

Pre-Bid conference: Tuesday April 29, 2014 at 10:00 am at the site
Bids open: Thursday May 8, 2014 at 11:00 am at Quincy Park Department

Reconstruction of Faxon Park Playground

Quincy, Massachusetts

Owners:
City of Quincy
Department of Parks and Forestry

**Funded by the City of Quincy and
Commonwealth of Massachusetts**

Prepared by:
Park Planning Associates
14 Capen Street
Milton, Massachusetts 02186
617-696-2834





INVITATION TO BID

CITY OF QUINCY, MASSACHUSETTS
PURCHASING DEPARTMENT
1305 HANCOCK STREET, QUINCY, MA 02169

The City of Quincy invites sealed bids/proposals for furnishing and delivering to the City of Quincy:

PARK DEPT.

MAY 8, 2014 @ 11:00 A.M.

RECONSTRUCTION OF FAXON PARK PLAYGROUND

Detailed specifications are on file at the office of the Purchasing Agent, Quincy City Hall, 1305 Hancock Street, Quincy, Massachusetts, 02169, between the hours of 8:30^{AM} and 4:30^{PM}. A non-mandatory pre-bid site walk through is scheduled for April 23, 2014 at 10:00 a.m. at the playground at Faxon Park, Quincy, MA. 02169.

Detailed specifications are available on-line at the City of Quincy's website, www.quincyma.gov and also available at the office of the Purchasing Agent, Quincy City Hall, 1305 Hancock Street, Quincy, Massachusetts, 02169, between the hours of 8:30^{AM} and 4:30^{PM} for a non-refundable printing charge of \$25.00

Bids/Proposals must be in a sealed envelope. The outside of the sealed envelope is to be clearly marked "**BID ENCLOSED**" with time/date of bid call. Late Bids/Proposals, delivered by mail or in person, will be rejected.

Bids/Proposals will be received at the office of the Purchasing Agent until the time and date stated above, at which time and date they will be publicly opened and read.

If applicable, bids shall be in accordance with M.G.L. Chapter 30B, Chapter 149 as amended, and Chapter 30, Sections 39A, 39B and 39F-R.

The successful bidder will be required to conform to the payment of Prevailing Wage Rates, as determined by the Commissioner of Labor & Industries under the provision of M.G.L. Chapter 149, Section 26 to 27D as amended

The right is reserved to reject any or all bids or to accept any part of a bid or the one deemed best for the City and waive any informality in the bidding if it is in the best interest of the City to do so.

Thomas P. Koch, Mayor

Kathryn R. Hobin, Purchasing Agent

LEGAL: APRIL 23, 2014
LEGAL: APRIL 24, 2014

CENTRAL REGISTER
P.O. # S050814

DEPT.CHARGED: PARK DEPARTMENT



CITY OF QUINCY, MASSACHUSETTS
PURCHASING DEPARTMENT
1305 HANCOCK STREET, QUINCY, MA 02169

DETAILED SPECIFICATIONS AND REQUIREMENTS

ISSUE DATE: APRIL 23, 2014
BID CALL: MAY 8, 2014 @ 11:00 A.M.
DEPARTMENT: PARK DEPARTMENT
BID: RECONSTRUCTION OF FAXON PARK PLAYGROUND

1. A 5% certified check or bid bond is required.
2. A 50 % Payment and 50 % Performance Bond is required.
3. The following forms, if contained in the bid documents, must be completed and signed:
 - √ • Certificate of Non-Collusion
 - √ • Tax Compliance Certificate
 - √ • Certification Relating to Debarment and Suspension
 - √ • Signature Authorization Form
 - √ • Proposal Sheet 5 of 5 (Lines 28 – 39)
 - √ • Certification of General/Sub-bidders on Public Construction Projects Regarding Health and Safety and Non-Collusion
 - Form for General Bid
 - Schedule of Participation Minority and Women Business Enterprise
4. Do not separate any sheets from this bid call.
5. All prices are to include delivery F.O.B. destination unless noted otherwise.
6. Wherever a manufacturer's name or model number is specified, it is to be clearly understood that the words "or approved equal" follow.
7. All vendors must acknowledge in writing receipt of any addenda.
8. The Purchasing Department shall accept questions in writing via facsimile up until 48 hours prior to the opening.

* TO THE EXTENT APPLICABLE THE FOLLOWING SECTIONS OF MASSACHUSETTS GENERAL LAWS ARE INCORPORATED HEREIN BY REFERENCE:

**M.G.L. CHAPTER 30B, CHAPER 30, SECTIONS 39A, 39B AND 39F-R AND
M.G.L. CHAPTER 149, AS AMENDED.**

In the event of any inconsistency between the bid, Information for Bidders, Bid Forms, Conditions or any other Contract Document or potential Contract Document and these statutes; or any other applicable statutes, by-laws or regulations existing on the date on which the bid is submitted, then the statute, by-laws or regulations shall govern. Such inconsistency shall not be grounds for invalidating this invitation to bid.

NOTICE TO BIDDERS

The successful bidder will be required to conform to the payment of Prevailing Wage Rates, as determined by the Commissioner of Labor & Industries under the provision of M.G.L., Chap. 149, Sect. 26 to 27D as amended.

LIABILITY, PROPERTY DAMAGE and WORKERS' COMPENSATION coverage is required of the successful bidder before any work can be started.

BID: RECONSTRUCTION OF FAXON PARK PLAYGROUND

DATE: _____

BIDDER: _____

ADDRESS: _____

TELEPHONE: _____

EMAIL: _____



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

Phone: (617) 376-1060

Fax: (617) 376-1074

SIGNATURE AUTHORIZATION

At a duly authorized meeting of the Board of Directors of the

(NAME OF CORPORATION)

held on _____, at which all the Directors were present or waived notice, it was
(DATE)

VOTED, that:

(NAME)

(OFFICER)

of this company, be and he/she hereby is authorized to execute Contracts and Bonds in the name and behalf of said Company, and affix its Corporate Seal thereto, and such execution of any Contract or obligation in this Company's name on its behalf by such _____ under seal of the Company, shall be valid
(OFFICER)

and binding upon this Company. It was further voted that the City of Quincy may rely on such authorization of future Contracts until notified to the contrary.

A true copy,

ATTEST: _____
(CLERK'S SIGNATURE)

PLACE OF BUSINESS: _____

DATE OF THIS CONTRACT: _____

I hereby certify that I am the Clerk of the:

_____ that _____ is the
(COMPANY) (NAME)

duly elected _____ of said Company, and that the above VOTE has not been
(TITLE)

amended or rescinded and remains in full force and effect as of the date of this Contract.

_____ CORPORATE SEAL

This form may be substituted with standardized form issued by insurance/bonding agent.

BID BOND

KNOW ALL MEN BY THESE PRESENT, that we, the undersigned,

_____ as Principal and

_____ as Surety, are hereby held and firmly bound unto

_____ 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:

_____ a certain BID, attached hereto and hereby made a part hereof

to enter into a contract in writing for the:

NOW, THEREFORE,

- (A) If said BID shall be rejected, or
- (B) If said BID shall be accepted and the Principal shall execute and deliver a contract in the Form of Contract attached hereto (properly completed in accordance with said BID) and shall furnish a BOND for his faithful performance of said contract, and for the payment of all persons performing labor, or 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 as herein stated.

This form may be substituted with standardized form issued by insurance/bonding agent.

The Surety, for value received, hereby stipulates and agrees that the obligations of said Surety and its BOND shall in no way be 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 present to be signed by their proper officers the day and year first set forth above.

Principal (L.S.)

Surety

BY: _____

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

CONTRACTOR'S BID

DATE:

To the Quincy Park Department
One Merrymount Parkway
Quincy, Massachusetts

The undersigned hereby proposes to furnish all labor, equipment, materials, and supervision required to complete the Reconstruction of Faxon Park Playground in Quincy in accordance with the terms of the Contract Documents, of which this bid is a part, for the sum specified below. If within thirty (30) days after the opening of bids hereunder, this bid is accepted by the Quincy Park Department as evidenced by written notice delivered to the undersigned, we will execute a contract and provide surety in the form of performance and payments bonds as specified, satisfactory to the City of Quincy.

ITEM No.	Estimated Quantity	Description of Item With Unit Price in Words	Unit Price In Figures	Amount In Figures
ITEM 1:	Lump Sum	Site Preparation _____ dollars	\$ _____	\$ _____
ITEM 2:	700 CY	Unclassified Excavation _____ dollars	\$ _____	\$ _____
ITEM 3:	Lump Sum	Storm Drain System _____ dollars	\$ _____	\$ _____
ITEM 4:	150 CY	Dense Graded Crushed Stone _____ dollars	\$ _____	\$ _____
ITEM 5:	210 CY	Gravel Borrow _____ dollars	\$ _____	\$ _____
ITEM 6:	1000 SY	Bituminous Conc. Paving _____ dollars	\$ _____	\$ _____
ITEM 7:	150 LF	Granite Curb _____ dollars	\$ _____	\$ _____

ITEM 8: 150 LF	Wood Guardrail	_____ dollars	\$ _____	\$ _____
ITEM 9: 6 EA	Boulder Bench	_____ dollars	\$ _____	\$ _____
ITEM 10: 1 EA	Picnic Table	_____ dollars	\$ _____	\$ _____
ITEM 11: 2 EA	Center Post Table	_____ dollars	\$ _____	\$ _____
ITEM 12: 12 EA	Site Boulder	_____ dollars	\$ _____	\$ _____
ITEM 13: Lump Sum	Concrete Pads	_____ dollars	\$ _____	\$ _____
ITEM 14: 1 EA	2-5 Yr. Play Structure	_____ dollars	\$ _____	\$ _____
ITEM 15: 1 EA	5-12 Yr. Play Structure	_____ dollars	\$ _____	\$ _____
ITEM 16: 1 EA	Double Arch Swing	_____ dollars	\$ _____	\$ _____

The undersigned certifies, under penalties of perjury, that this bid has been made and submitted in good faith and without collusion or fraud with any other person. As used in this certification the word person shall mean any natural person, business, partnership, corporation, union, committee, club, or other organization, entity or other group of individuals.

The proposed bid price has been arrived at independently, without collusion, consultation, or communication to any other contractor or with any competitor.

The said bid price was not disclosed by the Contractor and was not knowingly discussed prior to submission, directly or indirectly to any other Contractor or to any competitor.

No attempt was made by the Contractor to induce any other person, partnership, or corporation to submit or not to submit a proposal for the purpose of restricting competition.

Name of Contractor:

By: _____

Name:

Title:

Pursuant to G.L. Chapter 62C Section 49A the undersigned hereby certifies, under pains and penalties of perjury, that _____ has complied with all laws of the Commonwealth of Massachusetts relating to taxes.

Name of Company:

By: _____

NOTICE TO PROCEED

TO: _____

DATE:

Project: Reconstruction of Faxon Park Playground

You are hereby notified to commence WORK on or before _____

In accordance with contract documents the contract time is 90 calendar days. The date for completion of all work is therefore _____.

BY: _____

Name: Christopher Cassani

Title: Executive Director, Department of Parks
And Forestry

ACCEPTANCE OF NOTICE

Receipt of the above NOTICE TO PROCEED is hereby acknowledged by:

(Company Name)

Signature: _____ Date:

Print Name: _____ Title:

INSTRUCTIONS TO BIDDERS

ARTICLE 1 PROJECT IDENTIFICATION

- 1.1 Owner: City of Quincy, Massachusetts
- 1.2 Awarding Authority: Kathryn R. Hobin
Purchasing Agent
1305 Hancock St., Quincy, MA 02169
- 1.3 Project Name: Reconstruction of Faxon Park Playground
- 1.4 Funding: a. The City of Quincy
b. Commonwealth of Massachusetts

Funds for all work included under this contract have been authorized, as yet. All work done pursuant to this bid shall be subject to funding provided by any public agency, as applicable, and authorization by the Mayor and the City Council.

- 1.5 The attached 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.

ARTICLE 2 QUALIFICATIONS OF BIDDERS

- 2.1 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.
- 2.2 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, and 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.
- 2.3 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 themselves with local conditions that may in any manner affect cost, progress or performance of the Work, (c) familiarize themselves 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 bid 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 their Bid for performance of the work in accordance with the time, price and other terms and conditions of the Contract Documents.

4.4 Upon 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 about the meaning or intent of the Contract Documents must be received in writing by the City of Quincy Purchasing Department, 1305 Hancock St., Quincy, MA 02169, prior to the Bid Opening Date, as set forth in the Invitation to Bid.

5.2 Written clarifications or interpretations will be issued through Addenda. No addenda, except via FAX transmission or email, will be issued any later than 72 hours before the bid opening date. Only questions answered by formal written Addenda will be binding. Oral and other clarifications or interpretations will be without legal effect. Addenda will be sent out 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 their 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: Refer to Section 00100 - Invitation to Bid.

ARTICLE 7 BID SECURITY

7.1 Each bid must be accompanied by a bid bond 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 form 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 within ten calendar days 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 this Project Manual. 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 and email address 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 envelope bearing on the outside the Bidder's name, address, Project Title, Bid opening date and time, 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 address as above.

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 MODIFICATIONS 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 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 sixty (60) 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 will give the Successful Bidder a Notice of Award within sixty (60) 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 will 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, 01045, 01050, 01055, and 01170, 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 27H, 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 the Appendices 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 Department of Capital Asset Management.
- 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.

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.

Kathryn R. Hobin
Purchasing Agent

Section 1

- 01000 – Special Conditions
- 01010 - Summary of the Work
- 01019 - Contract Considerations
- 01025 - Measurement and Payment
- 01500 - Temporary Facilities and Controls
- 01600 - Materials and Equipment
- 01700 - Project Closeout

Section 2

- 02030 - Tree Pruning and Removal
- 02070 – Selective Demolition
- 02110 – Clearing and Grubbing
- 02200 – Earthwork
- 02270 – Slope Protection and Erosion Control
- 02510 – Bituminous Concrete Paving
- 02528 - Granite Curb
- 02750 – Storm Drainage
- 02790 - Playground Equipment
- 02820 - Playground Safety Surfaces
- 02835 - Wood Guardrail
- 02840 - Site Furnishings
- 02900 - Loaming and Seeding

Section 3

- 03300 - Concrete Work

SECTION 01000

SPECIAL CONDITIONS

1.01 DEFINITIONS

- A. General: Except as specifically defined otherwise, the following definitions supplement definitions of the Contract, General Conditions, Special Conditions, Technical Specifications and other general contract documents, and apply generally to the work.
1. Owners: City of Quincy, Department of Parks and Forestry
 2. Landscape Architect: Park Planning Associates, Milton, Massachusetts.
 3. Indicated: Shown on drawings by notes, graphics or schedules, or written into other portions of contract documents. Terms such as "shown", "noted", "scheduled" and "specified" have same meaning as "indicated" and are used to assist the reader in locating particular information.
 4. Directed, Requested, Approved, Accepted, etc.: These terms imply, "by the Landscape Architect", unless otherwise indicated.
 5. Approved by Landscape Architect: In no case releases Contractor from responsibility to fulfill requirements of contract documents.
 6. Project Site: Space available to Contractor at location of project, either exclusively or to be shared with separate contractors, for performance of the work.
 7. Furnish: Supply and deliver to project site, ready for unloading, unpacking, assembly, installation and similar subsequent requirements.
 8. Install: Operations at project site including: unloading, unpacking, assembly, erection, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning and similar requirements.
 9. Provide: Furnish and install, complete and ready for intended use.
 10. Remove: Complete removal, loading, transporting, permits, and legal disposal off-site by the Contractor of all designated materials in accordance with local, state and federal regulations, at the Contractor's expense.
 11. Installer: Entity (firm or person) engaged to install work, by Contractor, subcontractor or sub-contractor. Installers are required to be skilled experts in work they are engaged to install.
 12. Specification Text Format: Underscoring facilitates scan reading, no meaning. Imperative language is directed at Contractor, unless otherwise noted.

13. Overlapping/Conflicting Requirements: Most stringent (generally) language written directly into contract documents clearly indicates that a less stringent requirement is acceptable. Refer uncertainties to Landscape Architect for decision before proceeding.
14. Where optional requirements are specified in a parallel manner, option is intended to be Contractor's unless otherwise indicated.
15. Minimum Requirements: Indicated requirements are for a specific minimum acceptable level of quality/quantity, as recognized in the industry. Actual work must comply with specified tolerances. Refer uncertainties to Landscape Architect for decision before proceeding.
16. Abbreviations, Plural Words: Abbreviations, where not defined in the contract documents, will be interpreted to mean the normal construction industry terminology, determined by recognized grammatical rules, by the Landscape Architect. Plural words will be interpreted as singular and singular words will be interpreted as plural where applicable for context of contract documents.

1.02 PROJECT SITE

The project site is Faxon Park in the City of Quincy with an entrance from Faxon Park Road.

1.03 SUMMARY OF WORK

Reconstruction of a children's playground including paving, site furnishings, granite curb, wood guardrail, and other incidental improvements. Installation of playground equipment and safety surfacing will be done by others.

The Work to be done under this Contract consists of provision and payment for all materials, labor, tools, equipment, pumping, water, power, transportation, superintendence, temporary construction of every nature, taxes legally collectable because of the work, and all other services and facilities of every nature whatsoever necessary to execute the work and to complete in every respect and as shown on the drawings and/or called for in the specifications.

1.04 QUALIFICATIONS OF CONTRACTOR

- A. Construction of a safe and durable playground is the highest priority for the City of Quincy. It is also a priority for the Contractor to work diligently to minimize disruption to the environment and the public's use and enjoyment of the Faxon Park. To achieve this result award of this contract will only be made to an experienced contractor who has a record of working cooperatively with municipalities and the public.
- B. To be eligible to bid this contract the General Contractor shall submit with his bid, references, including the name, address, phone number, and project description, for three contracts of a similar nature completed in the past five years.

1.05 TIME FOR COMPLETION AND SEQUENCE OF WORK

- A. The work which the Contractor is required to perform under this Contract shall be commenced at the time stipulated by the Project Manager in the Notice to

Proceed to the Contractor and shall be fully completed within 90 calendar days. If seeding has not been accepted by the date of substantial completion of the contract, acceptance of the seeding can be carried over to the end of the 2014 construction season without penalty.

The Contractor shall employ sufficient equipment and workmen to complete the installation as expeditiously as possible as directed by the owner. If, in the opinion of the Project Manager the progress of the work of the Contractor does not, at any time, clearly demonstrate that completion of the installation will meet with the approval of the Project Manager, the Project Manager reserves the right to require the Contractor to employ such additional equipment and workmen as required, and to work overtime hours to assure completion dates, all without additional cost to the Project Manager.

- B. No night, Saturday, Sunday, or holiday work will be permitted unless approved by the Project Manager.

1.06 LIQUIDATED DAMAGES

As actual damages for failure in the completion of the work which the Contractor is required to perform under this Contract, the Contractor and his Sureties shall be liable for and shall pay to the Project Manager the sum of \$500.00 as fixed and agreed, as liquidate damages for each calendar day of delay from the date stipulated for completion as outlined in the Notice to Proceed by the Project Manager.

1.08 RESPONSIBILITIES OF CONTRACTOR

- A. Except as otherwise specifically stated in the Contract Documents and Technical Specification, the Contractor shall provide and pay for all materials, tools, labor, equipment, water, light, heat, power, transportation, superintendence, temporary construction of every nature, charges, levies, fee or other expenses, permits and back charges and all other services and facilities of every nature whatsoever necessary for the performance of the Contract and to deliver all improvements embraced in this Contract completed in every respect within the specified time.
- B. Unless otherwise specified herein all materials, workmanship, methods, and practices shall conform to the current Standards of the Massachusetts Highway Department for similar work.
- C. The Contractor shall be responsible for detailed layout, all stake-out and grade control, and shall employ a registered Professional Engineer or a registered Land Surveyor for this purpose.
- D. The Contractor shall verify dimensions and utility locations shown on the plans and if any inconsistencies or discrepancies should be noted on the Drawings, or between the Drawings and actual field conditions, or between the Drawings and the Specifications he shall immediately notify the Project Manager. The Contractor will be held responsible for any errors resulting from his failure to exercise the aforementioned precaution. Such information shall be marked on copies of the drawings and submitted to the Landscape Architect for incorporation into Record Drawings.

- E. The Contractor shall employ a suitable superintendent and foremen to represent him at the site of the work and they shall be present at all times while the work entrusted to them is in progress and shall be informed thoroughly regarding it. The foreman, mechanics, and others employed by the Contractor shall be skilled and experienced in the particular work which is given them to do.
- F. As soon as the Contract is executed, the Contractor shall order materials, submit construction schedules as hereinafter specified, and otherwise anticipate the Notice to Proceed. Work shall begin within 10 working days of the Notice to Proceed provided by the Project Manager and shall be completed within the Time for Completion specified.
- G. It is the Contractor's responsibility to make his own investigation and related assumptions and to satisfy himself as to subsurface conditions and to insure that these are reflected in the general and unit prices bid.

1.09 COMMUNICATIONS

- A. All notices, demands, requests, instructions, approvals, proposals and claims must be in writing and must be presented to the Landscape Architect in person or by mail to the Project Manager.
- B. Any notice to or demand upon the Contractor shall be considered sufficiently given if delivered at the office or field office of the Contractor stated on the signature page of the Agreement (or at such other office as the Contractor may from time to time designate in writing to the Owner), or if deposited in the United States mail in a sealed, postage-prepaid envelope, or delivered with charges prepaid to any telegraph company for transmission, in each case addressed to such office.
- C. All papers required to be delivered to the Project Manager shall, unless otherwise specified in writing to the Contractor, be delivered to the Quincy Department of Parks and Forestry, One Merrymount Parkway, 02169, Quincy, MA and any notice to or demand upon the Project Manager shall be sufficiently given if so delivered, or if deposited in the United States mail in a sealed, postage-prepaid envelope, or delivered with charges prepaid to any telegraph company for transmission to said Project Manager at such address, or to such other representatives of the Project Manager or to such other address as the Project Manager Owner may subsequently specify in writing to the Contractor for such purpose.
- D. Any such notice shall be deemed to have been given as of the time of actual delivery or (in case of mailing) when the same should have been received in due course of post, or in the case of telegrams, at the time of actual receipt, as the case may be.

1.10 LAYOUT WORK

- A. Dimensional layout work shown on Drawings for existing construction is based upon best available information from a field survey. The Contractor is hereby required to verify the layouts from referenced survey points and other points which serve as reference points of layout work. The Contractor shall report to the Landscape Architect any conditions which are found to be in conflict with

Contract Documents. The Landscape Architect will advance decisions as to necessary adjustment to dimensions and will promptly disseminate revised drawings and/or corrections which shall serve as the basis for advancement of the work.

- B. Lines and grade work in accordance with Drawings and Specifications shall be laid out by a registered Civil Engineer or Surveyor employed by the Contractor. The Contractor shall maintain all established bounds and bench marks and replace, as directed, any which may be disturbed or destroyed. The selection of the registered Civil Engineer or Surveyor shall be subject to the Landscape Architect's approval. The General Contractor shall pay all costs of the services of Civil Engineer or Surveyor.
- C. The Contractor shall check all Drawings and shall report any errors in them to the Landscape Architect, who will make or approve the necessary corrections. Any discrepancies not reported prior to construction shall not be the basis for claims for extra compensation.

1.11 PARTIAL USE OF SITE IMPROVEMENTS

- A. The Project Manager, at its election, may give notice to the Contractor and place in use those sections of the improvements which have been completed, inspected and can be accepted as complying with the Technical Specifications and accepted as complying with the Technical Specifications and if, in its opinion, each such section is reasonably safe, fit and convenient for the use and accommodation for which it was intended, provided:
 - 1. The use of such sections of the improvements shall in no way impeded the completion of the remainder of the work by the Contractor.
 - 2. The Contractor shall not be responsible for any damages or maintenance costs due directly to the use of such sections.
 - 3. The use of such sections shall in no way relieve the Contractor of his liability due to having used defective materials or due to poor workmanship.
 - 4. The period of guarantee stipulated in the specifications shall not begin to run until the date of the final acceptance of all work which the Contractor is required to construct under this Contract.

1.12 CONTRACT DOCUMENTS AND DRAWINGS

- A. The Project Manager will furnish the Contractor, without charge, 3 copies of the Contract Documents including drawings. Additional copies requested by the Contractor will be furnished at cost.

1.13 HISTORICAL, ARCHAEOLOGICAL OR ANTIQUE ITEMS

- A. The Contractor during his excavation, site clearance and other operations may come upon, uncover or otherwise discover items of historical, archaeological or antique nature. The Contractor shall immediately stop operations at the particular site of the discovery and notify the Project Manager so that a proper

evaluation may be made of its importance. The Project Manager shall arrange for the evaluation in a manner that shall not unduly interfere with the Contractor's operations.

- B. All such items, if designated by competent authority to be historical, archaeological or antique nature shall not become the property of the Contractor but shall be placed in the custody of the Project Manager for disposition.

1.14 FIRE PROTECTION AND PREVENTION

- A. The Contractor shall keep the site free of rubbish and construction debris at all times.
 - 1. He shall provide sufficient metal barrels or dumpsters into which all refuse and garbage shall be deposited. All containers shall have tight fitting covers. These shall be secured overnight or removed daily.
 - 2. At the end of each work week, the Contractor shall thoroughly clean premises of rubbish and debris of any nature, and remove such from the premises.

1.15 RUBBISH REMOVAL

- A. The Contractor and each Subcontractor shall remove all rubbish, waste, tools, equipment, and appurtenances caused by and used in the execution of his work; but this shall in no way be construed to relieve the Contractor of his primary responsibility for maintaining the site clean and free of debris, leaving all work in a clean condition.

1.16 TEMPORARY FACILITIES

- A. General Provisions
 - 1. Furnish all labor, materials, and services to fulfill the requirements for temporary facilities, at no additional cost to the Project Manager, and comply with all requirements set forth herein, except where said requirements are in conflict with Federal, State, or Local laws, rules, and regulations, in which case(s) the applicable Federal, State, or Local requirements shall govern.
- B. Sanitary Facilities
 - 1. Provide, place, and maintain in good order from the commencement to final completion of the work, suitable temporary toilet facilities for use by all workers employed under this contract. Toilets shall be rented from and serviced by an approved company and shall be kept clean, sanitary and secured at all times. Toilets shall be secured overnight.
- C. Temporary Light and Power
 - 1. Make all necessary arrangements with NSTAR and pay all costs including labor, in operating and maintaining all temporary services for electricity used during the construction, unless specifically noted otherwise.

2. Ensure that temporary wiring outlets and lighting are provided in accordance with the requirements of Bulletin No. 12, Division of Industrial Safety, Department of Public Safety, and Commonwealth of Massachusetts.

1.17 RECORD DRAWINGS

- A. The Contractor shall prepare and/or maintain a set of drawings on which shall be recorded accurately, as the work progresses, the actual "as built locations and dimensions of all his work, indicating thereon all variations from the Contract Drawings. This record of "as built" conditions shall include the work of all subcontractors and shall be submitted, upon final acceptance of all work, to the Landscape Architect.
- B. Refer to Section 01700 - Contract Closeout of the General Requirements.

1.18 CONSTRUCTION SCHEDULES AND PAYMENT ESTIMATES

- A. The Contractor must submit a construction schedule to the Project Manager indicating the general sequence of all work under his contract. The schedule must be sufficiently detailed to allow week-to-week review of the progress of all work and include identification of timing of all subcontracted work. This schedule must be submitted within 10 days of the date of Contract execution and shall be revised if required to the Satisfaction of the Project Manager. Along with the schedule the Contractor shall submit a list of all materials to be submitted for review and approval prior to ordering and identify the lead time required from date of ordering to delivery to the project.
- B. Within 10 days after date of Project Manager /Contractor Agreement, the Contractor shall submit to the Landscape Architect and the Owner a Schedule of Values in duplicate of the various portions of the work including quantities when requested, aggregating the total contract sum, and divided so as to facilitate payments for work under each section. The schedule shall be prepared in such form as specified or as the Landscape Architect or the Project Manager may approve, and it shall include data to substantiate its accuracy. Each item in the Schedule of Values shall include its proper share of overhead and profit. This schedule requires the approval of the Project Manager and Landscape Architect prior to the Contractor's submitting the first application for payment, and shall be used only as a basis for the Contractor's requests for payment.
- C. The established breakdown of items, categories and values shall be utilized to prepare the monthly pay requisition forms. It is recommended that the Contractor submit a draft pay - requisition to the Landscape Architect for approval, the last week of every month. The Landscape Architect shall review and edit this copy to indicate the amount of payment to be approved and return this to the Contractor after field review. The Contractor shall then submit formal 3 copies of the pay requisition, conforming to the Landscape Architect's approval, for payment by the Project Manager.

1.19 UTILITIES

- A. The Contractor shall obtain and pay for all licenses and/or permits which are required by the City of Quincy or any other agencies which may be involved; he shall comply with all codes, regulations and standards of the City of Quincy. No water withdrawals will be permitted from surface water sources for the various items of work under this contract.
- B. The Owners and all private companies or any agencies whose utilities are in the construction shall be notified by the Contractor at least 48 hours prior to the start of any excavation. The Contractor will be required to cooperate with the utility companies involved in order to assure completion of all work with the least amount of delay. Contact DIG SAFE @ 1-888-344-7233 and obtain dig safe number for site.

1.20 SHOP AND WORK DRAWINGS

- A. If it is the intent of the Contractor to furnish and install appurtenances and elements as specified and detailed on the plans, and where shop drawings are requested, a letter to the Landscape Architect indicating that these will be ordered and installed as specified shall suffice. In the instance of any discrepancies in the plans and the actual dimensions or size of materials, the Contractor shall be responsible to make any and all adjustments necessary to install the materials as set forth in the Contract Documents.
- B. The Contractor shall furnish four (4) copies of any shop drawings which may be required. The Contractor shall be responsible for the prompt submission of all shop working drawings so that there will be no delay in the work.
- D. The Approval of shop and working drawings will be general and shall not relieve the Contractor from the responsibility for details of design, dimensions, etc., necessary for fittings and construction of the work as required by the Contract and to ensure the safety of the public.
- E. Refer to Section 01300 - Submittals of the General Requirements.

1.21 SITE INSPECTION

- A. It shall be contingent upon the Contractor to inspect the site as an aid to determining the extent of his work under the various contract items prior to submission of his bid.

1.23 SAMPLING AND TESTING OF MATERIALS AND COMPACTION

- A. To ensure that the materials are as specified, sampling and tests may be ordered by the Landscape Architect or owner. The sampling and testing shall be completed by representatives of a Massachusetts certified testing laboratory and shall be paid for by the Contractor regardless of their results. These Special Conditions shall take precedence over any technical specifications included herein.
- B. Specific testing to take place includes: cylinder and slump on concrete and proctor density tests.

- C. In the event that the testing performed during construction fails to meet the tolerance as specified herein, the owner reserves the right to instruct the contractor to fix, remove, or reconstruct portions of the work that did not meet the specified tolerances.
- D. Compaction testing of base materials shall be done by a firm selected by the Project Manager and paid for by the Project Manager.

1.24 PROTECTION OF EXISTING STRUCTURES

- A. All existing walks, pipes, conduits, poles, fences, stairways, curbing, walls, buildings, trees and other structures which are to remain in place shall be carefully supported and protected from injury by the Contractor without additional compensation and in case of injury they shall be restored by him without compensation therefore to as good condition as that in which they were found. The value of any trees damaged shall be determined in accordance with established practices of the American Association of Nurserymen or a Registered or Certified Arborist selected by the Landscape Architect. Limits of liability shall not be limited to the replacement with new and immature trees.
- B. Utility lines shown are located from the best information available. Services may not be shown. The existence of utilities which are normally located underground and not shown on the plans shall not be considered as an unusual obstacle, and the Contractor shall not be entitled to extra compensation for maintaining, protecting, or restoring utilities which he disturbs.

1.25 DUST CONTROL

- A. During the progress of the work, the Contractor shall conduct his operations and maintain the area of his activities, including sweeping and sprinkling of water as necessary, so as to minimize the creation and dispersion of dust. If the Landscape Architect decides that it is necessary to use calcium chloride for more effect dust control, the Contractor shall furnish and apply the material as directed.

1.26 OTHER REQUIREMENTS

- A. The Contractor shall follow such other procedures consistent with the terms of this Agreement and the accomplishment of the objectives of the Project as the Project Manager may reasonably require.

END OF SECTION

SECTION 01010

SUMMARY OF THE WORK

PART 1: GENERAL

1.01 REQUIREMENTS INCLUDE:

- A. Work Under this Contract
- B. Work by Owner
- C. Owner Furnished Products
- D. Contractor Use of Site
- E. Future Work
- F. Work Sequence

1.02 WORK UNDER THIS CONTRACT

- A. The scope of work of this project consists of site preparation and demolition, the installation of Owner furnished play equipment, and the provision and installation of poured in place rubber safety surfacing, site furnishings, paving, and all related site work.
- B. The work to be done under this Contract consists of provision and payment for all materials, labor, tools, equipment, pumping, water, light, heat, power, transportation, supervision, field engineering, testing, temporary construction, taxes, and all other services and facilities necessary to execute the work and to complete the project in every respect and as shown on the drawings and/or specified herein.
- C. Definitions
 - 1. Owner: Also referred to in the Contract Documents as City shall mean the City of Quincy.
 - 2. Owner's Representative: Shall mean either the City Department of Parks and Forestry, Project Manager, and/or the Landscape Architect. The Project Manager, will have first right of refusal for general construction review issues. The Project Manager will defer to the Landscape Architect as deemed necessary. The Landscape Architect shall be consulted for all design and product submittals, all design decisions, and design discrepancies that may arise. This may also apply to other CITY personnel assigned to the project including the CITY Project Manager or others identified during the course of the project.
 - 3. Engineer: Shall mean either the Project Manager of the CITY or of the Landscape Architect. See Owner's Representative for further clarification.
 - 4. Landscape Architect: Shall mean Park Planning Associates, 14 Capen St., Milton, MA, or one of its authorized representatives. This may also be referred to in the Contract Documents as Landscape Architect, Engineer, or Architect. The Contractor and/or the CITY Project Manager shall consult the

Landscape Architect as needed or as specifically required by these specifications.

1.03 WORK BY OWNER

- A. None

1.04 OWNER FURNISHED PRODUCTS

- A. Owner shall furnish (order, arrange delivery to site, provide payment, provide approved shop drawings and installation directions) the proposed play equipment for Contractor installation. Play equipment shall include 2-5 year old composite play structure, 5-12 year old composite play structure, arch swing structure, and rock climber. Owner shall also obtain warranty for equipment. Contractor shall be responsible for assemblage, erection, protection, inspection, concrete footings, and safety surface all in accordance to contract documents.

1.05 CONTRACTOR USE OF SITE

- A. Refer to other sections of Project Manual for requirements with respect to time for performing work, project limits, and access.

1.06 FUTURE WORK

- A. None

1.07 WORK SEQUENCE

- A. Construct work in stages to accommodate Owner's requirements during the construction period, coordinate construction schedule and operations with Owner.
- B. All work shall be accomplished by the finish date stipulated in the contract.

PART 2: PRODUCTS (NOT USED)

PART 3: EXECUTION (NOT USED)

END OF SECTION

SECTION 01019

CONTRACT CONSIDERATIONS

PART 1: GENERAL

1.01 GENERAL INCLUDES

- A. Inspection and Testing Allowances
- B. Schedule of Values
- C. Application for Payment
- D. Change Procedures

1.02 RELATED SECTIONS

- A. Bid Form: Contract Sum, Unit Prices and Alternates.
- B. Section 01300 - Submittals: Schedule of Values.
- C. Section 01600 - Materials and Equipment: Product substitutions and alternates.

1.03 INSPECTION AND TESTING ALLOWANCES

1.04 SCHEDULE OF VALUES

- A. Submit typed schedule on approved forms.
- B. Submit Schedule of Values in duplicate within 15 days after date of Owner-Contractor Agreement. Schedule shall be approved by Landscape Architect and the Owner prior to submitting the first application for payment.
- C. Format: Prior to the first request for payment, the General Contractor shall submit to the Landscape Architect, a Schedule of Values of the various portions of the Work in sufficient detail to reflect various major components of each trade, including quantities when requested, aggregating the total contract sum, and divided so as to facilitate payments for work under each Section in accordance with Article VII of the contract form. The Schedule shall be prepared in such form as specified or as the Landscape Architect may approve, and it shall include data to substantiate its accuracy. Each item in the Schedule of Values shall include its proper share of overhead and profit. This schedule, including breakdown and values, requires the approval of the Landscape Architect and shall be used only as a basis for the Contractor's request for payment.
- D. Include separately from each line item, a directly proportional amount of Contractor's overhead and profit.
- E. Revise schedule to list approved Change Orders, with each Application for Payment.

1.05 APPLICATION FOR PAYMENT

- A. Submit five (5) copies of each application on approved forms.

- B. Content and Format: Utilize Schedule of Values for listing items in Application for Payment.
- C. Payment conditions for payments to be requested under "stored materials provisions":
 - 1. Provide receipted invoice for purchased materials.
 - 2. Provide typed "certificate of title" transferring ownership of stored materials to Owner.
 - 3. Provide Certificate of Insurance for theft, damage and casualty loss for stored materials with Owner listed as beneficiary.
 - 4. Provide satisfactory evidence to Owner that stored materials are within safe storage area.

1.08 CHANGE PROCEDURES

- A. The Landscape Architect will advise of minor changes in the Work not involving an adjustment to Contract Sum/Price or Contract Time.
- B. The Landscape Architect may issue a Proposal Request which includes a detailed description of a proposed change with supplemental or revised Drawings and specifications, a change in Contract Time for executing the change and the period of time during which the requested price will be considered valid. Contractor will prepare and submit an estimate within 7 days.
- C. The Contractor may propose a change by submitting a request for change to the Landscape Architect, describing the proposed change and its full effect on the Work. Include a statement describing the reason for the change, and the effect on the Contract Sum/Price and Contract Time with full documentation (and a statement describing the effect on Work by separate or other contractors). (Document any requested substitutions in accordance with Section 01600.)
- D. Stipulated Sum/Price Change Order: Based on Notice of Change and Contractor's fixed price quotation (or Contractor's request for a Change Order as approved by Landscape Architect).
- E. Change Order: Should certain additional work be required, or should the quantities of certain classes of work be increased or decreased from those on which the Contract Sum is based, by order or approval of the Owner, the supplemental unit prices may be used as the basis of payment to him or credit to the Owner for such addition, increase, or decrease in the work as determined solely by the Owner.
- F. Supplemental unit prices shall cover all costs, and the prices given shall represent the exact amount per unit to be paid the Contractor (in the case of additions or increases) or to be refunded the Owner (in the case of decreases). No additional adjustments will be allowed for overhead, profit, insurance or other direct or indirect expense of Contractor or Subcontractor..
- G. Construction Change Authorization: Landscape Architect may issue a directive on approved forms signed by the Owner, instructing the Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order. Document will
- H.

describe changes in the Work, and designate method of determining any change in Contract Sum/Price or Contract Time. Promptly execute the change.

- I. Time and Material Change Order: Submit itemized account and supporting data after completion of change, within time limits indicated in the Conditions of the Contract. Landscape Architect will determine the change allowable in Contract Sum/Price and Contract Time as proved in the Contract Documents.
- J. Maintain detailed records of work done on Time and material basis. Provide full information required for evaluation of proposed changes, and to substantiate costs for changes in the Work.
- K. Change Order Forms: Approved Forms.
- L. Execution of Change Orders: Landscape Architect will issue Change Orders for signature of parties as provided in the Conditions of the Contract.

END OF SECTION

SECTION 01025

MEASUREMENT AND PAYMENT

PART 1: GENERAL

1.01 GENERAL PROVISIONS

- A. Drawings and general provisions of the Contract, including Part III General Conditions and Part IV Special Conditions, apply to this Section.

1.02 SCOPE

- A. The purpose of this section is to define the methods of measurement and payment for each of the unit prices or lump sums listed in the Bid. If no bid item appears in the Bid, no work of that description is anticipated on the project or it is considered incidental to other pay items. The Contractor shall acquaint himself with all work associated with each payment item and shall have no claims for his unfamiliarity with the requirements of various items.

1.03 PAYMENT ITEMS

- A. The following payment items apply to this contract:

Payment Item	Description	Unit of Measurement
1	Site Preparation	Lump Sum
2	Unclassified Excavation	Cubic Yard
3	Storm Drain System	Lump Sum
4	Dense Graded Crushed Stone	Cubic Yard
5	Gravel Borrow	Cubic Yard
6	Bituminous Concrete Paving	Square Yard
7	Granite Curb	Linear Foot
8	Wood Guard Rail	Linear Foot
9	Boulder Bench	Each
10	Picnic Table	Each
11	Center Post Table	Each
12	Site Boulder	Each
13	Concrete Pads	Lump Sum
14	2-5 Yr Play Structure	Lump Sum
15	5-12 Yr Play Structure	Lump Sum
16	Double Arch Swing	Lump Sum
17	Rock Climber	Lump Sum
18	Poured In Place Rubber	Square Foot
19	Rubber Wearing Pads	Each
20	Wood Fiber Play Surface	Cubic Yard
21	Loam and Seed	Square Yard

1.04 METHOD OF MEASUREMENT & PAYMENT

- A. Item 1: Site Preparation will be measured and paid for at the contract lump sum complete in place, for work including tree pruning and removal, tree protection, erosion controls, temporary construction fencing, demolition, clearing and grubbing, and for all work necessary for the completion of work specified herein, shown on the plans, or as directed by the Landscape Architect. Demolition includes removal and backfill of existing swing gates, including posts and footings at the **two** park entrance roads.
- B. Item 2: Unclassified Excavation will be measured and paid for at the contract unit price per cubic yard excavated, including pavement removal, (including disposal), excavation for play area, walkways, and parking. Excavation for footings and other items is incidental to that work and will not be paid separately.
- C. Item 3: Storm Drain System will be measured and paid for at the contract unit price per lump sum, complete in place for proper completion of the storm drain system as specified herein and shown on the plans.
- D. Item 4: Gravel Borrow will be measured and paid for at the contract unit price per cubic yard, for the proper installation and compaction of gravel borrow in areas shown on the plans.
- E. Item 5: Dense Graded Crushed Stone will be measured and paid for at the contract unit price per cubic yard, for the proper installation and compaction of dense graded crushed stone.
- F. Item 6: Bituminous Concrete Paving will be measured and paid for at the contract unit price per square yard, complete in place for road, parking, and walk binder and top courses and are paid at the same rate in spite of varying thicknesses.
- G. Item 7: Granite Curb will be measured and paid for at the contract unit price per linear foot, complete in place.
- H. Item 8: Wood Guardrail will be measured and paid for at the contract unit price per linear foot, complete in place.
- I. Item 9: Boulder Bench will be measured and paid for at the contract unit price per each, complete in place including field collection of boulders, cleaning, installing the bench brackets and top, and installation on site consistent with the drawings.
- J. Item 10: Picnic Table will be measured and paid for at the contract unit price per table, complete in place and installed. The concrete pad for the table will be paid for as part of Item 12: Concrete Pads.
- K. Item 11: Center Post Table will be measured and paid for at the contract unit price per each including installation and concrete footings per the drawings.
- L. Item 12: Site Boulder will be measured and paid for at the contract unit price per boulder, complete in place, which payment shall include field collection of boulders, cleaning, and installation per the drawings.

- M. Item 13: Concrete Pads will be measured and paid for at the contract lump sum price for installation of the two concrete pads identified on the plans.
- N. Item 14: 2-5 Yr Play Structure will be measured and paid for at the contract lump sum price for installation of owner supplied play equipment as specified herein and shown on the plans.
- O. Item 15: 5-12 Yr Play Structure will be measured and paid for at the contract lump sum price for installation of owner supplied play equipment as specified herein and shown on the plans.
- P. Item 16: Double Arch Swing will be measured and paid for at the contract lump sum price for installation of owner supplied play equipment as specified herein and shown on the plans.
- Q. Item 17: Rock Climber will be measured and paid for at the contract lump sum price for installation of owner supplied play equipment as specified herein and shown on the plans.
- R. Item 18: Poured in Place Surfacing will be measured and paid for at the contract unit price per square foot, complete in place and installed to be measured as the exposed surface. Below surface transition surfacing will not be measured separately.
- R. Item 19: Rubber Wearing Pads will be measured and paid for at the contract unit price each complete and in place counted as each two foot square pad.
- S. Item 20: Wood Fiber Play Surface will be measured and paid for at the contract unit price per cubic yard installed. Measurement will be based on the number of cubic yards after compaction rather than the cubic yards delivered before compaction.
- T. Item 21: Loam and Seed will be measured and paid for at the contract unit price per square yard which shall include all areas within the limit of the construction fence but will not include areas outside the work limits requiring restoration due to construction disturbance.

PART 2: PRODUCTS (NOT USED)

PART 3: EXECUTION (NOT USED)

END OF SECTION

SECTION 01500

TEMPORARY FACILITIES AND CONTROLS

PART 1: GENERAL

1.01 GENERAL PROVISIONS

- A. Drawings and general provisions of the Contract, including Part III General Conditions and Part IV Special Conditions, apply to this Section.

1.02 REQUIREMENTS INCLUDED

A. GENERAL

- 1. Comply with applicable safety regulations, including:
 - a. ANSI Series A-10, Safety Requirements for Construction and Demolition.
 - b. OSHA Part 1926, Construction Safety and Health Regulations.

B. SITE DRAINAGE

- 1. Upon beginning site work, if any, the Contractor shall assume complete responsibility for such site drainage for the duration of contract, and shall maintain such drainage in a manner that will cause no damage to adjacent areas.
- 2. Keep excavation, pits, trenches, and other construction areas free of water at all times, including back up of drains and sewers.

C. PROTECTION

- 1. Take all necessary precautions to ensure that finished or partially completed work, materials, and equipment of all kinds are properly braced and secured against wind, rain, snow, and other adverse weather conditions.
- 2. Remove snow and ice from roads, walks, roofs, etc., which impedes access or drainage, or presents danger to workmen, public, or property relative to the scope of work required.
- 3. Provide barricades, fences, and other safety protection measures required by Codes or Governing Authorities.
- 4. Minimize storage of flammable materials, ensure that such material is properly handled and stored.
- 5. Provide fire extinguisher per code requirements near locations of flammable products.
- 6. Do not permit use of open fires.
- 7. The commission of nuisances on the land of the Commonwealth and adjacent property shall be rigorously prohibited and the Contractor shall take adequate steps to prevent them.

D. TEMPORARY STRUCTURES

1. The Contractor shall be responsible for arranging and providing general services and temporary facilities as specified herein and as otherwise required for proper and expeditious completion of the work. The Contractor shall pay costs for all such general services and temporary facilities, except as otherwise specified, until completion of the Work and then shall be removed.
2. All such services and facilities shall comply with applicable Federal, State and Municipal regulations.

E. ENCLOSURES

1. Provide temporary, insulated, weather tight closures of openings on exterior surfaces for providing acceptable working conditions and protection for materials, allow for heating during construction, and prevent entry of unauthorized persons. Provide doors with self-closing hardware and locks.

F. SECURITY

1. The General Contractor shall be responsible for security around the construction site and shall be expected to coordinate his security provisions with the DCR Resident Engineer where applicable.

G. TEMPORARY COVERINGS AND PROTECTION

1. Suitable protection shall be provided under all materials stored on finish surfaces. Planking shall be laid before moving materials over finished areas. Wheelbarrows used over such areas shall have rubber-tired wheels.
2. Finished surfaces, including factory finished and job finished items, shall be clean and not be marred in any way upon delivery of the site to the DCR. The Contractor shall, without extra compensation, refinish such surfaces that prove to have been inadequately protected or are damaged.

H. STAGING, SCAFFOLDING AND HOISTS

1. The Contractor shall provide, set-up, and maintain all necessary staging, hoists, shoring, temporary stairs, ladders, chutes, as required for the work and comply with applicable safety codes. The Contractor shall do all customary hoisting and give proper assistance to all trades and Sub-Contractors.
2. All staging required to be over 8 feet in height, shall be furnished and erected by the Contractor and maintained in safe condition by him without charge to and for the use of all trades as needed by them for proper execution of their work.
3. Coordinate use by trades of available storage areas. Temporary building shall remain the property of the Contractor or trade that erected them and they shall be removed by them from the site upon completion of the work.

I. CLEANING AND WASTE DISPOSAL

1. At reasonable intervals during progress of work, clean site, and adjacent

- public property.
2. Provide marked metal containers with tight fitting covers for edible debris. Enforce their use by employees.
3. Provide on-site dump containers for collection of waste material, as may be necessary.
4. Periodically remove and legally dispose of waste material off-site.
5. Schedule cleaning operations so that dust and other contaminants resulting from cleaning will not fall on wet, newly finished surfaces. Also, in open areas prevent any construction material or debris from becoming wind blown abroad the site apply materials and take necessary action consistent with usual and customary practice for dust control operations.
6. Do not dispose of volatile wastes such as mineral spirits, oil, or paint thinner in storm or sanitary drains.
7. The General Contractor shall be held responsible for the final cleaning of all work under this contract.

J. LIGHT AND POWER

1. Provide temporary light and power for construction needs and security throughout the construction period. Suitably protect temporary system by fuses or circuit breakers. Panel-boards, safety switches, and electrical outlets shall be enclosed and grounded. Provide meter as required. Entire system shall comply with NEC requirements for temporary wiring.
2. The General Contractor shall make necessary applications, pay all fees and charges, obtain necessary permits for power, lights as necessary for providing and maintaining artificial light during the progress of work.

K. HEAT AND VENTILATION

1. The Contractor shall furnish all temporary heat required for heating materials either on-the-site or in-place; also, for heating temporary structures including Engineer's field office if one is required.
2. Provide temporary heat and ventilation to:
 - a. Protect against dampness, cold and condensation.
 - b. Provide heat and humidity suitable for storage, curing, and installation of materials.
 - c. Provide ventilation adequate for work safety and fire protection
3. Maintain minimum temperature of 40 degrees F. within the building where materials sensitive to temperature may be stored.
4. Temporary heaters shall be smokeless portable unit heaters acceptable to Underwriters Laboratories and the Local Fire Department.

L. WATER

1. Provide temporary water for construction purposes, sanitation, drinking, first aid, fire protection, cleaning. Furnish and install all connections, piping, fittings, meters, necessary for the temporary service, and maintain same in good condition. Take necessary precautions to prevent waste of water.
2. The General Contractor will pay for all water required on the job site.

3. Provide satisfactorily cooled drinking water in units suitably located throughout the job site.

M. PROTECT RECORD DOCUMENTS

1. Do not use record documents for construction purposes.
2. Legibly mark significant field changes such as the following:
 - a. Drawings: Locations of concealed utilities, field changes of dimensions and details not on original drawings.
 - b. Specifications: Manufacturers, model number of equipment actually installed.
 - c. Shop Drawings: Changes made since review by the Landscape Architect.
3. At completion of work, each reproducible shall be 4 mil polyester base "Estar" or equal, and showing all "AS BUILT" corrections in ink and all superseded data removed therefrom.
4. Deliver complete record documents to Landscape Architect at job completion.

PART 2 : PRODUCTS (NOT USED)

PART 3 : EXECUTION (NOT USED)

END OF SECTION

SECTION 01600

MATERIALS AND EQUIPMENT

PART 1 : GENERAL

1.01 GENERAL PROVISIONS

- A. Drawings and general provisions of the Contract, including Part III General Conditions and Part IV Special Conditions, apply to this Section.

1.02 REQUIREMENTS INCLUDED

A. APPROVAL STANDARDS

1. Standards (ANSI, ASTM, Federal Specifications, etc.) referenced in these Contract Documents are the latest edition issued as of the date set for bidding.
2. Where compliance with standards is required, the Contractor shall provide affidavit from the Sub-Contractor or Manufacturer certifying compliance, if requested by the Landscape Architect.

B. SUBSTITUTIONS, PRODUCT OPTIONS

1. Within 15 days after date of contract, submit to the Landscape Architect four (4) copies of complete list of all products proposed for installation.
2. Substitutions
 - a. Within 15 days after date of contract, but no later than 35 days before proposed substitution is to be incorporated in the work, the Landscape Architect will consider formal request from the Contractor for substitution of materials and or products instead of those specified.
 - b. Submit four (4) copies of request for substitution.
 - 1) Include in request:
 - a) Complete data substantiating compliance of proposed substitution with Contract Documents.
 - 2) For Products:
 - a) Product identification, including the name and address of the manufacturer.
 - b) Literature from the manufacturer shall include the product description, performance and test data, and reference standards.
 - c) Samples, if appropriate.
 - d) Name and address of similar projects on which the

product or method was specified, include scheduling and cost data.

3. By making a request for substitution the Contractor represents:
 - a. He has personally investigated the proposed product or method, and determined that it is equal or superior in all respects to that specified.
 - b. He will provide same guarantee for the substitution as for product or method specified.
 - c. He will coordinate installation of the accepted substitution into the work, make such changes as may be required for the work to be complete in all respects.
 - d. He waives all claims for additional costs related to the substitution that subsequently becomes apparent.
 - e. Cost data is complete and includes all related costs under his contract, but excludes costs under separate contracts, and redesigned by the Landscape Architect.
4. Substitutions will not be considered when:
 - a. They are indicated or implied on shop drawings or project data submittals without formal request specified above.
 - b. Acceptance will require substantial revision of contract documents.
5. Landscape Architect retains absolute right of approval of the proposed substitution, and may reject it on any grounds including function, appearance, and dimensional compatibility.

C. DELIVERY AND STORAGE

1. Products shall be properly enclosed in containers, boxes, packages, etc., to prevent damage during transportation and handling. Deliver in original unopened containers with labels indicating brand names, color, patterns, model numbers, quality designations, and compliance with referenced specifications.
2. Store materials delivered to the site under cover, in conformance with manufacturer's recommendations. Carefully protect stored materials from mechanical damage, dampness, heat and cold.
3. Store materials in a location secure from vandalism and theft.

D. INSTALLATION

1. Products shall be installed, finished and cleaned in strict accordance with manufacturer's instructions unless otherwise specified, by skilled workmen

under adequate supervision.

2. Protect installed products until substantial completion by appropriate means including plastic or canvas sheeting, kraft paper, masking tape, or wood barricade.

PART 2: PRODUCTS (NOT USED)

PART 3: EXECUTION (NOT USED)

END OF SECTION

SECTION 01700

PROJECT CLOSEOUT

PART 1: GENERAL

1.01 GENERAL PROVISIONS

- A. Drawings and general provisions of the Contract, including Part III General Conditions and Part IV Special Conditions, apply to this Section.

1.02 REQUIREMENTS INCLUDED

A. FINAL CLEANING

- 1. Use cleaning materials as recommended by product manufacturers and the appropriate specification SECTIONS.
- 2. Employ experienced workmen.
- 3. Before inspection for substantial completion, clean as follows:
 - a. Remove stickers, marks and labels.
 - b. Remove grease, dirt, stains, fingerprints, etc., from exposed-to-view finished surfaces. Touch up marred surfaces as required.
 - c. Sweep and rinse with clean water exterior paved surfaces, rake clean other site surfaces.
 - d. Refer to specification SECTIONS for additional requirements for particular surfaces.

B. SUBSTANTIAL COMPLETION

- 1. Substantial Completion is defined as the date on which work is sufficiently complete for occupancy or the use for the purposes for which it is intended. The Contractor shall submit WRITTEN CERTIFICATION to the Landscape Architect that the work is substantially complete, include a list of major items to be corrected, completed, or otherwise resolved.
- 2. The Landscape Architect will inspect completed work within seven (7) calendar days after receipt of the certification.
- 3. Should the Landscape Architect consider that work is substantially complete:
 - a. Landscape Architect will prepare a punch list of items to be completed, corrected, or otherwise resolved as determined by inspection.
 - b. Landscape Architect will issue Certification of Substantial Completion including:
 - 1) Date of substantial completion.
 - 2) Punch List.
 - 3) Schedule for completion of punch list items.
 - 4) Date and time on which City will occupy work or designated portion thereof.
 - 5) Responsibilities of the City and the Contractor for insurance, utilities, maintenance, cleaning, and security.

4. Contractor shall obtain Certificate of use and occupancy.
5. City will occupy work in accordance with provisions of certificate of substantial completion.

C. CLOSEOUT SUBMITTAL

1. Refer to "COMPLETION" paragraph of each specification "SECTION" for closeout requirements including:
2. Operations and Maintenance Manuals: prior to turn-over of this contract to the Owner for Use and Occupancy or Substantial Completion, the Contractor shall secure and deliver to the City complete indexed files containing approved operating and maintenance manuals, shop drawings and other data as follows:
 - a. Operating manuals and operating instructions for the various systems.
 - b. Catalog sheets, maintenance manuals and approved shop drawings of all items and scheduled hardware actually installed, with all details clearly indicated.
 - c. Names, addresses and telephone numbers of repair and service companies for each of the major systems installed under this contract.
 - d. Non-availability of operating and maintenance manuals or inaccuracies therein may be grounds for cancellation and postponement of any scheduled final inspection by the City until such time as the discrepancy has been corrected.
3. Instruction of City Personnel in maintenance and operation of systems.
4. Submission of certificates, test reports, etc.
5. Provisions of spare parts and maintenance materials.
6. Extended guarantees and warranties.
 - a. The above shall be neatly packaged in standard sizes and clearly labeled.
7. Completed project record documents specified under SECTION 01500 TEMPORARY FACILITIES AND CONTROLS, Paragraph 1.02M.
8. Certificate of Insurance for products and completed addresses and telephone numbers.
9. Typed list of major Sub-Contractors and suppliers, with addresses and telephone numbers.
10. Include consent of surety to final payment.

D. EVIDENCE OF PAYMENT OF SUB-CONTRACTORS

1. Submit Certification of payment from Sub-Contractors and suppliers. If acceptable to the City, a bond may be provided in place of certification, indemnifying the City against liens or claims.
2. Two Complete sets of all written closeout submittals shall be neatly bound in labeled three-ring binders with the material organized according to Section of Specification.

E. FINAL ADJUSTMENTS OF ACCOUNTS

1. Submit final statement of accounting to Landscape Architect, reflecting additions and deductions for uncorrected work and other adjustments.
2. Landscape Architect will prepare final change order reflecting approved adjustments to contract sum not previously made by change order.
3. Submit application for final payment incorporating final change order.

PART 2: PRODUCTS (NOT USED)

PART 3: EXECUTION (NOT USED)

END OF SECTION

SECTION 02030

TREE PRUNING AND REMOVAL

PART 1 - GENERAL

1.01 GENERAL REQUIREMENTS

- A. The conditions and general requirements of the Contract, Division 0 and applicable parts of Division 1, apply to the work under this Section.
- B. Under this Section, the Contractor shall furnish all labor, materials, equipment and transportation required to complete all aspects of the work in accordance with all local, state and federal regulations in force at the time of this Contract and in accordance with the various items specified herein.
- C. The work of this Section consists of all tree pruning and removal work and related items as specified herein and includes, but is not limited to:
 - 1. Crown Cleaning;
 - 2. Tree Removal
- D. All work in this section shall be performed by a Massachusetts Certified Arborist.
- E. All trees to be pruned or removed are located on the site and indicated on the drawings. All trees indicated shall be inspected by the Arborist and Landscape Architect before work is to be done. In addition to trees indicated for removal on the Drawings, If the Arborist discovers tree(s) which have not been marked for removal and are intended for pruning, but whose condition is such that removal is warranted, whether due to death, disease, decay, damage, or structural weakness, such tree(s) shall not be pruned and the Arborist shall immediately report these findings in writing to the Owner and await the Owner's direction before proceeding with work on the particular tree(s) in question.
- F. The Contractor is required to review and inspect the site regarding trees to be removed (as indicated on the Drawings) prior to bid proposal in order to form his/her own assumptions as to the ultimate cost of the work.

1.02 STANDARDS AND DEFINITIONS

- A. Pruning and Removals shall conform to:
 - 1. American National Standards Institute (ANSI): Standard A300-2001 Standard Practices for Tree Care Operations – Tree, Shrub, and Other Woody Plant Maintenance.
 - 2. American National Standards Institute (ANSI): Standard Z-133.1 Safety Requirements for Tree Care Operations – Pruning, Trimming, Repairing, Removing Trees, and Cutting Brush.
 - 3. All other applicable Occupational Safety and health Administration (OSHA) standards, and state and local regulations

- B. American National Standards Institute- (ANSI) is the private, non-profit organization that administers the safety and maintenance regulations for the Tree Care Industry.
- C. Crown Cleaning- The removal of dead, diseased, obstructing, split, and/or broken branches that are 2 inches in diameter or greater. Limbs that are susceptible to failure from dense or heavy foliar masses should be thinned.
- O. Crown Raising- The removal of lower tree branches to allow safe movement of vehicles and pedestrians under the canopy of the tree. Limbs above sidewalks shall be no lower than 10 feet from the ground. Limbs over the road shall be no lower than 16 feet from the ground.
- E. Crown Reduction- The technique used to reduce the overall mass of the tree by thinning out the top and sides or just removing individual limbs of the tree. Reduction pruning is commonly associated with pruning away from buildings, structures, signs, lights and other overhead obstructions.
- F. Crown Thinning- The selective removal of branches to increase light penetration and air movement. No more than 25% of the trees living branches shall be removed.
- G. Crown Training- A pruning process that utilizes all the major pruning types to promote a strong central leader and strong scaffold branches on recently planted trees.
- H. D.B.H.- Diameter at breast height. The location on a tree 4.5 feet above ground where the diameter of the tree is measured.
- I. Massachusetts Certified Arborist- (MCA) An individual who is listed by the Massachusetts Arborist Association as a MCA who has passed a comprehensive exam and maintained their certification through the accumulation of continuing education credits.
- J. Occupational Safety & Health Administration- (OSHA) is the Federal agency responsible for insuring worker safety.
- K. Owner- the individual or designated representative responsible insuring the requirements of this Contract are adhered to.
- L. Street tree- Any tree planted and maintained with in the public right of way under the jurisdiction of the Quincy Park and Forestry Department.

1.03 EXAMINATION OF SITE AND DOCUMENTS

- A. The Contractor shall be responsible for having a clear understanding of the existing conditions of the site before submitting a bid for this Contract and shall be responsible for fully carrying out the work of the Contract, regardless of actual site conditions encountered.

1.04 ORDER OF WORK

- A. Before any work is started, the Contractor shall attend a conference with the Owner and the Landscape Architect. The Contractor shall provide a list of trees that should be removed for the following reasons: dead trees, hazardous trees, or trees in serious decline. All trees to remain shall be pruned to provide safety,

protection of property, clearance of roadways, walk, buildings and luminaries, and to improve the overall structure of the tree. The type of pruning to be performed on this project is classified as crown cleaning. Tree pruning operations are to be completed as part of site preparation prior to initiation of construction operations.

1.05 CHANGES IN THE WORK

- A. The owner reserves the right to change, add, or delete areas or quantities to be pruned or removed as deemed to be in the City's best interest.
- B. No claim for extra compensations or extension of time will be allowed on account of actual conditions inconsistent with those assumed.
- C. Any alterations or modifications of work performed under this contract shall be made only by written agreement between the Contractor and the Owner. No claims for extra work or materials shall be allowed unless covered by written agreement.

1.06 PROTECTION OF VEGETATION TO BE PRESERVED

- A. The Contractor shall protect all existing trees, shrubs, and lawns designated to remain for the length of the construction period. The placement of protection devices, such as snow fence enclosures, shall, however, be at the Contractor's discretion, except those required by the Owner.
- B. Damage no plant to remain by burning, pumping of water, by cutting of live roots or branches, or by any other means. No plants to be saved shall be used for cable stays, guys, or their fastenings. Vehicles shall not be parked within the dripline of trees to remain. Construction materials shall not be stored beneath trees to be saved.
- C. The Contractor shall be liable for any damage to any tree, shrub, or lawn to remain, and shall immediately report to the Owner for appraisal of any damage and for determination of corrective treatment or compensation to the Owner.
- D. The Contractor shall compensate the Owner for damages by installing replacement tree(s) of the size and species approved by the City, and of sufficient quantity such as the sum of the DBH inches for replacement trees equals the total DBH inches of the damaged trees. Damaged shrubs shall be replaced with shrub(s) of the same size, species, and quantity, unless determined otherwise by the Owner.
- E. Damaged shrubs or lawns shall be restored or replaced to match existing to remain to the satisfaction of the Owner, at no cost to the Owner.

PART 2 - MATERIALS

2.1 EQUIPMENT AND MATERIALS

- A. Equipment necessary for this Contract shall be properly maintained and in good operating condition to the City's satisfaction. The Contractor shall promptly remove and replace any equipment which the Owner deems to be in unsatisfactory repair or condition or otherwise unsuitable.

8. At the discretion of the Owner, if the equipment failures, breakdowns or other related problems occur that are jeopardizing the meeting of deadlines established in the written schedule provided by the Contractor, the Contract will be terminated.
- C. Vehicles shall display prominently the Contractor's name, address, and telephone number on both doors.
- D. Aerial lift equipment shall be required for pruning and removal work unless otherwise approved by the Owner. Such equipment shall have a minimal working height of fifty-five (55) feet, and shall include an articulated upper boom, insulated lower boom, a ten to fifteen (10-15) cubic yard enclosed hydraulic dump body, pintlehook and attachments for a towed chipper, or approved equal.
- E. A chipper, meeting all OSHA requirements, shall be used which will process material up to twelve (12) inches in diameter.
- F. A crane or log loader shall be used on site to remove logs too large to be chipped.

2.2 PERSONNEL

- A. The Contractor shall submit each employee's name and title prior to the commencement of work. The Contractor shall provide a list of all Massachusetts Certified Arborists who will be working on this contract. This list shall include the names of those individuals and their certification number. The Contractor shall advise the Owner of any changes in the roster assigned to this contract.
- B. A crew shall consist of a minimum, one (1) tree trimmer/ climber, and one (1) ground person (one of which shall be a crew foreman and a Massachusetts Certified Arborist in good standing). The crew foreman shall have a minimum of five (5) years climbing and pruning experience.
- C. Each worker shall be experienced and highly qualified with necessary tree work skills to successfully complete this contract, including the ability and training to perform aerial rescue. Said skill shall also include worker safety and ability to be in compliance with current OSHA and ANSI Z-133.1 Standards.

PART 3 - EXECUTION

3.1 DESCRIPTION OF WORK

- A. Each tree to be pruned shall be serviced according to the following types of pruning, as needed: Crown Cleaning, Crown Raising, Crown Reduction, Crown Thinning and Crown Training.
 1. Sidewalk/Paths – All branches shall be pruned to allow a minimum ten (10) foot clearance over sidewalks and paths, including proposed new paths.

2. Luminaries – Any and all branches extending directly below a street light, limiting the light reaching the street or path shall be removed and all branches shall be cut back to afford a minimum four (4) foot clearance.
 3. House/Building – All branches shall be pruned to allow a minimum of five (5) foot clearance away from homes and buildings, or if possible ten (10) foot clearance where trees will not be severely disfigured due to crown reduction, this shall be determined by the City Arborist.
 4. Streets/Roads — All branches shall be pruned to allow a minimum sixteen (16) foot clearance over street surface.
- E. All limbs over two inches in diameter to be removed shall be precut to prevent splitting. Any branches that would injure the tree or other objects by falling shall be lowered to the ground by proper rigging and rope procedures.
 - F. Remove one of two crossed or rubbing branches where practical so the removal will not leave large holes in the general outline of the tree.
 - G. On trees known to be diseased, tools are to be disinfected with alcohol after each cut between trees and where there is known to be a danger of transmitting the disease on tools.
 - H. Lateral branches as well as occasional water sprouts may be retained. Complete removal of secondary laterals and water sprouts resulting in the stripping of major limbs, will not be permitted.

3.4 REMOVAL PROCEDURES AND QUALITY CONTROL

- A. Trees designated to be removed shall be taken down and all leaves, branches and trunks of trees properly disposed of by chipping or removal from the premises.
- B. Trees are to be felled in such a manner that does not injure trees to be saved or endangers or harms the public and adjacent property.
- C. Removal of all parts of each tree, excluding the stump, shall be completed on the same day that the removal process is started, including the trunk (or butt) of the tree.
- D. Stump removal shall consist of grinding the stump and any roots to a depth of six inches below grade and the disposal of the wood waste. The area or tree pit is to be left at the finish grade using the specified planting mix that meets the requirements laid out in section 02900. Unless otherwise approved by the Owner, the stump must be removed within ten (10) business days from the date the above ground portion of the tree is removed.

3.5 SAFETY

- A. All equipment to be used and all work to be performed must be in full compliance with all standards as promulgated by OSHA at the time of bidding, including, but not limited to those regulations concerning noise levels, protective devices and operator safety.

END OF SECTION

SECTION 02070

SELECTIVE DEMOLITION

PART 1 - GENERAL

1.01 WORK INCLUDED

- A. Demolishing designated structures, utilities.
- B. Removing and disposing of materials off site in accordance with local, state, and federal regulations.

1.02 COORDINATION

- A. Coordinate work of trades and schedule demolition, alterations and renovation work using procedures and methods to expedite completion of the Work.

1.03 SUBMITTALS

- A. Submit demolition and removal procedures and schedule in accordance with approved Project Schedule. The demolition schedule shall be part of a phased plan of construction.

1.04 EXISTING CONDITIONS

- A. Conduct work to minimize interference with adjacent park areas. Maintain protected egress and access at all times.
- B. Provide, erect and maintain temporary barriers and security devices in accordance with Section 01500 - Construction Facilities and Temporary Controls.

PART 2 PRODUCTS

2.01 REMOVED MATERIALS

- A. The CONTRACTOR shall remove all equipment, fixtures, machinery, materials, etc., necessary to accomplish the Work except those items noted or shown that the OWNER will remove. All equipment, fixtures, machinery, materials, etc., removed under this Section shall become the property of the CONTRACTOR unless otherwise noted.
- B. Materials which are indicated to be reused shall be turned over to the trade whose work includes the particular material. Coordinate with OWNER return of any materials to the OWNER.
- C. Remove all other materials from the site. Dispose of materials in accordance with federal, state, and local regulations.

2.02 PRODUCTS FOR PATCHING, EXTENDING AND MATCHING

- A. Provide same products or types of construction as that in existing structure, as needed to patch, extend or match existing work. Generally Contract Documents will not define products or standards of workmanship present in existing construction; CONTRACTOR shall determine products by inspection and any necessary testing, and workmanship by use of the existing as a sample of comparison.
- B. Presence of a product, finish, or type of construction, requires that patching, extending or matching shall be performed as necessary to make Work complete and shall be not less than that specified for new work in the applicable Sections.

PART 3 EXECUTION

3.01 PREPARATION

- A. Take precautions to guard against movement or settlement of existing work; provide bracing or shoring necessary in connection herewith; be responsible for safety and support of such work; be liable for any such movement or settlement and any damage or injury caused thereby or resulting there from.
- B. Protect buildings and their contents from damage due to weather at all times, providing all necessary temporary enclosures to accomplish this protection.
- C. Coordinate with appropriate utility companies, when applicable, prior to initiating work.
- D. Provide, erect and maintain temporary barriers and security devices.
- E. Protect existing items which are not to be altered.

3.02 EXECUTION

- A. Assign the work of moving, removal, cutting, and patching, to CONTRACTOR'S qualified personnel. Perform the work in a manner to cause least damage to each type of work, and provide means of returning surfaces to same appearance of new work.
- B. Perform cutting and removal work to remove minimum necessary, and in a manner to avoid damage to adjacent work.
- C. Replace or repair any damage done to any other property on or off premises by reason of required work.
- D. Provide proper shoring and bracing to prevent settlement or damage to adjacent structures.
- E. If at any time the safety of adjacent structures or equipment appears to be endangered, cease operations; notify the Landscape Architect and take precautions to support such structures or equipment; do not resume operations until permission has been granted. Any and all supports necessary to safeguard or prevent movement or settlement shall be installed prior to resuming operations. The CONTRACTOR shall assume full responsibility and expense for the adequacy of such supports.
- F. Ensure that all mechanical piping and ducts and electrical conduit and wires that would be interrupted during the work are turned off, and locked out, valved out, or disconnected before starting work.
- G. Keep dust, dirt and debris to a minimum.
- H. Relocate materials and equipment where possible so as to avoid damage.
- I. Disconnect utilities. Cap as required. Identify disconnected utilities and indicate locations of disconnected utilities on Project Record Documents.
- J. Remove materials to be re-installed or retained in a manner to prevent damage. Store and protect in accordance with requirements of Section 01600 - Materials and Equipment.
- K. Notify Landscape Architect immediately of any contaminated, vermin infested, dangerous or hazardous materials encountered and remove and properly

dispose of materials in accordance with local, state and federal health, safety and environmental regulations.

- L. Remove contents of buried tanks located within demolition area. Remove underground tanks, components and piping from site.
- M. Backfill open pits and holes caused as a result of demolition. Use material specified in Section 02202 - Earthwork.
- N. Rough grade and compact areas affected by demolition to finish site grades and contours.

3.03 DEBRIS

- A. All debris shall be removed as it accumulates and shall not be stored or permitted to accumulate on site. Remove all debris at the end of each working day.
- B. Burning of debris will not be permitted.

3.04 PATCHING

- A. Patch and extend existing work using skilled tradesmen who are capable of matching existing quality of workmanship. Quality of patched or extended work shall be not less than that specified for new work in the applicable sections.
- B. Patch and replace with matching material any portion of an existing finished surface which is found to be damaged, lifted, discolored, or shows other imperfections.
 - 1. Provide adequate support of substrate prior to patching the finish.
 - 2. Refinish patched portions of painted or coated surfaces that will produce compatible uniform color and texture over entire surface.
 - 3. When existing surface finish cannot be matched, refinish entire surface to nearest intersection.
- C. When new work abuts or finishes flush with existing work, make a smooth and workmanlike transition. Patched work shall match existing adjacent work in texture and appearance so that the patch or transition is invisible at a distance of five feet.
- D. When finished surfaces are cut in such a way that a smooth transition with new work is not possible, terminate existing surface in a neat manner along a straight line at a natural line of division, and provide trim appropriate to finished surface.

END OF SECTION

SECTION 02110

CLEARING AND GRUBBING

PART 1 GENERAL

- A. WORK INCLUDED
- B. Clearing site of plant life and grass.
- C. Removing root systems of trees and shrubs in areas cleared.
- D. Pruning trees to remain where branches or roots will interfere with construction operations.
- E. Removing debris.
- F.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

3.01 PROTECTION

- A. Protect plant growth and features remaining as final landscaping.
- B. Protect bench marks and existing work from damage or displacement.
- C. Maintain designated site access for vehicle and pedestrian traffic.
- D. Protect existing trees and other vegetation to remain in place against unnecessary cutting, breaking, skinning of roots, skinning and bruising of bark, smothering of trees by stockpiling construction materials or excavated materials within drip line and excess foot or vehicular traffic, or parking of vehicles within drip line.

3.02 CLEARING AND GRUBBING

- A. Clear areas required for access to site and execution of Work.
- B. Remove trees and shrubs within designated areas shown on Drawings. Grub out stumps and roots.
- C. Clear undergrowth and deadwood, without excavating topsoil and subsoil.
- D. Remove and dispose of all materials used for mulch and/or ground cover. Do not stockpile or reuse the material.
- E. Use only hand methods for grubbing inside drip lines of trees that remain in place.

3.03 REMOVAL

- A. Remove debris from site. Burning or disposing of debris on site is prohibited.

END OF SECTION

SECTION 02200
EARTHWORK

PART 1 GENERAL

1.01 WORK INCLUDED

- A. Excavating topsoil and stockpiling topsoil for later use.
- B. Saw cutting pavement and excavating pavement.
- C. Excavating subsoil and stockpiling subsoil for later use.
- D. Excavating unsuitable material.
- E. Excavating rock, boulders, solid rubble masonry and Portland cement concrete that is less than one (1) cubic yard in volume.
- F. Replacing rock and boulder excavation and excavated unsuitable material.
- G. Placing select fill materials below and adjacent to utilities and structures.
- H. Backfilling excavations.
- I. Placing materials for bringing site to subgrade and preparing subgrades for foundations.
- J. Complying with compaction requirements.
- K. Removing and disposing of excess topsoil and subsoil, excavated unsuitable material, and excavated pavement, rock, boulders, solid rubble masonry, and Portland cement concrete off site in accordance with local, state and federal requirements.
- L. Grading and rough contouring the site to the cut limits required for construction.

1.02 REFERENCE STANDARDS

- A. ASTM C33 - Concrete Aggregates.
- B. ASTM C136 - Sieve Analysis of Fine and Coarse Aggregates.
- C. ASTM D75 - Sampling Aggregates.
- D. ASTM D1556 - Test for Density of Soil in Place by the Sand Cone Method.
- E. ASTM D1557 - Tests for Moisture - Density Relations of Soils and Soil-Aggregate Mixtures, Using 10-lb Rammer and 18-inch Drop: (Modified Proctor).
- F. ASTM D2167 - Tests for Density of Soil in Place by the Rubber- Balloon Method.
- G. ASTM D2922 - Tests for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth).
- H. Section M2.01.7 and other applicable sections of the Commonwealth of Massachusetts Development of Public works Standard Specifications for Highways and Bridges, latest edition.

1.03 SAMPLES

- A. Submit Samples in accordance with Section 01300 - Submittals. Samples shall be obtained in accordance with ASTM D75.
- B. Submit in air-tight containers, 25-lb sample of each type of material to be tested, to testing laboratory.

1.04 TESTING

- A. Tests and analysis of fill materials will be performed in accordance with Section 01400 - Quality Control and the methods in ASTM C136.

PART 2 PRODUCTS

2.01 MATERIALS - GENERAL

- A. Topsoil: Friable, fertile, natural, free-draining loam typical of the locality; free of subsoil, roots, grass, sticks, weeds, clay, sod lumps, debris and stones larger than 1-inch in maximum dimension. Soil shall not be excessively acid or alkaline, nor contain toxic material harmful to plant growth.
- B. Unsuitable Material: Cut or broken pavement, debris, concrete or other rubble, organic materials; muck, peat, silty soils or clayey soils; rock over 6 inches in maximum dimension; or any material which in the opinion of the ENGINEER will not provide sufficient support or maintain the completed construction in a stable condition.

2.02 COMMON FILL MATERIALS

- A. Subsoil: Material excavated on site which is friable, compactable, natural soil composed of gravel, sand, or silty or clayey gravel and sand; free from debris, concrete, or other rubble, organic matter, muck, peat, excavated rock and boulders over 6 inches in maximum dimension.
- B. Additional Fill: Imported material which is friable, compactable, natural soil composed of gravel, sand, or silty or clayey gravel and sand; free from debris, concrete or other rubble, organic matter, muck, peat, excavated rock, and boulders of 6 inches in maximum dimension.

2.03 SELECT FILL MATERIALS

- A. Crushed Stone: Clean, hard, durable crushed particles or fragments of stone or rock of uniform quality; free from thin and elongated pieces, silt, topsoil, clay, and organic matter; meeting the following limits in accordance with ASTM C33 stone size No. 67 when tested in accordance with ASTM C136.

Sieve Designation	Percentage by Weight Passing Square Mesh Sieve
	TOTAL SAMPLE
1-inch	100
3/4-inch	90 – 100
3/8-inch	20 – 55
No. 4	0 – 10
No. 8	0 – 5

- B. Sand: Clean, hard durable grains; free from silt, topsoil, clay and organic matter; uniformly graded from coarse to fine meeting the following limits when tested in accordance with ASTM C136:

Sieve Designation	Percentage by Weight Passing Square Mesh Sieve
	TOTAL SAMPLE
3/8-inch	100
No. 4	95 – 100
No. 16	50 – 80
No. 30	25 – 60
No. 50	10 – 30
No. 100	2 - 10

- C. Stone for Stone Fill: Hard, blasted angular rock other than serpentine rock containing the fibrous variety chrysotile (asbestos); least dimension of the stone shall be greater than 1/3 of the longest dimension; reasonably well graded from smallest to maximum size stone so as to form a compact mass when in place.
1. Type I - The longest dimension of the stone shall vary from 1 inch to 12 inches. At least 50 percent of the volume of stone in place shall have a least dimension of 4 inches.
 2. Type II - The longest dimension of the stone shall vary from 2 inches to 36 inches. At least 50 percent of the volume of the stone in place shall have a least dimension of 12 inches.
 3. Type III - The longest dimension of the stone shall vary from 3 inches to 48 inches. At least 50 percent of the volume of stone in place shall have a least dimension of 16 inches.
 4. Type IV - The longest dimension of the stone shall vary from 3 inches to 60 inches. At least 50 percent of the volume of stone in place shall have a least dimension of 20 inches.
- D. Dense Graded Crushed Stone for Pavement base: material combining crusher-run coarse aggregates of crushed stone and fine aggregates of natural sand or stone screening uniformly premixed with a predetermined quantity of water, includes the following:
1. Coarse aggregate shall consist of hard, durable particles of fragments of stone. Materials that break up when alternately frozen and thawed or wetted and dried shall not be used.
 2. Coarse aggregate shall have a percentage of wear, by the Los Angeles test, of not more than 45.
 3. Fine aggregate shall consist of natural or crushed sand.
 4. The composite material shall be free from clay, loam or other plastic material, and shall conform to the following grading requirements:

Sieve Designation	Percentage by Weight Passing Square Mesh Sieve
	TOTAL SAMPLE
2 in	100
1.5 in	70 – 100
.75 in	50 – 85
No. 4	30 – 55
No. 50	8 – 24
No. 200	3 - 10

5. Sampling and testing shall be in accordance with the following standard AASHTO methods:
- | | |
|----------------|-----|
| Sieve Analysis | T27 |
| Passing 75 um | T11 |

F. LOAM BORROW

Loam for use on lawn areas and planting beds shall conform to the following grain size distribution for material passing the #10 sieve:

U.S. Sieve Size Number	% Passing by Weight Minimum	% Passing by Weight Maximum
10	100	-
20	78	100
40	60	85
100	38	60
270	22	35
.002mm	2	5

The ratio of particle size for 80% passing to the particle size for 30% passing shall be 6.0 or less. Maximum size shall be one-inch largest dimension.

Tests shall be by combined hydrometer and wet sieving in compliance with ASTM D422 after destruction of organic material by ignition.

Amended topsoil shall not have a pH factor of less than 6.0 or greater than 7.0 and shall have an organic content between 4.0 and 8.0 percent.

2.04 FILTER FABRIC

- A. Filter fabric shall be Mirafi 140N. Substitution of a product of equal or better quality, detail, function and performance may be proposed for substitution by following the procedures in Section 01600 - Materials and Equipment.

PART 3 EXECUTION

3.01 PREPARATION

- A. Identify required lines, levels, contours, and datum.
- B. Identify known underground utilities. Stake and flag locations.
- C. Identify and flag surface and aerial utilities.
- D. Notify utility companies to locate and temporarily support, remove, and/or relocate utilities.
- E. Notify DIG-SAFE (1-888-344-7233).

3.02 PROTECTION

- A. Protect trees, shrubs, lawns, and other features to remain.
- B. Protect bench marks, existing structures, fences, sidewalks, paving, and curbs.
- C. Protect above and below grade utilities and structures which are to remain.
- D. Underpin adjacent structures which may be damaged by excavation work, including service utilities and pipe chases.
- E. Protect bottom of excavations and soil adjacent to and beneath foundations from frost.

3.03 TOPSOIL EXCAVATION

- A. Excavate and stockpile topsoil from areas to be further excavated, landscaped, or graded. Protect stockpiled topsoil from erosion.

3.04 PAVEMENT EXCAVATION

- A. All pavement shall be cut with saws or acceptable power tools prior to removal.
- B. Excavate pavement within the limits shown on the Drawings.
- C. Keep excavated pavement separate from topsoil and subsoil stock-piles.
- D. Remove and dispose of excavated pavement from site.

3.05 SUBSOIL EXCAVATION

- A. Excavate subsoil from areas to be landscaped or graded to the limits shown on the Drawings.
- B. Excavate subsoil required for structures, utilities, or yard piping and other work to the limits necessary or as shown on the Drawings.
- C. Stockpile excavated material to be reused and remove and dispose of unsuitable subsoil and excess subsoil off site. Subsoil suitable for reuse shall be in conformance with paragraph 2.02 A. Protect stockpiled subsoil from erosion.
- D. Notify Landscape Architect of unexpected subsurface conditions, discovery of unknown utilities or concealed conditions, and discontinue affected work in area until notified to resume work. Unexpected subsurface conditions do not include those conditions identified in the Contract Documents.
- E. Prevent surface water run-off into excavation in accordance with Section 01500 - Construction Facilities and Temporary Controls.
- F. When excavation through roots is necessary, cleanly cut any root one inch diameter or greater.

- G. Correct unauthorized excavation at no cost to OWNER. Backfill with specified materials.
- H. Maintain bottom of all excavations stable, dry, and free of water on a continual basis.

3.06 ROCK EXCAVATION

- A. Consists of the removal and disposal of materials encountered that cannot be excavated without continuous and systematic drilling and blasting, continuous use of a ripper or other special equipment, except such materials that are classified as earth excavation.
 - 1. Materials classified as rock, ledge and boulder are (1) cubic yards or more in volume, solid rock, and rock-hard aggregate deposits that cannot be broken or moved with a two (2) cubic yard backhoe.
 - 2. Old foundation walls, concrete slabs, equipment footings, and other manmade obstructions are not to be considered as ledge, rock, or boulder.
- B. When, during the process of excavation, rock is encountered, such material shall be uncovered and exposed, and the Landscape Architect shall be notified by the Contractor, before proceeding further. The areas in question shall then be measured to determine required volume to be excavated.
- C. Failure on the part of the Contractor to uncover such material and to notify the Landscape Architect and proceeding by the Contractor with the excavation before cross-sections are taken, will forfeit the Contractor's right to claim towards the stated allowance or additional payment over and above the stated allowance at the quoted unit price.
- D. Payment for Rock Excavation
 - 1. Rock excavation will be paid for at the contract unit price per cubic yard of rock excavation.
 - 2. The Bidder agrees to the unit prices for rock excavation included in his bid and the Contract Documents. The unit price shall include all costs relating to such rock excavation including: Blasting, removal, and placement of the excavated material or disposal offsite as necessary, furnish and place approved gravel borrow refill to replace rock excavation and all incidentals necessary to satisfactorily excavate and dispose of authorized rock excavation, including labor, materials, overhead, supervision, insurance, profit and taxes. No amount other than the specified in the Contract Documents will be paid for rock excavation. No extra payment will be made for approved refill replacing rock excavation and these costs shall be included in the Contractor's unit price bid per cubic yard of rock excavation.
 - 3. The unit price for rock excavation specifically excludes any costs incurred due to rock excavation for installation of the swing play area and swing structures as shown on the drawings. The cost for this work shall be included in the base lump sum bid.

3.07 BACKFILLING PREPARATION

- A. Brace walls and slabs of structures to support surcharge forces and construction loads to be imposed by backfilling operations.
- B. Remove all water, snow, ice, and debris from excavations prior to proceeding

with work.

- C. Compact subgrade surfaces disturbed by construction operations to density requirements for backfill material. Do not place bedding, foundation material, or backfill on porous, unstable, unsuitable, or frozen subgrade.

3.08 BEDDING AND BACKFILLING

- A. Bedding and backfilling materials shall not contain frozen materials, ice, or snow.
- B. Backfill with crushed gravel beneath pipe where rock, boulders, or unsuitable bearing material have been removed.
- C. Install pipe on shaped, undisturbed subgrade or on bedding material in accordance with paragraph 3.13 SCHEDULE OF BEDDING, BACKFILL AND COMPACTION.
- D. Maintain pipe in proper position during placement and compaction of bedding material.
- E. Filter fabric shall be placed to completely enclose crushed stone used for bedding material or for replacement material where rock, boulders or unsuitable material have been removed in pipe trenches. Under structures, where crushed stone is used, the filter fabric shall enclose the material on the sides and bottom, and on top, extending 2 feet under all edges of the proposed structure.
- F. Place and compact bedding for utilities and yard piping in accordance with the specifications and typical trench details shown on the Drawings.
- G. Backfill excavations and trenches to depths, contours, and elevations required. Do not backfill or compact any fill material during unfavorable weather conditions.
- H. Each layer of backfill shall be compacted to the specified density the same day it is placed.
- I. Adjust optimum moisture content of backfill materials to attain required compaction density.
- J. Fill that is too wet for proper compaction shall be disc-harrowed or otherwise dried to a proper moisture content for compacting to the required density. If the fill material cannot be dried to proper moisture content, it shall be replaced with drier material meeting specifications.
- K. Fill that is too dry for proper compaction shall be watered uniformly over the surface of the loose layer. Sufficient water shall be added to allow compaction to the required density.
- L. Employ placement and compaction methods that will not disturb or damage Work or existing structures or utilities. Disturbed or damaged Work, structures or utilities shall be repaired at no additional cost to the OWNER and at no additional time for performance.
- M. Do not backfill against unsupported foundation walls or before required concrete strength has been achieved. Backfill simultaneously on each side of unsupported foundation walls.
- N. Backfilling shall be performed as required to avoid interference with OWNER'S operations and/or other contractor's or subcontractor's work.
- O. Grade backfill to provide a smooth surface which will readily shed water and provide positive drainage. Areas to receive compacted fill shall be graded to prevent ponding of surface water runoff.

3.09 BACKFILLING TOLERANCES

- A. Top Surface of Backfilling or Subgrade: Plus or minus one inch.

3.10 COMPACTION

- A. The maximum density at optimum moisture content for bedding and backfill materials shall be determined in accordance with ASTM D1557 (Modified Proctor).
- B. All bedding and backfill materials shall be compacted to the density shown in paragraph 3.12 SCHEDULE OF BEDDING, BACKFILL AND COMPACTION. Do not conduct further backfill operations until compaction tests indicate acceptable results on prior layers.
- C. Testing density of soil in place (compaction) will be performed in accordance with ASTM D1556, ASTM D1557, ASTM D2167, or ASTM D2922. If tests indicate compacted bedding and/or backfill does not meet specified requirements, remove, replace and retest materials at no additional cost to OWNER and at no additional time for performance.
- D. Jetting and bucket compaction are not acceptable methods of compaction and consolidation.

3.11 GRADING

- A. Grading Areas to be Loamed and Seeded:
 - 1. Perform all rough grading required to attain the elevations indicated on the Drawings or as required. No materials, including rock or boulders, shall project above rough graded surface.
 - 2. Grade to elevations shown on the Drawings or as required for landscaping.
 - 3. Grade all ruts and other uneven surfaces by surface grading.
- B. Grading Areas to be Paved or Surfaced:
 - 1. Perform all rough grading, including shaping, sloping, and all work necessary to prepare the subgrades of all roadways, walks and parking areas. Subgrade shall be brought to the bottom elevation of the subbase under paved or surfaced areas.
 - 2. Accomplish all grading within the slope and grade lines as indicated on the Drawings or as necessary to accomplish the Work. Roadways shall be graded to full cross section width at subgrade before placing any type of subbase or pavement except that partial width construction may be permissible where necessary for the maintenance of traffic.
- C. Slope grade away from structures minimum 2 inches in 10 feet, unless noted otherwise.
- D. Make gradual changes in grade. Slopes shall transition gradually into level areas.
- E. Grade all areas completely and remove and dispose of all excess excavated, bedding and backfill materials from site.
- F. Backfill to original grade or as indicated herein or on the Drawings. Deviations and settlement shall be corrected at no cost to the OWNER and at no additional time for performance.

3.12 FIELD QUALITY CONTROL

- A. All subgrades and compacted material must be inspected and accepted by the ENGINEER prior to proceeding with work. Sufficient time must be allowed for the ENGINEER to observe and to have necessary tests performed on the subgrade.

3.13 SCHEDULE OF BEDDING, BACKFILL AND COMPACTION

A The following schedule identifies location; bedding and/or backfill materials to be used (identified from upper to lower fill type); maximum loose thicknesses of each fill lift; and, compaction expressed as a percentage of maximum density and optimum moisture determined in accordance with ASTM D1557 (Modified Proctor).

<u>LOCATION</u>	<u>MATERIAL/THICKNESS</u>	<u>LIFTS (LOOSE)/COMPACTION</u>
SUBGRADE		
Disturbed, excavated subgrade	Natural subgrade/existing	Existing 90 percent or equal to average density of undisturbed subgrade material
BACKFILL		
Beneath structures	Crushed Gravel /12 inches min.	8-inch lifts/ 95 percent
Beneath structures from which rock, boulders or unsuitable material have been removed	Crushed Gravel/12 inches min. top of structural fill to underside of structure Structural Fill/as req'd to 12 inches below structure	8-inch lifts/s 95 percent
Slabs-on-grade	Crushed Gravel/4 inches min. on natural subgrade or structural fill	4-inch min./ 90 percent
	Structural Fill/as req'd	8-inch lifts/ 90 percent
Around structures	Common Fill/as req'd	8-inch lifts to top of fill/ 90 percent
Around structures with foundation perimeter drainage	Structural Fill/as req'd	8-inch lifts to top of fill/ 90 percent
Under grassed areas	Common Fill/from subgrade or 12 inches above pipe to 4 inches below finished grade	12-inch lifts/ 85 percent
Under landscaped areas	Common Fill/from subgrade to 12 inches above pipe to 12 inches below finished grade	12-inch lifts/ 85 percent
Under paved areas	Common Fill/from subgrade or 12 inches above pipe to underside of subbase for paved areas	6-inch lifts/ 90 percent

<u>LOCATION</u>	<u>MATERIAL/THICKNESS</u>	<u>LIFTS (LOOSE)/COMPACTION</u>
PIPE BLANKET		
DI water pipe, DI sewage force main and RCP storm drain	Common Fill/from trench bottom to 12 inches above pipe	6-inch lifts/ 90 percent
PVC water pipe, DI gravity sewer, PVC gravity sewer, PVC sewage force main and HDPE storm drain	Crushed Gravel/from springline of pipe to 12 inches above pipe	6-inch lifts 90 percent
Copper water pipe and electrical conduits	Sand/as shown on details	6-inch lifts/ 90 percent
Infiltration beds, underdrains and foundation drains	Washed Crushed Stone/as shown on details	4-inch lifts/ 90 percent
PIPE BEDDING		
DI water pipe, DI sewage force main, RCP storm drain and CMP storm drain	Shaped, undisturbed subgrade/existing	Existing/ 90 percent or equal to average density of undisturbed material
PVC water pipe, DI gravity sewer, PVC gravity sewer, PVC sewage force main and HDPE storm drain	Crushed Gravel/6 inches min. below pipe to springline of pipe	6-inch lifts/ 90 percent
Copper water pipe and electrical conduits	Sand/as shown on details	6-inch lifts/ 90 percent
All pipe in area of rock excavation	Crushed Gravel/6 inches min. below pipe to springline of pipe	6-inch lifts/ 90 percent
All pipe in area of unsuitable material excavation	Crushed Gravel/as required, 6-inches min. from excavation limits below pipe to springline of pipe	6-inch lifts/ 90 percent
SUBBASE		
Bituminous pavement subbase	Crushed Gravel/12 inches in.	6-inch lifts/ 90 percent

Any area not identified in schedule shall be backfilled with gravel in one (1) foot maximum loose lifts and compacted to a modified Proctor density of ninety-five percent (95%).

END OF SECTION

SECTION 02270

SLOPE PROTECTION AND EROSION CONTROL

PART 1 GENERAL

1.01 WORK INCLUDED

- A. Preventing and controlling soil erosion.
- B. Furnishing, installing and maintaining erosion control materials.

1.02 REFERENCE STANDARDS

- A. Follow State and Local Codes for Soil Erosion and Sediment Control on Construction Sites.

1.03 SUBMITTALS

- A. Submit plans and details showing specific slope protection and erosion control measures to be taken for each phase of the construction.

1.04 PROJECT CONDITIONS

- A. Schedule temporary seeding, mulching and other erosion control measures to take place for implementation as required prior to starting, during, and after construction activities.
- B. When temporary seeding cannot be accomplished to have established or visible growth by October 15, the disturbed areas shall be covered with 6 inches of mulch for the winter.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Hay Bales: Securely tied baled hay at least 14 inches by 18 inches by 30 inches long.
- B. Mulch Material:
 - 1. Hay or Straw - Shall be dry, free of mold and weed seeds.
 - 2. Wood Chips - Shall be dry, free of soil and other foreign material.
- C. Mulch Anchoring: When mulch must be held in place, use mulch netting (paper, twine, plastic, or plastic and wood fiber).
- D. Fertilizer: Complete fertilizer 10-20-20 (standard product).
- E. Lime: Ground limestone containing not less than 95% total carbonates (calcium or magnesium).
- F. Temporary Seed Mixture: When it is impractical to establish permanent protective vegetation on disturbed earth by October 15, use "Conservation Mix" or the following seed mixture:

<u>Kind of Seed</u>	<u>Lbs per Acre</u>
Switchgrass (Blackwell or Shelter)	4.0

Big bluestem (Niagara or Kaw)	4.0
Little bluestem (Camper or Blaze)	2.0
Sand lovegrass (NE-27 or Blaze)	1.5
Birdsfoot trefoil (Viking)	2.0

Inoculum specific to Birdsfoot trefoil must be used with this mixture. If seeding by hand, a sticking agent such as milk or cola shall be used to stick inoculum to the seed. If seeding with hydroseeder, use four (4) times the recommended amount of inoculum.

- G. Permanent Seed Mixture: See Section 02900 - Landscape Work.

PART 3 EXECUTION

3.01 GENERAL CONSTRUCTION SEQUENCE TO MINIMIZE EROSION

- A. Erect hay bale dikes and/or silt fences as shown on Drawings and as may be required in the field to protect property, waterways, wells, and springs.
- B. Commence excavation. Stockpile soil so that erosion is minimized. Extra precautions shall be taken when soil is saturated.
- C. Control surface water and erosion in accordance with Section 01500 - Construction Facilities and Temporary Controls.
- D. Filter discharge using hay bales, silt fence, settling basin, or natural vegetated buffer as site conditions require and as approved by the Landscape Architect.
- E. Backfill excavation to grade. Grade site to prevent soil erosion.
- F. Seed and mulch exposed ground.

3.02 SEEDING AND MULCHING

- A. All areas which will remain open shall be seeded and mulched within five (5) days of being stripped or backfilled and graded.
- B. Soil samples may be sent to the County Extension Service for analysis to determine the proper seed mixture and fertilizer requirements.
- C. Temporary seeding procedures shall be as follows:
 1. Apply lime at a rate of 75 to 100 pounds per 1000 square feet. Mix thoroughly into top two inches of soil.
 2. Apply fertilizer at a rate of 30 pounds per 1000 square feet. Mix thoroughly into the top two inches of soil.
 3. Apply seed mixture at a rate of two pounds per 1000 square feet evenly in two intersecting directions. Rake lightly.
 4. Apply mulch material within 24 hours after seeding in accordance with the following:
 - a. Hay or Straw: Application rate - 75 to 100 pounds per 1000 square feet. Spread by hand or with machine. Anchor on slopes and where subject to blowing or slipping.
 - b. Wood Chips: Application rate - two to six inches deep. Use for tree and shrub planting.

5. Anchor mulch on all slopes exceeding 5% and other areas as required using mulch netting. Spread over loose mulch and pin to the soil in accordance with the manufacturer's instructions.

3.03 HAY BALE DIKES

- A. Embed hay bales into soil and anchor in place with stakes every 50' or where needed. Butt hay bales together tightly.
- B. Hay bales shall be replaced when they become clogged with soil particles or as directed by the Landscape Architect.

3.04 DAMAGE AND REPAIR

- A. Repair all damages caused by soil erosion or construction equipment at or before the end of each working day.

END OF SECTION

SECTION 02510

BITUMINOUS CONCRETE PAVING

PART 1 GENERAL

1.01 WORK INCLUDED

- A. Bituminous concrete paving and associated preparatory work.
- B. Furnishing subbase aggregates.
- C. Installation and final grading of subbase.
- D. Installation of binder course and wearing course.

1.02 REFERENCE STANDARDS

- A. ASTM C316 - Sieve Analysis of Fine and Coarse Aggregate.
- B. ASTM D1556 - Test for Density of Soil in Place by the Sand Cone Method.
- C. ASTM D1557 - Tests for Moisture - Density Relations of Soils and Soil - Aggregate Mixtures, Using 10-lb Rammer and 18-Inch Drop; Modified Proctor.
- D. ASTM D2167 - Tests for Density of Soil in Place by the Rubber-Balloon Method.
- E. ASTM D2922 - Tests for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth).
- F. State of Massachusetts Highway Department Standard Specifications for Highways and Bridges (MHDSSB)

1.03 SUBMITTALS

- A. Submit, in accordance with Section 01340, certification prepared by manufacturer certifying that the component materials and finished product to be delivered to site conforms to MHDSSHB requirements.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Gravel for Subbase: Process gravel and gravel borrow - Section 02200 - Earthwork.
- B. Binder Course: Class I Bituminous Concrete (3/4-inch maximum) mix in compliance with MHDSSHB Section M3, 11, 03, Table A.
- C. Top Course: Class I Bituminous Concrete mix in compliance with MHDSSHB Section M3, 11, 03.
- D. Emulsified Asphalt: MHDSSHB Section M3, 03,

PART 3 EXECUTION

3.01 GENERAL

- A. Subbase shall be placed on properly installed subgrade. Subbase shall be a minimum of 12 inches thick (compacted) or as shown on the Drawings. Each layer shall be compacted to a minimum of 95% of maximum dry density as determined by the Modified Proctor Method. Subbase gravel shall be installed at the time of initial backfill of all trenches under existing paved surfaces, or at a later time as authorized by the Landscape Architect.

-
- B. Bituminous concrete material shall be placed in accordance with MHDSSHB Section 460. The specific gravity of the compacted bituminous pavement shall not be less than 97 percent of the specific gravity of the corresponding daily job sample except as follows:
1. Pavement placed directly on subbase - 95 percent.
 2. Wearing course paving less than 1-1/4 inch in compacted thickness - 95 percent.
- C. Bituminous concrete paving mixture shall be placed only when the proper density can be obtained. Precautions shall be taken at all times to compact the mixture while the mixture is in the proper temperature range. The mixture shall not be placed on any wet surface or when weather conditions prevent its proper handling or finishing. Bituminous concrete wearing course mixture shall not be placed when the air temperature is below 40°F. Bituminous concrete binder course mixture shall not be placed when the air temperature is below 32°F.
- D. The number of paving courses and the thickness of each course shall conform to the Drawings or to the dimensions stated in this Section.
- E. Areas to receive bituminous paving shall be as shown on the Drawings, and all areas damaged during construction. The edge of the existing pavement, at the limits of the new paving, shall be saw cut and all pavement removed.
- F. Weather Conditions: Paving materials shall be placed only when the underlying surface is dry, frost free and the surface temperature is above forty (40) degrees F and rising for courses greater than one and one-quarter (1-1/4) inches in compacted depth and above fifty (50) degrees F and rising for courses less than one and one-quarter (1-1/4) inches in compacted depth unless otherwise directed in writing by Landscape Architect.
- G. Saw cut and clean edges of existing pavement and coat with emulsified asphalt in accordance with MHDSSHB Section 460 requirements prior to placement of paving materials.
- H. The temperature of bituminous paving materials shall be a minimum of two hundred seventy-five (275) degrees F and a maximum of three hundred fifty (350) degrees F when placed.
- I. Placing of any course shall be as nearly continuous as possible, minimizing the number of transverse joints. Stopping of the paver shall only be done in emergencies. When, in the opinion of the Landscape Architect, paving operations result in excessive stopping of the paver, the paving operation shall be suspended until the CONTRACTOR makes arrangements to synchronize the rate of paving with the rate of delivery of material.
- J. Any displacement occurring as a result of reversing the direction of a roller, or from other causes, shall be corrected immediately. Care shall be exercised in rolling the bituminous mixture to avoid displacing the line and grade of the edges.
- K. Roll all courses until all roller lines are eliminated.
- L. Apply a bead of emulsified asphalt and sand covers to all joints between existing and new pavement.
- M. Reset valve boxes, catch basin frames and grates, and manhole frames and covers as required.
- N. Do not place final wearing course until after guard rail posts (if any) have been set and general cleanup has been completed.

- O. Place bituminous binder and wearing courses in full compliance with MHDSSHB Section 460.
- 3.02 COMPACTION TESTING
- A. Compaction testing will be performed in accordance with ASTM D1556, ASTM D1557, ASTM D2167 or ASTM D2922.
- 3.03 EQUIPMENT
- A. Pavers and rollers shall be in compliance with MHDSSHB Section 460.
 - B. Pavers shall be self-contained and self-propelled and be capable of spreading the required thickness and width of pavement. Short-bodied pavers are not acceptable.
 - C. Rollers shall be eight (8) to twelve (12) ton self-propelled tandem drum type, minimum.
- 3.04 TRENCH WORK
- A. In areas where trenching was performed, allow a thirty (30) day setting period before placing pavement unless otherwise directed in writing by the Landscape Architect.
 - B. Remove all humps in pavement caused by the equipment or blasting operations before paving.
 - C. Remove all loose pieces of pavement on the edge of the trench and saw cut edges before paving. Saw cut edges of pavement to provide one (1) foot minimum overlap of the permanent trench pavement on undisturbed material. Disturbed areas shall receive compacted crushed gravel subbase course equal to the existing subbase course depth or the depth shown on the Drawings, whichever is greater.
 - D. Remove and replace with new pavement all remaining asphalt surfaces that are less than four (4) feet wide after the pavement has been cut back a minimum of one (1) foot.

END OF SECTION

SECTION 02528
GRANITE CURB

PART 1 - GENERAL

1.01 GENERAL REQUIREMENTS

- A. Include GENERAL CONDITIONS and SUPPLEMENTARY CONDITIONS as part of this Section.
- B. Examine all other Sections of the Specifications for requirements which affect work of this Section whether or not such work is specifically mentioned in this Section.
- C. Coordinate work with trades affecting, or affected by, work of this Section. Cooperate with such trades to assure the steady progress of all work under the Contract.

1.02 WORK INCLUDED

- A. Perform all work required to complete the work of this Section, as indicated. Such work includes, but is not limited to, the following:
 - 1. Granite Curbing

1.03 RELATED WORK UNDER OTHER SECTIONS

- A. Earthwork
- B. Site Preparation
- C. Portland Cement Concrete Paving

1.04 REFERENCES

- A. Work shall conform to codes and standards of the following:
 - 1. Massachusetts Highway Department Standard Specifications for Highways and Bridges (MHD Specifications).
 - 2. American Society for Testing and Materials (ASTM):
 - C 615 Structural Granite
 - C 131 Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine

1.05 QUALITY ASSURANCE

- A. Unless otherwise indicated, granite curb materials and construction shall conform to the applicable portions of the following:
 - 1. MHD Specification Section 500, "Curb and Edging".
- B. Curb Layout: After staking and laying out the curb work, and before beginning curb

installation, obtain the Landscape Architect's approval of layout. Contractor shall make minor adjustments as determined by the Landscape Architect.

- C. The Contractor and his Subcontractors shall inspect all subbases for unstable, unsuitable or improperly prepared areas. Do not begin work over unacceptable areas. Beginning work means the Contractor and his Subcontractors accept the subbase, previous work and conditions and shall be held responsible for any corrections required to properly implement the Construction Documents.

1.06 SUBMITTALS

- A. Shop Drawings: Supply shop drawings at an approved scale for location, installation and erection of all parts of the work under this section including but not limited to the following items:

- 1. Granite Curb.

1.07 PROJECT CONDITIONS

- A. Protection: The Contractor shall use all means necessary to protect the materials of this Section before, during and after installation. In the event of damage, make all repairs and replacements necessary to approval of the Landscape Architect and at no additional cost to the Owner. All work shall be executed in such a manner as to prevent any damage to existing streets, curbs, paving to remain, existing plant materials, and adjoining properties.
- B. The Contractor shall remove all debris, construction equipment and waste material from areas within the limit of work prior to inspection for acceptance.
- C. The Drawings indicate, in general, the alignment and finished grade elevations. The Landscape Architect, however, may make minor adjustments in grades and alignment as are found necessary.
- D. Existing Curb Salvaged: Maximum reuse shall be made in the new work of existing granite curbing which is removed and stacked under Section 02100, SITE PREPARATION. Existing curb to be reused shall be reset in accordance with the requirements of this Section.

1.08 DELIVERY, STORAGE, AND HANDLING

- A. Granite curb units shall be delivered to the job adequately protected from damage during transit.
- B. Curb units shall be stored off the ground with wood cribbing between each unit. Curb shall be protected against staining, chipping, and other damage. Cracked, badly chipped, or stained units will be rejected and shall not be employed in the work.

PART 2 - PRODUCTS

2.01 GRANITE CURBING

- A. Granite shall be a structural granite conforming to ASTM C 615, Class I Engineering Grade, suitable for curbstone use.
 - 1. Curb shall be light grey, free from seams which impair structural integrity, and with percentage of wear less than 32%, as determined by ASTM C 131.
- B. Curb materials shall conform to MHD Specifications Section M9.04.0 and shall meet requirements specified in the following subsection of Division III, Materials of the MHD Specifications:

<u>Item</u>		<u>Section</u>	<u>Type</u>
Granite Curb	M9.04.1	VA4	
Granite Curb Inlet	M9.04.5	-	
Granite Curb Corner	M9.04.6A		

2.02 CEMENT MORTAR

- A. Mortar for pointing joints between curbstones shall be a cement mortar composed of one part Portland cement and two parts sand, by volume with sufficient water to form a workable, stiff mixture.

2.03 CONCRETE

- A. Concrete for foundation at granite curb (where indicated) shall conform to MHD Specifications Section M4.00.0, 4000 psi, 1-1/2 in., 565 (Class A).

PART 3 - EXECUTION

3.01 SETTING CURB

- A. Curb shall be set in accordance with MHD Specifications Section 501 and as shown on the plans.
- B. Vertical face of vertical curb shall be plumb, with curb top parallel to adjacent surface.
- C. Curb shall be set accurately to line and grade. Curb units shall be fitted together as

closely as possible. Curb shall not be field cut.

- D. Joints, between curb units shall be carefully filled with a cement mortar, and neatly pointed on the top and front exposed portions. After pointing excess mortar shall be cleaned from curb surface.
- E. Backfill material on each side of curb shall be as specified for adjacent surface and shall be thoroughly compacted by means of power tampers. Extreme care shall be taken not to destroy alignment. Curb sections disturbed during backfilling or otherwise shall be reset to line and grade, and properly backfilled.

END OF SECTION

SECTION 02750
STORM DRAINAGE

PART 1 - GENERAL

1.01 GENERAL REQUIREMENTS

- A. Include GENERAL CONDITIONS and SUPPLEMENTARY CONDITIONS as part of this Section.
- B. Examine all other Sections of the Specifications for requirements which affect work of this Section whether or not such work is specifically mentioned in this Section.
- C. Coordinate work with trades affecting, or affected by, work of this Section. Cooperate with such trades to assure the steady progress of all work under the Contract.

1.02 WORK INCLUDED

- D. Provide all labor, materials, equipment, services and transportation required to complete the following:
 - 1. Install the storm drainage system, including piping, catch basins, covers, drain manholes, frames, grates, and appurtenances.

1.03 RELATED WORK

- E. Items of related work specified in other Sections include the following:
 - 1. Earthwork - Section 02200.
 - 2. Bituminous Concrete Paving - Section 02510.
 - 3. Concrete - Section 03300.

1.04 QUALITY ASSURANCE

- F. For each type of material required, furnish material obtained from a single supplier.

1.05 REFERENCES

- G. All of the Contract Documents, including the General Conditions, the Supplementary General Conditions, and Division 1, General Requirements, apply to the work of this Section.
- H. Examine the drawings and all other sections of the specification for requirements affecting the work of this Section.

1.06 SUBMITTALS

- I. Submit for approval, test data and certifications attesting conformance of materials to the specifications.

- J. Submit samples of all materials for testing as required by the Owner.
- K. Submit shop drawings as outlined in the GENERAL REQUIREMENTS for all precast concrete storm drainage items outlined below or indicated on the drawings and obtain approval prior to ordering the following:
 - 1. Pipe and fittings.
 - 2. Precast catch basin, and manhole sections.
 - 3. Catch basin frames and grates/manhole frames and covers.

PART 2 - PRODUCTS

2.01 PRODUCTS

- A. Piping for site drainage work to be High Density Polyethylene (HDPE) Pipe conforming to the latest edition of ASTM Specifications M294, D3350, D2321 and F477.
- B. Catch Basins shall be constructed in accordance with the materials as specified herein detailed on the drawings and shall comply with local standards.
- C. Precast reinforced concrete catch basin and manhole risers and tops shall conform to ASTM Specification C-478-80, except as indicated on the Drawings or as specified herein. Riser sections shall be 4'-0" inside diameter unless noted otherwise on the drawings. All precast concrete structures shall be heavy duty and designed for H-20 wheel loading.
 - 1. Concrete for the risers and tops shall have an average compressive strength of 4,000 psi at 28 days. Cement shall be Type II Portland Cement conforming to ASTM Specification C-150-81.
 - 2. Jointing shall be made with butyl rubber joint gasket to assure a watertight and permanent seal.
- D. Concrete for manhole or catch basin bases shall have a comprehensive strength of 3,000 psi at 28 days. No precast concrete bases will be allowed unless it is an integral part of the bottom 4 foot base/riser section.
- E. Brick shall conform in all respects to ASTM Specification C-32-73, Grade MS, as amended to date; size 2½" x 3-3/4" x 8". Bricks that are broken, warped, cracked, of improper size or quality, unduly chipped or otherwise defective shall not be used in the work and shall be removed from the site.
- F. Concrete Masonry Units shall conform in all respects to ASTM Specification C-139-73. Blocks shall be solid, precast segmental concrete, masonry units of sizes indicated. Blocks that are broken, cracked, of improper size or quality, unduly chipped or otherwise defective shall not be used in the work and shall be removed from the site.
- G. Sand for mortar shall be clean, sharp mason's sand conforming to ASTM Specification C-144-76.

- H. Water for mortar shall be clean and free from oils, acids, alkalis and injurious quantities of vegetable matter, deleterious substances or other impurities.
- I. Mortar shall be composed of one part Portland Cement, conforming to ASTM Specification C-150-81, Type II, and 2 parts sand with only sufficient water added to make a stiff, plastic mortar of a consistency and texture satisfactory to the Architect. Mortar shall be used so that it will be in place before the initial setting of the cement has taken place. Re-tempering of mortar in which the cement has started to set will not be permitted.
- J. Non-shrink Mortar for sealing pipes entering catch basins shall be a commercial factory-mixed product made especially for the intended use and shall be an approved type.
- K. Cast-iron frames and grates shall conform to the types and settings as specified on the Drawings. Drawing shall be submitted to the Architect for approval prior to ordering and casting. Gray iron castings shall conform to the requirements of AASHTO Design M105-62, Class 30, or its latest amendment. Iron castings shall be true to pattern in form and dimensions, free from pouring faults, sponginess, cracks, blowholes and other defects affecting the strength and value for the service intended.
- L. Cast iron manhole frames and covers shall conform to the types and settings as specified and have the work "drain" cast in the cover.

PART 3 - EXECUTION

3.01 INSPECTION

- A. Inspect the premises and surrounding areas to verify existing conditions potentially affecting the work, particularly those bearing upon transportation, disposal, handling, and storage of materials, availability of labor, water, electric power, roads and uncertainties of weather, ground water table or similar physical conditions.
- B. Confirm the nature of planned and ongoing work by others, including street and utility construction, and development on private lots and identify requirements to ensure safety and to maintain traffic.
- C. Observe neighboring facilities which are to remain in operation during construction and identify requirements to ensure the maintenance of access and the safety of persons and property.
- D. Confirm the nature of subsurface materials to be encountered, the character of equipment and facilities needed prior to and during the prosecution of the work and all other matters that can in any way affect the work.

3.02 PREPARATION

- E. Obtain and pay for all permits, licenses, authorizations, and bonds required for execution of the work.
- F. Obtain authorization for municipal and private utility services and pay associated connection fees.

- G. Obtain a "Dig Safe" number.
- H. Coordinate with all local and state authorities having jurisdiction over the work and ensure that all work is performed in conformance with their requirements and that all work is inspected as required by local authorities.
- I. Review applicable conditions of approval and modify the nature and methods and of construction as required to conform to the requirements set forth in any Order of Conditions, Section 404 CWA Permit, Water Quality Certification, Site Plan Approval, Special Permit, Variance, Special Exceptions, Subdivision Plan or ANR Plan and furnish documentation evidencing compliance the completed work to the aforesaid requirements.
- J. Furnish, place and install dust, erosion, sedimentation, and environmental control measures prior to construction.

3.03 INSTALLATION

- K. Drainage Trench Excavation, Fill and Backfill
 - 1. Trench widths shall be sufficient to permit proper installation of the work, and bottoms of trenches shall be evenly graded. The maximum allowable width of trench for pipe shall be as indicated on the Details. Excavations below required depths shall be refilled with gravel and compacted to the requirements of this specification. Immediately after trench excavations have been carried to the required grades, the exposed surface of the existing bottom shall be cleaned of all loose disturbed materials. Where the trench bottom is below the water level or within saturated earth materials, bedding below the storm drain shall be made with a minimum of 12 inches of 3/4 inch crushed stone. Pipe beds in bedding material shall be rounded to accommodate the bottom quadrant of the pipe and to provide full support and uniform bearing for the entire length of the pipe barrel.
 - 2. Control and pitch the grading to prevent water from running into the excavated areas of the site or drain, or to prevent damage to other structures or work already accomplished.
 - 3. Furnish all pumping and other dewatering equipment necessary to keep excavated areas dry during construction. Water shall be handled and disposed of as specified in Section 02200 - Earthwork.
 - 4. After piping and structures have been installed, tested, inspected and approved by the Architect, Granular Fill material as modified to have a 1 inch maximum size shall be carefully hand placed and hand tamped in 6 inch layers, under, around and above the top of the piping to the limits indicated on the drawings. The remaining excavation shall be backfilled with approved gravel bedding materials, compacted in 6 inch thick layers loose measure. Backfill shall be compacted to not less than 95 percent of the ASTM maximum dry densities as specified herein.
 - 5. Obtain information from the proper authorities concerning locations of existing utilities within the scope of this work in order to avoid damage to such utilities. Neither the Owner nor the Engineer will be responsible for any such damage.

- Restore any structure and repair any resultant damage without additional cost to the Owner.
6. Rules and regulations governing the respective utilities shall be observed. Active utilities shall be protected from damage and shall not be removed or relocated except as indicated or directed. Inactive and abandoned utilities shall be reported in writing immediately upon discovery to the Architect and shall be removed, plugged or capped as directed.
 7. Excavations shall be sheeted, shored and braced as necessary to permit proper execution of the work and to protect all slopes and earth banks. Sheet piling shall be installed if required to prevent cave-ins or settlement and to protect workmen, adjacent structures and utilities. Shoring and piling may be removed as the backfilling progresses, but only when banks are safe against caving.
 8. Excavation of earth, boulders or rock beyond indicated or authorized limits shall be refilled at no additional expense with gravel compacted to 95 percent of the maximum dry density at optimum moisture content, or crushed stone, as required by the Architect and as specified.
- L. Catch basins shall be set to the required elevation and shall be plumb and vertical, with each section in true alignment.
1. Lifting holes in precast sections shall be thoroughly plugged with mortar and finished smooth and flush with adjoining surfaces.
 2. Drainpipe shall extend, around its entire circumference, to inside surface of wall of structure into which it is inserted. Pipe shall be joined to wall using non-shrink grout.
- M. Brick shall be employed to bring cast iron frame, cover, and grate to required elevation. Completed brick installation shall be coated with at least a 3/4 in. thickness of mortar on outside to provide a fully sealed and watertight collar between the top manhole or catch basin section and the cover or grate frame.
1. Cast iron frame shall be set concentric with catch basin opening in a full bed of mortar. A thick ring of mortar extending to the outer edge of brick or concrete shall be placed all around the bottom flange of the cast iron frame. Mortar surface shall be smooth and shall be sloped to shed water away from the frame.
 2. Waterproofing shall be added to the mortar for underground masonry in accordance with the waterproofing manufacturer's directions. Other additives will not be permitted in the mortar.
- N. Portland cement-based mixtures used on this work shall receive a minimum of three days of moist curing, which shall start immediately after the material has been placed. Suitable means shall be employed to protect cement-based mixtures from too rapid drying and damage from cold weather and frost.
- O. Cast-Iron Frames for catch basins shall be bedded in cement mortar and accurately set to the grades indicated or as directed. The frames shall be encased with a 1-inch thick cement mortar ring extending around the entire perimeter of the frames to the outer edge of the masonry structure. Set frames flush with finish grade.

3.04 CLEANING PIPING AND CATCH BASINS

- P. Upon completion of pipe laying and after paving is complete, clean all exterior yard piping, catch basins and manholes to the satisfaction of the Architect. During laying or installation, use every precaution to thoroughly clean all piping before placing and to keep drain lines free from every kind of foreign material of whatever origin. Where applicable, stop off the drain lines when pipe laying is not in progress and after each day's work.

END OF SECTION

SECTION 02790
PLAYGROUND EQUIPMENT

PART 1 - GENERAL REQUIREMENTS

- A. The conditions of the Contract and Division 1 General Requirements apply to the Work under this Section.
 - 1. The work includes installation of OWNER furnished play equipment as specified below.

1.01 WORK INCLUDED

- A. Provide all labor, equipment, implements and materials required to install, construct and perform all site improvements complete as shown on the Drawings and specified herein.
- B. To be included, but not limited to the following:
 - 1. 2-to-5-Year-Olds' Composite Play Structure;
 - 2. 5-to-12-Year-Olds' Composite Play Structure;
 - 3. Double Arch Swings;
 - 4. Rock Climber;
- C. All play equipment to be furnished by the City.

1.02 REFERENCES

- A. Examine all other Sections of the Specifications and all Drawings for the relationship of the work under this Section and the work of other trades.
- B. The following related items are included under the Sections listed below:
 - 1. Section 02070 - Selective Demolition
 - 2. Section 03310 - Cast In Place Concrete
 - 3. Section 02200 - Earthwork
 - 4. Section 02791 - Playground Surface Systems

1.03 SUBMITTALS

- A. Shop Drawings and Samples
 - 1. Provide complete installation instruction, provided by the play equipment manufacturer, for all items called for on the Drawings. All play equipment supplied by Landscape Structures, Inc. of Delano, MN, represented by M. E. O'Brien and Sons, Inc. of Medfield, MA.
 - 2. Provide a copy of the inspection certificate from a Certified Playground

Safety Inspector confirming that the play equipment is with the latest editions of ASTM F-1487 and the CPSC Playground Safety Handbook, and all other applicable and regulations.

in compliance
Public
standards

1.04 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Contractor to arrange delivery of materials in manufacturer's original unopened and undamaged packages with labels legible and intact.
- B. Store materials in unopened packages in a manner to prevent damage from the environment and construction operations.
- C. Handle in accordance with manufacturer's instructions.

1.05 DEFINITIONS

- A. The following items are included herein and shall mean:
 - 1. S.S.H.B. - Standard Specifications for Highway and Bridges, the Commonwealth of Massachusetts, Department of Public Works, latest edition.
 - 2. A.S.T.M. - American Society for Testing and Materials. The following standard specifications are applicable to the associated items as listed.
 - a. A36...Steel
 - b. A 153...Zinc Coating (hot-dip) on hardware
 - c. A307 ...Carbon Steel bolts 66000 psi tensile
 - d. F1487...Standard Consumer Safety Performance Specification for Playground Equipment for Public Use
 - 3. CPSC - Consumer Product Safety Council.
 - 4. ADA - Americans with Disabilities Act and its current regulations.
 - 5. AWS: American Welding Society
 - 6. SSPS: Steel Structures Painting Council

PART 2 - PRODUCT

2.01 COMPOSITE PLAY STRUCTURES

- A. Manufacturer/Product: The 2-5 Year Old Playstructure, 5-12 Year Old Playstructure, and Double Arch Swing shall be supplied by one manufacturer and shall be in compliance with the layout, features, and arrangements shown on the Drawings. All structures shall be manufactured by Landscape Structures, Inc. (LSI) or Approved Equal.
 - 1. The 2-5 Year Old Playstructure shall be a custom PlayBooster(PB) structure by LSI or Approved Equal as shown on the Drawings and as specified below.
 - 2. The 5-12 Year Old Playstructure shall be a custom PlayBooster (PB) + Evos

- structure by LSI or Approved Equal as shown on the Drawings and as specified below.
3. The Double Arch Swing structure shall be by LSI or Approved Equal as shown on the Drawings and as specified below.
 4. The Rock Climber shall be "The Pinnacle" Rock Climber available through LSI as shown on the drawings and as specified below.
- B. Material: All materials shall be structurally sound and suitable for safe play. Durability shall be ensured on all steel parts by the use of time-tested coatings such as zinc plating, zinc-nickel plating, powdercoating, soft PVC coating (TenderTuff by LSI or Approved Equal), etc. Colors shall be specified.
- C. Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications). All primary fasteners shall include a locking patch type material that will meet the minimum torque requirements of IFI-125. Manufacturer to provide special tools for pinned tamperproof fasteners.
- D. Soft PVC Coating: All metal components to be PVC-coated (TenderTuff Coating by LSI or Approved Equal) shall be thoroughly cleaned in a hot phosphatizing pressure washer, then primed with a water-based thermosetting solution. Primed parts shall be preheated prior to dipping in U.V. stabilized, liquid polyvinyl chloride (PVC), then salt cured at approximately 400 degrees. The finished coating shall be approximately .080" +/- .020" thick at an 85 durometer hardness and have a matte finish. Four standard colors shall be available. Colors to be selected by Landscape Architect.
- E. Polyester Powdercoating: All metal components to be powdercoated shall be free of excess weld and spatter. Parts shall be thoroughly cleaned via a 5-Stage Pretreatment process. Parts shall then be thoroughly dried and proceed through a set of automatic sprayers that apply electrostatic powdercoat. Parts shall be oven cured at 400 degrees F. The average powdercoat thickness shall be .0025".
- F. Super Durable TGIC polyester powder shall be specially formulated for optimum Ultra Violet (U.V.) stability and gloss retention. It shall meet or exceed ASTM Standards for:
1. Hardness (D-3363)
 2. Impact (D-2794)
 3. Salt Spray resistance (B-117 and D-1654)
 4. U.V. Exposure (G-154)
 5. Adhesion (D-3359, Method B)
- The Paint Line shall employ a "checkered" adhesion test daily. A minimum of seventeen standard colors shall be available.
- G. Decks: All decks shall be soft-PVC coated perforated metal decks (Tenderdecks by LSI or Approved Equal). Decks shall be of modular design and have 5/16" diameter holes on the standing surface. There shall be a minimum of (4) slots in each face to accommodate face mounting of components. Decks shall be manufactured from a single piece of low carbon 12 GA (.105") sheet steel conforming to ASTM specification A-569. The sheet shall be perforated then

flanged formed and reinforced as necessary to ensure structural integrity. The unit shall then be soft PVC coated. Decks shall be designed so that all sides are flush with the outside edge of the supporting posts.

- H. Rotationally Molded Poly Parts: These parts shall be molded using prime compounded linear low-density polyethylene (LOPE) with a tensile strength of 2500 psi per ASTM 0638 and with color and UV-stabilizing additives. Wall thickness shall vary by product from .187" (3/16") to .312" (5/16"). Four standard colors shall be available.
- I. HDPE Panel Parts: These parts shall be manufactured from 3/4" thick high-density polyethylene (HOPE) that has been specially formulated for optimum U.V. stability and color retention (Permalene by LSI or Approved Equal). Products shall meet or exceed density of .960 G/cc per ASTM 01505, tensile strength of 2400 PSI per ASTM 0638. Five standard solid colors shall be available. Some HDPE panel parts are specified in a two-color product with (2) .10" thick exterior layers over a .55" interior core of a contrasting color.
 - 1. For non-recycled HOPE panels, a minimum of eight standard two-color options shall be available.
 - 2. For panels noted as "Recycled," the interior core shall be 100% recycled HOPE, black in color; a minimum of 5 (non-black) options for the exterior layers shall be available.
- J. Hardware Packages: All shipments shall include individual component-specific hardware packages. Each hardware package shall be labeled with the part number, description, a component diagram showing the appropriate component, package weight, a bar code linking the hardware package to the job number, assembler's name, date and time the package was assembled, work center number, and work order number.
- K. Installation Documentation: All shipments shall include a notebook or packet of order-specific, step-by-step instructions for assembly of each component, including equipment assembly diagrams, estimated hours for assembly, footing dimensions, concrete quantity for direct bury components, fall height information, area required information and detailed material specifications.
- L. Packing List: All shipments shall include a packing list for each skid/container, specifying the part numbers and quantities on each skid or within each container.

- M. Packaging: Posts shall be individually packaged in sturdy, water-resistant, mar-resistant cardboard boxes. Other components shall be individually wrapped or bulk wrapped to provide protection during shipment. Small parts and hardware packages will be placed in crates for shipment. The components and crates are then shrink-wrapped to skids (pallets) to ensure secure shipping.
- N. Maintenance Kit: An order-specific maintenance kit shall be provided for each structure order. The kit will include a notebook or packet with a second set of installation documents and order-specific maintenance documentation with recommendations on how often to inspect, what to look for and what to do to keep the equipment in like-new condition. The kit also includes touch-up primer, appropriate color touch-up paint, sandpaper, appropriate color touch-up PVC, graffiti remover and additional installation tools for the tamperproof fasteners.
- O. Posts:
1. Aluminum Posts: All aluminum posts are manufactured from 6005-T5 extruded tubing conforming to ASTM B-221.
 - a. Aluminum Post Mechanical Properties:
 - Yield Strength (min.): 35,000
 - PSI Tensile Strength (min.):
38,000 PSI
 - % Elongation in 2 inches: 10
 - Modulus of Elasticity: 10×10^6 PSI
 - b. Straight Round Posts (PlayBooster or Approved Equal) shall have a 5" outside diameter with a 0.125" wall thickness.
 2. Arch Roof Posts: Arch posts shall be manufactured from 6005-T5 alloy. The arch shall be formed to a 21" center line radius to complement the 42" center to center module. The arch shall be of one continuous piece construction. There shall be no welds or additional pieces mechanically fastened to manufacture the arch. Each arch shall be designed to provide a minimum of 90° clear span from the deck to the inside of the arch at the radius peak. Arches shall be powdercoated to a specified color.
 3. Round Steel Posts (PB): All steel posts are manufactured from 5" O.D. tubing with a wall thickness of 0.120", shall be galvanized after rolling and shall have both the I.D. and the cut ends sprayed with a corrosion resistant coating.
 - a. Steel Post Mechanical Properties:
 - Yield Strength (min.): 50,000 PSI
 - Tensile Strength (min.): 55,000 PSI

% Elongation in 2 inches: 25

Modulus of Elasticity: 29.5 x 10⁶

PSI

2. Round Steel Arches (Evos): All steel arches are manufactured from 5" O.D. tubing with a wall thickness of 0.120", shall be galvanized after rolling and shall have both the I.D. and the cut ends sprayed with a corrosion resistant coating.

- a. Steel Arch Mechanical Properties:

Yield Strength (min.): 50,000 PSI

Tensile Strength (min.): 55,000 PSI

% Elongation in 2 inches: 25

Modulus of Elasticity: 29.5 x 10⁶

PSI

P. Clamps:

1. All clamps, unless otherwise noted, shall be die cast using a 369.1 aluminum alloy and have the following mechanical properties:

Ultimate Tensile: 47,000 PSI

Yield Strength: 28,000 PSI

Elongation: 7% in 2 inches

Shear Strength: 29,000 PSI

Endurance Limit: 20,000 PSI

2. Each functional clamp assembly shall have an appropriate number of half clamps and shall be fastened to mating parts with (2) 3/8" x 1 1/8" pinned button head cap screws (SST) and (2) stainless steel (SST) recessed "T" nuts. A Y." aluminum drive rivet with stainless steel pin is used to ensure a secure fit to the post.

3. Clamps have three functional applications and shall be named as follows:

- a. Offset hanger clamp assembly.
- b. Deck hanger clamp assembly.
- c. Hanger clamp assembly.

Q. Cables:

1. Comprised of six-stranded and tempered Corocord-cable (or Approved Equal) with a polypropylene core. The galvanized steel wire cores of the six strands are heated and covered with polyamide, color to be selected.

2.02 2-to-5 Composite Play Structure

B. Posts for PlayBooster by LSI or Approved Equal:

1. Post length shall vary depending upon the intended use and shall be a minimum of 42" above the deck height.
2. All posts shall have a "finished grade marker" positioned on the post identifying the 34" bury line required for correct installation and the top of the required protective surfacing.
3. Top caps for posts shall be aluminum die cast from 369.1 alloy and powdercoated to match the post color. All caps shall be factory installed and secured in place with (3) self sealing rivets.
4. A molded low-density polyethylene (LDPE) cap, with drain holes, shall be pressed onto the bottom end of the post to increase the footing area.
5. Posts shall have a post number sticker for installation purposes.
6. All posts shall be powdercoated to specified color.

C. Play Components

1. Components for 2-5 Year Old Play Structure (PlayBooster or Approved Equal) shall include, but not be limited to the following
2. Curved Transfer Module (32", Right) with HDPE panels, and PVC-coated steel weldment railings, steps, and decks
3. Kick Plates (flat steel, PVC coated)
4. Perforated Steel Decks, various sizes/shapes,
5. PVC Coated Pipe Barriers and Guardrails: Weldment comprised of 5/8" solid steel vertical rails, 1 1/8" O.D. x 11 GA (.120") steel horizontal rails with 203 or 303 stainless steel welded inserts with 5/8" internal threads, 1 1/2" x 1 1/2" x 29 1/2" angle iron. Barrier shall measure 39 13/16" high. Finish: soft PVC coated, color to be selected.
6. ABC Climber: Inclined perforated steel deck (per 3) with HDPE letter panels.
7. Block Climber (32" Deck): 12.5"x12.5"x8" Blocks formed of 14ga. steel sheet with 3"x6" cutouts, welded into pairs and connected with fasteners, coated with soft PVC coating, colors to be selected.
8. Loop ladder climber: powdercoated galvanized steel tubing weldment.
9. Curved ladder climber: powdercoated steel weldment arch with soft PVC coated perforated steel planks (Cozy Climber by LSI or Approved Equal)
10. HDPE Ridged Climber (48" Deck), Mini Summit Climber by LSI or Approved Equal.
11. Drums-and-Bells Panel: Two LDPE drums mounted to HDPE panel, with steel bells and HDPE strikers on reverse. (Rock-and-Ring by LSI or Approved Equal)
12. Chimes Panel: Anodized aluminum chimes set in HDPE panel.
13. Gear Panel: Two-color HDPE gears within HDPE Panel with transparent acrylic window.
14. Steel Storefront Panel: Fabricated from 7 GA (.179") HR zinc plated flat steel measuring 35 5/8" wide x 20" high. Finish: Powdercoat, color to be selected.
15. Custom Periscope Panel (HDPE panel with cutouts and octagonal periscope assembly)
16. Pipe Barrier with Wheels: as 4 above, with two 12" diameter soft PVC coated wheels on bearings.
17. HDPE Table (19 1/2" wide x 34 3/4" long) with end panels

18. LOPE Curved Double Slide (48" Deck)
19. Pod climbers: Rotationally molded LOPE pods with steel weldment supports
20. Arch Roofs, Perforated powdercoated steel.

2.03 5-to-12 Composite Play Structure

D. Posts for PlayBooster by LSI or Approved Equal:

1. Post length shall vary depending upon the intended use and shall be a minimum of 42" above the deck height.
2. All posts shall have a "finished grade marker" positioned on the post identifying the 34" bury line required for correct installation and the top of the required protective surfacing.
3. Top caps for posts shall be aluminum die cast from 369.1 alloy and powdercoated to match the post color. All caps shall be factory installed and secured in place with (3) self-sealing rivets.
4. A molded low-density polyethylene (LOPE) cap, with drain holes, shall be pressed onto the bottom end of the post to increase the footing area.
5. Posts shall have a post number sticker for installation purposes.
6. All posts shall be powdercoated to specified color.

B. Components for 5-12 Year Old Play Structure (PlayBooster or Approved Equal) shall include, but not be limited to the following

1. Curved Transfer Module (48", Left) with HOPE panels, and PVC-coated steel weldment railings, steps, and decks
2. Kick Plates (flat steel, PVC coated)
3. Perforated Steel Decks and steps, various sizes/shapes, PVC Coated
4. Pipe Barriers and Guardrails: Weldment comprised of 5/8" solid steel vertical rails, 1 1/8" O.D. x 11 GA (.120") steel horizontal rails with 203 or 303 stainless steel welded inserts with 5/8" internal threads, 1 1/2" x 1 1/2" x 29 1/2" angle iron. Barrier shall measure 39 13/16" high. Finish: soft PVC coated, color to be selected.
5. LOPE Molded Modular Slide (96" Deck) ("SlideWinder2" or Approved Equal)
6. LOPE Molded Spiral Slide (72" Deck) (SpyroSlide by LSI or Approved Equal)
7. Cylindrical Net Climber (72" Deck): Powdercoated galvanized steel tubing weldment with cable climber (Chimney Climber by LSI or Approved Equal)
8. HOPE Ladder Panel (32" Rise)
9. Vertical Ladder w/Alum Posts: Steel weldment with soft PVC coating.
10. Corkscrew Climber: Powdercoated steel weldment
11. HDPE Panel with Pivot Blocks on Aluminum Rod (Match 4 Panel by LSI or Approved Equal)
12. Wire Barriers: Weldment composed of 5/8" solid steel vertical rails, 1-1/8" steel horizontal rails, angle irons, and Y." diameter wire with approx. 1-5/8" x 2-9/16" openings and soft PVC coated finish.
13. Wire Barrier with wheel: As 14. above, with 12" dia. soft PVC coated wheel.

14. Arched Net Climber (Helix Net by LSI or Approved Equal): 2.375" weldment railing with cable net and 5" round clamps.
15. Overhead ladder connector: Powdercoated steel weldment with LOPE pods/platforms (Bow Ladder by LSI or Approved Equal)
16. Pod Walk on Chains/Cables: Powdercoated weldment supporting cable and chain connections to LOPE pod steppers (Swiggle Stix by LSI or Approved Equal)
17. Curved Chinning Bar: Powdercoated steel weldment (Power Lifter by LSI or Approved Equal)
18. Arch Roofs, Perforated powdercoated steel.

2.04 Double Arch Swings

- A. Shall be a two-bay Double Arch Swing by LSI or Approved Equal, with 5" posts, clamps, and swing support bar.
- B. Posts: See Composite Play Structures general specifications.
- C. Beam: Powdercoated steel weldment comprised of 2.375" galvanized steel tubing, 3" wide zinc-plated steel clamps, and 1.25" housings with bronze bushings.
- D. Chains: shall be galvanized steel.
- E. Belt Seat: Molded from UV stabilized black EPDM rubber encapsulating a weldment comprised of a 22 GA (.029") spring stainless steel sheet and (4) .105" thick stainless steel washers. The belt seat elliptical shape measures 7" wide x 26" long x .700" thick.
- F. Full Bucket Seat: Made of U.V. stabilized high-quality black rubber encapsulating a 24 GA (.024") stainless steel reinforcement plate. Handles cast from 356-T6 aluminum alloy with a 60 durometer black neoprene grip placed over handles. Handles attach to seat with (3) 1/4" x 1 5/16" long stainless steel rivets. The full bucket measures 9" deep x 10 1/2" wide.

2.05 Rock Climber

- A. Rock Climber shall be manufactured of glass reinforced concrete of single piece construction.
- B. Climber shall be Model # 156065 "The Pinnacle" available from Landscape Structures, Inc. only.

PART 3 - EXECUTION

3.01 Cast-In-Place Concrete Footings

- A. Concrete footings shall conform to the specifications contained in 03 30 00, Cast-In-Place Concrete.
- B. Install all footings plumb and true.
- C. Embedments into footings shall be cast-in-place, cored and embedded, or sleeved and

embedded, following all instructions in 03 30 00.3.01.D.3, Cast-In-Place Concrete: Embedded Items. Cored or sleeved items shall be securely anchored in place with a non-shrink, non-metallic waterproof grout suitable for buried use.

1. All corings shall be done in such manner as to avoid damage to the cast footing. Where feasible, sleeved embedments or cast-in-place embedments are preferred. All proposed corings shall be discussed with the Landscape Architect prior to casting the footings.
 - D. The Contractor shall do all necessary excavation required for the installation of the play equipment. Excavation shall be defined as the digging of all required footings and the removal of all materials encountered (footings, pavements, earth, boulders, broken concrete pieces, etc.) while digging those footings.
 - E. The depth of the top of the footing depends on the safety surfacing specified. See Drawings.
- 3.02 Composite Play Structures (2-5 y.o., 5-12 y.o), and Arch Swings and Rock Climber
- A. Play equipment and play items to be installed per manufacturer's directions and specifications, and per the Drawings.
 - B. Erection
 1. All tubular Posts shall be set square and plumb in concrete footings, to grade required, to assure level installation of platform angle frames and rails. All Posts shall extend 34" min. below theoretical finish grade, or as directed by manufacturer.
 2. Equipment shall be assembled to conform to the approved shop drawings. All fastenings shall be made as shown on the drawings and shall be securely tightened. All work shall be done so that no hazardous projections shall be left on the finished work.
 3. Installation: Play equipment to be installed per manufacturer's directions. Contractor to repair all damage to surfaces and finishes per manufacturer's instructions after installation is complete.
 4. Cleanup: Upon completion of the work under this Section, all excess materials and debris resulting from work under this Section, including all packaging, shall be cleaned up, removed from the Site, and properly disposed of.

END OF SECTION

SECTION 02820
PLAYGROUND SAFETY SURFACES

PART 1: GENERAL

1.01 GENERAL PROVISIONS

- A. Drawings and general provisions of the Contract, including Part III General Conditions and Part IV Special Conditions, apply to this Section.

1.02 DESCRIPTION OF WORK

- A. All necessary material components and application overview required to install the Poured-in-Place Resilient Rubber Safety Surface, Rubber Wearing Pads, and Wood Fiber Surface shall be provided.
- B. Safety surfacing systems shall be utilized in the use zones around playground equipment as an impact absorbing resilient surface as shown on the drawings.

1.03 RELATED SECTIONS

- A. Related Sections include the following:
 - 1. Section 02200 – EARTHWORK
 - 2. Section 03000 - CONCRETE WORK

1.04 QUALITY ASSURANCE

- A. Safety surface systems shall be warranted by manufacturer for any defects in material and workmanship for a period of five (5) years from the date of Final Acceptance.
- B. Qualifications: The installer of the surface systems shall be approved and trained in the specification of the manufacturer and shall have demonstrated experience on a minimum of five public playground installations over the past five years.
- C. Poured-in-Place Rubber Safety Surfacing and Resilient Rubber Wearing Pads shall be designed to meet CPSC, ASTM, and ADA requirements as referenced.
- D. Conditions of all substrates with respect to structural performance shall be evaluated and approved by the installer prior to installation of Poured-in-Place system.

1.05 DEFINITIONS

- A. EPDM: Ethylene-propylene-diene monomer.

1.06 SUBMITTALS

- A. Product Data: For the following:

1. Poured-in-Place and Resilient Rubber Safety Surfacing: including base mat., top course, primer, and binder.
 - B. Shop Drawings: Show fabrication and installation details for poured-in-place system. Show typical section with substrate, and edge section with substrate.
 - C. Samples for Verification: For each color of poured-in-place surfacing, not less than (two) 2" x 2" samples of base with binder. Color mix shall be as selected from color chart.
 - D. Installer Certificates: Signed by manufacturer certifying that installers comply with requirements.
 - E. Manufacturer Certificates: Signed by manufacturers certifying that they comply with requirements.
 - F. Qualification Data: For firms and persons specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include lists of completed projects with project names and addresses, names and addresses of architects and owners, and other information specified.
 - G. Field Test Reports: Indicate and interpret test results for compliance with performance requirements.
 - H. Material and Product Test Reports: Indicating materials comply with requirements, based on comprehensive testing of current product formulations and products
 - I. Maintenance Data: For poured-in-place system to include in maintenance manuals specified in Division 1.
 - J. Warranties: Special warranties specified in this Section.
 - K. Height Certification: Certified for critical height of equipment.

1.07 DELIVERY, STORAGE AND HANDLING

- A. All materials shall be delivered in good condition in original unopened packages with labels intact.
- B. All materials shall be protected from weather and the binder shall be stored in temperatures 40 degrees F. or higher.

1.08 PROJECT CONDITIONS

- A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit placement of poured-in-place system to be performed according to manufacturers' written instructions and warranty requirements. Do not place during conditions of precipitation, excessive atmospheric moisture, blowing dust, strong wind, or at temperatures outside manufacturers' recommended range.

- B. At the time of application ambient air temperature shall be 40 degrees F. or greater and remain so for at least 72 hours after completion.
- C. Installation of rubber safety surface shall occur as soon as practicable.
- D. All materials shall be protected from weather or other damage prior to application, during application and while curing.

1.09 WARRANTY

- A. General Warranty: Special warranty specified in this Article shall not deprive Owner of other rights Owner may have under other provisions of the Contract Documents and shall be in addition to, and run concurrent with, other warranties made by Contractor under requirements of the Contract Documents.
- B. Warranty Period: five (5) years from date of Final Acceptance.

PART 2: PRODUCTS

2.01 GENERAL

- A. All material components of the poured-in-place system shall be obtained from the same manufacturer.
- B. Acceptable manufacturers include but are not limited to the following:
 - 1. "Playbound" as manufactured by Surface America, PO Box 157, Williamsville, NY 14231; phone: 800-999-0555.
 - 2. "Child Safe" poured-in-place rubber as manufactured by Child Safe Products, 645 Broadway, Amityville, NY 11701; Phone: (631) 841-0363, Toll Free: (800) 434-5616.
 - 3. Poured-in-place as manufactured by Playsites + Surfaces, 908-B Long Island Ave., Deer Park, NY 11729; phone: 631-392-0962.

2.02 RESILIENT RUBBER SAFETY SURFACING

- A. Shall be a poured-in-place, resilient, seamless rubber surface designed to impart impact attenuation when installed over a specified substrate, and tested for non-slip characteristics under ASTM E-303 over the specified base. Material and depth of surfacing shall be provided that meets or exceeds safety surfacing criteria for play structure heights shown on the Drawings.
- B. Rubber safety surfacing shall pass flammability resistance tested in accordance with ASTM D2859-76 and BS-5696.
- C. Material shall be porous as to allow water to percolate at the minimum rate of 10 GPM per square foot.

- D. Consult with manufacturer for limitations caused by weather.
- E. Materials:
 - 1. Base Course: Shall be a mix of rubber granules ground into 3/8" shredded strands and urethane binder. Binders using latex or emulsion will not be accepted. Prefabricated shock pads will also not be considered equal.
 - 2. Top wearing Course: Shall be an EPDM pigmented rubber granule and polyurethane binder. Binders using aromatic urethane (MDI based), latex, or emulsion will not be accepted. Colors to be approved.s
 - a. Typical granule size to be 1mm to 3mm.
 - b. In high impact zones (as shown on the drawings) granule size to be 0.5mm to 1.5mm.
- F. Colors to be based on Surface America; PO Box 157; Williamsville, NY 14231; tel: 800-999-0555 or approved equal. Color mixes shall be 50% black and 50% a color to be selected.

2.03 RUBBER SAFETY SURFACE TILES FOR WEARING PADS

- A. Resilient Rubber Safety Surface Tiles shall be a single layer rubber tile playground surfacing system with a factory-molded surface composed of high-quality, 100% post-consumer SBR (Styrene Butadiene Rubber) tire rubber and EPDM colored granules bound together by a wear and weather resistant polyurethane and a 3 mm top wear layer with tapered, conical support legs, Ultra-Tile by Surface America Inc. or Approved Equal.
- B. The system shall be designed, manufactured and installed to meet the following criteria:
 - Shock Attenuation (ASTM F1292)- for 4', 6', and 8' fall heights or as otherwise required by the installed condition.
 - Gmax- Less than 200.
 - Head Injury Criteria- Less than 1000.
 - Flammability (ASTM D2859) - Pass.

2.04 WOOD FIBER SURFACING

- A. Engineered Wood Fibers: Random-sized wood fibers, in manufacturer's standard fiber size, approximately 10 times longer than wide; containing no bark, leaves, twigs, or foreign or toxic materials according to ASTM F 2075; graded according to manufacturer's standard specification for material consistency for playground surfaces and for accessibility according to ASTM F 1951.

Fibar, Inc.; Fibar System
New England Playground Surfacing; Playground Safety Fiber.
Zeager Bros., Inc.; Wood Carpet.

2.05 ALUMINUM PAVEMENT EDGE RESTRAINTS

- A. Product shall be an extruded, 6005 Aluminum edge restraint **specifically designed for use with asphalt pavements** with 0.210 inch thick exposed top lip, Cleanline 4" and Cleanline XL 12" as manufactured by Permaloc Corporation, Holland MI 49424 (telephone (800) 356-9660 or (616) 399- 9600) or Approved Equal.
- B. Horizontal base to have upward facing angle profile designed to integrate restraint and asphalt surfaces for straight-line and curvilinear applications.
- C. Each 8' long section shall have holes in base spaced 4 inches apart along its length to receive anchors.
- D. Connection Method: Section ends shall splice together with horizontal 0.060 inch thick x 1 inch wide (or 0.530 inch wide for 1 inch high edging) x 4 inches long aluminum sliding connector.
- E. Anchors: Aluminum anchor stakes 10" and 18" as supplied by the Permaloc Corp.
- F. Finish shall be available anodized, color black.
- G. Manufacturer shall offer a 15-year limited material warranty for asphalt restraint edging from manufacturing defects in workmanship or material.

PART 3: EXECUTION

3.01 POURED IN PLACE RUBBER

- A. Examination
 - 1. Examine substrates, with Installer present, for freedom from sharp projections and voids; for compliance with requirements for compaction and grading; and for other conditions affecting performance of poured-in-place system.
 - 2. Proceed with installation only after unsatisfactory conditions have been corrected.
- B. Base Course Installation
 - 1. Primer: Where necessary, shall be applied at a rate of 300 sq. feet per gallon to the substrate.
 - 2. Base Course:
 - a. Urethane to rubber ratio of 13.64%, which equals a mix of 12% urethane and 88% rubber by weight to achieve maximum resilience.
 - b. Using trowel, base course mix shall be spread in a consistent density to a specified thickness at a rate of 31 lbs and 13 oz total weight per cubic foot to the specified depth.
 - c. Base course mix shall be allowed to cure as per manufacturer specifications.
 - 2. Primer: Where necessary, shall be applied at a rate of 300 sq. feet per gallon to the base course.

C. Top Course Installation

1. Contractor shall layout out colored shapes with marking paint at least 2 days prior to start of top course installation. Initial layout will be reviewed and approved by Landscape Architect.
2. If necessary, layout will be revised and approval obtained prior to start of top course installation.
3. Top Course:
 - a. Urethane to rubber ratio of 21.95% which equals a mix of 18% urethane and 82% rubber by weight to achieve maximum wearability and resilience.
 - b. Using trowel, EPDM/binder mix shall be spread in a consistent density of 2.44 lbs per square foot which yields a nominal thickness of 2 inch.
 - c. In high impact zones, using a trowel, EPDM/binder mix shall be spread in a consistent density of 2.69 lbs per square foot which yields a nominal thickness of 2 inch.
 - d. Binder mix shall be allowed to cure as per manufacturer specifications.
4. Timing
 - a. The application of the top course for individual areas shall commence and be completed during the same work day to prevent joint marks and unevenness.
 - b. Contractor shall provide a 24 hour security watch after installation is complete to ensure safety surface is undisturbed while setting.

3.02 RUBBER WEARING PADS

- A. Install and compact base materials to be a smooth, level surface without irregularities, which would reflect up to the finish surface.
- B. Using a 1/8" square-notched trowel, apply PlayGrip adhesive slightly wider than the tile being placed.
- C. Place tile into fresh adhesive bed following pre-established lines.
- D. Allow 24 hours for adhesive to cure before conducting further work in the area.

3.03 WOOD FIBER SURFACING

- A. Prepare subgrade by grading to a smooth even surface. Work carefully within dripline of tree to remain to protect tree roots from damage.
- B. Install drainage stone in even layer to depth shown on the drawings. Install geotextile fabric over entire stone layer with 12" overlap at all seams.
- C. Spread wood fiber surfacing throughout areas as shown on the drawings to such a depth that after settlement the fiber achieves the specified depth of 12 inches.

END OF SECTION

SECTION 02835

WOOD GUARDRAIL

PART 1. GENERAL

1.00 WORK INCLUDED

The work under this Item consists of furnishing and installing wooden rail and post guardrail installations as shown on the attached drawings. Work includes excavation, furnishing and installing posts and rails, and backfill of post holes.

1.01 SUBMITTALS

- A. Provide certification of treatment for wood preservative applied to posts and rails.

1.02 MANNER OF CONDUCTING WORK

- A. All work shall be conducted in a manner to protect the safety and convenience of the public and the workmen.
- B. In locations where guardrail is installed within pavement, the guardrail installation shall be coordinated with the paving contractor so that the guardrail is installed after the pavement binder course and in advance of the finish pavement.

1.03 DELIVERY, STORAGE AND HANDLING

- A. Store materials under waterproof covers on planking clear of the ground and protect from handling damage, dirt, stain, water, and wind.
- B. Take all necessary precautions to prevent damage during transportation of these materials to the project, and during unloading and storage. Damaged items will not be allowed to be installed and any items found to be damaged in the erected work shall be removed and replaced at no cost to the owner.

PART 2. MATERIALS

- A. Wood shall be pressure treated Southern Yellow Pine, graded S4S, uniform in treatment and appearance. Wood shall be sound, well seasoned, and straight grain, free from shakes and large or loose knots and shall have no decayed wood, worm holes, or other defects which the Landscape Architect determines will impair its strength or durability for the purpose intended.
- B. Preservative Treatment. All wood shall be pressure treated using the vacuum pressure methods with ACQ "Quat" preservative in accordance with American Wood Preservers' Association Standards (AWPA).
- C. All hardware shall be fabricated from steel conforming to ASTM A307 latest requirements hot-dipped galvanized to conform to ASTM A153.

PART 3. EXECUTION

- A. Layout locations, line and grade of proposed guardrail locations and confirm with owners representative prior to initiation of work.
- B. All posts and rails shall be set plumb and true and all rails shall be set straight and true.
- C. Auger post holes a minimum of three times the post diameter.
- D. Align each post vertically and laterally. Secure posts with backfill of excavated material unless found unsuitable.
- E. Install rails as shown and fasten securely.

END OF SECTION

SECTION 02840

SITE FURNISHINGS

PART 1 GENERAL

1.01 SCOPE

- A. Furnish all labor, materials, equipment and perform all operations necessary for completion of the work of this Section as shown on the Drawings, as herein specified and as evidently required to properly complete, to the satisfaction of OWNER, the following items, to provide and install new:

1. Boulder Benches
2. Center Post Tables
3. Picnic Table
4. Site Boulders
5. Handicap Parking Sign

1.02 REFERENCE SECTIONS

- A. Section 01330 - Submittal Procedures
- B. Section 01630 - Substitutions

1.03 COORDINATION

- C. Schedule delivery of site furnishings to arrive on site after pads, footings or level areas have been completed and the site is prepared for installation.

1.04 SUBMITTALS

- A. CONTRACTOR shall submit shop drawings on all site furnishings for review and approval by the LANDSCAPE ARCHITECT prior to ordering, as per Section 01330.

1.05 EXISTING CONDITIONS

- A. None.

PART 2 - PRODUCTS

2.01 ACCEPTABLE MANUFACTURER'S

- A. Supply exact material specified unless manufacturer is unable to provide specified item in a timely manner in which case proposals for substitutions will be considered.
- B. Substitutions: Products of equal quality, detail, function, and performance may be proposed for substitution by following the procedures in Section 01630.

2.02 BOULDER BENCHES

- A. Boulders shall be field collected from Faxon Park from areas identified by the Landscape Architect.
 - 1. The Contractor shall provide all labor and equipment to collect and transport boulders to the work area in a manner that protects the boulders from gouges and other damage. Nylon straps, not chains, shall be used to lift and transport boulders to prevent marking.
 - 2. Boulders for benches shall have minimum dimensions of 18" height and width, and 24" depth to allow installation per the details.
- B. Bench tops shall be Model 720BL-W backless benches manufactured by Maglin Site Furniture Inc., 27 Bysham Park Drive, Woodstock, Ontario N4T 1P1 Canada. Toll Free: (800) 716.5506. Phone: (519) 539.6776. Fax: (877) 260.9393. Website: www.maglin.com. E-mail: sales@maglin.com.
 - 1. Bench ends and mounting brackets shall be solid cast aluminum provided by the bench manufacturer. Aluminum parts to be powdered. color black.
 - 2. Bench slats shall be 1.38" x 1.5" and 1.38" x 5" lpe.

2.03 CENTER POST TABLES

- A. Tables shall be Model MLPT 400-BD-W manufactured by Maglin Site Furniture Inc., 27 Bysham Park Drive, Woodstock, Ontario N4T 1P1 Canada. Toll Free: (800) 716.5506. Phone: (519) 539.6776. Fax: (877) 260.9393. Website: www.maglin.com. E-mail: sales@maglin.com.
 - 1. Tables shall be direct burial structures with lpe slats. Dimensions shall be 30"H, 36" sq. top, and four 18" seats.
 - A. Materials
 - 1. The frame is H.S. steel tube and flat bar.
 - 2. Stainless Steel Fasteners.
 - B. Finishes
 - 1. All steel components shall be protected with automotive-grade electrocoating and a UV Resistant Powdercoat, color black
 - 2. lpe wood slats shall be finished with penetrating sealers.

2.04 PICNIC TABLE ON CONCRETE PAD

- A. Table shall Model MLPT720-S manufactured by Maglin Site Furniture Inc.
 - 1. Table shall be surface mount with lpe slats. Table dimensions shall be 30" H, 70" L, and 37" W. Two accompanying benches shall be 17.5" H, 70" L, and 17.25 W.
 - A. Materials
 - 1. The frame is H.S. steel tube and flat bar.
 - 2. Stainless Steel Fasteners.

B. Finishes

1. All steel components shall be protected with automotive-grade electrocoating and a UV Resistant Powdercoat, color black
2. Ipe wood slats shall be finished with penetrating sealers.

2.05 SITE BOULDERS

- A. Boulders shall be field collected from Faxon Park from areas identified by the Landscape Architect.
1. The Contractor shall provide all labor and equipment to collect and transport boulders to the work area in a manner that protects the boulders from gouges and other damage.
 2. Boulders for benches shall have minimum dimensions of 18" height and width, and 24" depth to allow installation per the details.

2.06 HANDICAP PARKING SIGN

- A. Sign shall be fabricated from flat sheet Aluminum Alloy meeting ASTM B209, Alloy 6061-T6 or Alloy 5052-H38. Panel shall be 0.08 inches thick. Sheeting shall meet the requirements of ASTM D4956 and AASHTO M268, and shall be High Intensity (H/I) conforming to ASTM Type III or IV, or High Intensity Prismatic Sheeting meeting or exceeding the requirements of ASTM Type VIII.
- B. The design, color, type, size and dimensions of the sign faces shall conform to the Plans and to the applicable requirements of the latest edition and revisions of the "Manual on Uniform Traffic Control Devices".
- C. Posts shall be 2 1/4" x 2 1/4" square tube post, painted gloss black. Posts shall be driven to a depth of 4 feet. The sign panel shall be attached to the post using two, 5/16-inch by 2 1/2-inch galvanized bolts with two 0.070 washers per bolt.

PART 3 EXECUTION

3.01 BOULDER BENCHES

- A. Selected boulders shall be pressure washed with water to remove extraneous material prior to placement on site. Each pair of boulders for a single bench shall be carefully selected to allow installation of bench brackets and tops in a level manner consistent with the detail drawings.
- B. Pour concrete leveling pad to insure the proper level for the top of the bench seat. Set boulders after pad has sufficiently hardened to provide a stable surface.
- C. Install bench seats in accordance with manufacturer's instructions.

3.02 CENTER POST TABLES

- A. Install per drawings and in accordance with manufacturer's instructions. Contractor shall take care not to damage materials or finishes.

3.03 PICNIC TABLE

- A. Install per drawings and in accordance with manufacturer's instructions. Contractor shall take care not to damage materials or finishes

3.04 SITE BOULDERS

- A. Place boulders on compacted base as shown on the drawings in locations as directed by Landscape Architect. Landscape Architect to be present during installation of boulders. Lifting shall use nylon straps so as not to scratch, nick, or otherwise mar surfaces.
- B. Set boulders so as to expose best surfaces with objective to provide reasonably flat top surfaces for comfort of seating.

END OF SECTION

SECTION 02900

LOAMING AND SEEDING

PART 1: GENERAL

1.01 GENERAL PROVISIONS

- A. Drawings and general provisions of the Contract, including Part III General Conditions and Part IV Special Conditions, apply to this Section.

1.02 ENVIRONMENTAL CONDITIONS

- A. The planting season for grass shall be from April 15 to October 1, except as otherwise authorized by the Landscape Architect.

1.03 SUBMITTALS

- A. The following information shall be submitted in accordance with the General Conditions and in Section 01300 - SUBMITTALS.
 - 1. Soil test results including recommendations for lime and fertilizer for lawns.
 - 2. Certification of seed mix and purity.

PART 2: PRODUCTS

2.01 LOAM

- A. Loam excavated and stock piled may be used if approved by the Landscape Architect. If stockpiled loam is insufficient or unsuitable, additional material shall be supplied from off-site sources. All loam shall be a "fine sandy loam" or a "sandy loam" as based on the USDA classification system. It shall be of uniform composition, without mixture of subsoil, free from stones larger than one inch in diameter, lumps, plants, clay, peat, root and other extraneous matter. Loam shall not be delivered or worked in a frozen or muddy condition.

2.02 LIME

- A. Shall be standard commercial ground limestone and shall be applied at a rate of 50 pounds per 1000 square feet.

2.03 COMMERCIAL FERTILIZER

- A. Shall be standard 10-10-10 dry granular mixture, delivered in the manufacturer's containers and containing a guaranteed analysis by weight of at least 10 parts Nitrogen, 10 parts Phosphorus and 10 parts Potash, applied at the rate of 10 lbs. per 1000 sq. ft.

2.04 GRASS SEED

- A. Shall be fresh, clean, new crop seed. Seed shall be delivered to the work site in sealed container with each container bearing the dealer's guaranteed analysis showing percentage of seed mix, year of production, net weight, date of packaging, and location of packaging. Lawn seed shall be composed substantially as follows with a percentage of purity and germination as listed.

1. Seed Mixture.

LAWN AREAS

Kinds of Grass	% by Weight	% Purity	% Germination
Chewing Fescue	30	97	90
Kentucky 31 Fescue	30	98	90
Kentucky Bluegrass	20	98	90
Domestic Ryegrass	20	98	90

NOTE: Weeds and inert material shall not exceed 1 percent. Weeds: Includes Dandelion, Jimsonweed, Quackgrass, Horsetail, Morning Glory, Rush Grass, Mustard, Lamsquarter, Chickweed, Cress, Crabgrass, Canadian Thistle, Nutgrass, Poison Oak, Blackberry, Tansy Ragwort, Bermuda Grass, Johnson Grass, Poison Ivy, Nut Sedge, Nimble Will, Bindweed, Bent Grass, Wild Garlic, Perennial Garlic, Perennial Sorrel, Bronce Grass, and any other plant growth not listed in the lawn area seed mixture.

2.05 WOVEN JUTE MESH NETTING

- A. Shall be "Ludlow Soil Saver," as manufactured by the Ludlow Corp., Needham Height, Mass., or an equal as manufactured by Advance Netting Company, Lodi, N.J. or "Jute-Net" by Bemis, Inc., St. Louis, MO, or equal. Netting shall utilized as required and as approved by the Landscape Architect.

2.06 STRAW OR HAY

- A. For erosion control and moisture retention shall consist of stems or stalks after threshing. Hay shall consist of a mowed, properly cured grass, clover or other acceptable plant. Straw or hay shall be kept in place by stakes, netting, pins or liquid coatings as may be required and as approved by the Landscape Architect.

PART 3: EXECUTION

3.01 GRADING AND SEEDING OPERATIONS

- A. Personnel for lawn work shall be familiar with lawn construction and shall be under the constant supervision of a qualified foreman.
- B. Grading and Topsoil Placement.

1. Preparation of sub-grade. The Contractor shall do whatever grading is necessary to bring the sub-grade to a true smooth slope, parallel to finish grade or to the level of adjacent existing loam areas.

Subgrade depth for Lawn Areas - 8 inches minimum or equal to original depth, whichever is greater (all stockpiled material shall be placed back even if greater than 8 inches).
 2. The top three inches of the sub-grade immediately prior to being covered with loam shall be raked or otherwise loosened and shall be free from stones, rock and other foreign materials three inches or greater in dimensions.
 3. Sufficient grade stakes shall be provided to insure correct line and grade of subgrade and of finished grade.
 4. Sub-grade shall be to a true smooth slope before placing of loam.
 5. Loam shall be as specified above, and shall be placed and spread over approved areas to a sufficient depth so that after natural settlement and light rolling for lawn areas, the completed work will conform to the lines, grades and elevations indicated. Depth or thickness of loam (topsoil) shall be equal to the depth of sub-grade below final elevation.
 6. Finish grading. After loam has been spread, it shall be prepared by scarifying or harrowing and hand raking. All large stiff clods, lumps, brush, roots, stumps, litter and other foreign matter, and stones over 1 inch in diameter shall be removed from the loam which shall also be free of smaller stones in excessive quantities.
 7. The surface for lawn areas shall then be rolled with a hand roller weighing not more than 100 lbs. per foot of width.
 8. During the rolling, all depressions caused by settlement of rolling shall be filled with additional loam and the surface shall be re-graded and rolled until presenting a smooth and even finish to the required grade.
 9. Subsequent to or during raking of the loam and at least four days prior to seeding, lime shall be applied and raked into the soil over all loam areas.
 10. After the lime has been applied and worked into the loam, the entire area shall receive an application of commercial fertilizer. Fertilizer shall be spread in advance of seeding by approved mechanical spreading devices and lightly raked into the top of the soil.
- C. Placement of Seed.
1. Seed shall be spread at least four days after fertilization of the soil by an approved mechanical method and at the rate of eight (8) pounds per thousand square feet. Seed shall be lightly raked into the soil to a depth

- of approximately 1/8-inch (and no more than 1/4-inch) and the entire seeded area shall be rolled with a lightweight roller.
2. Seeding shall not be done during windy weather.
3. For lawn areas, seeding shall be done in three directions, two at right angles to each other, and one diagonally.
4. Culti-packer or approved similar equipment may be used to cover the seed and to form the seedbed in one operation.
5. Immediately after seeding, all seeded areas shall be watered to a depth of approximately four inches and shall be covered with a loose, uniform layer of straw or hay. Watering will be done daily.

3.02 HYDROSEEDING

- A. Apply seeded slurry at a rate of 10 lbs. of seed per 1000 sq. ft. based only on seed content evenly in two intersecting directions, with a hydraulic seeder. Do not hydroseed an area in excess of that which could be protected and watered on the same day.
- B. Immediately following seeding, apply erosion control as specified.
- C. Apply water with a fine spray immediately. Saturate to four inches of soil.

3.03 MAINTENANCE AND PROTECTION

- A. Maintenance shall begin immediately after each portion of lawn is installed.
- B. Maintenance and protection of seeded areas shall consist of temporary protective fences, barriers, signs, watering, weeding, cutting, and reseeding as necessary, as well as maintaining the straw or hay cover in a uniform layer.
- C. Lawns shall be maintained until substantial completion of the project or until acceptance of lawns, whichever is longer.
- D. The surface layer of soil shall be kept damp during the germination period. After first cutting of Lawn Areas, watering shall be twice per week.
- E. Bi-weekly inspection shall be made to determine the moisture content of the soil and approved watering schedule shall be adjusted to fit conditions.
- F. At the time of the first cutting, when grass is between four inches and six inches high, mower blades shall be set at 2 ½ inches high. All areas shall receive at least two mowings before acceptance. The Contractor shall be responsible for the first two cuttings until the lawn is accepted by the Landscape Architect and substantial completion, whichever is later.
- G. All clippings in lawn areas shall be removed after each mowing. Mowing shall be done only in dry weather.

- H. Excessive weeds shall be removed.
- I. The Contractor shall repair bare spots and/or damage resulting from erosion, gulleys, washouts, or other causes by filling with topsoil if damage occurs prior to acceptance.
- J. In the event that lawn operations are completed too late in the fall for adequate germination and/or growth of grass, maintenance shall continue into the following spring.

3.04 ACCEPTANCE

- A. An acceptable lawn shall be one that has a dense, uniform stand of the specified grasses. It shall be free of ruts, gullies, bare spots, and the grass shall be healthy and free of weeds.
- B. After completion of all landscaping work, all debris and excess material shall be disposed of in accordance Section 02200 - EARTHWORK. All pavements shall be broomed and hosed (washed) clean.

END OF SECTION

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Park Planning Associates

SECTION 03000

CONCRETE WORK

PART 1: GENERAL

1.01 GENERAL PROVISIONS

- A. Drawings and general provisions of the Contract, including Part III General Conditions and Part IV Special Conditions, apply to this Section.

1.02 WORK INCLUDED

- A. Formwork, complete with required shoring, bracing, and anchorage.
- B. Concrete reinforcing, complete with required supports, spacers, and related accessories.
- C. Cast in place concrete for pads. Concrete for footings shall be part of each item and paid for as part of that item.

1.03 RELATED WORK

- A. Section 02200 - EARTHWORK

1.04 QUALITY ASSURANCE

- A. Perform cast-in-place concrete work in accordance with ACI 301, unless specified otherwise in this project.
- B. Keep copy of ACI 301 in field office for duration of project.

1.05 TESTING LABORATORY SERVICES

- A. Inspection and testing of concrete mix will be performed in accordance with Section 01400 – QUALITY CONTROL.
- B. Provide proposed concrete mix design for approval prior to initiating work under this item.

1.07 SUBMITTALS

- A. Submit product data and shop drawings of reinforcing steel in accordance with Section 01300 - SUBMITTALS.
- B. Indicate bar size, spacing, locations and quantities of reinforcing steel and wire fabric, bending and cutting schedules, and supporting and spacing devices.

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 Park Planning Associates

PART 2: PRODUCTS

2.01 CEMENT

- A. The following table of minimum cement contents for various minimum 28 days compressive strengths (6"x12" cylinder) are based on air entrained and water reduced mixtures. The use of an approved additive other than air entraining and water reducing additives shall not affect the minimum cement content.

The Contractor shall submit to the Field Engineer, for approval his proposed concrete supplier, source and type of materials, with current ASTM C-33 aggregate data, and concrete mix designs by an approved laboratory complete with trial mix data. Trial mixtures will be designed and tested at the maximum allowable slump and air content for each designated class of concrete.

Minimum 28 day Compressive <u>Strength</u> Lbs./Sq.In.	Minimum Cement Pounds/Cu. Yd.			In Place Slump <u>Inches</u>
	Max. Size C.A. <u>Inches</u>			
	1 ½	¾	⅜	
3000	470	517	564	3-5
Air Content % ± 1	5.0	6.0	7.5	

All concrete for pads shall have a minimum compressive strength of 3000 psi and contain 6% ± 1% entrained air.

- B. MATERIALS:

Portland Cement Shall conform to ASTM C150, latest edition.

Portland cement used for concrete shall be the type designed on the plans and/or in the specifications for the particular work. If no type is specified, Type II shall be furnished.

When high early strength is required, it shall be attained by using Type III cement or by adding 15% additional Type II cement.

- C. FINE AGGREGATE:

Fine aggregate shall consist of natural sand, manufactured sand or a combination thereof, conforming to the requirements of ASTM C33, Specification for "Concrete Aggregates", latest edition. The Fineness Modulus of the fine aggregate shall be 2.80 + .20 and the percent passing the #200 sieve shall not exceed 2 percent by dry sieving and 3 percent by wet sieving.

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D. COARSE AGGREGATE

Coarse aggregate of washed gravel, crushed gravel, crushed stone or a combination thereof conforming to ASTM C33 Specification for "Concrete Aggregates", latest edition. Aggregate for Lightweight Concrete shall conform to ASTM C330 Specification for "Lightweight Aggregates for Structural Concrete".

E. WATER

Water for concrete shall be clear and apparently clean and shall not exhibit any deleterious effects upon the required concrete properties.

F. ADMIXTURES:

Air entraining and water reducing admixtures will be used in all concrete as specified. They shall be used in strict accordance with the manufacturer's recommendations and added at the batch plant. Admixtures shall be a ready-to-use liquid material, and contain no calcium chloride

G. AIR ENTRAINING ADMIXTURE:

Shall conform to ASTM C260 Specification for "Air Entraining Admixtures for Concrete".

H. WATER REDUCING ADMIXTURE:

Shall conform to ASTM C494 Specification for "Chemical Admixtures for Concrete".

2.02 REINFORCEMENT

- A. Steel reinforcement dowels are to be billet steel, Grade 60, deformed bars to ASTM A 615 - Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement, unless indicated otherwise.
- B. Stirrup Steel: ASTM A 82/A 82M steel wire, unfinished.
- C. Steel Welded Wire Reinforcement: ASTM A 884/A 884M, deformed, Class A epoxy coated type.
1. Mesh Size and Wire Gage: As indicated on drawings.
- D. Reinforcement Accessories:
1. Tie Wire: Annealed, minimum 16 gage.
 2. Chairs, Bolsters, Bar Supports and Spacers: Sized and shaped for adequate support of reinforcement during concrete placement.
 3. Provide stainless steel components for placement within 1-1/2 inches of weathering surfaces.

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PART 3 : EXECUTION

3.01 GENERAL

- A. Install concrete work in accordance with ACI 301 except as amended by this Section.
- B. Provide reinforcing steel as shown or as directed.

3.02 FORMWORK (ACI 301 4.2)

- A. Obtain Landscape Architect's/Field Engineer's review for use of earth forms. When using earth forms, hand-trim sides and bottoms, and remove loose dirt prior to placing concrete.
- B. No concrete shall be poured until Landscape Architect/Field Engineer has inspected formwork.

3.03 TOLERANCES (ACI 301 4.3)

3.04 PREPARATION OF FORM SURFACES (ACI 301 4.4)

- A. Apply form release agent on formwork in accordance with manufacturer's recommendations. Apply prior to placing reinforcing steel, anchoring devices and embedded parts. Do not apply form release agent where concrete surfaces will receive special finishes or applied coverings which are affected by agent.

3.05 FINISHING FORMED SURFACES (ACI 301 10)

- A. Formed Surface Finishes: ACI 301 10.4, provide smooth rubbed finish at concrete columns, walls, steps and curb edges.

3.06 CONNECTIONS TO EXISTING WORK

- A. In locations where new concrete is doweled to existing work, drill holes in existing concrete, insert steel dowels and pack solidly with non-shrink grout.
- B. Prepare previously placed concrete by cleaning with steel brush and apply bonding agent. Apply bonding agent in accordance with manufacturer's recommendations.

3.07 REPAIR OF SURFACE DEFECTS (ACI 201 9)

- A. Allow Landscape Architect/Field Engineer to inspect concrete surfaces immediately upon removal of forms.
- B. Modify or replace concrete not conforming to required lines, detail, and elevations.
- C. Repair or replace concrete not properly placed resulting in excessive honeycombing and other defects. Do not patch, repair or replace exposed

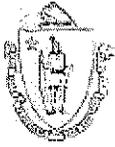
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architectural concrete except upon direction of Landscape Architect/Field Engineer.

3.08 PROTECTION

- A. Contractor shall be responsible for security, to guard against graffiti on concrete. Defaced concrete will be rejected, with no exceptions taken. Provide watchman (paid police details) and schedule work (limit paving concrete to A.M. hours only) as required or directed, until concrete has cured sufficiently to prevent defacement.

END OF SECTION



DEVAL L. PATRICK
Governor

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

RACHEL KAPRIELIAN
Secretary
HEATHER E. ROWE
Director

Awarding Authority: City of Quincy
Contract Number: **City/Town:** QUINCY
Description of Work: FAXON PARK PLAYGROUND - Reconstruction of a playground including paving, site furnishings, granite curb, wood guardrail, & other improvements. Installation of playground equipment & safety surfaces
Job Location: Faxon Park Road, Quincy, MA

Information about Prevailing Wage Schedules for Awarding Authorities and Contractors

- This wage schedule applies only to the specific project referenced at the top of this page and uniquely identified by the "Wage Request Number" on all pages of this schedule.
- Awarding authorities must request an updated wage schedule from the Department of Labor Standards ("DLS") if it has not opened bids or selected a contractor within 90 days of the date of issuance of the wage schedule.
- The wage schedule shall be incorporated in any advertisement or call for bids for the project as required by M.G.L. c. 149, § 27. Once a contractor has been selected by the awarding authority, the wage schedule shall be made a part of the contract for that project. The wage schedule must be posted in a conspicuous place at the work site during the life of the project in accordance with M.G.L. c. 149, § 27. The wages listed on the wage schedule must be paid to employees performing construction work on the project regardless of whether they are employed by the prime contractor, a filed sub-bidder, or any sub-contractor.
- All apprentices working on the project are required to be registered with the Massachusetts Division of Apprentice Training (DAT). Apprentices must keep his/her apprentice identification card on his/her person during all work hours on the project. If an apprentice rate is listed on the prevailing wage schedule for the trade in which an apprentice is registered with the DAT, the apprentice may be paid the lower apprentice wage rate at the applicable step as provided on the prevailing wage schedule. **If an apprentice rate is not listed on the prevailing wage schedule for the trade in which an apprentice is registered with the DAT, the apprentice must be paid the journeyworker's rate for the trade.**
- The wage rates will remain in effect for the duration of the project, except in the case of multi-year public construction projects. For construction projects lasting longer than one year, awarding authorities must request an updated wage schedule. Awarding authorities are required to request these updates no later than two weeks before the anniversary of the date the contract was executed by the awarding authority and the general contractor. Contractors are required to obtain the wage schedules from awarding authorities, and to pay no less than these rates to covered workers. The annual update requirement is not applicable to 27F "rental of equipment" contracts.
- Every contractor or subcontractor which performs construction work on the project is required to submit weekly payroll reports directly to the awarding authority and keep them on file for three years. Each weekly payroll report must contain: the employee's name, address, occupational classification, hours worked, and wages paid. Do not submit weekly payroll reports to DLS. A sample of a payroll reporting form may be obtained at <http://www.mass.gov/dols/pw>.
- Contractors with questions about the wage rates or classifications included on the wage schedule have an affirmative obligation to inquire with DLS at (617) 626-6953.
- Employees not receiving the prevailing wage rate set forth on the wage schedule may report the violation to the Fair Labor Division of the office of the Attorney General at (617) 727-3465.
- Failure of a contractor or subcontractor to pay the prevailing wage rates listed on the wage schedule to all employees who perform construction work on the project is a violation of the law and subjects the contractor or subcontractor to civil and criminal penalties.

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
Construction						
(2 AXLE) DRIVER - EQUIPMENT <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE A</i>	12/01/2013	\$32.05	\$9.41	\$8.80	\$0.00	\$50.26
	06/01/2014	\$32.40	\$9.41	\$8.80	\$0.00	\$50.61
	08/01/2014	\$32.40	\$9.91	\$8.80	\$0.00	\$51.11
	12/01/2014	\$32.40	\$9.91	\$9.33	\$0.00	\$51.64
	06/01/2015	\$32.75	\$9.91	\$9.33	\$0.00	\$51.99
	08/01/2015	\$32.75	\$10.41	\$9.33	\$0.00	\$52.49
	12/01/2015	\$32.75	\$10.41	\$10.08	\$0.00	\$53.24
	06/01/2016	\$33.25	\$10.41	\$10.08	\$0.00	\$53.74
	08/01/2016	\$33.25	\$10.91	\$10.08	\$0.00	\$54.24
	12/01/2016	\$33.25	\$10.91	\$10.89	\$0.00	\$55.05
(3 AXLE) DRIVER - EQUIPMENT <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE A</i>	12/01/2013	\$32.12	\$9.41	\$8.80	\$0.00	\$50.33
	06/01/2014	\$32.47	\$9.41	\$8.80	\$0.00	\$50.68
	08/01/2014	\$32.47	\$9.91	\$8.80	\$0.00	\$51.18
	12/01/2014	\$32.47	\$9.91	\$9.33	\$0.00	\$51.71
	06/01/2015	\$32.82	\$9.91	\$9.33	\$0.00	\$52.06
	08/01/2015	\$32.82	\$10.41	\$9.33	\$0.00	\$52.56
	12/01/2015	\$32.82	\$10.41	\$10.08	\$0.00	\$53.31
	06/01/2016	\$33.32	\$10.41	\$10.08	\$0.00	\$53.81
	08/01/2016	\$33.32	\$10.91	\$10.08	\$0.00	\$54.31
	12/01/2016	\$33.32	\$10.91	\$10.89	\$0.00	\$55.12
(4 & 5 AXLE) DRIVER - EQUIPMENT <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE A</i>	12/01/2013	\$32.24	\$9.41	\$8.80	\$0.00	\$50.45
	06/01/2014	\$32.59	\$9.41	\$8.80	\$0.00	\$50.80
	08/01/2014	\$32.59	\$9.91	\$8.80	\$0.00	\$51.30
	12/01/2014	\$32.59	\$9.91	\$9.33	\$0.00	\$51.83
	06/01/2015	\$32.94	\$9.91	\$9.33	\$0.00	\$52.18
	08/01/2015	\$32.94	\$10.41	\$9.33	\$0.00	\$52.68
	12/01/2015	\$32.94	\$10.41	\$10.08	\$0.00	\$53.43
	06/01/2016	\$33.44	\$10.41	\$10.08	\$0.00	\$53.93
	08/01/2016	\$33.44	\$10.91	\$10.08	\$0.00	\$54.43
	12/01/2016	\$33.44	\$10.91	\$10.89	\$0.00	\$55.24
ADS/SUBMERSIBLE PILOT <i>PILE DRIVER LOCAL 56 (ZONE 1)</i>	08/01/2013	\$84.21	\$9.80	\$18.17	\$0.00	\$112.18
	08/01/2014	\$87.36	\$9.80	\$18.17	\$0.00	\$115.33
	08/01/2015	\$90.51	\$9.80	\$18.17	\$0.00	\$118.48
AIR TRACK OPERATOR <i>LABORERS - ZONE 1</i>	12/01/2013	\$34.10	\$7.30	\$12.70	\$0.00	\$54.10
	06/01/2014	\$34.85	\$7.30	\$12.70	\$0.00	\$54.85
	12/01/2014	\$35.60	\$7.30	\$12.70	\$0.00	\$55.60
	06/01/2015	\$36.35	\$7.30	\$12.70	\$0.00	\$56.35
	12/01/2015	\$37.10	\$7.30	\$12.70	\$0.00	\$57.10
	06/01/2016	\$37.85	\$7.30	\$12.70	\$0.00	\$57.85
	12/01/2016	\$38.85	\$7.30	\$12.70	\$0.00	\$58.85

For apprentice rates see "Apprentice- LABORER"

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
ASBESTOS REMOVER - PIPE / MECH. EQUIPT. <i>HEAT & FROST INSULATORS LOCAL 6 (BOSTON)</i>	12/01/2013	\$30.68	\$10.40	\$5.95	\$0.00	\$47.03
	06/01/2014	\$31.58	\$10.40	\$5.95	\$0.00	\$47.93
	12/01/2014	\$32.48	\$10.40	\$5.95	\$0.00	\$48.83
	06/01/2015	\$33.43	\$10.40	\$5.95	\$0.00	\$49.78
	12/01/2015	\$34.38	\$10.40	\$5.95	\$0.00	\$50.73
ASPHALT RAKER <i>LABORERS - ZONE 1</i>	12/01/2013	\$33.60	\$7.30	\$12.70	\$0.00	\$53.60
	06/01/2014	\$34.35	\$7.30	\$12.70	\$0.00	\$54.35
	12/01/2014	\$35.10	\$7.30	\$12.70	\$0.00	\$55.10
	06/01/2015	\$35.85	\$7.30	\$12.70	\$0.00	\$55.85
	12/01/2015	\$36.60	\$7.30	\$12.70	\$0.00	\$56.60
	06/01/2016	\$37.35	\$7.30	\$12.70	\$0.00	\$57.35
	12/01/2016	\$38.35	\$7.30	\$12.70	\$0.00	\$58.35
For apprentice rates see "Apprentice- LABORER"						
ASPHALT/CONCRETE/CRUSHER PLANT-ON SITE <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2013	\$40.49	\$10.00	\$14.18	\$0.00	\$64.67
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
BACKHOE/FRONT-END LOADER <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2013	\$40.49	\$10.00	\$14.18	\$0.00	\$64.67
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
BARCO-TYPE JUMPING TAMPER <i>LABORERS - ZONE 1</i>	12/01/2013	\$33.60	\$7.30	\$12.70	\$0.00	\$53.60
	06/01/2014	\$34.35	\$7.30	\$12.70	\$0.00	\$54.35
	12/01/2014	\$35.10	\$7.30	\$12.70	\$0.00	\$55.10
	06/01/2015	\$35.85	\$7.30	\$12.70	\$0.00	\$55.85
	12/01/2015	\$36.60	\$7.30	\$12.70	\$0.00	\$56.60
	06/01/2016	\$37.35	\$7.30	\$12.70	\$0.00	\$57.35
	12/01/2016	\$38.35	\$7.30	\$12.70	\$0.00	\$58.35
For apprentice rates see "Apprentice- LABORER"						
BLOCK PAVER, RAMMER / CURB SETTER <i>LABORERS - ZONE 1</i>	12/01/2013	\$34.10	\$7.30	\$12.70	\$0.00	\$54.10
	06/01/2014	\$34.85	\$7.30	\$12.70	\$0.00	\$54.85
	12/01/2014	\$35.60	\$7.30	\$12.70	\$0.00	\$55.60
	06/01/2015	\$36.35	\$7.30	\$12.70	\$0.00	\$56.35
	12/01/2015	\$37.10	\$7.30	\$12.70	\$0.00	\$57.10
	06/01/2016	\$37.85	\$7.30	\$12.70	\$0.00	\$57.85
	12/01/2016	\$38.85	\$7.30	\$12.70	\$0.00	\$58.85
For apprentice rates see "Apprentice- LABORER"						
BOILER MAKER <i>BOILERMAKERS LOCAL 29</i>	01/01/2010	\$37.70	\$6.97	\$11.18	\$0.00	\$55.85

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

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

BRICK/STONE/ARTIFICIAL MASONRY (INCL. MASONRY WATERPROOFING)	02/01/2014	\$48.06	\$10.18	\$18.15	\$0.00	\$76.39
BRICKLAYERS LOCAL 3 (QUINCY)	08/01/2014	\$48.96	\$10.18	\$18.22	\$0.00	\$77.36
	02/01/2015	\$49.52	\$10.18	\$18.22	\$0.00	\$77.92
	08/01/2015	\$50.42	\$10.18	\$18.29	\$0.00	\$78.89
	02/01/2016	\$50.99	\$10.18	\$18.29	\$0.00	\$79.46
	08/01/2016	\$51.89	\$10.18	\$18.37	\$0.00	\$80.44
	02/01/2017	\$52.46	\$10.18	\$18.37	\$0.00	\$81.01

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - BRICK/PLASTER/CEMENT MASON - Local 3 Quincy

Effective Date - 02/01/2014

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$24.03	\$10.18	\$18.15	\$0.00	\$52.36
2	60	\$28.84	\$10.18	\$18.15	\$0.00	\$57.17
3	70	\$33.64	\$10.18	\$18.15	\$0.00	\$61.97
4	80	\$38.45	\$10.18	\$18.15	\$0.00	\$66.78
5	90	\$43.25	\$10.18	\$18.15	\$0.00	\$71.58

Effective Date - 08/01/2014

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$24.48	\$10.18	\$18.22	\$0.00	\$52.88
2	60	\$29.38	\$10.18	\$18.22	\$0.00	\$57.78
3	70	\$34.27	\$10.18	\$18.22	\$0.00	\$62.67
4	80	\$39.17	\$10.18	\$18.22	\$0.00	\$67.57
5	90	\$44.06	\$10.18	\$18.22	\$0.00	\$72.46

Notes:

Apprentice to Journeyworker Ratio:1:5

BULLDOZER/GRADER/SCRAPER <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2013	\$40.11	\$10.00	\$14.18	\$0.00	\$64.29
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For apprentice rates see "Apprentice- OPERATING ENGINEERS"

CAISSON & UNDERPINNING BOTTOM MAN <i>LABORERS - FOUNDATION AND MARINE</i>	12/01/2013	\$34.45	\$7.30	\$12.90	\$0.00	\$54.65
	06/01/2014	\$35.20	\$7.30	\$12.90	\$0.00	\$55.40
	12/01/2014	\$35.95	\$7.30	\$12.90	\$0.00	\$56.15
	06/01/2015	\$36.70	\$7.30	\$12.90	\$0.00	\$56.90
	12/01/2015	\$37.45	\$7.30	\$12.90	\$0.00	\$57.65
	06/01/2016	\$38.20	\$7.30	\$12.90	\$0.00	\$58.40
	12/01/2016	\$39.20	\$7.30	\$12.90	\$0.00	\$59.40

For apprentice rates see "Apprentice- LABORER"

CAISSON & UNDERPINNING LABORER <i>LABORERS - FOUNDATION AND MARINE</i>	12/01/2013	\$33.30	\$7.30	\$12.90	\$0.00	\$53.50
	06/01/2014	\$34.05	\$7.30	\$12.90	\$0.00	\$54.25
	12/01/2014	\$34.80	\$7.30	\$12.90	\$0.00	\$55.00
	06/01/2015	\$35.55	\$7.30	\$12.90	\$0.00	\$55.75
	12/01/2015	\$36.30	\$7.30	\$12.90	\$0.00	\$56.50
	06/01/2016	\$37.05	\$7.30	\$12.90	\$0.00	\$57.25
	12/01/2016	\$38.05	\$7.30	\$12.90	\$0.00	\$58.25

For apprentice rates see "Apprentice- LABORER"

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
CAISSON & UNDERPINNING TOP MAN <i>LABORERS - FOUNDATION AND MARINE</i>	12/01/2013	\$33.30	\$7.30	\$12.90	\$0.00	\$53.50
	06/01/2014	\$34.05	\$7.30	\$12.90	\$0.00	\$54.25
	12/01/2014	\$34.80	\$7.30	\$12.90	\$0.00	\$55.00
	06/01/2015	\$35.55	\$7.30	\$12.90	\$0.00	\$55.75
	12/01/2015	\$36.30	\$7.30	\$12.90	\$0.00	\$56.50
	06/01/2016	\$37.05	\$7.30	\$12.90	\$0.00	\$57.25
	12/01/2016	\$38.05	\$7.30	\$12.90	\$0.00	\$58.25
For apprentice rates see "Apprentice- LABORER"						
CARBIDE CORE DRILL OPERATOR <i>LABORERS - ZONE 1</i>	12/01/2013	\$33.60	\$7.30	\$12.70	\$0.00	\$53.60
	06/01/2014	\$34.35	\$7.30	\$12.70	\$0.00	\$54.35
	12/01/2014	\$35.10	\$7.30	\$12.70	\$0.00	\$55.10
	06/01/2015	\$35.85	\$7.30	\$12.70	\$0.00	\$55.85
	12/01/2015	\$36.60	\$7.30	\$12.70	\$0.00	\$56.60
	06/01/2016	\$37.35	\$7.30	\$12.70	\$0.00	\$57.35
	12/01/2016	\$38.35	\$7.30	\$12.70	\$0.00	\$58.35
For apprentice rates see "Apprentice- LABORER"						
CARPENTER <i>CARPENTERS -ZONE 2 (Eastern Massachusetts)</i>	03/01/2014	\$34.78	\$9.80	\$15.91	\$0.00	\$60.49
	09/01/2014	\$35.55	\$9.80	\$15.91	\$0.00	\$61.26
	03/01/2015	\$36.32	\$9.80	\$15.91	\$0.00	\$62.03

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - CARPENTER - Zone 2 Eastern MA

Effective Date - 03/01/2014

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$17.39	\$9.80	\$1.57	\$0.00	\$28.76
2	60	\$20.87	\$9.80	\$1.57	\$0.00	\$32.24
3	70	\$24.35	\$9.80	\$11.20	\$0.00	\$45.35
4	75	\$26.09	\$9.80	\$11.20	\$0.00	\$47.09
5	80	\$27.82	\$9.80	\$12.77	\$0.00	\$50.39
6	80	\$27.82	\$9.80	\$12.77	\$0.00	\$50.39
7	90	\$31.30	\$9.80	\$14.34	\$0.00	\$55.44
8	90	\$31.30	\$9.80	\$14.34	\$0.00	\$55.44

Effective Date - 09/01/2014

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$17.78	\$9.80	\$1.57	\$0.00	\$29.15
2	60	\$21.33	\$9.80	\$1.57	\$0.00	\$32.70
3	70	\$24.89	\$9.80	\$11.20	\$0.00	\$45.89
4	75	\$26.66	\$9.80	\$11.20	\$0.00	\$47.66
5	80	\$28.44	\$9.80	\$12.77	\$0.00	\$51.01
6	80	\$28.44	\$9.80	\$12.77	\$0.00	\$51.01
7	90	\$32.00	\$9.80	\$14.34	\$0.00	\$56.14
8	90	\$32.00	\$9.80	\$14.34	\$0.00	\$56.14

Notes:

Apprentice to Journeyworker Ratio:1:5

CEMENT MASONRY/PLASTERING	01/01/2014	\$43.60	\$10.90	\$18.71	\$1.30	\$74.51
BRICKLAYERS LOCAL 3 (QUINCY)	07/01/2014	\$43.77	\$10.90	\$18.71	\$1.30	\$74.68
	01/01/2015	\$44.69	\$10.90	\$18.71	\$1.30	\$75.60
	07/01/2015	\$45.29	\$10.90	\$18.71	\$1.30	\$76.20
	01/01/2016	\$46.21	\$10.90	\$18.71	\$1.30	\$77.12

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - CEMENT MASONRY/PLASTERING - Eastern Mass (Quincy)

Effective Date - 01/01/2014

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$21.80	\$10.90	\$12.21	\$1.30	\$46.21
2	60	\$26.16	\$10.90	\$13.71	\$1.30	\$52.07
3	65	\$28.34	\$10.90	\$14.71	\$1.30	\$55.25
4	70	\$30.52	\$10.90	\$15.71	\$1.30	\$58.43
5	75	\$32.70	\$10.90	\$16.71	\$1.30	\$61.61
6	80	\$34.88	\$10.90	\$17.71	\$1.30	\$64.79
7	90	\$39.24	\$10.90	\$18.71	\$1.30	\$70.15

Effective Date - 07/01/2014

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$21.89	\$10.90	\$12.21	\$1.30	\$46.30
2	60	\$26.26	\$10.90	\$13.71	\$1.30	\$52.17
3	65	\$28.45	\$10.90	\$14.71	\$1.30	\$55.36
4	70	\$30.64	\$10.90	\$15.71	\$1.30	\$58.55
5	75	\$32.83	\$10.90	\$16.71	\$1.30	\$61.74
6	80	\$35.02	\$10.90	\$17.71	\$1.30	\$64.93
7	90	\$39.39	\$10.90	\$18.71	\$1.30	\$70.30

Notes:

Steps 3,4 are 500 hrs. All other steps are 1,000 hrs.

Apprentice to Journeyworker Ratio:1:3

CHAIN SAW OPERATOR LABORERS - ZONE 1	12/01/2013	\$33.60	\$7.30	\$12.70	\$0.00	\$53.60
	06/01/2014	\$34.35	\$7.30	\$12.70	\$0.00	\$54.35
	12/01/2014	\$35.10	\$7.30	\$12.70	\$0.00	\$55.10
	06/01/2015	\$35.85	\$7.30	\$12.70	\$0.00	\$55.85
	12/01/2015	\$36.60	\$7.30	\$12.70	\$0.00	\$56.60
	06/01/2016	\$37.35	\$7.30	\$12.70	\$0.00	\$57.35
	12/01/2016	\$38.35	\$7.30	\$12.70	\$0.00	\$58.35

For apprentice rates see "Apprentice- LABORER"

CLAM SHELLS/SLURRY BUCKETS/HEADING MACHINES OPERATING ENGINEERS LOCAL 4	12/01/2013	\$41.49	\$10.00	\$14.18	\$0.00	\$65.67
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For apprentice rates see "Apprentice- OPERATING ENGINEERS"

COMPRESSOR OPERATOR OPERATING ENGINEERS LOCAL 4	12/01/2013	\$28.11	\$10.00	\$14.18	\$0.00	\$52.29
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For apprentice rates see "Apprentice- OPERATING ENGINEERS"

DELEADER (BRIDGE) PAINTERS LOCAL 35 - ZONE 2	01/01/2014	\$45.91	\$7.85	\$16.10	\$0.00	\$69.86
	07/01/2014	\$46.76	\$7.85	\$16.10	\$0.00	\$70.71
	01/01/2015	\$47.66	\$7.85	\$16.10	\$0.00	\$71.61
	07/01/2015	\$48.56	\$7.85	\$16.10	\$0.00	\$72.51
	01/01/2016	\$49.51	\$7.85	\$16.10	\$0.00	\$73.46
	07/01/2016	\$50.46	\$7.85	\$16.10	\$0.00	\$74.41
	01/01/2017	\$51.41	\$7.85	\$16.10	\$0.00	\$75.36

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - PAINTER Local 35 - BRIDGES/TANKS

Effective Date - 01/01/2014

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$22.96	\$7.85	\$0.00	\$0.00	\$30.81
2	55	\$25.25	\$7.85	\$3.66	\$0.00	\$36.76
3	60	\$27.55	\$7.85	\$3.99	\$0.00	\$39.39
4	65	\$29.84	\$7.85	\$4.32	\$0.00	\$42.01
5	70	\$32.14	\$7.85	\$14.11	\$0.00	\$54.10
6	75	\$34.43	\$7.85	\$14.44	\$0.00	\$56.72
7	80	\$36.73	\$7.85	\$14.77	\$0.00	\$59.35
8	90	\$41.32	\$7.85	\$15.44	\$0.00	\$64.61

Effective Date - 07/01/2014

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$23.38	\$7.85	\$0.00	\$0.00	\$31.23
2	55	\$25.72	\$7.85	\$3.66	\$0.00	\$37.23
3	60	\$28.06	\$7.85	\$3.99	\$0.00	\$39.90
4	65	\$30.39	\$7.85	\$4.32	\$0.00	\$42.56
5	70	\$32.73	\$7.85	\$14.11	\$0.00	\$54.69
6	75	\$35.07	\$7.85	\$14.44	\$0.00	\$57.36
7	80	\$37.41	\$7.85	\$14.77	\$0.00	\$60.03
8	90	\$42.08	\$7.85	\$15.44	\$0.00	\$65.37

Notes:

Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

DEMO: ADZEMAN <i>LABORERS - ZONE 1</i>	12/01/2013	\$33.50	\$7.30	\$12.70	\$0.00	\$53.50
	06/01/2014	\$34.25	\$7.30	\$12.70	\$0.00	\$54.25
	12/01/2014	\$35.00	\$7.30	\$12.70	\$0.00	\$55.00
	06/01/2015	\$35.75	\$7.30	\$12.70	\$0.00	\$55.75
	12/01/2015	\$36.50	\$7.30	\$12.70	\$0.00	\$56.50
For apprentice rates see "Apprentice- LABORER"						
DEMO: BACKHOE/LOADER/HAMMER OPERATOR <i>LABORERS - ZONE 1</i>	12/01/2013	\$34.50	\$7.30	\$12.70	\$0.00	\$54.50
	06/01/2014	\$35.25	\$7.30	\$12.70	\$0.00	\$55.25
	12/01/2014	\$36.00	\$7.30	\$12.70	\$0.00	\$56.00
	06/01/2015	\$36.75	\$7.30	\$12.70	\$0.00	\$56.75
	12/01/2015	\$37.50	\$7.30	\$12.70	\$0.00	\$57.50
For apprentice rates see "Apprentice- LABORER"						
DEMO: BURNERS <i>LABORERS - ZONE 1</i>	12/01/2013	\$34.25	\$7.30	\$12.70	\$0.00	\$54.25
	06/01/2014	\$35.00	\$7.30	\$12.70	\$0.00	\$55.00
	12/01/2014	\$35.75	\$7.30	\$12.70	\$0.00	\$55.75
	06/01/2015	\$36.50	\$7.30	\$12.70	\$0.00	\$56.50
	12/01/2015	\$37.25	\$7.30	\$12.70	\$0.00	\$57.25
For apprentice rates see "Apprentice- LABORER"						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
DEMO: CONCRETE CUTTER/SAWYER <i>LABORERS - ZONE 1</i>	12/01/2013	\$34.50	\$7.30	\$12.70	\$0.00	\$54.50
	06/01/2014	\$35.25	\$7.30	\$12.70	\$0.00	\$55.25
	12/01/2014	\$36.00	\$7.30	\$12.70	\$0.00	\$56.00
	06/01/2015	\$36.75	\$7.30	\$12.70	\$0.00	\$56.75
	12/01/2015	\$37.50	\$7.30	\$12.70	\$0.00	\$57.50
For apprentice rates see "Apprentice- LABORER"						
DEMO: JACKHAMMER OPERATOR <i>LABORERS - ZONE 1</i>	12/01/2013	\$34.25	\$7.30	\$12.70	\$0.00	\$54.25
	06/01/2014	\$35.00	\$7.30	\$12.70	\$0.00	\$55.00
	12/01/2014	\$35.75	\$7.30	\$12.70	\$0.00	\$55.75
	06/01/2015	\$36.50	\$7.30	\$12.70	\$0.00	\$56.50
	12/01/2015	\$37.25	\$7.30	\$12.70	\$0.00	\$57.25
For apprentice rates see "Apprentice- LABORER"						
DEMO: WRECKING LABORER <i>LABORERS - ZONE 1</i>	12/01/2013	\$33.50	\$7.30	\$12.70	\$0.00	\$53.50
	06/01/2014	\$34.25	\$7.30	\$12.70	\$0.00	\$54.25
	12/01/2014	\$35.00	\$7.30	\$12.70	\$0.00	\$55.00
	06/01/2015	\$35.75	\$7.30	\$12.70	\$0.00	\$55.75
	12/01/2015	\$36.50	\$7.30	\$12.70	\$0.00	\$56.50
For apprentice rates see "Apprentice- LABORER"						
DIRECTIONAL DRILL MACHINE OPERATOR <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2013	\$40.11	\$10.00	\$14.18	\$0.00	\$64.29
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
DIVER <i>PILE DRIVER LOCAL 56 (ZONE 1)</i>	08/01/2013	\$56.14	\$9.80	\$18.17	\$0.00	\$84.11
	08/01/2014	\$58.24	\$9.80	\$18.17	\$0.00	\$86.21
	08/01/2015	\$60.34	\$9.80	\$18.17	\$0.00	\$88.31
DIVER TENDER <i>PILE DRIVER LOCAL 56 (ZONE 1)</i>	08/01/2013	\$40.10	\$9.80	\$18.17	\$0.00	\$68.07
	08/01/2014	\$41.60	\$9.80	\$18.17	\$0.00	\$69.57
	08/01/2015	\$43.10	\$9.80	\$18.17	\$0.00	\$71.07
DIVER TENDER (EFFLUENT) <i>PILE DRIVER LOCAL 56 (ZONE 1)</i>	08/01/2013	\$60.15	\$9.80	\$18.17	\$0.00	\$88.12
	08/01/2014	\$62.40	\$9.80	\$18.17	\$0.00	\$90.37
	08/01/2015	\$64.65	\$9.80	\$18.17	\$0.00	\$92.62
DIVER/SLURRY (EFFLUENT) <i>PILE DRIVER LOCAL 56 (ZONE 1)</i>	08/01/2013	\$84.21	\$9.80	\$18.17	\$0.00	\$112.18
	08/01/2014	\$87.36	\$9.80	\$18.17	\$0.00	\$115.33
	08/01/2015	\$90.51	\$9.80	\$18.17	\$0.00	\$118.48
DRAWBRIDGE OPERATOR (Construction) <i>ELECTRICIANS LOCAL 103</i>	03/01/2014	\$44.45	\$13.00	\$14.68	\$0.00	\$72.13
	09/01/2014	\$45.12	\$13.00	\$14.70	\$0.00	\$72.82
	03/01/2015	\$45.84	\$13.00	\$14.72	\$0.00	\$73.56
	09/01/2015	\$46.80	\$13.00	\$14.75	\$0.00	\$74.55
	03/01/2016	\$47.75	\$13.00	\$14.78	\$0.00	\$75.53
For apprentice rates see "Apprentice- ELECTRICIAN"						
ELECTRICIAN <i>ELECTRICIANS LOCAL 103</i>	03/01/2014	\$44.45	\$13.00	\$14.68	\$0.00	\$72.13
	09/01/2014	\$45.12	\$13.00	\$14.70	\$0.00	\$72.82
	03/01/2015	\$45.84	\$13.00	\$14.72	\$0.00	\$73.56
	09/01/2015	\$46.80	\$13.00	\$14.75	\$0.00	\$74.55
	03/01/2016	\$47.75	\$13.00	\$14.78	\$0.00	\$75.53

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - *ELECTRICIAN - Local 103*

Effective Date - 03/01/2014

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$17.78	\$13.00	\$0.53	\$0.00	\$31.31
2	40	\$17.78	\$13.00	\$0.53	\$0.00	\$31.31
3	45	\$20.00	\$13.00	\$11.04	\$0.00	\$44.04
4	45	\$20.00	\$13.00	\$11.04	\$0.00	\$44.04
5	50	\$22.23	\$13.00	\$11.37	\$0.00	\$46.60
6	55	\$24.45	\$13.00	\$11.70	\$0.00	\$49.15
7	60	\$26.67	\$13.00	\$12.03	\$0.00	\$51.70
8	65	\$28.89	\$13.00	\$12.37	\$0.00	\$54.26
9	70	\$31.12	\$13.00	\$12.69	\$0.00	\$56.81
10	75	\$33.34	\$13.00	\$13.03	\$0.00	\$59.37

Effective Date - 09/01/2014

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$18.05	\$13.00	\$0.54	\$0.00	\$31.59
2	40	\$18.05	\$13.00	\$0.54	\$0.00	\$31.59
3	45	\$20.30	\$13.00	\$11.05	\$0.00	\$44.35
4	45	\$20.30	\$13.00	\$11.05	\$0.00	\$44.35
5	50	\$22.56	\$13.00	\$11.38	\$0.00	\$46.94
6	55	\$24.82	\$13.00	\$11.71	\$0.00	\$49.53
7	60	\$27.07	\$13.00	\$12.04	\$0.00	\$52.11
8	65	\$29.33	\$13.00	\$12.38	\$0.00	\$54.71
9	70	\$31.58	\$13.00	\$12.71	\$0.00	\$57.29
10	75	\$33.84	\$13.00	\$13.05	\$0.00	\$59.89

Notes :
App Prior 1/1/03; 30/35/40/45/50/55/65/70/75/80

Apprentice to Journeyworker Ratio:2:3***

ELEVATOR CONSTRUCTOR ELEVATOR CONSTRUCTORS LOCAL 4	01/01/2012	\$52.45	\$8.78	\$6.96	\$0.00	\$68.19
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Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

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 <i>ELEVATOR CONSTRUCTORS LOCAL 4</i>	01/01/2012	\$38.59	\$8.78	\$6.96	\$0.00	\$54.33
For apprentice rates see "Apprentice - ELEVATOR CONSTRUCTOR"						
FENCE & GUARD RAIL ERECTOR <i>LABORERS - ZONE 1</i>	12/01/2013	\$33.60	\$7.30	\$12.70	\$0.00	\$53.60
	06/01/2014	\$34.35	\$7.30	\$12.70	\$0.00	\$54.35
	12/01/2014	\$35.10	\$7.30	\$12.70	\$0.00	\$55.10
	06/01/2015	\$35.85	\$7.30	\$12.70	\$0.00	\$55.85
	12/01/2015	\$36.60	\$7.30	\$12.70	\$0.00	\$56.60
	06/01/2016	\$37.35	\$7.30	\$12.70	\$0.00	\$57.35
	12/01/2016	\$38.35	\$7.30	\$12.70	\$0.00	\$58.35
For apprentice rates see "Apprentice- LABORER"						
FIELD ENG.INST.PERSON-BLDG,SITE,HVY/HWY <i>OPERATING ENGINEERS LOCAL 4</i>	11/01/2013	\$38.73	\$10.00	\$13.55	\$0.00	\$62.28
	05/01/2014	\$38.87	\$10.00	\$14.18	\$0.00	\$63.05
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
FIELD ENG.PARTY CHIEF-BLDG,SITE,HVY/HWY <i>OPERATING ENGINEERS LOCAL 4</i>	11/01/2013	\$40.15	\$10.00	\$13.55	\$0.00	\$63.70
	05/01/2014	\$40.29	\$10.00	\$14.18	\$0.00	\$64.47
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
FIELD ENG.ROD PERSON-BLDG,SITE,HVY/HWY <i>OPERATING ENGINEERS LOCAL 4</i>	11/01/2013	\$21.10	\$10.00	\$13.55	\$0.00	\$44.65
	05/01/2014	\$20.92	\$10.00	\$14.18	\$0.00	\$45.10
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
FIRE ALARM INSTALLER <i>ELECTRICIANS LOCAL 103</i>	03/01/2014	\$44.45	\$13.00	\$14.68	\$0.00	\$72.13
	09/01/2014	\$45.12	\$13.00	\$14.70	\$0.00	\$72.82
	03/01/2015	\$45.84	\$13.00	\$14.72	\$0.00	\$73.56
	09/01/2015	\$46.80	\$13.00	\$14.75	\$0.00	\$74.55
	03/01/2016	\$47.75	\$13.00	\$14.78	\$0.00	\$75.53
For apprentice rates see "Apprentice- ELECTRICIAN"						
FIRE ALARM REPAIR / MAINTENANCE <i>LOCAL 103</i> / COMMISSIONING <i>ELECTRICIANS</i>	03/01/2014	\$33.44	\$13.00	\$13.03	\$0.00	\$59.47
	09/01/2014	\$33.84	\$13.00	\$13.05	\$0.00	\$59.89
	03/01/2015	\$34.38	\$13.00	\$13.06	\$0.00	\$60.44
	09/01/2015	\$35.10	\$13.00	\$13.08	\$0.00	\$61.18
	03/01/2016	\$35.81	\$13.00	\$13.10	\$0.00	\$61.91
For apprentice rates see "Apprentice- TELECOMMUNICATIONS TECHNICIAN"						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
FIREMAN (ASST. ENGINEER) OPERATING ENGINEERS LOCAL 4	12/01/2013	\$33.76	\$10.00	\$14.18	\$0.00	\$57.94
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
FLAGGER & SIGNALER LABORERS - ZONE 1	12/01/2013	\$20.50	\$7.30	\$12.70	\$0.00	\$40.50
	06/01/2014	\$20.50	\$7.30	\$12.70	\$0.00	\$40.50
	12/01/2014	\$20.50	\$7.30	\$12.70	\$0.00	\$40.50
	06/01/2015	\$20.50	\$7.30	\$12.70	\$0.00	\$40.50
	12/01/2015	\$20.50	\$7.30	\$12.70	\$0.00	\$40.50
	06/01/2016	\$20.50	\$7.30	\$12.70	\$0.00	\$40.50
	12/01/2016	\$20.50	\$7.30	\$12.70	\$0.00	\$40.50
For apprentice rates see "Apprentice- LABORER"						
FLOORCOVERER FLOORCOVERERS LOCAL 2168 ZONE 1	03/01/2014	\$39.87	\$9.80	\$16.96	\$0.00	\$66.63

Apprentice - FLOORCOVERER - Local 2168 Zone 1

Effective Date - 03/01/2014

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$19.94	\$9.80	\$1.79	\$0.00	\$31.53
2	55	\$21.93	\$9.80	\$1.79	\$0.00	\$33.52
3	60	\$23.92	\$9.80	\$11.59	\$0.00	\$45.31
4	65	\$25.92	\$9.80	\$11.59	\$0.00	\$47.31
5	70	\$27.91	\$9.80	\$13.38	\$0.00	\$51.09
6	75	\$29.90	\$9.80	\$13.38	\$0.00	\$53.08
7	80	\$31.90	\$9.80	\$15.17	\$0.00	\$56.87
8	85	\$33.89	\$9.80	\$15.17	\$0.00	\$58.86

Notes:

Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

FORK LIFT/CHERRY PICKER OPERATING ENGINEERS LOCAL 4	12/01/2013	\$40.49	\$10.00	\$14.18	\$0.00	\$64.67
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
GENERATOR/LIGHTING PLANT/HEATERS OPERATING ENGINEERS LOCAL 4	12/01/2013	\$28.11	\$10.00	\$14.18	\$0.00	\$52.29
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
GLAZIER (GLASS PLANK/AIR BARRIER/INTERIOR SYSTEMS) GLAZIERS LOCAL 35 (ZONE 2)	01/01/2014	\$35.41	\$7.85	\$16.10	\$0.00	\$59.36
	07/01/2014	\$36.26	\$7.85	\$16.10	\$0.00	\$60.21
	01/01/2015	\$37.16	\$7.85	\$16.10	\$0.00	\$61.11
	07/01/2015	\$38.06	\$7.85	\$16.10	\$0.00	\$62.01
	01/01/2016	\$39.01	\$7.85	\$16.10	\$0.00	\$62.96
	07/01/2016	\$39.96	\$7.85	\$16.10	\$0.00	\$63.91
	01/01/2017	\$40.91	\$7.85	\$16.10	\$0.00	\$64.86

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - GLAZIER - Local 35 Zone 2

Effective Date - 01/01/2014

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$17.71	\$7.85	\$0.00	\$0.00	\$25.56
2	55	\$19.48	\$7.85	\$3.66	\$0.00	\$30.99
3	60	\$21.25	\$7.85	\$3.99	\$0.00	\$33.09
4	65	\$23.02	\$7.85	\$4.32	\$0.00	\$35.19
5	70	\$24.79	\$7.85	\$14.11	\$0.00	\$46.75
6	75	\$26.56	\$7.85	\$14.44	\$0.00	\$48.85
7	80	\$28.33	\$7.85	\$14.77	\$0.00	\$50.95
8	90	\$31.87	\$7.85	\$15.44	\$0.00	\$55.16

Effective Date - 07/01/2014

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$18.13	\$7.85	\$0.00	\$0.00	\$25.98
2	55	\$19.94	\$7.85	\$3.66	\$0.00	\$31.45
3	60	\$21.76	\$7.85	\$3.99	\$0.00	\$33.60
4	65	\$23.57	\$7.85	\$4.32	\$0.00	\$35.74
5	70	\$25.38	\$7.85	\$14.11	\$0.00	\$47.34
6	75	\$27.20	\$7.85	\$14.44	\$0.00	\$49.49
7	80	\$29.01	\$7.85	\$14.77	\$0.00	\$51.63
8	90	\$32.63	\$7.85	\$15.44	\$0.00	\$55.92

Notes:

Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

HOISTING ENGINEER/CRANES/GRADALLS OPERATING ENGINEERS LOCAL 4	12/01/2013	\$40.49	\$10.00	\$14.18	\$0.00	\$64.67
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Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - OPERATING ENGINEERS - Local 4

Effective Date - 12/01/2013

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	55	\$22.27	\$10.00	\$0.00	\$0.00	\$32.27
2	60	\$24.29	\$10.00	\$14.18	\$0.00	\$48.47
3	65	\$26.32	\$10.00	\$14.18	\$0.00	\$50.50
4	70	\$28.34	\$10.00	\$14.18	\$0.00	\$52.52
5	75	\$30.37	\$10.00	\$14.18	\$0.00	\$54.55
6	80	\$32.39	\$10.00	\$14.18	\$0.00	\$56.57
7	85	\$34.42	\$10.00	\$14.18	\$0.00	\$58.60
8	90	\$36.44	\$10.00	\$14.18	\$0.00	\$60.62

Notes:

Apprentice to Journeyworker Ratio:1:6

HVAC (DUCTWORK) SHEETMETAL WORKERS LOCAL 17 - A	02/01/2014	\$42.76	\$9.82	\$19.74	\$2.17	\$74.49
	08/01/2014	\$43.61	\$9.82	\$19.74	\$2.17	\$75.34
	02/01/2015	\$44.51	\$9.82	\$19.74	\$2.17	\$76.24
	08/01/2015	\$45.51	\$9.82	\$19.74	\$2.17	\$77.24
	02/01/2016	\$46.51	\$9.82	\$19.74	\$2.17	\$78.24
	08/01/2016	\$47.66	\$9.82	\$19.74	\$2.17	\$79.39
	02/01/2017	\$48.76	\$9.82	\$19.74	\$2.17	\$80.49
	08/01/2017	\$49.86	\$9.82	\$19.74	\$2.17	\$81.59
	02/01/2018	\$51.01	\$9.82	\$19.74	\$2.17	\$82.74

For apprentice rates see "Apprentice- SHEET METAL WORKER"

HVAC (ELECTRICAL CONTROLS) ELECTRICIANS LOCAL 103	03/01/2014	\$44.45	\$13.00	\$14.68	\$0.00	\$72.13
	09/01/2014	\$45.12	\$13.00	\$14.70	\$0.00	\$72.82
	03/01/2015	\$45.84	\$13.00	\$14.72	\$0.00	\$73.56
	09/01/2015	\$46.80	\$13.00	\$14.75	\$0.00	\$74.55
	03/01/2016	\$47.75	\$13.00	\$14.78	\$0.00	\$75.53

For apprentice rates see "Apprentice- ELECTRICIAN"

HVAC (TESTING AND BALANCING - AIR) SHEETMETAL WORKERS LOCAL 17 - A	02/01/2014	\$42.76	\$9.82	\$19.74	\$2.17	\$74.49
	08/01/2014	\$43.61	\$9.82	\$19.74	\$2.17	\$75.34
	02/01/2015	\$44.51	\$9.82	\$19.74	\$2.17	\$76.24
	08/01/2015	\$45.51	\$9.82	\$19.74	\$2.17	\$77.24
	02/01/2016	\$46.51	\$9.82	\$19.74	\$2.17	\$78.24
	08/01/2016	\$47.66	\$9.82	\$19.74	\$2.17	\$79.39
	02/01/2017	\$48.76	\$9.82	\$19.74	\$2.17	\$80.49
	08/01/2017	\$49.86	\$9.82	\$19.74	\$2.17	\$81.59
	02/01/2018	\$51.01	\$9.82	\$19.74	\$2.17	\$82.74

For apprentice rates see "Apprentice- SHEET METAL WORKER"

HVAC (TESTING AND BALANCING -WATER) PIPEFITTERS LOCAL 537	03/01/2013	\$49.34	\$8.75	\$14.39	\$0.00	\$72.48
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For apprentice rates see "Apprentice- PIPEFITTER" or "PLUMBER/PIPEFITTER"

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
HVAC MECHANIC PIPEFITTERS LOCAL 537	03/01/2013	\$49.34	\$8.75	\$14.39	\$0.00	\$72.48
For apprentice rates see "Apprentice- PIPEFITTER" or "PLUMBER/PIPEFITTER"						
HYDRAULIC DRILLS LABORERS - ZONE 1	12/01/2013	\$34.10	\$7.30	\$12.70	\$0.00	\$54.10
	06/01/2014	\$34.85	\$7.30	\$12.70	\$0.00	\$54.85
	12/01/2014	\$35.60	\$7.30	\$12.70	\$0.00	\$55.60
	06/01/2015	\$36.35	\$7.30	\$12.70	\$0.00	\$56.35
	12/01/2015	\$37.10	\$7.30	\$12.70	\$0.00	\$57.10
	06/01/2016	\$37.85	\$7.30	\$12.70	\$0.00	\$57.85
	12/01/2016	\$38.85	\$7.30	\$12.70	\$0.00	\$58.85
For apprentice rates see "Apprentice- LABORER"						
INSULATOR (PIPES & TANKS) HEAT & FROST INSULATORS LOCAL 6 (BOSTON)	09/01/2013	\$42.11	\$10.95	\$12.10	\$0.00	\$65.16
	09/01/2014	\$44.11	\$10.95	\$12.10	\$0.00	\$67.16

Apprentice - ASBESTOS INSULATOR (Pipes & Tanks) - Local 6 Boston

Effective Date - 09/01/2013

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$21.06	\$10.95	\$9.00	\$0.00	\$41.01
2	60	\$25.27	\$10.95	\$9.62	\$0.00	\$45.84
3	70	\$29.48	\$10.95	\$10.24	\$0.00	\$50.67
4	80	\$33.69	\$10.95	\$10.86	\$0.00	\$55.50

Effective Date - 09/01/2014

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$22.06	\$10.95	\$9.00	\$0.00	\$42.01
2	60	\$26.47	\$10.95	\$9.62	\$0.00	\$47.04
3	70	\$30.88	\$10.95	\$10.24	\$0.00	\$52.07
4	80	\$35.29	\$10.95	\$10.86	\$0.00	\$57.10

Notes:

Steps are 1 year

Apprentice to Journeyworker Ratio:1:4

IRONWORKER/WELDER IRONWORKERS LOCAL 7 (BOSTON AREA)	03/16/2014	\$41.19	\$7.70	\$19.25	\$0.00	\$68.14
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Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - IRONWORKER - Local 7 Boston

Effective Date - 03/16/2014

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$24.71	\$7.70	\$19.25	\$0.00	\$51.66
2	70	\$28.83	\$7.70	\$19.25	\$0.00	\$55.78
3	75	\$30.89	\$7.70	\$19.25	\$0.00	\$57.84
4	80	\$32.95	\$7.70	\$19.25	\$0.00	\$59.90
5	85	\$35.01	\$7.70	\$19.25	\$0.00	\$61.96
6	90	\$37.07	\$7.70	\$19.25	\$0.00	\$64.02

Notes:

** Structural 1:6; Ornamental 1:4

Apprentice to Journeyworker Ratio:**

JACKHAMMER & PAVING BREAKER OPERATOR LABORERS - ZONE 1	12/01/2013	\$33.60	\$7.30	\$12.70	\$0.00	\$53.60
	06/01/2014	\$34.35	\$7.30	\$12.70	\$0.00	\$54.35
	12/01/2014	\$35.10	\$7.30	\$12.70	\$0.00	\$55.10
	06/01/2015	\$35.85	\$7.30	\$12.70	\$0.00	\$55.85
	12/01/2015	\$36.60	\$7.30	\$12.70	\$0.00	\$56.60
	06/01/2016	\$37.35	\$7.30	\$12.70	\$0.00	\$57.35
	12/01/2016	\$38.35	\$7.30	\$12.70	\$0.00	\$58.35

For apprentice rates see "Apprentice- LABORER"

LABORER LABORERS - ZONE 1	12/01/2013	\$33.35	\$7.30	\$12.70	\$0.00	\$53.35
	06/01/2014	\$34.10	\$7.30	\$12.70	\$0.00	\$54.10
	12/01/2014	\$34.85	\$7.30	\$12.70	\$0.00	\$54.85
	06/01/2015	\$35.60	\$7.30	\$12.70	\$0.00	\$55.60
	12/01/2015	\$36.35	\$7.30	\$12.70	\$0.00	\$56.35
	06/01/2016	\$37.10	\$7.30	\$12.70	\$0.00	\$57.10
	12/01/2016	\$38.10	\$7.30	\$12.70	\$0.00	\$58.10

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - LABORER - Zone 1

Effective Date - 12/01/2013

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$20.01	\$7.30	\$12.70	\$0.00	\$40.01
2	70	\$23.35	\$7.30	\$12.70	\$0.00	\$43.35
3	80	\$26.68	\$7.30	\$12.70	\$0.00	\$46.68
4	90	\$30.02	\$7.30	\$12.70	\$0.00	\$50.02

Effective Date - 06/01/2014

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$20.46	\$7.30	\$12.70	\$0.00	\$40.46
2	70	\$23.87	\$7.30	\$12.70	\$0.00	\$43.87
3	80	\$27.28	\$7.30	\$12.70	\$0.00	\$47.28
4	90	\$30.69	\$7.30	\$12.70	\$0.00	\$50.69

Notes:

Apprentice to Journeyworker Ratio:1:5

LABORER: CARPENTER TENDER <i>LABORERS - ZONE 1</i>	12/01/2013	\$33.35	\$7.30	\$12.70	\$0.00	\$53.35
	06/01/2014	\$34.10	\$7.30	\$12.70	\$0.00	\$54.10
	12/01/2014	\$34.85	\$7.30	\$12.70	\$0.00	\$54.85
	06/01/2015	\$35.60	\$7.30	\$12.70	\$0.00	\$55.60
	12/01/2015	\$36.35	\$7.30	\$12.70	\$0.00	\$56.35
	06/01/2016	\$37.10	\$7.30	\$12.70	\$0.00	\$57.10
	12/01/2016	\$38.10	\$7.30	\$12.70	\$0.00	\$58.10

For apprentice rates see "Apprentice- LABORER"

LABORER: CEMENT FINISHER TENDER <i>LABORERS - ZONE 1</i>	12/01/2013	\$33.35	\$7.30	\$12.70	\$0.00	\$53.35
	06/01/2014	\$34.10	\$7.30	\$12.70	\$0.00	\$54.10
	12/01/2014	\$34.85	\$7.30	\$12.70	\$0.00	\$54.85
	06/01/2015	\$35.60	\$7.30	\$12.70	\$0.00	\$55.60
	12/01/2015	\$36.35	\$7.30	\$12.70	\$0.00	\$56.35
	06/01/2016	\$37.10	\$7.30	\$12.70	\$0.00	\$57.10
	12/01/2016	\$38.10	\$7.30	\$12.70	\$0.00	\$58.10

For apprentice rates see "Apprentice- LABORER"

LABORER: HAZARDOUS WASTE/ASBESTOS REMOVER <i>LABORERS - ZONE 1</i>	12/01/2013	\$33.50	\$7.30	\$12.70	\$0.00	\$53.50
	06/01/2014	\$34.25	\$7.30	\$12.70	\$0.00	\$54.25
	12/01/2014	\$35.00	\$7.30	\$12.70	\$0.00	\$55.00
	06/01/2015	\$35.75	\$7.30	\$12.70	\$0.00	\$55.75
	12/01/2015	\$36.50	\$7.30	\$12.70	\$0.00	\$56.50

For apprentice rates see "Apprentice- LABORER"

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
LABORER: MASON TENDER <i>LABORERS - ZONE 1</i>	12/01/2013	\$33.60	\$7.30	\$12.70	\$0.00	\$53.60
	06/01/2014	\$34.35	\$7.30	\$12.70	\$0.00	\$54.35
	12/01/2014	\$35.10	\$7.30	\$12.70	\$0.00	\$55.10
	06/01/2015	\$35.85	\$7.30	\$12.70	\$0.00	\$55.85
	12/01/2015	\$36.60	\$7.30	\$12.70	\$0.00	\$56.60
	06/01/2016	\$37.35	\$7.30	\$12.70	\$0.00	\$57.35
	12/01/2016	\$38.35	\$7.30	\$12.70	\$0.00	\$58.35
For apprentice rates see "Apprentice- LABORER"						
LABORER: MULTI-TRADE TENDER <i>LABORERS - ZONE 1</i>	12/01/2013	\$33.35	\$7.30	\$12.70	\$0.00	\$53.35
	06/01/2014	\$34.10	\$7.30	\$12.70	\$0.00	\$54.10
	12/01/2014	\$34.85	\$7.30	\$12.70	\$0.00	\$54.85
	06/01/2015	\$35.60	\$7.30	\$12.70	\$0.00	\$55.60
	12/01/2015	\$36.35	\$7.30	\$12.70	\$0.00	\$56.35
	06/01/2016	\$37.10	\$7.30	\$12.70	\$0.00	\$57.10
	12/01/2016	\$38.10	\$7.30	\$12.70	\$0.00	\$58.10
For apprentice rates see "Apprentice- LABORER"						
LABORER: TREE REMOVER <i>LABORERS - ZONE 1</i>	12/01/2013	\$33.35	\$7.30	\$12.70	\$0.00	\$53.35
	06/01/2014	\$34.10	\$7.30	\$12.70	\$0.00	\$54.10
	12/01/2014	\$34.85	\$7.30	\$12.70	\$0.00	\$54.85
	06/01/2015	\$35.60	\$7.30	\$12.70	\$0.00	\$55.60
	12/01/2015	\$36.35	\$7.30	\$12.70	\$0.00	\$56.35
	06/01/2016	\$37.10	\$7.30	\$12.70	\$0.00	\$57.10
	12/01/2016	\$38.10	\$7.30	\$12.70	\$0.00	\$58.10
This classification applies to all tree work associated with the removal of standing trees, and trimming and removal of branches and limbs when the work is not done for a utility company for the purpose of operation, maintenance or repair of utility company equipment. For apprentice rates see "Apprentice- LABORER"						
LASER BEAM OPERATOR <i>LABORERS - ZONE 1</i>	12/01/2013	\$33.60	\$7.30	\$12.70	\$0.00	\$53.60
	06/01/2014	\$34.35	\$7.30	\$12.70	\$0.00	\$54.35
	12/01/2014	\$35.10	\$7.30	\$12.70	\$0.00	\$55.10
	06/01/2015	\$35.85	\$7.30	\$12.70	\$0.00	\$55.85
	12/01/2015	\$36.60	\$7.30	\$12.70	\$0.00	\$56.60
	06/01/2016	\$37.35	\$7.30	\$12.70	\$0.00	\$57.35
	12/01/2016	\$38.35	\$7.30	\$12.70	\$0.00	\$58.35
For apprentice rates see "Apprentice- LABORER"						
MARBLE & TILE FINISHERS <i>BRICKLAYERS LOCAL 3 - MARBLE & TILE</i>	02/01/2014	\$36.66	\$10.18	\$16.83	\$0.00	\$63.67
	08/01/2014	\$37.37	\$10.18	\$16.90	\$0.00	\$64.45
	02/01/2015	\$37.82	\$10.18	\$16.90	\$0.00	\$64.90
	08/01/2015	\$38.53	\$10.18	\$16.97	\$0.00	\$65.68
	02/01/2016	\$38.98	\$10.18	\$16.97	\$0.00	\$66.13
	08/01/2016	\$39.68	\$10.18	\$17.05	\$0.00	\$66.91
	02/01/2017	\$40.14	\$10.18	\$17.05	\$0.00	\$67.37

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - MARBLE & TILE FINISHER - Local 3 Marble & Tile

Effective Date - 02/01/2014

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$18.33	\$10.18	\$16.83	\$0.00	\$45.34
2	60	\$22.00	\$10.18	\$16.83	\$0.00	\$49.01
3	70	\$25.66	\$10.18	\$16.83	\$0.00	\$52.67
4	80	\$29.33	\$10.18	\$16.83	\$0.00	\$56.34
5	90	\$32.99	\$10.18	\$16.83	\$0.00	\$60.00

Effective Date - 08/01/2014

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$18.69	\$10.18	\$16.90	\$0.00	\$45.77
2	60	\$22.42	\$10.18	\$16.90	\$0.00	\$49.50
3	70	\$26.16	\$10.18	\$16.90	\$0.00	\$53.24
4	80	\$29.90	\$10.18	\$16.90	\$0.00	\$56.98
5	90	\$33.63	\$10.18	\$16.90	\$0.00	\$60.71

Notes:

Apprentice to Journeyworker Ratio:1:3

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
MARBLE MASONS, TILELAYERS & TERRAZZO MECH	02/01/2014	\$48.10	\$10.18	\$18.15	\$0.00	\$76.43
BRICKLAYERS LOCAL 3 - MARBLE & TILE	08/01/2014	\$49.00	\$10.18	\$18.22	\$0.00	\$77.40
	02/01/2015	\$49.56	\$10.18	\$18.22	\$0.00	\$77.96
	08/01/2015	\$50.46	\$10.18	\$18.29	\$0.00	\$78.93
	02/01/2016	\$51.03	\$10.18	\$18.29	\$0.00	\$79.50
	08/01/2016	\$51.93	\$10.18	\$18.37	\$0.00	\$80.48
	02/01/2017	\$52.50	\$10.18	\$18.37	\$0.00	\$81.05

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - MARBLE-TILE-TERRAZZO MECHANIC - Local 3 Marble & Tile

Effective Date - 02/01/2014

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$24.05	\$10.18	\$18.15	\$0.00	\$52.38
2	60	\$28.86	\$10.18	\$18.15	\$0.00	\$57.19
3	70	\$33.67	\$10.18	\$18.15	\$0.00	\$62.00
4	80	\$38.48	\$10.18	\$18.15	\$0.00	\$66.81
5	90	\$43.29	\$10.18	\$18.15	\$0.00	\$71.62

Effective Date - 08/01/2014

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$24.50	\$10.18	\$18.22	\$0.00	\$52.90
2	60	\$29.40	\$10.18	\$18.22	\$0.00	\$57.80
3	70	\$34.30	\$10.18	\$18.22	\$0.00	\$62.70
4	80	\$39.20	\$10.18	\$18.22	\$0.00	\$67.60
5	90	\$44.10	\$10.18	\$18.22	\$0.00	\$72.50

Notes:

Apprentice to Journeyworker Ratio:1:5

MECH. SWEEPER OPERATOR (ON CONST. SITES) OPERATING ENGINEERS LOCAL 4	12/01/2013	\$40.11	\$10.00	\$14.18	\$0.00	\$64.29
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
MECHANICS MAINTENANCE OPERATING ENGINEERS LOCAL 4	12/01/2013	\$40.11	\$10.00	\$14.18	\$0.00	\$64.29
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
MILLWRIGHT (Zone 1) MILLWRIGHTS LOCAL 1121 - Zone 1	04/01/2014	\$35.73	\$9.80	\$16.21	\$0.00	\$61.74
	10/01/2014	\$36.68	\$9.80	\$16.21	\$0.00	\$62.69
	04/01/2015	\$37.64	\$9.80	\$16.21	\$0.00	\$63.65

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - MILLWRIGHT - Local 1121 Zone 1

Effective Date - 04/01/2014

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	55	\$19.65	\$9.80	\$4.48	\$0.00	\$33.93
2	65	\$23.22	\$9.80	\$13.36	\$0.00	\$46.38
3	75	\$26.80	\$9.80	\$14.18	\$0.00	\$50.78
4	85	\$30.37	\$9.80	\$14.99	\$0.00	\$55.16

Effective Date - 10/01/2014

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	55	\$20.17	\$9.80	\$4.48	\$0.00	\$34.45
2	65	\$23.84	\$9.80	\$13.36	\$0.00	\$47.00
3	75	\$27.51	\$9.80	\$14.18	\$0.00	\$51.49
4	85	\$31.18	\$9.80	\$14.99	\$0.00	\$55.97

Notes:

Steps are 2,000 hours

Apprentice to Journeyworker Ratio:1:5

MORTAR MIXER <i>LABORERS - ZONE 1</i>	12/01/2013	\$33.60	\$7.30	\$12.70	\$0.00	\$53.60
	06/01/2014	\$34.35	\$7.30	\$12.70	\$0.00	\$54.35
	12/01/2014	\$35.10	\$7.30	\$12.70	\$0.00	\$55.10
	06/01/2015	\$35.85	\$7.30	\$12.70	\$0.00	\$55.85
	12/01/2015	\$36.60	\$7.30	\$12.70	\$0.00	\$56.60
	06/01/2016	\$37.35	\$7.30	\$12.70	\$0.00	\$57.35
	12/01/2016	\$38.35	\$7.30	\$12.70	\$0.00	\$58.35
For apprentice rates see "Apprentice- LABORER"						
OILER (OTHER THAN TRUCK CRANES,GRADALLS) <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2013	\$20.96	\$10.00	\$14.18	\$0.00	\$45.14
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
OILER (TRUCK CRANES, GRADALLS) <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2013	\$24.43	\$10.00	\$14.18	\$0.00	\$48.61
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
OTHER POWER DRIVEN EQUIPMENT - CLASS II <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2013	\$40.11	\$10.00	\$14.18	\$0.00	\$64.29
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
PAINTER (BRIDGES/TANKS) <i>PAINTERS LOCAL 35 - ZONE 2</i>	01/01/2014	\$45.91	\$7.85	\$16.10	\$0.00	\$69.86
	07/01/2014	\$46.76	\$7.85	\$16.10	\$0.00	\$70.71
	01/01/2015	\$47.66	\$7.85	\$16.10	\$0.00	\$71.61
	07/01/2015	\$48.56	\$7.85	\$16.10	\$0.00	\$72.51
	01/01/2016	\$49.51	\$7.85	\$16.10	\$0.00	\$73.46
	07/01/2016	\$50.46	\$7.85	\$16.10	\$0.00	\$74.41
	01/01/2017	\$51.41	\$7.85	\$16.10	\$0.00	\$75.36

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - PAINTER Local 35 - BRIDGES/TANKS

Effective Date - 01/01/2014

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$22.96	\$7.85	\$0.00	\$0.00	\$30.81
2	55	\$25.25	\$7.85	\$3.66	\$0.00	\$36.76
3	60	\$27.55	\$7.85	\$3.99	\$0.00	\$39.39
4	65	\$29.84	\$7.85	\$4.32	\$0.00	\$42.01
5	70	\$32.14	\$7.85	\$14.11	\$0.00	\$54.10
6	75	\$34.43	\$7.85	\$14.44	\$0.00	\$56.72
7	80	\$36.73	\$7.85	\$14.77	\$0.00	\$59.35
8	90	\$41.32	\$7.85	\$15.44	\$0.00	\$64.61

Effective Date - 07/01/2014

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$23.38	\$7.85	\$0.00	\$0.00	\$31.23
2	55	\$25.72	\$7.85	\$3.66	\$0.00	\$37.23
3	60	\$28.06	\$7.85	\$3.99	\$0.00	\$39.90
4	65	\$30.39	\$7.85	\$4.32	\$0.00	\$42.56
5	70	\$32.73	\$7.85	\$14.11	\$0.00	\$54.69
6	75	\$35.07	\$7.85	\$14.44	\$0.00	\$57.36
7	80	\$37.41	\$7.85	\$14.77	\$0.00	\$60.03
8	90	\$42.08	\$7.85	\$15.44	\$0.00	\$65.37

Notes:

Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

PAINTER (SPRAY OR SANDBLAST, NEW) *	01/01/2014	\$36.81	\$7.85	\$16.10	\$0.00	\$60.76
* If 30% or more of surfaces to be painted are new construction, NEW paint rate shall be used. PAINTERS LOCAL 35 - ZONE 2	07/01/2014	\$37.66	\$7.85	\$16.10	\$0.00	\$61.61
	01/01/2015	\$38.56	\$7.85	\$16.10	\$0.00	\$62.51
	07/01/2015	\$39.46	\$7.85	\$16.10	\$0.00	\$63.41
	01/01/2016	\$40.41	\$7.85	\$16.10	\$0.00	\$64.36
	07/01/2016	\$41.36	\$7.85	\$16.10	\$0.00	\$65.31
	01/01/2017	\$42.31	\$7.85	\$16.10	\$0.00	\$66.26

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - PAINTER Local 35 Zone 2 - Spray/Sandblast - New

Effective Date - 01/01/2014

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$18.41	\$7.85	\$0.00	\$0.00	\$26.26
2	55	\$20.25	\$7.85	\$3.66	\$0.00	\$31.76
3	60	\$22.09	\$7.85	\$3.99	\$0.00	\$33.93
4	65	\$23.93	\$7.85	\$4.32	\$0.00	\$36.10
5	70	\$25.77	\$7.85	\$14.11	\$0.00	\$47.73
6	75	\$27.61	\$7.85	\$14.44	\$0.00	\$49.90
7	80	\$29.45	\$7.85	\$14.77	\$0.00	\$52.07
8	90	\$33.13	\$7.85	\$15.44	\$0.00	\$56.42

Effective Date - 07/01/2014

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$18.83	\$7.85	\$0.00	\$0.00	\$26.68
2	55	\$20.71	\$7.85	\$3.66	\$0.00	\$32.22
3	60	\$22.60	\$7.85	\$3.99	\$0.00	\$34.44
4	65	\$24.48	\$7.85	\$4.32	\$0.00	\$36.65
5	70	\$26.36	\$7.85	\$14.11	\$0.00	\$48.32
6	75	\$28.25	\$7.85	\$14.44	\$0.00	\$50.54
7	80	\$30.13	\$7.85	\$14.77	\$0.00	\$52.75
8	90	\$33.89	\$7.85	\$15.44	\$0.00	\$57.18

Notes:

Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
PAINTER (SPRAY OR SANDBLAST, REPAINT) PAINTERS LOCAL 35 - ZONE 2	01/01/2014	\$34.87	\$7.85	\$16.10	\$0.00	\$58.82
	07/01/2014	\$35.72	\$7.85	\$16.10	\$0.00	\$59.67
	01/01/2015	\$36.62	\$7.85	\$16.10	\$0.00	\$60.57
	07/01/2015	\$37.52	\$7.85	\$16.10	\$0.00	\$61.47
	01/01/2016	\$38.47	\$7.85	\$16.10	\$0.00	\$62.42
	07/01/2016	\$39.42	\$7.85	\$16.10	\$0.00	\$63.37
	01/01/2017	\$40.37	\$7.85	\$16.10	\$0.00	\$64.32

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - PAINTER Local 35 Zone 2 - Spray/Sandblast - Repaint

Effective Date - 01/01/2014

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$17.44	\$7.85	\$0.00	\$0.00	\$25.29
2	55	\$19.18	\$7.85	\$3.66	\$0.00	\$30.69
3	60	\$20.92	\$7.85	\$3.99	\$0.00	\$32.76
4	65	\$22.67	\$7.85	\$4.32	\$0.00	\$34.84
5	70	\$24.41	\$7.85	\$14.11	\$0.00	\$46.37
6	75	\$26.15	\$7.85	\$14.44	\$0.00	\$48.44
7	80	\$27.90	\$7.85	\$14.77	\$0.00	\$50.52
8	90	\$31.38	\$7.85	\$15.44	\$0.00	\$54.67

Effective Date - 07/01/2014

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$17.86	\$7.85	\$0.00	\$0.00	\$25.71
2	55	\$19.65	\$7.85	\$3.66	\$0.00	\$31.16
3	60	\$21.43	\$7.85	\$3.99	\$0.00	\$33.27
4	65	\$23.22	\$7.85	\$4.32	\$0.00	\$35.39
5	70	\$25.00	\$7.85	\$14.11	\$0.00	\$46.96
6	75	\$26.79	\$7.85	\$14.44	\$0.00	\$49.08
7	80	\$28.58	\$7.85	\$14.77	\$0.00	\$51.20
8	90	\$32.15	\$7.85	\$15.44	\$0.00	\$55.44

Notes:

Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

PAINTER (TRAFFIC MARKINGS) LABORERS - ZONE 1	12/01/2013	\$33.35	\$7.30	\$12.70	\$0.00	\$53.35
	06/01/2014	\$34.10	\$7.30	\$12.70	\$0.00	\$54.10
	12/01/2014	\$34.85	\$7.30	\$12.70	\$0.00	\$54.85
	06/01/2015	\$35.60	\$7.30	\$12.70	\$0.00	\$55.60
	12/01/2015	\$36.35	\$7.30	\$12.70	\$0.00	\$56.35
	06/01/2016	\$37.10	\$7.30	\$12.70	\$0.00	\$57.10
	12/01/2016	\$38.10	\$7.30	\$12.70	\$0.00	\$58.10

For Apprentice rates see "Apprentice- LABORER"

PAINTER / TAPER (BRUSH, NEW) * * If 30% or more of surfaces to be painted are new construction, NEW paint rate shall be used. PAINTERS LOCAL 35 - ZONE 2	01/01/2014	\$35.41	\$7.85	\$16.10	\$0.00	\$59.36
	07/01/2014	\$36.26	\$7.85	\$16.10	\$0.00	\$60.21
	01/01/2015	\$37.16	\$7.85	\$16.10	\$0.00	\$61.11
	07/01/2015	\$38.06	\$7.85	\$16.10	\$0.00	\$62.01
	01/01/2016	\$39.01	\$7.85	\$16.10	\$0.00	\$62.96
	07/01/2016	\$39.96	\$7.85	\$16.10	\$0.00	\$63.91
	01/01/2017	\$40.91	\$7.85	\$16.10	\$0.00	\$64.86

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - PAINTER - Local 35 Zone 2 - BRUSH NEW

Effective Date - 01/01/2014

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$17.71	\$7.85	\$0.00	\$0.00	\$25.56
2	55	\$19.48	\$7.85	\$3.66	\$0.00	\$30.99
3	60	\$21.25	\$7.85	\$3.99	\$0.00	\$33.09
4	65	\$23.02	\$7.85	\$4.32	\$0.00	\$35.19
5	70	\$24.79	\$7.85	\$14.11	\$0.00	\$46.75
6	75	\$26.56	\$7.85	\$14.44	\$0.00	\$48.85
7	80	\$28.33	\$7.85	\$14.77	\$0.00	\$50.95
8	90	\$31.87	\$7.85	\$15.44	\$0.00	\$55.16

Effective Date - 07/01/2014

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$18.13	\$7.85	\$0.00	\$0.00	\$25.98
2	55	\$19.94	\$7.85	\$3.66	\$0.00	\$31.45
3	60	\$21.76	\$7.85	\$3.99	\$0.00	\$33.60
4	65	\$23.57	\$7.85	\$4.32	\$0.00	\$35.74
5	70	\$25.38	\$7.85	\$14.11	\$0.00	\$47.34
6	75	\$27.20	\$7.85	\$14.44	\$0.00	\$49.49
7	80	\$29.01	\$7.85	\$14.77	\$0.00	\$51.63
8	90	\$32.63	\$7.85	\$15.44	\$0.00	\$55.92

Notes:

Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

PAINTER / TAPER (BRUSH, REPAINT) PAINTERS LOCAL 35 - ZONE 2	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
	01/01/2014	\$33.47	\$7.85	\$16.10	\$0.00	\$57.42
	07/01/2014	\$34.32	\$7.85	\$16.10	\$0.00	\$58.27
	01/01/2015	\$35.22	\$7.85	\$16.10	\$0.00	\$59.17
	07/01/2015	\$36.12	\$7.85	\$16.10	\$0.00	\$60.07
	01/01/2016	\$37.07	\$7.85	\$16.10	\$0.00	\$61.02
	07/01/2016	\$38.02	\$7.85	\$16.10	\$0.00	\$61.97
	01/01/2017	\$38.97	\$7.85	\$16.10	\$0.00	\$62.92

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - PAINTER Local 35 Zone 2 - BRUSH REPAINT

Effective Date - 01/01/2014

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$16.74	\$7.85	\$0.00	\$0.00	\$24.59
2	55	\$18.41	\$7.85	\$3.66	\$0.00	\$29.92
3	60	\$20.08	\$7.85	\$3.99	\$0.00	\$31.92
4	65	\$21.76	\$7.85	\$4.32	\$0.00	\$33.93
5	70	\$23.43	\$7.85	\$14.11	\$0.00	\$45.39
6	75	\$25.10	\$7.85	\$14.44	\$0.00	\$47.39
7	80	\$26.78	\$7.85	\$14.77	\$0.00	\$49.40
8	90	\$30.12	\$7.85	\$15.44	\$0.00	\$53.41

Effective Date - 07/01/2014

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$17.16	\$7.85	\$0.00	\$0.00	\$25.01
2	55	\$18.88	\$7.85	\$3.66	\$0.00	\$30.39
3	60	\$20.59	\$7.85	\$3.99	\$0.00	\$32.43
4	65	\$22.31	\$7.85	\$4.32	\$0.00	\$34.48
5	70	\$24.02	\$7.85	\$14.11	\$0.00	\$45.98
6	75	\$25.74	\$7.85	\$14.44	\$0.00	\$48.03
7	80	\$27.46	\$7.85	\$14.77	\$0.00	\$50.08
8	90	\$30.89	\$7.85	\$15.44	\$0.00	\$54.18

Notes:

Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

PANEL & PICKUP TRUCKS DRIVER TEAMSTERS JOINT COUNCIL NO. 10 ZONE A	12/01/2013	\$31.88	\$9.41	\$8.80	\$0.00	\$50.09
	06/01/2014	\$32.23	\$9.41	\$8.80	\$0.00	\$50.44
	08/01/2014	\$32.23	\$9.91	\$8.80	\$0.00	\$50.94
	12/01/2014	\$32.23	\$9.91	\$9.33	\$0.00	\$51.47
	06/01/2015	\$32.58	\$9.91	\$9.33	\$0.00	\$51.82
	08/01/2015	\$32.58	\$10.41	\$9.33	\$0.00	\$52.32
	12/01/2015	\$32.58	\$10.41	\$10.08	\$0.00	\$53.07
	06/01/2016	\$33.08	\$10.41	\$10.08	\$0.00	\$53.57
	08/01/2016	\$33.08	\$10.91	\$10.08	\$0.00	\$54.07
	12/01/2016	\$33.08	\$10.91	\$10.89	\$0.00	\$54.88
PIER AND DOCK CONSTRUCTOR (UNDERPINNING AND DECK) PILE DRIVER LOCAL 56 (ZONE 1)	08/01/2013	\$40.10	\$9.80	\$18.17	\$0.00	\$68.07
	08/01/2014	\$41.60	\$9.80	\$18.17	\$0.00	\$69.57
	08/01/2015	\$43.10	\$9.80	\$18.17	\$0.00	\$71.07
PILE DRIVER PILE DRIVER LOCAL 56 (ZONE 1)	08/01/2013	\$40.10	\$9.80	\$18.17	\$0.00	\$68.07
	08/01/2014	\$41.60	\$9.80	\$18.17	\$0.00	\$69.57
	08/01/2015	\$43.10	\$9.80	\$18.17	\$0.00	\$71.07

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - PILE DRIVER - Local 56 Zone 1

Effective Date - 08/01/2013

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$20.05	\$9.80	\$18.17	\$0.00	\$48.02
2	60	\$24.06	\$9.80	\$18.17	\$0.00	\$52.03
3	70	\$28.07	\$9.80	\$18.17	\$0.00	\$56.04
4	75	\$30.08	\$9.80	\$18.17	\$0.00	\$58.05
5	80	\$32.08	\$9.80	\$18.17	\$0.00	\$60.05
6	80	\$32.08	\$9.80	\$18.17	\$0.00	\$60.05
7	90	\$36.09	\$9.80	\$18.17	\$0.00	\$64.06
8	90	\$36.09	\$9.80	\$18.17	\$0.00	\$64.06

Effective Date - 08/01/2014

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$20.80	\$9.80	\$18.17	\$0.00	\$48.77
2	60	\$24.96	\$9.80	\$18.17	\$0.00	\$52.93
3	70	\$29.12	\$9.80	\$18.17	\$0.00	\$57.09
4	75	\$31.20	\$9.80	\$18.17	\$0.00	\$59.17
5	80	\$33.28	\$9.80	\$18.17	\$0.00	\$61.25
6	80	\$33.28	\$9.80	\$18.17	\$0.00	\$61.25
7	90	\$37.44	\$9.80	\$18.17	\$0.00	\$65.41
8	90	\$37.44	\$9.80	\$18.17	\$0.00	\$65.41

Notes:

Apprentice to Journeyworker Ratio:1:3

PIPEFITTER & STEAMFITTER PIPEFITTERS LOCAL 537	03/01/2013	\$49.34	\$8.75	\$14.39	\$0.00	\$72.48
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Apprentice - PIPEFITTER - Local 537

Effective Date - 03/01/2013

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$19.74	\$8.75	\$6.50	\$0.00	\$34.99
2	45	\$22.20	\$8.75	\$14.39	\$0.00	\$45.34
3	60	\$29.60	\$8.75	\$14.39	\$0.00	\$52.74
4	70	\$34.54	\$8.75	\$14.39	\$0.00	\$57.68
5	80	\$39.47	\$8.75	\$14.39	\$0.00	\$62.61

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:**

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
PIPELAYER LABORERS - ZONE 1	12/01/2013	\$33.60	\$7.30	\$12.70	\$0.00	\$53.60
	06/01/2014	\$34.35	\$7.30	\$12.70	\$0.00	\$54.35
	12/01/2014	\$35.10	\$7.30	\$12.70	\$0.00	\$55.10
	06/01/2015	\$35.85	\$7.30	\$12.70	\$0.00	\$55.85
	12/01/2015	\$36.60	\$7.30	\$12.70	\$0.00	\$56.60
	06/01/2016	\$37.35	\$7.30	\$12.70	\$0.00	\$57.35
	12/01/2016	\$38.35	\$7.30	\$12.70	\$0.00	\$58.35

For apprentice rates see "Apprentice- LABORER"

PLUMBERS & GASFITTERS PLUMBERS & GASFITTERS LOCAL 12	03/01/2014	\$49.41	\$9.82	\$14.29	\$0.00	\$73.52
	09/01/2014	\$50.41	\$9.82	\$14.29	\$0.00	\$74.52
	03/01/2015	\$51.41	\$9.82	\$14.29	\$0.00	\$75.52
	09/01/2015	\$52.41	\$9.82	\$14.29	\$0.00	\$76.52
	03/01/2016	\$53.56	\$9.82	\$14.29	\$0.00	\$77.67
	09/01/2016	\$54.61	\$9.82	\$14.29	\$0.00	\$78.72
	03/01/2017	\$55.61	\$9.82	\$14.29	\$0.00	\$79.72

Apprentice - PLUMBER/GASFITTER - Local 12

Effective Date - 03/01/2014

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	35	\$17.29	\$9.82	\$5.33	\$0.00	\$32.44
2	40	\$19.76	\$9.82	\$6.02	\$0.00	\$35.60
3	55	\$27.18	\$9.82	\$8.08	\$0.00	\$45.08
4	65	\$32.12	\$9.82	\$9.47	\$0.00	\$51.41
5	75	\$37.06	\$9.82	\$10.85	\$0.00	\$57.73

Effective Date - 09/01/2014

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	35	\$17.64	\$9.82	\$5.33	\$0.00	\$32.79
2	40	\$20.16	\$9.82	\$6.02	\$0.00	\$36.00
3	55	\$27.73	\$9.82	\$8.08	\$0.00	\$45.63
4	65	\$32.77	\$9.82	\$9.47	\$0.00	\$52.06
5	75	\$37.81	\$9.82	\$10.85	\$0.00	\$58.48

Notes:

** 1:2; 2:6; 3:10; 4:14; 5:19/Steps are 1 yr
Step4 with lic\$54.58 Step5 with lic\$60.90

Apprentice to Journeyworker Ratio:**

PNEUMATIC CONTROLS (TEMP.) PIPEFITTERS LOCAL 537	03/01/2013	\$49.34	\$8.75	\$14.39	\$0.00	\$72.48
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For apprentice rates see "Apprentice- PIPEFITTER" or "PLUMBER/PIPEFITTER"

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
PNEUMATIC DRILL/TOOL OPERATOR <i>LABORERS - ZONE 1</i>	12/01/2013	\$33.60	\$7.30	\$12.70	\$0.00	\$53.60
	06/01/2014	\$34.35	\$7.30	\$12.70	\$0.00	\$54.35
	12/01/2014	\$35.10	\$7.30	\$12.70	\$0.00	\$55.10
	06/01/2015	\$35.85	\$7.30	\$12.70	\$0.00	\$55.85
	12/01/2015	\$36.60	\$7.30	\$12.70	\$0.00	\$56.60
	06/01/2016	\$37.35	\$7.30	\$12.70	\$0.00	\$57.35
	12/01/2016	\$38.35	\$7.30	\$12.70	\$0.00	\$58.35
For apprentice rates see "Apprentice- LABORER"						
POWDERMAN & BLASTER <i>LABORERS - ZONE 1</i>	12/01/2013	\$34.35	\$7.30	\$12.70	\$0.00	\$54.35
	06/01/2014	\$35.10	\$7.30	\$12.70	\$0.00	\$55.10
	12/01/2014	\$35.85	\$7.30	\$12.70	\$0.00	\$55.85
	06/01/2015	\$36.60	\$7.30	\$12.70	\$0.00	\$56.60
	12/01/2015	\$37.35	\$7.30	\$12.70	\$0.00	\$57.35
	06/01/2016	\$38.10	\$7.30	\$12.70	\$0.00	\$58.10
	12/01/2016	\$39.10	\$7.30	\$12.70	\$0.00	\$59.10
For apprentice rates see "Apprentice- LABORER"						
POWER SHOVEL/DERRICK/TRENCHING MACHINE <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2013	\$40.49	\$10.00	\$14.18	\$0.00	\$64.67
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
PUMP OPERATOR (CONCRETE) <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2013	\$40.49	\$10.00	\$14.18	\$0.00	\$64.67
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
PUMP OPERATOR (DEWATERING, OTHER) <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2013	\$28.11	\$10.00	\$14.18	\$0.00	\$52.29
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
READY-MIX CONCRETE DRIVER <i>TEAMSTERS LOCAL 256</i>	05/01/2011	\$28.03	\$7.75	\$5.91	\$0.00	\$41.69
RECLAIMERS <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2013	\$40.11	\$10.00	\$14.18	\$0.00	\$64.29
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
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 ** ** 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. <i>CARPENTERS -ZONE 2 (Residential Wood)</i>	05/01/2011	\$24.24	\$6.34	\$6.23	\$0.00	\$36.81
As of 9/1/09 Carpentry work on wood-frame residential WEATHERIZATION projects shall be paid the RESIDENTIAL WOOD FRAME CARPENTER rate.						

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - CARPENTER (Residential Wood Frame) - Zone 2

Effective Date - 05/01/2011

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	12/01/2013	\$33.60	\$7.30	\$12.70	\$0.00	\$53.60
	06/01/2014	\$34.35	\$7.30	\$12.70	\$0.00	\$54.35
	12/01/2014	\$35.10	\$7.30	\$12.70	\$0.00	\$55.10
	06/01/2015	\$35.85	\$7.30	\$12.70	\$0.00	\$55.85
	12/01/2015	\$36.60	\$7.30	\$12.70	\$0.00	\$56.60
	06/01/2016	\$37.35	\$7.30	\$12.70	\$0.00	\$57.35
	12/01/2016	\$38.35	\$7.30	\$12.70	\$0.00	\$58.35

For apprentice rates see "Apprentice- LABORER"

ROLLER/SPREADER/MULCHING MACHINE OPERATING ENGINEERS LOCAL 4	12/01/2013	\$40.11	\$10.00	\$14.18	\$0.00	\$64.29
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For apprentice rates see "Apprentice- OPERATING ENGINEERS"

ROOFER (Inc.Roofing Waterproofing &Roofing Dampproofing) ROOFERS LOCAL 33	02/01/2014	\$39.21	\$10.50	\$10.70	\$0.00	\$60.41
	08/01/2014	\$40.11	\$10.50	\$10.70	\$0.00	\$61.31
	02/01/2015	\$41.01	\$10.50	\$10.70	\$0.00	\$62.21
	08/01/2015	\$41.91	\$10.50	\$10.70	\$0.00	\$63.11
	02/01/2016	\$42.81	\$10.50	\$10.70	\$0.00	\$64.01

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - ROOFER - Local 33

Effective Date - 02/01/2014

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$19.61	\$10.50	\$3.38	\$0.00	\$33.49
2	60	\$23.53	\$10.50	\$10.70	\$0.00	\$44.73
3	65	\$25.49	\$10.50	\$10.70	\$0.00	\$46.69
4	75	\$29.41	\$10.50	\$10.70	\$0.00	\$50.61
5	85	\$33.33	\$10.50	\$10.70	\$0.00	\$54.53

Effective Date - 08/01/2014

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$20.06	\$10.50	\$3.38	\$0.00	\$33.94
2	60	\$24.07	\$10.50	\$10.70	\$0.00	\$45.27
3	65	\$26.07	\$10.50	\$10.70	\$0.00	\$47.27
4	75	\$30.08	\$10.50	\$10.70	\$0.00	\$51.28
5	85	\$34.09	\$10.50	\$10.70	\$0.00	\$55.29

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 ROOFERS LOCAL 33	02/01/2014	\$39.46	\$10.50	\$10.70	\$0.00	\$60.66
	08/01/2014	\$40.36	\$10.50	\$10.70	\$0.00	\$61.56
	02/01/2015	\$41.26	\$10.50	\$10.70	\$0.00	\$62.46
	08/01/2015	\$42.16	\$10.50	\$10.70	\$0.00	\$63.36
	02/01/2016	\$43.06	\$10.50	\$10.70	\$0.00	\$64.26

For apprentice rates see "Apprentice- ROOFER"

SHEETMETAL WORKER SHEETMETAL WORKERS LOCAL 17 - A	02/01/2014	\$42.76	\$9.82	\$19.74	\$2.17	\$74.49
	08/01/2014	\$43.61	\$9.82	\$19.74	\$2.17	\$75.34
	02/01/2015	\$44.51	\$9.82	\$19.74	\$2.17	\$76.24
	08/01/2015	\$45.51	\$9.82	\$19.74	\$2.17	\$77.24
	02/01/2016	\$46.51	\$9.82	\$19.74	\$2.17	\$78.24
	08/01/2016	\$47.66	\$9.82	\$19.74	\$2.17	\$79.39
	02/01/2017	\$48.76	\$9.82	\$19.74	\$2.17	\$80.49
	08/01/2017	\$49.86	\$9.82	\$19.74	\$2.17	\$81.59
	02/01/2018	\$51.01	\$9.82	\$19.74	\$2.17	\$82.74

Apprentice - SHEET METAL WORKER - Local 17-A

Effective Date - 02/01/2014

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$17.10	\$9.82	\$4.28	\$0.00	\$31.20
2	40	\$17.10	\$9.82	\$4.28	\$0.00	\$31.20
3	45	\$19.24	\$9.82	\$8.70	\$1.13	\$38.89
4	45	\$19.24	\$9.82	\$8.70	\$1.13	\$38.89
5	50	\$21.38	\$9.82	\$9.49	\$1.22	\$41.91
6	50	\$21.38	\$9.82	\$9.74	\$1.23	\$42.17
7	60	\$25.66	\$9.82	\$11.05	\$1.40	\$47.93
8	65	\$27.79	\$9.82	\$11.84	\$1.48	\$50.93
9	75	\$32.07	\$9.82	\$13.41	\$1.66	\$56.96
10	85	\$36.35	\$9.82	\$14.48	\$1.82	\$62.47

Effective Date - 08/01/2014

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$17.44	\$9.82	\$4.28	\$0.00	\$31.54
2	40	\$17.44	\$9.82	\$4.28	\$0.00	\$31.54
3	45	\$19.62	\$9.82	\$8.70	\$1.13	\$39.27
4	45	\$19.62	\$9.82	\$8.70	\$1.13	\$39.27
5	50	\$21.81	\$9.82	\$9.49	\$1.22	\$42.34
6	50	\$21.81	\$9.82	\$9.74	\$1.23	\$42.60
7	60	\$26.17	\$9.82	\$11.05	\$1.40	\$48.44
8	65	\$28.35	\$9.82	\$11.84	\$1.48	\$51.49
9	75	\$32.71	\$9.82	\$13.41	\$1.66	\$57.60
10	85	\$37.07	\$9.82	\$14.48	\$1.82	\$63.19

Notes:

Steps are 6 mos.

Apprentice to Journeyworker Ratio:1:4

SIGN ERECTOR PAINTERS LOCAL 35 - ZONE 2	06/01/2013	\$25.81	\$7.07	\$7.05	\$0.00	\$39.93
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Apprentice - SIGN ERECTOR - Local 35 Zone 2

Effective Date - 06/01/2013

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$12.91	\$7.07	\$0.00	\$0.00	\$19.98
2	55	\$14.20	\$7.07	\$2.45	\$0.00	\$23.72
3	60	\$15.49	\$7.07	\$2.45	\$0.00	\$25.01
4	65	\$16.78	\$7.07	\$2.45	\$0.00	\$26.30
5	70	\$18.07	\$7.07	\$7.05	\$0.00	\$32.19
6	75	\$19.36	\$7.07	\$7.05	\$0.00	\$33.48
7	80	\$20.65	\$7.07	\$7.05	\$0.00	\$34.77
8	85	\$21.94	\$7.07	\$7.05	\$0.00	\$36.06
9	90	\$23.23	\$7.07	\$7.05	\$0.00	\$37.35

Notes:

Steps are 4 mos.

Apprentice to Journeyworker Ratio:1:1

SPECIALIZED EARTH MOVING EQUIP < 35 TONS TEAMSTERS JOINT COUNCIL NO. 10 ZONE A	12/01/2013	\$32.34	\$9.41	\$8.80	\$0.00	\$50.55
	06/01/2014	\$32.69	\$9.41	\$8.80	\$0.00	\$50.90
	08/01/2014	\$32.69	\$9.91	\$8.80	\$0.00	\$51.40
	12/01/2014	\$32.69	\$9.91	\$9.33	\$0.00	\$51.93
	06/01/2015	\$33.04	\$9.91	\$9.33	\$0.00	\$52.28
	08/01/2015	\$33.04	\$10.41	\$9.33	\$0.00	\$52.78
	12/01/2015	\$33.04	\$10.41	\$10.08	\$0.00	\$53.53
	06/01/2016	\$33.54	\$10.41	\$10.08	\$0.00	\$54.03
	08/01/2016	\$33.54	\$10.91	\$10.08	\$0.00	\$54.53
	12/01/2016	\$33.54	\$10.91	\$10.89	\$0.00	\$55.34
SPECIALIZED EARTH MOVING EQUIP > 35 TONS TEAMSTERS JOINT COUNCIL NO. 10 ZONE A	12/01/2013	\$32.63	\$9.41	\$8.80	\$0.00	\$50.84
	06/01/2014	\$32.98	\$9.41	\$8.80	\$0.00	\$51.19
	08/01/2014	\$32.98	\$9.91	\$8.80	\$0.00	\$51.69
	12/01/2014	\$32.98	\$9.91	\$9.33	\$0.00	\$52.22
	06/01/2015	\$33.33	\$9.91	\$9.33	\$0.00	\$52.57
	08/01/2015	\$33.33	\$10.41	\$9.33	\$0.00	\$53.07
	12/01/2015	\$33.33	\$10.41	\$10.08	\$0.00	\$53.82
	06/01/2016	\$33.83	\$10.41	\$10.08	\$0.00	\$54.32
08/01/2016	\$33.83	\$10.91	\$10.08	\$0.00	\$54.82	
12/01/2016	\$33.83	\$10.91	\$10.89	\$0.00	\$55.63	

Classification

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
SPRINKLER FITTER	03/01/2014	\$53.58	\$8.42	\$13.60	\$0.00	\$75.60
SPRINKLER FITTERS LOCAL 550 - (Section A) Zone 1	10/01/2014	\$54.73	\$8.42	\$13.60	\$0.00	\$76.75
	01/01/2015	\$54.73	\$8.42	\$13.75	\$0.00	\$76.90
	03/01/2015	\$55.73	\$8.42	\$13.75	\$0.00	\$77.90
	10/01/2015	\$56.88	\$8.42	\$13.75	\$0.00	\$79.05
	01/01/2016	\$56.88	\$8.67	\$13.90	\$0.00	\$79.45
	03/01/2016	\$57.88	\$8.67	\$13.90	\$0.00	\$80.45
	10/01/2016	\$59.03	\$8.67	\$13.90	\$0.00	\$81.60
	03/01/2017	\$60.03	\$8.67	\$13.90	\$0.00	\$82.60

Apprentice - SPRINKLER FITTER - Local 550 (Section A) Zone 1

Effective Date - 03/01/2014

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	35	\$18.75	\$8.42	\$8.25	\$0.00	\$35.42
2	40	\$21.43	\$8.42	\$8.25	\$0.00	\$38.10
3	45	\$24.11	\$8.42	\$8.25	\$0.00	\$40.78
4	50	\$26.79	\$8.42	\$8.25	\$0.00	\$43.46
5	55	\$29.47	\$8.42	\$8.25	\$0.00	\$46.14
6	60	\$32.15	\$8.42	\$8.25	\$0.00	\$48.82
7	65	\$34.83	\$8.42	\$8.25	\$0.00	\$51.50
8	70	\$37.51	\$8.42	\$8.25	\$0.00	\$54.18
9	75	\$40.19	\$8.42	\$8.25	\$0.00	\$56.86
10	80	\$42.86	\$8.42	\$8.25	\$0.00	\$59.53

Effective Date - 10/01/2014

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	35	\$19.16	\$8.42	\$8.25	\$0.00	\$35.83
2	40	\$21.89	\$8.42	\$8.25	\$0.00	\$38.56
3	45	\$24.63	\$8.42	\$8.25	\$0.00	\$41.30
4	50	\$27.37	\$8.42	\$8.25	\$0.00	\$44.04
5	55	\$30.10	\$8.42	\$8.25	\$0.00	\$46.77
6	60	\$32.84	\$8.42	\$8.25	\$0.00	\$49.51
7	65	\$35.57	\$8.42	\$8.25	\$0.00	\$52.24
8	70	\$38.31	\$8.42	\$8.25	\$0.00	\$54.98
9	75	\$41.05	\$8.42	\$8.25	\$0.00	\$57.72
10	80	\$43.78	\$8.42	\$8.25	\$0.00	\$60.45

Notes: Apprentice entered prior 9/30/10:
40/45/50/55/60/65/70/75/80/85
Steps are 850 hours

Apprentice to Journeyworker Ratio:1:3

STEAM BOILER OPERATOR	12/01/2013	\$40.11	\$10.00	\$14.18	\$0.00	\$64.29
OPERATING ENGINEERS LOCAL 4						

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

TAMPERS, SELF-PROPELLED OR TRACTOR DRAWN	12/01/2013	\$40.11	\$10.00	\$14.18	\$0.00	\$64.29
OPERATING ENGINEERS LOCAL 4						

Classification

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
TELECOMMUNICATION TECHNICIAN ELECTRICIANS LOCAL 103	03/01/2014	\$33.44	\$13.00	\$13.03	\$0.00	\$59.47
	09/01/2014	\$33.84	\$13.00	\$13.05	\$0.00	\$59.89
	03/01/2015	\$34.38	\$13.00	\$13.06	\$0.00	\$60.44
	09/01/2015	\$35.10	\$13.00	\$13.08	\$0.00	\$61.18
	03/01/2016	\$35.81	\$13.00	\$13.10	\$0.00	\$61.91

Apprentice - TELECOMMUNICATION TECHNICIAN - Local 103

Effective Date - 03/01/2014

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$13.38	\$13.00	\$0.40	\$0.00	\$26.78
2	40	\$13.38	\$13.00	\$0.40	\$0.00	\$26.78
3	45	\$15.05	\$13.00	\$10.29	\$0.00	\$38.34
4	45	\$15.05	\$13.00	\$10.29	\$0.00	\$38.34
5	50	\$16.72	\$13.00	\$10.54	\$0.00	\$40.26
6	55	\$18.39	\$13.00	\$10.79	\$0.00	\$42.18
7	60	\$20.06	\$13.00	\$11.04	\$0.00	\$44.10
8	65	\$21.74	\$13.00	\$11.29	\$0.00	\$46.03
9	70	\$23.41	\$13.00	\$11.54	\$0.00	\$47.95
10	75	\$25.08	\$13.00	\$11.79	\$0.00	\$49.87

Effective Date - 09/01/2014

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$13.54	\$13.00	\$0.41	\$0.00	\$26.95
2	40	\$13.54	\$13.00	\$0.41	\$0.00	\$26.95
3	45	\$15.23	\$13.00	\$10.30	\$0.00	\$38.53
4	45	\$15.23	\$13.00	\$10.30	\$0.00	\$38.53
5	50	\$16.92	\$13.00	\$10.55	\$0.00	\$40.47
6	55	\$18.61	\$13.00	\$10.80	\$0.00	\$42.41
7	60	\$20.30	\$13.00	\$11.05	\$0.00	\$44.35
8	65	\$22.00	\$13.00	\$11.30	\$0.00	\$46.30
9	70	\$23.69	\$13.00	\$11.55	\$0.00	\$48.24
10	75	\$25.38	\$13.00	\$11.80	\$0.00	\$50.18

Notes:

Apprentice to Journeyworker Ratio:1:1

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
TERRAZZO FINISHERS BRICKLAYERS LOCAL 3 - MARBLE & TILE	02/01/2014	\$47.00	\$10.18	\$18.15	\$0.00	\$75.33
	08/01/2014	\$47.90	\$10.18	\$18.22	\$0.00	\$76.30
	02/01/2015	\$48.46	\$10.18	\$18.22	\$0.00	\$76.86
	08/01/2015	\$49.36	\$10.18	\$18.29	\$0.00	\$77.83
	02/01/2016	\$49.93	\$10.18	\$18.29	\$0.00	\$78.40
	08/01/2016	\$50.83	\$10.18	\$18.37	\$0.00	\$79.38
	02/01/2017	\$51.40	\$10.18	\$18.37	\$0.00	\$79.95

Apprentice - TERRAZZO FINISHER - Local 3 Marble & Tile

Effective Date - 02/01/2014

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$23.50	\$10.18	\$18.15	\$0.00	\$51.83
2	60	\$28.20	\$10.18	\$18.15	\$0.00	\$56.53
3	70	\$32.90	\$10.18	\$18.15	\$0.00	\$61.23
4	80	\$37.60	\$10.18	\$18.15	\$0.00	\$65.93
5	90	\$42.30	\$10.18	\$18.15	\$0.00	\$70.63

Effective Date - 08/01/2014

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$23.95	\$10.18	\$18.22	\$0.00	\$52.35
2	60	\$28.74	\$10.18	\$18.22	\$0.00	\$57.14
3	70	\$33.53	\$10.18	\$18.22	\$0.00	\$61.93
4	80	\$38.32	\$10.18	\$18.22	\$0.00	\$66.72
5	90	\$43.11	\$10.18	\$18.22	\$0.00	\$71.51

Notes:

Apprentice to Journeyworker Ratio:1:3

TEST BORING DRILLER LABORERS - FOUNDATION AND MARINE	12/01/2013	\$34.70	\$7.30	\$12.90	\$0.00	\$54.90
	06/01/2014	\$35.45	\$7.30	\$12.90	\$0.00	\$55.65
	12/01/2014	\$36.20	\$7.30	\$12.90	\$0.00	\$56.40
	06/01/2015	\$36.95	\$7.30	\$12.90	\$0.00	\$57.15
	12/01/2015	\$37.70	\$7.30	\$12.90	\$0.00	\$57.90
	06/01/2016	\$38.45	\$7.30	\$12.90	\$0.00	\$58.65
	12/01/2016	\$39.45	\$7.30	\$12.90	\$0.00	\$59.65

For apprentice rates see "Apprentice- LABORER"

TEST BORING DRILLER HELPER LABORERS - FOUNDATION AND MARINE	12/01/2013	\$33.42	\$7.30	\$12.90	\$0.00	\$53.62
	06/01/2014	\$34.17	\$7.30	\$12.90	\$0.00	\$54.37
	12/01/2014	\$34.92	\$7.30	\$12.90	\$0.00	\$55.12
	06/01/2015	\$35.67	\$7.30	\$12.90	\$0.00	\$55.87
	12/01/2015	\$36.42	\$7.30	\$12.90	\$0.00	\$56.62
	06/01/2016	\$37.17	\$7.30	\$12.90	\$0.00	\$57.37
12/01/2016	\$38.17	\$7.30	\$12.90	\$0.00	\$58.37	

For apprentice rates see "Apprentice- LABORER"

TEST BORING LABORER LABORERS - FOUNDATION AND MARINE	12/01/2013	\$33.30	\$7.30	\$12.90	\$0.00	\$53.50
	06/01/2014	\$34.05	\$7.30	\$12.90	\$0.00	\$54.25
	12/01/2014	\$34.80	\$7.30	\$12.90	\$0.00	\$55.00
	06/01/2015	\$35.55	\$7.30	\$12.90	\$0.00	\$55.75
	12/01/2015	\$36.30	\$7.30	\$12.90	\$0.00	\$56.50
	06/01/2016	\$37.05	\$7.30	\$12.90	\$0.00	\$57.25
12/01/2016	\$38.05	\$7.30	\$12.90	\$0.00	\$58.25	

For apprentice rates see "Apprentice- LABORER"

Classification

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
TRACTORS/PORTABLE STEAM GENERATORS <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2013	\$40.11	\$10.00	\$14.18	\$0.00	\$64.29
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
TRAILERS FOR EARTH MOVING EQUIPMENT <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE A</i>	12/01/2013	\$32.92	\$9.41	\$8.80	\$0.00	\$51.13
	06/01/2014	\$33.27	\$9.41	\$8.80	\$0.00	\$51.48
	08/01/2014	\$33.27	\$9.91	\$8.80	\$0.00	\$51.98
	12/01/2014	\$33.27	\$9.91	\$9.33	\$0.00	\$52.51
	06/01/2015	\$33.62	\$9.91	\$9.33	\$0.00	\$52.86
	08/01/2015	\$33.62	\$10.41	\$9.33	\$0.00	\$53.36
	12/01/2015	\$33.62	\$10.41	\$10.08	\$0.00	\$54.11
	06/01/2016	\$34.12	\$10.41	\$10.08	\$0.00	\$54.61
	08/01/2016	\$34.12	\$10.91	\$10.08	\$0.00	\$55.11
	12/01/2016	\$34.12	\$10.91	\$10.89	\$0.00	\$55.92
TUNNEL WORK - COMPRESSED AIR <i>LABORERS (COMPRESSED AIR)</i>	12/01/2013	\$45.58	\$7.30	\$13.30	\$0.00	\$66.18
	06/01/2014	\$46.33	\$7.30	\$13.30	\$0.00	\$66.93
	12/01/2014	\$47.08	\$7.30	\$13.30	\$0.00	\$67.68
	06/01/2015	\$47.83	\$7.30	\$13.30	\$0.00	\$68.43
	12/01/2015	\$48.58	\$7.30	\$13.30	\$0.00	\$69.18
	06/01/2016	\$49.33	\$7.30	\$13.30	\$0.00	\$69.93
	12/01/2016	\$50.33	\$7.30	\$13.30	\$0.00	\$70.93
For apprentice rates see "Apprentice- LABORER"						
TUNNEL WORK - COMPRESSED AIR (HAZ. WASTE) <i>LABORERS (COMPRESSED AIR)</i>	12/01/2013	\$47.58	\$7.30	\$13.30	\$0.00	\$68.18
	06/01/2014	\$48.33	\$7.30	\$13.30	\$0.00	\$68.93
	12/01/2014	\$49.08	\$7.30	\$13.30	\$0.00	\$69.68
	06/01/2015	\$49.83	\$7.30	\$13.30	\$0.00	\$70.43
	12/01/2015	\$50.58	\$7.30	\$13.30	\$0.00	\$71.18
	06/01/2016	\$51.33	\$7.30	\$13.30	\$0.00	\$71.93
	12/01/2016	\$52.33	\$7.30	\$13.30	\$0.00	\$72.93
For apprentice rates see "Apprentice- LABORER"						
TUNNEL WORK - FREE AIR <i>LABORERS (FREE AIR TUNNEL)</i>	12/01/2013	\$37.65	\$7.30	\$13.30	\$0.00	\$58.25
	06/01/2014	\$38.40	\$7.30	\$13.30	\$0.00	\$59.00
	12/01/2014	\$39.15	\$7.30	\$13.30	\$0.00	\$59.75
	06/01/2015	\$39.90	\$7.30	\$13.30	\$0.00	\$60.50
	12/01/2015	\$40.65	\$7.30	\$13.30	\$0.00	\$61.25
	06/01/2016	\$41.40	\$7.30	\$13.30	\$0.00	\$62.00
	12/01/2016	\$42.40	\$7.30	\$13.30	\$0.00	\$63.00
For apprentice rates see "Apprentice- LABORER"						
TUNNEL WORK - FREE AIR (HAZ. WASTE) <i>LABORERS (FREE AIR TUNNEL)</i>	12/01/2013	\$39.65	\$7.30	\$13.30	\$0.00	\$60.25
	06/01/2014	\$40.40	\$7.30	\$13.30	\$0.00	\$61.00
	12/01/2014	\$41.15	\$7.30	\$13.30	\$0.00	\$61.75
	06/01/2015	\$41.90	\$7.30	\$13.30	\$0.00	\$62.50
	12/01/2015	\$42.65	\$7.30	\$13.30	\$0.00	\$63.25
	06/01/2016	\$43.40	\$7.30	\$13.30	\$0.00	\$64.00
	12/01/2016	\$44.40	\$7.30	\$13.30	\$0.00	\$65.00
For apprentice rates see "Apprentice- LABORER"						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
VAC-HAUL TEAMSTERS JOINT COUNCIL NO. 10 ZONE A	12/01/2013	\$32.34	\$9.41	\$8.80	\$0.00	\$50.55
	06/01/2014	\$32.69	\$9.41	\$8.80	\$0.00	\$50.90
	08/01/2014	\$32.69	\$9.91	\$8.80	\$0.00	\$51.40
	12/01/2014	\$32.69	\$9.91	\$9.33	\$0.00	\$51.93
	06/01/2015	\$33.04	\$9.91	\$9.33	\$0.00	\$52.28
	08/01/2015	\$33.04	\$10.41	\$9.33	\$0.00	\$52.78
	12/01/2015	\$33.04	\$10.41	\$10.08	\$0.00	\$53.53
	06/01/2016	\$33.54	\$10.41	\$10.08	\$0.00	\$54.03
	08/01/2016	\$33.54	\$10.91	\$10.08	\$0.00	\$54.53
12/01/2016	\$33.54	\$10.91	\$10.89	\$0.00	\$55.34	
WAGON DRILL OPERATOR LABORERS - ZONE 1	12/01/2013	\$33.60	\$7.30	\$12.70	\$0.00	\$53.60
	06/01/2014	\$34.35	\$7.30	\$12.70	\$0.00	\$54.35
	12/01/2014	\$35.10	\$7.30	\$12.70	\$0.00	\$55.10
	06/01/2015	\$35.85	\$7.30	\$12.70	\$0.00	\$55.85
	12/01/2015	\$36.60	\$7.30	\$12.70	\$0.00	\$56.60
	06/01/2016	\$37.35	\$7.30	\$12.70	\$0.00	\$57.35
12/01/2016	\$38.35	\$7.30	\$12.70	\$0.00	\$58.35	
For apprentice rates see "Apprentice- LABORER"						
WASTE WATER PUMP OPERATOR OPERATING ENGINEERS LOCAL 4	12/01/2013	\$40.49	\$10.00	\$14.18	\$0.00	\$64.67
	For apprentice rates see "Apprentice- OPERATING ENGINEERS"					
WATER METER INSTALLER PLUMBERS & GASFITTERS LOCAL 12	03/01/2014	\$49.41	\$9.82	\$14.29	\$0.00	\$73.52
	09/01/2014	\$50.41	\$9.82	\$14.29	\$0.00	\$74.52
	03/01/2015	\$51.41	\$9.82	\$14.29	\$0.00	\$75.52
	09/01/2015	\$52.41	\$9.82	\$14.29	\$0.00	\$76.52
	03/01/2016	\$53.56	\$9.82	\$14.29	\$0.00	\$77.67
	09/01/2016	\$54.61	\$9.82	\$14.29	\$0.00	\$78.72
	03/01/2017	\$55.61	\$9.82	\$14.29	\$0.00	\$79.72
For apprentice rates see "Apprentice- PLUMBER/PIPEFITTER" or "PLUMBER/GASFITTER"						
Outside Electrical - East						
CABLE TECHNICIAN (Power Zone) OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104	09/01/2013	\$25.66	\$8.70	\$4.48	\$0.00	\$38.84
	For apprentice rates see "Apprentice- LINEMAN"					
CABLEMAN (Underground Ducts & Cables) OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104	09/01/2013	\$36.55	\$8.70	\$6.58	\$0.00	\$51.83
	For apprentice rates see "Apprentice- LINEMAN"					
DRIVER / GROUNDMAN CDL OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104	09/01/2013	\$29.94	\$8.70	\$6.05	\$0.00	\$44.69
	For apprentice rates see "Apprentice- LINEMAN"					
DRIVER / GROUNDMAN -Inexperienced (<2000 Hrs) OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104	09/01/2013	\$23.52	\$8.70	\$5.24	\$0.00	\$37.46
	For apprentice rates see "Apprentice- LINEMAN"					
EQUIPMENT OPERATOR (Class A CDL) OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104	09/01/2013	\$36.35	\$8.70	\$9.43	\$0.00	\$54.48
	For apprentice rates see "Apprentice- LINEMAN"					
EQUIPMENT OPERATOR (Class B CDL) OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104	09/01/2013	\$32.08	\$8.70	\$6.59	\$0.00	\$47.37
	For apprentice rates see "Apprentice- LINEMAN"					

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
GROUNDMAN <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	09/01/2013	\$23.52	\$8.70	\$3.72	\$0.00	\$35.94
For apprentice rates see "Apprentice- LINEMAN"						
GROUNDMAN -Inexperienced (<2000 Hrs.) <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	09/01/2013	\$19.25	\$8.70	\$2.85	\$0.00	\$30.80
For apprentice rates see "Apprentice- LINEMAN"						
JOURNEYMAN LINEMAN <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	09/01/2013	\$42.77	\$8.70	\$11.78	\$0.00	\$63.25

Apprentice - LINEMAN (Outside Electrical) - East Local 104

Effective Date - 09/01/2013

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$25.66	\$8.70	\$4.24	\$0.00	\$38.60
2	65	\$27.80	\$8.70	\$4.71	\$0.00	\$41.21
3	70	\$29.94	\$8.70	\$5.43	\$0.00	\$44.07
4	75	\$32.08	\$8.70	\$6.16	\$0.00	\$46.94
5	80	\$34.22	\$8.70	\$6.88	\$0.00	\$49.80
6	85	\$36.35	\$8.70	\$7.62	\$0.00	\$52.67
7	90	\$38.49	\$8.70	\$8.83	\$0.00	\$56.02

Notes:

Apprentice to Journeyworker Ratio:1:2

TELEDATA CABLE SPLICER <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	07/16/2012	\$26.33	\$4.18	\$2.79	\$0.00	\$33.30
TELEDATA LINEMAN/EQUIPMENT OPERATOR <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	07/16/2012	\$24.78	\$4.18	\$2.74	\$0.00	\$31.70
TELEDATA WIREMAN/INSTALLER/TECHNICIAN <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	07/16/2012	\$24.78	\$4.18	\$2.74	\$0.00	\$31.70
TREE TRIMMER <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	01/29/2012	\$17.18	\$3.37	\$0.00	\$0.00	\$20.55
This classification applies only to tree work done: (a) for a utility company, R.E.A. cooperative, or railroad or coal mining company, and (b) for the purpose of operating, maintaining, or repairing the utility company's equipment, and (c) by a person who is using hand or mechanical cutting methods and is not on the ground. This classification does not apply to wholesale tree removal.						
TREE TRIMMER GROUNDMAN <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	01/29/2012	\$15.15	\$3.37	\$0.00	\$0.00	\$18.52

This classification applies only to tree work done: (a) for a utility company, R.E.A. cooperative, or railroad or coal mining company, and (b) for the purpose of operating, maintaining, or repairing the utility company's equipment, and (c) by a person who is using hand or mechanical cutting methods and is on the ground. This classification does not apply to wholesale tree removal.

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.

