in the judgement of the Commission or its agent bring such Contractor into compliance. In the event that such Contractor fails or refuses to fully perform such steps, the Commission or its agent shall make a final report of non-compliance, and recommend to the administering agency the imposition of one or more of the sanctions listed below. If, however, the Commission believes the General Contractor or any Subcontractor has taken or is taking every possible measure to achieve compliance, it shall not make a final report of non-compliance. Within fourteen days of the receipt of the recommendations of the Commission, the administering agency shall move to impose one or more of the following sanctions, as it may deem appropriate to attain full and effective enforcement:

- a. The recovery by the administering agency from the General Contractor of 1/100 of 1% of the contract award price or \$1,000, whichever sum is greater, in the nature of liquidated damages or, if a subcontractor is in non-compliance, the recovery by the administering agency from the General Contractor, to be assessed by the General Contractor as a back charge against the Subcontractor, of 1/10 of 1% of the subcontract price, or \$400., whichever is greater, in the nature of liquidated damages, for each week that such party fails or refuses to comply;
  - b. The suspension of any payment or part thereof due under the contract until such time as the General Contractor or any Subcontractor is able to demonstrate his compliance with the terms of the contract;
  - c. The termination, or cancelation of the contract, in whole or in part, unless the General Contractor or any Subcontractor is able to demonstrate within a specified time his compliance with the terms of the contract;
  - d. The denial to the General Contractor or any Subcontractor of the right to participate in any future contracts awarded by the administering agency for a period of up to three years.
3. If at any time after the imposition of one or more of the above sanctions a Contractor is able to demonstrate that he is in compliance with this Section,

he may request the administering agency, in consultation with the Commission, to suspend the sanctions conditionally, pending a final determination by the Commission as to whether the Contractor is in compliance. Upon final determination of the Commission, the administering agency, based on the recommendation of the Commission, shall either lift the sanctions or reimpose them.

4. Sanctions enumerated under Sections XII-2 shall not be imposed by the administering agency except after an adjudicatory proceeding, as that term is used M.G.L. c.30A, has been conducted. No investigation by the Commission or its agent shall be initiated without prior notice to the Contractor.

#### XIV. Severability

The provisions of this section are severable, and if any of these provisions shall be held unconstitutional by any court of competent jurisdiction, the decision of such court shall not affect or impair any of the remaining provisions.

#### 301. CMR 50.00: AFFIRMATIVE ACTION

##### Section

- 50.01: Declaration of Policy
- 50.02: Purpose and Scope
- 50.03: Definitions
- 50.04: Employment Policies of Agencies Within EOE A
- 50.05: State Services and Facilities
- 50.06: Eligibility for Financial Assistance
- (301 CMR 50.07 and 50.08: RESERVED)
- 50.09: Construction Projects Conducted by Agencies
- 50.10: Construction Projects Conducted by Grantees
- (301 CMR 50.11 through 50.13: RESERVED)
- 50.14: Compliance and Sanctions
- 50.15: Severability
- 50.16: Appendix 1. Executive Order 74 (as amended and revised by Executive Order 116) the Governor's Code of Fair Practices.
- 50.17: Appendix 2. Supplemental Equal Employment Opportunity Anti-Discrimination and Affirmative Action Program
- 50.18: Appendix 3. Equal Employment Opportunity Guidelines
- 50.19: Appendix 4. Fair Housing Guidelines
- 50.20: Appendix 5. Memorandum of Agreement
- 50.21: Appendix 6. Goals and Timetables Adopted Pursuant to the

Department of Labor's Regulations 41 CFR 60-4.6

50.22: Appendix 7. Rules of Procedure for Hearings on Compliance with the Commonwealth's Equal Employment Policy and Anti-Discrimination and Affirmative Action Plan

50.01: Declaration of Policy

(1) Non-discrimination and equal opportunity are the policy of the Executive Office of Environmental Affairs in all of its decisions, programs and activities. To that end, all agency employees shall rigorously take affirmative steps to ensure equality of opportunity in the internal affairs of all agencies as well as in their relations with the public, including those persons and organizations doing business with any agency of the Executive Office of Environmental Affairs. Each agency, in discharging its decisions, programs and activities shall have in meeting the goal of equality of opportunity.

(2) Affirmative action requires more than vigilance in the elimination of discriminatory barriers on the grounds of race, color, creed, national origin, age, and sex. It must also entail positive and aggressive measures to ensure equal opportunity in internal personnel practices and in those programs which can affect persons and political subdivisions outside of state government. This affirmative action shall include efforts necessary to remedy the effects of present and past discriminatory patterns and practices and any action necessary to guarantee equal opportunity for all people.

(3) All agencies shall initiate affirmative action programs designed to conform to this policy. All such affirmative action programs shall be subject to review by the Executive Office of Administration and Finance, or such other Office or person as may be designated by the Governor, and the Massachusetts Commission Against Discrimination, as provided in 801 CMR 50.16 (Appendix 1, Executive Order 74, as amended by Executive Order No. 116, the Governor's Code of Fair Practice).

(4) All powers, functions and duties granted to the Secretary of Environmental Affairs under any provision of law shall be construed liberally for the accomplishment of these regulations.

These regulations establish the procedures by which the Executive Office of Environmental Affairs and all its agencies shall comply with the policy and requirements for equal employment opportunity and affirmative action.

50.10 Construction Projects Conducted by Grantees

(1) Before any applicant receives any financial assistance, including state assisted or federally assisted construction grants awarded under any program administered by an agency, the Secretary must have determined that such applicant is in compliance with the

Equal Employment Opportunity Guidelines and Fair Housing Guidelines of the Commission, as they may be amended from time to time (301 CMR 50.18 Appendix 3 and 50.19 Appendix 4 of these regulations) according to the procedures set forth in 301 CMR 50.06 of these regulations.

(2) Every state or state-assisted or federal or federally-assisted contract for public buildings and public works or for goods or services that is let by a grantee shall contain an article prohibiting discriminatory employment practices by contractors, subcontractor, and suppliers of goods or services based on race, color, religion, national origin, ancestry, age or sex. The non-discrimination article shall include a provision requiring contractors and suppliers of goods or services to give written notice of their commitments under this section to any labor union, association or brotherhood with which they have a collective bargaining or other agreement. Such notice shall also be given to the Commission and to SOMBA.

(3) Grantees shall adopt for use in all contracts for construction projects with a dollar value in excess of ten thousand dollars (\$10,000.) an adapted version of the Commonwealth of Massachusetts Supplemental Equal Employment Opportunity Anti-Discrimination and Affirmative Action Program (Supplemental Program) (301 CMR 50.17 Appendix 2 of these regulations). Such contract may include minority workforce percentages greater than those required for the geographical locations of the construction project as set forth in the Supplemental Program.

(4) Grantees shall take affirmative steps to increase participation of minority business enterprise (MBEs) in any construction grant.

(5) Prior to the publication of the availability of contracts for construction work to be performed under any construction grant with a total dollar value in excess of ten thousand dollars (\$10,000.), the grantee shall notify SOMBA of its intent to solicit bids and shall make available to SOMBA, upon request, copies of the proposal to bid, specifications and plans, and bid invitations.

(6) At the discretion of the Commission there may be established for the life of any construction contract a body to be known as the Liaison Committee, which may be the Executive Office Liaison Committee as established by 301 CMR 50.09 (3) of these regulations. A representative of the grantee shall be a member of the Liaison Committee. The contractor or his agent shall recognize the Liaison Committee as an affirmative action body, and shall establish a continuing working relationship with the Liaison Committee, consulting with the Liaison Committee on all matters related to minority recruitment, referral, employment and training.

(7) Before making the final allocation of funds to any grantee, the Secretary shall review any contracts for construction work to be performed under the grantee, to ascertain the grantee's compliance with the provisions of these regulations.

**MINIMUM PERCENTAGES TO BE APPLIED TO STATE  
AND STATE-ASSISTED CONTRACTS  
WITHIN THE COMMONWEALTH OF MASSACHUSETTS**

The following percentages shall apply	<u>Not Less Than:</u>
Boston: Impact Area (Jamaica Plain (part), Mattapan, South Cove, Chinatown, Bay Village, Roxbury, Dorchester, South End.	30%
Others	10%
Cambridge:	12%
New Bedford:	18%
Springfield:	10%
All other cities and towns	5%

December 19, 1988

*Quincy*

CITY OF QUINCY  
IN COUNCIL

RECEIVED

OCT 17 1989

ORDER NO. 532

QUINCY BUILDING DEPT.

ORDERED:  
That it be ordained by the City Council of the City of Quincy, that the revised ordinances of the City of Quincy, 1976, are further amended in Chapter 13 offenses - Miscellaneous, by adding the following new section:

SECTION 54 - RESIDENCY FOR CITY SUPPORTED CONSTRUCTION PROJECTS:

On any construction project funded in whole or in part by City funds, or funds from a federal grant or loan, or City-approved M.I.F.A. applications, or projects for which the City administers the construction contract, and when a project has a projected cost of more than \$250,000.00 residents of Quincy who are qualified to perform the work to which the employment relates shall be given preference in hiring on a 1-of-every-3 ratio, after the employer's foreman or supervisor and two key employees have been employed for a one-week payroll period.

In any project with a projected cost of more than \$250,000.00, companies receiving public assistance through these financing agencies should be in concurrence with the prevailing wages in the area, including wages in the Davis-Bacon Act. No revenue bond applications are to be approved unless the applicant agrees to all of the aforementioned conditions.

Prior to entering into a construction agreement involving more than \$250,000.00 the owner, developer or contractor shall place a reasonable size advertisement, at least 3" x 5" in size, at least twice, in at least one newspaper having a local distribution, on a craft-by-craft basis, indicating that bids are sought and the qualified residents of Quincy shall be given preference consideration in hiring on a 3-to-1 ratio.

Minorities and women shall additionally be accorded preference for their hiring, as provided for in the federal, state or municipal laws, shall either be included or the same will be deemed included in all construction agreements.

The Quincy Equal Opportunity Administrator will be furnished copies of names and home addresses of employees, upon request, and will be furnished such other proof compliance as said Director may request, upon written request for the same, within seven days of such request.

In the event that any section of this ordinance is deemed illegal, unenforceable, or unconstitutional, then the remaining sections shall remain in full force and effect.

APPROVED

IN 12 1989

PASSED TO BE ORDAINED JUNE 5, 1989

ATTEST

*[Signature]*  
CLERK OF COUNCIL

YEAS Cahill, Cheney, Chretien, DeCristofaro, McGrath, Nutley, Phelan, Sheets, Toland

MAYOR

NAYS Cahill, Cheney, Chretien, DeCristofaro, McGrath, Nutley, Phelan, Sheets, Toland

*11/11/90*  
*P.S.*  
*P.W.*  
*Pack*  
*Adk.*

# CITY OF QUINCY

IN COUNCIL

October 13, 1990

ORDER NO. 245

ORDERED: Insert the following additional subsections in Chapter 13, Sec. 54) (Replaces page two of Council Order #532 of 1989)

- 6. Any bidder for work covered by this section must notify the Quincy Equal Opportunity Administrator of the names and addresses of any individuals currently employed by the bidder who are not residents of Quincy and who the bidder intends to employ on the project. Such notices shall be in writing at least 48 hours prior to the opening of the bids. Failure to so notify the Administrator shall be deemed an admission by the bidder that the composition of the work force for the project will be in accordance with Section 1 of this ordinance.
- 7. This ordinance shall be enforced by the Commissioner of Public Works or his designee in conjunction with the Quincy Equal Opportunity Administrator. A \$300 fine shall be levied and withheld from the payment of any contractor who violates this ordinance for each day the contract remains in violation.
- 8. For purposes of this ordinance, a resident of Quincy shall mean an individual who is domiciled in the City of Quincy. Individuals who temporarily live in the City of Quincy during the term of the project shall not be considered residents of Quincy for the purpose of this ordinance.
- 9. In the event that any section of this ordinance is deemed illegal, unenforceable, or unconstitutional, then the remaining sections shall remain in full force and effect.

PASSED TO BE ORDAINED OCTOBER 15, 1990

ATTEST:

*[Signature]*  
CLERK OF COUNCIL

APPROVED

UCI 18 1990  
*[Signature]*  
MAYOR

00850-35

YEAS Cahill, Cheney, Chretien, DeCristofaro, Fabrizio, Kolson, Nutley, Phelan, Toland

NAYS Cahill, Cheney, Chretien, DeCristofaro, Fabrizio, Kolson, Nutley, Phelan, Toland

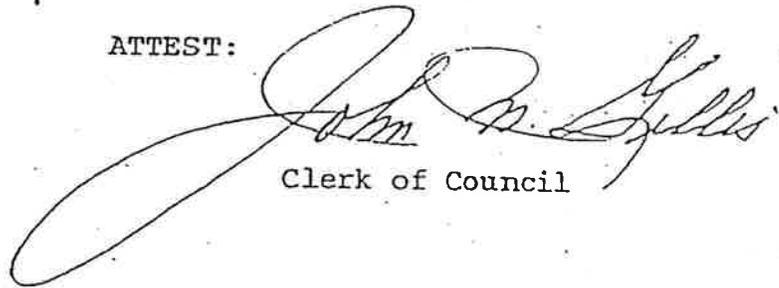
CITY OF QUINCY  
IN COUNCIL

ORDER NO. 264

ORDERED:

This order was returned to the City Council on June 20, 1989, with the Mayor's disapproval with a statement in writing giving his objections to the order. On October 2, 1989 the order was passed to be ordained notwithstanding the veto of the Mayor. Eight voting YES and one voting NO - Councillor Timothy P. Cahill voting in the negative.

ATTEST:



Clerk of Council

00850-36

YEAS Cahill, Cheney, Chretien, DeCristofaro, McGrath, Nutley, Phelan, Sheets, Toland

NAYS Cahill, Cheney, Chretien, DeCristofaro, McGrath, Nutley, Phelan, Sheets, Toland

## ARTICLE 11

### THE COMMONWEALTH OF MASSACHUSETTS THE CITY OF QUINCY, MASSACHUSETTS SUPPLEMENTAL EQUAL EMPLOYMENT OPPORTUNITY ANTI-DISCRIMINATION AND AFFIRMATIVE ACTION PROGRAM

- I. For purposes of this contract, "minority" refers to Asian-Americans, Blacks, Spanish Surnamed Americans, North American Indians, and Cape Verdeans. "Commission" refers to the Massachusetts Commission Against Discrimination. "City" refers to the City of Quincy, Massachusetts.
- II. During the performance of this contract, the Contractor and all of his subcontractors (hereinafter collectively referred to as the Contractor), for himself, his assignees, and successors in interests, agree as follows:
  1. In connection with the performance of the work under this contract, the Contractor shall not discriminate against any employee or applicant for employment because of race, color, religious creed, national origin, age or sex. The aforesaid provision shall include, but not be limited to the following: employment upgrading, demotion, or transfer; recruitment advertising, recruitment layoff, termination; rates of pay or other forms of compensation; conditions or privileges of employment; and selection for apprenticeship. The Contractor shall post hereafter in conspicuous places, available for employees and applicants for employment, notices to be provided by the Commission setting forth the provisions of the Fair Employment Practices Law of the Commonwealth (MGL Chapter 151B).
  2. In connection with the performance of the work under this contract, the contractor shall undertake in good faith affirmative action measures designed to eliminate any discriminatory barriers in the terms and conditions of employment on the grounds of race, color, religious creed, national origin, age or sex, and to eliminate and remedy any affects of such discrimination in the past. Such affirmative action shall entail positive and aggressive measures to ensure equal opportunity in the areas of hiring, upgrading, demotion or transfer, recruitment, layoff or termination, rate of compensation, and in-service or apprenticeship training programs. This affirmative action shall include all action required to guarantee equal employment opportunity

for all persons, regardless of race, color, religious creed, national origin, age, or sex. A purpose of this provision is to ensure to the fullest extent possible an adequate supply of skilled tradesmen for this and future City public construction projects.

- III. 1. As part of his obligation of remedial action under the foregoing section, the Contractor shall maintain on this project a not less than 15% ratio of minority employee man hours to total man hours in each job category, including but not limited to bricklayers, carpenters, cement masons, electricians, ironworkers, operating engineers, and those "classes of work" enumerated in Section 44C of Chapter 149 of the Massachusetts General Laws.
2. In the hiring of minority journeymen, apprentices, trainees and advanced trainees, the Contractor shall rely on referrals from a multi-employer affirmative action program approved by the City, traditional referral methods utilized by the construction industry, and referrals from agencies, not more than three in number at any one time, designated by the Liaison Committee or the City.
- IV. 1. At the discretion of either the Commission or the City, there may be established for the life of this contract a body to be known as the Liaison Committee. The Liaison Committee shall be composed of one representative each from the agency or agencies administering this project, hereinafter called the contracting agency, the City and such other representatives as may be designated by the Commission or the City in conjunction with the administering agency.
2. The Contractor (or his agent, if any, designated by him as the on-site equal employment officer) shall recognize the Liaison Committee as an affirmative action body, and shall establish a continuing working relationship with the Liaison Committee, consulting with the Liaison Committee on all matters related to minority recruitment, referral, employment and training.
3. The Contractor shall prepare projected manning tables on a quarterly basis. These shall be broken down into projections by week, or workers required in each trade. Copies shall be furnished one week in advance of the commencement of the period covered, and also when updated to the City and Liaison Committee.
4. Records of employment referral orders, prepared by the Contractor, shall be made available to the City and to the Liaison Committee on request.

5. The Contractor shall prepare weekly reports in a form approved by the Commission of hours worked in each trade by each employee, identified as minority or non-minority. Copies of these shall be provided at the end of each such week to the City and to the Liaison Committee.

V. If the Contractor shall use any subcontractor on any work performed under this contract, he shall take affirmative action to negotiate with qualified minority subcontractors. This affirmative action shall cover both pre-bid and post-bid periods. It shall include notification to the Office of Minority Business Assistance (within the Executive Office of Communities and Development) or its designee, while bids are in preparation, of all products, work or services for which the Contractor intends to negotiate bids. See attached requirements of City's Minority Business Enterprise Program.

VI. In the employment of journeymen, apprentices, trainees and advanced trainees, the Contractor shall give preference first to citizens of the Commonwealth of Massachusetts who have served in the armed forces of the United States in the time of war and have been honorably discharged therefrom or released from active duty therein, and are qualified to perform the work to which the employment relates, and, secondly, to citizens of the Commonwealth of Massachusetts, generally, and if such cannot be obtained in sufficient number, then to citizens of the United States.

VII. A designee of the City and a designee of the Liaison Committee shall each have right of access to the construction site.

VIII. Compliance with Requirements

The Contractor shall comply with the provisions of Executive Order No. 74, as amended by Executive Order 116, dated May 1, 1975, and of Chapter 151B, as amended, of the Massachusetts General Laws, both of which are herein incorporated by reference and made a part of this contract.

IX. Non-Discrimination

The Contractor, in the performance of all work after award, and prior to completion of the contract work, will not discriminate on grounds of race, color, religious creed, national origin, age or sex in employment practices, in the selection or retention of subcontractors, or in the procurement of materials and rentals of equipment.

X. Solicitations for Sub-Contractors  
and for the Procurement of Materials and Equipment

In all solicitations either by competitive bidding or negotiation made by the Contractor either for work to be performed under a subcontract or for the procurement of materials or equipment, each potential subcontractor or supplier shall be notified in writing by the Contractor of the Contractor's obligations under this contract relative to non-discrimination and affirmative action.

XI. Bidders Certification Requirement

1. The following certification statement will be inserted in the bid document just above the bidder's signature.

"The bidder hereby certifies that he shall comply with the minority manpower ratio and specific action steps contained in the Supplemental Equal Employment Opportunity Anti-Discrimination and Affirmative Action Plan (Supplemental EEO) attached hereto, including compliance specified therein. The contractor receiving the award of the contract shall be required to obtain from each of its subcontractors and submit to the contracting agency prior to the performance of any work under said contract a certification by said subcontractor, regardless of tier, that it will comply with the minority manpower ratio and specific affirmative action steps contained in the Supplemental EEO."

XII. Contractor's Certification

The Contractor's certification form must be signed by all successful bidder(s) prior to award by the contracting agency (see Section 00450).

XIII. Compliance Information, Reports and Sanctions

1. The Contractor will provide all information and reports required by the administering agency or the City on instruction issued by either of them and will permit access to its facilities and any books, records, accounts, and other sources of information which may be determined by the City to affect the employment of personnel. This provision shall apply only to information pertinent to the City's supplementary affirmative action contract requirements. Where information required is in the exclusive possession of another who fails or refuses to furnish this information, the Contractor shall so certify to the administering agency or the City as appropriate, and shall set forth what efforts he has made to obtain the information.
2. Whenever the administering agency, the City, or the Liaison Committee believes the General Contractor or any subcontractor may not be operating in compliance with the terms of this section, the City directly, or through its

designated agent, shall conduct an appropriate investigation, and may confer with the parties, to determine if such contractor is operating in compliance with the terms of this section. If the City or its agent finds the General Contractor or any subcontractor not in compliance with the terms of this section, it shall make a preliminary report of non-compliance, and notify such Contractor in writing of such steps as will in the judgement of the City or its agent, bring such Contractor into compliance. In the event that such Contractor fails or refuses to fully perform such steps, the City shall make a final report of non-compliance, and recommend to the contracting agency the imposition of one or more of the sanctions listed below. If, however, the City believes the General Contractor or any subcontractor has taken or is taking every possible measure to achieve compliance, it shall not make a final report of non-compliance. Within fourteen days of the receipt of the recommendation of the City, the contracting agency shall move to impose one or more of the following sanctions, as it may deem appropriate to attain full and effective enforcement:

- a. The recovery by the administering agency from the General Contractor of 1/100 of 1% of the Contract award price, or \$1,000., whichever is greater, in the nature of liquidated damages, or, if a subcontractor is in non-compliance, the recovery by the contracting agency from the General Contractor to be assessed by the General Contractor as a back charge against the subcontractor of 1/10 of 1% of the subcontract price, or \$400., whichever is greater, in the nature of liquidated damages, for each week that such party fails or refuses to comply.
  - b. The suspension of any payment or part thereof due under the contract until such time as the General Contractor or any subcontractor is able to demonstrate his compliance with the terms of this section.
  - c. The termination, or cancellation of the contract, in whole or in part, unless the General Contractor or any subcontractor is able to demonstrate within a specified time his compliance with the terms of the contract.
  - d. The denial to the General Contractor or any subcontractor of the right to participate in any future contracts awarded by the administering agency for a period of up to three years.
3. If at any time after the imposition of one or more of the above sanctions a contractor is able to demonstrate that he is in compliance with this section,

he may request the administering agency, in consultation with the City to suspend the sanctions conditionally, pending a final determination by the City as to whether the Contractor is in compliance. Upon final determination of the City, the administering agency, based on the recommendation of the City, shall either lift the sanctions or reimpose them.

4. Sanctions enumerated under Sections XI-2 shall not be imposed by the administering agency except after an adjudicatory proceeding, as that term is used in MGL c.30A, has been conducted. No investigation by the City or its agent shall be initiated without prior notice to the Contractor.

#### XIV. Severability

The provisions of this section are severable, and if any of these provisions shall be held unconstitutional by any court of competent jurisdiction, the decision of such court shall not affect or impair any of the remaining provisions.

May 16, 1988

*Public Works  
Adm.*

ORDERED:

Be it ordered that Chapter 24 of the Zoning Ordinance of the City of Quincy as amended, be further amended in Art. VIII, by adding a new section 87: Blasting.

Section 87

1. Pre-blast Survey

- a. For all permits issued for blasting (rock excavation) in the City of Quincy, a pre-blast survey must be made by the contractor or by an approved firm in this kind of work and satisfactory to the contractor's insurance company.
- b. The pre-blast survey will include a survey of the interior and exterior of existing buildings and stone walls adjacent to the project as specified herein, before any excavation or blasting is done. Written approval must be secured from the Fire Chief, City Engineer and Building Inspector serving as the Committee on Blasting.
- c. The survey shall record all visible structural defects such as cracks, settlement and lines out of plumb.
- d. The survey data shall be recorded in a permanent manner in approved hardbound notebooks. The survey data shall include polaroid photographs showing the building constructions surveyed referenced to the notebook pages. Also a tape recording of all data pertinent to the survey shall be made. The scope and format of the record survey data shall be satisfactory to the Committee on Blasting. Before commencing any blasting or ledge excavation, copies of the survey must be on file at the offices of the Quincy City Engineer, and Quincy City Clerk, City Hall, Quincy, MA.
- e. The adjacent area requiring the pre-blasting survey is specified as all buildings and stone walls within a radius of three hundred fifty feet (350) from said blast.
- f. Provided, however, that no pre-blasting survey shall be required if blasting is within the following limits: The total charge weight per blast does not exceed five (5) pounds and the maximum weight per delay does not exceed two pounds per delay.

YEAS Cahill, Cheney, Chretien, DeCristofaro, McGrath, Nutley, Phelan, Sheets, Toland

NAYS Cahill, Cheney, Chretien, DeCristofaro, McGrath, Nutley, Phelan, Sheets, Toland

- ORDER NO. \_\_\_\_\_  
ORDERED:
- g. If blasting is designed to excavate more than a ten (10) cubic yard area, the contractor must post a bond with the City of Quincy. The amount of said bond shall be determined by the Committee on Blasting. The Committee on Blasting will not release the bond until it is convinced that all judgments and claims have been reasonably dealt with by the contractor.
  - h. All blasting is to be supervised on site by an authorized member of the Fire Department, assigned by the Chief, and the cost of said supervision shall be the sole responsibility of the contractor.
  - i. Any person who shall violate any of the provisions of this ordinance, as determined by the Committee on Blasting, or who fails to comply therewith, shall severally, for each and every violation and noncompliance respectively, be liable to a penalty of two hundred dollars (\$200.00) for each offense.

PASSED TO BE ORDAINED OCTOBER 16, 1989

ATTEST

*John M. Dyllis*  
CLERK OF COUNCIL

APPROVED

OCT 23 1989

*Francis McAuley*  
MAYOR

YEAS Cahill, Cheney, Chretien, DeCristofaro, McGrath, Nutley, Phelan, Sheets, Toland

NAYS Cahill, Cheney, Chretien, DeCristofaro, McGrath, Nutley, Phelan, Sheets, Toland

## **DRAWING LIST**

C-001	COVER
C-100	NOTES & ABBREVIATIONS
C-200	OVERALL LOCATION, KEY PLAN, SURVEY CONTROL AND LEGEND
C-201	EDGEMERE ROAD & EDGEWOOD CIRCLE IMPROVEMENT PLAN
C-202	WOODWARD AVENUE IMPROVEMENT PLAN
C-203	RESOURCE AREA IMPROVEMENT PLAN
C-204	SOUTHERN ARTERY IMPROVEMENT PLAN 1
C-205	SOUTHERN ARTERY IMPROVEMENT PLAN 2
C-206	BROAD STREET TIDE GATE IMPROVEMENT PLAN
C-300	BROAD STREET TIDAL GATE PLAN, SECTION, & NOTES
C-301	BROAD STREET TIDAL GATE DETAILS & GENERAL NOTES
C-302	PROJECT DETAILS 1
C-303	PROJECT DETAILS 2
C-304	PROJECT DETAILS 3

## SECTION 00890 - PERMITS

### 1. GENERAL REQUIREMENTS

- A. The Owner has obtained or will obtain and pay for the permits listed below, which are required for this project. The Contractor shall assist in obtaining certain permits, as indicated. The Contractor shall obtain and pay for all other permits required, as defined under the Permits subsection of Section 00700, GENERAL CONDITIONS.

<u>Permits by Owner</u>	<u>Status</u>
Conservation Commission Order of Conditions	Approved
Army Corps of Engineers Programatic General Permit Category 2	Approved

- B. The Contractor shall perform the work in accordance with the Contract Documents, including any permits/orders and any applicable municipal requirements.

### 2. Conservation Commission Order of Conditions

The City of Quincy Conservation Commission has under the authority of Massachusetts General Laws Chapter 131, Section 40, issued an Order of Conditions on the work under this contract located in wetland resource areas. The Order will become part of the Contract Documents and the Contractor shall perform all work in strict conformance with said Order. Anticipated permit conditions are defined in Specification Appendix A, and those requirements shall be used as the basis of this bid.

### 3. DEP Water Quality Certifications (BRP WW 10 and WW 08)

The State of Massachusetts will issue a Water Quality Certification (WQC) waiver for the work under this contract located in wetland resource areas.

### 4. Army Corps of Engineers Category 2 Permit

The Army Corps of Engineers has issued a Category 2 permit for the work under this contract located below spring high tide line. The Category 2 permit will become part of the Contract Documents and the Contractor shall perform all work in strict conformance with said Order. Anticipated permit conditions are defined in Specification Appendix A, Work in Coastal Resource Areas, and those requirements shall be used as the basis of this bid.

### 5. Permits from the City of Quincy Inspectional Services Department and Engineering Department must be obtained by the Contractor for the work, including but not limited to:

- A. Quincy Road Opening Permit.
- B. Massachusetts Trench Permit.

\*\*\*END OF SECTION\*\*\*



THE COMMONWEALTH OF MASSACHUSETTS  
EXECUTIVE OFFICE OF LABOR AND WORKFORCE DEVELOPMENT  
**DEPARTMENT OF LABOR STANDARDS**

**Prevailing Wage Rates**

As determined by the Director under the provisions of the  
Massachusetts General Laws, Chapter 149, Sections 26 to 27H

JOANNE F. GOLDSTEIN  
Secretary

HEATHER E. ROWE  
Director

DEVAL L. PATRICK  
Governor

TIMOTHY P. MURRAY  
Lt. Governor

**Awarding Authority:** City of Quincy  
**Contract Number:** **City/Town:** QUINCY  
**Description of Work:** Stormwater drainage structure & conduit repair, drainage structure concrete repair, Tide gate removal & replacement, drain line excavation, curb removal & replacement, bituminous asphalt paving  
**Job Location:** Broad St, Southern Artery, Woodward Ave

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
<b>Construction</b>						
(2 AXLE) DRIVER - EQUIPMENT <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE A</i>	12/01/2011	\$30.95	\$8.56	\$7.27	0.00	\$46.78
	06/01/2012	\$31.25	\$8.56	\$7.27	0.00	\$47.08
	08/01/2012	\$31.25	\$8.91	\$7.27	0.00	\$47.43
	12/01/2012	\$31.55	\$8.91	\$8.00	0.00	\$48.46
(3 AXLE) DRIVER - EQUIPMENT <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE A</i>	12/01/2011	\$31.02	\$8.56	\$7.27	0.00	\$46.85
	06/01/2012	\$31.32	\$8.56	\$7.27	0.00	\$47.15
	08/01/2012	\$31.32	\$8.91	\$7.27	0.00	\$47.50
	12/01/2012	\$31.62	\$8.91	\$8.00	0.00	\$48.53
(4 & 5 AXLE) DRIVER - EQUIPMENT <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE A</i>	12/01/2011	\$31.14	\$8.56	\$7.27	0.00	\$46.97
	06/01/2012	\$31.44	\$8.56	\$7.27	0.00	\$47.27
	08/01/2012	\$31.44	\$8.91	\$7.27	0.00	\$47.62
	12/01/2012	\$31.74	\$8.91	\$8.00	0.00	\$48.65
ADS/SUBMERSIBLE PILOT <i>PILE DRIVER LOCAL 56 (ZONE 1)</i>	08/01/2011	\$80.43	\$9.80	\$17.12	0.00	\$107.35
AIR TRACK OPERATOR <i>LABORERS - ZONE 1</i>	12/01/2011	\$32.55	\$7.10	\$12.45	0.00	\$52.10
ASBESTOS REMOVER - PIPE / MECH. EQUIPT. <i>ASBESTOS WORKERS LOCAL 6 (BOSTON)</i>	12/01/2011	\$28.40	\$9.90	\$5.95	0.00	\$44.25
ASPHALT RAKER <i>LABORERS - ZONE 1</i>	12/01/2011	\$32.05	\$7.10	\$12.45	0.00	\$51.60
ASPHALT/CONCRETE/CRUSHER PLANT-ON SITE <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2011	\$39.52	\$10.00	\$12.40	0.00	\$61.92
	06/01/2012	\$40.09	\$10.00	\$12.40	0.00	\$62.49
	12/01/2012	\$40.71	\$10.00	\$12.40	0.00	\$63.11
	06/01/2013	\$41.49	\$10.00	\$12.40	0.00	\$63.89
	12/01/2013	\$42.27	\$10.00	\$12.40	0.00	\$64.67

This wage schedule must be posted by the contractor at the work site in accordance with M.G.L. ch. 149, sec. 27. Failure of the employer to pay "prevailing wage rates," which are the "total rates" listed above, on public works projects is a violation of M.G.L. ch. 149, sec. 27. Contractors with questions about the wage rates or classifications included on the wage schedule have an affirmative obligation to inquire with DLS at [www.mass.gov/dols](http://www.mass.gov/dols) or at 617-626-6952. Employees not receiving such rates should report the violation to the Fair Labor Division of the Office of the Attorney General, 100 Cambridge Street, Boston, MA 02108; Tel:



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DEPARTMENT OF LABOR STANDARDS

**Prevailing Wage Rates**

As determined by the Director under the provisions of the  
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JOANNE F. GOLDSTEIN  
Secretary

HEATHER E. ROWE  
Director

DEVAL L. PATRICK  
Governor

TIMOTHY P. MURRAY  
Lt. Governor

**Awarding Authority:** City of Quincy  
**Contract Number:** **City/Town:** QUINCY  
**Description of Work:** Stormwater drainage structure & conduit repair, drainage structure concrete repair, Tide gate removal & replacement, drain line excavation, curb removal & replacement, bituminous asphalt paving  
**Job Location:** Broad St, Southern Artery, Woodward Ave

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
BACKHOE/FRONT-END LOADER <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2011	\$39.52	\$10.00	\$12.40	0.00	\$61.92
	06/01/2012	\$40.09	\$10.00	\$12.40	0.00	\$62.49
	12/01/2012	\$40.71	\$10.00	\$12.40	0.00	\$63.11
	06/01/2013	\$41.49	\$10.00	\$12.40	0.00	\$63.89
	12/01/2013	\$42.27	\$10.00	\$12.40	0.00	\$64.67
BARCO-TYPE JUMPING TAMPER <i>LABORERS - ZONE 1</i>	12/01/2011	\$32.05	\$7.10	\$12.45	0.00	\$51.60
BLOCK PAVER, RAMMER / CURB SETTER <i>LABORERS - ZONE 1</i>	12/01/2011	\$32.55	\$7.10	\$12.45	0.00	\$52.10
BOILER MAKER <i>BOILERMAKERS LOCAL 29</i>	01/01/2010	\$37.70	\$6.97	\$11.18	0.00	\$55.85

**Apprentice - BOILERMAKER - Local 29**

**Effective Date - 01/01/2010**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	65	\$24.51	\$6.97	11.18	\$0.00	\$42.66
2	65	\$24.51	\$6.97	11.18	\$0.00	\$42.66
3	70	\$26.39	\$6.97	11.18	\$0.00	\$44.54
4	75	\$28.28	\$6.97	11.18	\$0.00	\$46.43
5	80	\$30.16	\$6.97	11.18	\$0.00	\$48.31
6	85	\$32.05	\$6.97	11.18	\$0.00	\$50.20
7	90	\$33.93	\$6.97	11.18	\$0.00	\$52.08
8	95	\$35.82	\$6.97	11.18	\$0.00	\$53.97

**Notes:**

**Apprentice to Journeyworker Ratio:1:5**

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**Prevailing Wage Rates**

As determined by the Director under the provisions of the  
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HEATHER E. ROWE  
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DEVAL L. PATRICK  
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TIMOTHY P. MURRAY  
Lt. Governor

**Awarding Authority:** City of Quincy  
**Contract Number:** **City/Town:** QUINCY  
**Description of Work:** Stormwater drainage structure & conduit repair, drainage structure concrete repair, Tide gate removal & replacement, drain line excavation, curb removal & replacement, bituminous asphalt paving  
**Job Location:** Broad St, Southern Artery, Woodward Ave

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
BRICK/STONE/ARTIFICIAL MASONRY (INCL. MASONRY WATERPROOFING) <i>BRICKLAYERS LOCAL 3 (QUINCY)</i>	03/01/2012	\$46.56	\$10.18	\$17.25	0.00	\$73.99

**Apprentice - BRICK/PLASTER/CEMENT MASON - Local 3 Quincy**

**Effective Date - 03/01/2012**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$23.28	\$10.18	17.25	\$0.00	\$50.71
2	60	\$27.94	\$10.18	17.25	\$0.00	\$55.37
3	70	\$32.59	\$10.18	17.25	\$0.00	\$60.02
4	80	\$37.25	\$10.18	17.25	\$0.00	\$64.68
5	90	\$41.90	\$10.18	17.25	\$0.00	\$69.33

**Notes:**

**Apprentice to Journeyworker Ratio:1:5**

BULLDOZER/GRADER/SCRAPER <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2011	\$39.16	\$10.00	\$12.40	0.00	\$61.56
	06/01/2012	\$39.72	\$10.00	\$12.40	0.00	\$62.12
	12/01/2012	\$40.34	\$10.00	\$12.40	0.00	\$62.74
	06/01/2013	\$41.11	\$10.00	\$12.40	0.00	\$63.51
	12/01/2013	\$41.89	\$10.00	\$12.40	0.00	\$64.29
CAISSON & UNDERPINNING BOTTOM MAN <i>LABORERS - FOUNDATION AND MARINE</i>	12/01/2011	\$32.80	\$7.10	\$12.60	0.00	\$52.50
CAISSON & UNDERPINNING LABORER <i>LABORERS - FOUNDATION AND MARINE</i>	12/01/2011	\$31.65	\$7.10	\$12.60	0.00	\$51.35
CAISSON & UNDERPINNING TOP MAN <i>LABORERS - FOUNDATION AND MARINE</i>	12/01/2011	\$31.65	\$7.10	\$12.60	0.00	\$51.35

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Lt. Governor

**Awarding Authority:** City of Quincy  
**Contract Number:** **City/Town:** QUINCY  
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Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
CARBIDE CORE DRILL OPERATOR <i>LABORERS - ZONE 1</i>	12/01/2011	\$32.05	\$7.10	\$12.45	0.00	\$51.60
CARPENTER <i>CARPENTERS -ZONE 2 (Eastern Massachusetts)</i>	03/01/2012	\$33.03	\$9.80	\$15.61	0.00	\$58.44

**Apprentice - CARPENTER - Zone 2 Eastern MA**

**Effective Date - 03/01/2012**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$16.52	\$9.80	1.57	\$0.00	\$27.89
2	60	\$19.82	\$9.80	1.57	\$0.00	\$31.19
3	70	\$23.12	\$9.80	10.90	\$0.00	\$43.82
4	75	\$24.77	\$9.80	10.90	\$0.00	\$45.47
5	80	\$26.42	\$9.80	12.47	\$0.00	\$48.69
6	80	\$26.42	\$9.80	12.47	\$0.00	\$48.69
7	90	\$29.73	\$9.80	14.04	\$0.00	\$53.57
8	90	\$29.73	\$9.80	14.04	\$0.00	\$53.57

**Notes:**

**Apprentice to Journeyworker Ratio:1:5**

CEMENT MASONRY/PLASTERING <i>BRICKLAYERS LOCAL 3 (QUINCY)</i>	02/01/2012	\$45.10	\$9.93	\$16.51	0.00	\$71.54
CHAIN SAW OPERATOR <i>LABORERS - ZONE 1</i>	12/01/2011	\$32.05	\$7.10	\$12.45	0.00	\$51.60

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Lt. Governor

**Awarding Authority:** City of Quincy  
**Contract Number:** **City/Town:** QUINCY  
**Description of Work:** Stormwater drainage structure & conduit repair, drainage structure concrete repair, Tide gate removal & replacement, drain line excavation, curb removal & replacement, bituminous asphalt paving  
**Job Location:** Broad St, Southern Artery, Woodward Ave

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
CLAM SHELLS/SLURRY BUCKETS/HEADING MACHINES <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2011	\$40.52	\$10.00	\$12.40	0.00	\$62.92
	06/01/2012	\$41.09	\$10.00	\$12.40	0.00	\$63.49
	12/01/2012	\$41.71	\$10.00	\$12.40	0.00	\$64.11
	06/01/2013	\$42.49	\$10.00	\$12.40	0.00	\$64.89
	12/01/2013	\$43.27	\$10.00	\$12.40	0.00	\$65.67
COMPRESSOR OPERATOR <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2011	\$27.95	\$10.00	\$12.40	0.00	\$50.35
	06/01/2012	\$28.34	\$10.00	\$12.40	0.00	\$50.74
	12/01/2012	\$28.79	\$10.00	\$12.40	0.00	\$51.19
	06/01/2013	\$29.34	\$10.00	\$12.40	0.00	\$51.74
	12/01/2013	\$29.89	\$10.00	\$12.40	0.00	\$52.29
DELEADER (BRIDGE) <i>PAINTERS LOCAL 35 - ZONE 2</i>	01/01/2012	\$44.01	\$7.80	\$14.60	0.00	\$66.41
	07/01/2012	\$45.01	\$7.80	\$14.60	0.00	\$67.41
	01/01/2013	\$46.01	\$7.80	\$14.60	0.00	\$68.41

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**Awarding Authority:** City of Quincy  
**Contract Number:** City/Town: QUINCY  
**Description of Work:** Stormwater drainage structure & conduit repair, drainage structure concrete repair, Tide gate removal & replacement, drain line excavation, curb removal & replacement, bituminous asphalt paving  
**Job Location:** Broad St, Southern Artery, Woodward Ave

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
<b>Apprentice - PAINTER Local 35 - BRIDGES/TANKS</b>						
<b>Effective Date - 01/01/2012</b>						
Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$22.01	\$7.80	0.00	\$0.00	\$29.81
2	55	\$24.21	\$7.80	3.25	\$0.00	\$35.26
3	60	\$26.41	\$7.80	3.54	\$0.00	\$37.75
4	65	\$28.61	\$7.80	3.84	\$0.00	\$40.25
5	70	\$30.81	\$7.80	12.83	\$0.00	\$51.44
6	75	\$33.01	\$7.80	13.13	\$0.00	\$53.94
7	80	\$35.21	\$7.80	13.42	\$0.00	\$56.43
8	90	\$39.61	\$7.80	14.01	\$0.00	\$61.42
<b>Effective Date - 07/01/2012</b>						
Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$22.51	\$7.80	0.00	\$0.00	\$30.31
2	55	\$24.76	\$7.80	3.25	\$0.00	\$35.81
3	60	\$27.01	\$7.80	3.54	\$0.00	\$38.35
4	65	\$29.26	\$7.80	3.84	\$0.00	\$40.90
5	70	\$31.51	\$7.80	12.83	\$0.00	\$52.14
6	75	\$33.76	\$7.80	13.13	\$0.00	\$54.69
7	80	\$36.01	\$7.80	13.42	\$0.00	\$57.23
8	90	\$40.51	\$7.80	14.01	\$0.00	\$62.32

**Notes:**

Steps are 750 hrs.

**Apprentice to Journeyworker Ratio:1:1**

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**Awarding Authority:** City of Quincy  
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Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
DEMO: ADZEMAN LABORERS - ZONE 1	12/01/2011	\$31.80	\$7.10	\$12.45	0.00	\$51.35

**Apprentice - LABORER Demo (Group 1)**

**Effective Date -** 12/01/2011

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$19.08	\$7.10	12.45	\$0.00	\$38.63
2	70	\$22.26	\$7.10	12.45	\$0.00	\$41.81
3	80	\$25.44	\$7.10	12.45	\$0.00	\$44.99
4	90	\$28.62	\$7.10	12.45	\$0.00	\$48.17

**Notes:**

**Apprentice to Journeyworker Ratio:1:5**

DEMO: BACKHOE/LOADER/HAMMER OPERATOR LABORERS - ZONE 1	12/01/2011	\$32.80	\$7.10	\$12.45	0.00	\$52.35
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This wage schedule must be posted by the contractor at the work site in accordance with M.G.L. ch. 149, sec. 27. Failure of the employer to pay "prevailing wage rates," which are the "total rates" listed above, on public works projects is a violation of M.G.L. ch. 149, sec. 27. Contractors with questions about the wage rates or classifications included on the wage schedule have an affirmative obligation to inquire with DLS at [www.mass.gov/dols](http://www.mass.gov/dols) or at 617-626-6952. Employees not receiving such rates should report the violation to the Fair Labor Division of the Office of the Attorney General, 100 Cambridge Street, Boston, MA 02108; Tel:



THE COMMONWEALTH OF MASSACHUSETTS  
EXECUTIVE OFFICE OF LABOR AND WORKFORCE DEVELOPMENT  
DEPARTMENT OF LABOR STANDARDS

**Prevailing Wage Rates**

As determined by the Director under the provisions of the  
Massachusetts General Laws, Chapter 149, Sections 26 to 27H

JOANNE F. GOLDSTEIN  
Secretary

HEATHER E. ROWE  
Director

DEVAL L. PATRICK  
Governor

TIMOTHY P. MURRAY  
Lt. Governor

**Awarding Authority:** City of Quincy  
**Contract Number:** **City/Town:** QUINCY  
**Description of Work:** Stormwater drainage structure & conduit repair, drainage structure concrete repair, Tide gate removal & replacement, drain line excavation, curb removal & replacement, bituminous asphalt paving  
**Job Location:** Broad St, Southern Artery, Woodward Ave

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
<b>Apprentice - LABORER Demo (Group 3)</b>						
<b>Effective Date - 12/01/2011</b>						
Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$19.68	\$7.10	12.45	\$0.00	\$39.23
2	70	\$22.96	\$7.10	12.45	\$0.00	\$42.51
3	80	\$26.24	\$7.10	12.45	\$0.00	\$45.79
4	90	\$29.52	\$7.10	12.45	\$0.00	\$49.07
<b>Notes:</b>						
<b>Apprentice to Journeyworker Ratio:1:5</b>						
DEMO: BURNERS	12/01/2011	\$32.55	\$7.10	\$12.45	0.00	\$52.10
LABORERS - ZONE I						

**Apprentice - LABORER Demo (Group 2)**

**Effective Date - 12/01/2011**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$19.53	\$7.10	12.45	\$0.00	\$39.08
2	70	\$22.79	\$7.10	12.45	\$0.00	\$42.34
3	80	\$26.04	\$7.10	12.45	\$0.00	\$45.59
4	90	\$29.30	\$7.10	12.45	\$0.00	\$48.85

**Notes:**

**Apprentice to Journeyworker Ratio:1:5**

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Lt. Governor

**Awarding Authority:** City of Quincy  
**Contract Number:** **City/Town:** QUINCY  
**Description of Work:** Stormwater drainage structure & conduit repair, drainage structure concrete repair, Tide gate removal & replacement, drain line excavation, curb removal & replacement, bituminous asphalt paving  
**Job Location:** Broad St, Southern Artery, Woodward Ave

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
DEMO: CONCRETE CUTTER/SAWYER <i>LABORERS - ZONE 1</i>	12/01/2011	\$32.80	\$7.10	\$12.45	0.00	\$52.35

**Apprentice - LABORER Demo (Group 3)**

**Effective Date -** 12/01/2011

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$19.68	\$7.10	12.45	\$0.00	\$39.23
2	70	\$22.96	\$7.10	12.45	\$0.00	\$42.51
3	80	\$26.24	\$7.10	12.45	\$0.00	\$45.79
4	90	\$29.52	\$7.10	12.45	\$0.00	\$49.07

**Notes:**

**Apprentice to Journeyworker Ratio:1:5**

DEMO: JACKHAMMER OPERATOR <i>LABORERS - ZONE 1</i>	12/01/2011	\$32.55	\$7.10	\$12.45	0.00	\$52.10
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**Awarding Authority:** City of Quincy  
**Contract Number:** **City/Town:** QUINCY  
**Description of Work:** Stormwater drainage structure & conduit repair, drainage structure concrete repair, Tide gate removal & replacement, drain line excavation, curb removal & replacement, bituminous asphalt paving  
**Job Location:** Broad St, Southern Artery, Woodward Ave

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
<b>Apprentice - LABORER Demo (Group 2)</b>						
<b>Effective Date - 12/01/2011</b>						
Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$19.53	\$7.10	12.45	\$0.00	\$39.08
2	70	\$22.79	\$7.10	12.45	\$0.00	\$42.34
3	80	\$26.04	\$7.10	12.45	\$0.00	\$45.59
4	90	\$29.30	\$7.10	12.45	\$0.00	\$48.85
<b>Notes:</b>						
<b>Apprentice to Journeyworker Ratio:1:5</b>						
DEMO: WRECKING LABORER LABORERS - ZONE I	12/01/2011	\$31.80	\$7.10	\$12.45	0.00	\$51.35

**Apprentice - LABORER Demo (Group 1)**

**Effective Date - 12/01/2011**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$19.08	\$7.10	12.45	\$0.00	\$38.63
2	70	\$22.26	\$7.10	12.45	\$0.00	\$41.81
3	80	\$25.44	\$7.10	12.45	\$0.00	\$44.99
4	90	\$28.62	\$7.10	12.45	\$0.00	\$48.17

**Notes:**

**Apprentice to Journeyworker Ratio:1:5**

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**Awarding Authority:** City of Quincy  
**Contract Number:** **City/Town:** QUINCY  
**Description of Work:** Stormwater drainage structure & conduit repair, drainage structure concrete repair, Tide gate removal & replacement, drain line excavation, curb removal & replacement, bituminous asphalt paving  
**Job Location:** Broad St, Southern Artery, Woodward Ave

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
DIRECTIONAL DRILL MACHINE OPERATOR <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2011	\$39.16	\$10.00	\$12.40	0.00	\$61.56
	06/01/2012	\$39.72	\$10.00	\$12.40	0.00	\$62.12
	12/01/2012	\$40.34	\$10.00	\$12.40	0.00	\$62.74
	06/01/2013	\$41.11	\$10.00	\$12.40	0.00	\$63.51
	12/01/2013	\$41.89	\$10.00	\$12.40	0.00	\$64.29
DIVER <i>PILE DRIVER LOCAL 56 (ZONE 1)</i>	08/01/2011	\$53.62	\$9.80	\$17.12	0.00	\$80.54
DIVER TENDER <i>PILE DRIVER LOCAL 56 (ZONE 1)</i>	08/01/2011	\$38.30	\$9.80	\$17.12	0.00	\$65.22
DIVER TENDER (EFFLUENT) <i>PILE DRIVER LOCAL 56 (ZONE 1)</i>	08/01/2011	\$57.45	\$9.80	\$17.12	0.00	\$84.37
DIVER/SLURRY (EFFLUENT) <i>PILE DRIVER LOCAL 56 (ZONE 1)</i>	08/01/2011	\$80.43	\$9.80	\$17.12	0.00	\$107.35
ELECTRICIAN <i>ELECTRICIANS LOCAL 103</i>	03/01/2012	\$42.37	\$13.00	\$13.87	0.00	\$69.24
	09/01/2012	\$43.05	\$13.00	\$13.89	0.00	\$69.94
	03/01/2013	\$43.77	\$13.00	\$13.91	0.00	\$70.68
	09/01/2013	\$44.45	\$13.00	\$13.93	0.00	\$71.38
	03/01/2014	\$45.17	\$13.00	\$13.95	0.00	\$72.12
	09/01/2014	\$45.84	\$13.00	\$13.97	0.00	\$72.81
	03/01/2015	\$46.55	\$13.00	\$14.00	0.00	\$73.55
	09/01/2015	\$47.51	\$13.00	\$14.03	0.00	\$74.54
	03/01/2016	\$48.47	\$13.00	\$14.05	0.00	\$75.52

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**Awarding Authority:** City of Quincy  
**Contract Number:** **City/Town:** QUINCY  
**Description of Work:** Stormwater drainage structure & conduit repair, drainage structure concrete repair, Tide gate removal & replacement, drain line excavation, curb removal & replacement, bituminous asphalt paving  
**Job Location:** Broad St, Southern Artery, Woodward Ave

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
<b>Apprentice - ELECTRICIAN - Local 103</b>						
<b>Effective Date - 03/01/2012</b>						
Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$16.95	\$13.00	7.81	\$0.00	\$37.76
2	40	\$16.95	\$13.00	7.81	\$0.00	\$37.76
3	45	\$19.07	\$13.00	10.26	\$0.00	\$42.33
4	45	\$19.07	\$13.00	10.26	\$0.00	\$42.33
5	50	\$21.19	\$13.00	10.59	\$0.00	\$44.78
6	55	\$23.30	\$13.00	10.92	\$0.00	\$47.22
7	60	\$25.42	\$13.00	11.24	\$0.00	\$49.66
8	65	\$27.54	\$13.00	11.58	\$0.00	\$52.12
9	70	\$29.66	\$13.00	11.90	\$0.00	\$54.56
10	75	\$31.78	\$13.00	12.23	\$0.00	\$57.01
<b>Effective Date - 09/01/2012</b>						
Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$17.22	\$13.00	7.82	\$0.00	\$38.04
2	40	\$17.22	\$13.00	7.82	\$0.00	\$38.04
3	45	\$19.37	\$13.00	10.27	\$0.00	\$42.64
4	45	\$19.37	\$13.00	10.27	\$0.00	\$42.64
5	50	\$21.53	\$13.00	10.60	\$0.00	\$45.13
6	55	\$23.68	\$13.00	10.93	\$0.00	\$47.61
7	60	\$25.83	\$13.00	11.25	\$0.00	\$50.08
8	65	\$27.98	\$13.00	11.59	\$0.00	\$52.57
9	70	\$30.14	\$13.00	11.91	\$0.00	\$55.05
10	75	\$32.29	\$13.00	12.25	\$0.00	\$57.54

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Lt. Governor

**Awarding Authority:** City of Quincy  
**Contract Number:** **City/Town:** QUINCY  
**Description of Work:** Stormwater drainage structure & conduit repair, drainage structure concrete repair, Tide gate removal & replacement, drain line excavation, curb removal & replacement, bituminous asphalt paving  
**Job Location:** Broad St, Southern Artery, Woodward Ave

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
<b>Notes:</b> : App Prior 1/1/03; 30/35/40/45/50/55/65/70/75/80 <b>Apprentice to Journeyworker Ratio:2:3***</b>						
ELEVATOR CONSTRUCTOR ELEVATOR CONSTRUCTORS LOCAL 4	01/01/2012	\$52.45	\$8.78	\$6.96	0.00	\$68.19

**Apprentice - ELEVATOR CONSTRUCTOR - Local 4**

**Effective Date - 01/01/2012**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$26.23	\$8.78	0.00	\$0.00	\$35.01
2	55	\$28.85	\$8.78	6.96	\$0.00	\$44.59
3	65	\$34.09	\$8.78	6.96	\$0.00	\$49.83
4	70	\$36.72	\$8.78	6.96	\$0.00	\$52.46
5	80	\$41.96	\$8.78	6.96	\$0.00	\$57.70

**Notes:**  
Steps 1-2 are 6 mos.; Steps 3-5 are 1 year

**Apprentice to Journeyworker Ratio:1:1**

ELEVATOR CONSTRUCTOR HELPER ELEVATOR CONSTRUCTORS LOCAL 4	01/01/2012	\$38.59	\$8.78	\$6.96	0.00	\$54.33
FENCE & GUARD RAIL ERECTOR LABORERS - ZONE 1	12/01/2011	\$32.05	\$7.10	\$12.45	0.00	\$51.60

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**Awarding Authority:** City of Quincy  
**Contract Number:** **City/Town:** QUINCY  
**Description of Work:** Stormwater drainage structure & conduit repair, drainage structure concrete repair, Tide gate removal & replacement, drain line excavation, curb removal & replacement, bituminous asphalt paving  
**Job Location:** Broad St, Southern Artery, Woodward Ave

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
FIELD ENG.INST.PERSON-BLDG,SITE,HVY/HWY <i>OPERATING ENGINEERS LOCAL 4</i>	11/01/2011	\$37.49	\$10.00	\$12.20	0.00	\$59.69
	05/01/2012	\$37.90	\$10.00	\$12.40	0.00	\$60.30
	11/01/2012	\$38.51	\$10.00	\$12.40	0.00	\$60.91
	05/01/2013	\$39.12	\$10.00	\$12.40	0.00	\$61.52
	11/01/2013	\$39.88	\$10.00	\$12.40	0.00	\$62.28
	05/01/2014	\$40.65	\$10.00	\$12.40	0.00	\$63.05
FIELD ENG.PARTY CHIEF-BLDG,SITE,HVY/HWY <i>OPERATING ENGINEERS LOCAL 4</i>	11/01/2011	\$38.88	\$10.00	\$12.20	0.00	\$61.08
	05/01/2012	\$39.29	\$10.00	\$12.40	0.00	\$61.69
	11/01/2012	\$39.91	\$10.00	\$12.40	0.00	\$62.31
	05/01/2013	\$40.53	\$10.00	\$12.40	0.00	\$62.93
	11/01/2013	\$41.30	\$10.00	\$12.40	0.00	\$63.70
	05/01/2014	\$42.07	\$10.00	\$12.40	0.00	\$64.47
FIELD ENG.ROD PERSON-BLDG,SITE,HVY/HWY <i>OPERATING ENGINEERS LOCAL 4</i>	11/01/2011	\$20.91	\$10.00	\$12.20	0.00	\$43.11
	05/01/2012	\$21.07	\$10.00	\$12.40	0.00	\$43.47
	11/01/2012	\$21.43	\$10.00	\$12.40	0.00	\$43.83
	05/01/2013	\$21.79	\$10.00	\$12.40	0.00	\$44.19
	11/01/2013	\$22.25	\$10.00	\$12.40	0.00	\$44.65
	05/01/2014	\$22.70	\$10.00	\$12.40	0.00	\$45.10
FIRE ALARM INSTALLER <i>ELECTRICIANS LOCAL 103</i>	03/01/2012	\$42.37	\$13.00	\$13.87	0.00	\$69.24
	09/01/2012	\$43.05	\$13.00	\$13.89	0.00	\$69.94
	03/01/2013	\$43.77	\$13.00	\$13.91	0.00	\$70.68
	09/01/2013	\$44.45	\$13.00	\$13.93	0.00	\$71.38
	03/01/2014	\$45.17	\$13.00	\$13.95	0.00	\$72.12
	09/01/2014	\$45.84	\$13.00	\$13.97	0.00	\$72.81
	03/01/2015	\$46.55	\$13.00	\$14.00	0.00	\$73.55
	09/01/2015	\$47.51	\$13.00	\$14.03	0.00	\$74.54
	03/01/2016	\$48.47	\$13.00	\$14.05	0.00	\$75.52

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**Awarding Authority:** City of Quincy

**Contract Number:** **City/Town:** QUINCY

**Description of Work:** Stormwater drainage structure & conduit repair, drainage structure concrete repair, Tide gate removal & replacement, drain line excavation, curb removal & replacement, bituminous asphalt paving

**Job Location:** Broad St, Southern Artery, Woodward Ave

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
FIRE ALARM REPAIR / MAINTENANCE / COMMISSIONING <i>ELECTRICIANS</i> <i>LOCAL 103</i>	03/01/2012	\$31.78	\$13.00	\$12.23	0.00	\$57.01
	09/01/2012	\$32.29	\$13.00	\$12.25	0.00	\$57.54
	03/01/2013	\$32.83	\$13.00	\$12.26	0.00	\$58.09
	09/01/2013	\$33.34	\$13.00	\$12.28	0.00	\$58.62
	03/01/2014	\$33.88	\$13.00	\$12.30	0.00	\$59.18
	09/01/2014	\$34.38	\$13.00	\$12.31	0.00	\$59.69
	03/01/2015	\$34.91	\$13.00	\$12.33	0.00	\$60.24
	09/01/2015	\$35.63	\$13.00	\$12.35	0.00	\$60.98
	03/01/2016	\$36.35	\$13.00	\$12.37	0.00	\$61.72
FIREMAN (ASST. ENGINEER) <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2011	\$33.23	\$10.00	\$12.40	0.00	\$55.63
	06/01/2012	\$33.70	\$10.00	\$12.40	0.00	\$56.10
	12/01/2012	\$34.23	\$10.00	\$12.40	0.00	\$56.63
	06/01/2013	\$34.88	\$10.00	\$12.40	0.00	\$57.28
	12/01/2013	\$35.54	\$10.00	\$12.40	0.00	\$57.94
FLAGGER & SIGNALER <i>LABORERS - ZONE 1</i>	12/01/2011	\$20.50	\$7.10	\$12.45	0.00	\$40.05
FLOORCOVERER <i>FLOORCOVERERS LOCAL 2168 ZONE 1</i>	03/01/2012	\$37.20	\$9.80	\$16.61	0.00	\$63.61

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THE COMMONWEALTH OF MASSACHUSETTS  
EXECUTIVE OFFICE OF LABOR AND WORKFORCE DEVELOPMENT  
**DEPARTMENT OF LABOR STANDARDS**

**Prevailing Wage Rates**

As determined by the Director under the provisions of the  
Massachusetts General Laws, Chapter 149, Sections 26 to 27H

JOANNE F. GOLDSTEIN  
Secretary

HEATHER E. ROWE  
Director

DEVAL L. PATRICK  
Governor

TIMOTHY P. MURRAY  
Lt. Governor

**Awarding Authority:** City of Quincy  
**Contract Number:** **City/Town:** QUINCY  
**Description of Work:** Stormwater drainage structure & conduit repair, drainage structure concrete repair, Tide gate removal & replacement, drain line excavation, curb removal & replacement, bituminous asphalt paving  
**Job Location:** Broad St, Southern Artery, Woodward Ave

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
<b>Apprentice - FLOORCOVERER - Local 2168 Zone I</b>						
<b>Effective Date - 03/01/2012</b>						
Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$18.60	\$9.80	1.79	\$0.00	\$30.19
2	55	\$20.46	\$9.80	1.79	\$0.00	\$32.05
3	60	\$22.32	\$9.80	11.24	\$0.00	\$43.36
4	65	\$24.18	\$9.80	11.24	\$0.00	\$45.22
5	70	\$26.04	\$9.80	13.03	\$0.00	\$48.87
6	75	\$27.90	\$9.80	13.03	\$0.00	\$50.73
7	80	\$29.76	\$9.80	14.82	\$0.00	\$54.38
8	85	\$31.62	\$9.80	14.82	\$0.00	\$56.24

**Notes:**

Steps are 750 hrs.

**Apprentice to Journeyworker Ratio:1:1**

FORK LIFT/CHERRY PICKER OPERATING ENGINEERS LOCAL 4	12/01/2011	\$39.52	\$10.00	\$12.40	0.00	\$61.92
	06/01/2012	\$40.09	\$10.00	\$12.40	0.00	\$62.49
	12/01/2012	\$40.71	\$10.00	\$12.40	0.00	\$63.11
	06/01/2013	\$41.49	\$10.00	\$12.40	0.00	\$63.89
	12/01/2013	\$42.27	\$10.00	\$12.40	0.00	\$64.67
GENERATOR/LIGHTING PLANT/HEATERS OPERATING ENGINEERS LOCAL 4	12/01/2011	\$27.95	\$10.00	\$12.40	0.00	\$50.35
	06/01/2012	\$28.34	\$10.00	\$12.40	0.00	\$50.74
	12/01/2012	\$28.79	\$10.00	\$12.40	0.00	\$51.19
	06/01/2013	\$29.34	\$10.00	\$12.40	0.00	\$51.74
	12/01/2013	\$29.89	\$10.00	\$12.40	0.00	\$52.29

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 DEPARTMENT OF LABOR STANDARDS

**Prevailing Wage Rates**

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 Massachusetts General Laws, Chapter 149, Sections 26 to 27H

JOANNE F. GOLDSTEIN  
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 Lt. Governor

**Awarding Authority:** City of Quincy  
**Contract Number:** **City/Town:** QUINCY  
**Description of Work:** Stormwater drainage structure & conduit repair, drainage structure concrete repair, Tide gate removal & replacement, drain line excavation, curb removal & replacement, bituminous asphalt paving  
**Job Location:** Broad St, Southern Artery, Woodward Ave

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
GLAZIER (GLASS PLANK/AIR BARRIER/INTERIOR SYSTEMS)	01/01/2012	\$33.51	\$7.80	\$14.60	0.00	\$55.91
GLAZIERS LOCAL 35 (ZONE 2)	07/01/2012	\$34.51	\$7.80	\$14.60	0.00	\$56.91
	01/01/2013	\$35.51	\$7.80	\$14.60	0.00	\$57.91

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**Awarding Authority:** City of Quincy  
**Contract Number:** **City/Town:** QUINCY  
**Description of Work:** Stormwater drainage structure & conduit repair, drainage structure concrete repair, Tide gate removal & replacement, drain line excavation, curb removal & replacement, bituminous asphalt paving  
**Job Location:** Broad St, Southern Artery, Woodward Ave

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
<b>Apprentice - GLAZIER - Local 35 Zone 2</b>						
<b>Effective Date - 01/01/2012</b>						
Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$16.76	\$7.80	0.00	\$0.00	\$24.56
2	55	\$18.43	\$7.80	3.25	\$0.00	\$29.48
3	60	\$20.11	\$7.80	3.54	\$0.00	\$31.45
4	65	\$21.78	\$7.80	3.84	\$0.00	\$33.42
5	70	\$23.46	\$7.80	12.83	\$0.00	\$44.09
6	75	\$25.13	\$7.80	13.13	\$0.00	\$46.06
7	80	\$26.81	\$7.80	13.42	\$0.00	\$48.03
8	90	\$30.16	\$7.80	14.01	\$0.00	\$51.97
<b>Effective Date - 07/01/2012</b>						
Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$17.26	\$7.80	0.00	\$0.00	\$25.06
2	55	\$18.98	\$7.80	3.25	\$0.00	\$30.03
3	60	\$20.71	\$7.80	3.54	\$0.00	\$32.05
4	65	\$22.43	\$7.80	3.84	\$0.00	\$34.07
5	70	\$24.16	\$7.80	12.83	\$0.00	\$44.79
6	75	\$25.88	\$7.80	13.13	\$0.00	\$46.81
7	80	\$27.61	\$7.80	13.42	\$0.00	\$48.83
8	90	\$31.06	\$7.80	14.01	\$0.00	\$52.87

**Notes:**

Steps are 750 hrs.

**Apprentice to Journeyworker Ratio:1:1**

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JOANNE F. GOLDSTEIN  
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HEATHER E. ROWE  
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DEVAL L. PATRICK  
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TIMOTHY P. MURRAY  
Lt. Governor

**Awarding Authority:** City of Quincy

**Contract Number:** **City/Town:** QUINCY

**Description of Work:** Stormwater drainage structure & conduit repair, drainage structure concrete repair, Tide gate removal & replacement, drain line excavation, curb removal & replacement, bituminous asphalt paving

**Job Location:** Broad St, Southern Artery, Woodward Ave

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
HOISTING ENGINEER/CRANES/GRADALLS <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2011	\$39.52	\$10.00	\$12.40	0.00	\$61.92
	06/01/2012	\$40.09	\$10.00	\$12.40	0.00	\$62.49
	12/01/2012	\$40.71	\$10.00	\$12.40	0.00	\$63.11
	06/01/2013	\$41.49	\$10.00	\$12.40	0.00	\$63.89
	12/01/2013	\$42.27	\$10.00	\$12.40	0.00	\$64.67

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**Awarding Authority:** City of Quincy  
**Contract Number:** **City/Town:** QUINCY  
**Description of Work:** Stormwater drainage structure & conduit repair, drainage structure concrete repair, Tide gate removal & replacement, drain line excavation, curb removal & replacement, bituminous asphalt paving  
**Job Location:** Broad St, Southern Artery, Woodward Ave

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
<b>Apprentice - HOIST/PORT. ENG.- Local 4</b>						
<b>Effective Date - 12/01/2011</b>						
Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	55	\$21.74	\$10.00	0.00	\$0.00	\$31.74
2	60	\$23.71	\$10.00	12.40	\$0.00	\$46.11
3	65	\$25.69	\$10.00	12.40	\$0.00	\$48.09
4	70	\$27.66	\$10.00	12.40	\$0.00	\$50.06
5	75	\$29.64	\$10.00	12.40	\$0.00	\$52.04
6	80	\$31.62	\$10.00	12.40	\$0.00	\$54.02
7	85	\$33.59	\$10.00	12.40	\$0.00	\$55.99
8	90	\$35.57	\$10.00	12.40	\$0.00	\$57.97
<b>Effective Date - 06/01/2012</b>						
Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	55	\$22.05	\$10.00	0.00	\$0.00	\$32.05
2	60	\$24.05	\$10.00	12.40	\$0.00	\$46.45
3	65	\$26.06	\$10.00	12.40	\$0.00	\$48.46
4	70	\$28.06	\$10.00	12.40	\$0.00	\$50.46
5	75	\$30.07	\$10.00	12.40	\$0.00	\$52.47
6	80	\$32.07	\$10.00	12.40	\$0.00	\$54.47
7	85	\$34.08	\$10.00	12.40	\$0.00	\$56.48
8	90	\$36.08	\$10.00	12.40	\$0.00	\$58.48

Notes:

Apprentice to Journeyworker Ratio:1:6

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JOANNE F. GOLDSTEIN  
Secretary

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TIMOTHY P. MURRAY  
Lt. Governor

**Awarding Authority:** City of Quincy

**Contract Number:**

**City/Town:** QUINCY

**Description of Work:** Stormwater drainage structure & conduit repair, drainage structure concrete repair, Tide gate removal & replacement, drain line excavation, curb removal & replacement, bituminous asphalt paving

**Job Location:** Broad St, Southern Artery, Woodward Ave

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
HVAC (DUCTWORK) <i>SHEETMETAL WORKERS LOCAL 17 - A</i>	02/01/2012	\$40.79	\$9.82	\$17.34	2.04	\$69.99
	08/01/2012	\$42.04	\$9.82	\$17.34	2.08	\$71.28
	02/01/2013	\$43.29	\$9.82	\$17.34	2.11	\$72.56
HVAC (ELECTRICAL CONTROLS) <i>ELECTRICIANS LOCAL 103</i>	03/01/2012	\$42.37	\$13.00	\$13.87	0.00	\$69.24
	09/01/2012	\$43.05	\$13.00	\$13.89	0.00	\$69.94
	03/01/2013	\$43.77	\$13.00	\$13.91	0.00	\$70.68
	09/01/2013	\$44.45	\$13.00	\$13.93	0.00	\$71.38
	03/01/2014	\$45.17	\$13.00	\$13.95	0.00	\$72.12
	09/01/2014	\$45.84	\$13.00	\$13.97	0.00	\$72.81
	03/01/2015	\$46.55	\$13.00	\$14.00	0.00	\$73.55
	09/01/2015	\$47.51	\$13.00	\$14.03	0.00	\$74.54
	03/01/2016	\$48.47	\$13.00	\$14.05	0.00	\$75.52
HVAC (TESTING AND BALANCING - AIR) <i>SHEETMETAL WORKERS LOCAL 17 - A</i>	02/01/2012	\$40.79	\$9.82	\$17.34	2.04	\$69.99
	08/01/2012	\$42.04	\$9.82	\$17.34	2.08	\$71.28
	02/01/2013	\$43.29	\$9.82	\$17.34	2.11	\$72.56
HVAC (TESTING AND BALANCING - WATER) <i>PIPEFITTERS LOCAL 537</i>	03/01/2012	\$46.84	\$8.75	\$14.39	0.00	\$69.98
	09/01/2012	\$48.09	\$8.75	\$14.39	0.00	\$71.23
	03/01/2013	\$49.34	\$8.75	\$14.39	0.00	\$72.48
HVAC MECHANIC <i>PIPEFITTERS LOCAL 537</i>	03/01/2012	\$46.84	\$8.75	\$14.39	0.00	\$69.98
	09/01/2012	\$48.09	\$8.75	\$14.39	0.00	\$71.23
	03/01/2013	\$49.34	\$8.75	\$14.39	0.00	\$72.48
HYDRAULIC DRILLS <i>LABORERS - ZONE 1</i>	12/01/2011	\$32.55	\$7.10	\$12.45	0.00	\$52.10
INSULATOR (PIPES & TANKS) <i>ASBESTOS WORKERS LOCAL 6 (BOSTON)</i>	09/01/2011	\$40.66	\$10.40	\$11.20	0.00	\$62.26
	09/01/2012	\$42.06	\$10.40	\$11.20	0.00	\$63.66
	09/01/2013	\$43.66	\$10.40	\$11.20	0.00	\$65.26
	09/01/2014	\$45.66	\$10.40	\$11.20	0.00	\$67.26

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**Awarding Authority:** City of Quincy  
**Contract Number:** **City/Town:** QUINCY  
**Description of Work:** Stormwater drainage structure & conduit repair, drainage structure concrete repair, Tide gate removal & replacement, drain line excavation, curb removal & replacement, bituminous asphalt paving  
**Job Location:** Broad St, Southern Artery, Woodward Ave

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
<b>Apprentice - ASBESTOS INSULATOR (Pipes &amp; Tanks) - Local 6 Boston</b>						
<b>Effective Date - 09/01/2011</b>						
Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$20.33	\$10.40	8.30	\$0.00	\$39.03
2	60	\$24.40	\$10.40	8.88	\$0.00	\$43.68
3	70	\$28.46	\$10.40	9.46	\$0.00	\$48.32
4	80	\$32.53	\$10.40	10.04	\$0.00	\$52.97
<b>Effective Date - 09/01/2012</b>						
Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$21.03	\$10.40	8.30	\$0.00	\$39.73
2	60	\$25.24	\$10.40	8.88	\$0.00	\$44.52
3	70	\$29.44	\$10.40	9.46	\$0.00	\$49.30
4	80	\$33.65	\$10.40	10.04	\$0.00	\$54.09
<b>Notes:</b> Steps are 1 year						
<b>Apprentice to Journeyworker Ratio:1:4</b>						

IRONWORKER/WELDER	03/16/2012	\$38.28	\$7.70	\$17.95	0.00	\$63.93
IRONWORKERS LOCAL 7	09/16/2012	\$39.28	\$7.70	\$17.95	0.00	\$64.93
	03/16/2013	\$40.53	\$7.70	\$17.95	0.00	\$66.18

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**Awarding Authority:** City of Quincy  
**Contract Number:** **City/Town:** QUINCY  
**Description of Work:** Stormwater drainage structure & conduit repair, drainage structure concrete repair, Tide gate removal & replacement, drain line excavation, curb removal & replacement, bituminous asphalt paving  
**Job Location:** Broad St, Southern Artery, Woodward Ave

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
<b>Apprentice - IRONWORKER - Local 7 Boston</b>						
<b>Effective Date - 03/16/2012</b>						
Step percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate	
1 60	\$22.97	\$7.70	17.95	\$0.00	\$48.62	
2 70	\$26.80	\$7.70	17.95	\$0.00	\$52.45	
3 75	\$28.71	\$7.70	17.95	\$0.00	\$54.36	
4 80	\$30.62	\$7.70	17.95	\$0.00	\$56.27	
5 85	\$32.54	\$7.70	17.95	\$0.00	\$58.19	
6 90	\$34.45	\$7.70	17.95	\$0.00	\$60.10	
<b>Effective Date - 09/16/2012</b>						
Step percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate	
1 60	\$23.57	\$7.70	17.95	\$0.00	\$49.22	
2 70	\$27.50	\$7.70	17.95	\$0.00	\$53.15	
3 75	\$29.46	\$7.70	17.95	\$0.00	\$55.11	
4 80	\$31.42	\$7.70	17.95	\$0.00	\$57.07	
5 85	\$33.39	\$7.70	17.95	\$0.00	\$59.04	
6 90	\$35.35	\$7.70	17.95	\$0.00	\$61.00	
<b>Notes:</b>						
** Structural 1:6; Ornamental 1:4						
<b>Apprentice to Journeyworker Ratio:**</b>						

JACKHAMMER & PAVING BREAKER OPERATOR LABORERS - ZONE 1	12/01/2011	\$32.05	\$7.10	\$12.45	0.00	\$51.60
LABORER LABORERS - ZONE 1	12/01/2011	\$31.80	\$7.10	\$12.45	0.00	\$51.35

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**Awarding Authority:** City of Quincy  
**Contract Number:** **City/Town:** QUINCY  
**Description of Work:** Stormwater drainage structure & conduit repair, drainage structure concrete repair, Tide gate removal & replacement, drain line excavation, curb removal & replacement, bituminous asphalt paving  
**Job Location:** Broad St, Southern Artery, Woodward Ave

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
<b>Apprentice - LABORER - Zone 1</b>						
<b>Effective Date - 12/01/2011</b>						
Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$19.08	\$7.10	12.45	\$0.00	\$38.63
2	70	\$22.26	\$7.10	12.45	\$0.00	\$41.81
3	80	\$25.44	\$7.10	12.45	\$0.00	\$44.99
4	90	\$28.62	\$7.10	12.45	\$0.00	\$48.17

**Notes:**

**Apprentice to Journeyworker Ratio:1:5**

LABORER: CARPENTER TENDER LABORERS - ZONE 1	12/01/2011	\$31.80	\$7.10	\$12.45	0.00	\$51.35
LABORER: CEMENT FINISHER TENDER LABORERS - ZONE 1	12/01/2011	\$31.80	\$7.10	\$12.45	0.00	\$51.35
LABORER: HAZARDOUS WASTE/ASBESTOS REMOVER LABORERS - ZONE 1	12/01/2011	\$31.80	\$7.10	\$12.45	0.00	\$51.35
LABORER: MASON TENDER LABORERS - ZONE 1	12/01/2011	\$32.05	\$7.10	\$12.45	0.00	\$51.60
LABORER: MULTI-TRADE TENDER LABORERS - ZONE 1	12/01/2011	\$31.80	\$7.10	\$12.45	0.00	\$51.35
LABORER: TREE REMOVER LABORERS - ZONE 1	12/01/2011	\$31.80	\$7.10	\$12.45	0.00	\$51.35
This classification applies to the wholesale removal of standing trees including all associated trimming of branches and limbs, and applies to the removal of branches at locations not on or around utility lines.						
LASER BEAM OPERATOR LABORERS - ZONE 1	12/01/2011	\$32.05	\$7.10	\$12.45	0.00	\$51.60

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THE COMMONWEALTH OF MASSACHUSETTS  
EXECUTIVE OFFICE OF LABOR AND WORKFORCE DEVELOPMENT  
DEPARTMENT OF LABOR STANDARDS

**Prevailing Wage Rates**

As determined by the Director under the provisions of the  
Massachusetts General Laws, Chapter 149, Sections 26 to 27H

JOANNE F. GOLDSTEIN  
Secretary

HEATHER E. ROWE  
Director

DEVAL L. PATRICK  
Governor

TIMOTHY P. MURRAY  
Lt. Governor

**Awarding Authority:** City of Quincy  
**Contract Number:** **City/Town:** QUINCY  
**Description of Work:** Stormwater drainage structure & conduit repair, drainage structure concrete repair, Tide gate removal & replacement, drain line excavation, curb removal & replacement, bituminous asphalt paving  
**Job Location:** Broad St, Southern Artery, Woodward Ave

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
MARBLE & TILE FINISHERS <i>BRICKLAYERS LOCAL 3 - MARBLE &amp; TILE</i>	03/01/2012	\$35.52	\$10.18	\$16.04	0.00	\$61.74

**Apprentice - MARBLE & TILE FINISHER - Local 3 Marble & Tile**

**Effective Date -** 03/01/2012

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$17.76	\$10.18	16.04	\$0.00	\$43.98
2	60	\$21.31	\$10.18	16.04	\$0.00	\$47.53
3	70	\$24.86	\$10.18	16.04	\$0.00	\$51.08
4	80	\$28.42	\$10.18	16.04	\$0.00	\$54.64
5	90	\$31.97	\$10.18	16.04	\$0.00	\$58.19

**Notes:**  
Steps are 800 hrs.

**Apprentice to Journeyworker Ratio:1:3**

MARBLE MASONS, TILELAYERS & TERRAZZO MECH <i>BRICKLAYERS LOCAL 3 - MARBLE &amp; TILE</i>	03/01/2012	\$46.60	\$10.18	\$17.25	0.00	\$74.03
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**Awarding Authority:** City of Quincy  
**Contract Number:** **City/Town:** QUINCY  
**Description of Work:** Stormwater drainage structure & conduit repair, drainage structure concrete repair, Tide gate removal & replacement, drain line excavation, curb removal & replacement, bituminous asphalt paving  
**Job Location:** Broad St, Southern Artery, Woodward Ave

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
<b>Apprentice - MARBLE-TILE-TERRAZZO MECHANIC - Local 3 Marble &amp; Tile</b>						
<b>Effective Date - 03/01/2012</b>						
Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$23.30	\$10.18	17.25	\$0.00	\$50.73
2	60	\$27.96	\$10.18	17.25	\$0.00	\$55.39
3	70	\$32.62	\$10.18	17.25	\$0.00	\$60.05
4	80	\$37.28	\$10.18	17.25	\$0.00	\$64.71
5	90	\$41.94	\$10.18	17.25	\$0.00	\$69.37

Notes:

Apprentice to Journeyworker Ratio:1:3

MECH. SWEEPER OPERATOR (ON CONST. SITES) OPERATING ENGINEERS LOCAL 4	12/01/2011	\$39.16	\$10.00	\$12.40	0.00	\$61.56
	06/01/2012	\$39.72	\$10.00	\$12.40	0.00	\$62.12
	12/01/2012	\$40.34	\$10.00	\$12.40	0.00	\$62.74
	06/01/2013	\$41.11	\$10.00	\$12.40	0.00	\$63.51
	12/01/2013	\$41.89	\$10.00	\$12.40	0.00	\$64.29
MECHANICS MAINTENANCE OPERATING ENGINEERS LOCAL 4	12/01/2011	\$39.16	\$10.00	\$12.40	0.00	\$61.56
	06/01/2012	\$39.72	\$10.00	\$12.40	0.00	\$62.12
	12/01/2012	\$40.34	\$10.00	\$12.40	0.00	\$62.74
	06/01/2013	\$41.11	\$10.00	\$12.40	0.00	\$63.51
	12/01/2013	\$41.89	\$10.00	\$12.40	0.00	\$64.29
MILLWRIGHT (Zone 1) MILLWRIGHTS LOCAL 1121 - Zone 1	04/01/2011	\$33.57	\$8.67	\$15.61	0.00	\$57.85

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Lt. Governor

**Awarding Authority:** City of Quincy  
**Contract Number:** **City/Town:** QUINCY  
**Description of Work:** Stormwater drainage structure & conduit repair, drainage structure concrete repair, Tide gate removal & replacement, drain line excavation, curb removal & replacement, bituminous asphalt paving  
**Job Location:** Broad St, Southern Artery, Woodward Ave

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
<b>Apprentice - MILLWRIGHT - Local 1121 Zone 1</b>						
<b>Effective Date - 04/01/2011</b>						
Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$16.79	\$8.67	11.64	\$0.00	\$37.10
2	55	\$18.46	\$8.67	11.64	\$0.00	\$38.77
3	60	\$20.14	\$8.67	13.23	\$0.00	\$42.04
4	65	\$21.82	\$8.67	13.23	\$0.00	\$43.72
5	70	\$23.50	\$8.67	14.02	\$0.00	\$46.19
6	75	\$25.18	\$8.67	14.02	\$0.00	\$47.87
7	80	\$26.86	\$8.67	14.82	\$0.00	\$50.35
8	85	\$28.53	\$8.67	14.82	\$0.00	\$52.02

Notes:

Apprentice to Journeyworker Ratio:1:5

MORTAR MIXER LABORERS - ZONE 1	12/01/2011	\$32.05	\$7.10	\$12.45	0.00	\$51.60
OILER (OTHER THAN TRUCK CRANES,GRADALLS) OPERATING ENGINEERS LOCAL 4	12/01/2011	\$21.28	\$10.00	\$12.40	0.00	\$43.68
	06/01/2012	\$21.56	\$10.00	\$12.40	0.00	\$43.96
	12/01/2012	\$21.90	\$10.00	\$12.40	0.00	\$44.30
	06/01/2013	\$22.32	\$10.00	\$12.40	0.00	\$44.72
	12/01/2013	\$22.74	\$10.00	\$12.40	0.00	\$45.14

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TIMOTHY P. MURRAY  
Lt. Governor

**Awarding Authority:** City of Quincy  
**Contract Number:** **City/Town:** QUINCY  
**Description of Work:** Stormwater drainage structure & conduit repair, drainage structure concrete repair, Tide gate removal & replacement, drain line excavation, curb removal & replacement, bituminous asphalt paving  
**Job Location:** Broad St, Southern Artery, Woodward Ave

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
OILER (TRUCK CRANES, GRADALLS) <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2011	\$24.51	\$10.00	\$12.40	0.00	\$46.91
	06/01/2012	\$24.85	\$10.00	\$12.40	0.00	\$47.25
	12/01/2012	\$25.24	\$10.00	\$12.40	0.00	\$47.64
	06/01/2013	\$25.72	\$10.00	\$12.40	0.00	\$48.12
	12/01/2013	\$26.21	\$10.00	\$12.40	0.00	\$48.61
OTHER POWER DRIVEN EQUIPMENT - CLASS II <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2011	\$39.16	\$10.00	\$12.40	0.00	\$61.56
	06/01/2012	\$39.72	\$10.00	\$12.40	0.00	\$62.12
	12/01/2012	\$40.34	\$10.00	\$12.40	0.00	\$62.74
	06/01/2013	\$41.11	\$10.00	\$12.40	0.00	\$63.51
	12/01/2013	\$41.89	\$10.00	\$12.40	0.00	\$64.29
PAINTER (BRIDGES/TANKS) <i>PAINTERS LOCAL 35 - ZONE 2</i>	01/01/2012	\$44.01	\$7.80	\$14.60	0.00	\$66.41
	07/01/2012	\$45.01	\$7.80	\$14.60	0.00	\$67.41
	01/01/2013	\$46.01	\$7.80	\$14.60	0.00	\$68.41

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Lt. Governor

**Awarding Authority:** City of Quincy  
**Contract Number:** **City/Town:** QUINCY  
**Description of Work:** Stormwater drainage structure & conduit repair, drainage structure concrete repair, Tide gate removal & replacement, drain line excavation, curb removal & replacement, bituminous asphalt paving  
**Job Location:** Broad St, Southern Artery, Woodward Ave

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
<b>Apprentice - PAINTER Local 35 - BRIDGES/TANKS</b>						
<b>Effective Date - 01/01/2012</b>						
Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$22.01	\$7.80	0.00	\$0.00	\$29.81
2	55	\$24.21	\$7.80	3.25	\$0.00	\$35.26
3	60	\$26.41	\$7.80	3.54	\$0.00	\$37.75
4	65	\$28.61	\$7.80	3.84	\$0.00	\$40.25
5	70	\$30.81	\$7.80	12.83	\$0.00	\$51.44
6	75	\$33.01	\$7.80	13.13	\$0.00	\$53.94
7	80	\$35.21	\$7.80	13.42	\$0.00	\$56.43
8	90	\$39.61	\$7.80	14.01	\$0.00	\$61.42
<b>Effective Date - 07/01/2012</b>						
Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$22.51	\$7.80	0.00	\$0.00	\$30.31
2	55	\$24.76	\$7.80	3.25	\$0.00	\$35.81
3	60	\$27.01	\$7.80	3.54	\$0.00	\$38.35
4	65	\$29.26	\$7.80	3.84	\$0.00	\$40.90
5	70	\$31.51	\$7.80	12.83	\$0.00	\$52.14
6	75	\$33.76	\$7.80	13.13	\$0.00	\$54.69
7	80	\$36.01	\$7.80	13.42	\$0.00	\$57.23
8	90	\$40.51	\$7.80	14.01	\$0.00	\$62.32

**Notes:**  
Steps are 750 hrs.

**Apprentice to Journeyworker Ratio:1:1**

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 DEPARTMENT OF LABOR STANDARDS

**Prevailing Wage Rates**

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 Massachusetts General Laws, Chapter 149, Sections 26 to 27H

JOANNE F. GOLDSTEIN  
 Secretary

HEATHER E. ROWE  
 Director

DEVAL L. PATRICK  
 Governor

TIMOTHY P. MURRAY  
 Lt. Governor

**Awarding Authority:** City of Quincy  
**Contract Number:** **City/Town:** QUINCY  
**Description of Work:** Stormwater drainage structure & conduit repair, drainage structure concrete repair, Tide gate removal & replacement, drain line excavation, curb removal & replacement, bituminous asphalt paving  
**Job Location:** Broad St, Southern Artery, Woodward Ave

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
Painter (Spray or Sandblast, New) *	01/01/2012	\$34.91	\$7.80	\$14.60	0.00	\$57.31
* If 30% or more of surfaces to be painted are new construction, NEW paint rate shall be used. PAINTERS LOCAL 35 - ZONE 2	07/01/2012	\$35.91	\$7.80	\$14.60	0.00	\$58.31
	01/01/2013	\$36.91	\$7.80	\$14.60	0.00	\$59.31

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**Awarding Authority:** City of Quincy  
**Contract Number:** **City/Town:** QUINCY  
**Description of Work:** Stormwater drainage structure & conduit repair, drainage structure concrete repair, Tide gate removal & replacement, drain line excavation, curb removal & replacement, bituminous asphalt paving  
**Job Location:** Broad St, Southern Artery, Woodward Ave

**Classification** **Effective Date** **Base Wage** **Health** **Pension** **Supplemental Unemployment** **Total Rate**

**Apprentice - PAINTER Local 35 Zone 2 - Spray/Sandblast - New**

**Effective Date -** 01/01/2012

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$17.46	\$7.80	0.00	\$0.00	\$25.26
2	55	\$19.20	\$7.80	3.25	\$0.00	\$30.25
3	60	\$20.95	\$7.80	3.54	\$0.00	\$32.29
4	65	\$22.69	\$7.80	3.84	\$0.00	\$34.33
5	70	\$24.44	\$7.80	12.83	\$0.00	\$45.07
6	75	\$26.18	\$7.80	13.13	\$0.00	\$47.11
7	80	\$27.93	\$7.80	13.42	\$0.00	\$49.15
8	90	\$31.42	\$7.80	14.01	\$0.00	\$53.23

**Effective Date -** 07/01/2012

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$17.96	\$7.80	0.00	\$0.00	\$25.76
2	55	\$19.75	\$7.80	3.25	\$0.00	\$30.80
3	60	\$21.55	\$7.80	3.54	\$0.00	\$32.89
4	65	\$23.34	\$7.80	3.84	\$0.00	\$34.98
5	70	\$25.14	\$7.80	12.83	\$0.00	\$45.77
6	75	\$26.93	\$7.80	13.13	\$0.00	\$47.86
7	80	\$28.73	\$7.80	13.42	\$0.00	\$49.95
8	90	\$32.32	\$7.80	14.01	\$0.00	\$54.13

**Notes:**

Apprentice to Journeyworker Ratio:1:1

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**Awarding Authority:** City of Quincy  
**Contract Number:** **City/Town:** QUINCY  
**Description of Work:** Stormwater drainage structure & conduit repair, drainage structure concrete repair, Tide gate removal & replacement, drain line excavation, curb removal & replacement, bituminous asphalt paving  
**Job Location:** Broad St, Southern Artery, Woodward Ave

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
PAINTER (SPRAY OR SANDBLAST, REPAINT) <i>PAINTERS LOCAL 35 - ZONE 2</i>	01/01/2012	\$32.97	\$7.80	\$14.60	0.00	\$55.37
	07/01/2012	\$33.97	\$7.80	\$14.60	0.00	\$56.37
	01/01/2013	\$34.97	\$7.80	\$14.60	0.00	\$57.37

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**Awarding Authority:** City of Quincy  
**Contract Number:** **City/Town:** QUINCY  
**Description of Work:** Stormwater drainage structure & conduit repair, drainage structure concrete repair, Tide gate removal & replacement, drain line excavation, curb removal & replacement, bituminous asphalt paving  
**Job Location:** Broad St, Southern Artery, Woodward Ave

**Classification** **Effective Date** **Base Wage** **Health** **Pension** **Supplemental Unemployment** **Total Rate**

**Apprentice - PAINTER Local 35 Zone 2 - Spray/Sandblast - Repaint**

**Effective Date -** 01/01/2012

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$16.49	\$7.80	0.00	\$0.00	\$24.29
2	55	\$18.13	\$7.80	3.25	\$0.00	\$29.18
3	60	\$19.78	\$7.80	3.54	\$0.00	\$31.12
4	65	\$21.43	\$7.80	3.84	\$0.00	\$33.07
5	70	\$23.08	\$7.80	12.83	\$0.00	\$43.71
6	75	\$24.73	\$7.80	13.13	\$0.00	\$45.66
7	80	\$26.38	\$7.80	13.42	\$0.00	\$47.60
8	90	\$29.67	\$7.80	14.01	\$0.00	\$51.48

**Effective Date -** 07/01/2012

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$16.99	\$7.80	0.00	\$0.00	\$24.79
2	55	\$18.68	\$7.80	3.25	\$0.00	\$29.73
3	60	\$20.38	\$7.80	3.54	\$0.00	\$31.72
4	65	\$22.08	\$7.80	3.84	\$0.00	\$33.72
5	70	\$23.78	\$7.80	12.83	\$0.00	\$44.41
6	75	\$25.48	\$7.80	13.13	\$0.00	\$46.41
7	80	\$27.18	\$7.80	13.42	\$0.00	\$48.40
8	90	\$30.57	\$7.80	14.01	\$0.00	\$52.38

**Notes:**

Apprentice to Journeyworker Ratio:1:1

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EXECUTIVE OFFICE OF LABOR AND WORKFORCE DEVELOPMENT  
DEPARTMENT OF LABOR STANDARDS

**Prevailing Wage Rates**

As determined by the Director under the provisions of the  
Massachusetts General Laws, Chapter 149, Sections 26 to 27H

JOANNE F. GOLDSTEIN  
Secretary

HEATHER E. ROWE  
Director

DEVAL L. PATRICK  
Governor

TIMOTHY P. MURRAY  
Lt. Governor

**Awarding Authority:** City of Quincy

**Contract Number:** **City/Town:** QUINCY

**Description of Work:** Stormwater drainage structure & conduit repair, drainage structure concrete repair, Tide gate removal & replacement, drain line excavation, curb removal & replacement, bituminous asphalt paving

**Job Location:** Broad St, Southern Artery, Woodward Ave

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
PAINTER (TRAFFIC MARKINGS) <i>LABORERS - ZONE 1</i>	12/01/2011	\$31.80	\$7.10	\$12.45	0.00	\$51.35
PAINTER / TAPER (BRUSH, NEW) *	01/01/2012	\$33.51	\$7.80	\$14.60	0.00	\$55.91
* If 30% or more of surfaces to be painted are new construction, NEW paint rate shall be used. <i>PAINTERS LOCAL 35 - ZONE 2</i>	07/01/2012	\$34.51	\$7.80	\$14.60	0.00	\$56.91
	01/01/2013	\$35.51	\$7.80	\$14.60	0.00	\$57.91

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**Awarding Authority:** City of Quincy  
**Contract Number:** **City/Town:** QUINCY  
**Description of Work:** Stormwater drainage structure & conduit repair, drainage structure concrete repair, Tide gate removal & replacement, drain line excavation, curb removal & replacement, bituminous asphalt paving  
**Job Location:** Broad St, Southern Artery, Woodward Ave

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
<b>Apprentice - PAINTER - Local 35 Zone 2 - BRUSH NEW</b>						
<b>Effective Date - 01/01/2012</b>						
Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$16.76	\$7.80	0.00	\$0.00	\$24.56
2	55	\$18.43	\$7.80	3.25	\$0.00	\$29.48
3	60	\$20.11	\$7.80	3.54	\$0.00	\$31.45
4	65	\$21.78	\$7.80	3.84	\$0.00	\$33.42
5	70	\$23.46	\$7.80	12.83	\$0.00	\$44.09
6	75	\$25.13	\$7.80	13.13	\$0.00	\$46.06
7	80	\$26.81	\$7.80	13.42	\$0.00	\$48.03
8	90	\$30.16	\$7.80	14.01	\$0.00	\$51.97
<b>Effective Date - 07/01/2012</b>						
Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$17.26	\$7.80	0.00	\$0.00	\$25.06
2	55	\$18.98	\$7.80	3.25	\$0.00	\$30.03
3	60	\$20.71	\$7.80	3.54	\$0.00	\$32.05
4	65	\$22.43	\$7.80	3.84	\$0.00	\$34.07
5	70	\$24.16	\$7.80	12.83	\$0.00	\$44.79
6	75	\$25.88	\$7.80	13.13	\$0.00	\$46.81
7	80	\$27.61	\$7.80	13.42	\$0.00	\$48.83
8	90	\$31.06	\$7.80	14.01	\$0.00	\$52.87

**Notes:**

Steps are 750 hrs.

**Apprentice to Journeyworker Ratio:1:1**

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 Lt. Governor

**Awarding Authority:** City of Quincy  
**Contract Number:** **City/Town:** QUINCY  
**Description of Work:** Stormwater drainage structure & conduit repair, drainage structure concrete repair, Tide gate removal & replacement, drain line excavation, curb removal & replacement, bituminous asphalt paving  
**Job Location:** Broad St, Southern Artery, Woodward Ave

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
PAINTER / TAPER (BRUSH, REPAINT) <i>PAINTERS LOCAL 35 - ZONE 2</i>	01/01/2012	\$31.57	\$7.80	\$14.60	0.00	\$53.97
	07/01/2012	\$32.57	\$7.80	\$14.60	0.00	\$54.97
	01/01/2013	\$33.57	\$7.80	\$14.60	0.00	\$55.97

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**Awarding Authority:** City of Quincy  
**Contract Number:** **City/Town:** QUINCY  
**Description of Work:** Stormwater drainage structure & conduit repair, drainage structure concrete repair, Tide gate removal & replacement, drain line excavation, curb removal & replacement, bituminous asphalt paving  
**Job Location:** Broad St, Southern Artery, Woodward Ave

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
<b>Apprentice - PAINTER Local 35 Zone 2 - BRUSH REPAINT</b>						
<b>Effective Date - 01/01/2012</b>						
Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$15.79	\$7.80	0.00	\$0.00	\$23.59
2	55	\$17.36	\$7.80	3.25	\$0.00	\$28.41
3	60	\$18.94	\$7.80	3.54	\$0.00	\$30.28
4	65	\$20.52	\$7.80	3.84	\$0.00	\$32.16
5	70	\$22.10	\$7.80	12.83	\$0.00	\$42.73
6	75	\$23.68	\$7.80	13.13	\$0.00	\$44.61
7	80	\$25.26	\$7.80	13.42	\$0.00	\$46.48
8	90	\$28.41	\$7.80	14.01	\$0.00	\$50.22
<b>Effective Date - 07/01/2012</b>						
Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$16.29	\$7.80	0.00	\$0.00	\$24.09
2	55	\$17.91	\$7.80	3.25	\$0.00	\$28.96
3	60	\$19.54	\$7.80	3.54	\$0.00	\$30.88
4	65	\$21.17	\$7.80	3.84	\$0.00	\$32.81
5	70	\$22.80	\$7.80	12.83	\$0.00	\$43.43
6	75	\$24.43	\$7.80	13.13	\$0.00	\$45.36
7	80	\$26.06	\$7.80	13.42	\$0.00	\$47.28
8	90	\$29.31	\$7.80	14.01	\$0.00	\$51.12

**Notes:**

Steps are 750 hrs.

**Apprentice to Journeyworker Ratio:1:1**

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Lt. Governor

**Awarding Authority:** City of Quincy  
**Contract Number:** **City/Town:** QUINCY  
**Description of Work:** Stormwater drainage structure & conduit repair, drainage structure concrete repair, Tide gate removal & replacement, drain line excavation, curb removal & replacement, bituminous asphalt paving  
**Job Location:** Broad St, Southern Artery, Woodward Ave

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
PANEL & PICKUP TRUCKS DRIVER <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE A</i>	12/01/2011	\$30.78	\$8.56	\$7.27	0.00	\$46.61
	06/01/2012	\$31.08	\$8.56	\$7.27	0.00	\$46.91
	08/01/2012	\$31.08	\$8.91	\$7.27	0.00	\$47.26
	12/01/2012	\$31.38	\$8.91	\$8.00	0.00	\$48.29
PIER AND DOCK CONSTRUCTOR (UNDERPINNING AND DECK) <i>PILE DRIVER LOCAL 56 (ZONE 1)</i>	08/01/2011	\$38.30	\$9.80	\$17.12	0.00	\$65.22
PILE DRIVER <i>PILE DRIVER LOCAL 56 (ZONE 1)</i>	08/01/2011	\$38.30	\$9.80	\$17.12	0.00	\$65.22

**Apprentice - PILE DRIVER - Local 56 Zone 1**

**Effective Date - 08/01/2011**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$22.98	\$8.08	17.12	\$0.00	\$48.18
2	65	\$24.90	\$8.08	17.12	\$0.00	\$50.10
3	70	\$26.81	\$8.08	17.12	\$0.00	\$52.01
4	75	\$28.73	\$8.08	17.12	\$0.00	\$53.93
5	80	\$30.64	\$8.08	17.12	\$0.00	\$55.84
6	85	\$32.56	\$8.08	17.12	\$0.00	\$57.76
7	90	\$34.47	\$8.08	17.12	\$0.00	\$59.67
8	95	\$36.39	\$8.08	17.12	\$0.00	\$61.59

Notes:

Apprentice to Journeyworker Ratio:1:3

PIPEFITTER & STEAMFITTER <i>PIPEFITTERS LOCAL 537</i>	03/01/2012	\$46.84	\$8.75	\$14.39	0.00	\$69.98
	09/01/2012	\$48.09	\$8.75	\$14.39	0.00	\$71.23
	03/01/2013	\$49.34	\$8.75	\$14.39	0.00	\$72.48

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Lt. Governor

**Awarding Authority:** City of Quincy  
**Contract Number:** **City/Town:** QUINCY  
**Description of Work:** Stormwater drainage structure & conduit repair, drainage structure concrete repair, Tide gate removal & replacement, drain line excavation, curb removal & replacement, bituminous asphalt paving  
**Job Location:** Broad St, Southern Artery, Woodward Ave

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
<b>Apprentice - PIPEFITTER - Local 537</b>						
<b>Effective Date - 03/01/2012</b>						
Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$18.74	\$8.75	6.50	\$0.00	\$33.99
2	45	\$21.08	\$8.75	14.39	\$0.00	\$44.22
3	60	\$28.10	\$8.75	14.39	\$0.00	\$51.24
4	70	\$32.79	\$8.75	14.39	\$0.00	\$55.93
5	80	\$37.47	\$8.75	14.39	\$0.00	\$60.61
<b>Effective Date - 09/01/2012</b>						
Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$19.24	\$8.75	6.50	\$0.00	\$34.49
2	45	\$21.64	\$8.75	14.39	\$0.00	\$44.78
3	60	\$28.85	\$8.75	14.39	\$0.00	\$51.99
4	70	\$33.66	\$8.75	14.39	\$0.00	\$56.80
5	80	\$38.47	\$8.75	14.39	\$0.00	\$61.61

**Notes:**  
\*\* 1:3; 3:15; 1:10 thereafter / Steps are 1 yr.  
Refrig/AC Mechanic \*\*1:1;1:2;2:4;3:6;4:8;5:10;6:12;7:14;8:17;9:20;10:23(Max)  
**Apprentice to Journeyworker Ratio:\*\***

PIPELAYER LABORERS - ZONE 1	12/01/2011	\$32.05	\$7.10	\$12.45	0.00	\$51.60
PLUMBERS & GASFITTERS PLUMBERS & GASFITTERS LOCAL 12	03/01/2012	\$46.81	\$9.32	\$13.29	0.00	\$69.42
	09/01/2012	\$48.06	\$9.32	\$13.29	0.00	\$70.67
	03/01/2013	\$49.31	\$9.32	\$13.29	0.00	\$71.92

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**Awarding Authority:** City of Quincy  
**Contract Number:** **City/Town:** QUINCY  
**Description of Work:** Stormwater drainage structure & conduit repair, drainage structure concrete repair, Tide gate removal & replacement, drain line excavation, curb removal & replacement, bituminous asphalt paving  
**Job Location:** Broad St, Southern Artery, Woodward Ave

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
<b>Apprentice - PLUMBER - Local 12</b>						
<b>Effective Date - 03/01/2012</b>						
Step percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate	
1 35	\$16.38	\$9.32	4.97	\$0.00	\$30.67	
2 40	\$18.72	\$9.32	5.61	\$0.00	\$33.65	
3 55	\$25.75	\$9.32	7.53	\$0.00	\$42.60	
4 65	\$30.43	\$9.32	8.81	\$0.00	\$48.56	
5 75	\$35.11	\$9.32	10.09	\$0.00	\$54.52	
<b>Effective Date - 09/01/2012</b>						
Step percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate	
1 35	\$16.82	\$9.32	4.97	\$0.00	\$31.11	
2 40	\$19.22	\$9.32	5.61	\$0.00	\$34.15	
3 55	\$26.43	\$9.32	7.53	\$0.00	\$43.28	
4 65	\$31.24	\$9.32	8.81	\$0.00	\$49.37	
5 75	\$36.05	\$9.32	10.09	\$0.00	\$55.46	

**Notes:**  
\*\* 1:2; 2:6; 3:10; 4:14; 5:19/Steps are 1 yr  
Step4 with lic\$51.54 Step5 with lic\$57.49

**Apprentice to Journeyworker Ratio:\*\***

PNEUMATIC CONTROLS (TEMP.) PIPEFITTERS LOCAL 537	03/01/2012	\$46.84	\$8.75	\$14.39	0.00	\$69.98
	09/01/2012	\$48.09	\$8.75	\$14.39	0.00	\$71.23
	03/01/2013	\$49.34	\$8.75	\$14.39	0.00	\$72.48
PNEUMATIC DRILL/TOOL OPERATOR LABORERS - ZONE 1	12/01/2011	\$32.05	\$7.10	\$12.45	0.00	\$51.60
POWDERMAN & BLASTER LABORERS - ZONE 1	12/01/2011	\$32.80	\$7.10	\$12.45	0.00	\$52.35

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**Awarding Authority:** City of Quincy  
**Contract Number:** **City/Town:** QUINCY  
**Description of Work:** Stormwater drainage structure & conduit repair, drainage structure concrete repair, Tide gate removal & replacement, drain line excavation, curb removal & replacement, bituminous asphalt paving  
**Job Location:** Broad St, Southern Artery, Woodward Ave

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
POWER SHOVEL/DERRICK/TRENCHING MACHINE <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2011	\$39.52	\$10.00	\$12.40	0.00	\$61.92
	06/01/2012	\$40.09	\$10.00	\$12.40	0.00	\$62.49
	12/01/2012	\$40.71	\$10.00	\$12.40	0.00	\$63.11
	06/01/2013	\$41.49	\$10.00	\$12.40	0.00	\$63.89
	12/01/2013	\$42.27	\$10.00	\$12.40	0.00	\$64.67
PUMP OPERATOR (CONCRETE) <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2011	\$39.52	\$10.00	\$12.40	0.00	\$61.92
	06/01/2012	\$40.09	\$10.00	\$12.40	0.00	\$62.49
	12/01/2012	\$40.71	\$10.00	\$12.40	0.00	\$63.11
	06/01/2013	\$41.49	\$10.00	\$12.40	0.00	\$63.89
	12/01/2013	\$42.27	\$10.00	\$12.40	0.00	\$64.67
PUMP OPERATOR (DEWATERING, OTHER) <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2011	\$27.95	\$10.00	\$12.40	0.00	\$50.35
	06/01/2012	\$28.34	\$10.00	\$12.40	0.00	\$50.74
	12/01/2012	\$28.79	\$10.00	\$12.40	0.00	\$51.19
	06/01/2013	\$29.34	\$10.00	\$12.40	0.00	\$51.74
	12/01/2013	\$29.89	\$10.00	\$12.40	0.00	\$52.29
READY-MIX CONCRETE DRIVER <i>TEAMSTERS LOCAL 25b</i>	05/01/2011	\$28.03	\$7.75	\$5.91	0.00	\$41.69
RECLAIMERS <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2011	\$39.16	\$10.00	\$12.40	0.00	\$61.56
	06/01/2012	\$39.72	\$10.00	\$12.40	0.00	\$62.12
	12/01/2012	\$40.34	\$10.00	\$12.40	0.00	\$62.74
	06/01/2013	\$41.11	\$10.00	\$12.40	0.00	\$63.51
	12/01/2013	\$41.89	\$10.00	\$12.40	0.00	\$64.29
RESIDENTIAL WOOD FRAME (All Other Work) <i>CARPENTERS -ZONE 2 (Residential Wood)</i>	04/01/2011	\$24.24	\$8.67	\$15.51	0.00	\$48.42
RESIDENTIAL WOOD FRAME CARPENTER **	05/01/2011	\$24.24	\$6.34	\$6.23	0.00	\$36.81

\*\* The Residential Wood Frame Carpenter classification applies only to the construction of new, wood frame residences that do not exceed four stories including the basement. *CARPENTERS -ZONE 2 (Residential Wood)*

As of 9/1/09 Carpentry work on wood-frame residential WEATHERIZATION projects shall be paid the RESIDENTIAL WOOD FRAME CARPENTER rate.

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**Prevailing Wage Rates**

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JOANNE F. GOLDSTEIN  
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DEVAL L. PATRICK  
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TIMOTHY P. MURRAY  
Lt. Governor

**Awarding Authority:** City of Quincy  
**Contract Number:** **City/Town:** QUINCY  
**Description of Work:** Stormwater drainage structure & conduit repair, drainage structure concrete repair, Tide gate removal & replacement, drain line excavation, curb removal & replacement, bituminous asphalt paving  
**Job Location:** Broad St, Southern Artery, Woodward Ave

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
<b>Apprentice - CARPENTER (Residential Wood Frame) - Zone 2</b>						
<b>Effective Date - 05/01/2011</b>						
Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$14.54	\$6.34	0.00	\$0.00	\$20.88
2	60	\$14.54	\$6.34	6.23	\$0.00	\$27.11
3	65	\$15.76	\$6.34	6.23	\$0.00	\$28.33
4	70	\$16.97	\$6.34	6.23	\$0.00	\$29.54
5	75	\$18.18	\$6.34	6.23	\$0.00	\$30.75
6	80	\$19.39	\$6.34	6.23	\$0.00	\$31.96
7	85	\$20.60	\$6.34	6.23	\$0.00	\$33.17
8	90	\$21.82	\$6.34	6.23	\$0.00	\$34.39

Notes:

Apprentice to Journeyworker Ratio:1:5

RIDE-ON MOTORIZED BUGGY OPERATOR LABORERS - ZONE 1	12/01/2011	\$32.05	\$7.10	\$12.45	0.00	\$51.60
ROLLER/SPREADER/MULCHING MACHINE OPERATING ENGINEERS LOCAL 4	12/01/2011	\$39.16	\$10.00	\$12.40	0.00	\$61.56
	06/01/2012	\$39.72	\$10.00	\$12.40	0.00	\$62.12
	12/01/2012	\$40.34	\$10.00	\$12.40	0.00	\$62.74
	06/01/2013	\$41.11	\$10.00	\$12.40	0.00	\$63.51
	12/01/2013	\$41.89	\$10.00	\$12.40	0.00	\$64.29
ROOFER (Inc.Roofeer Waterproofng &Roofeer Damproofg) ROOFERS LOCAL 33	02/01/2012	\$35.56	\$10.50	\$10.70	0.00	\$56.76
	08/01/2012	\$36.56	\$10.50	\$10.70	0.00	\$57.76
	02/01/2013	\$37.56	\$10.50	\$10.70	0.00	\$58.76

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Lt. Governor

**Awarding Authority:** City of Quincy  
**Contract Number:** **City/Town:** QUINCY  
**Description of Work:** Stormwater drainage structure & conduit repair, drainage structure concrete repair, Tide gate removal & replacement, drain line excavation, curb removal & replacement, bituminous asphalt paving  
**Job Location:** Broad St, Southern Artery, Woodward Ave

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
<b>Apprentice - ROOFER - Local 33</b>						
<b>Effective Date - 02/01/2012</b>						
Step percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate	
1 50	\$17.78	\$10.50	3.38	\$0.00	\$31.66	
2 60	\$21.34	\$10.50	10.70	\$0.00	\$42.54	
3 65	\$23.11	\$10.50	10.70	\$0.00	\$44.31	
4 75	\$26.67	\$10.50	10.70	\$0.00	\$47.87	
5 85	\$30.23	\$10.50	10.70	\$0.00	\$51.43	
<b>Effective Date - 08/01/2012</b>						
Step percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate	
1 50	\$18.28	\$10.50	3.38	\$0.00	\$32.16	
2 60	\$21.94	\$10.50	10.70	\$0.00	\$43.14	
3 65	\$23.76	\$10.50	10.70	\$0.00	\$44.96	
4 75	\$27.42	\$10.50	10.70	\$0.00	\$48.62	
5 85	\$31.08	\$10.50	10.70	\$0.00	\$52.28	

**Notes:** \*\* 1:5, 2:6-10, the 1:10; Reroofing: 1:4, then 1:1  
Step 1 is 2000 hrs.; Steps 2-5 are 1000 hrs.

**Apprentice to Journeyworker Ratio:\*\***

ROOFER SLATE / TILE / PRECAST CONCRETE	02/01/2012	\$35.81	\$10.50	\$10.70	0.00	\$57.01
ROOFERS LOCAL 33	08/01/2012	\$36.81	\$10.50	\$10.70	0.00	\$58.01
	02/01/2013	\$37.81	\$10.50	\$10.70	0.00	\$59.01

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Lt. Governor

**Awarding Authority:** City of Quincy  
**Contract Number:** **City/Town:** QUINCY  
**Description of Work:** Stormwater drainage structure & conduit repair, drainage structure concrete repair, Tide gate removal & replacement, drain line excavation, curb removal & replacement, bituminous asphalt paving  
**Job Location:** Broad St, Southern Artery, Woodward Ave

**Classification** **Effective Date** **Base Wage** **Health** **Pension** **Supplemental Unemployment** **Total Rate**

**Apprentice - ROOFER (Slate/Tile/Precast Concrete) - Local 33**

**Effective Date -** 02/01/2012

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$17.91	\$10.50	3.38	\$0.00	\$31.79
2	60	\$21.49	\$10.50	10.70	\$0.00	\$42.69
3	65	\$23.28	\$10.50	10.70	\$0.00	\$44.48
4	75	\$26.86	\$10.50	10.70	\$0.00	\$48.06
5	85	\$30.44	\$10.50	10.70	\$0.00	\$51.64

**Effective Date -** 08/01/2012

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$18.41	\$10.50	3.38	\$0.00	\$32.29
2	60	\$22.09	\$10.50	10.70	\$0.00	\$43.29
3	65	\$23.93	\$10.50	10.70	\$0.00	\$45.13
4	75	\$27.61	\$10.50	10.70	\$0.00	\$48.81
5	85	\$31.29	\$10.50	10.70	\$0.00	\$52.49

**Notes:**

**Apprentice to Journeyworker Ratio:\*\***

SHEETMETAL WORKER	02/01/2012	\$40.79	\$9.82	\$17.34	2.04	\$69.99
SHEETMETAL WORKERS LOCAL 17 - A	08/01/2012	\$42.04	\$9.82	\$17.34	2.08	\$71.28
	02/01/2013	\$43.29	\$9.82	\$17.34	2.11	\$72.56

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**Awarding Authority:** City of Quincy  
**Contract Number:** **City/Town:** QUINCY  
**Description of Work:** Stormwater drainage structure & conduit repair, drainage structure concrete repair, Tide gate removal & replacement, drain line excavation, curb removal & replacement, bituminous asphalt paving  
**Job Location:** Broad St, Southern Artery, Woodward Ave

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
<b>Apprentice - SHEET METAL WORKER - Local 17-A</b>						
<b>Effective Date - 02/01/2012</b>						
Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$16.32	\$9.82	3.74	\$0.00	\$29.88
2	45	\$18.36	\$9.82	7.45	\$1.07	\$36.70
3	50	\$20.40	\$9.82	8.42	\$1.16	\$39.80
4	60	\$24.47	\$9.82	9.60	\$1.32	\$45.21
5	65	\$26.51	\$9.82	10.32	\$1.40	\$48.05
6	75	\$30.59	\$9.82	11.76	\$1.57	\$53.74
7	85	\$34.67	\$9.82	12.69	\$1.72	\$58.90
<b>Effective Date - 08/01/2012</b>						
Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$16.82	\$9.82	3.74	\$0.00	\$30.38
2	45	\$18.92	\$9.82	7.45	\$1.09	\$37.28
3	50	\$21.02	\$9.82	8.42	\$1.18	\$40.44
4	60	\$25.22	\$9.82	9.60	\$1.34	\$45.98
5	65	\$27.33	\$9.82	10.32	\$1.42	\$48.89
6	75	\$31.53	\$9.82	11.76	\$1.59	\$54.70
7	85	\$35.73	\$9.82	12.69	\$1.75	\$59.99

**Notes:**  
Steps 1-3 are 1 year; Steps 4-7 are 6 mos.

**Apprentice to Journeyworker Ratio:1:4**

SIGN ERECTOR	06/01/2009	\$24.81	\$7.07	\$5.90	0.00	\$37.78
PAINTERS LOCAL 35 - ZONE 2						

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**Awarding Authority:** City of Quincy  
**Contract Number:** **City/Town:** QUINCY  
**Description of Work:** Stormwater drainage structure & conduit repair, drainage structure concrete repair, Tide gate removal & replacement, drain line excavation, curb removal & replacement, bituminous asphalt paving  
**Job Location:** Broad St, Southern Artery, Woodward Ave

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
<b>Apprentice - SIGN ERECTOR - Local 35 Zone 2</b>						
<b>Effective Date - 06/01/2009</b>						
Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$12.41	\$7.07	0.00	\$0.00	\$19.48
2	55	\$13.65	\$7.07	2.40	\$0.00	\$23.12
3	60	\$14.89	\$7.07	2.40	\$0.00	\$24.36
4	65	\$16.13	\$7.07	2.40	\$0.00	\$25.60
5	70	\$17.37	\$7.07	5.90	\$0.00	\$30.34
6	75	\$18.61	\$7.07	5.90	\$0.00	\$31.58
7	80	\$19.85	\$7.07	5.90	\$0.00	\$32.82
8	85	\$21.09	\$7.07	5.90	\$0.00	\$34.06
9	90	\$22.33	\$7.07	5.90	\$0.00	\$35.30

**Notes:**  
Steps are 4 mos.

**Apprentice to Journeyworker Ratio:1:1**

SPECIALIZED EARTH MOVING EQUIP < 35 TONS <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE A</i>	12/01/2011	\$31.24	\$8.56	\$7.27	0.00	\$47.07
	06/01/2012	\$31.54	\$8.56	\$7.27	0.00	\$47.37
	08/01/2012	\$31.54	\$8.91	\$7.27	0.00	\$47.72
	12/01/2012	\$31.84	\$8.91	\$8.00	0.00	\$48.75
SPECIALIZED EARTH MOVING EQUIP > 35 TONS <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE A</i>	12/01/2011	\$31.53	\$8.56	\$7.27	0.00	\$47.36
	06/01/2012	\$31.83	\$8.56	\$7.27	0.00	\$47.66
	08/01/2012	\$31.83	\$8.91	\$7.27	0.00	\$48.01
	12/01/2012	\$32.13	\$8.91	\$8.00	0.00	\$49.04

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**Awarding Authority:** City of Quincy  
**Contract Number:** **City/Town:** QUINCY  
**Description of Work:** Stormwater drainage structure & conduit repair, drainage structure concrete repair, Tide gate removal & replacement, drain line excavation, curb removal & replacement, bituminous asphalt paving  
**Job Location:** Broad St, Southern Artery, Woodward Ave

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
SPRINKLER FITTER	03/01/2012	\$51.58	\$8.42	\$11.60	0.00	\$71.60
<i>SPRINKLER FITTERS LOCAL 550</i>	09/01/2012	\$52.58	\$8.42	\$11.60	0.00	\$72.60
	03/01/2013	\$53.58	\$8.42	\$11.60	0.00	\$73.60

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**Awarding Authority:** City of Quincy  
**Contract Number:** **City/Town:** QUINCY  
**Description of Work:** Stormwater drainage structure & conduit repair, drainage structure concrete repair, Tide gate removal & replacement, drain line excavation, curb removal & replacement, bituminous asphalt paving  
**Job Location:** Broad St, Southern Artery, Woodward Ave

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
<b>Apprentice - SPRINKLER FITTER - Local 550</b>						
<b>Effective Date - 03/01/2012</b>						
Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	35	\$18.05	\$8.42	7.85	\$0.00	\$34.32
2	40	\$20.63	\$8.42	7.85	\$0.00	\$36.90
3	45	\$23.21	\$8.42	7.85	\$0.00	\$39.48
4	50	\$25.79	\$8.42	7.85	\$0.00	\$42.06
5	55	\$28.37	\$8.42	7.85	\$0.00	\$44.64
6	60	\$30.95	\$8.42	7.85	\$0.00	\$47.22
7	65	\$33.53	\$8.42	7.85	\$0.00	\$49.80
8	70	\$36.11	\$8.42	7.85	\$0.00	\$52.38
9	75	\$38.69	\$8.42	7.85	\$0.00	\$54.96
10	80	\$41.26	\$8.42	7.85	\$0.00	\$57.53
<b>Effective Date - 09/01/2012</b>						
Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	35	\$18.40	\$8.42	7.85	\$0.00	\$34.67
2	40	\$21.03	\$8.42	7.85	\$0.00	\$37.30
3	45	\$23.66	\$8.42	7.85	\$0.00	\$39.93
4	50	\$26.29	\$8.42	7.85	\$0.00	\$42.56
5	55	\$28.92	\$8.42	7.85	\$0.00	\$45.19
6	60	\$31.55	\$8.42	7.85	\$0.00	\$47.82
7	65	\$34.18	\$8.42	7.85	\$0.00	\$50.45
8	70	\$36.81	\$8.42	7.85	\$0.00	\$53.08
9	75	\$39.44	\$8.42	7.85	\$0.00	\$55.71
10	80	\$42.06	\$8.42	7.85	\$0.00	\$58.33

This wage schedule must be posted by the contractor at the work site in accordance with M.G.L. ch. 149, sec. 27. Failure of the employer to pay "prevailing wage rates," which are the "total rates" listed above, on public works projects is a violation of M.G.L. ch. 149, sec. 27. Contractors with questions about the wage rates or classifications included on the wage schedule have an affirmative obligation to inquire with DLS at [www.mass.gov/dols](http://www.mass.gov/dols) or at 617-626-6952. Employees not receiving such rates should report the violation to the Fair Labor Division of the Office of the Attorney General, 100 Cambridge Street, Boston, MA 02108; Tel:



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**Awarding Authority:** City of Quincy

**Contract Number:** \_\_\_\_\_ **City/Town:** QUINCY

**Description of Work:** Stormwater drainage structure & conduit repair, drainage structure concrete repair, Tide gate removal & replacement, drain line excavation, curb removal & replacement, bituminous asphalt paving

**Job Location:** Broad St, Southern Artery, Woodward Ave

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
<b>Notes:</b>						
<b>Apprentice to Journeyworker Ratio:1:1</b>						
STEAM BOILER OPERATOR <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2011	\$39.16	\$10.00	\$12.40	0.00	\$61.56
	06/01/2012	\$39.72	\$10.00	\$12.40	0.00	\$62.12
	12/01/2012	\$40.34	\$10.00	\$12.40	0.00	\$62.74
	06/01/2013	\$41.11	\$10.00	\$12.40	0.00	\$63.51
	12/01/2013	\$41.89	\$10.00	\$12.40	0.00	\$64.29
TAMPERS, SELF-PROPELLED OR TRACTOR DRAWN <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2011	\$39.16	\$10.00	\$12.40	0.00	\$61.56
	06/01/2012	\$39.72	\$10.00	\$12.40	0.00	\$62.12
	12/01/2012	\$40.34	\$10.00	\$12.40	0.00	\$62.74
	06/01/2013	\$41.11	\$10.00	\$12.40	0.00	\$63.51
	12/01/2013	\$41.89	\$10.00	\$12.40	0.00	\$64.29
TELECOMMUNICATION TECHNICIAN <i>ELECTRICIANS LOCAL 103</i>	03/01/2012	\$31.78	\$13.00	\$12.23	0.00	\$57.01
	09/01/2012	\$32.29	\$13.00	\$12.25	0.00	\$57.54
	03/01/2013	\$32.83	\$13.00	\$12.26	0.00	\$58.09
	09/01/2013	\$33.34	\$13.00	\$12.28	0.00	\$58.62
	03/01/2014	\$33.88	\$13.00	\$12.30	0.00	\$59.18
	09/01/2014	\$34.38	\$13.00	\$12.31	0.00	\$59.69
	03/01/2015	\$34.91	\$13.00	\$12.33	0.00	\$60.24
	09/01/2015	\$35.63	\$13.00	\$12.35	0.00	\$60.98
03/01/2016	\$36.35	\$13.00	\$12.37	0.00	\$61.72	

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EXECUTIVE OFFICE OF LABOR AND WORKFORCE DEVELOPMENT  
DEPARTMENT OF LABOR STANDARDS

**Prevailing Wage Rates**

As determined by the Director under the provisions of the  
Massachusetts General Laws, Chapter 149, Sections 26 to 27H

JOANNE F. GOLDSTEIN  
Secretary

HEATHER E. ROWE  
Director

DEVAL L. PATRICK  
Governor

TIMOTHY P. MURRAY  
Lt. Governor

**Awarding Authority:** City of Quincy  
**Contract Number:** **City/Town:** QUINCY  
**Description of Work:** Stormwater drainage structure & conduit repair, drainage structure concrete repair, Tide gate removal & replacement, drain line excavation, curb removal & replacement, bituminous asphalt paving  
**Job Location:** Broad St, Southern Artery, Woodward Ave

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
<b>Apprentice - TELECOMMUNICATION TECHNICIAN - Local 103</b>						
<b>Effective Date - 03/01/2012</b>						
Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$12.71	\$13.00	9.27	\$0.00	\$34.98
2	40	\$12.71	\$13.00	9.27	\$0.00	\$34.98
3	45	\$14.30	\$13.00	9.51	\$0.00	\$36.81
4	45	\$14.30	\$13.00	9.51	\$0.00	\$36.81
5	50	\$15.89	\$13.00	9.76	\$0.00	\$38.65
6	55	\$17.48	\$13.00	10.01	\$0.00	\$40.49
7	60	\$19.07	\$13.00	10.26	\$0.00	\$42.33
8	65	\$20.66	\$13.00	10.50	\$0.00	\$44.16
9	70	\$22.25	\$13.00	10.75	\$0.00	\$46.00
10	75	\$23.84	\$13.00	11.00	\$0.00	\$47.84
<b>Effective Date - 09/01/2012</b>						
Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$12.92	\$13.00	9.28	\$0.00	\$35.20
2	40	\$12.92	\$13.00	9.28	\$0.00	\$35.20
3	45	\$14.53	\$13.00	9.53	\$0.00	\$37.06
4	45	\$14.53	\$13.00	9.53	\$0.00	\$37.06
5	50	\$16.15	\$13.00	9.77	\$0.00	\$38.92
6	55	\$17.76	\$13.00	10.02	\$0.00	\$40.78
7	60	\$19.37	\$13.00	10.27	\$0.00	\$42.64
8	65	\$20.99	\$13.00	10.52	\$0.00	\$44.51
9	70	\$22.60	\$13.00	10.77	\$0.00	\$46.37
10	75	\$24.22	\$13.00	11.02	\$0.00	\$48.24

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**Job Location:** Broad St, Southern Artery, Woodward Ave

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
<b>Notes:</b>						
<b>Apprentice to Journeyworker Ratio:1:1</b>						
TERRAZZO FINISHERS <i>BRICKLAYERS LOCAL 3 - MARBLE &amp; TILE</i>	03/01/2012	\$45.50	\$10.18	\$17.25	0.00	\$72.93

**Apprentice - TERRAZZO FINISHER - Local 3 Marble & Tile**

**Effective Date - 03/01/2012**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$22.75	\$10.18	17.25	\$0.00	\$50.18
2	60	\$27.30	\$10.18	17.25	\$0.00	\$54.73
3	70	\$31.85	\$10.18	17.25	\$0.00	\$59.28
4	80	\$36.40	\$10.18	17.25	\$0.00	\$63.83
5	90	\$40.95	\$10.18	17.25	\$0.00	\$68.38

**Notes:**

Steps are 800 hrs.

**Apprentice to Journeyworker Ratio:1:3**

TEST BORING DRILLER <i>LABORERS - FOUNDATION AND MARINE</i>	12/01/2011	\$33.05	\$7.10	\$12.60	0.00	\$52.75
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**Job Location:** Broad St, Southern Artery, Woodward Ave

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
<b>Apprentice - TEST BORING DRILLER (Laborers Foundation &amp; Marine)</b>						
<b>Effective Date - 12/01/2011</b>						
Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$19.83	\$7.10	12.60	\$0.00	\$39.53
2	70	\$23.14	\$7.10	12.60	\$0.00	\$42.84
3	80	\$26.44	\$7.10	12.60	\$0.00	\$46.14
4	90	\$29.75	\$7.10	12.60	\$0.00	\$49.45
<b>Notes:</b>						
<b>Apprentice to Journeyworker Ratio:1:3</b>						
TEST BORING DRILLER HELPER LABORERS - FOUNDATION AND MARINE	12/01/2011	\$31.77	\$7.10	\$12.60	0.00	\$51.47
TEST BORING LABORER LABORERS - FOUNDATION AND MARINE	12/01/2011	\$31.65	\$7.10	\$12.60	0.00	\$51.35

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**Job Location:** Broad St, Southern Artery, Woodward Ave

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
<b>Apprentice - TEST BORING LABORER (Laborers Foundation &amp; Marine)</b>						
<b>Effective Date - 12/01/2011</b>						
Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$18.99	\$7.10	12.60	\$0.00	\$38.69
2	70	\$22.16	\$7.10	12.60	\$0.00	\$41.86
3	80	\$25.32	\$7.10	12.60	\$0.00	\$45.02
4	90	\$28.49	\$7.10	12.60	\$0.00	\$48.19

**Notes:**

**Apprentice to Journeyworker Ratio:1:3**

TRACTORS/PORTABLE STEAM GENERATORS <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2011	\$39.16	\$10.00	\$12.40	0.00	\$61.56
	06/01/2012	\$39.72	\$10.00	\$12.40	0.00	\$62.12
	12/01/2012	\$40.34	\$10.00	\$12.40	0.00	\$62.74
	06/01/2013	\$41.11	\$10.00	\$12.40	0.00	\$63.51
	12/01/2013	\$41.89	\$10.00	\$12.40	0.00	\$64.29
TRAILERS FOR EARTH MOVING EQUIPMENT <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE A</i>	12/01/2011	\$31.82	\$8.56	\$7.27	0.00	\$47.65
	06/01/2012	\$32.12	\$8.56	\$7.27	0.00	\$47.95
	08/01/2012	\$32.12	\$8.91	\$7.27	0.00	\$48.30
	12/01/2012	\$32.42	\$9.07	\$8.00	0.00	\$49.49
TUNNEL WORK - COMPRESSED AIR <i>LABORERS (COMPRESSED AIR)</i>	12/01/2011	\$44.08	\$7.10	\$13.00	0.00	\$64.18
TUNNEL WORK - COMPRESSED AIR (HAZ. WASTE) <i>LABORERS (COMPRESSED AIR)</i>	12/01/2011	\$46.08	\$7.10	\$13.00	0.00	\$66.18
TUNNEL WORK - FREE AIR <i>LABORERS (FREE AIR TUNNEL)</i>	12/01/2011	\$36.15	\$7.10	\$13.00	0.00	\$56.25

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**Job Location:** Broad St, Southern Artery, Woodward Ave

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
TUNNEL WORK - FREE AIR (HAZ. WASTE) <i>LABORERS (FREE AIR TUNNEL)</i>	12/01/2011	\$38.15	\$7.10	\$13.00	0.00	\$58.25
VAC-HAUL <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE A</i>	12/01/2011	\$31.24	\$8.56	\$7.27	0.00	\$47.07
	06/01/2012	\$31.54	\$8.56	\$7.27	0.00	\$47.37
	08/01/2012	\$31.54	\$8.91	\$7.27	0.00	\$47.72
	12/01/2012	\$31.84	\$8.91	\$8.00	0.00	\$48.75
WAGON DRILL OPERATOR <i>LABORERS - ZONE 1</i>	12/01/2011	\$32.05	\$7.10	\$12.45	0.00	\$51.60
WASTE WATER PUMP OPERATOR <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2011	\$39.52	\$10.00	\$12.40	0.00	\$61.92
	06/01/2012	\$40.09	\$10.00	\$12.40	0.00	\$62.49
	12/01/2012	\$40.71	\$10.00	\$12.40	0.00	\$63.11
	06/01/2013	\$41.49	\$10.00	\$12.40	0.00	\$63.89
	12/01/2013	\$42.27	\$10.00	\$12.40	0.00	\$64.67
WATER METER INSTALLER <i>PLUMBERS &amp; GASFITTERS LOCAL 12</i>	03/01/2012	\$46.81	\$9.32	\$13.29	0.00	\$69.42
	09/01/2012	\$48.06	\$9.32	\$13.29	0.00	\$70.67
	03/01/2013	\$49.31	\$9.32	\$13.29	0.00	\$71.92

**Additional Apprentices Information:**

Minimum wage rates for apprentices employed on public works projects are listed above as a percentage of the pre-determined hourly wage rate established by the Commissioner under the provisions of the M.G.L. c. 149, ss. 26-27D. Apprentices ratios are established by the Division of Apprenticeship Training pursuant to M.G.L. c. 23, ss. 11E-11L.

All apprentices must be registered with the Division of Apprenticeship Training in accordance with M.G.L. c. 23, ss. 11E-11L.

All steps are six months (1000 hours) unless otherwise specified.

- \* Ratios are expressed in allowable number of apprentices to journeymen or fraction thereof.
- \*\* Multiple ratios are listed in the comment field.
- \*\*\* APP to JM; 1:1, 2:2, 2:3, 3:4, 4:4, 4:5, 4:6, 5:7, 6:7, 6:8, 6:9, 7:10, 8:10, 8:11, 8:12, 9:13, 10:13, 10:14, etc.
- \*\*\*\* APP to JM; 1:1, 1:2, 2:3, 2:4, 3:5, 4:6, 4:7, 5:8, 6:9, 6:10, 7:11, 8:12, 8:13, 9:14, 10:15, 10:16, etc.

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## SECTION 01010 - SUMMARY OF WORK

### 1.01 LOCATION OF WORK

- A. All work under this contract is located in the City of Quincy, Massachusetts. The Project consists of repairs to the Broad Street tide gate & stormwater tributary system.

### 1.02 SCHEDULE AND OTHER SITE SPECIFIC REQUIREMENTS

- A. The project construction milestone dates, maintenance of safe streets and sidewalks for vehicular/pedestrian traffic through the project area, safe and unobstructed access to businesses and abutters, public safety measures and site clean-up on a daily basis shall be strictly enforced. No waiver of any one of these requirements shall be allowed. The Contractors are urged to study these requirements before submitting bids. Unfamiliarity with the above requirements shall not be accepted as an excuse for lack of performance and / or basis for claims.
- B. Work on the area referenced as Resource Area Improvements, on the contract drawings shall not commence prior to June 19, 2012 nor finish after August 10, 2012 and shall be performed from 7:30 AM to 3:00 PM, Monday through Friday, excluding holidays unless modified by the OWNER.
- C. Work within the limits of work indicated on Plan sheet C-206 entitled Broad Street Tide Gate Improvement Plan, as shown on the drawings, will be allowed between 3:30 PM and 7:00 AM, Mondays through Thursdays to accommodate work off-peak of the tide cycle, unless otherwise modified by the OWNER as noted herein.
- D. Work shall be scheduled/sequenced such that one means of controlled vehicular access to the western most parking lot of Quincy High School is maintained during normal hours of operation from 5:00 AM to 8:00 PM, Monday through Friday, unless modified by the OWNER for traffic management purposes.
- E. During all periods of no construction activity and prior to the project completion, the Contractor shall be fully responsible for maintaining roads/sidewalks, utilities and other public amenities for convenience, safety and safe access to businesses and abutters at all times.

### 1.03 WORK TO BE DONE

- A. The work shall be done in accordance with the Massachusetts Highway Department Standard Specifications for Highways and Bridges, Construction Standards, other approved standards of the Department, the Manual on Uniform Traffic Control Devices, Standard Drawings for Signs and Supports, all as last amended, other standards as referenced in these specifications.
- B. The work to be done under this Contract consists of furnishing all necessary labor, materials and equipment required for repairs to the Broad Street tide gate & stormwater tributary system. The project will include other improvements in accordance with the Plans and these Special Provisions.

Included in the work are site demolition, paving, excavation, drainage structure and conduit installation, modifications/adjustments, concrete structure repair, tide gate installation, installation of sidewalks and handicap ramps, installation of curb, traffic signs and pavement markings, traffic control management during construction, and other improvements in accordance with the Plans and these Technical Specifications.

The project also includes significant amount of Contractor project management responsibilities including record keeping, grant administration, progress tracking, and communication with the City.

All work done under this Contract shall be in conformance with the Massachusetts Department of Transportation - Highway Division's (Formally Massachusetts Highway Department) STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES dated 1988, the SUPPLEMENTAL SPECIFICATIONS dated February 25, 2010, the STANDARD SPECIAL PROVISIONS dated August 27, 2010, the 2003 MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, the 2010 CONSTRUCTION STANDARD DETAILS, the 1990 STANDARD DRAWING FOR SIGNS AND SUPPORTS, the 1968 STANDARD DRAWINGS FOR TRAFFIC SIGNALS AND HIGHWAY LIGHTING, THE AMERICAN STANDARD NURSERY STOCK (ANSI Z60.1-1986) the PLANS and these TECHNICAL SPECIFICATIONS.

In addition, work shall conform to the City of Quincy Standards. In case of discrepancy between Massachusetts Department of Transportation - Highway Division (MassDOT) Standard Specifications and the City of Quincy Standards, the latter will govern. In instances where the Standard Specifications make references to the Massachusetts Highway Department (MassDOT or MassDOT), those references shall be replaced with "City of Quincy".

#### 1.04 COORDINATION

The Contractor shall coordinate all work with Quincy Department of Public Works, Quincy Police Department for traffic control, Engineer, and the Quincy High School Principal.

#### 1.05 ABBREVIATIONS AND REFERENCES

A. The following abbreviations and references may be used in these specifications.

1. Standard Specifications: Commonwealth of Massachusetts, Department of Public Works, Standard Specifications for Highways and Bridges.
2. Construction Standards: Commonwealth of Massachusetts Department of Public Works Construction Standards.
3. Signs & Supports: Commonwealth of Massachusetts Department of Public Works Standard Drawings for Signs and Supports.
4. MUTCD: Commonwealth of Massachusetts Manual on Uniform Traffic Control Devices.
5. AASHTO: The American Association of State Highway Transportation Officials.
6. ACI: American Concrete Institute.
7. ANSI: American National Standard Institute.
8. ASCE: American Society of Civil Engineers.
9. ASTM: American Society of Testing Methods.
10. AWS: American Welding Society.

11. Fed. Specs: Federal Specifications.

- B. Where reference is made to a specification by one of the above-referenced or other associations, it is understood that the latest revisions thereof shall apply.
- C. In case of conflict, these specifications shall take precedence over the Standards and Specifications noted above.

\*\*\* END OF SECTION \*\*\*

## SECTION 01025 – MEASUREMENT AND PAYMENT

### PART 1 - GENERAL

#### 1.1 DESCRIPTION

- A. Measurement and payment for the lump sum portions of the work will be on a per item basis as defined by the Schedule of Values. The value of each item listed in the Schedule of Values shall constitute full compensation for complete compliance with the requirements of that item, including all labor, equipment, materials, tools, incidental work, and construction methods.
- B. Measurement and payment for the unit price item portions of the work will be on a per item basis as defined by the Schedule of Values. The value of each item listed in the Schedule of Values shall constitute full compensation for complete compliance with the requirements of that item, including all labor, equipment, materials, tools, incidental work, and construction methods.

#### 1.2 METHOD OF MEASUREMENT

- A. Measurement of completed unit price and lump sum work shall be based on the quantities shown on the Drawings, complete, in place. Any changes to the quantities shall be the result of authorized variations to the Drawings.
- B. Measurement of allowance items will be based on actual costs incurred for the item.
- C. All measurements shall be made in English units.
- D. When the method of measurement is in stations, miles, or acres, the measurements shall be horizontal measurements unless specified otherwise.

#### 1.3 BASIS OF PAYMENT

- A. Payment of unit price and lump sum items shall be based on the most recent Schedule of Values in accordance with the procedures and schedule set forth in the Agreement and Section 01300, Submittals.
- B. Progress payments for lump sum items shall be based on the percentage completion of each portion of the work as of the end of the period covered by the Application for Payment.
- C. Payment of unit price items shall be based on the unit prices stipulated in the Agreement between Owner and Contractor for the quantities of materials delivered to and installed on the Site specifically to replace unsuitable materials as directed by the Engineer.
- D. Payment shall be made on approved submittal items. No payment shall be made for items without approved submittals.
- E. Retainage will be withheld from progress payments as specified in the Agreement between Owner and Contractor.

#### F. DESCRIPTION OF PAY ITEMS:

- 1. Item 1a. – Broad Street Tide Gate Repair.

- a. Payment: Lump sum price, complete as set in the Bid.
- b. Measurement: Measured as percent complete, as approved by ENGINEER.
- c. Includes: all labor, equipment, tools, and materials to furnish and install tide gate including clearing and grubbing, concrete forms, removal and replacement of guard rail, hydraulic cement, excavation, disposal of excavated trench material, shoring/bracing, dewatering, tide gate, tide gate installation and incidental installation materials, by-pass pumping as required to prevent up gradient flooding, pneumatic plug for control of tidal surcharge and / or base flow, project sign, two (2) electronic message boards, all tree trimming, environmental protection, and all other incidentals necessary to furnish and install the tide gate and drainage structure repairs, complete in place, as specified, shown on the Drawings or required by field conditions.

The two electronic message boards shall be WANCO model number WVTMM-M, or equal. The two boards shall be turned over and retained by City of Quincy Department of Public Works (DPW) upon completion of the project.

- d. Schedule of payment: Installation per percent complete, as approved by ENGINEER. Payment for the message boards shall be 100% of direct cost (**no mark-up will be allowed on this item**) upon completion of project and transfer of Certificate of Title to authorized DPW personnel and delivery of equipment to DPW at 55 Sea Street, Quincy MA.

2. Items 1.b. through 1.d.– Unit Price Bid Items per Concrete Repair Schedule indicated on the Plans.

- a. Payment: Unit price per square foot or linear foot as applicable of repair type installed, complete in place, as stated in the Bid.
- b. Measurement: As measured in place by the Engineer.
- c. Includes: all labor, equipment, tools and materials to furnish and install concrete structure repairs and all other incidentals necessary to furnish and install structural repairs, complete in place, as specified, shown on the Drawings (sheets C-300 and C-301) or required by field conditions.
- d. Schedule of payment: Installation per percent complete, as approved by ENGINEER.

3. Item 2 – Resource Area Improvements.

- a. Payment: Lump sum price, complete as set in the Bid.
- b. Measurement: Measured as percent complete, as approved by ENGINEER
- c. Includes: all labor, equipment, tools, and materials to furnish and install drain line and drain structure repairs including: employment of a Massachusetts register wetland specialist and / or arborist, wetland vegetation removal and burlap balling of roots,

wetland vegetation stacking and watering, wetland vegetation replacement, drain structure, structure frame and grate, pipe couplings, hydraulic cement, excavation, removal, disposal, and replacement of excavated trench material, shoring/bracing, dewatering, removal, disposal, and replacement of existing pipe to be repaired, pneumatic plug for control of tidal surcharge and / or base flow, pipe supports, pipe bedding and backfill, connecting to existing drain or drain structure (as applicable), compaction, marsh mats, environmental protection, dewatering, dewatering equipment and treatment materials, loam and seed, drainage and all other incidentals necessary to furnish , install the pipe and drainage structure, complete in place, as specified, shown on the Drawings or required by field conditions, and in compliance with the issued Order of Conditions and the Programmatic General Permit Category II as issued by the Army Corps of Engineers.

d. Schedule of payment: Installation per percent complete, as approved by ENGINEER.

4. Items 3.a. through 3.e., 4.a. through 4.g. – Drain Pipe (Various diameter).

a. Payment: Unit price per linear foot of pipe installed, complete in place, as stated in the Bid.

b. Measurement: As measured along the horizontal projection of the centerline of the pipe; for drain line, measure from center of drain structures where applicable or linear length of drain installed per spot repair

c. Includes: all labor, equipment, tools and materials to furnish and install drain including clearing and grubbing, drain structure cores, saw cutting, pipe couplings, hydraulic cement, excavation, removal, disposal, and replacement of excavated trench material, shoring/bracing, dewatering, removal and disposal existing pipe, protection and or adjustment of existing castings and appurtenances, plugging and capping existing drain line abandoned in place, pipe supports, pipe bedding, backfill and gravel borrow, connecting to existing drain or drain structure (as applicable), compaction, crossing utilities, support of existing utilities as specified in the bid documents, tree trimming, removing and replacing fences and mail boxes, and all other incidentals necessary to furnish and install the pipe, re-painting of disturbed pavement markings, complete in place, as specified, shown on the Drawings or required by field conditions.

d. Schedule of payment: Installation per percent complete, as approved by ENGINEER.

5. Items 3.f. through 3.ff., and 4.h. through 4.kk. – Unit Price Line Items.

a. Payment: Unit price per line item unit of measurement, as stated in the Bid.

b. Measurement: Actual quantity of specific line item installed complete, as determined by Engineer.

c. Includes: all labor, equipment, tools, and materials to furnish and install or remove as applicable, complete in place, as specified, shown on the Drawings or required by field conditions.

d. Schedule of payment: Installation per percent complete, as approved by ENGINEER.

6. Item 5 – Allowance for Traffic Police Details.

- a. Payment: Unit price per day utilized, as stated in the Bid.
- b. Measurement: As measured by the ENGINEER.
- c. Includes: Direct cost (**no mark-up will be allowed on this item**) to provide coordination and scheduling a sufficient quantity of details to align with scheduled work within public right-of way. Contractor shall not receive payment for any unused portion of the allowance for compaction.
- d. Schedule of payment: 100% of costs incurred to date once Quincy Police Department confirms payment from contractor.

7. Items 6.a. - Unsuitable Materials Excavation And Backfill.

- a. Payment: Unit price per cubic yard, complete in place, as stated in the Bid.
- b. Measurement: As measured by the ENGINEER within the pay limits shown on the Drawings and as specified.
- c. Includes: excavation and replacement of materials unsuitable for pipe or structure subgrade or trench backfill. Unsuitable material shall be as defined in Section 02200 and as determined by the ENGINEER.
- d. Schedule of payment: Installation per percent complete, as approved by ENGINEER.

8. Items 6.b. - Rock and Boulder Excavation.

- a. Payment: Unit price per cubic yard, complete in place as stated in the Bid.
- b. Measurement: Measurement in place prior to excavation within pay limits shown on the Drawings and as specified or measured after excavation.
- c. Includes: all labor, tools, equipment and materials to remove “rock” from its original bed by drilling, barring or wedging (blasting shall not be permitted) specifically ledge or bed rock and boulders larger than one cubic yard in volume, excavation, removal, and disposal of the rock and replacement as necessary with suitable backfill material as directed by the ENGINEER and all incidentals necessary to remove “rock” and install pipe in accordance with the Contract Documents.
- d. Schedule of payment: Installation per percent complete, as approved by ENGINEER.

9. Items 6.c. - Control Density Fill, Type 2E.

- a. Payment: Unit price per cubic yard removed as stated in the Bid.
- b. Measurement: Per cubic yard measured in place by the ENGINEER.

- c. Includes: all labor, equipment, tools and materials to place controlled density fill, including saw cutting, excavation, shoring/bracing, removing and disposing of materials, placement of Control Density Fill (CDF), Type 2e, Flowable (Excavatable), steel plates and cold patch. CDF shall be used for preventative trench settlement only where directed by the Engineer and the trench shall be plated overnight.
  - d. Schedule of payment: Installation per percent complete, as approved by ENGINEER.
10. Items 7 - Allowance for Compaction Testing.
- a. Payment: Shall be reimbursement for actual direct costs incurred relative to soil compaction testing by certified independent testing company. Payment shall be made after confirmation of payment to independent testing company. The lump sum allowance included in the Form for General Bid is strictly for the purpose of bid evaluation
  - b. Measurement: As measured by the ENGINEER.
  - c. Includes: Direct cost (**no mark-up will be allowed on this item**) to provide compaction testing performed by a qualified technician certified in “soils” by the New England Transportation Technician Certification Program (NETTCP) using the methods described in the specifications. Only compaction tests that meet requirements of the specifications shall be eligible for payment under this item. Compaction tests and work performed to obtain desired compaction in trenches that failed initial compaction tests shall not be eligible for payment under this item and shall be performed at the Contractor’s expense. Testing to be performed at depths and locations determined by the Engineer. Contractor shall not receive payment for any unused portion of the allowance for compaction.
  - d. Schedule of payment: 100% based upon submittal of invoices, showing no outstanding balance, and receipt of certified payroll statements.

## PART 2 – PRODUCTS

Not Used.

## PART 3 - EXECUTION

### 3.01 GENERAL:

A. Measurement: Provide advance notification to ENGINEER when necessary measurements must be taken. Backfilling of trench shall not be performed until ENGINEER has taken all measurements. Assist ENGINEER in taking measurements when requested.

\*\*\*END OF SECTION\*\*\*

## SECTION 01045 - SAFETY CONTROLS & SIGNS FOR CONSTRUCTION OPERATIONS

### PART 1 – GENERAL

#### 1.01 DESCRIPTION

- A. The work under this Item shall conform to the relevant provisions of Section 850 of the Standard Specifications, the Manual on Uniform Traffic Control Devices (Part IV, as amended), requirements of this section, and work as shown or as directed.
- B. The work shall include furnishing, installing and maintaining various traffic control devices for the protection of area residents, the traveling public and workers during construction operations.
- C. All signs, barricades, cones and drums shall have Encapsulated Lens Reflective Sheeting in accordance with Section M9.30.2 of the Standard Specifications.

#### 1.02 FLAGS FOR ADVANCE WARNING SIGNS

- A. Standard orange and red-orange flags (16-inch minimum) shall be mounted on all signs in advance of starting the work.
- B. Flags shall be mounted as shown on page 6B-13 of the Mass. Manual on Uniform Traffic Control Devices (MUTCD) and shall not interfere with a clear view of the sign face.
- C. Reflectorized plastic drums and the reflectorized plastic drums with flashers (Type A) shall be placed as directed by the Engineer.
- D. Plastic drums shall not be less than 19-inches in any diameter transverse to the direction of traffic flow, nor less than 14-inches in any diameter.
- E. Flexible reflective sheeting shall be applied to all plastic drums in accordance with the Drawings in the Standard Specifications.

#### 1.03 PROVISIONS FOR TRAVEL AND PROSECUTION OF THE WORK

- A. The Contractor shall submit a Schedule of Operations as provided for in the Standard Specifications, for the Engineer's approval before any work is started. The schedule of operations shall include a plan of construction procedures and the safety measures to be used during the execution of the work.
- B. A work schedule incorporating all traffic control appurtenances and defining utilization of access points shall be submitted to the Engineer for approval. All temporary work shall be in conformance with Section 850 of the Standard Specifications, as last amended and supplemented by the following:
  - 1. The Contractor shall provide such temporary bridging, steel plates, temporary pavement, wood-framed walkways, caution safety and other necessary signs directing the pedestrian/vehicular traffic towards unblocked and safe areas.

In areas where the construction activity is in progress, the Contractor is required to install directional signs in front of businesses saying "OPEN FOR BUSINESS" or something similar for

guidance of the shoppers. The Contractor shall provide safe access/egress, as defined above, to all businesses and abutters within the project area.

2. The Contractor shall schedule its operations so as to cause the least interruption at all times in the flow of traffic on existing roads during construction and shall provide for the safe and convenient passage of pedestrians and vehicles throughout the project area and the adjacent areas impacted by the construction operations.
3. During construction hours, traffic flow must be controlled by Uniformed Traffic Police Officers, in accordance with Section 7.0 of the Standard Specifications. Between the hours of 7:30 AM and 3:30 PM, a minimum of one moving lane shall be maintained on the roadways in each direction. During peak traffic hours, the Contractor may be required to open more than one moving lane in one or both directions, as directed by the Engineer.
4. For construction after normal work hours, on weekends, and holidays, at least one traffic lane with pull out areas must be made available to pedestrian and vehicular traffic. Gravel borrow and bituminous concrete needed to maintain temporary passable travel lane ramps to allow access and egress to abutting properties shall be provided as needed, by the Contractor.
5. Certain construction operations such as utility work and roadway/sidewalk reconstruction may restrict access/egress on some roads and to businesses and abutters. Under these circumstances, the Contractor is required to schedule his operations during off-peak hours or late evenings with owner approval and in small stretches so that a particular work activity can be completed in the shortest possible time.

**The Contractor is required to give abutting property owners 48 hours notice of periods when access/egress will not be available. It is again stressed that the City of Quincy considers the access/egress to abutting residences and businesses of critical importance and the Contractor must implement provisions of safe access/egress.**

6. Particular care shall be exercised to establish and maintain such methods and procedures that will not create hazards of any nature. Traffic control, safety devices and/or signs having messages that are irrelevant to normal traffic conditions will be removed or properly covered at the end of each work period. Signs are to be kept clean at all times and legends shall be distinctive and unmarred.
7. In areas of high pedestrian and vehicular traffic volume, the Contractor is required to remove all waste materials and construction equipment from the work site and clean and make the site and its approaches safe on a daily basis. The construction equipment shall not be parked overnight on the site or the adjacent roads unless permitted by the Engineer.
8. Night watchmen may be required where special hazards exist. These shall be provided by the Contractor as part of the bid.
9. Unless permission to close a street is received in writing from the City, all excavated materials shall be placed so that vehicular and pedestrian traffic is maintained at all times. If the Contractor's operations cause traffic hazards, appropriate safety measures satisfactory to the Engineer shall be implemented immediately.
10. Detours around construction will be subject to the approval of the City Traffic Engineer. where detours are permitted, the Contractor shall provide all necessary barricades, flashers, flashing

arrows and signs in conformance with the Local and State regulations and standards to divert the flow of traffic. The Engineer will strictly control the periods when traffic is being detoured.

11. The Contractor will be responsible for posting signage that clearly states that any vehicle impeding the progress of construction will be towed at the Owner's expense. If Contractor fails to post such signs, Contractor will be responsible for **all** towing charges.
12. The Contractor will be fully responsible for all injuries or claims, damage to public and private properties, and any violations of the local, state or federal regulations resulting from his construction operations whether or not police protection has been provided. The services of uniformed traffic police shall in no way relieve the Contractor of its responsibilities under the Contract.

PART 2 – PRODUCTS (not applicable)

PART 3 – EXECUTION (not applicable)

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## SECTION 01050 - CONTROL OF WORK

### PART 1 - GENERAL

#### 1.01 PROJECT SCHEDULES

- A. The Contractor shall furnish plant and equipment to secure a satisfactory quality of Work and a rate of progress to insure a timely completion of the work.
- B. The Contractor shall follow the agreed construction schedule, and all work progress shall be monitored against the on a weekly basis, as required.

#### 1.02 SITE SUPERINTENDENCE & WORK FORCE

- A. The Contractor shall provide, at its own expense, during the entire course of the work, a competent full-time job superintendent to supervise the Contractor's employees, equipment operations and the general coordination and management of the project. The superintendent shall not work part-time as a tradesman, nor shall he be removed from the job except with the written permission of the Engineer.
- B. The Contractor shall furnish a labor force, which will work in harmony and accord with all other labor forces taking part in, or connected with this project. The Contractor shall also promptly remove from work on this project any superintendent, assistant or workman who, in the opinion of the Engineer, is incompetent, unskillful, disruptive, or disorderly, and no person so removed from the work shall be re-employed on this project without the Engineer's written consent.

#### 1.03 COORDINATION WITH LOCAL AGENCIES

- A. The Contractor shall coordinate its activities with the Police, Traffic, Fire, schools, and Department of Public Works (DPW) in the City, as required.
- B. The Contractor shall maintain all area services and public amenities at all times and shall provide the DPW with an address at which it can be contacted in an emergency. Upon notification by the City or the Engineer, the Contractor shall promptly restore services or make repairs as necessary or as directed.
- C. The Contractor shall immediately notify utility companies of any damage to their utilities resulting from its construction operations.
- D. The Contractor shall notify Dig Safe<sup>®</sup> at 1-800-322-4844 at least 72 hours before excavating in any public way.
- E. The Contractor shall give at least 48 hours written notice to the Engineer and the effected businesses, utilities, residents and abutters prior to the commencement of work on roads and utilities effecting traffic safety and safe access for abutters and performance of other normal area activities.
- F. During the progress of the work, the Contractor shall remove debris, sweep and sprinkle water in work areas, maintain the area as necessary to minimize the creation and dispersion of dust. Calcium chloride shall not be used to control dust.

#### 1.04 SITE WORK

- A. The Contractor shall, without additional compensation, be required to provide safe and convenient access to all abutters during the prosecution of the Work.
- B. All construction areas shall be adequately safeguarded by providing temporary barricades, caution signs, lights and other means to prevent accidents to persons, and damage to property. The Contractor shall, at its own expense, provide suitable crossing from travel by pedestrians and workmen and take precautions to prevent injury to the public due to its construction operations. All excavated materials, equipment, or stockpiles that could be dangerous to the public shall be protected, barricaded, well lighted at nights, and/or removed off-site as directed by the Engineer.
- C. The Contractor shall be responsible for the protection of all public and private property. Any direct or indirect damage done to public or private property for any reason due to the Contractor's operations shall be restored by the Contractor, at its own expense to a condition equal to or better than existed before the damage.
- D. All open excavations shall be adequately safeguarded by providing temporary barricades, caution signs, lights, flares and other means to prevent injuries to persons and damage to property. The Contractor shall, at its own expense, provide suitable and safe means for completely covering all open trench excavations (backfilling or covering with steel plates of adequate strength) and for accommodating travel when work is not in progress. Bridges provided for access to private property during construction shall be removed when no longer required.
- E. Test pits for the purpose of locating underground pipe lines, structures, or to determine the sub-surface conditions prior to or during construction shall be excavated and backfilled by the Contractor at his own expense regardless of whether the test pits are dug at the direction of the Engineer or for the convenience of the Contractor. Test pits shall be backfilled immediately and the surfaces restored and maintained in a manner satisfactory to the Engineer.
- F. All precautions shall be taken to prevent freezing or damage to any of the exposed or partially uncovered utility lines. All trenches shall be backfilled as soon as possible and immediately followed by an installation of temporary bituminous surface. The roadway shall be free of construction debris and excavated material and shall be relatively smooth to provide safe passage.
- G. Necessary access for fire apparatus and other emergency vehicles must be maintained at all times. Fire hydrants and water holes for fire protection on or adjacent to the project site shall be kept accessible to the fire apparatus at all times, and no obstructions shall be placed within 10 feet of any such facility.
- H. When work at the site necessitates the temporary placement of vehicles, equipment, materials or workers in public streets, sidewalks or walkways, the Contractor shall provide and use all necessary warning devices, barricades, signs, special apparel, etc., in the performance of the work, as set forth in Section 250 of the Standard Specifications.
- I. No pavement work shall be done between December 15<sup>th</sup> and March 31<sup>st</sup> unless specifically permitted by the Engineer. Therefore, the Contractor shall not begin and construction which cannot be satisfactorily completed before December 15<sup>th</sup>. The Contractor shall not have any claim for extension of time for completion of the Work under this contract as a result of this restriction.

#### 1.05 INTERFERENCE WITH EXISTING WORKS

- A. The Contractor shall at all times conduct its operations so as not to interfere with the existing works. The Contractor shall develop a program, with the approval of the Engineer and interested officials, to provide for construction and putting into service of the new works in an orderly manner.
- B. All work connected with cutting into and reconstruction of existing pipes or structures shall be planned to interfere with the operation of the existing facilities for the shortest possible time when the demands on the facilities best permit such interference.
- C. The Contractor shall have no claim for additional compensation by reason of delay or inconvenience in adapting its operations to meet the above requirement.
- D. Pipe lines will be located substantially as indicated on the drawings, but the City reserves the right to make modifications in alignment, sizes, fittings and appurtenances to suit field or the existing system operation/design conditions. This type of modification shall not relieve the Contractor from his contractual obligations in laying, jointing, and installing difference additional items, as required.
- E. Where dimensions and location of existing structures are of importance in the installation or connection of any part of the work, the Contractor shall verify such dimensions and locations in the field at its own expense, before fabricating or ordering any material or equipment.

#### 1.06 INTERFERENCE WITH STREETS/SIDEWALKS

- A. The Contractor shall not close or obstruct any portion of a street, road, or private way without obtaining permits to perform work within limits of public ways from the DPW.
- B. Streets, roads, private ways and walks under construction shall be maintained so as not to endanger the public/private properties and safety of the traveling public and residents at all times. The Contractor shall be fully responsible for all damages arising out of its operations and for the adequacy of safety measures provided at each site.
- C. If the closure of a street or road is necessary, the Contractor shall notify the Police, Fire, Traffic, schools, and DPW and shall cooperate with the Traffic Department in the establishment of alternate routes. The Contractor shall provide and install the required number of detour signs (plainly marked and well-lighted) and take all other safety measures necessary to minimize confusion.
- D. Along the location of work, all fences, stone walls, curbs, drives and walks, bushes, trees, shrubbery and other physical features which are within the limits of the streets or are associated with private property shall be protected to the satisfaction of the Engineer and to the satisfaction of the property owner(s).
- E. Fences and other features removed by the Contractor for site access are to be restored in the location indicated by the Engineer as soon as conditions permit. All damages to existing physical feature shall be repaired to the satisfaction of the Engineer and the satisfaction of the affected property owner(s). All protection, repair, restoration and/or replacement work required shall be at the Contractor's expense.

#### 1.07 PROTECTION/RELOCATION OF EXISTING STRUCTURES/UTILITIES

- A. The Contractor shall assume full responsibility for the protection of all buildings, structures/utilities, public or private, including poles, signs, services to buildings, utilities in the street, (gas, water, sewer, drains, the electric and telephone, cable and the associated appurtenances) whether or not these are shown on the drawings. Any damage resulting from the construction operations shall be repaired at the Contractor's expense.
- B. The City will provide the Contractor with all existing information to determine the location of existing lines and appurtenances for sewer, water and drainage systems. The Contractor, however, shall bear full responsibility for ascertaining the correct locations of all utility lines and associated structures and appurtenances before starting construction work.
- C. The identification, relocation and/or resetting of hand-holes, manholes, vaults, valves, and other distribution control devices for the electric, gas, and telephone cable systems, shall be the responsibility of the respective utility companies. However, the Contractor shall obtain a comprehensive list of all such appurtenances from the utility companies, verify their physical location and shall be fully responsible for their protection during the construction operations.
- D. All costs charges or damages resulting from lack of comprehensive pre-construction investigations related to the above items shall be borne by the Contractor.
- E. Protection and temporary removal and replacement of existing utilities and structures as described in this section shall be considered as a part of the work under the Contract and all costs in connection therewith shall be borne by the Contractor.
- F. In all public streets or private ways, except for City-owned utilities (water mains, sewers and drains), all relocation of utilities required for construction of the contract work shall be performed by the appropriate utility organization unless agreed otherwise by the utility company. The Contractor shall bear all expenses incurred because of utilities damaged due to its operations.
- G. The operation of existing utilities shall not be interrupted except with written permission of the City and the operator of such utilities. The Contractor shall allow ample time and resources to implement all measures required for the continuation of existing utility operations. The Contractor shall request and coordinate all utility relocations, subject to permission of the Engineer. The Contractor shall comply with all regulations, standards, methods and procedures particular to the utility organizations involved.
- H. Utility relocation for the sole purpose of making excavation easier for the Contractor shall not be allowed. Should the Contractor desire to relocate publicly-owned utilities such as water mains, sewers and drains for the sole purpose of making excavation easier, they shall be relocated at the Contractor's expense.

#### 1.08 PROTECTION OF TREES AND SHRUBS

- A. The Contractor shall avoid all damage to trees along and adjacent to the work area. No tree or shrub shall be removed without the approval of the Engineer.
- B. If during the progress of the work, the Contractor encounters any upland state-listed species on the

construction site, the matter shall be immediately reported to the Engineer, the Quincy Conservation Commission or Arborist, and further reported to the appropriate state agencies having jurisdiction over these matters.

- C. All measure required for the protection of trees, shrubs and other resource areas shall be considered to be part of the work to be done under these specifications at no additional cost to the City.

#### 1.09 PROTECTION AGAINST EROSION

- A. The Contractor shall take precautions during construction to minimize erosion and run-off of polluting substances such as silt, clay, fuels, oils, bitumen's, and calcium chloride into the water resource areas.
- B. Disposal of drainage shall be in an area approved by the City. Drainage water shall not be disposed of until silt and other sedimentary materials have been removed.
- C. Stacked bales of hay shall be provided at points where drainage from the work site leaves the site to reduce the sediment content of the water. Sufficient bales of hay shall be provided such that all flow will filter through the hay. Other methods that reduce the sediment content to an equal or greater degree may be used as approved by the Engineer.
- D. Drainage leaving the site shall flow to watercourses in such a manner to prevent erosion.
- E. Erosion control measures must be adequate to ensure that turbidity in the receiving water will not be increased more than 10 standard turbidity units (s.t.u.), or as otherwise required by the state or other controlling body, in waters used for public water supply or fish unless limits have been established for the particular water. In surface waters used for other purposes, the turbidity must not exceed 25 s.t.u., unless otherwise permitted.
- F. The Contractor shall receive not direct payment for any costs incurred instituting erosion control measures, as stipulated herein or whatever is necessary to provide the necessary protection against erosion.

#### 1.10 SITE CLEAN-UP AND DISPOSAL OF SURPLUS WASTE MATERIAL

- A. The Contractor shall remove and dispose of all surplus and/or waste materials including surplus excavation, broken pavement, lumber, metal pipe and appurtenances, old equipment, temporary structures, and any other refuse from the construction operations.
- B. Stone base and/or gravel base materials, manhole/catch basin castings, valves, gates, etc., if not used in the project, will remain the property of the City of Quincy unless specifically directed by the Engineer to dispose of the materials off-site. If the City decides to keep the materials, the Contractor will be required to load and haul the materials to the DPW yard at 55 Sea Street, Quincy, at no additional cost.
- C. In order to prevent environmental pollution arising from the construction activities, the Contractor and sub-contractors shall comply with all applicable federal, state and local laws and regulations concerning waste material disposal, as well as the specific requirements stated in this section and elsewhere in the specifications specified herein.

- D. The disposal of excess excavated materials in wetlands, stream corridors, and plains is strictly prohibited even if the permission of the property owner is obtained. Any violation of this restriction by the Contractor or its employees will be brought to the immediate attention of the responsible regulatory agency, with a request that appropriate action be taken against the offending parties.
  
- E. All new and existing interfacing pipe lines, appurtenant structures within the project limits and the adjacent effected section shall be left in a clean and operable condition at the completion of the work. It shall be the responsibility of the Contractor to make certain that the new systems carrying run-off, sewage and water (as applicable) within the limits of this project operate efficiently to their points of discharge into the existing system. The Contractor without additional compensation shall remove all debris in pipes and structures as a result of the Contractor's operations.

\*\*\* END OF SECTION \*\*\*

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## SECTION 01055 - TEMPORARY CONSTRUCTION FACILITIES

### PART 1 - GENERAL

#### 1.01 DESCRIPTION

- A. The Contractor shall provide all temporary construction support facilities and controls, such as staging area, project signs, temporary access road, temporary stockpile areas, pre-construction surveys and bench mark and base lines to control and to layout the works as necessary and as specified or as directed by the Engineer. The contractor shall also provide all utility services and miscellaneous supplies required for satisfactory control of the works.

#### 1.02 CONTRACTOR'S STAGING AREA

- A. The Contractor's attention is directed to the fact that the City will not provide a staging area for the storage of construction equipment, material or supplies. All permits required for selection of staging area and the Contractor must obtain its proposed use from the local or state agencies having jurisdiction over the area. The cost of obtaining a staging area and the associated permits shall be considered to be included in the bid prices for the various items of work as listed in the Bid Form.
- B. At no time shall any material, equipment, construction plant be stored on the beaches, public streets, private ways, sidewalks and other public areas.
- C. The Contractor shall not enter or occupy private land outside of easements, except by permission of the landowner and the approving public agencies.
- D. Only the equipment and materials ready for incorporation into the work shall be delivered and temporarily stacked on site. All materials and equipment thus delivered shall be placed so as not to injure any part of the work or the existing facilities and such that free access can be had at all times to all parts of the work.
- E. All unrelated or idle construction plant waste and/or excess materials shall be removed from the site immediately.

#### 1.03 TEMPORARY ACCESS ROADS

- A. The Contractor shall construct temporary access/haul roads and temporary equipment and material storage area where needed or as directed by the Engineer to move men, equipment and materials to otherwise inaccessible or hard to reach areas. Such facilities where located in environmentally sensitive areas shall be as permitted by the Quincy Conservation Commission and subject to its regular monitoring, completion inspection and restoration to original conditions.

#### 1.04 PROJECT SIGN

- A. The Contractor shall furnish and install signs at the project site and at other locations as directed by the Engineer. The sign shall be made of 3/4-inch thick exterior grade high-density overlay plywood, and shall be mounted on 4-in. x 4-in. wooden posts. The sign shall be 4-ft. x 8-ft. in size and shall have a blue background and white letters. The text and its layout shall be provided to the Contractor before the start of Work.
- B. Letter size shall be in proportion to layout and text and shall be of professional quality. The Contractor shall maintain the sign (including repainting), in a satisfactory condition for the life of this

Contract.

- C. Upon completion of the project and when directed, the sign shall become the property of the Contractor and shall be satisfactorily removed and disposed of by the Contractor off the site. The costs of furnishing, erecting, and maintaining the project sign shall be considered to be included in the bid prices for the various items of work listed in the Bid Form. For layout of project sign, please refer to Appendices.

\*\*\* END OF SECTION \*\*\*

## SECTION 01090 - DEFINITIONS AND STANDARDS

### PART 1 - GENERAL

#### 1.01 DEFINITIONS:

- A. GENERAL EXPLANATION: A substantial amount of specification language constitutes definitions for terms found in other Contract Documents, including Drawings which must be recognized as diagrammatic in nature and not completely descriptive of requirements indicated thereon. Certain terms used in Contract Documents are defined generally in this article. Definitions and explanations of this section are not necessarily either complete or exclusive, but are general for the Work to extent not stated more explicitly in another provision of the Contract Documents.
- B. GENERAL REQUIREMENTS: The provisions or requirements of Division-1 sections. General Requirements apply to entire Work of Contract and, where so indicated, to other elements which are included in Project.
- C. OWNER: The term "Owner" shall mean the City of Quincy when referring to the contracting and awarding authority. The term "Owner" shall mean the Department of Public Works when referring to technical specifications and bidding authority.
- D. INDICATED: The term "Indicated" is a cross-reference to details, notes or schedules on Drawings, to other paragraphs or schedules in the Specifications, and to similar means of recording requirements in Contract Documents. Where terms such as "shown," "noted," "scheduled," and "specified" are used in lieu of "indicated," it is for purpose of helping reader locate cross-reference, and no limitation of location is intended except as specifically noted.
- E. DIRECTED, REQUESTED, ETC.: Where not otherwise explained, terms such as "directed," "requested," "authorized," "selected," "no exceptions," "required," "accepted," and "permitted" mean "directed by ENGINEER," "requested by ENGINEER," etc. However, no such implied meaning will be interpreted to extend ENGINEER's responsibility into CONTRACTOR'S area of construction supervision.
- F. NO EXCEPTIONS: Where used in conjunction with ENGINEER's response to submittals, requests, applications, inquiries, reports and claims by CONTRACTOR, the meaning of terms "no exceptions taken" will be held to limitations of ENGINEER's responsibilities and duties as specified in General and Supplementary Conditions. In no case will "no exceptions taken" by ENGINEER be interpreted as a release of CONTRACTOR from responsibilities to fulfill requirements of Contract Documents.
- G. PROJECT SITE: The space available to CONTRACTOR for performance of the WORK, either exclusively or in conjunction with others performing other WORK as part of the Project. The extent of Project site is shown on the DRAWINGS, and may or may not be identical with description of the land upon which Project is to be built.
- H. FURNISH: Except as otherwise defined in greater detail, term "furnish" is used to mean supply and deliver to Project site, ready for unloading, unpacking, assembly, installation, etc., as applicable in each instance.
- I. INSTALL: Except as otherwise defined in greater detail, term "install" is used to describe operations at Project site including unloading, unpacking, assembly, erection, placing, anchoring,

applying, working to dimension, finishing, curing protecting, cleaning and similar operations, as applicable in each instance.

- J. PROVIDE: Except as otherwise defined in greater detail, term "provide" means furnish and install, complete and ready for intended use, as applicable in each instance.
- K. INSTALLER: The entity (person or firm) engaged by CONTRACTOR or its Subcontractor or sub-Subcontractor for the performance of a particular unit of Work at Project site, including installation, erection, application and similar required operations. It is a general requirement that such entities (Installers) be expert in operations they are engaged to perform.
- L. TESTING LABORATORY: An independent entity engaged to perform specific inspections or tests of the Work, either at Project site or elsewhere; and to report and (if required) interpret results of those inspections or tests.
- M. SUPPLY CONTRACTOR: The Contractor for the Meter Replacement and Radio Read Project Contract 02 – Water Meters furnishing water meters and remote encoders.
- N. FIXED NETWORK CONTRACTOR: The Contractor for the Meter Replacement and Radio Read Project Contract 01 – Fixed Network Automatic Meter Reading System furnishing the MTUs.

1.02 SPECIFICATION EXPLANATIONS:

- A. Overlapping and Conflicting Requirements: Where compliance with 2 or more industry standards or sets of requirements is specified, and overlapping of those different standards or requirements establishes different or conflicting minimums or levels of quality, most stringent requirement (which is generally recognized to be also most costly) is intended and will be enforced, unless specifically detailed language written into the Contract Documents(not by way of reference to an industry standard) clearly indicates that a less stringent requirement is to be fulfilled. Refer apparently- equal-but-different requirements, and uncertainties as to which level of quality is more stringent, to ENGINEER for a decision before proceeding.
- B. Contractor's Options: Except for overlapping or conflicting requirements, where more than one set of requirements are specified for a particular unit of Work, option is intended to be CONTRACTOR'S regardless of whether specifically indicated as such.
- C. Minimum Quality/Quantity: In every instance, quality level or quantity shown or specified is intended as minimum for the Work to be performed or provided. Except as otherwise specifically indicated, actual Work may either comply exactly with that minimum (within specified tolerances), or may exceed that minimum within reasonable limits. In complying with requirements, indicated numeric values are either minimums or maximums as noted or as appropriate for context of requirements. Refer instances of uncertainty to ENGINEER for decision before proceeding.
- D. Specialists; Assignments: In certain instances, specification text requires (or at least implies) that specific Work be assigned to specialists or expert entities, who must be engaged for performance of those units of Work. These must be recognized as special requirements over which CONTRACTOR has no choice or option. These assignments must not be confused with (and are not intended to interfere with) normal application of regulations, union jurisdictions and similar conventions. One purpose of such assignments is to establish which party or entity involved in a specific unit of Work is recognized as "expert" for indicated construction processes

or operations. Nevertheless, final responsibility for fulfillment of entire set of requirements remains with CONTRACTOR.

#### 1.03 INDUSTRY STANDARDS:

- A. General Applicability of Standards: Applicable standards of construction industry have same force and effect (and are made a part of Contract Documents by reference) as if copied directly into Contract Documents, or as if published copies were bound herewith.
  - 1. Referenced standards (referenced directly in Contract Documents or by governing regulations) have precedence over non-referenced standards which are recognized in industry for applicability to the Work.
  - 2. Non-referenced standards recognized in the construction industry are hereby defined, except as otherwise limited in Contract Documents, to have direct applicability to the Work, and will be so enforced for performance of the WORK.
- B. Copies of Standards: Provide where needed for proper performance of the Work; obtain directly from publication sources.
- C. Abbreviation and Names: Where acronyms or abbreviations are used in SPECIFICATIONS or other Contract Documents they are defined to mean the industry recognized name of trade association, standards generating organization, governing authority or other entity applicable to context of text provision. Refer to "Encyclopedia of Associations," published by Gale Research Co., available in large libraries.

#### 1.04 SUBMITTALS:

- A. Permits, Licenses and Certificates: For the OWNER's records, submit copies of permits, licenses, certifications, inspection reports, releases, notices, receipts for fee payments, judgements, and similar documents, correspondence and records established in conjunction with compliance with standards and regulations bearing upon performance of the Work.

PART 2 - PRODUCTS (not applicable)

PART 3 - EXECUTION (not applicable)

\*\*\* END OF SECTION \*\*\*

## SECTION 01100 - TEMPORARY SHEETING, SHORING, BRACING AND DECKING

### PART 1 - GENERAL

#### 1.01 DESCRIPTION

- A. The work to be done under these items shall conform to the relevant provisions of Sections 100 and 900 of the Standard Specifications, requirements of this Section and the work as shown on the drawings.
- B. Steel sheet piling shall conform to Section M8.05.4 of the Standard Specifications and shall be standard interlocking type with necessary standard corner sections.
- C. Structural steel for bracing shall be standard H, I or wide flange beams conforming to ASIM Standard Specification A-36-69, or pipe sections conforming to ASIM Standard Specification A-252-68.
- D. The Contractor shall furnish, place and maintain all sheeting, shoring, underpinning, bracing, trench boxes, and decking as is required to support structures, excavations, embankments, pavements, public amenities, and utilities in order to prevent settlements/movements and for the reason of safety for pedestrians, vehicular traffic, life and property.
- E. If at any point during the excavation of the works, sufficient or proper supports have not been provided, the Engineer may order installation of additional supports at the expense of the Contractor.
- F. All design work for temporary sheeting, bracing, shoring, trench boxes and decking in critical areas where the safety and security of public and private property is of concern shall be performed by a **Professional Engineer registered in the Commonwealth of Massachusetts engaged by the Contractor.**
- G. No work will be allowed until results of the final review of the design and construction sequence is approved by the Engineer. The review of such a submittal by the Engineer shall not relieve the Contractor of full responsibility for the structural adequacy of the proposed systems.

#### 1.02 DESIGN CRITERIA

- A. The pressure diagram shall extend four feet (4') below the bottom of excavation for all excavation stages. Pressures beyond four feet below the excavation level shall be considered to be balanced by passive resistance.
- B. The pressure diagram includes the contribution of a 300 psf uniformly distributed surcharge load at the surface. If additional surcharge loads or high concentrated loads are anticipated, the resultant increase in pressure on the sheeting shall be added to the pressure diagram.
- C. The allowable stresses for structural steel member and connections shall be as per AISC at full depth of excavation: For temporary condition, prior to reaching full depth of excavation, add up to 20% on the AISC allowed limits.
- D. The Contractor shall plan the sequence of operations such that no loss of ground occurs behind the sheeting which will cause subsidence of adjacent retaining walls, roadway, utilities and structures.
- E. Timber and steel used for bracing, interior structural members and connections shall be as designed by

the Contractor's Professional Engineer. Timber or steel used for bracing shall be new or undamaged used material which does not contain splices, cutouts, patches or other alterations which would impair its integrity or strength. All timber used shall be sound spruce, pine or hemlock planed on one side and either tongue and grooved or spliced. Timber sheeting shall not be less than nominal 2-inches thick.

### 1.03 SHEETING/BRACING AND SHORING

- A. Work shall not be started until all materials and equipment necessary for construction are on site or available for immediate use, as required.
- B. All sheeting shall be securely braced to withstand all pressures to which it may be subjected and be sufficiently tight to minimize any resulting lowering of the groundwater level outside the excavation, as required in section titled "Dewatering". Every effort shall be made to avoid breaking the continuity of the lock during driving sheet piles.
- C. If boulders or very dense soils are encountered, making it impractical to drive a section to the desired depth, the section shall be treated as directed by the Contractor's System Design Engineer.
- D. Where sheeting is to be used, it shall be driven ahead of excavation operations to the extent practicable so as to avoid the loss of material from behind the sheeting. Where voids occur outside of the sheeting, they shall be filled immediately with well-graded sand or gravelly sand and compacted.
- E. The Contractor shall leave in place to be embedded in the backfill, or concrete, all wood sheeting, bracing, etc. When directed by the Engineer, the Contractor shall leave in place any and all other sheeting, bracing, etc., for preventing injury to the public, to properties and to adjacent structures.
- F. All sheeting and bracing that is not necessary to be left in place shall be removed. Unless otherwise specified, sheeting to be left in place shall be cut off and left in place at a line 2-feet below finished grade. All cut off material shall be removed from the site.
- G. Steel sheeting may be driven by impact/vibratory methods as approved. All sheeting and piles shall be straight and with proper alignment as indicated or as directed. Sheet piles may be removed on completion of permanent backfilling unless directed otherwise.
- H. Each bracing level shall be completely installed before the excavation proceeds more than three feet (3) below the center line of the bracing level. The bracing shall be installed complete with wales, knee braces, cross braces and all necessary connections to assure full design capacity. All voids between the sheeting face and wales shall be wedged with wood to prevent lateral movement of the sheeting or piles. All welding shall conform to American Welding Society Code AWS-D-1.1-72.
- I. The responsibility for the satisfactory design, fabrication, construction and maintenance of sheeting and bracing systems shall rest with the Contractor. Any work done including incidental construction which is not acceptable shall be either repaired or replaced by the Contractor at its expense.
- J. The Contractor shall also be solely responsible for repairing all damage associated with and resulting from design, fabrication, installation, performance and removal of the sheeting/piling and bracing systems.
- K. All sheeting, shoring and bracing operations shall be designed and executed to prevent injury to persons or damage to structures, facilities, utilities and services. Any injuries to persons and damage to the work occurring as a result of settlement, water or earth pressure or other causes due to

inadequate bracing and/or construction operations shall be satisfactorily repaired or replaced in a satisfactory manner, at no additional expense to the City.

1.04 DECKING

- A. The Contractor shall install decking over street openings where traffic requires unrestricted use of the street. At such locations work may be suspended during periods of heavy traffic, to insure the public safety.
- B. All street openings unless otherwise instructed by the Engineer shall be installed with a trench box or the excavations sheeted and braced regardless of its depth.
- C. Before the decking and supporting systems are placed, the Contractor shall submit to the Engineer detailed plans of the proposed structure. The decking materials be wood or steel. The decking and supports shall be of sufficient strength to carry a load of 200 psi over the entire deck area or 10 tons on an axle with wheels five (5) feet on centers without exceeding the allowable stress specified in the AASHTO Standard Specifications for Highways and Bridges.
- D. Decking placed at an opening shall remain over the open excavation until backfilling is complete except to provide access while cleaning or lining the pipe, or for the removal and replacement of valves, or for other work under this contract and as directed by the Engineer.

\*\*\* END OF SECTION \*\*\*

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## SECTION 01125 - DEWATERING

### PART 1 - GENERAL

#### 1.01 DESCRIPTION

- A. The work under this section shall conform to the relevant provisions of Section 100 of the Standard Specifications, and the following:
- B. The Contractor shall furnish all labor, materials, equipment and incidentals required to design, install, operate and remove temporary dewatering and water handling systems to prevent groundwater, surface waters and tidal flows, etc., from entering the work areas and to provide a firm, dry and stable foundation for structures/pipes, and appurtenances.
- C. Dewatering includes lowering the ground water table, intercepting seepage flows etc., or conveying surface flows to desired locations through the use of pumps. Water handling systems may include ponding in designated areas, dikes, channels, conduits, cofferdams and other methods acceptable to the Engineer.
- D. Dewatering shall include the temporary pneumatic plugging and interception of drain line base flow upgradient of construction activities for work to be performed in the dry. By-pass pumping around the impacted work area shall be provided to prevent surface flooding conditions of any and all upgradient tributary areas. Temporary drain line plugs shall be deflated and removed at the end of each work day to allow water to drain.
- E. Normal dewatering operations utilize conventional pumps installed in open excavations, ditches or sumps. Special dewatering operations utilize single or two stage wellpoints, deep wells, or eductor/ejector systems installed in drilled holes or jetted in place.
- F. No work shall be started until the design and construction sequence is reviewed and approved by the Engineer. The review of such a submittal by the Engineer shall not relieve the Contractor of full responsibility for the adequacy of its dewatering and water handling systems.

#### 1.02 DESIGN AND PERFORMANCE REQUIREMENTS

- A. All excavation, construction work and backfilling shall be done in the dry and on a firm sub-grade. The following conditions shall be met in all areas where dewatering operations are required:
  - 1. The dewatering system installed shall maintain the groundwater level at least 6-inches below the proposed finished elevation at the bottom of the excavation. The dewatering and water handling systems shall maintain a dry and stable sub-grade until the structures, seawalls, pipes, and appurtenances have been completed to the extent that they will not float or otherwise get damaged.
  - 2. If conventional dewatering methods are inadequate to ensure dry and stable conditions for structural foundations, the Contractor shall be required to use special dewatering methods, as necessary. The well points system, when used, shall be driven to elevations required for proper dewatering.
  - 3. All main wellpoint equipment shall be electrically operated and shall run on commercial power. Standby equipment shall be independent of commercial power and shall provide dewatering upon failure of primary pumps or power sources.

4. The dewatering and water handling systems shall be designed by a registered professional engineer experienced in similar work. All geotechnical investigations and design of dewatering and water handling systems and for any subsequent modifications thereto shall be at the Contractor's expense.
  5. The dewatering, water handling and the required excavation support systems shall be designed so that the groundwater level within the work area does not adversely effect the adjacent structures and utilities or wells.
- B. All information about sub-surface conditions shown on the drawings or included in the specifications is not guaranteed. The City or the Engineer assumes no responsibility for its accuracy. The Contractor shall perform all necessary soil, groundwater or other site investigations to ascertain the existing sub-surface conditions in the areas where excavation, dewatering and construction work is required. It would be the Contractor's responsibility to fully acquaint itself with the existing site conditions for the proper design of sheeting, bracing and dewatering systems and for the selection of the proper construction equipment to perform the work. Unfamiliarity with the existing site and/or sub-surface conditions shall not be accepted as a basis for any claims for extra work.

#### 1.03 DEWATERING OPERATIONS

- A. All work shall be performed so as to protect existing structures and pipelines and shall not cause loss of ground or disturbance to the bearing soils or to soil supporting adjacent structures. The Contractor shall be solely responsible for damage to properties, buildings or structures, sewers and other utility installations, pavements and sidewalks, etc. that may result from dewatering and water handling operations.
- B. Water shall not be allowed to rise above concrete or brick masonry within 24 hours after being placed, nor shall moving water be allowed to rise over any masonry for four days. In no event shall water be allowed to rise so as to cause unequal pressures in structures until 72 hours after the concrete or mortar has been placed/set.
- C. Prior to any trench/foundation excavation, dewatering systems shall be installed in the area of initial excavation and operated sufficiently to demonstrate adequacy of the system to achieve and maintain the desire water table elevations. The system shall be modified, if required, to maintain such capability.
- D. Dewatering and water handling methods/procedures or equipment which cause damage to new or existing facilities shall be expeditiously modified or replaced as directed.

#### 1.04 DISPOSAL OF DRAINAGE FLOWS

- A. All drainage waters shall be disposed of in an approved manner. The existing storm drainage system may not be used for water disposal, except as permitted by the Engineer.
- B. The drainage resulting from pumping operations shall be discharged so that it does not damage adjacent properties.
- C. All state, federal and local regulations shall be enforced.
- D. At the completion of construction work, and when approved by the Engineer, all pipe, pumps,

equipment, accessories for monitoring systems and cofferdams, etc., shall be removed from the site.

- E. All areas disturbed/damaged due to the dewatering and/or water handling operations shall be restored to at least the condition that existing before the work started.

\*\*\* END OF SECTION \*\*\*

## SECTION 01155 - SCHEDULES, REPORTS, PAYMENTS

### PART 1 - GENERAL:

#### 1.01 COORDINATION:

- A. Coordinate both the procedural timing and the listing (naming and sequencing) of reports/activities required by provisions of this section and other sections. Update at weekly shorter time intervals. Make appropriate distribution of each report and updated report to entities involved in the Work including ENGINEER and OWNER. In particular, provide close coordination of progress schedule, schedule of values, listing of subcontracts, schedule of submittals, progress reports, and payment requests.

#### 1.02 PROGRESS SCHEDULE:

- A. Critical Path Method Diagram: Secure critical time commitments for performing major elements of the Work. Within 30 days of date established for "Commencement of the Work", submit a comprehensive critical path type progress schedule indicating activity-coded symbols for each major category or unit of work to be performed at site, and including minor units which are, nevertheless, involved in overall sequencing of the Work. Arrange schedule to graphically show major sequences required in intermeshing of work, and to show how Substantial Completion is scheduled to allow for ENGINEER's procedure for certification thereof. Prepare and maintain the critical path diagram schedule on sufficiently wide sheet or series of sheets of stable transparency or other reproducible stock, to show required data clearly for entire Construction Time, and to permit reproduction for required distribution.
  1. Phasing: Arrange schedule of work delineating the order on which work will be completed with notations to show how sequence of work is affected by requirements for phased completion, work by separate contractors, work by OWNER, coordination with existing work, non-interruptable services, site restrictions, provisions for future work, seasonal variations, environmental control and similar provisions of total Project. Refer to the other sections of Division 1 and other Contract Documents for requirements.
  2. Cost Correlation: Immediately below date line at heading of chart, provide a double-line cost correlation line ("Precalculated" and "actual") to show dollar-volume of work performed as of same dates used for preparation of payment requests. Refer to subsequent article for cost reporting and payment procedures. Use those same dates as primary vertical lines of schedule.
  3. Distribution: Following initial submittal to and response by ENGINEER, print and distribute the critical path diagram to ENGINEER (4 copies), separate CONTRACTORS (if any), principal Subcontractors and Suppliers or fabricators, and others with a need-to-know schedule-compliance requirement. Post copies in Project meeting rooms and field (temporary) offices. Distribute and post subsequent updated issues to same entities, when revisions are made; except delete entities from distribution when they have completed assigned work and are no longer involved in performance of scheduled work.
  4. Update Schedule: Provide updated schedule with each monthly payment request. Updates should highlight any changes in critical path, any delays due to Suppliers, Subcontractors or the CONTRACTOR's own activities. Payment will not be authorized without submitting schedule updates to the ENGINEER.

1.03 REPORTING:

- A. Daily Reports: The CONTRACTOR shall prepare a daily report, recording the following information concerning events at the site, and submit duplicate copies to ENGINEER at regular intervals not exceeding weekly intervals:
1. List of personnel at the site.
  2. Count of personnel at the site, by job classification.
  3. List of equipment and materials on site.
  5. Accidents (refer to accident reports).
  6. Meetings and significant decisions.
  7. Unusual events (refer to special reports).
  8. Stoppages, delays, shortages, losses.
  9. Emergency procedures, Field Orders.
  10. Orders/requests by governing authorities.
  11. Change Orders received, implemented.
  12. Equipment connected, disconnected.
  13. Equipment or system tests and start-ups.
  14. Partial completions.
  15. Substantial completions authorized.

1.04 SUBMITTAL SCHEDULE:

- A. General: Immediately following development and acceptance of fully developed critical path diagram, prepare a complete schedule of submittals. Submit 4 copies of submittal schedule within 10 days of date required for establishment of critical path diagram. Revise schedule monthly to reflect job conditions and progress. Promptly submit revised schedules to ENGINEER for review.
- B. Form: Prepare schedule in chronological sequence of "first submittals". Show category of submittal, name of sub- CONTRACTOR, generic description of work covered, related section numbers, activity or event number on critical path diagram, scheduled date for first submission, and blank columns for actual date of submittal resubmittal, and final release or review by ENGINEER.

1.05 PAYMENT REQUESTS:

- A. General: See General Conditions for payment procedures. It is recognized that certain applications involve extra requirements, including initial application, application at times of Substantial Completion, and final payment application.
- B. Payment Application Times: The "date" for each progress payment is as indicated in CONTRACT.
- C. Payment Application Forms: Use forms provided by the ENGINEER.

- D. Application Preparation: Except as otherwise indicated, complete every entry provided for on the form, including notarization and execution by authorized persons. Incomplete applications will be returned by ENGINEER without action.

PART 2 - PRODUCTS (not applicable)

PART 3 - EXECUTION (not applicable)

\*\*\* END OF SECTION \*\*\*

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## SECTION 01200 - PROJECT MEETINGS

### PART 1 - GENERAL

#### 1.01 DESCRIPTION OF REQUIREMENTS:

- A. General: Attend the following meetings:  
Neighborhood Preconstruction  
Preconstruction meeting  
Progress meetings  
Coordination meetings  
Post-construction meetings

Meetings will be held at the DPW offices. The ENGINEER will compile minutes of meetings and provide a copy to the CONTRACTOR.

#### 1.02 PERSONNEL:

- A. Authority: Persons designated by the CONTRACTOR to attend meetings shall have authority to commit the CONTRACTOR and SUBCONTRACTORS to actions agreed upon in the meetings.
- B. Attendance: Assign the same personnel to represent CONTRACTOR at meetings through the entire PROJECT duration. Require attendance of SUBCONTRACTORS when necessary or when requested by the ENGINEER.

#### 1.03 SUBMITTALS:

- A. Agenda items: Submit items for agenda at least 24 hours before scheduled meeting time.

#### 1.04 PRECONSTRUCTION MEETING:

- A. General: Meeting will be scheduled within 5 days of issuance of NOTICE TO PROCEED. Provide attendance by CONTRACTOR's personnel and all major SUBCONTRACTORS. The ENGINEER will request attendance of other parties involved.
- B. Minimum Agenda: The following will be discussed:
1. CONTRACTOR shall submit insurance contacts to the City of Quincy prior to mobilization. Contact information shall include insurance company, insurance agent, address, phone numbers, fax numbers and e-mail addresses;
  2. Organizational arrangement of CONTRACTOR's forces and personnel, and those of Subcontractor, suppliers, and the ENGINEER;
  3. Channels and procedures for communications;
  4. Construction schedule and submittal schedule including sequence of critical Work.
  5. Contract Documents, including distribution of required copies of original documents and revisions;

6. Processing of Shop Drawings and other data submitted to the ENGINEER for review Change Orders.
7. Processing of field decisions and Change Orders;
8. Rules and regulations governing performance of the Work; and
9. Procedures for safety and first aid, security, quality control, housekeeping, and other related matters.

1.05 PROJECT MEETINGS:

A. General: Meetings will be held monthly on a schedule acceptable to CONTRACTOR, ENGINEER, and OWNER.

B. Minimum Agenda:

1. Review, revise as necessary, and approve minutes of previous meeting;
2. Review progress of the Work since last meeting, including status of submittals for approval;
3. Identify problems which impede planned progress;
4. Develop corrective measures and procedures to regain planned schedule; and
5. Complete other current business.

1.06 COORDINATION MEETINGS:

A. General: Meetings will be held as required by the OWNER or ENGINEER for coordinating, expediting and scheduling the WORK. When possible, coordination meetings may be combined with monthly progress meetings.

1.07 POST-CONSTRUCTION MEETINGS:

A. General: Meetings will be held as required to implement the operation of the WORK.

PART 2 - PRODUCTS (not applicable)

PART 3 - EXECUTION (not applicable)

\*\*\* END OF SECTION \*\*\*

## SECTION 01300 - SUBMITTALS

### PART 1 - GENERAL

#### 1.01 DESCRIPTION OF REQUIREMENTS:

- A. Submittal requirements specified in this section include Shop Drawings, product data, samples and miscellaneous work-related submittals. Individual submittal requirements are specified in applicable sections for each unit of work. Refer to other Division-1 sections, General Conditions, and other Contract Documents for requirements of administrative submittals.
- B. Definitions: Work -related submittals of this section are categorized for convenience as follows:
  - 1. Shop drawings include specially-prepared technical data for this Project, including drawings, diagrams, performance curves, data sheets, schedules, templates, patterns, reports, calculations, instructions, measurements and similar information not in standard printed form for general application to several projects.
  - 2. Product data include standard printed information on materials, products and systems; not specially-prepared for this Project, other than the designation of selections from among available choices printed therein.
  - 3. Samples include both fabricated and unfabricated physical examples of materials, products and units of work; both as complete units and as smaller portions of units of work; either for limited visual inspection or (where indicated) for more detailed testing and analysis.
  - 4. Mock-ups are a special form of samples, which are too large or otherwise inconvenient for handling in specified manner for transmittal of sample submittals.
- C. Miscellaneous submittals related directly to the Work (non-administrative) include warranties, maintenance agreements, workmanship bonds, photographs, survey data and reports, physical work records, quality testing and certifying reports, copies of industry standards, record drawings, field measurement data, operating and maintenance materials, overrun stock, and similar information, devices and materials applicable to the work and not processed as Shop Drawings, product data or samples.

#### 1.02 GENERAL SUBMITTAL REQUIREMENTS:

- A. Submit shop drawings for all materials to be used.
- B. Scheduling: See Section 01155.
- C. Project Phasing and Traffic Management Plan: Contractor shall submit a detail project phasing and traffic plan. The plan shall outline the approach, equipment, schedule, and hours of work anticipated to demonstrate how the work will be performed.
- D. Coordination and Sequencing: Coordinate preparation and processing of submittals with performance of the Work so that Work will not be delayed by submittals. Coordinate and sequence different categories of submittals for same work, and for interfacing units of work, so that one will not be delayed for coordination of ENGINEER's review with another. In general, allow 2 weeks for ENGINEER to process submittals.

Determine and verify all interface conditions, catalog numbers and similar data.

Coordinate with other trades.

Indicate all deviations from the requirements of the CONTRACT DOCUMENTS.

- E. Preparation of Submittals: Provide permanent marking on each submittal to identify Project, date, CONTRACTOR, Subcontractor, submittal name, sequential numbers, and similar information to distinguish it from other submittals. Show CONTRACTOR's executed review and marking and provide space for Engineer's "Action" marking. Package and sequentially number each submittal appropriately for transmittal and handling. Submittals which are received from sources other than through CONTRACTOR's office will be returned by ENGINEER "without action". All submittal data shall be clearly marked original information. Photocopies will not be permitted and will be rejected.

Submittals shall be numbered consecutively beginning with one (1). When an item in any submittal is required to be resubmitted, the number of the original submittal shall be used followed by a capital letter starting with "A" and using consecutive lettering for subsequent resubmittals.

- F. Grouping of submittals: Unless otherwise specified, make submittals grouped by specification section, and containing all associated items, to ensure that information is available for checking each item when it is received. Partial submittals may be rejected as not complying with the provisions of the Contract Documents.
- G. Transmittal Form: Provide places to indicate Project, date, "To: "; "From: "; names of Subcontractors, manufacturers, required references, category and type of submittal, purpose, description, distribution record (for both transmittal and submittals), sequential number, and signature of transmitter.
- H. Number of submittals: Submit 6 copies. Additional copies may be requested by the ENGINEER. 2 copies will be returned to the CONTRACTOR.

#### 1.03 SPECIFIC-CATEGORY SUBMITTAL REQUIREMENTS:

- A. General: Except as otherwise indicated in individual specification sections, comply with requirements specified herein.
- B. SHOP DRAWINGS: Provide newly-prepared information, on reproducible sheets, with graphic information at accurate scale (except as otherwise indicated), with name of preparer indicated (firm name). Show dimensions and note which are based on field measurement. Identify materials and products in the Work shown. Indicate compliance with standards, and special coordination requirements. Do not allow shop drawing copies without appropriate final "Action" markings by ENGINEER to be used in connection with the Work. Photocopies of catalog cuts will not be accepted.

Submit blue-line or black-line prints.

- C. Product Data: Collect required data into one submittal for each unit of work or system; and mark each copy to show which choices and options are applicable to Project. Include manufacturer's standard printed recommendations for application and use, compliance with standards, application of labels and seals, notation of field measurements which have been checked, and

special coordination requirements. Maintain one set of product data (for each submittal) at Project site, available for reference by ENGINEER and others.

- D. Samples: Provide units identical with final condition of proposed materials or products for the Work. Include "range" samples (not less than 3 units) where unavoidable variations must be expected, and describe or identify variations between units of each set. Provide full set of optional samples where ENGINEER's selection is required. Include information with each sample to show generic description, source or product name and manufacturer, limitations, and compliance with standards. Samples are submitted for review and confirmation of color, pattern, texture and "kind" by ENGINEER. ENGINEER will not "test" samples (except as otherwise indicated) for compliance with other requirements, which are therefore the exclusive responsibility of CONTRACTOR.
- E. Mock-Ups: Mock-ups and similar samples specified in individual specification sections are recognized as a special type of sample. Comply with requirements for "samples" to greatest extent possible, and process transmittal forms to provide a record of activity.
- F. Inspection and Test Reports: See Section 01400.
- G. Warranties: Refer to "Products" section for specific general requirements on warranties, product/workmanship bonds, and maintenance agreements. In addition to copies desired for CONTRACTOR's use, furnish 2 executed copies, except furnish 2 additional (confirmed) copies where required for maintenance manuals.
- H. Standards: Where copy submittal is indicated, and except where specified integrally with "Product Data" submittal, submit a single copy for ENGINEER's use. Where workmanship at Project site and elsewhere is governed by standard, furnish additional copies to fabricators, installers and others involved in performance of the Work.
- I. Closeout Submittals: Refer to individual specification sections and to General Conditions for specific requirements.
- J. General Distribution: Provide additional distribution of submittals (not included in foregoing copy submittal requirements) to Subcontractors, suppliers, fabricators, installers, governing authorities and others as necessary for proper performance of the Work. Include such additional copies in transmittal to ENGINEER where required to receive "Action" marking before final distribution. Record distributions on transmittal forms.

#### 1.04 ACTION ON SUBMITTALS:

- A. Engineer's Action: Where action and return is required or requested, ENGINEER will review each submittal, mark with "Action", and where possible return within 2 weeks of receipt. Where submittal must be held for coordination, or additional time is required for review of complex items, CONTRACTOR will be so advised by ENGINEER without delay.
- B. Action Stamp: ENGINEER's action stamp, for use on submittals to be returned to CONTRACTOR, is self-explanatory as marked.

PART 2 - PRODUCTS (not applicable)

PART 3 - EXECUTION (not applicable)

\*\*\* END OF SECTION \*\*\*

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## SECTION 01500 - TEMPORARY FACILITIES

### PART 1 - GENERAL

#### 1.01 DESCRIPTION OF REQUIREMENTS:

- A. Provide temporary facilities including:
  - 1. CONTRACTOR's office and storage facilities.
  - 2. Sanitary facilities
  - 3. Fire protection
  - 4. Temporary enclosures
- B. Other Temporary Facilities: See General Conditions.

#### 1.02 QUALITY ASSURANCE:

- A. General: Comply with OSHA Regulations, NFPA requirements, and local regulations.
- B. Conditions of Use: Install, operate, maintain and protect temporary facilities in a manner and at locations which will be safe, non-hazardous, sanitary and protective of persons and property.

### PART 2 - PRODUCTS

#### 2.01 CONTRACTOR'S OFFICE AND STORAGE FACILITIES:

- A. General: Provide facilities adequate for CONTRACTOR's administration of Contract, shelter for personnel, and storage of materials and equipment which must be protected from weather. Contractor will provide own facility of sufficient size to store enough materials and supplies to maintain the flow of work.
- B. Telephone: Provide a telephone and fax for work-related use by CONTRACTOR's personnel.

#### 2.02 SANITARY FACILITIES:

- A. General: Provide self-contained toilet units in sufficient numbers for use of all persons involved in the Work.

#### 2.03 FIRE PROTECTION AND SAFETY FACILITIES:

- A. General: Provide fire extinguishers, first aid facilities and other safety facilities as required by local, state, and OSHA requirements.

#### 2.04 TEMPORARY ENCLOSURES:

- A. General: Provide temporary enclosure where indicated and where reasonably required to ensure adequate workmanship and protection from weather and ambient conditions unsatisfactory for the Work, including enclosure where temporary heat is used. Provide tarpaulins with UL label and flame spread of 15 or less or translucent nylon reinforced polyethylene.

PART 3 - EXECUTION

3.01 GENERAL REQUIREMENTS:

- A. Provide facilities at the time first required for proper performance of the Work.
- B. Remove temporary facilities at earliest reasonable time when no longer required for performance of the Work.

3.02 LOCATION OF FACILITIES: Location of CONTRACTOR'S Office and Storage Facilities to be approved by ENGINEER and OWNER.

\*\*\* END OF SECTION \*\*\*

## SECTION 01600 - PRODUCTS

### PART 1 - GENERAL

#### 1.01 DESCRIPTION OF REQUIREMENTS:

##### A. Definitions:

1. "Products" is defined to include purchased items for incorporation into the Work, regardless of whether specifically purchased for Project or taken from CONTRACTOR'S stock of previously purchased products.
2. "Materials," is defined as products which must be substantially cut, shaped, worked, mixed, finished, refined or otherwise fabricated, processed, installed or applied to the Work.
3. "Equipment" is defined as products with operational parts, regardless of whether motorized or manually operated, and particularly including products with service connections (wiring, piping, etc.).

Definitions in this paragraph are not intended to negate the meaning of other terms used in Contract Documents, including "specialties," "systems," "structure," "finishes," "accessories," "furnishings," "special construction," and similar terms, which are self-explanatory and have recognized meanings in the construction industry.

- B. Substitutions: The requirements for substitutions do not apply to specified CONTRACTOR options on products and construction methods. Revisions to Contract Documents, where requested by OWNER or ENGINEER, are "change" not "substitutions." CONTRACTOR's determination of and compliance with governing regulations and orders issued by governing authorities do not constitute "substitutions," and do not constitute a basis for Change Orders, except as provided for in Contract Documents. Otherwise, CONTRACTOR's requests for changes in products, materials and methods of construction required by Contract Documents are considered requests for "substitutions," and are subject to requirements hereof.
- C. Standards: Refer to Section 01090, "Definitions and Standards" for applicability of industry standards to products of Project, and for acronyms used in text of specification sections.

#### 1.02 QUALITY ASSURANCE:

- A. Source Limitations: To the greatest extent possible provide products, materials and equipment of a singular generic kind and from a single source.
- B. Compatibility: Select products and materials which are compatible with other products and materials already selected and are suitable for proper performance in the completed Work.

- 1.03 REQUESTS FOR SUBSTITUTIONS: Submit 6 copies, fully identified for product or method being replaced by substitution (including related Specification Section and Drawing number(s)) and fully documented to show compliance with requirements for substitutions. Include product data/drawings, description of methods, samples where applicable, CONTRACTOR's detailed comparison of significant qualities between specified item and proposed substitution, statement of effect on construction time and coordination with other affected Work, cost information or proposal, and CONTRACTOR's statement to the effect that proposed substitution will result in

overall Work equal-to-or-better-than Work originally indicated.

- 1.04 PRODUCT DELIVERY-STORAGE-HANDLING: Deliver, handle and store products in accordance with manufacturer's recommendations and by methods and means which will prevent damage, deterioration, and loss including theft. Control delivery schedules to minimize long-term storage of products at site and overcrowding of construction spaces.
- 1.05 WARRANTIES (GUARANTEES):
- A. Categories of Specific Warranties: Warranties on the Work include but are not necessarily limited to those of General Conditions, and specific warranties related to individual components of the Work:
  - B. Specified Product Warranty: A warranty which is required by Contract Documents, to be provided for a manufactured product incorporated into the Work regardless of whether manufacturer has published a similar warranty.
  - C. Start of Warranties: Warranties are to commence on date of Substantial Completion, unless noted otherwise.
  - D. Reinstatement of Warranty Period: Except as otherwise indicated, when Work covered by a product warranty has failed and has been corrected by replacement or restoration, reinstate warranty by written endorsement for a period of time equal to original warranty period of time, starting on date of acceptance of replaced or restored Work.
  - E. Replacement Cost Obligations: Costs of replacing or restoring failing warranted units or products is CONTRACTOR's obligation, without regard for whether OWNER has already benefited from use through a portion of anticipated useful service lives.

## PART 2 - PRODUCTS

### 2.01 GENERAL PRODUCT COMPLIANCES:

- A. General: The compliance requirements, for individual products as indicated in Contract Documents, are multiple in nature and may include generic, descriptive, performance, prescriptive, compliance with standards, compliance with codes, conformance with graphic details and other similar forms and methods of indicating requirements, all of which must be complied with.
- B. Procedures for Selecting Products: CONTRACTOR's options for selecting products are limited by Contract Documents requirements, and governing regulations, and are not controlled by industry traditions or procedures experienced by CONTRACTOR on previous construction projects. Required procedures include, but are not necessarily limited to, the following for various indicated methods of specifying:
  - 1. "Or Equal": See General Conditions and Supplementary Conditions.
  - 2. "Named", is defined to mean manufacturer's name for product, as recorded in published product literature, of latest issue as of date of Contract Documents. Refer requests to use products of a later (or earlier) model to ENGINEER for acceptance before proceeding.
  - 3. Standards, Codes and Regulations: Where compliance with an imposed standard, code or regulation is required, selection from among products which comply with

requirements including those standards, codes and regulations, is CONTRACTOR's option.

4. **Performance Requirements:** Provide products which comply with specific performances indicated, and which are recommended by manufacturer (in published product literature or by individual certification) for application indicated. Overall performance of a product is implied where product is specified with only certain specific performance requirements.
5. **Prescriptive Requirements:** Provide products which have been produced in accordance with prescriptive requirements, using specified ingredients and components, and complying with specified requirements for mixing, fabricating, curing, finishing, testing and similar operations in manufacturing process.

#### 2.02 SUBSTITUTIONS:

- A. General: See General Conditions and Supplementary Conditions.

#### 2.03 GENERAL PRODUCT REQUIREMENTS:

- A. General: Provide products which comply with requirements, and which are undamaged and unused at time of installation, and which are complete with accessories, trim, finish, safety guards and other devices and details needed for a complete installation and for intended use and effect.
- B. Standard Products: Where available, provide standard products of types which have been produced and used previously and successfully on other projects and in similar applications.
- C. Continued Availability: Where additional amounts of a product, by nature of its application, are likely to be needed by OWNER at a later date for maintenance and repair or replacement Work, provide a standard, domestically produced product which is likely to be available to OWNER at such later date.

#### PART 3 - EXECUTION (not applicable)

\*\*\* END OF SECTION \*\*\*

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## SECTION 01625 - ENVIRONMENTAL PROTECTION

### PART 1 - GENERAL

#### 1.01 DESCRIPTION

- A. The Work under this section shall consist of all environmental mitigation measures designed to minimize various types of pollution and resource area contamination, including airborne dust, equipment noise, vibration, drainage and soil erosion, alteration/damaging or dumping hazardous waste or rubbish in resource areas. The Contractor shall furnish all labor, materials, tools and equipment and perform all work required for the prevention of environmental pollution resulting from its construction operations.
- B. A portion of the project work will take place in coastal wetland resource areas that are under Massachusetts Department of Environmental Protection (MADEP) and Army Corps of Engineers (ACOE) jurisdiction. The work performed under this Contract will be subject to a Conservation Commission Order of Conditions and an ACOE Category 2 General Permit (GP). The anticipated permit conditions are included in the Appendix A and B respectively. CONTRACTOR shall assume these conditions in the preparation of the bid.
- C. The requirements set forth in this section are intended to minimize the adverse impacts on populated and cross-country areas, stream crossings, coastal areas, beaches, flood plains, marshes, wetlands, wild life and marine life due to construction activities in and adjacent to all resource areas.
- D. All work shall be in accordance with the applicable Local, State and Federal laws and regulations and the Quincy Conservation Commission's Order of Conditions.

#### 1.02 NOTIFICATION

- A. The Engineer will notify the Contractor in writing of any non-compliance with the foregoing provisions. The Contractor shall, after receipt of such notice, immediately take corrective action. In case of non-compliance, the Engineer will order stoppage of all or part of the work until satisfactorily corrective action has been taken. No claim for an extension of time or for extra costs or loss incurred by the Contractor as a result of time lost due to any stop orders shall be made unless it was later determined that the Contractor was in compliance.
- B. Prior to commencement of the Work, the Contractor shall meet with the Engineer to develop mutual understandings relative to compliance of the environmental protection program.

#### 1.03 CONSTRUCTION ACTIVITY

- A. Insofar as possible, the Contractor shall confine all activities, including clearing, grubbing, excavation and construction of works, to those areas defined by the plans and specifications. All land resources within the project boundaries and outside the limits of permanent work performed under this contract shall be preserved in their present condition or if damaged, shall be restored to their original condition after completion of construction.

#### 1.04 PROTECTION OF WATER RESOURCES

- A. The Contractor shall not pollute streams, lakes or reservoirs, wetlands and beaches with fuels, oils, bitumens, calcium chloride, acids or harmful materials. It is the Contractor's responsibility to comply with all applicable Federal, State, County and Municipal laws regarding pollution of rivers/streams.

Special measures should be taken to insure against spillage of any pollutants into public waters.

#### 1.05 PROTECTION OF WETLANDS

- A. The Contractor shall make every effort to minimize disturbances within the areas designated as wetlands. Easement widths shall be limited to the widths shown on the drawings. The Contractor shall make sure that wetlands are restored to the conditions existing prior to construction.
- B. The Contractor shall carefully remove and stockpile the top 24-inches of soil. This topsoil material shall be used as backfill for the trench excavation top layer. The elevation of the trench is to be restored to the pre-construction elevations wherever disturbed by the Contractor.
- C. A trench box and/or sheeting or bracing shall be used to support the excavation in wetlands.
- D. Excavated materials shall not be permanently or temporarily stored in wetlands. Temporary storage areas for excavated materials shall be as directed by the Engineer.
- E. The Contractor shall be required to utilize marsh matting to support equipment in wetlands. The marsh matting shall be constructed in such a way so that it is capable of supporting all equipment loads necessary to complete the construction work. The marsh matting shall be constructed of materials and placed so that, once removed, the material below the matting is not unduly disturbed, mixed or compacted in such a way that would adversely affect the recovery of the existing plant life. Use of metal plates, plywood, or other material in lieu of marsh mats is not permitted.
- F. Wetland vegetation shall be carefully removed from the work area and stored in a protected area. Upon completion of the work, wetland vegetation shall be replanted.
- G. All dewatering must be discharged to a sediment-capturing device outside of the resource area.
- H. Water used to rinse concrete truck or equipment shall not be discharged to any resource area.
- I. Extra erosion control materials shall be stored onsite, but not within the resource area, for emergency and routine replacement.

#### 1.06 PROTECTION OF EXPOSED AREAS

- A. The Contractor shall limit the area of land that is exposed and free from vegetation during construction. In areas where the period of exposure will be greater than two (2) months, temporary vegetation, mulching or other protective measures shall be provided as specified.
- B. Where temporary cover crop will be used, the Contractor shall insure that materials used for temporary vegetation are adaptive to the sediment control. Materials to be used for temporary vegetation shall be approved by the Engineer.
- C. Loaming and seeding or mulching of cross-country areas shall take place as soon after completion of work in that area as practicable. This shall be considered part of the clean-up work, and full payment for the work will not be made until it has been completed.

#### 1.07 LOCATION OF STORAGE AREAS

- A. No excavated materials or materials to be used in backfill operations shall be stored within a minimum distance of fifty (50) feet of any watercourse or any drainage facility.

- B. No storage of equipment or materials shall be permitted in wetlands.
- C. In cross-country areas when excavating in wetland or flood plain, where no temporary diversion structure is required, the excavated material shall be placed on the uphill side of the trench so that the trench serves as a barrier between the excavated material and the wetland or flood plain.

#### 1.08 SOIL EROSION AND SEDIMENTATION CONTROLS

- A. The Contractor shall take effective measures during construction to minimize soil erosion and silting/sedimentation in the vicinity of construction areas.
- B. The Contractor shall not cause direct or indirect discharge of pollutants such as silt, clay, fuel oils, lubricants, cleaning agents, bitumen's, calcium chloride or any other material that may be hazardous or detrimental to watersheds, lakes, wetlands, beaches, marshes, streams, and public water, sewer and drain systems.
- C. Site generated drainage runoff whether due to storm run-off or the Contractor's dewatering and other operations shall not be allowed to shed on to the abutting properties.
- D. To reduce uncontrolled soil erosion, the site drainage runoff shall be conveyed through conduits, swales, gravel drains, etc., and disposed of in areas approved by the City.
- E. Site runoffs shall not be disposed of until silt, sediment and other deleterious materials have been removed through the use of hay bales, silt fences and other methods acceptable to the Engineer.
- F. During the course of construction, the Contractor shall, when directed, dispose, remove, relocate, or replace the hay bales and silt fences as directed by the Engineer. The Contractor shall also be fully responsible for removal and disposal of the collected sediment and debris behind the hay bales and silt fences as directed by the Engineer. The hay bales and silt fences shall remain in place until directed by the Engineer.
- G. Erosion control measures used for public water supply or fist culture must be adequate to ensure that turbidity in the receiving water will not be increased more than 10 standard turbidity units (s.t.u.) or as otherwise required by the State or other controlling body. In surface water used for other purposes, the turbidity must not exceed 25 s.t.u., unless permitted otherwise.

#### 1.10 WATER HANDLING

- A. All water discharges from the Contractor's dewatering and/or water handling operations shall be filtered prior to being discharged into a receiving water.
- B. The water may be filtered through hay bales, a vegetative filter strip, or a vegetative channel. Discharge flow rate through these media shall not exceed one (1'/sec) foot per second. The sediment shall be cleared from the channel periodically.
- C. If water from dewatering operations is discharged over non-vegetated land, impermeable plastic sheeting must be laid over non-vegetated areas and sediment traps constructed at strategic locations to catch sediment.
- D. Any water discharged from the Contractor's operations must be at least equal in quality to the receiving water. If the quality of the water being discharged is unacceptable, the Contractor shall employ whatever measures necessary to provide an acceptable water quality.

- E. All existing drainage facilities including, but not limited to, brooks, streams, canals, channels, ditches, culverts, catch basins, and drainage piping shall be adequately safeguarded so as not to impede drainage or to cause siltation of downstream areas. If the Contractor damages or impairs any of the aforesaid drainage facilities, these shall be repaired immediately.
- F. All drainage appurtenances shall be designed to remove suspended solids, oils and other such material. Baled hay or straw must also be used to trap sediment and prevent clogging of drainage systems.
- G. If interruption of existing drainage flows is necessary, the Contractor shall provide, maintain, and operate all temporary facilities such as dams, pumping equipment and conduits etc. required to by-pass flows past the construction area.

#### 1.11 DUST CONTROL

- A. During the progress of the work, the Contractor shall conduct operations to maintain a dust free environment. Measures to control dust may include sweeping and applying water to streets, as necessary, to minimize the air borne dust.
- B. At no time shall calcium chloride or other chemicals be used for dust control.

#### 1.12 NOISE LEVEL REQUIREMENTS

- A. Equipment utilized by the Contractor shall conform to the General Services Administration Construction Noise Specifications, effective as of January 1, 1975, for stationary equipment. Equipment must not exceed 75 Db (A) when measured at a distance of 50 feet from the noise source. The Contractor shall construct sound enclosures or utilize other noise reduction techniques if the equipment does not meet the noise level requirements.

#### 1.13 CLEAN AIR AND WATER POLLUTION CONTROL ACTS

- A. The Contractor is subject to the requirements of the Clean Air Act, as amended, 42 U.S.C. 1857 et. seg; the Federal Water Pollution Control Act, as amended, 33 U.S.C. 1251 et. seg; and the regulations of the Environmental Protection Agency with respect thereto, at CFR Part 15, as amended from time to time.
  - 1. The Contractor agrees that any facility to be utilized in the performance of any non-exempt contract or sub-contract shall not be listed on the List of Violating Facilities issued by the Environmental Protection Agency (EPA) pursuant to 40CFR 15.20.
  - 2. The Contractor agrees to comply with all the requirements of Section 114 of the Clean Air Act, as amended (42 U.S.C. 1857 c8) and Section 308 of the Federal Water Pollution Control Act, as amended (33 U.S.C. 1318), relating to inspection, monitoring, entry, reports, and information, as well as all regulation and guidelines issued thereunder.

PART 2 – PRODUCTS (not applicable)

PART 3 – EXECUTION (not applicable)

\*\*\* END OF SECTION \*\*\*

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## SECTION 01700 - PROJECT CLOSEOUT

### PART 1 - GENERAL

1.01 DESCRIPTION OF REQUIREMENTS: Project closeout is defined to include general requirements near end of Contract Time in preparation for final acceptance, final payment, normal termination of Contract, occupancy by OWNER and similar actions evidencing completion of the Work. Time of closeout is directly related to "Substantial Completion", and therefore may be either a single time period for the entire Work or a series of time periods for individual parts of the Work which have been certified as Substantially Complete at different dates. That time variation (if any) shall be applicable to other provisions of this section.

### 1.02 PREREQUISITES TO SUBSTANTIAL COMPLETION:

A. General: Prior to requesting ENGINEER's inspection for certification of Substantial Completion (for either entire Work or portions thereof), complete the following and list known exceptions in request:

1. In progress payment request, coincident with or first following date claimed, show either 100% completion for portion of the Work claimed as "Substantially Complete", or list incomplete items, value of incompleteness, and reasons for being incomplete.
2. Include supporting documentation for completion as indicated in these Contract Documents.
3. Advise OWNER of pending insurance change-over requirements.
4. Submit specific warranties, workmanship/maintenance bonds, software licenses, maintenance agreements, final certifications and similar documents as required.
5. Complete testing of equipment/software and supporting documentation of tests.
6. Partial waivers of lien from all Subcontractor's and Suppliers.

B. Inspection Procedures: Upon receipt of CONTRACTOR's request, ENGINEER will proceed with inspection and advise CONTRACTOR of prerequisites not fulfilled or prepare certificate of Substantial Completion. If work must be performed prior to issuance of certificate, ENGINEER will repeat inspection when requested, to assure that the Work has been substantially completed.

### 1.03 PREREQUISITES TO FINAL ACCEPTANCE:

A. General: Prior to requesting ENGINEER's final inspection for certification of final acceptance and final payment, as required by General Conditions, complete the following and list known exceptions (if any) in request:

1. Submit final payment request with final releases and supporting documentation not previously submitted and accepted. Include certificates of insurance for products and completed operations where required.
2. Submit updated final statement, accounting for final changes to Contract Price.

3. Submit copy of ENGINEER's final punch-list of itemized work to be completed or corrected, stating that each item has been completed or otherwise resolved for acceptance, endorsed and dated by ENGINEER.
  4. Submit record drawings, maintenance manuals, final photographs and all other record documents.
  5. Submit final liquidated damages settlement statement, acceptable to OWNER.
  6. Revise and submit evidence of final, continuing insurance coverage complying with insurance requirements.
  7. Submit final waivers of lien from all Subcontractor's and Suppliers.
- B. Procedure: Upon receipt of CONTRACTOR's request for final acceptance and payment, ENGINEER will either prepare certificate of final acceptance or advise CONTRACTOR of Work not completed or obligations not fulfilled, as required for final acceptance. If necessary, procedure will be repeated.

#### 1.04 RECORD DOCUMENT SUBMITTALS:

- A. General: Specific requirements for record documents are indicated in individual sections of these Specifications. Do not use record documents for construction purposes. Provide access to record documents for ENGINEER's reference during normal working hours.
- B. Record Drawings: Maintain a white-print set (blue-line or black-line) of Contract Drawings and Shop Drawings in clean, undamaged condition, with mark-up of actual installations which vary substantially from the Work as originally shown. Mark whichever drawing is most capable of showing "field" condition fully and accurately; however, where Shop Drawings are used for mark-up, record a cross-reference at corresponding location on working drawings. Mark with red erasable pencil. Give particular attention to concealed work, which would be difficult to measure and record at a later date. Note related Change-Order numbers where applicable. Organize Record Drawing sheets into manageable sets, bind with durable paper cover sheets, and print suitable titles, dates and other identification on cover of each set.
- C. Record Specifications: Maintain one copy of Specifications, including Addenda, Change Orders and similar modifications issued in printed form during construction, and mark-up variations (of substance) in actual Work in comparison with text of Specifications and modifications as issued. Give particular attention to substitutions, selection of options, and similar information on work where it is concealed or cannot otherwise be readily discerned at a later date. Note related Record Drawing information and product data, where applicable.
- D. Record Product Data: Maintain one copy of each product data submittal, and mark-up significant variations in actual Work in comparison with submitted information. Include both variations in product as delivered to site, and variations from manufacturer's instructions and recommendations for installation. Give particular attention to concealed products and portions of the Work which cannot otherwise be readily discerned at a later date. Note related Change Orders and mark-up of Record Drawings and Specifications.
- E. Miscellaneous Record Submittals: Refer to other Sections of these Specifications for requirements of miscellaneous record-keeping and submittals in connection with actual performance of the Work. Immediately prior to date(s) of final completion, complete

miscellaneous records and place in good order, properly identified and bound or filed, ready for continued use and reference.

1.05 BALANCING CHANGE ORDER:

- A. General: Contractor shall execute a balancing change order to closeout the contract. Contractor's time to execute balancing change order is considered incidental to contract.

PART 2 - PRODUCTS (not applicable)

PART 3 - EXECUTION

3.01 CLOSEOUT PROCEDURES:

- A. General: Cleaning for specific items of Work shall be performed as specified in technical Specifications. General cleaning during progress of the Work is specified in Section 01400. Additional final clean-up requirements are as follows:
1. Remove signs which are not required as permanent signs.
  2. Clean project site, including landscape development areas, of litter and foreign substances. Sweep paved areas to a broom-clean condition; remove stains, petro-chemical spills and other foreign deposits. Rake grounds which are neither planted nor paved, to a smooth, even-textured surface.
- B. Removal of Protection: Except as otherwise requested by ENGINEER, remove temporary protection devices and facilities which were installed during course of the Work.
- C. Disposal of Wastes: Do not burn waste materials at site, or bury debris or excess materials on OWNER's property, or discharge volatile or other harmful or dangerous materials into drainage systems. Remove waste materials from site and dispose of in a lawful manner.

\*\*\* END OF SECTION \*\*\*

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## SECTION 02100 – SITE DEMOLITION

The work to be done under this item shall conform to the relevant provisions of Section 100 of the Standard Specifications, all requirements of this section and the work as shown on the drawings.

The Contractor shall furnish all labor, materials, tools, and equipment necessary to perform all work to prepare and clear the site for construction work as shown on the drawings or as directed by the Engineer.

The work shall include, but not necessarily be limited to the following:

- A. Clearing the site of construction debris and waste materials, including grass, bushes, trees, broken concrete, pipes, lumber and steel pieces, rags and plastics, etc., within the limits of work, as shown on the drawings or as directed.
- B. The work includes the stripping and/or ordinary excavation of existing bituminous or cement concrete pavements, soils, foundations, bituminous or cement concrete curbs, bituminous or cement concrete sidewalks, grassed areas, except for those materials specifically classified and paid for under other items of this contract.
- C. Removal and stacking of all fencing, lamp posts, letter boxes, signs, guard rail, bike racks, and poles and other usable materials to be reinstalled as originally existed after the completion of the construction work.
- D. Demolition and removal of existing bituminous pavement, bituminous and concrete walkways, fencing, as necessary to construct the drainage improvements, curbing, grass borders and landscaping, etc.
- E. Removal and stockpiling all top soil, curb stones, cobblestones, and all utility castings and other materials for reuse on the project, as shown or as directed by the Engineer.
- F. Removal and disposal of all waste materials off site.

All recovered materials to be reused on the project shall be acceptable to the Engineer and properly stockpiled and guarded against damage or deterioration. Unsatisfactory materials shall not be incorporated into the work.

All waste or surplus material collected in the course of the clearing, grubbing, stripping, demolition, alteration and other site preparation operations shall be disposed of in a satisfactory manner at the Contractor's expense to an approved site. **Burying is not allowed.** All waste material shall be disposed of immediately and shall not be left until the final site clean-up.

The Contractor's attention is directed towards the requirements of Division 0 and 1 of the specifications in relation to protection, relocation, replacement and repair/restoration of property, existing structures, utilities and appurtenances.

The Contractor shall execute the site clearing, demolition, replacement, and restoration work to ensure against damage or injury to buildings, occupants, and adjacent property from falling debris or other causes. Free and safe passage to and from the site shall be maintained at all times.

The closing or blocking of walks, passageways, and roads adjacent to the site shall not be permitted and all operations shall be conducted with minimum interference to traffic. The Contractor shall erect and maintain all necessary barriers, lights, plates, signs, flashers and other devices for the safety of vehicular and pedestrian traffic.

All clearing and grubbing shall be as indicated on the drawings, as specified herein or as directed.

The Contractor shall remove any and all existing site obstructions and debris, cut trees, bushes, root stumps, waste stones, concrete, bituminous materials, wood, lumber, metal, plastic, and other unsuitable materials above, at or below grade that may interfere with or obstruct the new work, whether or not they are shown on the drawings.

The Contractor shall not cut or injure any trees or other vegetation outside the limits of the work area and shall guard against like action by its employees. No trees and shrubs shall be cut, removed, destroyed or trimmed unless specifically marked or permitted.

All demolitions, removal and alterations to the existing structures, appurtenances, utility pipes, castings, fences, walkways, posts, stairs and other physical features shall be accomplished without damaging the integrity of the remaining structures, appurtenances and equipment.

The edges of all excavations to be made in existing pavements and sidewalks shall be saw-cut neatly along either a straight line or design curved line as shown in the drawings. Ragged, uneven edges are not acceptable.

The existing pavement shall be saw cut through its full depth, or to the elevation of the abutting proposed pavement subgrade, whichever is lesser, at all joints between existing and proposed pavements, and at all utility trenches through existing pavement to remain, to provide a uniform, vertical surface for the proposed pavement joint with the existing pavement.

Saw cut edges that become broken, ragged or undermined as a result of the Contractor's operations shall be edged neatly with a minimum disturbance to remaining pavements or sidewalks prior to the placement of abutting proposed pavement at no additional cost.

In areas where an existing concrete sidewalk abuts a building, wall or storefront, and the sidewalk is to be reconstructed or removed, the existing sidewalk shall be saw cut a minimum of six (6) inches from the building wall or storefront unless otherwise directed by the Engineer.

Saw cut surfaces shall be sprayed or painted with a uniform thin coat of RS-1 asphalt emulsion immediately before placement of hot mix asphalt material against the surface.

The Contractor shall perform all excavations in such a manner as to maintain slopes longitudinally and laterally and to ensure proper and continuous drainage at all times. Sidewalk and roadway gutter grades at driveways and side street intersections are to be field adjusted to be consistent with the existing drainage pattern and shall provide for an appropriate transition between the new and the existing (side streets and driveways) pavement surfaces at intersections.

The excavation must also avoid damage to adjacent areas, facilities, and appurtenances.

Cutting of openings in existing masonry work shall be done in a manner to provide suitable bond, and clean, square and plumb openings for the installation of new work. The cut surfaces shall be thoroughly cleaned of all loosened materials.

All workmanship and materials for new construction and alterations shall be as specified. Materials used for repair and/or restoration work shall match the existing adjacent surfaces in finish and texture as closely as practical. All joints between new and existing work shall be made inconspicuous.

Unless noted on the drawings or specifically directed by the Engineer, all abandoned underground piping shall be left in place, plugged or capped, and filled with flowable control density fill. Abandoned underground piping castings shall either be removed or at least cut a minimum 12-inches below the finished surface and the area backfilled. Whenever a section of piping needs to be removed for whatever reasons, it shall either be cut to the nearest solid support or appropriate new supports shall be provided and each of the remaining ends shall

be capped before backfilling.

All items such as fences, lamp posts, letter boxes, masonry boundary walls, City signs, poles, bollards, curb stones, markers, trees, bushes, grassed areas, walkways, stairs/steps, benches, outside lighting and all other amenities and physical features damages, dislocated and/or dismantled by the Contractor shall be replaced or restored to conditions that existed prior to the start of construction. All direct and indirect costs associated with the replacement/restoration work shall be borne by the Contractor.

Site demolition, including all labor, materials, equipment and tools required to complete all clearing, demolition, dismantling, replacement/restoration work, stacking of reusable and disposal of all waste/surplus materials, and all else incidental thereto, all as specified in this sections, as shown on the drawings or as directed by the Engineer.

\*\*\* END OF SECTION \*\*\*

## SECTION 02105 – TREE REMOVAL (DIAMETER UNDER 24 INCHES)

The work to be done under this item shall conform to the relevant provisions of Sections 100 of the Standard Specifications, all the requirements of this section and the work as shown on the drawings.

The Contractor shall furnish all labor, materials, tools and equipment necessary to cut existing trees and expose by excavation, remove and/or cut, as required, the tree stumps and root systems to prepare the site for construction work as shown on the drawings and as directed. The work shall also include removal and disposal of tree stumps, roots, organic matter and the other unsuitable materials resulting from the operation.

The Contractor shall comply with the provisions of Division's One and Two of this specification as related to protection, relocation, replacement and restoration of property, and existing utilities and appurtenances.

All work in the proximity of the existing structures, appurtenances, pipes, stairs, and other physical features shall be accomplished without damaging the integrity of remaining structures, appurtenances and equipment.

Such items that are damaged shall be either repaired or replaced at the Contractor's expense to a condition at least equal to that which existed prior to the start of his work.

All workmanship and materials for new construction and alterations shall be as specified. Materials used for repair and/or restoration work shall match the existing adjacent surfaces in finish and texture as closely as practical, and joints between new and existing work shall be made inconspicuous.

Unless directed otherwise by the Engineer, excavation required to expose the tree stump and root system shall comply with the following:

- Excavation around the tree not to exceed the width of the sidewalk.
- The depth of excavation for stump removal not to exceed 5 feet.
- The depth of excavation for removal of a tree root system not to exceed 2 feet.

All root system encountered within the limits of sidewalk width as determined by the Engineer, shall be cut clean and removed. The cut surfaces of the remaining detached roots shall be painted with stump rot. The tree roots which are still attached to the trunk shall be cleaned and painted with two coats of an approved chemical root guard to protect the tree from later damage.

All waste or surplus materials resulting from the tree, tree stump, tree root system removal and the associated operations shall be disposed of in a satisfactory manner at the Contractor's expense. The disposal of all such materials shall be carried out immediately after removal of the material and shall not be left until the final period of clean up.

All existing tree grates in good condition and not needed for the project shall be transported and carefully stacked at the DPW yard or otherwise disposed of by the contractor at no additional cost to the City.

Only trees as having a diameter less than 24 inches, shall be included in Item 3.bb.

Payment for work under **Item 3.bb: Tree Removed, Stored, Protected, and Reset** shall be at the contract unit price, per each tree location, where work is satisfactorily completed and accepted by the Engineer, which price shall be full compensation for all labor, materials and equipment required to complete all work items including cutting, excavations, removal of stumps or root systems, replacement/restoration of damaged areas, removal and stacking of grates, and disposal of waste/surplus materials as specified in this section and all else

incidental thereto.

All cost related to back fill materials and reconstruction of sidewalk and the associated work shall be paid for separately under their respective pay items.

Tree and stump removal for trees as having a shortest diameter of less than 9 inches will not be measured or paid for under Item 103.1. Payment for such work will be paid for in the Item of Unclassified Excavation.

The measurement and payment provisions listed under Division One, Section 01025 shall supplement the above payment provisions, as applicable.

\*\*\* END OF SECTION \*\*\*

## SECTION 02120 –UNCLASSIFIED EXCAVATION

The work to be done under this Item shall conform to the relevant provisions of Section 120 of the Standard Specifications and the following:

The work shall consist of the excavation and satisfactory disposal of all materials encountered within the limits of the contract except for those materials specifically classified and paid for under other items of this contract.

The work includes the stripping and/or ordinary excavation of existing bituminous or cement concrete pavements, soils, foundations, bituminous or cement concrete curbs, bituminous or cement concrete sidewalks, grassed areas, except for those materials specifically classified and paid for under other items of this contract.

The edges of all excavations to be made in existing pavements and sidewalks shall be saw-cut neatly along either a straight line or design curved line as shown in the drawings. Ragged, uneven edges are not acceptable.

The existing pavement shall be saw cut through its full depth, or to the elevation of the abutting proposed pavement subgrade, whichever is lesser, at all joints between existing and proposed pavements, and at all utility trenches through existing pavement to remain, to provide a uniform, vertical surface for the proposed pavement joint with the existing pavement.

Saw cut edges that become broken, ragged or undermined as a result of the Contractor's operations shall be edged neatly with a minimum disturbance to remaining pavements or sidewalks prior to the placement of abutting proposed pavement at no additional cost.

In areas where an existing concrete sidewalk abuts a building, wall or storefront, and the sidewalk is to be reconstructed or removed, the existing sidewalk shall be saw cut a minimum of six (6) inches from the building wall or storefront unless otherwise directed by the Engineer.

Saw cut surfaces shall be sprayed or painted with a uniform thin coat of RS-1 asphalt emulsion immediately before placement of hot mix asphalt material against the surface.

The Contractor shall perform all excavations in such a manner as to maintain slopes longitudinally and laterally and to ensure proper and continuous drainage at all times. Sidewalk and roadway gutter grades at driveways and side street intersections are to be field adjusted to be consistent with the existing drainage pattern and shall provide for an appropriate transition between the new and the existing (side streets and driveways) pavement surfaces at intersections.

The excavation must also avoid damage to adjacent areas, facilities and appurtenances.

If during the course of the excavation, the Contractor encounters cobblestones, the excavated cobblestone shall remain the property of the City of Quincy. The entire excavated cobblestone shall be carefully stacked at the DPW Yard at no additional cost to the City. All other waste or unsuitable materials (bituminous/cement concrete, debris, rails and ties, etc) resulting from the contractor's excavation (common excavation, cold planning, reclamation, etc.) and/or the excavated materials declared surplus by the Engineer shall be disposed of by the Contractor at no additional cost to the City.

Also included under this item is the removal of any guard rails, trees under 9-inches in diameter, bushes, shrubs and vegetation. This work shall be considered incidental with no additional compensation.

Saw cutting required for the excavation of pavements, sidewalks, drainage, traffic signal conduit and/or lighting conduit shall be considered incidental with no additional compensation.

Payment for **Unclassified Excavation** shall not be measured or paid for separately and shall be included within

the contract unit price of items 3a through 3e and 4a through 4g, indicated on the schedule of values. This price shall be full compensation for all labor, materials, tools, equipment and incidentals including excavation to lines and grades, all construction and public safety measures and dewatering operations where required or necessary to complete the work as specified or as shown on the drawings.

The measurement and payment provisions listed under Division One, Section 01025 shall supplement the above payment provisions, as applicable.

\*\*\* END OF SECTION \*\*\*

## SECTION 02140 – DRAINAGE STRUCTURE REMOVED

The work to be done under this section shall conform to the relevant provisions of Section 140 of the Standard Specifications and the following:

This work shall consist of removal of drainage structures identified on the plans or directed otherwise.

The castings (frames, covers and grates) shall be removed and stacked. Castings in good condition shall be transported and stacked carefully at the DPW yard. Casting deemed by the Engineer as not serviceable shall be disposed of by the Contractor at no additional cost to the City.

The Contractor shall plug all inlets and outlets and removal all masonry and concrete.

The Contractor shall fill the cavity with Gravel for Base Course.

Payment for work under **Item 3j and 4p: Drainage Structure Removed** shall be at the contract unit price, per Each, for the respective Items, which price shall be full compensation for all labor, materials, and equipment necessary to complete the work, including removing and stacking castings, excavation, backfill, compaction, and plugs.

Gravel for backfill will not be paid for separately.

The measurement and payment provisions listed under Division 1, Section 01025 shall supplement the above payment provisions as applicable.

\*\*\* END OF SECTION \*\*\*

SECTION 02150 – GRAVEL BORROW

The work under this section shall conform to the relevant provisions of Section 150 of the Standard Specifications and the following:

This work shall consist of furnishing and placing ordinary borrow in accordance with the details shown on the contract drawings, as specified in these specifications, and as directed by the Engineer. Gravel borrow shall consist of hard durable stone and coarse sand free from loam and clay, well graded and containing no stone having any dimensions greater than two (2) inches (Type C), as per Section M1.03.0. The gravel borrow shall conform to the following requirements:

<b>Sieve</b>	<b>% Passing</b>
<b>1/2"</b>	<b>50-85</b>
<b>#4</b>	<b>40-75</b>
<b>#50</b>	<b>8-28</b>
<b>#200</b>	<b>0- 8</b>

The gravel borrow shall be placed in six (6") inch maximum layers and then compacted to not less than 95% of maximum optimum density as determined by AASHTO Test Designations: T99-57, Method C.

Gravel Borrow for Roadways and Sidewalks, including all materials, equipment, tools, labor, backfilling, leveling and initial compaction, etc., and all else incidental thereto, shall not be measured or paid for separately and shall be included within the contract unit price of items 3a through 3e, 3h, 3i, and 4a through 4g indicated on the schedule of values. Fine grading and compaction, wherever required, shall be paid for under the applicable item.

The measurement and payment provisions listed under Division 1, Section 01025 shall supplement the above payment provisions, as applicable.

\*\*\* END OF SECTION \*\*\*

SECTION 02170 – FINE GRADING & COMPACTION OF SUB-GRADE/ SUB-BASE AREAS

The Work under this Item shall conform to the relevant provisions of Section 170 of the Standard Specifications and the following:

The Work shall consist of the removal of temporary pavement and the underlying material over trenches and other areas including pavement saw cutting for specified cutbacks, trench excavation, fine grading and compaction, as required or as directed by the Engineer. The sub-grade areas shall be formed to the proposed cross-sections and compacted to the required dimensions, or as directed, in accordance with the provisions of sub-section 150.60 and 150.62.

Payment for this **Fine Grading & Compaction of Sub-Base/Sub-Grade Areas**, including all materials, equipment, tools, labor, backfilling, leveling and initial compaction, etc., and all else incidental thereto, shall not be measured or paid for separately and shall be included within the contract unit price of items 3a through 3e, 3h, 3i, and 4a through 4g indicated on the schedule of values.

The measurement and payment provisions listed under Division 1, Section 01025 shall supplement the above payment provisions, as applicable.

\*\*\* END OF SECTION \*\*\*

## SECTION 02210 – CATCH BASINS

The work under this section shall conform to the relevant provisions of Section 200 and the following:

This work shall consist of furnishing and placing pre-cast catch basin sections, castings, and performing all excavation and backfill all in accordance with the designs and details shown on Drawings, as specified herein or as directed by the Engineer.

The materials used in construction of catch basins shall conform to Section 201.40 or as directed by the Engineer.

Catch basin frames shall be set to the finished lines and grades, as specified. The castings shall be set in bituminous concrete collars and underlain with cement concrete. The collars shall be at least 9 inches deep and extend to a radius of one (1) foot beyond the circumference of the frame, as shown on the contract drawings.

Catch basin or gutter inlet frames and grates shall be as manufactured by Lebaron Foundry Catalog number LF248-2 Type F or approved equal and as shown on the plans.

Payment for work under **Items 3l and 4q: Catch Basins, Item 4r: Catch Basins - special, Items 3m and 4s: Catch Basins Drain Pipe Hood, and Items 3o and 4z: Frame with Grate or Cover** shall be at the contract unit price, per each, for the respective Items, which price shall be full compensation for all labor, materials, and equipment necessary to complete the work, including removing and stacking castings, excavation, backfill, compaction, plugs, placement of concrete collars, and pavement markings.

Gravel for backfill will not be paid for separately.

The measurement and payment provisions listed under Division 1, Section 01025 shall supplement the above payment provisions as applicable.

\*\*\* END OF SECTION \*\*\*

## SECTION 02215 – DRAIN MANHOLES

The work under this Item shall conform to the relevant provisions of Section 200 and the following:

This work shall consist of constructing Drain Manholes as specified on the contract drawings or as directed by the Engineer.

The materials used in construction of drain manholes shall conform to Section 201.40 or as designated by the Engineer. Manholes shall be constructed of pre-cast reinforced concrete sections unless directed otherwise by the Engineer.

Construction methods shall conform to Section 201, or as directed by the Engineer.

Manhole frames shall be set to the finished grades, as specified. The manhole frames shall be set in bituminous concrete collars underlain with cement concrete. The collars shall be nine (9) inches in depth and will extend to a radius of one (1) foot beyond the circumference of the frame.

Drain manhole frames and covers shall be as manufactured by Lebaron Foundry Catalog number LK110-Type A or approved equal and as shown on the plans.

Measurement for manholes shall be based on a complete unit in place (regardless of depth) and accepted by the Engineer.

Payment shall be made for the number of units completed and accepted by the Engineer at the contract unit price for **Items 3n and 4t: Drain Manholes, Item 4u Drain Manhole – 6-foot diameter, Item 4v Drain Manhole – Special(Doghouse)7-foot diameter, Item 4w Drain Manhole – Special(shallow), and Items 3o and 4z: Frame with Grate or Cover.** Payment for collars, excavations backfilling, compaction, placement of concrete collars and pavement materials and all related work, shall be included in the contract unit price of the manhole.

The measurement and payment provisions listed under Division 1, Section 01025 shall supplement the above payment provision as applicable.

\*\*\* END OF SECTION \*\*\*

## SECTION 02220 – DRAINAGE STRUCTURE, ADJUSTED

The work to be done under this section shall conform to the relevant provisions of Section 220 of the Standard Specifications and the following:

This work shall consist of adjustments to all existing drainage structures within the project limits, unless noted or directed otherwise. The excavated area will be refilled with gravel with the casting set into a concrete collar. The new elevation of the structure shall be determined by the Engineer and all necessary work shall be done under this direction.

The City will assist the Contractor with the available information on the existing utility appurtenances/structures (sewer and drain manholes, catch basins, water valves, clean-outs, monitoring wells, etc.) located along the streets and sidewalks. Similar information on other utility appurtenances/structures (gas, electric, telephone, etc.) shall be obtained by the Contractor from the respective utility companies operating in the area.

The Contractor shall be fully responsible for the physical location of each of these utility appurtenances. This includes exposing the appurtenances/structures already paved over or discovered during the Contractor's construction operations.

The Contractor shall not pave over any of the utility appurtenances/structures unless specifically directed otherwise, in writing, by the Engineer. Any paving over of the utility appurtenances/structures, whether willful or inadvertent, shall be subject to a fine of two hundred dollars (\$200.00) for each appurtenance/structure thus buried.

If during the course of the work, a defective casting is encountered, the Contractor shall remove it as directed by the Engineer. A new casting shall be installed by the Contractor. This shall not include the castings damaged by the Contractor, which shall be repaired or replaced by the Contractor at his expense.

Existing frames and grates belonging to the City, in good condition and not needed on the project, shall be transported and carefully stacked at the DPW Yard, or otherwise disposed of by the Contractor at no additional cost to the City.

Replacement castings shall not be included under these items but will be provided to the Contractor from the City of Quincy stockpile. The Contractor will be required to pick up the castings at the City Yard and install the castings.

Payment shall be made for the number of units completed and accepted by the Engineer at the contract unit price for **Item 4y: Drainage Structure Adjusted.** Payment for collars, excavations, backfilling, compaction, placement of concrete collars and pavement materials and all related work, shall be included in the contract unit price of the drainage structure adjusted.

The measurement and payment provisions listed under Division 1, Section 01025 shall supplement the above payment provision as applicable.

\*\*\*END OF SECTION\*\*\*

## SECTION 02222 – DRAINAGE STRUCTURE REMODELED

The work under this **Items 3k and 4x** shall conform to the relevant provisions of Section 220 and the following;

The work shall consist of remodeling the cone of the structure where the line or grade requires a change greater than six (6") inches at existing drainage structures, or where noted on the plans. For structures in the roadway itself, the excavated area will be refilled with gravel with the casting set into a concrete collar, overlain with 3-in. thick bituminous concrete top course. The Engineer shall determine the new elevation of the structure and all necessary work shall be done under his direction.

The City will assist the Contractor with the available information on the existing utility appurtenances/structures (sewer and drain manholes, catch basins, water valves, clean-outs, monitoring wells, etc.) located along the streets and sidewalks. Similar information on other utility appurtenances/structures (gas, electric, telephone, etc.) shall be obtained by the Contractor from the respective utility companies operating in the area.

The Contractor shall be fully responsible for the physical location of each of these utility appurtenances/structures already paved over or discovered during the Contractor's construction operations.

The Contractor shall not pave over any of the utility appurtenances/structures unless specifically directed otherwise, in writing, by the Engineer. Any paving over of the utility appurtenances/structures, whether willful or inadvertent, shall be subject to a fine or two hundred (\$200.00) dollars for each appurtenance/structure thus buried.

If during the course of the work a defective casting is encountered, the Contractor shall remove it as directed by the Engineer. The Contractor shall install a new casting. This shall not include any damage by the Contractor, which shall be repaired or replaced by the Contractor at his expense. Existing frames and grates belonging to the City of Quincy, in good condition and not needed on the project shall be transported and carefully stacked at the DPW Yard or otherwise disposed of by the Contractor at no additional cost to the City.

Replacement castings shall not be included under this Item but shall be paid for under a separate item or provided to the Contractor from the City of Quincy stockpile. The Contractor will be required to pick up the castings at the DPW Yard.

Any remodeled drainage or sanitary structure, regardless of existing material, shall be paid for under **Items 3k and 4x: Drainage Structure Remodeled**. Payment for work under this Item shall be at the contract unit price, per Each, which price shall be full compensation for all labor, materials, and equipment necessary to complete the work, including restoration in kind of all disturbed surfaces.

Payment for temporary setting of frames and castings, as required, during the pavement construction operations, shall also be included in the unit prices, per Each, as set forth in the Bid Form.

The measurement and payment provisions listed under Division 1, Section 01025 shall supplement the above payment provisions, as applicable.

\*\*\*END OF SECTION\*\*\*

## SECTION 02225 – REPLACEMENT FRAME WITH GRATE OR COVER

The work under this **Item** shall consist of furnishing new castings and shall conform to the relevant provisions of Section 201 and Section 220 and the following:

Payment under this Item shall including furnishing new castings for the existing sanitary/drainage structures regardless of type or size or for existing structures that are to be adjusted or changed in type or remodeled and where existing castings need to be replaced.

New castings will be paid under **Items 3o and 4z: Frame with Grate or Cover**, at the contract unit price, per Each, furnished and installed in place to the satisfaction of the Engineer. This price shall be full compensation for all labor, materials, equipment and tools necessary to complete the work including restoration in kind of all disturbed/damaged areas and facilities.

Unless directed otherwise, the Massachusetts Highway Department 1977 Standard Frame and Cover will be placed on all manholes. Square Frame type Catch Basin Frame and Cover with square hole grate shall be placed on all catch basins and gutter inlets and shall conform to the details as shown on the drawings. The cost of new castings for new structures shall be paid for under their respective items.

The measurement and payment provisions listed under Division 1, Section 01025 shall supplement the above payment provisions, as applicable.

\*\*\*END OF SECTION\*\*\*

## SECTION 02230 – PVC DRAINAGE PIPE

The work under this section shall conform to the relevant provisions of Section 230 of the standard specifications and the following:

The work shall include furnishing and installation of all pipes, fittings, excavation, backfilling, compaction and making the connection to existing and proposed drainage structures and all work related thereto.

Pipe shall meet ASTM D3034 or D3033, strength requirements SDR 35, push-on joints ASTM D3212, gaskets ASTM F477.

When the existing drainage pipe to be replaced is encountered in the excavation for the new pipe, the removal and disposal of the existing pipe shall be included in the cost.

Manhole pipe connections between new pipe and proposed and existing manholes shall be sealed with premolded elastomeric boots. Boots shall be Kor-n-Seal or approved equal.

Payment for work under this Item shall be at the contract unit price, per Linear Foot, for **Items 3a through 3e, 4c, 4d, and 4g: (various diameter) PVC Drainage Pipe**. This price shall be full compensation for all labor, materials, equipment, including all pipe, fittings, excavation, pipe installation, existing drainage structure connection, (including coring of new penetrations and plugging abandoned penetrations), reconfiguration of brick invert of existing manholes, backfill materials, backfilling, compaction, restoration in kind of all damaged/disturbed surfaces and all else incidental thereto for which separate payment has not been provided for elsewhere.

Manholes, catch basins and castings for the existing drainage appurtenances shall be paid for under their respective items.

Only Unsuitable Materials Excavation and Backfill Items 6a and 6b shall be paid for separately as directed and approved by the Engineer.

The measurement and payment provisions listed under Division 1, Section 01025 shall supplement the above payment provisions, as applicable.

\*\*\*END OF SECTION\*\*\*

SECTION 02240 – REINFORCED CONCRETE PIPE CLASS V

The work under this Item shall conform to the relevant provisions of Section 230 of the standard specifications and the following:

The work shall include furnishing and installation of all pipes, fittings, excavation, backfilling, compaction and making the connection to existing drainage structures and all work related thereto.

When the existing drainage pipe to be replaced is encountered in the excavation for the new pipe, the removal and disposal of the existing pipe shall be included in the cost of the new pipe.

Payment for work under this Item shall be at the contract unit price, per Linear Foot, for **Item 4b: 12-inch Reinforced Concrete Pipe Class V, Item 4e: 18-inch Reinforced Concrete Pipe Class V, and Item 4f: 24-inch Reinforced Concrete Pipe Class V**. This price shall be full compensation for all labor, materials, equipment, including all pipe, fittings, excavation, removal, disposal, and replacement of excavated trench material, pipe installation, existing drainage structure connection, (including coring of new penetrations and plugging abandoned penetrations) backfilling, compaction, restoration in kind of all damaged/disturbed surfaces and all else incidental thereto for which separate payment has not been provided for elsewhere.

Manholes, catch basins and castings for the existing drainage appurtenances shall be paid for under their respective items.

Only Unsuitable Materials Excavation and Backfill Items 6a and 6b shall be paid for separately as directed and approved by the Engineer.

The measurement and payment provisions listed under Division 1, Section 01025 shall supplement the above payment provisions, as applicable.

\*\*\*END OF SECTION\*\*\*

## SECTION 02250 – DUCTILE IRON PIPE

The work under this section shall conform to the relevant provisions of Section 230 of the standard specifications and the following:

The work shall include furnishing and installation of all pipes, fittings, excavation, backfilling, compaction and making the connection to existing and proposed drainage structures and all work related thereto.

Ductile iron pipe shall conform to AWWA specifications C150 and C151, latest revision, Class 52. Pipe shall have "push-on" type joints except at fittings and above-grade piping systems, which shall be mechanical joints. All pipe shall have a cement mortar lining and bituminous seal coating on all interior and exterior surfaces conforming to AWWA Specification C104 latest revision.

When the existing drainage pipe to be replaced is encountered in the excavation for the new pipe, the removal and disposal of the existing pipe shall be included in the cost.

Manhole pipe connections between new pipe and proposed and existing manholes shall be sealed with premolded elastomeric boots. Boots shall be Kor-n-Seal or approved equal.

Payment for work under this Item shall be at the contract unit price, per Linear Foot, for **Item 4a – 12-Inch Ductile Iron Drainage Pipe**. This price shall be full compensation for all labor, materials, equipment, including all pipe, fittings, excavation, removal, disposal, and replacement of excavated trench material, pipe installation, existing drainage structure connection, (including coring of new penetrations and plugging abandoned penetrations), reconfiguration of brick invert of existing manholes, backfill materials, backfilling, compaction, restoration in kind of all damaged/disturbed surfaces and all else incidental thereto for which separate payment has not been provided for elsewhere.

Manholes, catch basins and castings for the existing drainage appurtenances shall be paid for under their respective items.

Only Unsuitable Materials Excavation and Backfill Items 6a and 6b shall be paid for separately as directed and approved by the Engineer.

The measurement and payment provisions listed under Division 1, Section 01025 shall supplement the above payment provisions, as applicable.

\*\*\*END OF SECTION\*\*\*

## SECTION 02400 – DENSE GRADED CRUSHED STONE

The work under this section shall conform to the relevant provisions of Section 402 and the following:

This work shall consist of furnishing, placing and compacting the crushed stone to correct the sub-base deficiencies in accordance with the details shown, or as directed by the Engineer.

The material shall be well-graded and conform to Section M2.01.7.

The material shall be placed in six inch (6") maximum layers and then compacted to not less than ninety-five percent (95%) of maximum optimum dry density as determined by AASHTO Test Designations: T99-57, Method C.

Payment for **Dense Graded Crushed Stone** shall not be measured or paid for separately and shall be included within the contract unit price of items 3a through 3e and 4a through 4g, indicated on the schedule of values. This price shall be full compensation for all labor, materials, tools, equipment and incidentals including all labor, materials, equipment, tools, additional excavation, if any, backfilling, placement of materials, compaction, grading, etc., and all else incidental thereto necessary to complete the work as specified or as shown on the drawings.

The measurement and payment provisions listed under Division One, Section 01025 shall supplement the above payment provisions, as applicable.

\*\*\*END OF SECTION\*\*\*

## SECTION 02410 – GRAVEL FOR BASE COURSE

The work under this section shall conform to the relevant provisions of Section 400 of the Standard Specifications and the following:

This work shall consist of furnishing, placing and compacting the gravel for base course in accordance with the details shown, as specified, or as directed by the Engineer.

The gravel shall consist of hard, durable stone material free from loam and clay, well-graded, as per Section M1.03.0 (Type B).

The gravel borrow shall be placed in three inch (3") maximum layers and then compacted to not less than ninety-five percent (95%) of maximum optimum density, as determined by AASHTO Test Designations: T99-57, Method C.

Payment for **Gravel for Base Course** shall not be measured or paid for separately and shall be included within the contract unit price of items 3a through 3e and 4a through 4g, indicated on the schedule of values. This price shall be full compensation for all labor, materials, tools, equipment and incidentals including all labor, materials, equipment, tools, additional excavation, if any, backfilling, placement of materials, compaction, grading, etc., and all else incidental thereto necessary to complete the work as specified or as shown on the drawings.

The measurement and payment provisions listed under Division One, Section 01025 shall supplement the above payment provisions, as applicable.

\*\*\*END OF SECTION\*\*\*

SECTION 02420 – CLASS I BITUMINOUS CONCRETE TYPE I-1 (BASE COURSE)

The work to be done under this section shall conform to the relevant provisions of Section 420 of the Standard Specifications, the work as described on the plans, and the following;

The work shall include all permanent and temporary bituminous concrete surfaces installed on the roadways, sidewalks and other areas to maintain traffic access/egress to all properties abutting any work and for the safe passage of pedestrian and vehicular traffic.

The bitumen for tack coat shall be applied over the existing cold planned or the prepared sub-base/sub-grade, or the newly installed base, or leveling courses, immediately prior to the installation of top course, as denoted on the plans or as directed by the Engineer. The surface shall be cleaned of all sand and foreign matter and dry before applying the prime coat.

Payment for work under this Item shall be at the contract unit price, per Ton, for **Items 3x and 4j: Class I Bituminous Concrete Type I-1 (Base Course)**. This price shall be full compensation for all labor, materials, equipment and tools necessary for furnishing , placement, leveling, rolling and compaction of materials for the satisfactory completion of the work and all else incidental thereto for which separate payment has not been provided for elsewhere.

The measurement and payment provisions listed under Division 1, Section 01025 shall supplement the above payment provisions, as applicable.

\*\*\*END OF SECTION\*\*\*

SECTION 02460 – CLASS I BITUMINOUS CONCRETE TYPE I-1 (TOP COURSE)

The work to be done under this section shall conform to the relevant provisions of Section 460 of the Standard Specifications, the work as described on the plans and the following:

The work shall include all permanent and temporary bituminous concrete surfaces installed on the roadway, sidewalks and other areas, to maintain traffic access/egress to all properties abutting any work and for the safe passage of pedestrian and vehicular traffic.

The bitumen for tack coat shall be applied over the existing cold planned or the prepared sub-base/sub-grade, or the newly installed base, or leveling courses, immediately prior to the installation of top course, as denoted on the plans or as directed by the Engineer. The surface shall be cleaned of all sand and foreign matter and dry before applying the prime coat.

Provide 2” minimum compacted thickness depth of Class I Bituminous Concrete Pavement Top Course (Type I-1) to achieve the proposed finish grades indicated on the Plans or as directed by the Engineer.

Payment for work under this Item shall be at the contract unit price, per Ton, for **Items 3x and 4j: Class I Bituminous Concrete Type I-1 (Top Course)**. This price shall be full compensation for all labor, materials, equipment and tools necessary for furnishing , placement, leveling, rolling and compaction of materials for the satisfactory completion of the work including bitumen for prime/tack coat and hot poured rubberized asphalt sealant applied to longitudinal and transverse joint, and all else incidental thereto for which separate payment has not been provided for elsewhere.

The measurement and payment provisions listed under Division 1, Section 01025 shall supplement the above payment provisions, as applicable.

\*\*\*END OF SECTION\*\*\*

## SECTION 02460 – BITUMEN FOR TACK/PRIME COAT

The work to be done under this section shall conform to the relevant provisions of Section 460 of the Standard Specifications, the work as described on the plans and the following:

*The bitumen for prime/tack coat shall be applied at the rate of 1/10 to 1/20 gallons per square yard over the over the existing cold planned or the prepared sub-base/sub-grade, or the newly installed base, or leveling courses, immediately prior to the installation of top course, as denoted on the plans or as directed by the Engineer.* The surface shall be cleaned of all sand and foreign matter and dry before applying the prime coat /tack coat.

**Hot poured rubberized asphalt sealant shall also be applied to longitudinal and transverse joint as per the MHWY standard specification, section 460. The sealant shall be considered incidental to all class I bituminous concrete pavement of said section.**

Bitumen for tack/prime coat, including all labor, materials, equipment, and tools necessary for furnishing, placement, leveling, rolling and compaction of materials and spraying of bituminous emulsions and all other work incidental thereto for the satisfactory completion of the work will not be measured or paid for separately and shall be included in the contract unit price for **Items 3x and 4j: Class I Bituminous Concrete Type I-1 (Top Course)**.

The measurement and payment provisions listed under Division 1, Section 01025 shall supplement the above payment provisions, as applicable.

\*\*\*END OF SECTION\*\*\*

SECTION 02465 – HOT MIX ASPHALT FOR MISC. USE

The work to be done under the **Items 3z and 4l: Hot Mix Asphalt for Misc. Use**, when directed by the engineer, shall consist of placement of bituminous concrete for patching and handwork performed on roadway surfaces that cannot be installed mechanically. This work shall conform to the relevant provisions of Section 460 on the Standard Specifications, the work as described on the plans and the following:

The work shall include all permanent and temporary bituminous concrete surfaces installed on the roadway, and other areas, to maintain traffic access/egress to all properties abutting any work and for the safe passage of pedestrian and vehicular traffic.

Payment for the work under these Items shall be at the contract unit price per ton, for Items 3z and 4l : Hot Mix Asphalt for Misc. Use which price shall be full compensation for all labor, materials, equipment, and tools necessary for furnishing, placement, leveling, rolling and compaction of materials and spraying of bituminous emulsions and all other work incidental thereto for the satisfactory completion of the work.

The measurement and payment provisions listed under Division 1, Section 01025 shall supplement the above payment provisions, as applicable.

\*\*\*END OF SECTION\*\*\*

SECTION 02505 – GRANITE CURB TYPE VA-3 (STRAIGHT AND CURVED)

The work under this section shall conform to the relevant provisions of Section 500 of the Standard Specifications and the following:

The ends of all curbs shall be vertical and such that a flush joint is formed when two curb stones are placed adjacent to each other. Maximum joint space not to exceed 3/4 inches. The top 7-inches (exposed portion) of curb stone shall be uniform thickness and surface finish. The radii of the curved curb stone shall be as shown on drawings.

Payment for: **Granite Curb - Type VA-3 - Straight; and Granite Curb - Type VA-3 - Curved** shall be included as applicable in **Item 3g: Granite Transition Curb for Wheelchair Ramps** at the contract unit price, per Linear Foot, complete in place and accepted by the Engineer (including the transition section), which price shall be full compensation for furnishing and installation of curbing including excavation, backfilling, saw cutting, cutting of curb pieces, curb setting, placement of dense graded crushed stone, concrete bedding and pavement materials and all else incidental thereto and necessary to complete the work.

The measurement and payment provisions listed under Division 1, Section 1150 shall supplement the above payment provisions, as applicable.

\*\*\*END OF SECTION\*\*\*

## SECTION 02580 – CURB REMOVED & RESET

The work under these Items shall conform to the relevant provisions of Section 580 of the Standard Specifications and the following:

Resetting of curbs, curb inlets and curb corners may be required at any location within the project limit. All the existing curbs, curb inlets and curb corners shall be incorporated into the work before the installation of new curb stones. The use and payment for new curb pieces will not be accepted unless agreed to in writing by the Engineer.

Payment for **Items 3f and 4i: Curb Removed and Reset** shall be at the contract unit price, per Linear Foot, complete in place and accepted by the Engineer. The contract unit prices will include all labor, equipment and materials including saw cutting of the existing pavement where indicated or directed, the removal of the existing pavement, excavation, removal and resetting, all handling, cutting ends square, trimming exposed and hidden faces, cleaning all sections to be reset, gravel borrow, including grading and compacting and/or placement of concrete base, pavement materials between the reset curb and the existing or proposed pavement, and all else incidental thereto for the satisfactory completion of the work.

The measurement and payment provisions listed under Division 1, Section 01025 shall supplement the above payment provisions as applicable.

\*\*\*END OF SECTION\*\*\*

SECTION 02705 – CEMENT CONCRETE SIDEWALK AND CEMENT CONCRETE WHEELCHAIR RAMP

The work to be done under these Items shall conform to the relevant provisions of Section 700 of the Standard Specifications and the following:

Included in the work are cement concrete sidewalks, and other paved surfaces as called for in the plans, or as directed. Bounds and utility appurtenances, castings in sidewalks shall not be covered over. Sidewalk surfaces are to be graded flush with the bounds and castings. All cement concrete surfaces shall be broom finished.

The location of expansion, contraction and construction joints in the cement concrete sidewalk shall be determined by the Engineer in the field. However, such joints in straight sidewalk sections shall not exceed 25 feet. Expansion/contraction joints shall be filled with elastic filler material, as approved by the Engineer.

Wheelchair ramps are to be constructed at locations as shown or as designated by the Engineer in accordance with the latest details as per the American Disabilities Act and the Massachusetts Highway Department Standards.

The commercial driveways and all wheelchair ramps shall be reinforced with 6-in X 6-in No. 2 Reinforced Steel Bar Mesh. Approximately 3 feet length of the sidewalk on either side of the driveway shall also be reinforced with steel reinforcement bars and described above.

Payment for **Item 3i: Concrete Sidewalk and Item 3q: Accessible Curb Ramp** shall be at the contract unit prices, per square yard and for each, respectively, of these items, completed as specified and accepted by the Engineer. These prices shall be full compensation for all labor, materials, equipment, and tools, including preparation of sub-base, grading, leveling, compaction, placement of reinforcement steel, cement concrete, joint fillers, sealants, woven wire mesh, and provision and installation of tactile warning, as required, and all else incidental to the satisfactory completion of the work.

The measurement and payment provisions listed under Division 1, Section 01025 shall supplement the above payment provisions.

\*\*\*END OF SECTION\*\*\*



Number: E-04-007

Date: 12/16/2004

**ENGINEERING DIRECTIVE**

CHIEF ENGINEER

*Th*

Detectable Warning Panels – Revised

Effective immediately, the 1996 Metric Edition Construction and Traffic Standard Details and the 1997 [English Edition] Construction Standards are amended with the following revised drawings (attached):

- M/E 107.2.1R Wheelchair Ramp on Narrow Sidewalk
- M/E 107.6.5R Detectable Warning Panel for Wheelchair Ramps

These drawings supersede drawings dated April 2004, issued under Engineering Directive E-04-003. These drawings shall be used immediately on all design and construction projects.

The depth of Detectable Warning Panels shall be 24 inches (610 mm) in the direction of travel. All other guidance provided in the text of Engineering Directive E-04-003 dated April 16, 2004 remains in effect.

Attachments

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E-04-007

2/16/2004



Number: E-04-003

Date: April 16, 2004

## ENGINEERING DIRECTIVE

*Thomas F. Buslevick*

CHIEF ENGINEER

### DETECTABLE WARNING PANELS

Effective immediately, the 1996 Metric Edition Construction and Traffic Standard Details and the 1977 [English Edition] Construction Standards are amended with the following new drawings (attached):

- M/E 107.2.1 Wheelchair Ramp on Narrow Sidewalk
- M/E 107.6.5 Detectable Warning Panel for Wheelchair Ramps

These drawings have been issued to comply with the FHWA enforcement of the Federal Access Board's decision to require detectable warning panels at certain locations. Detectable warning panels are intended to alert sight-impaired pedestrians that they are about to enter potentially hazardous locations. The drawings also include a new configuration of wheelchair ramps that can be used for narrow sidewalks.

Detectable warning panels shall be installed on all wheelchair ramps as shown on the drawings. Panels shall also be installed on all sidewalks that are crossed by train tracks to warn pedestrians that they are about to enter a track area. These panels shall be 25" (635 mm) long in the direction of travel and shall be installed across the entire sidewalk. The designer shall show the proposed location(s) of warning panels on the plans after consulting with the operator of the tracks about the safe envelope required around the tracks. The Resident Engineer shall verify the actual location(s) of warning panels with the operator of the tracks prior to installation.

Designers shall include detectable warning panels in all applicable design documents immediately.

For projects already under construction or for which detectable warning panels are not otherwise included in the design documents at the time of construction, contractors shall install all required detectable warning panels in all locations where the applicable wheelchair ramps or sidewalk surfaces are not already completed, effective immediately.

Payment for detectable warning panels shall be considered incidental to the construction of the wheelchair ramps or sidewalks in which they are being installed.

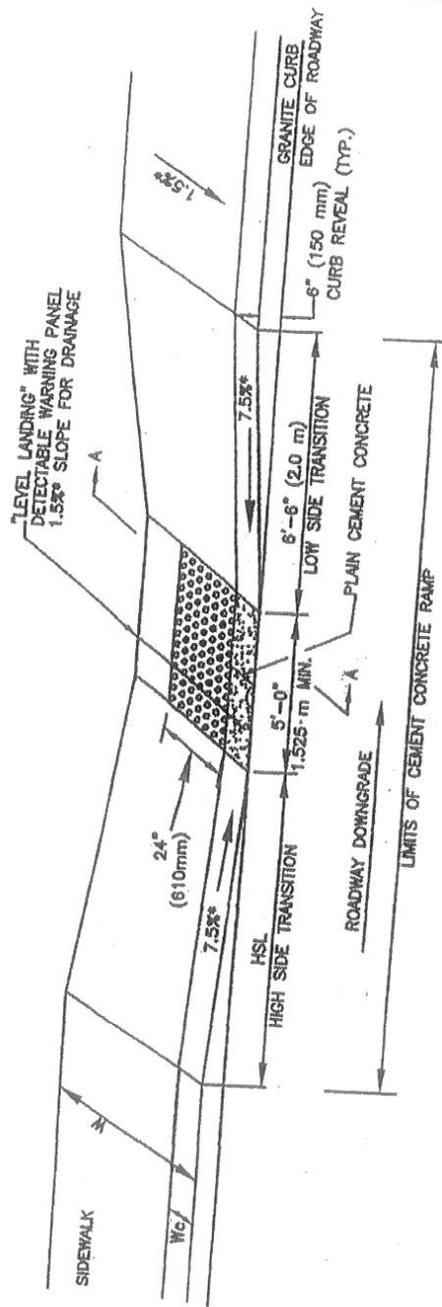
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**LEGEND**

HSL = HIGH SIDE TRANSITION LENGTH (SEE M/E 107.9.0)

W = SIDEWALK WIDTH

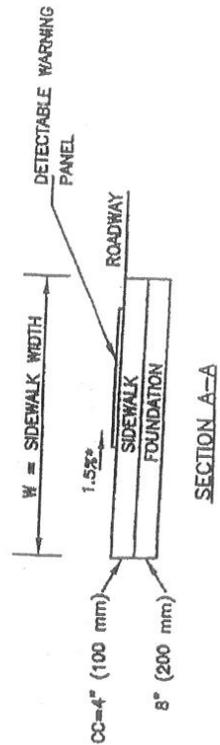
Wc = CURB WIDTH

± = TOLERANCE FOR CONSTRUCTION ±0.5%

USABLE SIDEWALK WIDTH PER AAB = W-Wc

USABLE SIDEWALK WIDTH PER AAB IS NOT TO BE LESS THAN 4'-0" (1.22m)

SEE M/E 107.6.5R FOR DETAILS OF DETECTABLE WARNING PANEL



24°(6'  
DETECTABLE

**MASS HIGHWAY**  
CONSTRUCTION  
STANDARDS

WHEELCHAIR RAMP ON  
NARROW SIDEWALK  
WITH DETECTABLE WARNING PANEL

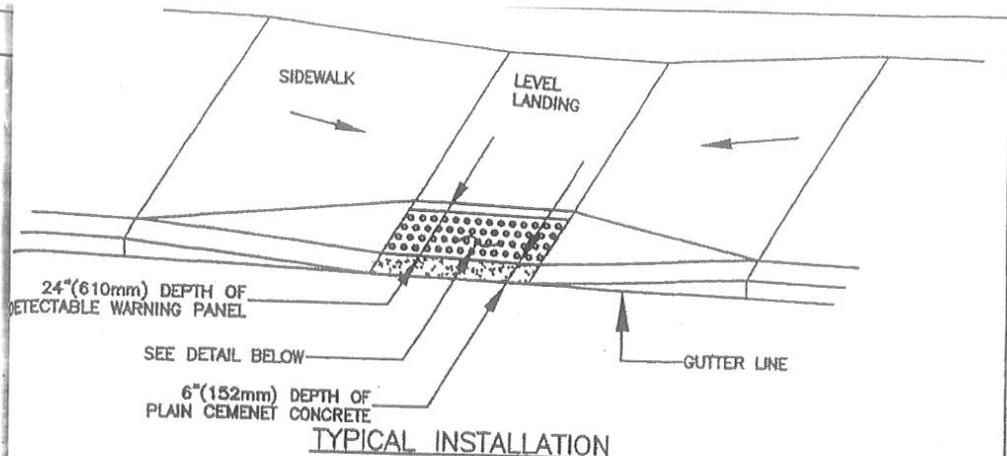
DATE OF ISSUE  
December 2004

DRAWING NUMBER  
**M/E 107.2.1R**

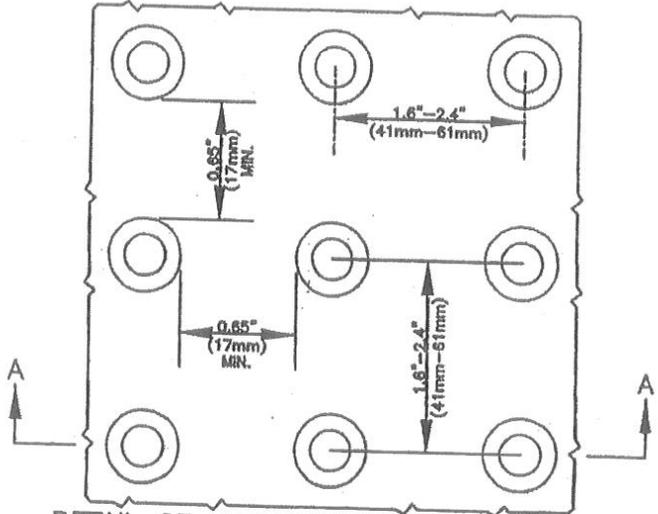
**MASS HIGHWAY**  
CONSTRUCTION  
STANDARDS

NO  
PANEL  
SUITABLE  
WARNING  
WALKING

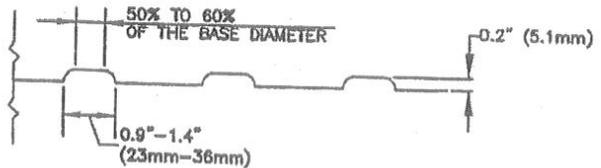
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TYPICAL INSTALLATION



DETAIL OF DETECTABLE WARNING PANEL



SECTION A-A

**NOTE:**

PANELS MAY BE CONCRETE PRECAST OR CAST IN PLACE OR OTHER SUITABLE MATERIAL PERMANENTLY APPLIED TO THE RAMP. DETECTABLE WARNING SURFACES SHALL CONTRAST VISUALLY WITH ADJACENT WALKING SURFACES EITHER LIGHT-ON-DARK, OR DARK-ON-LIGHT

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17.2.1R

**MASS HIGHWAY**  
**CONSTRUCTION**  
**STANDARDS**

DETECTABLE WARNING PANEL  
FOR WHEELCHAIR RAMPS

DATE OF ISSUE  
December 2004  
DRAWING NUMBER  
**M/E107.6.5R**

02705-5

## SECTION 02740 – MOBILIZATION / DEMOBILIZATION

The work to be done under this section shall conform to the relevant provision of Section 748 of the Standard Specifications and the following:

The work under this item shall include all mobilization of men, materials, equipment and related support facilities to satisfactorily perform the job as required to meet the project construction schedules. Also included under this item shall be the demobilization of all men, materials, equipment and the related support facilities and the final site clean-up on project completion and its acceptance by the City.

Payment for **Item 3ff: Edgemere, Edgewood, & Woodward Improvements Mobilization/Demobilization and Item 4kk: Southern Artery Improvements Mobilization/Demobilization** shall be on a lump sum basis with the item amounts as set forth in the Bid Form to be divided equally for mobilization (50%) and demobilization (50%). These payments shall be full compensation for all preparation work and operations, movement of men, equipment, supplies and incidentals to the project site for the establishment of full office and facilities necessary for work on this project and all other work and operations which must be performed from the time prior to the start of the work to the final acceptance of the work by the City.

The amount allocated to demobilization activities shall not be paid until the job, including restoration work, is completed, accepted and the project area is cleaned to the satisfaction of the Engineer.

Lump sum prices for all work, operations and expenses in connection with mobilization and demobilization shall not exceed five percent (5%) of the total bid amount for the entire project.

The measurement and payment provisions listed under Divisions 1, Section 01025 shall supplement the above payment provisions, as applicable.

\*\*\*END OF SECTION\*\*\*

## SECTION 02750 – LOAM BORROW

The work to be done under this section shall conform to the relevant provisions of Section 751 of the Standard Specifications and the following:

The work shall consist of furnishing and placing loam borrow at designated locations where plant material (grasses, bushes and trees, etc.) are to be installed. All work shall be performed in close conformity with the lines, grades and locations shown on the plans or established by the Engineer in the field.

Loam Borrow shall conform to Section M1.05.0.

Payment for **Items 3v and 4ee: Loam Borrow** shall be at the contract unit price, per Cubic Yard, in place and accepted by the Engineer. This price shall be full compensation for all labor, materials, and equipment including placement/spreading and rolling/tamping of the materials, excavation and preparation of areas and locations for installation of plant materials and all other work incidental to the satisfactory completion of the work.

Note: It must be noted that all seeding, loaming and landscaping of areas, not originally included in the scope of work but subsequently necessitated due to the Contractor's operations shall be considered as a part of restoration work and shall not be paid for under this item. All costs associated with the restoration work shall be included under the item of work which necessitated the restoration work.

\*\*\*END OF SECTION\*\*\*

## SECTION 02765 – SEEDING

The work to be done under this section shall conform to the relevant provisions of Section 765 of the Standard Specifications and the following:

The work shall consist of seeding the approved areas in close conformity with the lines and grades shown on the plans or established by the Engineer in the field.

The materials to be used in the work (limestone, fertilizers, plant materials, water for irrigation and soil conditioners) shall conform to Section 765.40 of the Standard Specifications.

The quantities of materials, rate of application of various items and the installation details shall be as described under Section 765, as shown on the plans or as recommended by the manufacturers and suppliers.

Payment for work under **Items 3w and 4ff: Seeding** shall be at the contract unit price, per Square Yard, in place and accepted by the Engineer. This price shall be full compensation for all labor, materials and equipment, including seed spraying, limestone, fertilizers, fine grading, rolling the seeded areas, watering, clearing the weed and all else incidental thereto and necessary for healthy grass areas without any bare spots or areas.

The measurement and payment provisions listed under Division One, Section 01025 shall supplement the above payment provisions, as applicable.

\*\*\*END OF SECTION\*\*\*

## SECTION 02850 – SAFETY CONTROLS FOR CONSTRUCTION OPERATIONS

The work to be performed under these items shall conform to the relevant provisions of Section 850 of the Standard Specifications and the following:

Subsection 850.42 (reprinted from the Supplemental Specifications, dated June 6, 2006):

Materials shall conform to Sections 828 and 840 except the plywood material shall conform to the following: Plywood sign panels and independent route markers shall be fabricated from 5 ply, 5/8" thick medium density overlaid (MDO) Exterior Type, A-B both sides surface in natural color and the whole conforming with the requirements and test for the above as set forth in US Product Standard PS1-74 for Construction and Industrial Plywood. All plywood shall bear the grade trade mark of an approved testing agency. The entire sign face shall be reflectorized with reflective sheeting conforming to M9.30.0, Type III, or Type IV, and shall be orange in color.

Background sheeting for the first set of signs on each approach to the work zone shall be of a fluorescent orange color. The maximum spectral radiance factor, in accordance with Section 5.1 of ASTM E991, for the fluorescence shall be as follows:

New	110%, min.
Weathered	60%, min.

Reflectorized drums with flashers may be required to be repositioned on a daily basis, on weekends or even removed for long holiday weekends as directed by the Engineer. Only plastic drums will be used on this project.

Closed areas will be delineated with drums and suitable barricades only. Upon completion of each work day, barrels and barricades shall be placed so that they are sufficiently back from the edge of the lanes used for travel so as not to interfere with or encroach upon through traffic.

The Contractor will be required to submit sign placement and sign size sketches showing the proposed sign setups he intends to use to provide the necessary traffic control and protection during the progress of the work. Traffic Management Plans showing appropriate signing, suggested construction staging and pertinent traffic controls are included in the Contract documents. The Contractor may, however, submit an alternate traffic management plan for approval by the Engineer.

Payment for work under **Items 3dd and 4jj: Safety Controls for Construction Operations** shall be at the contract unit price per Unit Day, which shall be full compensation for all labor, materials, tools and equipment, including furnishing, positioning, repositioning, maintaining and removing, as needed and/or as directed: traffic cones, reflectorized drums, warning devices, special apparel, safety signage, etc. and all else incidental thereto and necessary to complete the work to the satisfaction of the Engineer.

The measurement and payment provisions listed under Division 1, Section 01025, shall supplement the above payment provisions, as applicable.

\*\*\*END OF SECTION\*\*\*

SECTION 02860 – 4-IN. REFLECTORIZED WHITE LINE (THERMOPLASTIC), 12-IN. REFLECTORIZED WHITE LINE (THERMOPLASTIC) AND 4-IN. REFLECTORIZED YELLOW LINE (THERMOPLASTIC)

The work under this section shall conform to the relevant provisions of Section 860 of the Standard Specifications, the 1990 Standard Drawings for Signs and Supports and the following:

Pavement markings shall be of thermoplastic reflectorized type conforming to M7.01.03 (White) and M7.01.04 (Yellow).

The design, application and installation of pavement markings shall conform to the Manual on Uniform Traffic Control Devices (MUTCD), and/or as directed by the Engineer.

Pavement markings, including all materials, tools, and equipment required and all other work incidental to the satisfactory completion of the work, will not be measured and paid for separately and shall be included under the item of work which necessitate its use.

The measurement and payment provisions listed under Division 1, Section 01025, shall supplement the above payment provisions, as applicable.

\*\*\*END OF SECTION\*\*\*

## SECTION 02870 – MISCELLANEOUS SIGNS REMOVED AND RESET

The work under this section shall conform to the relevant provisions of Section 840 of the Standard Specifications, the 1990 Standard Drawings for Signs and Supports, and the following:

The work to be performed under this item shall include the dismantling, removal, transporting, and resetting of the existing signs, including concrete foundations where required, at locations as shown on the plans. The work also includes the removal and disposal of the existing sign supports and foundations determined by the Engineer to be unusable.

The Contractor shall exercise particular care in the dismantling, removal, transporting, and resetting of the existing signs designated to be reused. Any sign panel damaged through carelessness or lack of protection by the Contractor shall be replaced at the Contractor's expense.

New sign supports shall be provided for all traffic signs to be removed and reset in accordance with Section 02840.

The Contractor shall backfill with compacted gravel all holes resulting from the removal of the existing signs and their foundations and restore the area to match existing conditions of adjacent areas.

Payment for work under these Items shall be at the contract unit price, per Each, for **Items 3t and 4cc: Miscellaneous Signs Removed, Stored, and Protected, and Items 3u and 4dd: Miscellaneous Signs Reset**, which price shall be full compensation that includes: all dismantling and existing signage removal, transportation, storage and protection, removal & disposal of existing posts, furnishing and installing the new posts, furnishing and installing applicable mounting hardware, excavation, gravel, backfill, compaction, concrete base where required, restoration of disturbed surfaces, all labor, equipment, tools, and other incidentals necessary to complete the work.

The measurement and payment provisions listed under Division 1, Section 01025, shall supplement the above payment provisions, as applicable.

\*\*\*END OF SECTION\*\*\*

## SECTION 02905 – CONCRETE FOR MISCELLANEOUS USES

The work under this section shall conform to the relevant provisions of Section 901 of the Standard Specifications and the following:

The work shall consist of furnishing and placement of structural cement concrete, and steel reinforcements, where required for use in the construction of collars, plugs, thrust blocks, concrete steps, curbs, gutters, paved areas, bridging for trenches, conduit encasement, footings, foundation pads, walls, walkways and other miscellaneous items as shown on the drawings or as directed by the Engineer.

The materials and composition of mix shall meet the requirement of 4,000 psi (28 days), 3/4-inch, 610 Cement Concrete and conforming to the relevant provisions of Section M4.02.00 unless otherwise specified.

Concrete for Miscellaneous Uses, including all labor, materials, equipment, tools and all else incidental thereto. The unit price shall also include all cement concrete mix, steel reinforcements, wire, metal clips, metal chains, form work, fastenings, supporting devices, dowels, concrete curing compounds, joints, fillers and sealants where required and all else incidental thereto and necessary to complete the work in a satisfactory manner, shall not be measured or paid for separately and shall be included under the item of work which necessitate its use.

The measurement and payment provisions listed under Division 1, Section 01025, shall supplement the above payment provisions, as applicable.

\*\*\*END OF SECTION\*\*\*

## SECTION 02990 – TRAFFIC POLICE DETAILS

The work to be done under this section shall conform to the relevant provisions of Section 7.00 of the Standard Specifications and supplemented by the following:

All uniformed traffic police personnel required for public safety and traffic control for construction projects located within the City shall be authorized by the Department of Public Work's Safety Officer and/or the Project Resident Engineer.

**No payment will be made for personnel other than uniformed traffic police, nor will payment be made for uniformed traffic police not approved by the Engineer.**

The project construction contractor shall submit a forecast weekly traffic police detail schedule, at least 72 hours days prior to the start of the work. The schedule shall describe the nature and location of the work, the number of police personnel and the estimated number of police hours required for each location. The Contractor must also include justification for each uniformed officer being requested. All payment to the police for work under this contract shall be in accordance with the Massachusetts General Laws, Chapter 149, Section 34B, which states that reserve police officers shall receive the same prevailing wage rate as paid to regular police officers.

While scheduling work in areas where uniformed traffic police is required, the Contractor must recognize that uniformed police are paid for a four-hour minimum. If uniformed police are arranged to work and weather or some other situation prohibits the work, the Police Department Detail Unit shall be notified at 479-1212 before **5:30 AM on the day of intended work** to cancel the work order. Unless the work order is canceled in time, the Contractor shall be charged at the rate of minimum four hours for each officer included in the detail. The Contractor shall be fully responsible for payment of all charges thus incurred.

The intent of posting police details is to insure public safety and protection of property through appropriate traffic control. Police personnel are not to be employed as watchmen to protect the Contractor's equipment and materials. Nothing contained herein shall be construed as relieving the Contractor of any of his responsibilities for protection of the public and property under the terms of the Contract.

Reimbursement to the Contractor for uniformed traffic police details shall be made from amounts allocated under **Pay Item 5: Traffic Police Details** in the schedule of quantities. Payment for uniformed traffic police officers will be paid for on the basis of the actual hours worked and paid for by the Contractor as verified by the Resident Engineer. The invoiced amounts paid by the Contractor may include standard administrative charges levied by the Police Department. An allowance has been used for this pay item at account for varying hourly rates.

The Contractor shall submit copies of all traffic police invoices paid (include copy of cashed check paid to police) with its regular Application for Payment. These invoices shall clearly show the following:

- a.) the project name;
- b.) the officer's name;
- c.) location of assignment;
- d.) date of assignment;
- e.) hours of assignment; and

f.) number of hours being invoiced.

**Failure to include this information and a proof of payment with the "application for payment" shall result in non-payment of invoiced amount.**

The measurement and payment provisions listed under Division One, Section 01025 shall supplement the above payment provisions, as applicable.

\*\*\*END OF SECTION\*\*\*

## SECTION 03100 - STRUCTURAL CONCRETE FORMWORK

### PART 1 GENERAL

#### 1.01 REFERENCES

The documents listed below are referenced in this section. They are referred to within the text by basic designation only.

ACI INTERNATIONAL (ACI)

ACI 117 (2006) Standard Specifications for Tolerances for Concrete Construction and Materials

ACI 301 (2005) Specifications for Structural Concrete

ASTM INTERNATIONAL (ASTM)

ASTM C 31/C 31M (2008a) Standard Practice for Making and Curing Concrete Test Specimens in the Field

U.S. ARMY CORPS OF ENGINEERS (USACE)

COE CRD-C 572 (1974) Specifications for Polyvinylchloride Waterstops

#### 1.02 SCOPE

- A. The work of this section comprises all materials, tools, equipment and labor required for the design, preparation and cleaning, construction, and removal of all concrete formwork, and the installation of all concrete embedments furnished under other sections, necessary for the proper completion of the Work.
- B. SECTION 00700, GENERAL CONDITIONS and all sections within DIVISION 1 - GENERAL REQUIREMENTS, are hereby made a part of this section of the Specifications.

#### 1.03 MEASUREMENT AND PAYMENT

Measurement and Payment for the work of this section shall be in accordance with SECTION 01025, MEASUREMENT AND PAYMENT.

#### 1.04 SUBMITTALS

The following shall be submitted in accordance with SECTION, 01300 SUBMITTAL PROCEDURES:

- A. SD-03 Product Data
  - 1. Dovetail Slots
  - 2. Form Ties
  - 3. Form Release Agent

4. PVC Reglets

5. Waterstops

#### 1.05 PRODUCT HANDLING

All materials shall be delivered, stored, and installed so as not to degrade quality, serviceability and appearance.

#### 1.06 TECHNICAL REQUIREMENTS

The Contractor shall design, erect, shore, brace, and maintain formwork in accordance with ACI 301 to support all loads, including construction loads, until the concrete structure can support such loads.

### PART 2 PRODUCTS

#### 2.01 MATERIALS

##### A. General

1. Formwork shall conform dimensionally to the concrete work as shown on the drawings. To minimize the number of panel joints, formwork panels shall be of the largest practicable sizes. Formwork shall be sufficiently tight to prevent leakage.
2. Undamaged smooth form facing materials such as plywood, hardboard, metal and plastic, that will produce a smooth form finish, shall be used. Formwork shall not result in fins or offsets exceeding 1/8 inch. If used, aluminum forms with unoxidized surfaces shall be pretreated with a paste made of calcium hydroxide and water followed by water rinsing, repeated until hydrogen bubbles do not form.

##### B. Form Release Agent

Form release agent shall be non-grain-raising, non-staining, and shall not leave a residue on the concrete nor adversely affect bonding of materials to be applied thereto.

##### C. Form Ties

1. Form ties shall be adjustable length, sized to withstand construction loads, and upon removal shall prevent concrete spalling.
2. The portion of the tie remaining embedded in the concrete upon removal shall be at least 1 1/2 inches from both concrete faces.
3. Ties for liquid containment structures, any and all structures below the 100-year flood and/or design high groundwater elevation, and in areas where waterstops at joints are specified, shall contain a neoprene waterstop.

##### D. PVC Waterstops

PVC waterstops shall meet COE CRD-C 572 except: the tensile strength shall exceed 2,000 psi; the minimum ultimate elongation shall be 300 percent; and they shall be manufactured from virgin polyvinylchloride with no scrap, reclaimed material, or pigment contained therein.

1. Waterstops for construction joints shall be 6 inch wide, ribbed and flat: Greenstreak 679, Vinylex R6-38, Wirestop FR-6380, or approved equal.
2. Waterstops for containment curbs, where shown as 4 inch waterstops, shall be 4 inch wide, ribbed and flat: Greenstreak 781, Vinylex R4-316T, Wirestop FR-4316, or approved equal.
3. Corners and intersections shall be factory formed and tested.

#### E. PVC Reglets

Reglets shall be made of rigid PVC plastic and as manufactured by Heckman, Progress Unlimited, Inc., or approved equal.

#### F. Dovetail Slots

Dovetail slots shall be made of 22 gauge, galvanized steel with a removable filler: 5/8 inch face by one inch deep by one inch back.

### PART 3 EXECUTION

#### 3.01 CONSTRUCTION

##### A. Tolerances

Tolerances shall be in accordance with ACI 117.

##### B. Form Alignment

At locations where continuous surfaces are formed in successive units, forms shall be tightly fitted over the hardened concrete surface to obtain accurate surface alignment and to prevent leakage of mortar and the formation of fins, ridges, and other defects.

##### C. Chamfered Edges

1. All exposed concrete corners shall be formed with beveled strips to provide 3/4 inch chamfers unless otherwise shown, specified, or directed by the Engineer.
2. Where concrete walls, columns, and beams abut masonry walls the chamfer shall be omitted.
3. Where masonry walls are flush with the face of supporting concrete curbs, the chamfer shall be omitted.
4. Chamfering by grinding is prohibited.

#### D. Openings

1. Form openings in concrete where required for other Work. Upon failing to form such openings, provide them in a manner approved by the Engineer at no additional cost to the Owner/Engineer.
2. Provide 6 inch PVC waterstop at the perimeter of such openings required to be watertight.
3. Except as otherwise specified, all such openings shall be filled with concrete after the Work to be installed therein is complete.

#### E. Cleanouts and Access Panels

1. Temporary openings shall be provided to facilitate cleaning and inspection prior to concrete placement, including at the bottom of wall forms. Cleanout openings are not permitted in exposed concrete (concrete exposed to view upon completion of the Work, whether or not it is painted) without the approval of the Engineer.
2. All refuse, sawdust, shavings, etc. shall be removed, and the forms broom-cleaned before concrete placement.

#### F. Form Release Agent

1. Forms shall be coated with the approved form release agent before placement of reinforcing steel. Excess agent applied to the forms, and any and all on the reinforcing steel and other surfaces requiring a concrete bond, shall be removed.
2. Forms for unexposed surfaces may be thoroughly wetted in lieu of the approved form release agent immediately before concrete is placed, however form release agent shall be used in freezing weather.

#### G. PVC Waterstops

1. Random samples of delivered waterstops may be tested for conformance by a testing laboratory selected and paid for by the Owner. Nonconformance will be cause for rejection.
2. Waterstops shall be stored under tarpaulins, protected from sunlight, precipitation, soiling, etc.
3. Waterstop shall be securely fastened to the reinforcing steel with wire ties every 12 inches along both edges prior to concrete placement.
4. Waterstops shall be continuous throughout.
5. Only straight butt splices shall be made in the field. All field splices shall be heat welded and tested for a complete seal by use of a corona discharge unit.

### 3.02 INSTALLATION OF EMBEDDED ITEMS

A. General

1. Coordinate the setting of anchor bolts, thimbles, inserts, wall pipe, sleeves, and other embedded items. Before placing concrete ensure that all items are accurately located and firmly secured against displacement.
2. All items shall be thoroughly cleaned and free of loose rust, mill scale, dirt, grease, etc. Wood used for removable keys shall be thoroughly dampened before concrete is placed against it.

3.03 REMOVAL

A. Form Removal

1. Forms shall be removed while ensuring the complete safety of the structure. Forms and/or shoring for slabs, beams, and other suspended members shall not be removed until members are of sufficient strength to safely support their own weight and the weight thereon.
2. Newly unsupported portions of the structure shall not be subjected to heavy construction or material loading. Additional shores or reshores shall be provided as required to adequately support the members during the construction period.
3. The Contractor shall be responsible for the proper removal of forms, shores, and bracing.
4. Spalling of concrete surfaces shall be prevented.
5. When forms are removed before the specified curing period (as specified in SECTION 03350 CONCRETE PLACING, CURING AND FINISHING) is complete, measures shall be taken to continue curing and providing thermal protection for the concrete.
6. Forms may be removed when the cumulative time during which the temperature of the air surrounding the concrete is above 50 degrees F are as follows:
  - a. Walls, columns, sides of beams and girders, and similar parts of the Work not supporting the weight of the concrete:  
Twenty-four hours
  - b. (1) Beam and Girder Soffits:  
Clear span less than 10 feet: Four (4) days  
Clear span 10 feet to 20 feet: Seven (7) days  
Clear span more than 20 feet: Fourteen (14) days  
  
(2) Slabs:  
Clear span less than 10 feet: Three (3) days  
Clear span 10 feet to 20 feet: Four (4) days  
Clear span more than 20 feet: Seven (7) days

7. Alternatively to the stripping times specified, additional concrete cylinders shall be made using representative concrete, witnessed and approved by the Engineer, and tested at no additional cost to the Owner/Engineer. Such specimens shall be field cured in accordance with ASTM C 31/C 31M under conditions that are not more favorable than the most unfavorable conditions for the portions of the concrete that the test specimens represent. The supporting forms and shores may be removed from horizontal members when the concrete strength is a minimum of 70 percent of the specified design strength, as determined by the field-cured cylinders according to ACI 301.

B. Tie Holes

Filling of form tie holes and concrete finishing are specified in SECTION 03350, CONCRETE PLACING, CURING AND FINISHING.

C. Cleaning and Repair of Forms

Parts of forms reserved for reuse shall be inspected, cleaned and repaired. Any and all parts dented, deformed or otherwise rendered unfit for reuse shall be discarded.

\*\*\*END OF SECTION\*\*\*

## SECTION 03150 - CONCRETE SPECIALITIES

### PART 1 - GENERAL

#### 1.01 REFERENCES

The documents listed below are referenced in this section. They are referred to within the text by basic designation only.

ACI INTERNATIONAL (ACI)

ACI SP-66(2004) ACI Detailing Manual

ASTM INTERNATIONAL (ASTM)

ASTM C 1107/C 1107M (2007a) Standard Specification for Packaged Dry, Hydraulic-Cement Grout (Nonshrink)

#### 1.02 SCOPE

- A. The work of this section comprises all materials, tools, equipment and labor necessary for the construction of concrete specialties as specified herein, as shown on the Contract Drawings, and as necessary for the proper completion of the Work.
- B. SECTION 00700, GENERAL CONDITIONS and all sections within DIVISION 1 - GENERAL REQUIREMENTS, are hereby made a part of this section of the Specifications.

#### 1.03 MEASUREMENT AND PAYMENT

Measurement and Payment for the work described in this section shall be in accordance with the provisions of SECTION 01025, MEASUREMENT AND PAYMENT.

#### 1.04 SUBMITTALS

- A. A.The following shall be submitted in accordance with SECTION 01300, SUBMITTAL PROCEDURES:
  - 1. SD-02 Shop Drawings
    - a. Reinforcement: Comply with ACI SP-66 and show bar schedules, arrangement of reinforcement, bar and stirrup spacing, and bent bar diagrams.
  - 2. SD-03 Product Data
    - a. Non-shrink grout: Manufacturer's technical and installation information.
    - b. Epoxy adhesive: Manufacturer's technical and installation information.

### PART 2 - PRODUCTS

#### 2.01 GROUT

Grout shall be non-metallic, cementitious non-shrink grout meeting ASTM C 1107/C 1107M, grade C. Grout shall be Five Star Grout by U.S. Grout Company, Crystex or Premier by L&M Construction Chemicals, Inc., Sure-Grip High Performance Grout, by Dayton Superior, or approved equal.

## 2.02 CONCRETE FILLS

- A. All concrete fills shall have a 28-day design compressive strength of 4,000 pounds per square inch, a maximum water to cementitious materials ratio of 0.45, and shall otherwise meet the requirements of SECTION 03300, CAST-IN-PLACE CONCRETE.
- B. Concrete fills 2-inches thick and less, and those screeded into place by process equipment, shall have a 1/2 inch maximum size aggregate.

## 2.03 DUCTBANKS

- A. All underground electrical ductbanks shall be concrete encased. Concrete shall be as specified in SECTION 03300, CAST-IN-PLACE CONCRETE, except it shall have a 3/8 inch maximum aggregate size and a minimum 28-day compressive strength of 3,000 pounds per square inch.
- B. Ductbanks shall be reinforced as detailed where crossing under roads, driveways, parking areas, all areas subject to vehicular traffic, and where as shown or specified in the Contract Documents. Reinforcing shall extend a minimum of 4 feet beyond the specified areas.

## 2.04 EPOXY ADHESIVE

- A. Epoxy adhesive for anchoring reinforcing bars to concrete shall be a two-component solid epoxy based system supplied in manufacturer's standard side-by-side cartridge and dispensed through manufacturer's standard static-mixing nozzle. Epoxy adhesive shall be Epoxy Tie SET or ET by Simpson Strong Tie Co., Inc., HIT RE-500 by Hilti, Inc., or approved equal.
- B. Epoxy adhesive shall pass the creep test requirements of ICC-ES AC58.
- C. The embedment depth shall be per the manufacturer's requirements and such that: the ultimate strength exceeds the tensile strength of the reinforcing bar, and the ultimate strength divided by a minimum factor of safety of 3.75 is at least 40 percent of the yield strength of the reinforcing bar.

## PART 3 - EXECUTION

### 3.01 EQUIPMENT PADS

- A. New concrete surfaces upon which equipment pads are to be built shall receive a scratched finish in accordance with SECTION 03350, CONCRETE PLACING, CURING, AND FINISHING.
- B. All laitance shall be removed and the surface shall be saturated with water for a minimum of six hours. Excess water shall then be removed and the epoxy bonding compound applied as specified in SECTION 03350, CONCRETE PLACING, CURING, AND FINISHING.
- C. All equipment pads shall be sized to suit the approved equipment, and reinforcement shall be as shown on the Contract Drawings.

- D. All exposed faces shall be formed with smooth forms and shall be smooth and free of sands streaks, bug holes, and honeycomb. All exposed surfaces shall have a smooth, even surface, with all exterior corners chamfered. Exposed faces of pads shall receive a rubbed finish as specified in SECTION 03350, CONCRETE PLACING, CURING, AND FINISHING.
- E. All anchor bolts, dowels, sleeves, and other fittings required for the equipment, shall be built in.

### 3.02 TRENCHES AND SUMPS

- A. Make provisions for all built-in frames, embedded items, pipes and sleeves.
- B. Floors shall be smooth, even, and properly sloped to sumps and trenches.

### 3.03 GROUTING

- A. Grouting is required for structural, mechanical, and electrical items, and shall be in accordance with the manufacturer's recommendations.
- B. Concrete surfaces to receive grout shall be cleaned of all contamination and debris. Surface roughening shall be required if laitance or poor concrete is evident.
- C. Grout placement shall be rapid and continuous such that grout completely fills the space to be grouted, absent of air pockets.
- D. Grout may be placed by gravity or pumped. When practical, grout shall be placed from one side and made to flow to the open side to prevent the formation of air pockets.

### 3.04 CONCRETE FILLS

- A. New unformed concrete surfaces upon which concrete fills are to be placed shall receive a rough (broom, scratched, rough screed, or rough wood float) finish in accordance with SECTION 03350, CONCRETE PLACING, CURING, AND FINISHING.
- B. All laitance shall be removed and the surface shall be saturated with water for a minimum of six hours. Excess water shall then be removed and the epoxy bonding compound applied as specified in SECTION 03350 CONCRETE PLACING, CURING, AND FINISHING.

### 3.05 EXISTING CONCRETE

Where equipment pads are to be constructed, grouting is to be performed, and/or concrete fills are to be placed against existing concrete, the following surface preparation shall be required.

- A. The existing concrete surface shall be cleaned of all contamination and debris, and roughened by chipping, abrasive blasting, or scarifying.
- B. The existing concrete surface shall be water-saturated for a minimum of six hours, after which the excess water shall be removed immediately prior to placement of new concrete and/or grout.
- C. In areas where equipment pads are to be constructed and/or concrete fills are to be placed, apply epoxy-bonding compound (as specified in SECTION 03350, CONCRETE PLACING, CURING, AND FINISHING) to prepared concrete surface prior to concrete placement.

### 3.06 DUCTBANKS

- A. There shall be a minimum of 4 inches of concrete between the outside of a duct and surrounding soil. There shall be not less than 3 inches of concrete between adjacent ducts.
- B. All ductbank concrete placements shall be continuous between manholes/handholes and between manholes/handholes and structures.
- C. Ductbanks shall be laid in trenches on a minimum of 6 inches of compacted granular fill.
- D. Where ducts pass through a foundation wall, the concrete encasement shall extend through the wall and be flush with inside face per the details on the Contract Drawings. Watertight construction joints shall be provided.

### 3.07 EPOXY ADHESIVE

- A. The Contractor shall furnish the services of a competent manufacturer's field representative who shall be present at the Work site prior to beginning installation in order to instruct the Contractor and the Engineer on proper installation and inspection procedures. Such instruction shall include a full and complete demonstration.
- B. Adhesive and reinforcing shall be installed in very strict accordance with the manufacturer's written instructions. Drilled holes shall be blown out with air, thoroughly wire brushed with a repeated back and forth movement, blown out, thoroughly wire brushed, and blown out again.
- C. Anchors shall remain completely undisturbed between the manufacturer's specified gel time and the full cure time. Zero load shall be applied during this time.

\*\*\*END OF SECTION\*\*\*

## SECTION 03200 - CONCRETE AND MASONRY REINFORCEMENT

### PART 1 - GENERAL

#### 1.01 REFERENCES

The documents listed below are referenced in this section. They are referred to within the text by basic designation only.

##### ACI INTERNATIONAL (ACI)

ACI 117 (2006) Standard Specifications for Tolerances for Concrete Construction and Materials

##### ASTM INTERNATIONAL (ASTM)

ASTM A 185/A 185M (2007) Standard Specification for Steel Welded Wire Reinforcement, Plain, for Concrete

ASTM A 497/A 497M (2007) Standard Specification for Steel Welded Wire Reinforcement, Deformed, for Concrete

ASTM A 615/A 615M (2008a) Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement

##### AMERICAN WELDING SOCIETY (AWS)

AWS D1.4/D1.4M (2005; Errata 2005) Structural Welding Code - Reinforcing Steel

##### CONCRETE REINFORCING STEEL INSTITUTE (CRSI)

CRSI 10MSP (2001; 27Ed) Manual of Standard Practice

#### 1.02 SCOPE

- A. The work of this section comprises all materials, tools, equipment, and labor necessary for the fabrication and installation of all reinforcing steel (except installation only of reinforcing steel for masonry construction which is included in SECTION 04100, MASONRY) as shown on the Contract Drawings, as specified herein, and as necessary for the proper completion of the Work.
- B. SECTION 00700, GENERAL CONDITIONS and all sections within DIVISION 1 - GENERAL REQUIREMENTS, are hereby made a part of this section of the Specifications.

#### 1.03 MEASUREMENT AND PAYMENT

Measurement and Payment for the work described in this section shall be in accordance with the provisions of SECTION 01025, MEASUREMENT AND PAYMENT.

#### 1.04 SUBMITTALS

- A. The following shall be submitted in accordance with SECTION 01300, SUBMITTAL PROCEDURES:

1. SD-01 Preconstruction Submittals

A letter by the masonry contractor indicating that they have reviewed the shop drawings, the masonry specifications and the Contract Drawings for the Work.

2. SD-02 Shop Drawings

- a. All reinforcing shop drawings shall include the following information:

i. Sizes, dimensions, and locations for reinforcing steel and supports.

ii. Bending diagrams and schedules.

iii. Splices.

iv. Cover and clearances.

v. Class designation and details of bar supports.

vi. Pertinent reinforced concrete details with dimensions and elevations.

vii. Items furnished by other trades and/or under other sections of the specification that are to be cast in concrete where interference with reinforcing may occur.

viii. Reinforcement of walls shall be shown on wall elevations with required sections; reinforcement of beams on beam elevations with required sections; and reinforcement of slabs on plan views with required sections. Provide plan details where walls intersect.

3. SD-03 Product Data

Certified mill reports of reinforcing steel including chemical and physical analyses.

#### 1.05 PRODUCT HANDLING

- A. Reinforcement shall be delivered to the project site in bundles with tags indicating size, length, and identification mark.
- B. Materials shall be stored off the ground to prevent soiling and to facilitate subsequent inspection and handling.

#### 1.06 TECHNICAL REQUIREMENTS

Reinforcement shall be fabricated in accordance with ACI 117.

## PART 2 - PRODUCTS

### 2.01 STEEL REINFORCEMENT

#### A. General

"Steel reinforcement" shall include all bars, anchorages, stirrups, dowels, ties, tie-wire, chairs and other steel supports, and spacers as noted on the Contract Drawings, specified herein, and as required for the proper completion of the Work.

#### B. Materials

1. Reinforcing Bars shall be formed from new billet steel conforming to ASTM A 615/A 615M, Grade 60 except as otherwise specified.
2. Plain wire fabric shall conform to ASTM A 185/A 185M and deformed wire fabric shall conform to ASTM A 497/A 497M. Flat sheets shall be used; rolls are not permitted.

#### C. Tie Wire shall conform to FS QQ-W-461 annealed black, 16-gauge minimum.

##### 1. Bar Supports

- a. Chairs, bolsters, spacers and other supports to properly position reinforcing steel shall conform to the "Bar Support" recommendations of CRSI 10MSP, and shall be of adequate strength and design to prevent displacement of reinforcing and discoloration of concrete.
- b. Supports shall be Class 3, except where concrete surfaces are exposed to view, weather and/or moisture where they shall be Class 1 - Plastic Protected.
- c. Supports for bottom reinforcing of concrete mats and slabs-on-grade shall be precast concrete blocks not less than 4-inches square, with a compressive strength equal to that of the surrounding concrete. They may only be used to support reinforcing within 3-inches of the bottom of the slab.

#### D. Fabrication

1. Steel reinforcement shall be fabricated to the sizes, shapes and dimensions shown on the Contract Drawings, details and schedules. All bending shall be in accordance with CRSI 10MSP. All steel shall be bent cold and shall not be bent or straightened in a manner that will injure the metal. Bars with kinks or bends not so detailed shall not be used.
2. Bends for stirrups and ties shall be made around a pin having a diameter not less than four times the minimum thickness of the bar but in all cases the diameter of bend shall be at least large enough to accommodate the supporting bar. Bends for other bars shall be made around a pin having a diameter not less than six times the minimum thickness of the bar, except that for bars larger than 1-inch the pin shall be not less than eight times the minimum thickness of the bar.

## E. Dowel Bar Splicers

Dowel bar splicers shall be a two-component threaded rebar splice system. The internally threaded component shall be forged from Grade 60 deformed rebar material free of external machining and/or welding. It shall contain an integral flange with nailing holes and be threaded with UNC or UN threads to a depth equal to the nominal diameter of the threads plus 1/4 inch. The externally threaded splice component shall be fabricated from Grade 60 deformed rebar material and supplied with rolled threads corresponding with the internally threaded component. The root diameter of the threads shall provide a minimum cross sectional area equal to the cross sectional area of the nominal rebar size. Manufacturer testing shall indicate ultimate tension failure occurring in the nominal bar diameter, not at the mechanical splice.

## PART 3 - EXECUTION

### 3.01 INSTALLATION

#### A. Reinforcing Bars

1. Tolerances shall conform to ACI 117.
2. Placement
  - a. Reinforcement shall be accurately positioned both horizontally and vertically, and shall be properly secured and sufficiently rigid to prevent displacement during concrete placement.
  - b. Reinforcement shall be securely tied at intersections with tie wire or clips in a manner that will keep all metal away from exposed concrete surfaces.
3. Splices
  - a. Reinforcement splices shall be as shown on the Contract Drawings. Where not shown, splices shall be located away from areas of maximum stress, and shall be approved by the Engineer.
  - b. Only when permitted by written approval of the Engineer, welding shall be in accordance with AWS D1.4/D1.4M.
4. All reinforcement within an area of a continuous concrete placement shall be installed, supported, and secured before beginning the concrete placement.
5. Steel Adjustment
  - a. Adjust steel within allowable tolerances to avoid interference with other reinforcing, conduits, and/or embedded items.
  - b. Reinforcing shall not be moved beyond allowable tolerances without the Engineer's approval.

- c. Reinforcing shall not be heated, bent or cut without approval Engineer's approval.

B. Wire Fabric

1. Shall be installed in longest practicable sheet.
2. Adjoining sheets shall be lapped a minimum of one and one-half wire spacings and securely wired together.
3. End laps in adjacent sheets shall be offset.

C. Cleaning

All reinforcement shall be entirely free from flaking rust, loose mill scale, grease, dirt, etc. that might reduce its bond with the concrete.

D. Relation of Bars to Concrete Surfaces

Concrete cover for reinforcement shall conform to the dimensions shown on the Contract Drawings.

E. Observation of Reinforcing Steel

Notify the Engineer at least 24 hours before placing concrete. All reinforcement within the area of one day's concrete placement shall be tied in place, and observed by the Engineer, prior to commencing concrete placement.

\*\*\*END OF SECTION\*\*\*

## SECTION 03300 - CAST-IN-PLACE CONCRETE

### PART 1 - GENERAL

#### 1.01 REFERENCES

The documents listed below are referenced in this section. They are referred to within the text by the basic designation only.

##### ACI INTERNATIONAL (ACI)

ACI 117	(2006) Standard Specifications for Tolerances for Concrete Construction and Materials
ACI 301	(2005) Specifications for Structural Concrete

##### ASTM INTERNATIONAL (ASTM)

ASTM C 31/C 31M	(2008a) Standard Practice for Making and Curing Concrete Test Specimens in the Field
ASTM C 33	(2007) Standard Specification for Concrete Aggregates
ASTM C 40	(2004) Standard Test Method for Organic Impurities in Fine Aggregates for Concrete
ASTM C 94/C 94M	(2007) Standard Specification for Ready-Mixed Concrete
ASTM C 143/C 143M	(2008) Standard Test Method for Slump of Hydraulic-Cement Concrete
ASTM C 150	(2007) Standard Specification for Portland Cement
ASTM C 173/C 173M	(2008) Standard Test Method for Air Content of Freshly Mixed Concrete by the Volumetric Method
ASTM C 231	(2008b) Standard Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method
ASTM C 260	(2006) Standard Specification for Air-Entraining Admixtures for Concrete
ASTM C 494/C 494M	(2008a) Standard Specification for Chemical Admixtures for Concrete
ASTM C 618	(2008) Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete

ASTM C 989	(2006) Standard Specification for Ground Granulated Blast-Furnace Slag for Use in Concrete and Mortars
ASTM C 1260	(2007) Potential Alkali Reactivity of Aggregates (Mortar-Bar Method)
ASTM E 329	(2008) Standard Specification for Agencies Engaged in the Testing and/or Inspection of Materials Used in Construction

## 1.02 SCOPE

- A. The work of this section comprises all materials, tools, equipment and labor necessary for furnishing the cast-in-place concrete as shown on the Contract Drawings, as specified herein, and as necessary for the proper completion of the Work.
- B. SECTION 00700, GENERAL CONDITIONS and all sections within DIVISION 1 - GENERAL REQUIREMENTS, are hereby made a part of this section of the Specifications.

## 1.03 MEASUREMENT AND PAYMENT

Measurement and payment for the work of this section shall be in accordance with SECTION 01025, MEASUREMENT AND PAYMENT.

## 1.04 SUBMITTALS

The following shall be submitted in accordance with SECTION 01300, SUBMITTAL PROCEDURES:

- A. SD-03 Product Data
  - 1. Admixtures
  - 2. Concrete Mix Design for each concrete mix proposed for use in the Work.
- B. SD-06 Test Reports
  - 1. Certified mill test reports of cement.
    - a. Fine and coarse aggregate data, including sources, sieve analyses, potential alkali reactivity, and soundness from tests performed as specified in this section for all aggregates proposed for use. Aggregate, tested in accordance with ASTM C 1260, having a fourteen (14) day expansion greater than 0.10 percent shall be considered to be potentially reactive. Test data of organic impurities for fine aggregate.
    - b. Test data supporting proportions of design mixes, for each concrete mix proposed for use in the work, based upon laboratory trial batches or field test records that are in strict accordance with ACI 301 Section 4, "Concrete Mixtures". Data shall include sources of cement and aggregates. Field test data used to determine the standard deviation used

for establishing the required average design strength shall be from within the previous twelve (12) months, in accordance with ACI 301. Field test data documenting that the proposed concrete proportions will produce an average compressive strength equal to or greater than the required average compressive strength shall be from within the past twelve (12) months. All data shall be submitted within forty-five (45) days after Notice to Proceed, or at least fourteen (14) days before initial placement of concrete, whichever is earlier.

- c. Fly ash source and test reports showing fly ash to be in compliance with these Specifications. Reports shall be for actual fly ash to be used in the Work.
- d. Ground granulated blast-furnace slag source and test reports showing slag to be in compliance with these Specifications. Reports shall be for actual slag to be used in the Work.

#### 1.05 PRODUCT HANDLING

Concrete shall be supplied from a commercial ready mix plant and shall be mixed and delivered in accordance with the requirements of ASTM C 94/C 94M and these specifications.

#### 1.06 TECHNICAL REQUIREMENTS

ACI 301 is hereby made a part of this specification, except as otherwise modified by the Contract Documents.

#### 1.07 QUALITY ASSURANCE

No more than one single commercial ready mix plant shall be used throughout the Work.

#### 1.08 APPROVALS

##### A. Commencement of Work

Concrete Work shall not begin until test results and design mixes have been reviewed by the Engineer. The Engineer's review shall not constitute "approval"; the Contractor shall be responsible for meeting all concrete performance requirements.

### PART 2 - PRODUCTS

#### 2.01 CONCRETE MATERIALS

##### A. General

1. All concrete shall be designed to have a minimum 28-day compressive strength of 4,500 pounds per square inch, except as otherwise noted in the Contract Documents.
2. Proportions of aggregate to cement shall produce a mixture of the required strength and slump that will produce the specified finishes and not segregate.

B. Cement

1. Cement shall meet the requirements of ASTM C 150, Type II.

C. Supplementary Cementitious Materials

1. Fly Ash shall conform to the following.
  - a. ASTM C 618, Class F.
  - b. Maximum loss of ignition: 3.0 percent.
2. Ground granulated blast furnace slag shall conform to the following.
  - a. ASTM C 989.
  - b. Slag activity classification: Grade 100 or 120.

D. Aggregate

1. All aggregates shall conform to ASTM C 33, as amended herein. Aggregates failing to meet these specifications but proven by special test or actual service to produce concrete of the required quality may be used where approved by the Engineer.

2. Fine Aggregates

- a. Fine aggregates shall consist of sand or screenings of gravel or crushed stone, well graded from fine to coarse; clean and free from soft particles, clay, loam and organic matter, with the volume removed by sedimentation not more than three percent. When tested in accordance with ASTM C 40 for organic impurities, the color of the supernatant liquid above the test sample shall show not darker than organic plate No. 3.

- b. Fine aggregate shall conform to the following grading:

U.S. Standard Sieve	Percent Passing
Size 3/8 inch	100
No. 4	95 - 100
No. 8	80 - 100
No. 16	50 - 85
No. 30	25 - 60
No. 50	5 - 30
No. 100	0-10

- c. Fine aggregate shall not have more than 45 percent retained between any two consecutive sieves listed above, and the fineness modulus shall not be less than 2.3 nor more than 3.1.

3. Coarse Aggregates

- a. Coarse aggregates shall consist of crushed stone or washed gravel of clean, hard, durable, uncoated particles, free from dust, dirt, or other deleterious substances; and free from thin, flat or elongated particles. Nominal maximum aggregate size shall be 1½ inch for all slabs poured on ground, foundation mats, footings, in addition to walls that are at least 15 inches thick, except where the clear spacing between reinforcing bars is less than 2 inches. Nominal maximum aggregate size shall be ¾ inch at all other locations, except as specified elsewhere or upon written approval of the Engineer.
- b. Coarse aggregate shall conform to the grading given in Table 2 of ASTM C 33 for sizes (nominal maximum aggregate sizes) No. 467 (1½"), No. 57 (1"), No. 67 (¾"), No. 7 (½"), and No. 8 (⅜").

#### E. Water

Water shall be potable.

#### F. Admixtures

Admixtures shall be used as follows, and the use of products other than those listed will be allowed only with the written approval of the Engineer.

1. The air-entraining admixture shall be chloride free conforming to ASTM C 260.
2. Mid-Range Water Reducing Agents shall conform to ASTM C 494/C 494M, Type A. The air entraining effect of the water reducing agent shall be taken into account.
3. Water Reducing-Retarding Agents. When the ambient temperature rises above 70 degrees F., the water reducing agent shall be replaced in whole or in part with a water reducing-retarding agent conforming to ASTM C 494/C 494M, Type D. The admixture shall be used in such amounts to produce concrete with a set time equal to that which it would have at 70 degrees F. without the retarder.
4. Set Accelerator. Where a set accelerator is allowed under the provisions of SECTION 03350, CONCRETE PLACING, CURING, AND FINISHING, it shall be non-chloride type conforming to ASTM C 494/C 494M, Type C or E.
5. Superplasticizer may be approved for use in any part of the structure, and shall conform to ASTM C 494/C 494M, Type F or G. Admixture may be added in plant or field depending on haul time and ambient temperatures.

### PART 3 - EXECUTION

#### 3.01 TESTING AND INSPECTION

##### A. General

1. Concrete materials and concreting operations shall be tested and inspected as the Work progresses. Failure to detect defective work or material shall in no way preclude later rejection upon discovery.

2. The use of testing services shall in no way relieve the Contractor of the responsibility to furnish materials and construction in full compliance with the Contract Documents.

## B. Responsibilities and Duties of General Contractor

### 1. Design Concrete Mixes.

- a. Concrete mixes shall be designed in accordance with Section 4, "Concrete Mixtures" of ACI 301.
  - b. Ingredient Tests. Prior to making design mixes, the Testing Laboratory conforming to ASTM E 329, shall conduct the following tests in accordance with the References:
    - (1) Cement: Specific gravity and brand name of cement.
    - (2) Aggregates: Sieve analysis, specific gravity, soundness, absorption, potential alkali reactivity, moisture content of fine and coarse aggregate, dry-rodded weight of coarse aggregate, and fineness modulus of fine aggregate.
  - c. Design mixes shall indicate water to cementitious materials ratio, water content, admixture content, cement content, aggregate content, aggregate gradations, slump, air content and strength. Design mixes and related tests shall be in accordance with the procedures referred to in the applicable references cited herein.
  - d. The testing laboratory shall recommend the design mixes to be used for each application of concrete that will produce concrete of specified strengths and finishes with slumps and workability to meet all placing conditions.
2. Furnish necessary labor to assist the testing laboratory and Engineer in obtaining and handling samples at the Project site and other sources of materials.
  3. Advise the testing laboratory and the field observers at least twenty-four (24) hours in advance of placing concrete to allow for the scheduling of observation and testing.
  4. Provide and maintain adequate facilities for safe storage and proper curing of concrete test specimens on the Project site for 48 hours after casting, as required by ASTM C 31/C 31M. Cylinders shall be stored in a temperature range from 60 to 80°F in an environment preventing moisture loss from the specimens. Various methods are effective in maintaining the specified moisture and temperature conditions during the initial curing period. Examples include immediate immersion of molded specimens with plastic lids in water saturated with calcium hydroxide (except that cardboard and other molds that expand when immersed in water should not be used), storage in wooden boxes, placement in damp sand pits, etc. All specimens shall be shielded from direct sunlight and, if used, radiant heating devices. The storage temperature shall be controlled by use of heating and cooling devices, if necessary. The temperature shall be recorded with a maximum-minimum thermometer.

### 3.02 CONCRETE MIX

#### A. Water to Cementitious Materials Ratio

The water to cementitious materials ratio shall not exceed 0.42 except as otherwise noted in the Contract Documents.

#### B. Fly Ash

Use of fly ash is optional. When used, the amount of fly ash shall not be less than 15 percent nor more than 25 percent of weight of cement plus fly ash.

#### C. Ground Granulated Blast-Furnace Slag (GGBF Slag)

GGBF slag use is optional. When used, the amount of slag shall not be less than 25 percent nor more than 50 percent of weight of cementitious material.

#### D. Fly Ash and GGBF Slag

When both fly ash and GGBF slag are used, the minimum amount of portland cement shall be 337 pounds per cubic yard of concrete. The combined fly ash and GGBF slag shall not exceed 50 percent of the total cementitious materials, and the fly ash shall not exceed 25 percent thereof.

#### E. Water Content

1. The amount of water carried on the aggregate, and the effect of admixtures, shall be included in the water content. The water carried on the aggregate shall be determined periodically by test, and the amount of free water on the aggregate subtracted from water added to the mix.
2. In all cases the amount of water to be used shall be the minimum amount required to produce a plastic mixture of the strength specified and of the required density, uniformity and workability. The consistency of any mix shall be at that required for the specific placing conditions and methods.

#### F. Concrete Slumps

1. Unless otherwise specified, at the point of delivery concrete shall have a slump of 4 inches, determined in accordance with ASTM C 143/C 143M. Slump tolerances shall meet the requirements of ACI 117.
2. When Type F or G high-range water-reducing admixture conforming to ASTM C 494/C 494M is used, concrete shall have a slump of 2 to 4 inches before the admixture is added, and a maximum slump of 8 inches at the point of delivery after the admixture is added.

#### G. Air Entrainment

1. All concrete, except as noted below, shall be air entrained. Air entraining admixture shall be used strictly in accordance with the manufacturer's directions and these specifications

to produce a total entrained air content, determined in accordance with the procedure given in ASTM C 173/C 173M or ASTM C 231, as follows:

Nominal Maximum Size Coarse Aggregate (inches)	Air Content By Volume (percent $\pm$ 1.5)
3/8	7.5
1/2	7.0
3/4	6.0
1	6.0
1-1/2	5.5

2. Interior concrete slabs to be hard-troweled shall have a maximum air content of 3.0 percent. Such slabs shall be continually protected against freezing temperatures for the duration of the Contract.

\*\*\*END OF SECTION\*\*\*

## SECTION 03350 - CONCRETE PLACING, CURING AND FINISHING

### PART 1 - GENERAL

#### 1.01 REFERENCES

The documents listed below are referenced in this specification. They are referred to within the text by the basic designation only.

##### ACI INTERNATIONAL (ACI)

ACI 301	(2005) Specifications for Structural Concrete
ACI 306.1	(1990; R 2002) Standard Specification for Cold Weather Concreting
ACI 308.1	(1998) Standard Specification for Curing Concrete
ACI 350.1	(2001) Tightness Testing of Environmental Engineering Concrete Structures

##### ASTM INTERNATIONAL (ASTM)

ASTM C 31/C 31M	(2008a) Standard Practice for Making and Curing Concrete Test Specimens in the Field
ASTM C 39/C 39M	(2005e1) Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens
ASTM C 42/C 42M	(2004) Standard Test Method for Obtaining and Testing Drilled Cores and Sawed Beams of Concrete
ASTM C 143/C 143M	(2008) Standard Test Method for Slump of Hydraulic-Cement Concrete
ASTM C 171	(2007) Standard Specification for Sheet Materials for Curing Concrete
ASTM C 172	(2008) Standard Practice for Sampling Freshly Mixed Concrete
ASTM C 173/C 173M	(2008) Standard Test Method for Air Content of Freshly Mixed Concrete by the Volumetric Method
ASTM C 231	(2008b) Standard Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method
ASTM C 309	(2007) Standard Specification for Liquid Membrane-Forming Compounds for Curing Concrete

ASTM C 881/C 881M	(2002) Standard Specification for Epoxy-Resin-Base Bonding Systems for Concrete
ASTM C 1064/C 1064M	(2008) Standard Test Method for Temperature of Freshly Mixed Hydraulic-Cement Concrete
ASTM E 96/E 96M	(2005) Standard Test Methods for Water Vapor Transmission of Materials
ASTM E 1745	(1997; R 2004) Standard Specification for Water Vapor Retarders Used in Contact with Soil or Granular Fill under Concrete Slabs

## 1.02 SCOPE

- A. The Work of this section comprises all materials, tools, equipment and labor required for the placing, curing and finishing of all cast-in-place concrete as shown on the Contract Drawings, as specified herein, and as necessary for the proper completion of the Work.
- B. SECTION 00700, GENERAL CONDITIONS and all sections within DIVISION 1 - GENERAL REQUIREMENTS, are hereby made a part of this section of the Specifications.

## 1.03 MEASUREMENT AND PAYMENT

- A. Measurement and payment for the Work described in this section shall be in accordance with the provisions of SECTION 01025, MEASUREMENT AND PAYMENT.
- B. During the progress of the Work, an independent, accredited and certified testing laboratory shall conduct concrete testing as specified herein, including the preparation and testing of concrete cylinders. All such testing shall be paid for by the Owner.
- C. The Engineer may order load and/or core tests in accordance with ASTM C 42/C 42M. Such testing shall be paid for by the Owner if the concrete is proven to meet the requirements of the Contract Documents, and by the Contractor otherwise. The Contractor shall also pay for all testing costs associated with any and all Work to be replaced.

## 1.04 SUBMITTALS

The following shall be submitted in accordance with SECTION 01300, SUBMITTAL PROCEDURES:

- A. SD-03 Product Data
  - 1. Provide duplicate delivery tickets, one for the Contractor and one for the Engineer, for each truckload of concrete delivered, with the following information:
    - a. Serial number of ticket.
    - b. Date and Project location.
    - c. Name and location of ready mixed concrete plant.

- d. Truck number, time loaded, cubic yardage delivered.
  - e. Dispatcher's name.
  - f. Mix design, cement type, and admixtures with brand names.
  - g. Cement, fly ash and/or slag (if included in approved mix design), water, and fine and coarse aggregate quantities, and admixture content. Maximum aggregate size.
  - h. Water added subsequent to plant batching, if any. (Only applicable if total mix water is not added at plant. Addition of water such that the water content of the approved mix design is exceeded will be strictly prohibited.)
  - i. Concrete temperature upon delivery.
  - j. Unloading time and location.
2. Manufacturer's Literature - including technical and installation information for:
- a. Curing Paper
  - b. Epoxy Bonding Compound
  - c. Evaporation Retardant
  - d. Floor Hardener
  - e. Joint Filler, Self Leveling
  - f. Membrane Curing Compound
  - g. Preformed Joint Filler
  - h. Vapor Barrier
  - i. Water Repellent
3. Methods to be used to protect concrete placed during hot and cold weather. The Engineer's review shall not constitute "approval"; the Contractor shall be responsible for the protection of concrete placed during hot and cold weather.

B. SD-04 Samples

- 1. Preformed Joint Filler; 12 inches long.
- 2. Vapor barrier; 12 inches square.

## 1.05 ENVIRONMENTAL CONDITIONS

### A. Protection

1. Provisions shall be made for maintaining new concrete in a continuously moist condition for at least seven days after placement.
2. Fresh concrete shall be protected from freezing, premature drying, heavy rain, flowing water, and mechanical injury.

### B. Cold Weather Requirements

1. ACI 306.1 is hereby made a part of this specification, except as otherwise modified within the Contract Documents.
2. Cold weather concreting provisions shall be followed during cold weather: any and all periods when for more than three consecutive days the average daily outdoor temperature drops below 40 degrees F. (The average daily temperature is the average of the highest and lowest temperature during the period from midnight to midnight.) When temperatures higher than 50 degrees F occur during more than half of any 24-hour duration, the period shall not be regarded as cold weather.
3. When freezing temperatures may occur during periods not defined as cold weather, concrete surfaces shall be protected against freezing for at least the first 24 hours after placing.
4. Thermal protection must be provided immediately after concrete placement. Procedures for covering, insulating, housing, and/or heating concrete shall be prearranged.
5. Accelerating admixtures shall be approved at the Engineer's discretion, however those containing calcium chloride shall not be permitted.
6. When combustion heaters are used, flue gases shall be vented to the exterior of enclosures.
7. Concrete shall be placed and maintained at the following minimum concrete placement temperatures (measured at concrete surface):
  - a. Sections of less than 12 inch minimum dimension: 55 degrees F.
  - b. Sections of 12 to 36 inch minimum dimension: 50 degrees F.
  - c. Sections of 36 to 72 inch minimum dimension: 45 degrees F.
8. The concrete placement temperature shall not be higher than the minimum concrete placement temperature by more than 20 degrees F.

9. The minimum concrete temperature as mixed shall be: 5 degrees F higher than the minimum concrete placement temperature when the air temperature is above 30 degrees F; 10 degrees F higher when the air temperature is between 0 and 30 degrees F; and 15 degrees F higher when the air temperature is less than 0 degrees F.
10. Concrete shall be maintained at the minimum specified temperatures for a period of 6 days. When an approved accelerating admixture is used this period may be reduced to 4 days.
11. Concrete shall be cooled gradually at the end of the protection period. The maximum allowable temperature drop at the concrete surface during the first 24 hours after the protection period shall be: 50 degrees F for concrete sections of less than 12 inch minimum dimension; 40 degrees F for concrete sections of 12 to 36 inch minimum dimension; and 30 degrees F for concrete sections of 36 to 72 inch minimum dimension.

#### C. Hot Weather Requirements

1. The temperature of the concrete when placed shall not exceed 90 degrees F. When the air temperature is 90 degrees F and above, procedures to cool mix ingredients may be warranted. These include: providing shaded storage for aggregate, frequent sprinkling or fog spraying of coarse aggregate, and using chilled batch water and/or ice. Forms and reinforcement shall be sprinkled with cold water just prior to concrete placement. When possible, placement of slabs should be scheduled after walls and roof structure are in place in order to minimize problems associated with direct sunlight and/or drying winds. Newly placed concrete shall be protected from the direct sunlight.
2. Records shall be maintained of: time and location of concrete placement, air temperature, weather conditions (i.e. calm, windy, clear, and/or cloudy), relative humidity, and concrete temperature as delivered and after placement.
3. When the air temperature is 90 degrees F and above: the time between the addition of water to cement or cement to aggregate (whichever occurs first) and the time of concrete placement shall not exceed 60 minutes.

### 1.06 TECHNICAL REQUIREMENTS

ACI 301 is hereby made a part of this specification, except as otherwise modified within the Contract Documents.

### 1.07 QUALITY ASSURANCE

#### A. Evaluation of Concrete

1. Concrete strength shall be evaluated in accordance with ACI 301 Section 1.6.6, "Evaluation of Concrete Strength Tests", and Section 1.6.7, "Acceptance of Concrete Strength". The Engineer may order concrete that fails to meet the acceptance criteria removed and replaced at no additional cost to Owner/Engineer.
2. Sampling and Testing

- a. During the progress of the Work, an independent, accredited and certified testing laboratory shall conduct concrete testing as specified herein. All such testing shall be paid for by the Owner. Concrete samples shall be taken in accordance with ASTM C 172 for slump, entrained air, unit weight, and strength tests.
  - b. Pumped concrete shall be sampled and tested for slump and air content at the point of placement, as opposed to at the point of delivery. Upon the Engineer's approval: once the slump loss and the loss of entrained air due to pumping is established, correlated acceptance limits at the point of delivery, where sampling and testing may then be performed, shall be made applicable. When the pumpline configuration is changed significantly, sampling and testing shall again be performed at the point of placement until new acceptance limits at the point of delivery may be determined.
  - c. Concrete cylinders shall be prepared in accordance with ASTM C 31/C 31M and be 6 inches diameter by 12 inches tall. One set of 4 cylinders shall be prepared for each 100 cubic yards, or fraction thereof, of each different mix placed in each single day. Cylinders shall be transported to the testing lab within 48 hours of forming, but not sooner than 8 hours after final set. Cylinders shall be tested for compressive strength in accordance with ASTM C 39/C 39M. One cylinder shall be tested at 7 days, two at 28 days, and one at 56 days. Test results shall be submitted directly to both the Engineer and the Engineer's on-site representative for review.
  - d. Concrete slump shall be measured in accordance with ASTM C 143/C 143M.
  - e. Tests for air content shall be performed in accordance with ASTM C 173/C 173M or ASTM C 231, every time a set of concrete cylinders is prepared.
  - f. Temperature shall be measured in accordance with ASTM C 1064/C 1064M.
3. Construction will be considered potentially deficient if concrete fails to meet any requirements that affect the strength of the structure, including but not necessarily limited to:
- a. Low strength concrete per ACI 301, Section 1.6.6, "Evaluation of Concrete Strength Tests", and Section 1.6.7, "Acceptance of Concrete Strength".
  - b. Reinforcing steel size, quantity, strength, position or arrangement that does not meet the requirements of the Contract Documents.
  - c. Reinforced concrete that differs from the dimensions or locations shown on the Contract Drawings.

- d. Curing that does not meet the requirements of the Contract Documents, including premature formwork removal.
- e. Hot or cold weather concreting that doesn't meet the requirements of the Contract Documents.
- f. Mechanical damage from accidents or fire.
- g. Poor construction practices.

#### 4. Water Tightness

- a. The following concrete basins shall be tested for water tightness before beginning backfilling operations:
  - i. Notown Clarifier Building Tanks No. 1 and 2, and both clearwells.
  - ii. Testing shall be in accordance with ACI 350.1, "Tightness Testing of Environmental Engineering Concrete Structures", Chapter 2, "Hydrostatic Test, HST, for Open or Covered Tanks". Testing shall meet criteria HST-100, not exceed 0.10 percent net liquid loss per day.

#### B. Sample Panel

- 1. The first completed wall sections of smooth-form and grout-cleaned finishes, approved by the Engineer, each at least 200 square feet, shall be designated the "sample panel" for the corresponding finish. It shall be constructed using the same materials and procedures as the walls it is to represent.
- 2. Work intended to serve as a sample panel shall be approved by the Engineer before the Contractor may proceed with construction of work with the same specified finish. All Work shall closely match the approved sample panels. If the Engineer does not accept the work intended to serve as the sample panel, it shall be demolished and reconstructed, or repaired, as directed by the Engineer.

### PART 2 - PRODUCTS

#### 2.01 PREFORMED JOINT FILLER

Prefomed joint filler shall be closed cell polyethylene foam isolation joint material of the size indicated. Joint filler shall be X-Tech by C2 Products, Inc., or approved equal.

#### 2.02 JOINT FILLER, SELF LEVELING

- 1. Joint filler shall be 100% solids, fast-setting, semi-rigid, two component, self leveling polyurea, having a minimum Shore A hardness of 80 per ASTM D2240.
- 2. Joint filler shall be Euco Qwikjoint 200 by The Euclid Chemical Company, Joint Tite 750 by L&M Construction Chemicals, Inc., or approved equal.

### 2.03 MEMBRANE CURING COMPOUND

Use of membrane curing compound shall be permitted except where prohibited in Part 3 of this Section. It shall conform to ASTM C 309, Type 1, with minimum 20 percent solids. Clearseal WB STD, as manufactured by A.C. Horn, Inc.; Kure 1315, by Sonneborn; Vocomp 20/30, by W.R. Meadows; Dress & Seal WB/30, by L&M Construction Chemicals, Inc.; or approved equal shall be provided.

### 2.04 CURING PAPER

Curing paper shall conform to ASTM C 171, for regular or white waterproof paper.

### 2.05 EPOXY BONDING COMPOUND

Epoxy bonding compound shall conform to ASTM C 881/C 881M, contain 100 percent solids, and be moisture tolerant. Uniweld, by Permagine Industries, Inc.; Sikadur 32 Hi-Mod or Sikadur 32 Hi-Mod LPL, by Sika Corporation; Resi-bond (J-38), by Dayton Superior; or approved equal shall be provided.

### 2.06 VAPOR BARRIER

Vapor barrier shall meet ASTM E 1745 Class "A" requirements, and be 10 mil minimum thickness with water vapor permeance not greater than 0.04 perms per ASTM E 96/E 96M. Moistop Ultra 10 by Fortifiber Building Products Systems; Griffolyn T-65 G by Reef Industries; Stego Wrap 10-mil, Perminator 10-mil by W.R. Meadows; VB-250 by Barrier-Bac, Inc.; or approved equal shall be provided.

### 2.07 BOND BREAKER

Bond breaker shall be 15-pound asphalt saturated roofing felt.

### 2.08 FLOOR HARDENER

Hardener shall be Tammolith as manufactured by Tamms, Inc; Lapidolith by Sonneborn; Fluohard by L&M Construction Chemicals, Inc.; or approved equal.

### 2.09 EVAPORATION RETARDANT

Evaporation retardant shall be E-CON as manufactured by L&M Construction Chemicals, Inc.; SikaFilm by Sika Corporation; Confilm by Master Builders; or approved equal.

### 2.10 WATER REPELLENT

Water repellent shall be Baracade WB 244 as manufactured by Tamms Industries, Aquapel as manufactured by L&M Construction Chemicals, Inc., or approved equal.

## PART 3 - EXECUTION

### 3.01 VAPOR BARRIER INSTALLATION

Vapor barrier shall be installed with the long dimension parallel to the direction of concrete placement. Seams shall be lapped a minimum of 6 inches and continuously taped, and all penetrations shall be

sealed using wrap, tape, boots, and/or mastic of the same manufacturer. Vapor barrier shall be as clean and dry as possible while sealing seams and penetrations. Any and all punctures and/or other damage shall be repaired prior concrete placement. Concrete shall be placed as soon as practicable after preparation of vapor barrier is complete.

### 3.02 CONCRETE PLACEMENT

#### A. Tolerances

Tolerances shall conform to all requirements of ACI 117 except as otherwise modified by the Contract Documents.

#### B. Placing

1. Concrete shall be handled from the truck to the place of final deposit as rapidly as practicable by methods preventing segregation and/or loss of ingredients.
2. The time between the addition of water to cement, or cement to aggregates (whichever occurs first), and the placement of concrete shall in no case exceed 90 minutes. When air temperature is 90 degrees F and above, this time shall be reduced to 60 minutes.
3. Water shall be removed from all forms and excavations and the Work shall be kept dry during placement. No water shall be thrown on, allowed to flow over, or rise upon the concrete until it is thoroughly set.
4. The concrete shall be directly deposited as close as possible to its final location, and shall be deposited in such manner so as to maintain a homogeneous, plastic, approximately horizontal surface.
5. Where concrete may contact soil while being placed, free fall shall be limited to a maximum of 3 feet. Accumulation of concrete on the forms and/or on reinforcement above the level of placement shall be avoided. Concrete that has been contaminated by soil and/or other foreign matter shall be rejected.
6. Retempering of concrete and concrete placement against partially hardened concrete shall not be permitted. A concrete placement, once started, shall be carried out as a continuous operation until the placement of the entire section between construction joints is complete.

#### C. Runways

Runways shall be provided for wheeled concrete handling equipment which shall not be wheeled over reinforcement. Runways shall not be supported upon reinforcement that is part of the Work.

#### D. Chuting

1. Minimum slope shall be 3 horizontal to 1 vertical and maximum slope shall be 2 horizontal to 1 vertical. Between these limits, the slope shall be that which will prevent segregation and ensure continuous flow.

2. A baffle shall be provided at the end of the chute to prevent segregation. If the end of the chute is more than 3 feet above the surface of deposit, a spout shall be used. The spout shall be kept full of concrete with the end kept as near as practical to the surface of deposit.
3. The chute shall be steel or steel lined, and sections shall have the same slope throughout. Aluminum chutes are not permitted.
4. The chute shall be thoroughly flushed with water before and after each use, the water discharged outside the forms.

#### E. Pumping

The inside diameter of pipes and hoses used to convey the concrete shall be a minimum of three times the maximum size aggregate of the mix. In order to minimize altering the concrete properties, long vertical sections at the end of the pumpline shall be avoided. A horizontal hose run, a hose loop, or a slide gate at the end of the hose may be used to reduce loss of entrained air.

#### F. Bonding

1. Immediately after initial set, laitance on the top surface of construction joints shall be removed, and the surface raked. After the concrete has set to a degree that precludes laitance removal by shovels or scrapers, the Contractor shall remove it by power chipping tools, or other effective method.
2. Before concrete is placed against set concrete, the surface shall be thoroughly cleaned with wire brushes, air blasted, wetted and standing water removed. Where noted on the Contract Drawings, and as approved by the Engineer where an unplanned interruption within a concrete placement has occurred, epoxy bonding compound shall be used in accordance with the manufacturer's instructions.

#### G. Compaction

1. Concrete shall be placed in layers not exceeding 12 inches in depth. Each layer shall be compacted by mechanical internal vibrating equipment supplemented by hand spading, rodding, and tamping as required.
2. Vibrators shall be relocated frequently, and over-vibration such that segregation occurs shall be prevented. Vibrators shall not be used to move concrete within the forms. Concrete shall be thoroughly consolidated around reinforcement, embedments, and into the corners of the forms.
3. Ensure that vibrator is kept several inches clear of waterstops.
4. Where internal vibration is impractical, the use of form vibrators will be considered, and will be allowed only with the Engineer's written approval. When allowed, the vibrator shall be placed so that motion is horizontal.

#### H. Construction Joints

1. Construction joints shall be located as shown on the Contract Drawings, or where they are not shown, locations shall be approved by the Engineer. Where a construction joint occurs in a joint

that must be watertight, waterstops as specified in SECTION 03 11 13, STRUCTURAL CONCRETE FORMWORK shall be used.

2. Reinforcement shall be continuous at construction joints unless otherwise shown on the Contract Drawings. Continuous keyways and waterstops shall be provided where called for in the Contract Documents. All necessary precautions to ensure that the waterstop is properly located and aligned and remains so during concrete placement shall be taken. In the event that the waterstop is improperly located, allowing a tolerance of plus or minus 1/2 inch, the Engineer may order the waterstop extended, or replaced, or such other action as deemed necessary, and at no additional cost to the Owner/Engineer.

#### I. Sawed Joints

1. Joint sawing shall be performed as soon as the concrete has hardened sufficiently to prevent dislodgment of aggregates and edge raveling. Sawing shall be completed within 12 hours of concrete placement except when saws specifically designed for early-entry sawcutting are used it shall be completed within 4 hours of concrete placement.
2. Joints shall be approximately 1/4 inch wide, and extend into the slab 1/4 the slab thickness. However, where saws designed especially for early-entry sawcutting are used, the depth of the sawcut shall be 1" for slabs up to 8 inches thick, and 1/6 the slab depth for thicker slabs.
3. Concrete-sawing machines shall be adequate in number and power, and with sufficient replacement blades to complete the sawing at the required rate. Joints shall be cut to true alignment and shall be cut in sequence of concrete placement. Sludge and cutting debris shall be removed.

#### J. Joint Filler, Self Leveling

1. Note that joint sealant is specified in Section 07 92 00 JOINT SEALANTS.
2. Sawed joints in slabs shall be provided with self leveling joint filler, unless otherwise shown on the Drawings.
3. Joints shall be clean, dry, and free of oil and other foreign material that could adversely affect the bond between sealant and concrete. Joint preparation and filler installation shall be in accordance with the manufacturer's instructions. Filler shall be installed the full joint depth. The top of joint shall be overfilled, followed by trimming of excess such that joint filler is flush with concrete slab.

### 3.03 CURING AND PROTECTION

#### A. Temperature

1. When the ambient temperature falls below 40 degrees F or rises above 95 degrees F, a record shall be kept of concrete temperatures and of protection given to concrete during placement and curing.
2. The temperature of in-place concrete shall be the surface temperature of the concrete. The surface temperature may be determined by placing temperature sensors in contact with concrete surfaces or between concrete surfaces and covers used for curing, such as insulation blankets or plastic sheeting.

## B. Curing

1. ACI 308.1 is hereby made a part of this Section, except as otherwise modified within the Contract Documents.
2. Curing shall be accomplished by the use of curing paper, curing compounds (except as noted below), "wet" methods (fog spray, damp sand or burlap) or other methods dependent upon the end used of the concrete. Provisions shall be made for maintaining new concrete in a continuously moist condition for a minimum of 7 days.
3. The use of a curing compound on surfaces to receive applied toppings, chemical hardeners, water repellents, coatings, or a bonded finish will not be allowed. Where it is used, curing compound shall applied uniformly by spray, leaving no pinholes or gaps, at a coverage rate of 250-350 square feet per gallon for the first coat. A second coat of 300-400 square feet per gallon shall be applied after the first coat has dried. The above application rates are based on A.C. Horn; other manufacturer's recommendations may vary.
4. Curing paper shall also be used to protect newly poured concrete floors from damage.

## C. Concrete Slabs

1. Concrete slabs to receive a coating or bonded finish shall be covered with curing paper as specified, laid with side joints lapped 4 inches and end joints lapped 6 inches. Paper shall be applied no earlier than 24 hours and no later than 30 hours after finishing the slab and shall be left in place at least seven days. (Wet methods shall be used for the first 24 hours.) Joints shall be taped and paper shall be weighted to prevent displacement. Tears during the first 7 days after a floor is completed shall be immediately repaired. Only light traffic will be permitted until 7 days after concrete placement. Slabs shall be protected from damage for the Contract duration, with any and all damage repaired by the Contractor at no additional cost to the Owner/Engineer.
2. Where heavy tools and/or equipment may be used, provide additional protection as required.

### 3.04 DEFECTIVE CONCRETE

- A. The Engineer may direct the Contractor to remove and replace, at no additional cost to the Owner/Engineer, concrete Work that is not formed as shown and/or specified in the Contract Documents, or that contains a defective surface.
- B. Upon the Engineer's approval, minor imperfections may be patched as specified herein.

### 3.05 REPAIR OF SURFACE DEFECTS

#### A. General

Immediately after form removal, all form ties shall be cut off, all fins and irregularities removed, and all defective areas, holes, honeycombs, cavities and irregularities cleaned and patched in accordance with SECTION 03 72 00, CONCRETE REPAIR. (Bugholes larger than 3/4 inch in any dimension shall be considered a defect.) Exposed patchwork shall be rubbed where and as specified herein or otherwise treated to match adjacent surfaces.

## B. Patching

1. Defective areas where patching is permitted shall be cleaned of all dust, dirt, grease, laitance, and loose or spalling concrete.
2. The patching mortar shall be as specified in SECTION 03 72 00, CONCRETE REPAIR. Patching shall be finished to match adjoining concrete, and cured and protected as specified for concrete.

## C. Filling Form Tie Holes

Tie holes shall be filled solid with mortar in the same manner as specified under patching above.

## 3.06 FINISH OF FORMED SURFACES

### A. General

1. All concrete surfaces that are to receive the application of Type II waterproofing membrane or a protective lining shall receive an initial abrasive blast to fully expose bugholes prior to finishing.
2. All interior and exterior concrete surfaces that: are exposed, or are to receive the application of a waterproofing membrane or protective lining shall receive a grout cleaned (sack rubbed) finish and shall have a smooth and even surface, free of bug holes, when completed.
3. "Exposed" surfaces shall be defined as those exposed to view upon completion of the Work, whether or not a painted finish is specified. Surfaces which will be covered by fill, such as exterior faces of walls, shall not be considered exposed. Interior surfaces of tanks and channels to receive a cover (including grating), or that are more than one foot below the design water level, shall not be considered exposed.

### B. Grout Cleaned (Sack Rubbed) Finish

1. While the concrete is still damp, a thin coat of medium consistency neat cement slurry shall be applied to the concrete surface by means of bristle brushes to provide a bonding coat. Before the slurry has dried or changed color, a relatively dry grout comprising one part cement to 1 1/2 parts sand shall be applied. Cement shall be that used in the concrete mix, adjusted with white cement to match color at exposed concrete. Grout shall be applied with slightly damp pads of coarse burlap approximately 6 inches square used as a float, and shall be well scrubbed into the surface to provide a dense mortar.
2. The mortar shall be allowed to partially harden for 1 to 2 hours depending upon weather conditions. Work in direct hot sunlight shall be avoided. In hot dry conditions the concrete shall be kept damp during this period with a fine fog spray. Grout shall not be allowed to remain on the surface too long as it will become very difficult to remove. Grout shall not be left on the concrete overnight.
3. After the grout has hardened sufficiently, all that can be removed with a trowel shall be.
4. The surface shall then be allowed to dry thoroughly, and be rubbed vigorously with clean, dry burlap to completely remove any dried grout. There should be no visible film of grout remaining after rubbing.

5. The entire rubbing operation shall be completed in a single working day. Sufficient time shall be allowed for this.
6. On the following day the concrete shall again be wiped clean with dry burlap to remove dust. The use of burlap containing old hardened mortar may be used since it will act as a mild abrasive. After this treatment no build-up film should remain on the surface, but if it does, a fine abrasive stone shall be used to remove it without breaking through the surface film of the parent concrete. Do not work up a lather.
7. After application of the surface grout, the surface shall be thoroughly washed down with stiff brushes and the concrete maintained in a continuously damp condition for at least three days above 50 degrees F by the periodic application of a fine fog spray, the use of damp fabric covered with polyethylene or other methods.

### 3.07 FINISHING OF RELATED UNFORMED SURFACES

- A. Tops of exposed walls and similar unformed surfaces shall be struck off smooth and hand steel troweled to produce a smooth hard level surface. Line and elevation shall be pre-established by means of preset wood screeds which shall be removed during the troweling operation.
- B. After troweling is completed and after the curing period, the surface shall be dry honed to a smooth non-directional surface texture satisfactory to the Engineer.

### 3.08 FINISH OF SLABS

#### A. General

1. Slabs shall be true to the gradient and elevation shown on the Contract Drawings. Flat Slabs shall be level with a tolerance of 1/8 inch in 10 feet. Sloped slabs shall be true to the gradient shown, within a tolerance of 1/8 inch in 10 feet. Slabs shall be pitched to drains as indicated on the Contract Drawings.
2. The evaporation retardant specified may be used in accordance with manufacturer recommendations to control plastic shrinkage cracking and as an aid in slab finishing operations. Conditions that may warrant its use include: high temperature, low humidity, high winds, and direct sunlight.
3. Loss of bleed water and surface drying shall be allowed to proceed naturally. Means to accelerate drying such as applying dry cement, sand, or other materials shall be prohibited.

#### B. Floated Finish

1. Slabs to receive a seamless floor finish or roofing, and all tank bottom slabs, shall receive a floated finish. Floating shall also precede a troweling, where a troweled finish is required as specified below. After consolidating, screeding and leveling, the slab shall not be worked further until it is ready for floating.
2. Floating shall begin when the water sheen has disappeared, and when the slab has stiffened sufficiently to allow proper operation of a power-driven float. Hand floating

with wood, aluminum or magnesium floats shall be used at locations inaccessible to the power-driven float.

3. Surface trueness shall be verified at this stage with a 10 foot straightedge applied in multiple angles. High spots shall be cut down and low spots filled so that the finished surface is true. The slab shall then be immediately refloated to a uniform, smooth, granular texture.

#### C. Troweled Finish

1. All interior slabs left exposed (except as otherwise specified elsewhere) shall receive a troweled finish.
2. The surface shall be finished with power floats as specified above for floated finish, followed by power trowels, and finally hand trowels. The first power troweling shall produce a smooth surface relatively free of defects but which may contain trowel marks. Subsequent trowelings shall be by hand after the surface has sufficiently hardened. The surface shall be thoroughly consolidated by the hand troweling, and final troweling shall be done when a ringing sound is produced as the trowel is moved over the surface. The finished surface shall be free of trowel marks and uniform in texture and appearance.

#### D. Broom Finish

A broom finish shall be provided for all exterior slabs, sidewalks, platforms, ramps, exterior stairs and as specified herein or shown on the Contract Drawings. After floating, and between initial and final set, the surface shall be given a coarse transverse scored texture by drawing a broom across the surface.

#### E. Scratched Finish

After consolidating, screeding and leveling, the surface shall be roughened with stiff brushes or raked before final set. At sloped surfaces scratches shall be made parallel to the direction of slope, to facilitate subsequent cleaning.

### 3.09 FLOOR HARDENER

Floor hardener shall be applied where specified for exposed interior concrete slabs. It shall be applied at a coverage rate recommended by the manufacturer for heavy-duty traffic. It shall be applied per the manufacturer's Specifications after curing. Slabs to receive hardener shall be wet cured or cured using curing paper.

### 3.10 WATER REPELLENT

Water repellent shall be applied to exterior slabs, sidewalks, platforms, ramps, exterior stairs and as specified herein or shown on the Contract Drawings and in accordance with the manufacturer's recommendations. Surfaces to receive repellent shall be wet cured, or cured using curing paper.

### 3.11 CLEANING CONCRETE

- A. Cleaning during progress of the Work shall not be permitted. Cleaning shall not commence until the structure is entirely completed.

- B. Rust and other stains and discolorations shall be removed with a non-etching cleaning agent used in accordance with the manufacturer's instructions. Cleaning of all surfaces to receive a painted finish is also required.
- C. Rust stains may be removed by applying a bleaching agent such as oxalic acid. Acid etching, sandblasting, or cleaning by other methods may be used as approved by the Engineer.

\*\*\*END OF SECTION\*\*\*

## SECTION 03720 - CONCRETE REPAIR

### PART 1 - GENERAL

#### 1.01 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

#### AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO)

AASHTO T 277 (2007) Standard Method of Test for Electrical Indication of Concrete's Ability to Resist Chloride Ion Penetration

#### ASTM INTERNATIONAL (ASTM)

ASTM C 109/C 109M (2007e1) Standard Test Method for Compressive Strength of Hydraulic Cement Mortars (Using 2-in. or (50-mm) Cube Specimens)

ASTM C 78 (2008) Standard Test Method for Flexural Strength of Concrete (Using Simple Beam with Third-Point Loading)

ASTM C 496 (1996) Splitting Tensile Strength of Cylindrical Concrete Specimens

ASTM C 882 (1999) Bond Strength of Epoxy-Resin Systems Used with Concrete by Slant Shear

ASTM C 884 (1998) Thermal Compatibility between Concrete and Epoxy-Resin Overlay

ASTM G 109 (2007) Determining the Effects of Chemical Admixtures on the Corrosion of Embedded Steel Reinforcement in Concrete Exposed to Chloride Environments (2000)

#### 1.02 SCOPE

- A. The work of this section includes all labor, materials, tools and equipment necessary to repair new concrete areas when permitted by the Engineer and to fill form tie holes, both as per SECTION 03350, CONCRETE PLACING, CURING AND FINISHING, and to repair deteriorated concrete areas as defined on the drawings.
- B. SECTION 00720, GENERAL CONDITIONS and all sections within DIVISION 1 - GENERAL REQUIREMENTS, are hereby made a part of this section of the Specifications.

### 1.03 SUBMITTALS

The following shall be submitted in accordance with Section 01300 SUBMITTAL PROCEDURES:

#### A. SD-03 Product Data

1. Trowel-grade polymer modified portland cement repair mortar.
2. Non-sag polymer modified portland cement repair mortar.
3. Reinforcing steel primer

### 1.04 QUALITY ASSURANCE

Provide a notarized certificate stating that the repair material meets the specified requirements and have the manufacturer's current printed literature on the specified product.

The manufacturer shall provide a field representative as per Part 3 of this Specification.

### 1.05 DELIVERY, STORAGE, AND HANDLING

Deliver the specified product in original, unopened containers with the manufacturer's name, labels, product identification, and batch numbers.

Store and condition the specified product as recommended by the manufacturer.

### 1.06 JOB CONDITIONS

#### A. Environmental Conditions

1. Do not apply material if it is raining or snowing or if they appear to be imminent.

#### B. Protection

1. Precautions should be taken to avoid damage to any surface near the work zone due to mixing and handling of the specified repair material.

## PART 2 - PRODUCTS

### 2.01 GENERAL

SikaTop 122 Plus (trowel grade mortar), SikaTop 123 Plus (non-sag mortar), and Sika Armatec 110 EpoCem (reinforcing steel primer), as manufactured by Sika Corporation, are considered to conform to the requirements of this specification. Approval of other products will be considered if they meet or exceed the specified performance criteria when tested in accordance with the specified test standards.

### 2.02 MORTAR PERFORMANCE CRITERIA

#### A. Mixed Properties

1. Application Time: Approximately 15 minutes.

2. Finishing Time: 20-60 minutes.

3. Color: concrete gray.

#### B. Cured Properties

1. Compressive Strength (ASTM C 109/C 109M)

a. 1 day: 3000 psi min.

b. 28 day: 7000 psi min.

2. Splitting Tensile Strength (ASTM C 496) at 28 days: 750 psi min.

3. Flexural Strength (Modulus of Rupture) (ASTM C 78) at 28 days: 2000 psi min.

4. Bond Strength (ASTM C 882 Modified) at 28 days: 2200 psi min.

5. Thermal Compatibility (ASTM C 884 Modified): passes test

6. Permeability (AASHTO T 277) at 28 days: approximately 500 coulombs

7. Cracked Beam Corrosion Tests (ASTM G 109, modified): Reduced corrosion rates 63% versus control specimens.

### PART 3 - EXECUTION

#### 3.01 SURFACE PREPARATION

##### A. General

Areas to be repaired shall be mechanically prepared, clean, sound and free of contaminants. All loose and deteriorated concrete shall be removed by mechanical means. Remove all dirt, oil, grease and all bond-inhibiting materials from the surface. Saw cut perimeter 1/8 inch minimum when a neat mortar is to be applied, and 1 inch minimum when an extended mortar is to be applied. Prepare concrete substrate to obtain a minimum surface profile of 1/16 inch in depth with a new aggregate fractured surface. Be sure the area to be repaired is not less than 1/8 inch in depth. The substrate shall be saturated surface dry with no standing water.

##### B. Reinforcing Steel Primer

Where reinforcing steel with active corrosion is encountered, the following procedures shall be used. Sandblast reinforcing steel to remove all contaminants and rust. Pressure wash. Apply primer. Determine section loss and splice new reinforcing steel where there is more than 15%-25% loss, as directed by the Engineer. If half or more of the diameter of the rebar is exposed, chip out behind the reinforcing steel 1/2 inch minimum.

##### C. Cracks

Cracks in the substrate in the area of the patching or overlay work shall be treated as directed by the Engineer.

### 3.02 MIXING AND APPLICATION

#### A. General

Mix and apply in strict accordance with, and adhere to all limitation and cautions within, the manufacturer's printed literature. The following describes the specific procedures applicable for the Sika products.

SikaTop 122 Plus (trowel-grade) or approved equal shall be used for horizontal and vertical surfaces. SikaTop 123 Plus (non-sag) or approved equal shall be used for overhead surfaces.

#### B. Trowel-Grade Polymer Mortar

1. Pour all of Component "A" into mixing container. Add all of the Component "B" while mixing. For extended mix, introduce 3/8 inch coarse aggregate at desired quantity. Mix to uniform consistency, maximum 3 minutes. Addition rate must not exceed 42 pounds per bag. The aggregate must be non-reactive, clean, well-graded, saturated surface dry, and have low absorption/high density.
2. Scrub mortar into the substrate, filling all pores and voids. Force material against edge of repair, working toward center. After filling repair, consolidate, then screed. Allow mortar or concrete to set to desired stiffness, and finish with wood or sponge float for a smooth surface. The minimum application thickness is 1/8 inch for a neat mortar, and 1 inch if extended. The maximum application thickness in a single lift is 1 inch for a neat mortar, and 3 inches if extended. Multiple lifts may be required in some areas of application. Where multiple lifts are required, the top surface of the preceding lift shall be scored to produce a roughened surface. The preceding lift shall be allowed to reach final set prior to applying the next lift.

#### C. Non-Sag Polymer Mortar

1. Pour all of Component "A" into mixing container. Add all Component "B" while mixing. Mix to uniform consistency, maximum 3 minutes
2. Scrub mortar into the substrate, filling all pores and voids. Force material against edge of repair, working toward center. After filling repair, consolidate, then screed. Allow mortar or concrete to set to desired stiffness, and finish with wood or sponge float for a smooth surface. The minimum application thickness is 1/8 inch. The maximum application thickness in a single lift is 1-1/2 inches. Multiple lifts may be required in some areas of application. Where multiple lifts are required, the top surface of the preceding lift shall be scored to produce a roughened surface. The preceding lift shall be allowed to reach final set, 30 minutes minimum, before applying the next lift.

#### D. Curing

Curing is required. Moist cure with wet burlap and polyethylene, a fine mist of water or a water based compatible curing compound. Curing compounds adversely affect the adhesion of following layers of mortar. Do not use solvent-based curing compounds. Moist curing should commence immediately after finishing. Protect newly applied material from direct sunlight, wind, rain and frost.

### 3.03 CLEANING

Leave finished work and work area in a neat, clean condition without evidence of spillovers on adjacent areas.

### 3.04 MANUFACTURER'S SERVICES

The Contractor shall furnish the services of a competent field representative of the manufacturer as required by the Engineer. The field representative shall be present at the Work site prior to commencement of application to instruct the Contractor and Engineer, to demonstrate proper application and inspection procedures, and to inspect the finish of the prepared surfaces prior to application.

\*\*\*END OF SECTION\*\*\*

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## SECTION - 03742 CONCRETE CRACK REPAIR BY POLYURETHANE INJECTION

### PART 1 - GENERAL

#### 1.01 DESCRIPTION OF WORK:

- A. The work of this section includes all labor, materials, tools and equipment necessary for the repair of cracks as indicated on drawings.

#### 1.02 QUALITY ASSURANCE:

- A. Provide a notarized certificate stating that the repair material meets the specified requirements and have the manufacturer's current printed literature on the specified product.
- B. The manufacturer shall provide a field representative as per Part 3 of this Specification.

#### 1.03 SUBMITTALS:

- A. Product Data: Provide manufacturer's literature for expanding polyurethane grout.

#### 1.04 DELIVERY, STORAGE, AND HANDLING:

- A. Deliver the specified product in original, unopened containers with the manufacturer's name, labels, product identification, and batch numbers.
- B. Store and condition the specified product as recommended by the manufacturer.

#### 1.05 JOB CONDITIONS:

- A. Environmental Conditions: Do not apply material if it is raining or snowing or if they appear to be imminent.
- B. Protection: Precautions should be taken to avoid damage to any surface near the work zone due to mixing and handling of the specified repair material.

### PART 2 - PRODUCTS

#### 2.01 GENERAL:

- A. SikaFix HH LV, as manufactured by Sika Corporation, is considered to conform to the requirements of this specification. Approval of other products will be considered if they meet or exceed the specified performance criteria when tested in accordance with the specified test standards.
- B. Compatibility of product with waterproofing materials shall be coordinated.

#### 2.02 PERFORMANCE CRITERIA:

- A. Pot Life: Approximately 5 hours providing no moisture enters the system

- B. Viscosity at 77 degrees F: 5-16 cps (ASTM D 2196)
- C. Tensile Strength: 150 psi (ASTM D 190 63)
- D. Elongation: 250%
- E. Shrinkage: Less than 4% (ASTM D 1042)
- F. Water Absorption: 10% after 6 months immersion
- G. Density: 8.70 – 9.17 lbs/gal (ASTM D3574)

### PART 3 - EXECUTION

#### 3.01 SURFACE PREPARATION:

- A. The cracks and adjacent substrate must be clean, sound and free of frost. Remove dust, laitance, grease, curing compounds, waxes, impregnations, foreign particles, efflorescence and other bond inhibiting materials from the surface by mechanical means.
- B. Moisture must be present. If there is insufficient moisture to activate the grout, inject the crack with a small amount of water prior to injecting the chemical grout.

#### 3.02 MIXING AND APPLICATION:

- A. Mixing: Mixing the polyurethane chemical grout for the injection of cracks:

1. The material can be agitated vigorously shaking the 5 gallon pail or by mixing thoroughly for about 2 minutes max. with low speed 9400-600 rpm), drill and paddle, bung mixer.

Caution: Do not allow water to enter this mix and avoid "whipping" air into the material.

- B. Placement Procedure:

1. Drill 5/8 inch diameter holes along the side of the crack at a 45 degree angle. Drill the holes to intersect the crack midway through the substrate at a spacing of 6" min. to 36" max. Install the injection packers in holes and tighten. If the crack to be injected is ½ inch or greater at surface, pack an open cell polyurethane foam saturated with the mixed SikaFix into the crack. Spray with a small amount of water to activate the grout and create a surface seal.
2. Pump SikaFix at over 250 psi into cracks. Pump SikaFix for 45 seconds and then pause to allow the material to flow into all the cracks. Watch for material flow and water movement to appear on the surface. When movement stops, begin injecting into the next packer.
3. When sealing vertical cracks, begin injecting at the bottom of the crack and work vertically.
4. Reinject to ensure that all cracks are properly sealed.

5. After completion of injection and cure of product, all injection ports/packers shall be removed from holes and grouted flush/solid with “Sikatop 123 Plus” by Sika Corporation, or approved equal.

3.03 CLEANING:

- A. After the material has cured, remove excess material as directed by the Engineer. Clean the substrate in a manner to produce a finish appearance acceptable to the Owner.

3.04 MANUFACTURER’S SERVICES:

- A. The Contractor shall furnish the services of a competent field representative of the manufacturer as required by the Engineer. The field representative shall be present at the Work site prior to commencement of application to instruct the Contractor and Engineer, and to demonstrate proper application and inspection procedures.

\*\*\*END OF SECTION\*\*\*

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## SECTION 05500 - MISCELLANEOUS METAL WORK

### PART 1 GENERAL

#### 1.01 REFERENCES

The documents listed below are referenced in this section. They are referred to within the text by basic designation only.

##### ACI INTERNATIONAL (ACI)

ACI 318	(2005) Building Code Requirements for Structural Concrete, Appendix D, Anchoring to Concrete
ACI 355.2	(2007) Qualification of Post-Installed Mechanical Anchors to Concrete

##### AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC)

AISC 303	(2005) Code of Standard Practice for Steel Buildings and Bridges
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##### AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)

A14.3	(2008) American National Standard for Ladders-Fixed-Safety Requirements
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##### AMERICAN WELDING SOCIETY (AWS)

AWS D1.6/D1.6M	(2007) Structural Welding Code - Stainless Steel
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##### ASTM INTERNATIONAL (ASTM)

ASTM A 6/A 6M	(2008a) Standard Specification for General Requirements for Rolled Structural Steel Bars, Plates, Shapes, and Sheet Piling
ASTM A 36/A 36M	(2008) Standard Specification for Carbon Structural Steel
ASTM A 53/A 53M	(2007) Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless
ASTM A 123/A 123M	(2008) Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products
ASTM A 153/A 153M	(2005) Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware

ASTM A 239	(1995; R 2004) Standard Practice for Locating the Thinnest Spot in a Zinc (Galvanized) Coating on Iron or Steel Articles
ASTM A 325	(2007a) Standard Specification for Structural Bolts, Steel, Heat Treated, 120/105 ksi Minimum Tensile Strength
ASTM A 563	(2007a) Standard Specification for Carbon and Alloy Steel Nuts
ASTM A 653/A 653M	(2008) Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process
ASTM A 780	(2001; R 2006) Standard Practice for Repair of Damaged and Uncoated Areas of Hot-Dip Galvanized Coatings
ASTM A 992/A 992M	(2006a) Standard Specification for Structural Steel Shapes
ASTM B 209	(2007) Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate
ASTM B 211	(2003) Standard Specification for Aluminum and Aluminum-Alloy Bar, Rod, and Wire
ASTM B 308/B 308M	(2002) Standard Specification for Aluminum-Alloy 6061-T6 Standard Structural Profiles
ASTM D 6386	(1999; R 2005) Standard Practice for Preparation of Zinc (Hot-Dip Galvanized) Coated Iron and Steel Product and Hardware Surfaces for Painting
ASTM E 488	(1996; R 2003) Standard Test Methods for Strength of Anchors in Concrete and Masonry Elements
ASTM F 436	(2007a) Hardened Steel Washers
ASTM F 1554	(2007a) Standard Specification for Anchor Bolts, Steel, 36, 55, and 105-ksi Yield Strength
ASTM F 1852	(2007) Standard Specification for "Twist Off" Type Tension Control Structural Bolt/Nut/Washer Assemblies, Steel, Heat Treated, 120/105 ksi Minimum Tensile Strength

NATIONAL ASSOCIATION OF ARCHITECTURAL METAL MANUFACTURERS (NAAMM)

NAAMM AMP 500	(2006) Metal Finishes Manual
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## Specification for Structural Joints Using ASTM A325 and A490 Bolts

### 1.02 SCOPE

- A. The work of this section comprises all materials, tools, equipment and labor required to furnish, fabricate and erect miscellaneous metal work shown on the Contract Drawings, specified herein, and evidently required to complete the Work. Items include, but are not necessarily limited to the following. (See Part 2 of this section for a more complete list of included items.)
  - 1. Railings and components including mounting brackets,
  - 2. Expansion and adhesive anchors,
  - 3. Miscellaneous supports and components
- B. Items to be embedded in concrete or masonry shall be furnished under this section but installed under DIVISION 3, CONCRETE or DIVISION 4, MASONRY, as applicable.
- C. Section 00700, GENERAL CONDITIONS and all sections within DIVISION 1 - GENERAL REQUIREMENTS, are hereby made a part of this section of the Specifications.

### 1.03 MEASUREMENT AND PAYMENT

Measurement and Payment for the work of this section shall be in accordance with Section 01025, MEASUREMENT AND PAYMENT.

### 1.04 SUBMITTALS

Submittals shall be in accordance with Section 01300 SUBMITTAL PROCEDURES, and include, but are not necessarily limited to:

- A. SD-02 Shop Drawings
  - 1. Details of connections, copes, splices, holes, hardware, finish, and other pertinent information.
  - 2. Indicate welds by standard AWS symbols.
  - 3. Indicate bolts.
- B. SD-03 Product Data
  - 1. For adhesive anchors: manufacturer's complete data sheets including material data, gel and cure times, allowable and ultimate loads, and installation instructions.
- C. SD-07 Samples
  - 1. Rail(s), indicating weld, splicing, and finish.
  - 2. Stair Nosing(s)

D. SD-10 Material Certificates

1. Mill test reports for structural shapes, bolts, nuts, and washers.

E. Anchor Bolt Embedment Drawings

F. Welding Certificates

1. For welding procedures and personnel.

1.05 PRODUCT HANDLING

- A. The material shall be unloaded as soon as it is delivered and carefully handled and stacked to prevent deformation and damage. All items shall be carefully stored on substantial pallets, dunnage, or other supports and spacers, free from the earth and properly drained, preventing splattering with dirt and other foreign matter.
- B. Store materials to permit easy access for inspection and identification. Protect from deterioration. Maintain markings.
- C. Provide protective storage for all fastener components. Fastener components removed from protective storage shall be protected from dirt and moisture in closed containers at the site of installation. Fastener components shall not be cleaned or modified from as-delivered condition, and if they accumulate rust or dirt shall not be incorporated into the work, and shall be removed from the site. ASTM F 1852 tension-control bolt assemblies shall not be relubricated.

1.06 QUALITY ASSURANCE

- A. For steel, comply with AISC 303.
- B. Steel mill materials shall meet the tolerances specified in ASTM A 6/A 6M.

PART 2 - PRODUCTS

2.01 GENERAL PROVISIONS

- A. Standard products meeting the requirements of the Specifications may be accepted as the equivalent of those specified, if approved by the Engineer
- B. Gauges for iron sheets and steel are U.S. Standard; for non-ferrous products is Brown & Sharpe; and for wire is United States Steel Wire.
- C. Steel W-shapes shall conform to ASTM A 992/A 992M (50 ksi yield strength). Other steel shapes, plates and bars shall conform to ASTM A 36/A 36M.
- D. Steel pipe shall conform to **ASTM A 53/A 53M**, Grade B.
- E. Welding electrodes shall comply with AWS requirements, with a tensile strength level of 70 ksi.

- F. Anchor bolts shall be of the sizes indicated, threaded, headed and made of ASTM F 1554 Grade 36 steel.
- G. Bolts shall be ASTM A 325 Type I, heavy-hex.
- H. Nuts shall be ASTM A 563, heavy-hex.
- I. Washers shall be ASTM F 436 hardened steel.
- J. Aluminum items shall be fabricated from bars, plates, pipes, rolled and extruded shapes conforming to the following alloy designation unless otherwise indicated or specified.
  - 1. Standard structural shapes shall be rolled 6061-T6 conforming to ASTM B 308/B 308M.
  - 2. Rolled rod and bar shall be 6061-T6 conforming to ASTM B 211.
  - 3. Sheets, Plates, Checkered Plates, etc., shall be 6061-T6 conforming to ASTM B 209.
  - 4. Bolts shall be 2024-T4; Nuts shall be 6061-T6; and Washers shall be Alclad 2024-T4.
- K. Stainless Steel Items shall be Type 316 (Type 316L if welded) unless otherwise specified herein and/or as shown on the drawings.

## 2.02 SPECIFIC PRODUCTS

### A. Steel Railing

- 1. Steel railing shall be formed of 1-1/2 inch round steel pipe in all welded construction. Posts shall be Schedule 80 and rails shall be Schedule 40. All welds shall be continuous at all intersections and ground smooth on all exposed areas. Radius corners shall be used and mitered corners are not acceptable. Where intersections occur, pieces shall be shaped and cut to fit, no distortion of the circular shape will be allowed. Railing shall be furnished in the largest practical sections with the locations and details of field connections indicated on the shop drawings. Close exposed ends of railing members.
- 2. Post spacing shall be a maximum of four (4) feet on centers measured along the rail. Posts shall be single, unspliced pipe length. Lower rails shall be single, unspliced length between posts. Top rails shall be continuous wherever possible and a single unspliced length shall be attached to a minimum of three posts. Provide 4 inch high toe plate connected to posts, where shown on the Contract Drawings.
- 3. Unless otherwise noted, the upper rail at platforms and other level runs shall be forty-two (42) inches from the top of rail to floor, tank wall or other horizontal surface. On stair flights, the upper rail shall be forty-two (42) vertical inches from the top of rail to a line connecting the toes of the treads. At level runs and at stairs, the lower rail shall be located at approximately half the height of the upper rail. On stairs an additional (third) rail, forming a handrail, shall be bracketed off of the vertical posts: the handrail height shall be thirty-six (36) vertical inches from the upper surface to a line connecting the toes of the treads.
- 4. Design and anchorage of all railing shall be such that the completed structure shall be capable of withstanding the loads prescribed by the Building Code of the Project state.

5. Railing shall be hot-dip galvanized per ASTM A 123/A 123M after fabrication.

B. Expansion Bolts

Where concrete anchors or expansion bolts are noted on the Contract Drawings, or are evidently required to secure members, they shall be Hilti Kwik Bolt III or approved equal that meet the requirements of Appendix D of ACI 318, and are pre-qualified via tests described in ACI 355.2 for use in uncracked concrete. AISI 316 stainless steel bolts and hardware shall be provided.

C. Adhesive Anchors

Adhesive anchors for anchoring to solid concrete shall be Hilti HIT RE 500 Epoxy Adhesive Anchors, or approved equal. Adhesive anchors for anchoring to hollow masonry shall be Hilti HIT HY20 Adhesive Anchors, or approved equal. AISI 316 stainless steel bolts and hardware shall be provided.

D. Miscellaneous Steel Items

All miscellaneous steel items, galvanized angles, relieving angles, plates, channels, headed concrete anchors, and all required fastenings shown on the Contract Drawings shall be fabricated as detailed and furnished under this section. They shall be installed under the applicable section of the Specifications. Miscellaneous items shall be galvanized as indicated and as specified herein.

E. Anchor Bolts

Anchor bolts shall be of the sizes indicated, threaded, headed and made of ASTM F 1554 Grade 36 steel, galvanized except where stainless steel is noted. Plates shall be furnished as indicated. Stainless steel bolts shall be used in attaching aluminum, and in all submerged locations, and shall include stainless steel nuts and washers. In general, anchor bolts to be supplied under this section will only be for the other items supplied under this section that requires them.

## PART 3 - EXECUTION

### 3.01 FABRICATION

- A. Materials and workmanship shall be subject to the approval of the Engineer. Built-up Work shall be assembled in sections in the shop as much as practicable, and components shall be match marked for field assembly.
- B. Field measurements shall be made prior to fabrication to ensure proper fit. Discrepancies in existing conditions that require detail changes shall be reported to the Engineer prior to fabrication.
- C. All bolt holes shall be provided by the fabricator. Holes shall not be made or modified by burning.

### 3.02 WELDING ALUMINUM

Welding of aluminum shall be in accordance with ANSI/AWS D1.2. Aluminum shall be fusion welded by the inert gas-shielded arc method. Where appearance is not a factor and anodizing is not required, alloy 4043 rods may be used. For appearance match, rods shall be of an alloy similar to the alloy being welded.

### 3.03 WELDING STAINLESS STEEL

Welding of stainless steel shall be in accordance with AWS D1.6/D1.6M.

### 3.04 SHOP COATINGS

#### A. Dissimilar Material

1. Where aluminum surfaces come in contact with metals other than stainless steel or other metals not compatible with aluminum, aluminum surfaces shall be kept from direct contact with such parts by painting the dissimilar metal with a coating of zinc chromate paint or use a good grade caulking or non-absorptive tape between dissimilar metals.
2. Similarly, when aluminum comes in contact with concrete, masonry or by-products of these materials, the aluminum shall be given a coat of bituminous paint.

#### B. Galvanizing. All items specified as galvanized shall be coated by the hot-dip process in accordance with ASTM A 123/A 123M, ASTM A 153/A 153M, or ASTM A 653/A 653M, as applicable, in molten zinc, producing a continuous coating of uniform thickness of weight required by the referenced specifications.

1. Coating shall be of best commercial quality, free from injurious defects, flux and uncoated spots, and of such quality as will endure, without penetration of the coating, not less than four (4) immersions in copper sulfate in conformance with ASTM A 239.
2. A stamp showing the name of the galvanizer, the weight of the coating, and applicable ASTM compliance shall identify all galvanized items.
3. Galvanized steel to be painted shall not be quenched; it shall be phosphatized, and prepared for painting per ASTM D 6386. It shall be prime painted, compatible with the finish paints specified in Section 09 90 00, PAINTING.
4. At locations where galvanized steel is field cut and at other locations where galvanized coating is removed, the steel surface shall be touched up with a zinc rich paint meeting ASTM A 780 and containing a minimum of 65% zinc.

### 3.05 ADHESIVE ANCHORS

- A. The Contractor shall furnish the services of a competent manufacturer's field representative. The field representative shall be present at the Work site prior to beginning anchor installation to instruct the Contractor and the Engineer on proper installation and inspection procedures for each intended installation. Such instruction shall include a full and complete demonstration.
- B. Adhesive anchors shall be installed in very strict accordance with the manufacturer's written instructions. For epoxy adhesive anchors, drilled holes shall be blown out with air, thoroughly

wire brushed with a repeated back and forth movement, blown out, thoroughly wire brushed, and blown out again.

- C. Anchors shall remain completely undisturbed between the manufacturer's specified gel time and the full cure time. No load shall be applied, and no attachments to the anchors shall be made during this time.
- D. Ten percent of the anchors, and a minimum of two anchors, shall be load tested in place in accordance with ASTM E 488. The Contractor shall engage and pay for the services of an independent materials testing laboratory to perform such load testing. It shall be acceptable for the manufacturer to perform a portion of, or all of the load testing. The testing company shall submit a report indicating the test results. Anchors shall be tested to a minimum of 125% of the allowable anchor load. If one or more tests that fail prior to reaching 125% of the allowable load, the Engineer may order additional tests, at his discretion, to be paid for by the Contractor. The Contractor shall make good any and all failed anchors, at no additional cost to the Owner/Engineer.
- E. Upon the completion of testing, only after the full curing time, and with the Engineer's approval, detailed attachments may be made to the anchors. Nuts shall be tightened only with a calibrated torque wrench. Tightening torque shall not exceed the manufacturer's specified maximum tightening torque.

### 3.06 CLEANING

Immediately after installation, round or chamfer sharp edges and grind smooth burrs, jagged edges and surface defects. Remove weld splatter.

\*\*\*END OF SECTION\*\*\*

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## SECTION - 07920 JOINT SEALANT

### PART 1 - GENERAL

#### 1.01 DESCRIPTION OF WORK:

- A. Provide joint sealant as shown on Drawings and indicated by provisions of this section.

#### 1.02 SUBMITTALS:

- A. Product Data: Manufacturer's descriptive data including storage requirements, shelf life, curing time, instructions for mixing and application, and primer data (if required). Provide a copy of the Material Safety Data Sheet for each solvent, primer or sealant material.
- B. Samples:
  - 1. Initial Selection: Submit samples of manufacturer's color charts showing complete range of colors, textures, and finishes available for each material used.
  - 2. Verification: Submit actual representative samples of each sealant material that is to be exposed in the completed work. Show full color ranges and finish variations expected. Provide sealant samples having minimum size of (4 inches) long.
- C. Certificates: Submit certificates of compliance stating that the materials conform to the specified requirements.

#### 1.03 ENVIRONMENTAL CONDITIONS:

- A. Apply sealant when the ambient temperature is between 40 and 90 degrees F.

#### 1.04 DELIVERY AND STORAGE:

- A. Deliver materials to the job site in unopened manufacturers' external shipping containers, with brand names, date of manufacture, color, and material designation clearly marked thereon. Label elastomeric sealant containers to identify type, class, grade, and use. Carefully handle and store materials to prevent inclusion of foreign materials or subjection to sustained temperatures exceeding 90 degrees F or less than 0 degrees F.

#### 1.05 QUALITY ASSURANCE:

- A. Compatibility with Substrate: Verify that each of the sealants are compatible for use with joint substrates.
- B. Joint Tolerance: Provide joint tolerances in accordance with manufacturer's printed instructions.
- C. Mock-Up: Project personnel is responsible for installing sealants in mock-up prepared by other trades, using materials and techniques approved for use on the project.

#### 1.06 SPECIAL WARRANTY:

- A. Guarantee sealant joint against failure of sealant and against water penetration through each sealed joint for five years.

PART 2 - PRODUCTS

2.01 SEALANTS:

- A. Provide sealant that has been tested and found suitable for the substrates to which it will be applied.
- B. Typical Interior Sealant: Provide polyurethane sealants that meet requirements of ASTM C 920, Type M, Grade NS, Class 25, Use NT, M, G, A, O. Locations and color of sealant for the following:

LOCATION	COLOR
a. Small voids between walls or partitions and adjacent lockers, casework, shelving, door frames, built-in or surface-mounted equipment and fixtures, and similar items.	As selected by Engineer
b. Perimeter of frames at doors, windows, and access panels which adjoin exposed interior concrete and masonry surfaces.	As selected by Engineer
c. Joints of interior masonry walls and partitions which adjoin columns, pilasters, concrete walls, and exterior walls unless otherwise detailed.	As selected by Engineer
d. Interior locations, not otherwise indicated or specified, where small voids exist between materials specified to be painted.	As selected by Engineer
e. Joints formed between tile floors and tile base cove; joints between tile and dissimilar materials; joints occurring where substrates change.	As selected by Engineer

- C. Interior Wet Area Sealant (Including Restrooms): Provide mildew resistant 100% silicone sealant meeting requirements of ASTM C 920, Type S, Grade NS, Class 12.5, Use NT.

LOCATION	COLOR
a. Small voids between walls or partitions and adjacent lockers, casework, shelving, door frames, built-in or surface-mounted equipment and fixtures, and similar items.	As selected by Engineer
b. Perimeter of frames at doors, windows, and access panels which adjoin exposed interior concrete and masonry surfaces.	As selected by Engineer
c. Joints of interior masonry walls and partitions which adjoin columns, pilasters,	As selected by Engineer

concrete walls, and exterior walls unless otherwise detailed.

- |    |   |                         |
|----|---|-------------------------|
| d. | Joints between edge members for acoustical tile and adjoining vertical surfaces.  | As selected by Engineer |
| e. | Interior locations, not otherwise indicated or specified, where small voids exist between materials specified to be painted.                  | As selected by Engineer |
| f. | Joints between bathtubs and ceramic tile; joints between shower receptors and ceramic tile; joints formed where nonplaner tile surfaces meet. | As selected by Engineer |
| g. | Joints formed between tile floors and tile base cove; joints between tile and dissimilar materials; joints occurring where substrates change. | As selected by Engineer |
| h. | Behind escutcheon plates at valve pipe penetrations and showerheads in showers.   | As selected by Engineer |

D. Exterior Sealant: For joints in vertical and horizontal surfaces, polyurethane sealant that meets requirements of ASTM C 920, Type M, Grade NS, Class 25, Use M, G, A, O. Provide locations and colors of sealant as follows:

- | LOCATION   | COLOR                   |
|--|-------------------------|
| a. Joints and recesses formed where frames and subsills of windows, doors, louvers, and vents adjoin masonry, concrete, or metal frames. Use sealant at both exterior and interior surfaces of exterior wall penetrations. | As selected by Engineer |
| b. Joints between new and existing exterior masonry walls.   | As selected by Engineer |
| c. Masonry joints where shelf angles occur.  | As selected by Engineer |
| d. Expansion and control joints.   | As selected by Engineer |
| e. Interior face of expansion joints in exterior concrete or masonry walls where metal expansion joint covers are not required.  | As selected by Engineer |
| f. Voids where items pass through exterior walls.  | As selected by Engineer |

- |    |   |                         |
|----|---|-------------------------|
| g. | Metal reglets, where flashing is inserted into masonry joints, and where flashing is penetrated by coping dowels. | As selected by Engineer |
| h. | Metal-to-metal joints where sealant is indicated or specified.  | As selected by Engineer |
| i. | Joints between ends of gravel stops, fascias, copings, and adjacent walls.  | As selected by Engineer |

E. General Sealant:

1. Floor Joint Sealant: ASTM C 920, Type M, Grade P or NS, Class 25, Use T. Provide locations and colors of sealant as follows:

LOCATION	COLOR
a. Seats of metal thresholds for exterior doors.	As selected by Engineer
b. Control and expansion joints in floors, slabs, ceramic tile, and walkways.	As selected by Engineer

2. Preformed Sealant: Provide preformed sealant of polybutylene or isoprene-butylene based pressure sensitive weather resistant tape or bead sealant capable of sealing out moisture, air and dust when installed as recommended by the manufacturer. At temperatures from minus 34 to plus 71 degrees C (30 to plus 160 degrees F), the sealant must be non-bleeding and no loss of adhesion.
3. Concrete Slab Joint Sealant: For joints in concrete slabs, provide polyurethane elastomeric sealant meeting the requirements of ASTM C 920, Type S, Grade P or NS, Class 25, Use T. Color selected by Engineer from submitted samples.
4. Concrete Wall Joint Sealants: For joints in concrete walls, provide polyurethane elastomeric sealant meeting the requirements on ASTM C 920, Type S, Grade NS, Class 25, Use NT. Color selected by Engineer from submitted samples.

2.02 PRIMERS:

- A. Provide a nonstaining, quick-drying type and consistency recommended by the sealant manufacturer for the particular application.

2.03 BOND BREAKERS:

- A. Provide the type and consistency recommended by the sealant manufacturer to prevent adhesion of the sealant to backing or to bottom of the joint.

2.04 SEALANT BACK-UP ROD:

- A. Provide polyethylene foams free from oil or other staining elements as recommended by sealant manufacturer. Provide 25 to 33 percent oversized backing for closed cell, unless otherwise

indicated. Make backstop material compatible with sealant. Do not use oakum and other types of absorptive materials as backstops.

2.05 CLEANING SOLVENTS:

- A. Provide type(s) recommended by the sealant manufacturer except for aluminum and bronze surfaces that will be in contact with sealant.

PART 3 - EXECUTION

3.01 SURFACE PREPARATION:

- A. Clean surfaces from dirt frost, moisture, grease, oil, wax, lacquer, paint, or other foreign matter that would tend to destroy or impair adhesion. Remove oil and grease with solvent. Surfaces must be wiped dry with clean cloths. When resealing an existing joint, remove existing calk or sealant prior to applying new sealant. For surface types not listed below, contact sealant manufacturer for specific recommendations.
- B. Steel Surfaces: Remove loose mill scale by sandblasting or, if sandblasting is impractical or would damage finish work, scraping and wire brushing. Remove protective coatings by sandblasting or using a residue-free solvent.
- C. Aluminum or Bronze Surfaces: Remove temporary protective coatings from surfaces that will be in contact with sealant. When masking tape is used as a protective coating, remove tape and any residual adhesive just prior to sealant application. For removing protective coatings and final cleaning, use nonstaining solvents recommended by the manufacturer of the item(s) containing aluminum or bronze surfaces.
- D. Concrete and Masonry Surfaces: Where surfaces have been treated with curing compounds, oil, or other such materials, remove materials by sandblasting or wire brushing. Remove laitance, efflorescence and loose mortar from the joint cavity.
- E. Wood Surfaces: Keep wood surfaces to be in contact with sealants free of splinters and sawdust or other loose particles.

3.02 SEALANT PREPARATION:

- A. Do not add liquids, solvents, or powders to the sealant. Mix multi-component elastomeric sealants in accordance with manufacturer's instructions.

3.03 APPLICATION:

- A. Joint Width-To-Depth Ratios:

- 1. Acceptable Ratios:

JOINT WIDTH

JOINT DEPTH

Minimum          Maximum

For metal, glass, or other nonporous surfaces:

1/4 inch (minimum) over 1/4 inch	1/4 inch 1/2 of width	1/4 inch Equal to width
-------------------------------------	-----------------------------	-------------------------------

For wood, concrete, or masonry:

1/4 inch (minimum) Over 1/4 inch to 1/2 inch	1/4 inch 1/4 inch	1/4 inch Equal to width
Over 1/2 inch to 2 inch Over 2 inch.	1/2 inch (As recommended by sealant manufacturer)	5/8 inch

2. Unacceptable Ratios: Where joints of acceptable width-to-depth ratios have not been provided, clean out joints to acceptable depths and grind or cut to acceptable widths without damage to the adjoining work. Grinding is not required on metal surfaces.
- B. Masking Tape: Place masking tape on the finish surface on one or both sides of a joint cavity to protect adjacent finish surfaces from primer or sealant smears. Remove masking tape within 10 minutes after joint has been filled and tooled.
- C. Backstops: Install backstops dry and free of tears or holes. Tightly pack the back or bottom of joint cavities with backstop material to provide a joint of the depth specified. Install backstops in the following locations:
1. Where indicated.
  2. Where backstop is not indicated but joint cavities exceed the acceptable maximum depths specified in paragraph entitled, "Joint Width-to-Depth Ratios".
- D. Primer: Immediately prior to application of the sealant, clean out loose particles from joints. Where recommended by sealant manufacturer, apply primer to joints in concrete masonry units, wood, and other porous surfaces in accordance with sealant manufacturer's instructions. Do not apply primer to exposed finish surfaces.
- E. Bond Breaker: Provide bond breakers to the back or bottom of joint cavities, as recommended by the sealant manufacturer for each type of joint and sealant used, to prevent sealant from adhering to these surfaces. Carefully apply the bond breaker to avoid contamination of adjoining surfaces or breaking bond with surfaces other than those covered by the bond breaker.
- F. Sealants: Provide a sealant compatible with the material(s) to which it is applied. Do not use a sealant that has exceeded shelf life or has jelled and can not be discharged in a continuous flow from the gun. Apply the sealant in accordance with the manufacturer's printed instructions with a gun having a nozzle that fits the joint width. Force sealant into joints to fill the joints solidly without air pockets. Tool sealant after application to ensure adhesion. Make sealant uniformly smooth and free of wrinkles. Upon completion of sealant application, roughen partially filled or unfilled joints, apply sealant, and tool smooth as specified. Apply sealer over the sealant when and as specified by the sealant manufacturer.

3.04 PROTECTION AND CLEANING:

- A. Protection: Protect areas adjacent to joints from sealant smears. Masking tape may be used for this purpose if removed 5 to 10 minutes after the joint is filled.
- B. Final Cleaning: Upon completion of sealant application, remove remaining smears and stains and leave the work in a clean and neat condition.
  - 1. Masonry and Other Porous Surfaces: Immediately scrape off fresh sealant that has been smeared on masonry and rub clean with a solvent as recommended by the sealant manufacturer. Allow excess sealant to cure for 24 hour then remove by wire brushing or sanding.
  - 2. Metal and Other Non-Porous Surfaces: Remove excess sealant with a solvent-moistened cloth.

\*\*\*END OF SECTION\*\*\*

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## SECTION 11100 STAINLESS STEEL FLAP GATE

### PART 1 GENERAL

#### 1.00 REFERENCES

The documents listed below are referenced in this section. They are referred to within the text by basic designation only.

##### ASTM INTERNATIONAL (ASTM)

ASTM A 240 Standard Specification for Chromium and Chromium-Nickel Stainless Steel

ASTM A 276 Standard Specification for Stainless Steel Bars and Shapes

ASTM D-2000 Standard Specification for neoprene rubber

#### 1.01 SCOPE OF WORK

- A. The CONTRACTOR shall furnish all labor, materials, equipment and incidentals required to install and ready for operation stainless steel flap gates as shown on the Contract Drawings and as specified herein.

#### 1.02 SUBMITTALS

- A. Provide the following information to confirm compliance with the specification.
1. Complete description of all materials including the material thickness of all structural components of the frame and flap.
  2. Installation drawings showing all details of construction, details required for installation, dimensions and anchor bolt locations.
  3. Maximum bending stress and deflection of the flap under the maximum design head (seating head).
  4. The location of the company headquarters and the location of the principle manufacturing facility. Provide the name of the company that manufactures the equipment if the supplier utilizes an outside source.

#### 1.03 QUALITY ASSURANCE

- A. Qualifications
1. All of the equipment specified under this Section shall be furnished by a single manufacturer with a minimum of 20 years experience designing and manufacturing water control gates.
  2. Acceptable Manufacturers: Although a manufacturer may be listed, the submitted design must meet all aspects of the specifications detailed within this section and on the contract drawings. Submitting a "standard" flap gate that does not meet these requirements will not be accepted.
    - a. Whipps, Inc., Athol, MA
    - b. Hydro Gate, Denver, CO
    - c. Engineer Approved Equal

### PART 2 EQUIPMENT

## 2.01 GENERAL

- A. Gates shall be as specified herein and have the characteristics and dimensions shown on the Contract Drawings.
- B. Leakage shall not exceed 0.1 gpm/ft of wetted seal perimeter in seating head condition.
- C. The flap gate shall utilize a resilient seal around the perimeter of the opening.
- D. All structural components of the frame and flap shall be fabricated of stainless steel having a minimum thickness of 1/4-inch and shall have adequate strength to prevent distortion during normal handling, during installation and while in service.
- E. All welds shall be performed by welders with AWS certification.
- F. Finish: Mill finish on stainless steel. Welds shall be sandblasted to remove weld burn and scale.
- G. Materials:

### Components

Frame  
Flap, Stiffeners and Hinge Arms  
Hinge Pins  
Hinge Pin Bushings  
Fasteners, Nuts and Bolts  
Seal

### Materials

Stainless Steel, Type 316, ASTM A240  
Stainless Steel, Type 316, ASTM A240  
Stainless Steel, Type 316, ASTM A240  
UHMW or bronze  
Stainless Steel, Type 316, ASTM A276  
Neoprene ASTM D-2000 or EPDM

## 2.02 FRAME

- A. The frame shall be constructed of formed stainless steel plate with a minimum thickness of 1/4-inch.
  - 1. Frame design shall be of the flanged back type suitable for mounting directly to a wall with stainless steel anchor bolts and grout. Mounting style shall be as shown on the Contract Drawings.
  - 2. The angle of the flap when seated against the frame shall be between 3 degrees and 7 degrees from the vertical.
  - 3. Lifting lugs shall be provided on the top of the frame to facilitate installation.

## 2.03 HINGE ARMS

- A. Hinge arms shall be constructed of formed stainless steel plate with a minimum thickness of 1/4-inch and shall connect the frame to the flap.
  - 1. Dual hinge arms shall be provided on all flap gates in excess of 18 inches wide.
  - 2. Flap gates in excess of 30 inches wide shall have two pivot joints per arm. An adjustable lower pivot with limited rotation and a fixed or adjustable upper hinge lug arrangement to permit adjustment of the opening sensitivity to unseating head.
  - 3. The hinge pins shall have a minimum diameter of 1-3/8 inch and shall be constructed of solid stainless steel rod.
  - 4. The hinge pin bushings shall be Ultra High Molecular Weight (UHMW) or bronze.

## 2.04 FLAP

- A. The flap and reinforcing stiffeners shall be constructed of stainless steel plate with a minimum thickness of 1/4-inch.
  - 1. The flap shall not deflect more than 1/360 of the span under the maximum design head equivalent of 16.5 feet.
  - 2. Reinforcing stiffeners shall be welded to the flap.

## 2.05 SEALS

- A. All flap gates shall be provided with a seal system to restrict leakage in accordance with the requirements listed in this specification.
  - 1. A continuous resilient seal shall be mounted to the seating surface of the frame to restrict leakage.
  - 2. The seal system shall be durable and shall be designed to accommodate frequent operation without loosening or suffering damage.
  - 3. All seals must be bolted or otherwise mechanically fastened to the frame. Arrangement with seals that are force fit and/or held in place with adhesives are unacceptable.
  - 4. The seals shall be mounted so as not to obstruct the water way opening.

## 2.06 ANCHOR BOLTS

- A. Anchor bolts shall be provided by the flap gate manufacturer for mounting the gates when shown on the Contract Drawings.
  - 1. Quantity and location shall be determined by the gate manufacturer.
  - 2. If epoxy type anchor bolts are provided, the gate manufacturer shall provide the studs and nuts.
  - 3. Anchor bolts shall have a minimum diameter of 1/2-inch.

## PART 3 EXECUTION

### 3.01 INSTALLATION

- A. Installation of the gates and appurtenances shall be done in a workmanlike manner. It shall be the responsibility of the CONTRACTOR to handle, store and install the equipment specified in this Section in strict accordance with the manufacturer's recommendations.
- B. The CONTRACTOR shall review the installation drawings and installation instruction prior to installing the gates.
- C. The gate assemblies shall be installed in a true vertical plane, square and plumb.
- D. The CONTRACTOR shall fill the void in between the gate frame and the wall with non-shrink grout as shown on the installation drawing and in accordance with the manufacturer's recommendations.

### 3.02 FIELD TESTING

- A. After installation, all gates shall be field tested in accordance with the manufacturers recommendations in the presence of the ENGINEER and OWNER to ensure that all items of equipment are in full compliance with this Section. Each gate shall be visually inspected to confirm that the flap seats against the frame properly.

\*\*\* END OF SECTION \*\*\*

## SECTION 11155 – MESSAGE BOARD

The work under this section shall conform to the relevant provisions of Section 850 of the Standard Specifications and the following:

This work shall consist of furnishing 2 new compact trailer mounted full-matrix electronic message boards that meet the following specifications:

Display:	48 x 30 pixels, or approved equal
Resolution:	LED
Characters:	min: 5 pixels wide x 7 pixel high; 3 lines, 8 characters per line
Power – Battery:	6 V dc deep-cycle golf cart type, wired in series and parallel of 12 V dc power supply; 450 Ah total battery capacity; 15 A battery charger; 85 W solar panels, or approved equal.
Operation:	Handheld touch screen controller
Sign Cabinet Size:	72 inches x 49 inches, or approved equal
Deployed Footprint:	120 inches x 78 inches, or approved equal
Deployed Height:	118 inches, or approved equal
Travel Height:	85 inches, or approved equal

Electronic message boards shall be WANCO model number WVTMM-M, or equal. The two boards shall be turned over and retained by City of Quincy Department of Public Works (DPW) upon completion of the project.

Payment for **Message Board** shall not be measured or paid for separately and shall be included in the lump sum of **Item 1a: Broad Street Tide Gate Repair**, indicated on the schedule of values. This price shall be full compensation for all labor, materials, tools, equipment, transportation and incidentals thereto necessary to provide the product as specified or as shown on the drawings. Payment for the message boards shall be 100% of direct cost (**no mark-up will be allowed on this item**) upon completion of project and transfer of Certificate of Title to authorized DPW personnel and delivery of equipment to DPW at 55 Sea Street, Quincy MA.

The measurement and payment provisions listed under Division One, Section 01025 shall supplement the above payment provisions, as applicable.

\*\*\*END OF SECTION\*\*\*

## **Appendix A**

**Massachusetts Department of Environmental Protection Order of  
Conditions File Number 059-1283**



**Massachusetts Department of Environmental Protection  
Bureau of Resource Protection - Wetlands  
WPA Form 5 – Order of Conditions  
Massachusetts Wetlands Protection Act M.G.L. c. 131, §40**

Provided by MassDEP:

059-1283

MassDEP File #

eDEP Transaction #

Quincy

City/Town

**A. General Information**

Please note: this form has been modified with added space to accommodate the Registry of Deeds Requirements

**Important:** When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



1. From: Quincy  
Conservation Commission

2. This issuance is for (check one):  
a.  Order of Conditions b.  Amended Order of Conditions

3. To: Applicant  
Commissioner Daniel G. Raymondi  
a. First Name b. Last Name

Quincy Dept. of Public Works  
c. Organization

55 Sea Street  
d. Mailing Address

Quincy MA 02169  
e. City/Town f. State g. Zip Code

4. Property Owner (if different from applicant):  
a. First Name b. Last Name

City of Quincy  
c. Organization

1305 Hancock Street  
d. Mailing Address

Quincy MA 02169  
e. City/Town f. State g. Zip Code

5. Project Location:  
0 Coddington Street, et.al. (see report) Quincy  
a. Street Address b. City/Town

1114E Lot 1  
c. Assessors Map/Plat Number d. Parcel/Lot Number

Latitude and Longitude, if known: 42d15'm18.18"Ns 70d59'm53.79"Ws  
d. Latitude e. Longitude



Massachusetts Department of Environmental Protection  
 Bureau of Resource Protection - Wetlands  
**WPA Form 5 – Order of Conditions**  
 Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:  
 059-1283  
 MassDEP File # \_\_\_\_\_  
 eDEP Transaction # \_\_\_\_\_  
 Quincy  
 City/Town

**A. General Information (cont.)**

6. Property recorded at the Registry of Deeds for (attach additional information if more than one parcel):

Norfolk

a. County

99

c. Book

b. Certificate Number (if registered land)

4892

d. Page

7. Dates: February 16, 2012 March 7, 2012 March 7, 2012  
 a. Date Notice of Intent Filed b. Date Public Hearing Closed c. Date of Issuance

8. Final Approved Plans and Other Documents (attach additional plan or document references as needed):

Locus Maps--Figure 1:USGS Topographic Quadrangle. Figure 2: NHESP Estimated Habitat Map/Ariel Orthophoto.

Woodward & Curran

b. Prepared By

David A. White

c. Signed and Stamped by

variable

d. Final Revision Date

Stormwater Report

e. Scale

2/6/12

f. Additional Plan or Document Title

g. Date

**B. Findings**

1. Findings pursuant to the Massachusetts Wetlands Protection Act:

Following the review of the above-referenced Notice of Intent and based on the information provided in this application and presented at the public hearing, this Commission finds that the areas in which work is proposed is significant to the following interests of the Wetlands Protection Act (the Act). Check all that apply:

- a.  Public Water Supply
- b.  Land Containing Shellfish
- c.  Prevention of Pollution
- d.  Private Water Supply
- e.  Fisheries
- f.  Protection of Wildlife Habitat
- g.  Groundwater Supply
- h.  Storm Damage Prevention
- i.  Flood Control

2. This Commission hereby finds the project, as proposed, is: (check one of the following boxes)

Approved subject to:

- a.  the following conditions which are necessary in accordance with the performance standards set forth in the wetlands regulations. This Commission orders that all work shall be performed in accordance with the Notice of Intent referenced above, the following General Conditions, and any other special conditions attached to this Order. To the extent that the following conditions modify or differ from the plans, specifications, or other proposals submitted with the Notice of Intent, these conditions shall control.



Massachusetts Department of Environmental Protection  
 Bureau of Resource Protection - Wetlands  
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 City/Town

**B. Findings (cont.)**

Denied because:

- b.  the proposed work cannot be conditioned to meet the performance standards set forth in the wetland regulations. Therefore, work on this project may not go forward unless and until a new Notice of Intent is submitted which provides measures which are adequate to protect the interests of the Act, and a final Order of Conditions is issued. A description of the performance standards which the proposed work cannot meet is attached to this Order.
- c.  the information submitted by the applicant is not sufficient to describe the site, the work, or the effect of the work on the interests identified in the Wetlands Protection Act. Therefore, work on this project may not go forward unless and until a revised Notice of Intent is submitted which provides sufficient information and includes measures which are adequate to protect the Act's interests, and a final Order of Conditions is issued. A description of the specific information which is lacking and why it is necessary is attached to this Order as per 310 CMR 10.05(6)(c).
3.  Buffer Zone Impacts: Shortest distance between limit of project disturbance and the wetland resource area specified in 310 CMR 10.02(1)(a) \_\_\_\_\_ a. linear feet

**Inland Resource Area Impacts: Check all that apply below. (For Approvals Only)**

Resource Area	Proposed Alteration	Permitted Alteration	Proposed Replacement	Permitted Replacement
4. <input type="checkbox"/> Bank	_____ a. linear feet	_____ b. linear feet	_____ c. linear feet	_____ d. linear feet
5. <input checked="" type="checkbox"/> Bordering Vegetated Wetland	4,150(temporary)	_____ b. square feet	4,150(restoration)	_____ d. square feet
6. <input type="checkbox"/> Land Under Waterbodies and Waterways	_____ a. square feet	_____ b. square feet	_____ c. square feet	_____ d. square feet
	_____ e. c/y dredged	_____ f. c/y dredged		
7. <input type="checkbox"/> Bordering Land Subject to Flooding	_____ a. square feet	_____ b. square feet	_____ c. square feet	_____ d. square feet
Cubic Feet Flood Storage	_____ e. cubic feet	_____ f. cubic feet	_____ g. cubic feet	_____ h. cubic feet
8. <input type="checkbox"/> Isolated Land Subject to Flooding	_____ a. square feet	_____ b. square feet		
Cubic Feet Flood Storage	_____ c. cubic feet	_____ d. cubic feet	_____ e. cubic feet	_____ f. cubic feet
9. <input type="checkbox"/> Riverfront Area	_____ a. total sq. feet	_____ b. total sq. feet		
Sq ft within 100 ft	_____ c. square feet	_____ d. square feet	_____ e. square feet	_____ f. square feet
Sq ft between 100-200 ft	_____ g. square feet	_____ h. square feet	_____ i. square feet	_____ j. square feet



Massachusetts Department of Environmental Protection  
 Bureau of Resource Protection - Wetlands  
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 Quincy  
 City/Town

**B. Findings (cont.)**

**Coastal Resource Area Impacts: Check all that apply below. (For Approvals Only)**

	Proposed Alteration	Permitted Alteration	Proposed Replacement	Permitted Replacement
10. <input type="checkbox"/> Designated Port Areas	Indicate size under Land Under the Ocean, below			
11. <input type="checkbox"/> Land Under the Ocean	_____	_____		
	a. square feet	b. square feet		
	_____	_____		
	c. c/y dredged	d. c/y dredged		
12. <input type="checkbox"/> Barrier Beaches	Indicate size under Coastal Beaches and/or Coastal Dunes below			
13. <input type="checkbox"/> Coastal Beaches	_____	_____	_____	_____
	a. square feet	b. square feet	c. nourishment	d. nourishment
			cu yd	cu yd
14. <input type="checkbox"/> Coastal Dunes	_____	_____	_____	_____
	a. square feet	b. square feet	c. nourishment	d. nourishment
			cu yd	cu yd
15. <input checked="" type="checkbox"/> Coastal Banks	+/- 12	+/- 12		
	a. linear feet	b. linear feet		
16. <input type="checkbox"/> Rocky Intertidal Shores	_____	_____		
	a. square feet	b. square feet		
17. <input type="checkbox"/> Salt Marshes	_____	_____	_____	_____
	a. square feet	b. square feet	c. square feet	d. square feet
18. <input type="checkbox"/> Land Under Salt Ponds	_____	_____		
	a. square feet	b. square feet		
	_____	_____		
	c. c/y dredged	d. c/y dredged		
19. <input type="checkbox"/> Land Containing Shellfish	_____	_____	_____	_____
	a. square feet	b. square feet	c. square feet	d. square feet
20. <input type="checkbox"/> Fish Runs	Indicate size under Coastal Banks, Inland Bank, Land Under the Ocean, and/or inland Land Under Waterbodies and Waterways, above			
	_____	_____		
	a. c/y dredged	b. c/y dredged		
21. <input checked="" type="checkbox"/> Land Subject to Coastal Storm Flowage	26,445	26,445		
	a. square feet	b. square feet		



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**B. Findings (cont.)**

\* #22. If the project is for the purpose of restoring or enhancing a wetland resource area in addition to the square footage that has been entered in Section B.5.c (BWV) or B.17.c (Salt Marsh) above, please enter the additional amount here.

22.  Restoration/Enhancement \*:

a. square feet of BWV

b. square feet of salt marsh

23.  Stream Crossing(s):

a. number of new stream crossings

b. number of replacement stream crossings

**C. General Conditions Under Massachusetts Wetlands Protection Act**

The following conditions are only applicable to Approved projects.

1. Failure to comply with all conditions stated herein, and with all related statutes and other regulatory measures, shall be deemed cause to revoke or modify this Order.
2. The Order does not grant any property rights or any exclusive privileges; it does not authorize any injury to private property or invasion of private rights.
3. This Order does not relieve the permittee or any other person of the necessity of complying with all other applicable federal, state, or local statutes, ordinances, bylaws, or regulations.
4. The work authorized hereunder shall be completed within three years from the date of this Order unless either of the following apply:
  - a. the work is a maintenance dredging project as provided for in the Act; or
  - b. the time for completion has been extended to a specified date more than three years, but less than five years, from the date of issuance. If this Order is intended to be valid for more than three years, the extension date and the special circumstances warranting the extended time period are set forth as a special condition in this Order.
5. This Order may be extended by the issuing authority for one or more periods of up to three years each upon application to the issuing authority at least 30 days prior to the expiration date of the Order.
6. If this Order constitutes an Amended Order of Conditions, this Amended Order of Conditions does not extend the issuance date of the original Final Order of Conditions and the Order will expire on \_\_\_\_\_ unless extended in writing by the Department.
7. Any fill used in connection with this project shall be clean fill. Any fill shall contain no trash, refuse, rubbish, or debris, including but not limited to lumber, bricks, plaster, wire, lath, paper, cardboard, pipe, tires, ashes, refrigerators, motor vehicles, or parts of any of the foregoing.
8. This Order is not final until all administrative appeal periods from this Order have elapsed, or if such an appeal has been taken, until all proceedings before the Department have been completed.



Massachusetts Department of Environmental Protection  
Bureau of Resource Protection - Wetlands  
**WPA Form 5 – Order of Conditions**  
Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:  
059-1283  
MassDEP File #  
eDEP Transaction #  
Quincy  
City/Town

**C. General Conditions Under Massachusetts Wetlands Protection Act (cont.)**

9. No work shall be undertaken until the Order has become final and then has been recorded in the Registry of Deeds or the Land Court for the district in which the land is located, within the chain of title of the affected property. In the case of recorded land, the Final Order shall also be noted in the Registry's Grantor Index under the name of the owner of the land upon which the proposed work is to be done. In the case of the registered land, the Final Order shall also be noted on the Land Court Certificate of Title of the owner of the land upon which the proposed work is done. The recording information shall be submitted to the Conservation Commission on the form at the end of this Order, which form must be stamped by the Registry of Deeds, prior to the commencement of work.
10. A sign shall be displayed at the site not less than two square feet or more than three square feet in size bearing the words,  
"Massachusetts Department of Environmental Protection" [or, "MassDEP"]  
"File Number            059-1283            "
11. Where the Department of Environmental Protection is requested to issue a Superseding Order, the Conservation Commission shall be a party to all agency proceedings and hearings before MassDEP.
12. Upon completion of the work described herein, the applicant shall submit a Request for Certificate of Compliance (WPA Form 8A) to the Conservation Commission.
13. The work shall conform to the plans and special conditions referenced in this order.
14. Any change to the plans identified in Condition #13 above shall require the applicant to inquire of the Conservation Commission in writing whether the change is significant enough to require the filing of a new Notice of Intent.
15. The Agent or members of the Conservation Commission and the Department of Environmental Protection shall have the right to enter and inspect the area subject to this Order at reasonable hours to evaluate compliance with the conditions stated in this Order, and may require the submittal of any data deemed necessary by the Conservation Commission or Department for that evaluation.
16. This Order of Conditions shall apply to any successor in interest or successor in control of the property subject to this Order and to any contractor or other person performing work conditioned by this Order.
17. Prior to the start of work, and if the project involves work adjacent to a Bordering Vegetated Wetland, the boundary of the wetland in the vicinity of the proposed work area shall be marked by wooden stakes or flagging. Once in place, the wetland boundary markers shall be maintained until a Certificate of Compliance has been issued by the Conservation Commission.



Massachusetts Department of Environmental Protection  
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City/Town

**C. General Conditions Under Massachusetts Wetlands Protection Act (cont.)**

18. All sedimentation barriers shall be maintained in good repair until all disturbed areas have been fully stabilized with vegetation or other means. At no time shall sediments be deposited in a wetland or water body. During construction, the applicant or his/her designee shall inspect the erosion controls on a daily basis and shall remove accumulated sediments as needed. The applicant shall immediately control any erosion problems that occur at the site and shall also immediately notify the Conservation Commission, which reserves the right to require additional erosion and/or damage prevention controls it may deem necessary. Sedimentation barriers shall serve as the limit of work unless another limit of work line has been approved by this Order.

**NOTICE OF STORMWATER CONTROL AND MAINTENANCE REQUIREMENTS**

19. The work associated with this Order (the "Project") is (1)  is not (2)  subject to the Massachusetts Stormwater Standards. If the work is subject to the Stormwater Standards, then the project is subject to the following conditions:

a) All work, including site preparation, land disturbance, construction and redevelopment, shall be implemented in accordance with the construction period pollution prevention and erosion and sedimentation control plan and, if applicable, the Stormwater Pollution Prevention Plan required by the National Pollution Discharge Elimination System Construction General Permit as required by Stormwater Condition 8. Construction period erosion, sedimentation and pollution control measures and best management practices (BMPs) shall remain in place until the site is fully stabilized.

b) No stormwater runoff may be discharged to the post-construction stormwater BMPs unless and until a Registered Professional Engineer provides a Certification that:

- i. all construction period BMPs have been removed or will be removed by a date certain specified in the Certification. For any construction period BMPs intended to be converted to post construction operation for stormwater attenuation, recharge, and/or treatment, the conversion is allowed by the MassDEP Stormwater Handbook BMP specifications and that the BMP has been properly cleaned or prepared for post construction operation, including removal of all construction period sediment trapped in inlet and outlet control structures;
- ii. as-built final construction BMP plans are included, signed and stamped by a Registered Professional Engineer, certifying the site is fully stabilized;
- iii. any illicit discharges to the stormwater management system have been removed, as per the requirements of Stormwater Standard 10;
- iv. all post-construction stormwater BMPs are installed in accordance with the plans (including all planting plans) approved by the issuing authority, and have been inspected to ensure that they are not damaged and that they are in proper working condition;
- v. any vegetation associated with post-construction BMPs is suitably established to withstand erosion.



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**C. General Conditions Under Massachusetts Wetlands Protection Act (cont.)**

c) The landowner is responsible for BMP maintenance until the issuing authority is notified that another party has legally assumed responsibility for BMP maintenance. Prior to requesting a Certificate of Compliance, or Partial Certificate of Compliance, the responsible party (defined in General Condition 18(e)) shall execute and submit to the issuing authority an Operation and Maintenance Compliance Statement ("O&M Statement") for the Stormwater BMPs identifying the party responsible for implementing the stormwater BMP Operation and Maintenance Plan ("O&M Plan") and certifying the following: *i.*) the O&M Plan is complete and will be implemented upon receipt of the Certificate of Compliance, and *ii.*) the future responsible parties shall be notified in writing of their ongoing legal responsibility to operate and maintain the stormwater management BMPs and implement the Stormwater Pollution Prevention Plan.

d) Post-construction pollution prevention and source control shall be implemented in accordance with the long-term pollution prevention plan section of the approved Stormwater Report and, if applicable, the Stormwater Pollution Prevention Plan required by the National Pollution Discharge Elimination System Multi-Sector General Permit.

e) Unless and until another party accepts responsibility, the landowner, or owner of any drainage easement, assumes responsibility for maintaining each BMP. To overcome this presumption, the landowner of the property must submit to the issuing authority a legally binding agreement of record, acceptable to the issuing authority, evidencing that another entity has accepted responsibility for maintaining the BMP, and that the proposed responsible party shall be treated as a permittee for purposes of implementing the requirements of Conditions 18(f) through 18(k) with respect to that BMP. Any failure of the proposed responsible party to implement the requirements of Conditions 18(f) through 18(k) with respect to that BMP shall be a violation of the Order of Conditions or Certificate of Compliance. In the case of stormwater BMPs that are serving more than one lot, the legally binding agreement shall also identify the lots that will be serviced by the stormwater BMPs. A plan and easement deed that grants the responsible party access to perform the required operation and maintenance must be submitted along with the legally binding agreement.

f) The responsible party shall operate and maintain all stormwater BMPs in accordance with the design plans, the O&M Plan, and the requirements of the Massachusetts Stormwater Handbook.



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Provided by MassDEP:  
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MassDEP File #  
\_\_\_\_\_  
eDEP Transaction #  
**Quincy**  
\_\_\_\_\_  
City/Town

**C. General Conditions Under Massachusetts Wetlands Protection Act (cont.)**

- g) The responsible party shall:
  1. Maintain an operation and maintenance log for the last three (3) consecutive calendar years of inspections, repairs, maintenance and/or replacement of the stormwater management system or any part thereof, and disposal (for disposal the log shall indicate the type of material and the disposal location);
  2. Make the maintenance log available to MassDEP and the Conservation Commission ("Commission") upon request; and
  3. Allow members and agents of the MassDEP and the Commission to enter and inspect the site to evaluate and ensure that the responsible party is in compliance with the requirements for each BMP established in the O&M Plan approved by the issuing authority.
  
- h) All sediment or other contaminants removed from stormwater BMPs shall be disposed of in accordance with all applicable federal, state, and local laws and regulations.
- i) Illicit discharges to the stormwater management system as defined in 310 CMR 10.04 are prohibited.
- j) The stormwater management system approved in the Order of Conditions shall not be changed without the prior written approval of the issuing authority.
- k) Areas designated as qualifying pervious areas for the purpose of the Low Impact Site Design Credit (as defined in the MassDEP Stormwater Handbook, Volume 3, Chapter 1, Low Impact Development Site Design Credits) shall not be altered without the prior written approval of the issuing authority.
- l) Access for maintenance, repair, and/or replacement of BMPs shall not be withheld. Any fencing constructed around stormwater BMPs shall include access gates and shall be at least six inches above grade to allow for wildlife passage.

Special Conditions (if you need more space for additional conditions, please attach a text document):

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Massachusetts Department of Environmental Protection  
 Bureau of Resource Protection - Wetlands  
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 Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:  
 059-1283  
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 eDEP Transaction #  
 Quincy  
 City/Town

**D. Findings Under Municipal Wetlands Bylaw or Ordinance**

1. Is a municipal wetlands bylaw or ordinance applicable?  Yes  No
2. The Quincy Conservation Commission hereby finds (check one that applies):
- a.  that the proposed work cannot be conditioned to meet the standards set forth in a municipal ordinance or bylaw, specifically:

1. Municipal Ordinance or Bylaw \_\_\_\_\_ 2. Citation \_\_\_\_\_

Therefore, work on this project may not go forward unless and until a revised Notice of Intent is submitted which provides measures which are adequate to meet these standards, and a final Order of Conditions is issued.

- b.  that the following additional conditions are necessary to comply with a municipal ordinance or bylaw:

Municipal Wetlands Act 401-87  
 1. Municipal Ordinance or Bylaw \_\_\_\_\_ 2. Citation \_\_\_\_\_

3. The Commission orders that all work shall be performed in accordance with the following conditions and with the Notice of Intent referenced above. To the extent that the following conditions modify or differ from the plans, specifications, or other proposals submitted with the Notice of Intent, the conditions shall control.

The special conditions relating to municipal ordinance or bylaw are as follows (if you need more space for additional conditions, attach a text document):

1. A copy of the Order of Conditions and Approved Plans shall be on-site during all operations.
2. Prior to any activity on site, the Applicant shall inform the Commission of the Name and Contact information of the on-site Construction Supervisor as well as the start date of the project.
3. Erosion and sediment control shall be maintained at all times and not removed until approved by the Commission.



**Massachusetts Department of Environmental Protection  
Bureau of Resource Protection - Wetlands  
WPA Form 5 – Order of Conditions  
Massachusetts Wetlands Protection Act M.G.L. c. 131, §40**

Provided by MassDEP:  
059-1283  
MassDEP File #  
eDEP Transaction #  
Quincy  
City/Town

**G. Recording Information**

Prior to commencement of work, this Order of Conditions must be recorded in the Registry of Deeds or the Land Court for the district in which the land is located, within the chain of title of the affected property. In the case of recorded land, the Final Order shall also be noted in the Registry's Grantor Index under the name of the owner of the land subject to the Order. In the case of registered land, this Order shall also be noted on the Land Court Certificate of Title of the owner of the land subject to the Order of Conditions. The recording information on this page shall be submitted to the Conservation Commission listed below.

Quincy

Conservation Commission

Detach on dotted line, have stamped by the Registry of Deeds and submit to the Conservation Commission.

To:

Quincy

Conservation Commission

Please be advised that the Order of Conditions for the Project at:

0 Coddington Street

Project Location

059-1283

MassDEP File Number

Has been recorded at the Registry of Deeds of:

Norfolk

County

99

Book

4892

Page

for:

City of Quincy

Property Owner

and has been noted in the chain of title of the affected property in:

Book

Page

In accordance with the Order of Conditions issued on:

Date

If recorded land, the instrument number identifying this transaction is:

Instrument Number

If registered land, the document number identifying this transaction is:

Document Number

Signature of Applicant



**Massachusetts Department of Environmental Protection**  
**Bureau of Resource Protection - Wetlands**  
**WPA Form 5 – Order of Conditions**  
 Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:  
 059-1283  
 MassDEP File #  
 eDEP Transaction #  
 Quincy  
 City/Town

**E. Signatures**

This Order is valid for three years, unless otherwise specified as a special condition pursuant to General Conditions #4, from the date of issuance.

March 7, 2012

Please indicate the number of members who will sign this form.

1. Date of Issuance

This Order must be signed by a majority of the Conservation Commission.

4

2. Number of Signers

The Order must be mailed by certified mail (return receipt requested) or hand delivered to the applicant. A copy also must be mailed or hand delivered at the same time to the appropriate Department of Environmental Protection Regional Office, if not filing electronically, and the property owner, if different from applicant.

Signatures:

*[Handwritten signatures]*

*[Handwritten signature]*

by hand delivery on

by certified mail, return receipt requested, on

March 8, 2012

Date

Date

**F. Appeals**

The applicant, the owner, any person aggrieved by this Order, any owner of land abutting the land subject to this Order, or any ten residents of the city or town in which such land is located, are hereby notified of their right to request the appropriate MassDEP Regional Office to issue a Superseding Order of Conditions. The request must be made by certified mail or hand delivery to the Department, with the appropriate filing fee and a completed Request of Departmental Action Fee Transmittal Form, as provided in 310 CMR 10.03(7) within ten business days from the date of issuance of this Order. A copy of the request shall at the same time be sent by certified mail or hand delivery to the Conservation Commission and to the applicant, if he/she is not the appellant.

Any appellants seeking to appeal the Department's Superseding Order associated with this appeal will be required to demonstrate prior participation in the review of this project. Previous participation in the permit proceeding means the submission of written information to the Conservation Commission prior to the close of the public hearing, requesting a Superseding Order, or providing written information to the Department prior to issuance of a Superseding Order.

The request shall state clearly and concisely the objections to the Order which is being appealed and how the Order does not contribute to the protection of the interests identified in the Massachusetts Wetlands Protection Act (M.G.L. c. 131, § 40), and is inconsistent with the wetlands regulations (310 CMR 10.00). To the extent that the Order is based on a municipal ordinance or bylaw, and not on the Massachusetts Wetlands Protection Act or regulations, the Department has no appellate jurisdiction.

## **Appendix B**

**US Army Corps of Engineers**

**Programmatic General Permit**

**File Numbers: NAE-2012-353 & NAE-2012-353**



REPLY TO  
ATTENTION OF

**DEPARTMENT OF THE ARMY**  
NEW ENGLAND DISTRICT, CORPS OF ENGINEERS  
696 VIRGINIA ROAD  
CONCORD, MASSACHUSETTS 01742-2751

March 27, 2012

Regulatory Division  
File Number: NAE-2012-353

Shawn Hardy, P.E., City Engineer  
The City of Quincy Department of Public Works  
55 Sea Street  
Quincy, Massachusetts 02169

Dear Mr. Hardy:

We have reviewed your application to perform work, place structures, and place approximately 325 square feet of permanent fill below the high tide line and 200 square feet of temporary fill below the ordinary high water line of waters of the United States including wetlands in order to perform repairs to an existing tide gate and to replace an existing catch basin and associated drainage pipes that are located within a wetland upstream of the tide gate. This project is located at the inlet of Town River at the end of Broad Street and off of Russell Park Road, Quincy, Massachusetts. The work is shown on the attached plans entitled, "Repairs to the Broad Street Tide Gate and Stormwater Tributary System," on five sheets, and dated February 10, 2012.

Based on the information you have provided, we have determined that the proposed activity, which includes a discharge of dredged or fill material into waters or wetlands, will have only minimal individual or cumulative environmental impacts on waters of the United States, including wetlands. Therefore, this work is authorized as a Category 2 activity under the attached Federal permit known as the Massachusetts General Permit (GP). This work must be performed in accordance with the terms and conditions of the GP and also in compliance with the following special conditions:

1. Silt curtains placed fully across waterways often cause localized scour, erosion, and turbidity by forcing water to flow faster around or under the curtain. If such conditions are observed during the silt curtain use, the curtain shall be removed from across the waterway.
2. Debris or refuse materials excavated from the waterway shall not be placed back into the waterway.
3. Rip-rap shall not be placed below the high tide line of the waterway.
4. The new Catch Basin 203 shall maintain the same grate elevation of 3.65 feet NAVD 88 as the existing catch basin to be replaced in order to maintain the same hydrologic conditions in the wetland.

The Corps of Engineers has consulted with the National Marine Fisheries Service (NMFS) regarding the effects of your project on Essential Fish Habitat (EFH) as designated under the Magnuson-Stevens Fishery Conservation and Management Act. The NMFS has not provided EFH conservation recommendations.

You are responsible for complying with all of the GP's requirements. Please review the attached GP carefully, in particular the GP conditions beginning on Page 5, to familiarize yourself with its contents. You should ensure that whoever does the work fully understands the requirements and that a copy of the permit document and this authorization letter are at the project site throughout the time the work is underway.

This determination becomes valid only after the Massachusetts Department of Environmental Protection (MassDEP) issues or waives Water Quality Certification (WQC) as required under Section 401 of the Clean Water Act. In the event the DEP denies the 401 WQC, this determination becomes null and void. The address of the MassDEP Regional office for your area is provided in the attached GP.

Your project is located within, or may affect resources within the coastal zone. The Massachusetts Office of Coastal Zone Management (CZM) has already determined that no further Federal Consistency Review is required.

This GP expires on January 21, 2015. Activities authorized under this GP that have commenced (i.e., are under construction) or are under contract to commence before this GP expires will have until January 21, 2016 to complete the activity under the terms and general conditions of the current GP. For work within Corps jurisdiction that is not completed by January 21, 2016, you will need to reference any reissued GP to see if your project is still authorized under Category 1 (no application required), or Category 2 (application required). If it is no longer authorized you must submit an application and receive written authorization before you can continue work within our jurisdiction. Please contact us immediately if you change the plans or construction methods for work within our jurisdiction. This office must approve any changes before you undertake them.

This authorization requires you to complete and return the attached Work Start Notification Form to this office at least two weeks before the anticipated starting date. You must also complete and return the enclosed Compliance Certification Form within one month following the completion of the authorized work.

This authorization presumes that the work as described above and as shown on your plans noted above is in waters of the U.S. Should you desire to appeal our jurisdiction, submit a request for an approved jurisdictional determination in writing to this office.

This permit does not obviate the need to obtain other federal, state, or local authorizations required by law, as listed on Page 2 of the GP. Performing work not specifically authorized by this determination or failing to comply with any special condition(s) provided above or all the terms and conditions of the GP may subject you to the enforcement provisions of our regulations.

We continually strive to improve our customer service. In order for us to better serve you, we would appreciate your completing our Customer Service Survey located at <http://per2.nwp.usace.army.mil/survey.html>

Please contact Kevin Kotelly, of my staff at 978-318-8703 if you have any questions.

Sincerely,



Karen Kirk Adams  
Chief, Permits & Enforcement Branch  
Regulatory Division

Attachments

Copies Furnished:

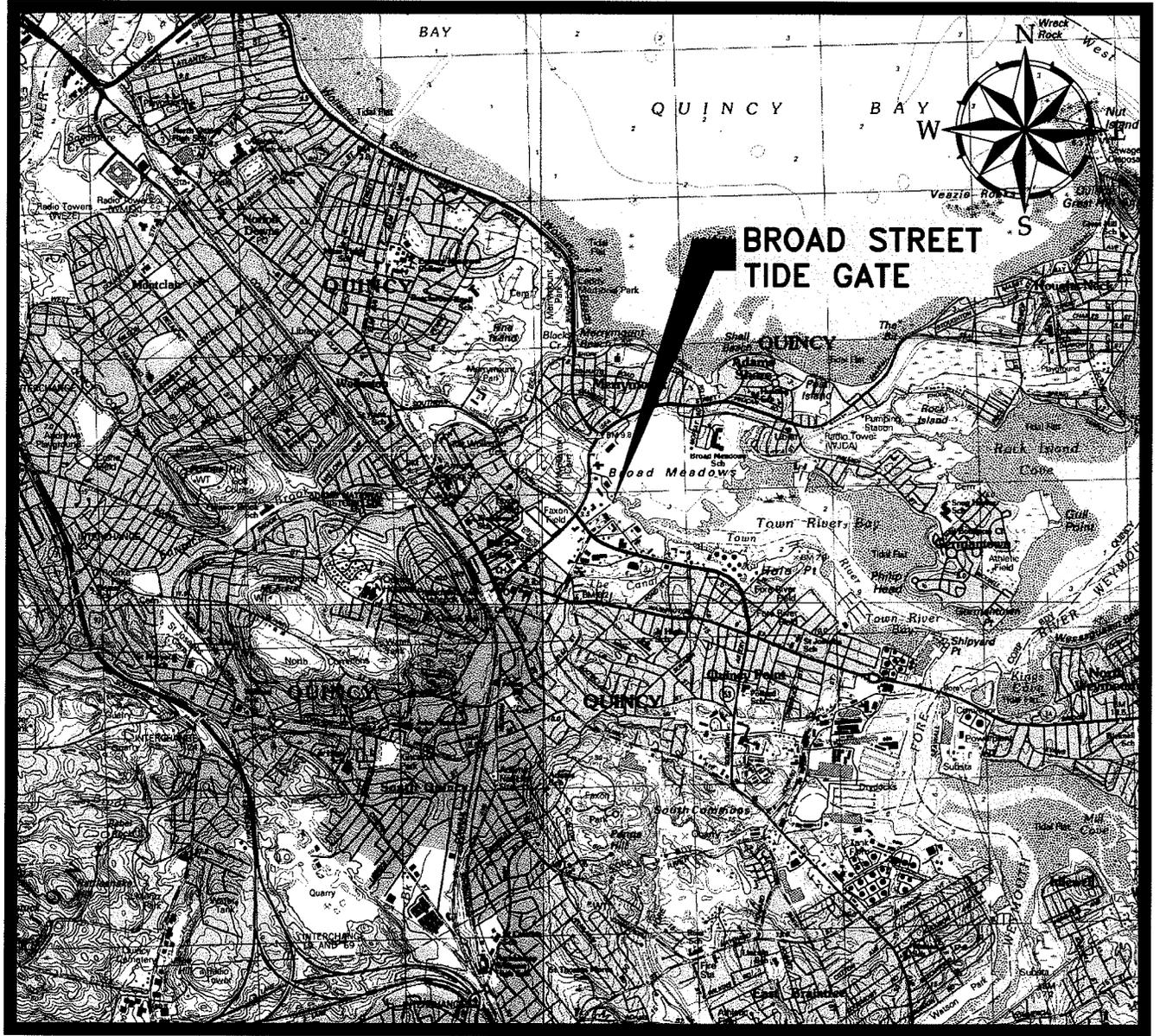
Ed Reiner, U.S. EPA, Region 1, Boston, Massachusetts, [reiner.ed@epa.gov](mailto:reiner.ed@epa.gov)

Christopher Boelke, National Marine Fisheries Service, Gloucester, Massachusetts,  
[christopher.boelke@noaa.gov](mailto:christopher.boelke@noaa.gov)

Rachel Freed, DEP NERO, Wetland and Waterways, Wilmington, Massachusetts,  
[rachel.freed@state.ma.us](mailto:rachel.freed@state.ma.us)

John T. Brennion, Conservation Commission, Quincy City Hall, 1305 Hancock Street, Quincy,  
Massachusetts 02169

Daniel Garson, Woodard and Curran, Inc., 980 Washington Street, Suite 325N, Dedham,  
Massachusetts 02026



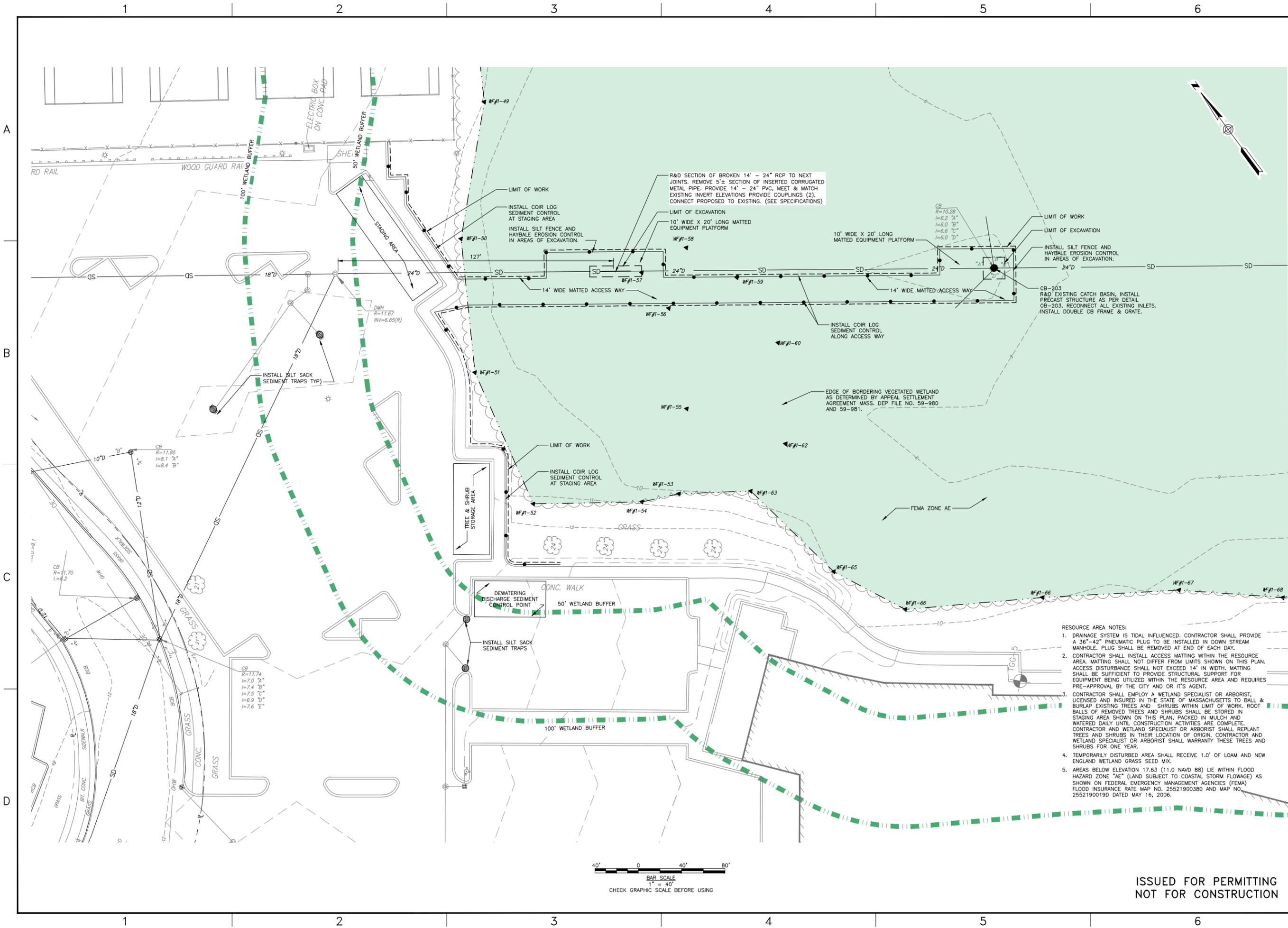
SOURCE: USGS TOPOGRAPHIC MAP

# SITE LOCATION MAP

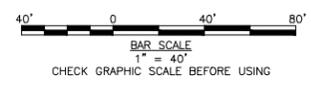
NOT TO SCALE







- RESOURCE AREA NOTES:**
1. DRAINAGE SYSTEM IS TIDAL INFLUENCED. CONTRACTOR SHALL PROVIDE A 36"-42" PNEUMATIC PLUG TO BE INSTALLED IN DOWN STREAM MANHOLE. PLUG SHALL BE REMOVED AT END OF EACH DAY.
  2. CONTRACTOR SHALL INSTALL ACCESS MATTING WITHIN THE RESOURCE AREA. MATTING SHALL NOT DIFFER FROM LIMITS SHOWN ON THIS PLAN. ACCESS DISTURBANCE SHALL NOT EXCEED 14" IN WIDTH. MATTING SHALL BE SUFFICIENT TO PROVIDE STRUCTURAL SUPPORT FOR EQUIPMENT BEING UTILIZED WITHIN THE RESOURCE AREA AND REQUIRES PRE-APPROVAL BY THE CITY AND OR IT'S AGENT.
  3. CONTRACTOR SHALL EMPLOY A WETLAND SPECIALIST OR ARBORIST, LICENSED AND INSURED IN THE STATE OF MASSACHUSETTS TO BALL & BURLAP EXISTING TREES AND SHRUBS WITHIN LIMIT OF WORK. ROOT BALLS OF REMOVED TREES AND SHRUBS SHALL BE STORED IN STAGING AREA SHOWN ON THIS PLAN, PACKED IN MULCH AND WATERED DAILY UNTIL CONSTRUCTION ACTIVITIES ARE COMPLETE. CONTRACTOR AND WETLAND SPECIALIST OR ARBORIST SHALL REPLANT TREES AND SHRUBS IN THEIR LOCATION OF ORIGIN. CONTRACTOR AND WETLAND SPECIALIST OR ARBORIST SHALL WARRANTY THESE TREES AND SHRUBS FOR ONE YEAR.
  4. TEMPORARILY DISTURBED AREA SHALL RECEIVE 1.0' OF LOAM AND NEW ENGLAND WETLAND GRASS SEED MIX.
  5. AREAS BELOW ELEVATION 17.63 (11.0 NAVD 88) LIE WITHIN FLOOD HAZARD ZONE "AE" (LAND SUBJECT TO COASTAL STORM FLOWAGE) AS SHOWN ON FEDERAL EMERGENCY MANAGEMENT AGENCIES (FEMA) FLOOD INSURANCE RATE MAP NO. 25521900380 AND MAP NO. 2552190019D DATED MAY 16, 2006.



980 Washington Street, Suite 325N  
 Dedham, Massachusetts 02026  
 800.446.6518 | www.woodardcurran.com

**WOODARD & CURRAN**

COMMITMENT & INTEGRITY DRIVE RESULTS

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REVISION	DATE	DESCRIPTION

CHECKED BY: 224627.01\_CONCORDBUILDING  
 DESIGNED BY:  
 DRAWN BY:

**RESOURCE AREA IMPROVEMENTS PLAN**

CITY OF QUINCY, MASSACHUSETTS  
 DEPARTMENT OF PUBLIC WORKS  
 55 SEA STREET, QUINCY, MA

REPAIRS TO THE BROAD STREET  
 TIDE GATE & STORMWATER  
 TRIBUTARY SYSTEM

JOB NO.: 224627.01  
 DATE: FEBRUARY 10, 2012  
 SCALE: 1" = 40'  
 SHEET: 6 OF 13

**C-203**

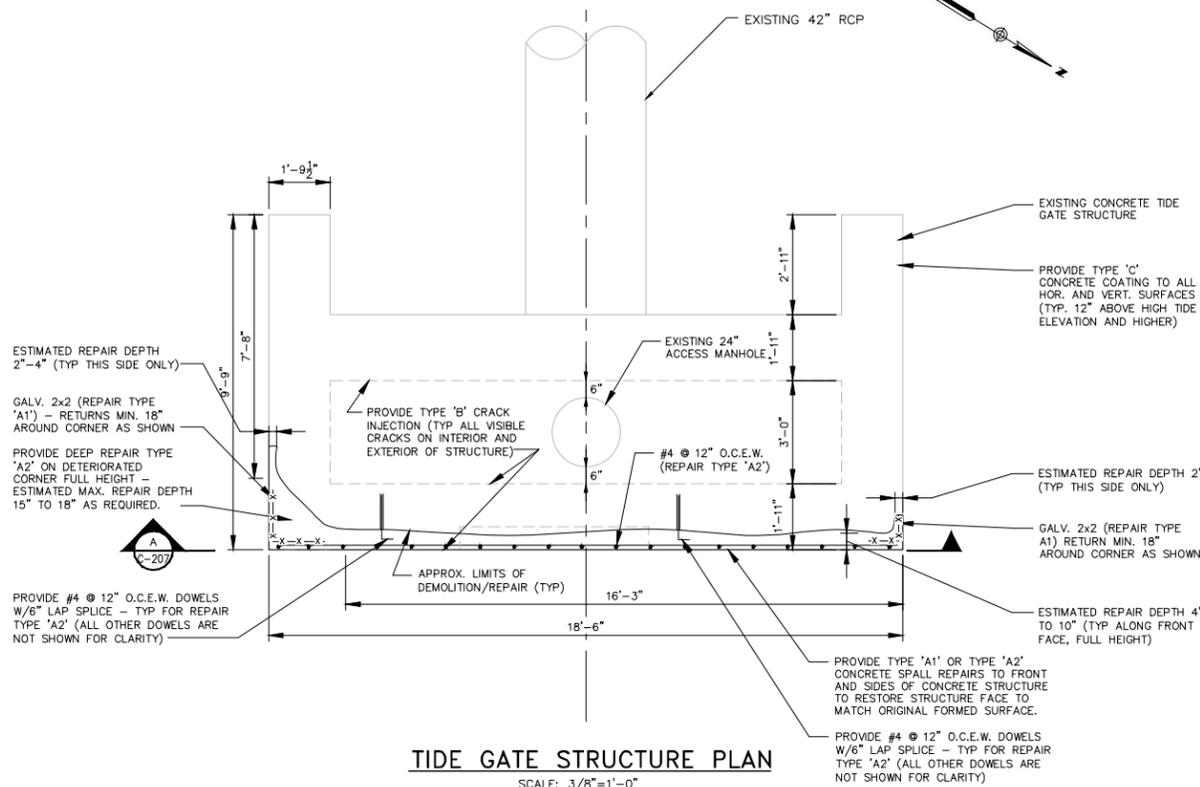
ISSUED FOR PERMITTING  
 NOT FOR CONSTRUCTION

A

B

C

D

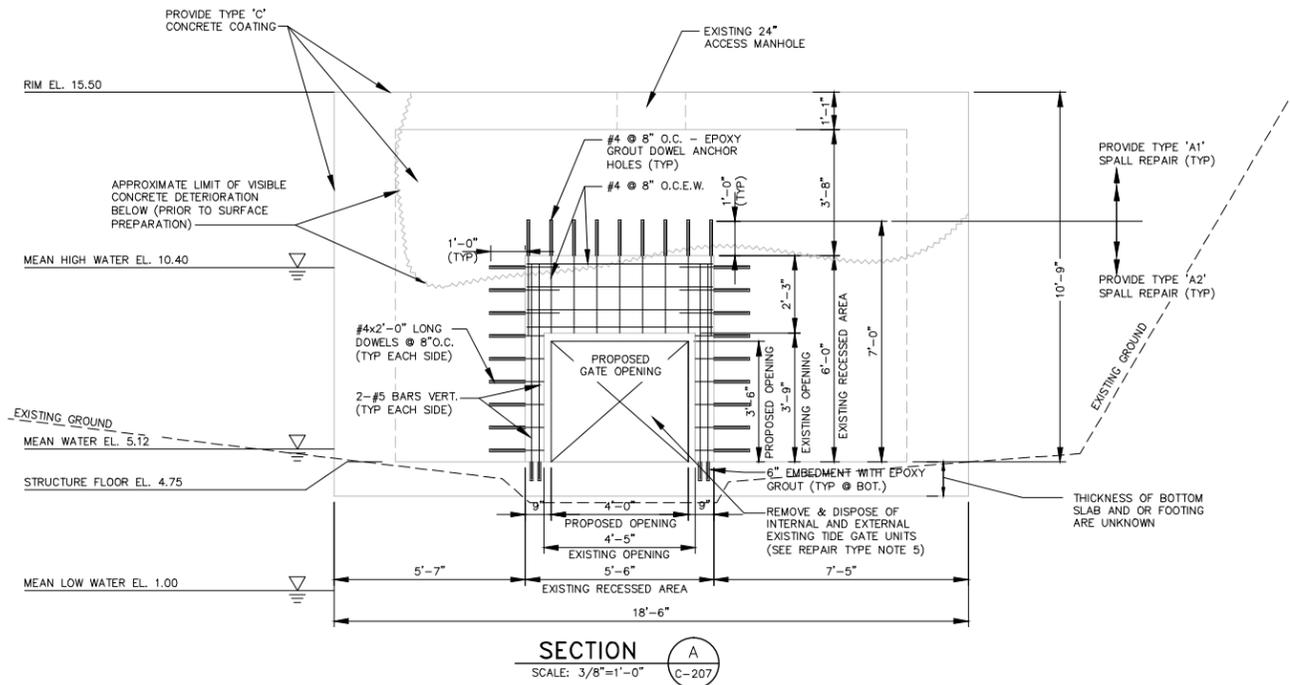


**TIDE GATE STRUCTURE PLAN**  
SCALE: 3/8"=1'-0"

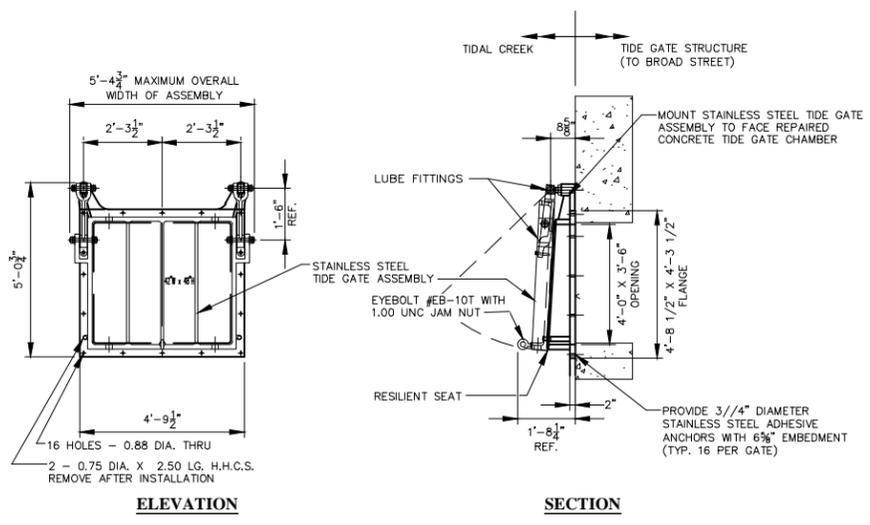
CONCRETE REPAIR SCHEDULE					
REPAIR TYPE	REPAIR DESCRIPTION	UNIT	QUANTITY	BID ITEM TYPE	REMARKS
A1	SHALLOW SPALL REPAIR (2" < DEPTH ≤ 4")	SF	100	UNIT PRICE	REPAIR AREAS ARE ABOVE HIGH TIDE ELEVATION
A2	DEEP SPALL REPAIR (4" < DEPTH ≤ 10")	SF	150	UNIT PRICE	PROVIDE ANTI-WASHOUT ADMIXTURE TO CONCRETE PLACED UNDER WATER AND WITHIN 4' ABOVE LOW TIDE.
B	CRACK INJECTION	LF	75	UNIT PRICE	BOTH INSIDE AND OUTSIDE OF STRUCTURE
C	CONCRETE COATING	SF	350	LUMP SUM	FOR ABOVE-WATER-LINE HORIZONTAL AND VERTICAL SURFACES

**REPAIR TYPE DESCRIPTION:**

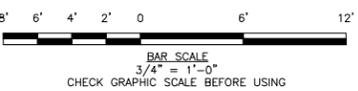
- REPAIR TYPE A1 - SHALLOW SPALL REPAIR:** FOR ESTIMATED REPAIR DEPTHS FROM 2" UP TO 4".
  - AS SHOWN ON THE PLANS AND AS SCHEDULED, ALL HOLLOW, UNSOUND, DETERIORATED CONCRETE SURFACES SHALL BE REPAIRED AS FOLLOWS: SAW-CUTTING OF PERIMETER OF REPAIR TO A MINIMUM DEPTH OF 1"; CHIPPING OUT ALL UNSOUND CONCRETE TO A DEPTH APPROVED BY ENGINEER; INSTALLING LEAD HOOK ANCHORS AND 2X2 GALVANIZED STEEL WELDED WIRE FABRIC WITH MINIMUM 1" CONCRETE COVER.
  - PROVIDE HIGH-PERFORMANCE REPAIR MORTAR EQUAL TO "SIKATOP 123 PLUS" BY SIKA CORPORATION TO RESTORE STRUCTURE TO ORIGINAL FORM DIMENSIONS FLUSH WITH ADJACENT FORMED SURFACES; STEEL TROWEL FINISH.
  - REFER TO SPECIFICATION SECTION 03720 FOR FURTHER REQUIREMENTS.
  - ALL SURFACE PREPARATION AND INSTALLATION SHALL BE IN STRICT ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- REPAIR TYPE A2 - DEEP SPALL REPAIR:** FOR ESTIMATED REPAIR DEPTHS LARGER THAN 4" UP TO 10".
  - AS SHOWN ON THE PLANS AND AS SCHEDULED, ALL HOLLOW, UNSOUND, DETERIORATED CONCRETE SURFACES SHALL BE REPAIRED AS FOLLOWS: SAW-CUTTING OF PERIMETER OF REPAIR TO A MINIMUM DEPTH OF 1"; CHIPPING OUT ALL UNSOUND CONCRETE TO A DEPTH APPROVED BY ENGINEER; INSTALLING #4 REBAR DOWELS @ 12" O.C. EACH WAY DRILLED AND EMBEDDED A MINIMUM OF 4" INTO EXISTING SOUND CONCRETE WITH EPOXY GROUT AND MINIMUM 1.5" CONCRETE COVER; INSTALL #4 @ 12" O.C. EACH WAY REBAR MAT TIED TO DOWELS OVER REPAIR AREA.
  - PROVIDE HIGH-PERFORMANCE REPAIR MORTAR EQUAL TO "SIKATOP 123 PLUS" BY SIKA CORPORATION TO RESTORE ORIGINAL FORM DIMENSIONS FLUSH WITH ADJACENT FORMED SURFACES; STEEL TROWEL FINISH.
  - REFER TO SPECIFICATION SECTION 03720 FOR FURTHER REQUIREMENTS.
  - FOR REPAIRS THAT ARE WITHIN 4' OF LOW TIDE ELEVATION, CONCRETE REPAIR MORTAR SHALL BE COMBINED WITH A LIQUID ANTI-WASHOUT ADMIXTURE EQUAL TO "RHEDMAC UW450" BY BASF, TO PERMIT UNDERWATER APPLICATION OF CONCRETE WITHIN FORMWORK. ALL SURFACE PREPARATION AND INSTALLATION SHALL BE IN STRICT ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- REPAIR TYPE B - CRACK INJECTION:**
  - AS SHOWN ON THE PLANS AND AS SCHEDULED, ALL CRACKS SHALL BE CONTINUALLY INJECTED WITH "SIKAFIX HH PLUS" BY SIKA CORPORATION, OR APPROVED EQUAL.
  - PRODUCT SHALL BE HIGH-SOLIDS, HYDROPHOBIC, POLYURETHANE, LIQUID CHEMICAL GROUT.
  - REFER TO SPECIFICATION SECTION 03742 FOR FURTHER REQUIREMENTS.
  - SURFACE PREPARATION AND APPLICATION SHALL BE IN STRICT ACCORDANCE WITH MANUFACTURER'S WRITTEN RECOMMENDATIONS.
- REPAIR TYPE C - CONCRETE COATING:**
  - AS SHOWN ON THE PLANS AND AS SCHEDULED, CLEAN AND PREPARE EXISTING HORIZONTAL AND VERTICAL CONCRETE SURFACES.
  - PROVIDE POLYURETHANE, WATERPROOF, SEAMLESS, TRAFFIC-BEARING MEMBRANE SYSTEM EQUAL TO "SONOSHIELD SONOGUARD BASECOAT AND TOPCOAT", AS MANUFACTURED BY BASF, OR APPROVED EQUAL.
  - SURFACE PREPARATION AND APPLICATION SHALL BE IN STRICT ACCORDANCE WITH MANUFACTURER'S WRITTEN RECOMMENDATIONS.
- REMOVE AND DISPOSE OF EXISTING TIDE GATE ASSEMBLY, FRAME, AND ALL ASSOCIATED APPURTENANCES IN ITS ENTIRETY. COST SHALL BE INCIDENTAL TO LUMP SUM BASE BID PRICE (TYP. OF 2 TIDE GATE ASSEMBLIES).



**SECTION A**  
SCALE: 3/8"=1'-0"  
C-207



**TIDE GATE ASSEMBLY DETAIL**  
SCALE: 3/8"=1'-0"



980 Washington Street, Suite 325N  
Dedham, Massachusetts 02026  
800.446.5518 | www.woodardcurran.com

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REV.	DESCRIPTION	DATE

CHECKED BY: 224627.01\_AJC-TEGA/ERH/ABC  
DESIGNED BY:  
DRAWN BY:

**BROAD STREET TIDAL GATE STRUCTURE DETAILS**

CITY OF QUINCY, MASSACHUSETTS  
DEPARTMENT OF PUBLIC WORKS  
55 SEA STREET, QUINCY, MA

REPAIRS TO THE BROAD STREET  
TIDE GATE & STORMWATER  
TRIBUTARY SYSTEM

JOB NO.: 224627.01  
DATE: FEBRUARY 10, 2012  
SCALE: 3/4"=1'  
SHEET: 10 OF 13

**C-300**

ISSUED FOR PERMITTING  
NOT FOR CONSTRUCTION



**US Army Corps  
of Engineers**®  
New England District

**GENERAL PERMIT  
WORK-START NOTIFICATION FORM**  
(Minimum Notice: Two weeks before work begins)

\*\*\*\*\*  
\* MAIL TO: U.S. Army Corps of Engineers, New England District \*  
\* Permits and Enforcement Branch \*  
\* Regulatory Division \*  
\* 696 Virginia Road \*  
\* Concord, Massachusetts 01742-2751 \*  
\*\*\*\*\*

Corps of Engineers Permit No. NAE-2012-353 was issued to the City of Quincy, Massachusetts, in March, 2012. The permit authorized the permittee to perform work, place structures, and place approximately 325 square feet of permanent fill below the high tide line and 200 square feet of temporary fill below the ordinary high water line of waters of the United States including wetlands in order to perform repairs to an existing tide gate and to replace an existing catch basin and associated drainage pipes that are located within a wetland upstream of the tide gate. The project is located at the inlet of Town River at the end of Broad Street and off of Russell Park Road, Quincy, Massachusetts.

The people (e.g., contractor) listed below will do the work, and they understand the permit's conditions and limitations.

**PLEASE PRINT OR TYPE**

**Name of Person/Firm:** \_\_\_\_\_

**Business Address:** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Telephone Numbers:** ( ) \_\_\_\_\_ ( ) \_\_\_\_\_

**Proposed Work Dates:** Start: \_\_\_\_\_ Finish: \_\_\_\_\_

**Permittee/Agent Signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Printed Name:** \_\_\_\_\_ **Title:** \_\_\_\_\_

**Date Permit Issued:** \_\_\_\_\_ **Date Permit Expires:** \_\_\_\_\_

\*\*\*\*\*

**FOR USE BY THE CORPS OF ENGINEERS**

**PM:** Kevin Kotelly **Submittals Required:** No.

**Inspection Recommendation:** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



**US Army Corps  
of Engineers®**  
New England District

(Minimum Notice: Permittee must sign and return notification  
within one month of the completion of work.)

**COMPLIANCE CERTIFICATION FORM**

**Permit Number:** NAE-2012-353

**Project Manager** Kevin Kotelly

**Name of Permittee:** The City of Quincy, Massachusetts

**Permit Issuance Date:** March, 2012

Please sign this certification and return it to the following address upon completion of the activity and any mitigation required by the permit. You must submit this after the mitigation is complete, but not the mitigation monitoring, which requires separate submittals.

\*\*\*\*\*  
 \* MAIL TO: U.S. Army Corps of Engineers, New England District \*  
 \* Permits and Enforcement Branch A \*  
 \* Regulatory Division \*  
 \* 696 Virginia Road \*  
 \* Concord, Massachusetts 01742-2751 \*  
 \*\*\*\*\*

Please note that your permitted activity is subject to a compliance inspection by an U.S. Army Corps of Engineers representative. If you fail to comply with this permit you are subject to permit suspension, modification, or revocation.

**I hereby certify that the work authorized by the above referenced permit was completed in accordance with the terms and conditions of the above referenced permit, and any required mitigation was completed in accordance with the permit conditions.**

\_\_\_\_\_  
Signature of Permittee

\_\_\_\_\_  
Date

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
Date of Work Completion

( ) \_\_\_\_\_  
Telephone Number

( ) \_\_\_\_\_  
Telephone Number



REPLY TO  
ATTENTION OF

**DEPARTMENT OF THE ARMY**  
NEW ENGLAND DISTRICT, CORPS OF ENGINEERS  
696 VIRGINIA ROAD  
CONCORD, MASSACHUSETTS 01742-2751

April 19, 2012

Regulatory Division  
Permit Number: NAE-2012-353

Shawn Hardy, P.E., City Engineer  
The City of Quincy Department of Public Works  
55 Sea Street  
Quincy, Massachusetts 02169

Dear Mr. Hardy:

In accordance with your recent request, your Department of the Army permit number NAE-2012-353, issued on March 27, 2012 is hereby modified. The project is located at the inlet of Town River at the end of Broad Street and off of Russell Park Road, Quincy, Massachusetts. The original permit was to perform work, place structures, and place approximately 325 square feet (SF) of permanent fill below the high tide line and 200 SF of temporary fill below the ordinary high water line (OHWL) of waters of the United States including wetlands in order to perform repairs to an existing tide gate and to replace an existing catch basin and associated drainage pipes that are located within a wetland upstream of the tide gate.

The area of temporary fill is hereby modified from 200 SF to 4650 SF below the OHWL due to the temporary placement of swamp mats within the wetland during the replacement of the existing catch basin and drainage pipes.

The conditions of the original permit remain in full force and effect.

We continually strive to improve our customer service. In order for us to better serve you, we would appreciate your completing our Customer Service Survey located at <http://per2.nwp.usace.army.mil/survey.html>

If you have any questions, please contact Kevin Kotelly of my staff at (978) 318-8703.

Sincerely,

A handwritten signature in cursive script, appearing to read "Karen K. Adams".

Karen K. Adams  
Chief, Permits and Enforcement Branch  
Regulatory Division

Copies Furnished:

Ed Reiner, U.S. EPA, Region 1, Boston, Massachusetts, reiner.ed@epa.gov

Rachel Freed, DEP NERO, Wetland and Waterways, Wilmington, Massachusetts,  
rachel.freed@state.ma.us

John T. Brennon, Conservation Commission, Quincy City Hall, 1305 Hancock Street, Quincy,  
Massachusetts 02169

Daniel Garson, Woodard and Curran, Inc., 980 Washington Street, Suite 325N, Dedham,  
Massachusetts 02026