

23 MAPLE STREET HISTORIC EXTERIOR RESTORATION
Arlington, Massachusetts

May 1, 2013

PROJECT MANUAL

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Document 00100
INVITATION FOR BIDS

THE TOWN OF ARLINGTON, ACTING THROUGH THE TOWN MANAGER, WILL BE RECEIVING BIDS AT THE OFFICE OF THE TOWN MANAGER, SECOND FLOOR OF THE ANNEX OF ROBBINS MEMORIAL TOWN HALL, 730 MASSACHUSETTS AVENUE, ARLINGTON, MASSACHUSETTS 02476 IN ACCORDANCE WITH BID DOCUMENTS PREPARED BY COURTSTREET ARCHITECTS, INC., 285 PARKER STREET, NEWTON CENTRE, MASSACHUSETTS 02459. INVITES SEALED BIDS FOR THE 23 MAPLE STREET HISTORIC EXTERIOR RESTORATION, ARLINGTON, MASSACHUSETTS

Approximate value of Construction: \$100,000.
Bid Number: 13-10

Bidding procedures and award of Contract and Subcontracts are subject to the provisions of M.G.L. Chapter 149, Sections 44A to 44J inclusive; applicable sections of M.G.L. Chapter 30; and Chapter 674 of the Acts of 1981

Attention is called to the fact that not less than the minimum wage rates as hereinafter set forth shall be paid on this Project. Attention is also called to the requirements relating to worker's compensation and conditions of employment.

A. Contractor Certification for General Bidders

DCAM: HISTORIC BUILDING

Each bidder must submit with its bid a copy of the Certificate of Eligibility from the Division of Capital Asset Management showing that it is eligible to bid on the project. Each bidder also must submit an Update Statement with its bid.

Bidders must be certified by the Commonwealth of Massachusetts, Division of Capital Asset Management in category of "General Building Construction".

B. Availability of Bidding and Contract documents:

Copies of the Bidding and Contract Documents, may be obtained after 8:00 AM local time, MAY 8, 2013, during the working hours of the Purchasing Agent, Town Hall Annex, weekdays: Monday to Wednesday 8:00 AM to 4:00 PM, Thursday 8:00 AM to 7:00 PM, Friday 8:00 AM to Noon at:

Robbins Memorial Town Hall Annex
730 Massachusetts Avenue
Arlington, MA 02476

upon deposit of cash, check or money order payable to the Town of Arlington in the amount of Fifty Dollars (\$50.00) per set. The deposits will be refunded upon return of the documents in good condition within thirty (30) calendar days after opening of the General Bids, otherwise the deposit shall be the property of the Awarding Authority.

Additional sets may be purchased from the Awarding Authority by written request and upon payment of Fifty Dollars (\$50.00) per set, non-refundable. There is a Twenty Five (\$25) Non Refundable mailing fee.

Bid documents are available for viewing & downloading on the Town website: www.arlingtonma.gov/purchasing

The Contract Documents may be seen, but not removed from the following locations, during regular office hours:

Construction Market Data - Plan Room
75 Second Avenue, Suite 320
Needham MA 02194

F.W.Dodge Plan Room
24 Hartwell Avenue
Lexington, MA 02173

Court Street Architects
285 Parker Street
Newton Centre, MA 02459

C. Pre-Bid conference

There will be a pre-bid conference on Tuesday May 14, 2013 @ 10AM at 23 Maple Street. Contractors are encouraged to attend.

D. Bid Proposals

All General Bid shall be accompanied by a bid deposit in an amount not less than five percent (5%) of the value of the bid. Bid deposits, payable to the Town of Arlington shall be in the form of either a BID BOND, or a CERTIFIED or TREASURER'S CHECK issued by a responsible bank or trust company. Cash and company checks are not acceptable.

The Town of Arlington is exempt from sales and federal excise tax; bidders should not include taxes in figuring or in references to any bid.

SEALED BIDS FOR THE GENERAL CONTRACT listed above will be received by the Office of the Purchasing Agent, Town of Arlington, Robbins Memorial Town Hall Annex, 730 Massachusetts Avenue, Arlington, MA until 11:00 AM. local time, Thursday, May 23, 2013.

A one hundred percent (100%) Performance Bond and a one hundred percent (100%) Labor and Materials Payment Bond will be required from the successful bidder.

Wages are subject to minimum wage rates pursuant to M.G.L. Chapter 149, Sections 26 to 27D inclusive.

E. Contract Award

Upon receipt of bids, the Awarding Authority must determine, from information submitted on the Update Statement, whether the apparent low bidder is responsible and can be awarded the Contract.

The Awarding Authority reserves the right to waive any informalities or to reject any or all bids if it be in the public interest so to do.

No bidder may withdraw bid for at least thirty (30) business days after the date set for receipt of General Bids.

Work shall begin within seven (7) calendar days from receipt by Contractor of Notice to Proceed. Work shall be substantially completed in 120 days from receipt by Contractor of Notice to Proceed.

End of Document

Document 00200

INSTRUCTIONS TO BIDDERS

ARTICLE 1 - REFERENCE TO GENERAL LAWS

- 1.1 Wherever in the Contract Documents reference is made to General Laws of Massachusetts, (MGL), it shall be construed to include all amendments thereto effective as of the date of issue of ADVERTISEMENT TO BID on the proposed work.

ARTICLE 2 - PREFERENCE IN CONTRACT AWARD

- 2.1 The attention of bidders is called to MGL Chapter 149, Section 179A, which requires persons contracting to do public work to give preference in awarding contracts to persons who are citizens of the United States and to partnerships all of whose members are such citizens.

ARTICLE 3 - ADDENDA AND INTERPRETATION

- 3.1 All questions by prospective bidders as to the interpretation of the Contract Documents shall be submitted in writing to the Architect's office and should be in its possession at least ten working days before the date set for the receipt of general bids. Said office will then mail any necessary addenda to bidders who have taken out plans at the address given by them before said date, interpretations of all questions so raised which in its opinion require interpretation. Oral interpretations given to prospective bidders will have no standing. It shall be the sole responsibility of bidders to ascertain the existence of any and all addenda issued by the Awarding Authority whether or not the addenda is presented or mailed to or received by the bidder.

ARTICLE 4 - EXAMINATION OF SITE AND DOCUMENTS

- 4.1 All bidders shall visit the site and examine all contract documents before submitting bids. All bidders shall inspect and be thoroughly familiar with same and conditions under which work will be carried out. Neither the Owner nor the Architect will be responsible for errors, omissions or changes for extra work arising from the General or Subcontractors' failure to familiarize themselves with contract documents or existing conditions. By submitting a bid, the bidder agrees and warrants that he has examined the site and the contract documents, and that he is familiar with the conditions and requirements of both and where they require, in any part of the work, a given result to be produced, and that the contract documents are adequate and that he shall produce the required result.

ARTICLE 5 - GENERAL BIDDER'S PRE QUALIFICATION

- 5.1 General bids must be accompanied by a Certificate of Eligibility issued by the Division of Capital Asset Management (formerly Division of Capital Planning and Operations - DCPO) showing that the Bidder has been approved to bid on projects

of the size and type of the named project, and by a Contractor Update Statement (Form CQ3).

- 5.2 It is the bidder's responsibility to obtain the necessary forms from the Division of Capital Asset Management and make application in sufficient time for the Division of Capital Asset Management to evaluate the application and issue a Certificate of Eligibility.
- 5.3 The Contractor Update Statement is not a public record as defined in MGL Chapter 4, Section 7 and will not be open to public inspection.

ARTICLE 6 - PREPARATION AND SUBMISSION OF BIDS

6.1 General bids shall be for the complete work as specified and shall include the names of Filed Sub-bidders and the amounts of their sub-bids. The General Contractor shall be selected on the basis of such general bids. Sub-bids for each trade designated on the FORM FOR GENERAL BID shall be for the complete work of the trade as specified and filed with the Awarding Authority as provided in the ADVERTISEMENT FOR BID.

6.2.1 Each sub-bid for trades designated in Item 2 of the FORM FOR GENERAL BID shall be submitted upon the FORM FOR SUB-BID provided by the Awarding Authority. All blank spaces shall be filled in, in ink or typewritten, in words or figures. Use figures alone only where no space is provided for words. The sub-bid shall be signed by the sub-bidder. The FORM FOR SUB-BID, including the required bid deposit, shall be enclosed in a sealed envelope with the following plainly marked on the outside:

“SUB-BID FOR
{Title of Filed Sub-Bid and Specification Section Numbers}

PROJECT: 23 MAPLE STREET HISTORIC EXTERIOR RESTORATION

6.2.2 If the bid is mailed, the sub-bidder shall enclose its sealed bid in an outer envelope, addressed as follows:

“FROM
(Bidder's Name and Business Address)

PROJECT: 23 MAPLE STREET HISTORIC EXTERIOR RESTORATION

TRADE:
(Trade for which bid is submitted)

TO: Office of the Purchasing Agent
Robbins Memorial Town Hall Annex
730 Massachusetts Avenue, Arlington, MA 02476

6.3.1 Each general bid shall be submitted on the FORM FOR GENERAL BID furnished by the Authority. All blank spaces shall be filled in, in ink or typewritten, in words or figures. Use figures alone only where no space is provided for words. The general bid shall be signed by the general bidder. The FORM FOR GENERAL

BID, including the required bid deposit, shall be enclosed in a sealed envelope with the following plainly marked on the outside:

“GENERAL BID FOR
23 MAPLE STREET HISTORIC EXTERIOR RESTORATION“

- 6.3.2 If the bid is mailed, the bidder shall enclose its sealed bid in an outer envelope, addressed as follows:

FROM“
(Bidder's Name and Business Address)

PROJECT: 23 MAPLE STREET HISTORIC EXTERIOR RESTORATION

TO: Office of the Purchasing Agent
Robbins Memorial Town Hall Annex
730 Massachusetts Avenue,
Arlington, MA 02476

- 6.4 All bidders are cautioned to allow ample time for transmittal of bids. Bids received after the specified time will not be accepted or recognized. The time of receipt will determine the acceptability of mailed bids, regardless of postmark.
- 6.5 No oral, written or telegraphic amendments to the bid will be received or recognized. A bidder wishing to amend a bid after transmittal to the Awarding Authority may do so only by amending the bid document itself prior to the time for opening bids.
- 6.6 Any bid may be withdrawn by the bidder or his representative duly authorized in writing prior to the time scheduled for the opening of such bids or authorized postponement thereof. No bid may be withdrawn for thirty (30) days, Saturdays, Sundays and legal holidays excluded, after opening of bids.
- 6.7 Bids will be opened and read publicly at the time and place scheduled for the opening of such bids or the authorized postponement thereof. Bidders or their authorized representatives are invited to be present. Bidding results will not be given out over the telephone; results will be made available by written request to the Awarding Authority.

ARTICLE 7 - ALTERNATES

NOT USED

ARTICLE 8 - SALES TAX

- 8.1 The Town of Arlington is a municipality exempt from certain taxes. It is therefore required that the Contractor and all Subcontractors purchasing taxable goods or services make known to suppliers the tax-exempt status of the Owner, in order that such taxes will not be applied to the goods under Contract. The Awarding Authority will provide the necessary evidence and certificates of its tax-exempt status to the General Contractor at the Pre-construction Conference.

ARTICLE 9 - BID DEPOSIT REQUIREMENTS AND PROCEDURES

- 9.1 The following matters respecting bid deposits are governed by MGL Section 44B of Chapter 149. Every general bid and every sub-bid not accompanied by the prescribed bid deposit will be rejected.
- 9.2.1 Each general bid and each sub-bid for a trade designated below must be accompanied by a deposit in the form of a bid bond, or cash or a certified check on, or a treasurer's or cashier's check issue by, a responsible bank or trust company, payable to the [name]. A bid bond shall be (a) with a surety company qualified to do business in the Commonwealth of Massachusetts and satisfactory to the Awarding Authority, and (b) conditioned upon the faithful performance by the principal of the agreements contained in the bid. The amount of such bid deposit shall be five percent (5%) of the amount of the bid.
- 9.3 All bid deposits of general bidders, except those of the three (3) lowest responsible and eligible general bidders, shall be return within ten (10) days, Saturdays, Sundays and legal holidays excluded after the opening of the general bids. The bid deposits of the three (3) lowest responsible and eligible general bidders shall be returned upon the execution and delivery of the contract, or, if no award made, upon the expiration of thirty (30) calendar days after the date of opening General Bids; except that, any selected general bidder fails to perform its agreement to execute contract and furnish a performance bond and also a labor and materials or payment bond as stated in its bid in accordance with MGL Section 44E of Chapter 149, its deposit shall become and be the property of the Awarding Authority as liquidated damages, provided that the amount of the bid deposit which becomes the property of the Awarding Authority shall not, in any event, exceed the difference between its bid price and the bid price of the next lowest responsible and eligible bidder; and provided further that, in case of death, disability, bona fide clerical or mechanical error of a substantial nature, or other similar unforeseen circumstances affecting the general bidder, its bid deposit shall be returned to him/her named in the general bids.
- 9.4 All bid deposits of sub-bidders, except those of the three (3) lowest responsible and eligible sub-bidders, shall be return within ten (10) days, Saturdays, Sundays and legal holidays excluded after the opening of the general bids. The bid deposits of the three (3) lowest responsible and eligible filed sub-bidders shall be returned upon the execution of the General Contract, except that, if a selected sub-bidder fails to perform its agreement to execute a sub-contract with the general bidder selected as the General Contractor, contingent upon the execution of the general contract, and, if requested to do so in the general bid by such general bidder, to furnish a performance and payment bond as stated in his sub-bid in accordance with MGL Section 44F(2) of Chapter 149, the bid deposit of such sub-bidder shall become and be the property of the Awarding Authority as liquidated damages, provided that the amount of the bid deposit which becomes the property of the Awarding Authority shall not, in any event, exceed the difference between its sub-bid price and the sub-bid price of the next lowest responsible and eligible sub-bidder; and provided further that, in case of death, disability, bona fide clerical or mechanical error of a substantial nature, or other similar unforeseen circumstances

affecting the general bidder, its bid deposit shall be returned to him/her named in the general bids.

- 9.5 In addition to the provisions for the return of bid deposits in the foregoing Paragraphs 9.3 and 9.4 upon receipt of a bid bond in an amount not less than the amount of the required bid deposit, the Awarding Authority shall return any bid deposit of a bidder forthwith after public opening of bids. The bid bond shall be in an amount and in the form provided in Paragraph 9.2.

ARTICLE 10 - REJECTION OF BIDS

- 10.1 The Awarding Authority reserves the right to reject any or all General Bids, if it be in the public interest to do so. The Awarding Authority reserves the right to reject any sub-bid on any trade, if it determines that such sub-bid does not represent the sub-bid of a person competent to perform the work as specified, or that less than three (3) such sub-bids were received and that the prices are reasonable for acceptance without further competition.
- 10.2 Sub-bids which are restricted to use by one General Contractor and are deemed to be unrealistic in that the proposed price is substantially less or more than the actual cost to complete all the work specified in that Section of the Specifications will be considered as not responsive to the Invitation to Bid and shall be rejected (Massachusetts Department of Labor and Industries Ruling N°.136 and N°.169.)
- 10.3 Within five (5) days, Saturdays, Sundays and legal holidays excluded, after opening of sub-bids, the Awarding Authority will reject every sub-bid which is not accompanied by the required bid deposit or which otherwise does not conform to the statutory requirements, or which is on a form not completely filled in, or which is incomplete, conditional or obscure, or which contains any addition not called for, provided, however, that the failure of the Awarding Authority to reject such a sub-bid within such period shall not validate such a sub-bid nor preclude the Awarding Authority from subsequently rejecting it.
- 10.4 Every general bid which is not accompanied by the required bid deposit, or which otherwise does not conform to the statutory requirements, or which is on a form not completely filled in, or which is incomplete, conditional or obscure, or which contains any addition not called for, shall be invalid; and the Awarding Authority shall reject every such bid.
- 10.5 No general bid or sub-bid shall be rejected because of the failure to submit prices for, or information relating to, any item or items for which no specific space is provided in the bid form furnished by the Awarding Authority, but this sentence shall not be applicable to any failure to furnish prices or information required by MGL Chapter 149 Section 44E (in the case of general bids) or MGL Section 44F (in the case of sub-bids) of Chapter 149 Chapter 149. No general bid shall be rejected (1) because the sum of the prices for all work of the General Contractor and sub-bids does not equal the general bid price set forth on the bid form for that purpose or (2) because of error in setting forth the name, the sub-bid price of a sub-bidder, or the total sub-bids as long as the sub-bidder or sub-bidders

designated are clearly identifiable, or (3) because the plans and specifications do not accompany the bid or are not submitted with the bid.

- 10.6 Any unit price bid that contains a unit price which is unduly high or low may be rejected as unbalanced. In the event of a discrepancy between the Arabic numerals and the written words, if the intent of the bidder is not clear as finally determined by the Awarding Authority, the written word shall prevail.

ARTICLE 11 - METHOD OF AWARD

- 11.1 The general contract will be awarded to the lowest responsible and eligible bidder on the basis of the proposed base contract price and accepted alternates. Attention is directed to the provisions of MGL Chapter 149 Section 44A; defining the terms “responsible” and “eligible”
- 11.2 Award of the general contract will be made within thirty (30) days, Saturdays, Sundays and legal holidays excluded, after the opening of the general bids.
- 11.3 The successful bidder will be notified in writing, by mail or otherwise, that his bid has been accepted and that he has been awarded the contract.
- 11.4 If the bidder selected as the General Contractor fails to perform his agreement to execute the contract in accordance with the terms of his general bid and furnish a performance bond and also a labor and materials or payment bond as stated in his general bid, an award will be made to the next lowest responsible and eligible general bidder, subject to the provisions of the aforesaid MGL Chapter 149, Sections 44A-44H. The thirty (30) day time limit will not apply to a second or subsequent award made after the expiration of the time limit with the consent of said next lowest responsible and eligible bidder and made because the original award made within the time limit was invalid, or because the general bidder fails to execute the general contract or to provide a performance bond and labor and materials or payment bond.

ARTICLE 12 - EXECUTION OF CONTRACTS

- 12.1 All bidders' attention is called to the agreements and certifications made by general bidders and sub-bidders in the required FORM FOR GENERAL BID and FORM FOR SUB-BID, respectively.
- 12.2 Bonds required of the General Contractor must be delivered to the Awarding Authority not later than the time of execution of the contract. An attorney-in-fact who executes the required bond on behalf of the surety must affix thereto a certified and current copy of his power of attorney.
- 12.3 A performance and payment bond furnished by the Sub-Contractor, at the request of a General Contractor set forth in the general bid form, shall be for the benefit of the General Contractor; shall secure the performance of the subcontract by the Sub-Contractor; and shall indemnify and hold harmless the General Contractor and the surety or sureties under the labor and materials or payment bond furnished by such General Contractor to the Awarding Authority against (1) any and all loss and

expense arising out of any and all claims in connection with the performance of said subcontract which would be required to be paid under the labor and materials or payment bond furnished by the General Contractor to the Awarding Authority and (2) attorney's fees in the event that the Sub-Contractor, after notice, fails to assume the defense of and defend such claims.

- 12.4 The contract between the General Contractor and each Sub-Contractor shall be in the form contained in the Contract Documents following these Instructions, as required by MGL Chapter 149, Section 44F(4)(c).

ARTICLE 13 - COMMENCEMENT OF WORK AND TIME OF COMPLETION

- 13.1 It is agreed that time is of the essence of this Contract. The selected General Bidder must agree to commence and prosecute the Work under this Contract in conformance with the conditions of the Contract Documents and to substantially complete 90 days from receipt by Contractor of Notice to Proceed.

ARTICLE 14 - LIQUIDATED DAMAGES

- 14.1 Due to the expenses incurred by the Awarding Authority for the continued use of the existing library, the Awarding Authority may assess Liquidated Damages in the amount of Two Hundred Dollars per day (\$200/day), if the project is not completed within the Contract Time of 90 days. Any authorized extension of time will delay the commencement of Liquidated damages. The Contract Time may be extended due to suspensions, delays, interruptions or failures caused by the Owner as provided for by MGL Chapter 30, Sections 39O and 39P, and for changes in the scope of the Contract due to differing subsurface or latent physical conditions as provided for by MGL Chapter 30, Section 39N.

End of Document

Document 00410
FORM FOR GENERAL BID

BID OF: _____
(Name of General Bidder)

PROJECT: 23 MAPLE STREET HISTORIC EXTERIOR RESTORATION
TO: Town of Arlington
c/o Office of the Purchasing Agent
Town Hall Annex
730 Massachusetts Ave.,
Arlington, MA 02476

A. The undersigned Bidder hereby offers and agrees to provide all labor, services, products, and materials required in the performance of Work to complete the following named project:

23 MAPLE STREET HISTORIC EXTERIOR RESTORATION,
Arlington, MA.

to the satisfaction of the Awarding Authority and the Architect and in accordance with the accompanying Bidding and Contract Documents, dated: August 11, 2003, as prepared by:

Court Street Architects
285 Parker Street, Newton Centre, MA 02459

for the Contract price specified below, subject to additions and deductions according to the terms of the Contract Documents.

B. Bid Sum: The proposed total contract price is: (Base Bid - NOT INCLUDING ALTERNATES)
..... Dollars

(total contract price amount in words, which governs)

(\$)

(total contract price amount in numbers)

C. Addenda: The Bidder acknowledges receipt of addenda numbered as follows, and has taken them into consideration in the preparation of this Bid:

(.....) (.....) (.....) (.....) (.....) (.....) (.....)

(indicate addendum numbers received)

D. Alternates: The undersigned Bidder submits the following alternate prices, as described in the Bidding Documents, which are to be added to or deducted from the above stated Bid Proposal, as may be selected by the Awarding Authority for inclusion into this Contract. (In the event that an alternate does not affect the Contract Price, the Bidder shall remark "No Change".)

Add Alternates

For Alternate No. 1:

\$.....

E. Subdivision of Bid: The subdivision of the proposed contract price is as follows:

Item 1. The work of the General Contractor, being all work other than that covered by Item 2.

..... Dollars

(Item 1 price amount in words)

(\$)

(Item 1 price amount in numbers)

Item 2: The work of the Sub-Bidders Indicated by Class of Work and Name of Filed Sub-Bidder.

<u>Trade and Sub-Bidder Name</u>	<u>Amount</u>	<u>Bond Required</u>
Roofing and Flashing	\$	YES / NO
.....		
Painting	\$	YES / NO
.....		

Failure to edit any or all spaces in the Bonds Required column will be construed as an entry of the word "NO".

F. Filed Sub-Bidders: The undersigned agrees that each of the above named sub bidders will be used for the work indicated at the amount stated, unless substitution is made. The undersigned further agrees to pay the premium for the performance and payment bonds furnished by sub-bidders as requested herein and that all of the cost of such premiums is included in the amount set forth in Item 1 of this bid.

The undersigned agrees that if he or she is selected as General Contractor, it will promptly confer with the Awarding Authority on the question of sub-bidders; and that the Awarding Authority may substitute for any sub-bid listed above a sub-bid duly filed with the Awarding Authority by another sub-bidder for the sub-trade against whose standing and ability the under signed makes no objection; and that the undersigned will use all the finally selected sub-bidders at the amounts named in their respective sub-bids and be in every way as responsible for them and their work as if that had been originally named in this general bid, the total contract priced being adjusted to conform thereto.

G. Unit prices: Should certain additional work be required, or should the quantities of certain classes of Filed-sub-bid work be increased or decreased from those upon which the Filed-

Sub Bid is based, only by order or approval of the Architect and Awarding Authority, the undersigned agrees that the following supplemental unit prices shall be the basis of payment to him or credit to the Awarding Authority for such work, or increase or decrease in the work. Unit prices given shall represent the exact net amount per unit to be paid the Filed-Sub-Bid Subcontractor (in the case of additions or increases) or credited to the Awarding Authority in the case of decreases, No additional adjustment will be allowed for overhead, profit, insurance, compensation insurance or other direct or indirect expenses of the work of the Filed-Sub-Bid Subcontractor or Sub-subcontractor. Refer to Sections listed in parenthesis below for description and measurement of unit price items. The Awarding Authority shall have the right to reject any or all proposed unit prices at any time prior to signing the Agreement, in which case the cost of extra work shall be as determined by one of the other methods set forth in the General Conditions. The given unit price amounts for the work listed in the Schedule of Unit Prices” shall be the same amount for increases or decreases for such units of work.

H. Schedule of Unit Prices

	Item	Spec. Section	Unit of Measure	FSB Unit Bid		Bid Price
				Cost	Quantity	
1.	Replacement of clapboard siding	06200	Square feet of wall surface.	\$.....	50 sf	\$.....

Contract on the following maximum mark-up percentages (Paragraph I).

I. Overhead and Profit: The undersigned Bidder agrees to the maximum mark-up percentages for overhead, profit and taxes, computed on the total of labor and materials only, for additional work authorized by the Awarding Authority during the performance of the Work.

1. For the General Contractor, allow a maximum of fifteen percent (15%) on Work of his/her own employees and agents; further additional overhead and profit costs will not be allowed, for non-filed subcontractors, vendors and employees of the Contractor.
2. For the General Contractor, allow a maximum of Five percent (5%) on total payments made to Filed Sub-Contractors.
3. For Filed Sub-Contractors, allow a maximum of Ten percent (10%) on their own work and a maximum of Five percent (5%) on payments made to their Filed Sub-Sub-Contractors.
4. For Filed Sub-Sub-Contractors, allow a maximum of Five percent (5%) on their own work.

J. Bid Security: Accompanying this proposal is a bid surety in the form of: (Bid bond) (Certified check) (Treasurer’s check) (Cashier’s check), payable to *Town of Arlington* in the amount of

..... Dollars

(Bond amount in words, which governs)

(\$)

(Bond amount in numbers)

- K. Examined Conditions: The undersigned Bidder hereby declares that he or she has visited the site and the conditions present and has carefully examined the Contract Documents, together with all Addenda issued, received and acknowledged below, and has familiarized himself or herself with the legal requirements (federal, state, and local laws, ordinances, rules and regulations) and other conditions which may affect the cost, progress or performance of Work, and has made independent investigations, deemed necessary by the Bidder.
- L. Contract: The undersigned agrees that, if he or she is selected as the Contractor, he/she will within five days, Saturdays, Sundays and legal holidays excluded, after presentation thereof by the Awarding Authority, execute a contract in accordance with the terms of this general bid and furnish a Performance Bond and also a Labor and Material or Payment Bond, each of a surety company qualified to do business under the laws of the Commonwealth of Massachusetts and satisfactory to the Awarding Authority and each in the sum of the contract price, the premiums for which are to be paid by the Contractor and are included in the contract price.
- M. Furnish Labor: The undersigned hereby certifies that he/she is able to furnish labor that can work in harmony with all other elements of labor employed or to be employed on the work and he/she will comply fully with all laws and regulations applicable to awards made subject to Massachusetts General Laws (M.G.L.) Chapter 149, Section 44A.
- N. Withdraw bids: The Bidder agrees that this Bid shall be good and may not be withdrawn for a period of 30 calendar days after the scheduled closing time for receipt of bids.
- O. Non-collusion: The undersigned Bidder certifies under the penalty of perjury, that he/she, and his/hers employees and agents of the Bidder, are the only persons interested in this proposal, that this proposal is made without any connection with any other person making any bid for the same work; that no person acting for, or employed by, the Awarding Authority is directly or indirectly interested in this proposal, or in any contract which be made under it, or in expected profits to arise therefrom; and without directly or indirectly influencing or attempting to influence any other person or corporation to bid or to refrain from bidding or to influence the amount of the bid of any other person or corporation; and that this proposal is made in good faith without collusion or connection with any other person bidding for the same work; and that this proposal is made with distinct reference and relation to the plans and specifications prepared for this contract and herein mentioned. The undersigned further declares that in regard to the conditions affecting the work to be done and the labor and materials needed, this proposal is based solely on their own investigation and research and not in reliance upon any representation of any employee, officer or agent of the Awarding Authority.
- P. Certification: Attach copy of Division of Capital Planning and Operations (DCPO) Certificate of Eligibility Form CQ7 and Contractor Update Statement Form CQ3, as required by Massachusetts General Law, Chapter 149, Section 44D.

- Q. Affidavit of eligibility to perform work in the Commonwealth of Massachusetts: The undersigned certifies under penalty of perjury that the said undersigned is not presently debarred from doing public construction work in the Commonwealth under the provisions of Section 29F of Chapter 29, or any other applicable debarment provisions of any other chapter of the General Laws or any rule or regulation promulgated hereunder.
- R. Authority Rights: The Bidder understands the Awarding Authority right to reject any and all bids.

Should the Invitation to Bid, Instructions to Bidders, Form for General Bid, Conditions of the Contract, Plans or Specifications require submission of special data to accompany the bid, the Awarding Authority reserves the right to rule the bidder's failure to submit such data an informality and to receive said data subsequently, within a reasonable time as set by the Awarding Authority.

Date of Bid:
(Name of Bidder - Company Name)

BY
(SIGNATURE of person signing Bid & Title)

.....
(PRINTED Name of person signing Bid & Title)

.....
(Business Mailing Address)

.....
(City/Town, State and Zip Code)

Corporate Seal
(Business Telephone Number)

Note: If the bidder is a corporation, indicate state of incorporation under signature and affix corporate seal; if partnership, give full names and residential address of all partners; and if an individual give residential address if different from business address.

End of Document

BID SECURITY FORM

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

_____, as Principal, and
(insert name of bidder)

_____, as Surety, are hereby
(insert name of surety)

held and firmly bound unto Town of Arlington, Massachusetts, acting through its Town Manager, as Owner, in the penal sum of

\$ _____ dollars (\$ _____)

for the payment of which, well and truly to be made, we hereby jointly and severally bind ourselves, our heirs, executors, administrators, successors, and assigns.

The condition of this obligation is such that whereas the Principal has submitted to the Owner a certain Bid, attached hereto and hereby made a part hereof, to enter into a contract in writing, hereinafter referred to as the "AGREEMENT" for 23 MAPLE STREET HISTORIC EXTERIOR RESTORATION, Arlington, Massachusetts.

NOW THEREFORE,

- (a) If said BID shall be rejected, or in the alternative,
- (b) If said BID shall be accepted and the Principal shall duly execute and deliver the form of AGREEMENT attached hereto and shall furnish the specified bonds for the faithful performance of the Contract and for the payment for labor and materials furnished for the performance of the AGREEMENT, then this obligation shall be void, otherwise it shall remain in full force and effect; it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder in no event shall exceed the amount of this obligation as herein stated.

The Surety, for value received, hereby agrees that the obligations of said Surety and its bond shall be in no way impaired or affected by any extensions of the time within which the Owner may accept such BID; and said Surety does hereby waive notice of any such extensions.

23 MAPLE STREET HISTORIC EXTERIOR RESTORATION
Arlington, Massachusetts

May 1, 2013

IN WITNESS WHEREOF, the parties to these presents have duly executed this bond on the
_____ day of _____, 20 _____.

(SEAL)

(Name of Principal)
By: _____

(SEAL)

(Name of Surety)
By: _____

Sealed and delivered
in the presence of

CERTIFICATE OF VOTE

I, _____, Clerk of
_____, hereby certify
that, at a meeting of the Board of Directors of said Corporation duly held on
_____ 20 _____, at which a quorum

(DATE MUST BE EARLIER THAN DATE OF CONTRACT)

was present and voting throughout, the following vote was duly passed and is now in full force and effect:

"VOTED: That _____
(Name of Officer authorized to sign for Corp.)

be and be hereby is authorized, directed and empowered for, in the name and on behalf of this Corporation, to sign, seal with the corporate seal, execute, acknowledge and deliver all contracts, bonds and other obligations by such

_____ to be valid and binding upon this
(Name of Officer)

Corporation for all purposes, and that a certificate of the Clerk of the Corporation setting forth this vote shall be delivered to the ___ and that this vote shall remain in full force and effect unless and until the same has been altered, amended or revoked by a subsequent vote of such directors and a certificate of such later vote attested by the Clerk of this Corporation is delivered to the

(Name of Officer)

I further certify that _____

is duly elected _____ of said Corporation.
(Name of Officer)

(Title)

Signed _____

(Clerk-Secretary)

Place of Business _____

Date of Contract _____

AFFIX CORPORATE SEAL

COUNTERSIGNATURE: _____

(Name and Title of Officer)

In the event that the Clerk or Secretary is the same person as the Officer authorized to sign that contract or other instrument for the Corporation, this certificate must be countersigned by another officer of the Corporation.

END OF DOCUMENT

NONCOLLUSION AFFIDAVIT

State of _____)
County of _____)

_____, being first duly sworn,
(Name of Affiant)
deposes and says that:

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

Signed _____

Subscribed and sworn to me

this _____ day of _____, 20 __.

(Title)

My commission expires _____

23 MAPLE STREET HISTORIC EXTERIOR RESTORATION

ARLINGTON, MASSACHUSETTS

THIS AGREEMENT made the _____ in the year Two Thousand
and _____ by and between _____

_____ hereinafter called the Contractor and the _____

_____ as represented by its duly appointed _____

_____ hereinafter called the Owner.

WITNESSETH that the Contractor and the Owner for the considerations hereinafter named and agree as follows:

ARTICLE 1 - SCOPE OF WORK - The Contractor shall furnish all the material and perform all of the work shown on the Drawings and described in the Specifications entitled CONTRACT FOR 23 MAPLE STREET HISTORIC EXTERIOR RESTORATION, ARLINGTON, MASSACHUSETTS prepared by Courtstreet Architects, Inc., acting as and in these Contract Documents entitled the Architect, and shall do everything required by this Contract, the General Conditions of the Contract, the Specifications and the Drawings.

ARTICLE 2 - TIME AND COMPLETION - The work to be performed under this Contract shall be commenced on or before _____ and shall be finally completed _____.

ARTICLE 3 - THE CONTRACT SUM - The Owner shall pay the Contractor for the performance of the Contract, subject to additions and deductions provided therein in current funds as

follows: _____
_____ Dollars (\$ _____).

The Contract Price is subdivided as follows:

Item 1: The Work of the General Contractor, being all work other than that covered by Item 2.

Dollars

(\$ _____)

Item 2: Filled Sub-Contractors as follows:

ARTICLE 6 - PROGRESS PAYMENTS - Within fifteen (15) days after receipt from the Contractor at the place designated by the Awarding Authority, if such a place is so designated, of a periodic estimate requesting payment of the amount due for the preceding month, the Awarding Authority will make a periodic payment to the Contractor for the work performed during the preceding month and for the materials not incorporated in the work, but delivered and suitably stored at the site (or some location agreed upon in writing) to which the Contractor has title or to which a sub-contractor has title and has authorized the Contractor to transfer title to the Awarding Authority, less (1) a retention based on its estimate of the fair value of its claim against the Contractor and less (2) a retention for direct payments to sub-contractors based on demands for same.

There shall be a five percent (5%) retention on each approved amount of the periodic payment. Payment schedules, retainage, release of retainage, direct payment claims, etc., shall be as per M.G.L., Chapter 30, Section 39K, as amended, and Section 39F. Sub-surface latent conditions shall be as per M.G.L., Chapter 149, Section 39N, including any subsequent amendments.

ARTICLE 7 - THE CONTRACT DOCUMENTS - The General Conditions of the Contract, the Specifications and the Drawings, together with this Agreement, for the Contract, and they are as fully a part of the Contract as if hereto attached or herein repeated. Drawings and Specifications titled: 23 MAPLE STREET HISTORIC EXTERIOR RESTORATION, August 11, 2003
Arlington, Massachusetts.

ARTICLE 8 - INCORPORATION OF STATUTES BY REFERENCE: If statutes of the Commonwealth of Massachusetts in any way relating to the construction, alterations, repair and installation of public works, particularly with reference to labor and labor rates, they shall be strictly complied with by the Contractor and it is understood that all such statutes are incorporated by reference in this Contract.

ARTICLE 9 - TIME OF COMPLETION: The Contractor shall commence work under this Contract on the date specified in the written "Notice to Proceed" of the Owner and shall bring the work to substantial completion within the dates set forth in the "Instructions to Bidders."

ARTICLE 10 - It is expressly agreed that this Agreement is to be executed for and in behalf of the Owner by the members of its Board of Aldermen and any of its appointees and; that such persons are acting in a representative capacity for and in behalf of the Owner; and that such persons shall not incur any personal liability hereunder.

By signing this Contract, the Contractor certifies under the penalties of perjury that he/she has complied with all laws of the Commonwealth relating to taxes.

IN WITNESS WHEREOF, the parties hereto have caused this instrument to be executed.

CONTRACTOR

AWARDING AUTHORITY

Name of Contractor

The Town of Arlington

Address

By:
Name and Seal

Title

By:
Name and Seal

Attest:

Witness

Date

(If a corporation, attach to each signed Contract a notarized copy of the corporate vote authorizing the signatory to sign this Contract.)

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENT: That we

(Name of Contractor)

a

(Corporation, Partnership or Individual)
hereinafter called "Principal" and

(Surety)
of _____, State of _____ hereinafter called

the "Surety", are held and firmly bound into

The Town of Arlington, Massachusetts

(Owner)
acting through its Acting Town Manager,

Arlington, Massachusetts

(City and State)
hereinafter called "Owner", in the penal sum of

_____ Dollars (\$))

in lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that Whereas, the Principal entered into a certain contract with the Owner, dated _____ day of _____, 20_____, a copy of which is hereto attached and made a part hereof for the construction of

23 MAPLE STREET HISTORIC EXTERIOR RESTORATION,
Arlington, Massachusetts.

NOW, THEREFORE, if the Principal shall well, truly and faithfully perform its duties, all the undertakings, covenants, terms, conditions, and agreements of said contract during the original term thereof, and any extensions thereof which may be granted by the Owner, with or without notice to the Surety, and if he shall satisfy all claims and demands incurred under such contract, and shall fully indemnify and save harmless the Owner from all costs and damages which it may suffer by reason of failure to do so, and shall reimburse and repay the Owner all outlay and expense which the Owner may incur in making good any default, then this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED, FURTHER, that the said Surety, for value received hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract or to the work to be performed thereunder or the specifications accompanying the same shall in any way affect its obligation of this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the contract or to the work or to the specifications.

PROVIDED, FURTHER, that no final settlement between the Owner and the Contractor shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

IN WITNESS WHEREOF, the parties to these present have duly executed in this bond on the ___ day of ___, 20_____.

ATTEST:

(Principal)

By _____
(Secretary)

(Address-Zip Code)

(Seal)

Witness as to Principal

(Address-Zip Code)

Arlington, Massachusetts

ATTEST:

(Surety)

By _____
(Surety)

(Secretary)

(Address-Zip Code)

Witness as to Surety

(Seal)

(Address-Zip Code)

NOTE: Date of bond must not be prior to date of Contract. If Contractor is a Partnership, all partners should execute Bond.

END OF DOCUMENT

LABOR AND MATERIALS PAYMENT BOND

KNOW ALL MEN BY THESE PRESENT: That we

(Name of Contractor)
a

(Corporation, Partnership or Individual)
hereinafter called "Principal" and

(Surety)
of _____, State of _____ hereinafter called
the "Surety", are held and firmly bound into
The Town of Arlington, Massachusetts

(Owner)
acting through its Acting Town Manager,
Arlington, Massachusetts

(Town and State)
hereinafter called "Owner", in the penal sum of

_____ Dollars (\$))

in lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that Whereas, the Principal entered into a certain contract with the Owner, dated the _____ day of _____, 2003 _____, a copy of which is hereto attached and made a part hereof for the construction of

23 MAPLE STREET HISTORIC EXTERIOR RESTORATION,
Arlington, Massachusetts

NOW, THEREFORE, if the Principal shall promptly make payment to all persons, firms, subcontractors, and corporations furnishing materials for or performing labor in the prosecution of the work provided for in such contract, and any authorized extension or modification thereof, including all amounts due for materials, lubricants, oil, gasoline, coal and coke, repairs on machinery, equipment and tools, consumed or used in connection with the construction of such work, and all insurance premiums on said work, and for all labor, performed in such work whether by subcontractor or otherwise, then this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED, FURTHER, that the said Surety, for value received hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract or to the work to be performed thereunder or the specifications accompanying the same shall in any wise affect its obligation on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the contract or to the work or to the specifications.

PROVIDED, FURTHER, that no final settlement between the Owner and the Contractor shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

IN WITNESS WHEREOF, the parties to these present have duly executed in this bond on the ___ day of ___, 20_____.

ATTEST:

Principal

By _____
Secretary

(Address-Zip Code)

(Seal)

Witness as to Principal

(Address-Zip Code)

ATTEST:

Surety

By _____
(Surety)

Secretary

(Address-Zip Code)

Witness as to Surety

(Address-Zip Code)

(Seal)

NOTE: Date of bond must not be prior to date of Contract. If Contractor is a Partnership, all partners should execute Bond.

END OF DOCUMENT



DEVAL L. PATRICK
Governor
TIMOTHY P. MURRAY
Lt. 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

JOANNE F. GOLDSTEIN
Secretary
HEATHER E. ROWE
Director

Awarding Authority: Town of Arlington, MA
Contract Number: 13-10 **City/Town:** ARLINGTON
Description of Work: Renovation of Historic Porch at 23 Maple Street, Carpentry, Handicap Ramp, Roofing as per plans and specifications
Job Location: 23 Maple Street

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 must be registered with the Massachusetts Division of Apprenticeship Training (DAT) in order to be paid at the lower apprentice rates. All apprentices must keep his/her apprentice identification card on his/her person during all work hours. If a worker is not registered with DAT, he/she must be paid the "total rate" listed on the wage schedule regardless of experience or skills.
- 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>	12/01/2012	\$31.55	\$8.91	\$8.00	\$0.00	\$48.46
(3 AXLE) DRIVER - EQUIPMENT <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE A</i>	12/01/2012	\$31.62	\$8.91	\$8.00	\$0.00	\$48.53
(4 & 5 AXLE) DRIVER - EQUIPMENT <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE A</i>	12/01/2012	\$31.74	\$8.91	\$8.00	\$0.00	\$48.65
ADS/SUBMERSIBLE PILOT <i>PILE DRIVER LOCAL 56 (ZONE 1)</i>	08/01/2012	\$82.32	\$9.80	\$17.67	\$0.00	\$109.79
	08/01/2013	\$85.47	\$9.80	\$17.67	\$0.00	\$112.94
	08/01/2014	\$88.62	\$9.80	\$17.67	\$0.00	\$116.09
	08/01/2015	\$91.77	\$9.80	\$17.67	\$0.00	\$119.24
AIR TRACK OPERATOR <i>LABORERS - ZONE 1</i>	12/01/2012	\$33.05	\$7.10	\$12.45	\$0.00	\$52.60
	06/01/2013	\$33.80	\$7.10	\$12.45	\$0.00	\$53.35
	12/01/2013	\$34.55	\$7.10	\$12.45	\$0.00	\$54.10
	06/01/2014	\$35.30	\$7.10	\$12.45	\$0.00	\$54.85
	12/01/2014	\$36.05	\$7.10	\$12.45	\$0.00	\$55.60
	06/01/2015	\$36.80	\$7.10	\$12.45	\$0.00	\$56.35
	12/01/2015	\$37.55	\$7.10	\$12.45	\$0.00	\$57.10
	06/01/2016	\$38.30	\$7.10	\$12.45	\$0.00	\$57.85
	12/01/2016	\$39.30	\$7.10	\$12.45	\$0.00	\$58.85
For apprentice rates see "Apprentice- LABORER"						
ASBESTOS REMOVER - PIPE / MECH. EQUIPT. <i>HEAT & FROST INSULATORS LOCAL 6 (BOSTON)</i>	12/01/2012	\$29.08	\$10.40	\$5.95	\$0.00	\$45.43
	06/01/2013	\$29.88	\$10.40	\$5.95	\$0.00	\$46.23
	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>	12/01/2012	\$32.55	\$7.10	\$12.45	\$0.00	\$52.10
	06/01/2013	\$33.30	\$7.10	\$12.45	\$0.00	\$52.85
	12/01/2013	\$34.05	\$7.10	\$12.45	\$0.00	\$53.60
	06/01/2014	\$34.80	\$7.10	\$12.45	\$0.00	\$54.35
	12/01/2014	\$35.55	\$7.10	\$12.45	\$0.00	\$55.10
	06/01/2015	\$36.30	\$7.10	\$12.45	\$0.00	\$55.85
	12/01/2015	\$37.05	\$7.10	\$12.45	\$0.00	\$56.60
	06/01/2016	\$37.80	\$7.10	\$12.45	\$0.00	\$57.35
	12/01/2016	\$38.80	\$7.10	\$12.45	\$0.00	\$58.35
For apprentice rates see "Apprentice- LABORER"						
ASPHALT/CONCRETE/CRUSHER PLANT-ON SITE <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2012	\$40.09	\$10.00	\$13.02	\$0.00	\$63.11
	06/01/2013	\$40.87	\$10.00	\$13.02	\$0.00	\$63.89
	12/01/2013	\$41.65	\$10.00	\$13.02	\$0.00	\$64.67
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
BACKHOE/FRONT-END LOADER <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2012	\$40.09	\$10.00	\$13.02	\$0.00	\$63.11
	06/01/2013	\$40.87	\$10.00	\$13.02	\$0.00	\$63.89
	12/01/2013	\$41.65	\$10.00	\$13.02	\$0.00	\$64.67
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
BARCO-TYPE JUMPING TAMPER <i>LABORERS - ZONE 1</i>	12/01/2012	\$32.55	\$7.10	\$12.45	\$0.00	\$52.10
	06/01/2013	\$33.30	\$7.10	\$12.45	\$0.00	\$52.85
	12/01/2013	\$34.05	\$7.10	\$12.45	\$0.00	\$53.60
	06/01/2014	\$34.80	\$7.10	\$12.45	\$0.00	\$54.35
	12/01/2014	\$35.55	\$7.10	\$12.45	\$0.00	\$55.10
	06/01/2015	\$36.30	\$7.10	\$12.45	\$0.00	\$55.85
	12/01/2015	\$37.05	\$7.10	\$12.45	\$0.00	\$56.60
	06/01/2016	\$37.80	\$7.10	\$12.45	\$0.00	\$57.35
For apprentice rates see "Apprentice- LABORER"						
BLOCK PAVER, RAMMER / CURB SETTER <i>LABORERS - ZONE 1</i>	12/01/2012	\$33.05	\$7.10	\$12.45	\$0.00	\$52.60
	06/01/2013	\$33.80	\$7.10	\$12.45	\$0.00	\$53.35
	12/01/2013	\$34.55	\$7.10	\$12.45	\$0.00	\$54.10
	06/01/2014	\$35.30	\$7.10	\$12.45	\$0.00	\$54.85
	12/01/2014	\$36.05	\$7.10	\$12.45	\$0.00	\$55.60
	06/01/2015	\$36.80	\$7.10	\$12.45	\$0.00	\$56.35
	12/01/2015	\$37.55	\$7.10	\$12.45	\$0.00	\$57.10
	06/01/2016	\$38.30	\$7.10	\$12.45	\$0.00	\$57.85
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

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

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
BRICK/STONE/ARTIFICIAL MASONRY (INCL. MASONRY WATERPROOFING) <i>BRICKLAYERS LOCAL 3 (BOSTON)</i>	02/01/2013	\$47.41	\$10.18	\$17.83	\$0.00	\$75.42
	08/01/2013	\$48.31	\$10.18	\$17.90	\$0.00	\$76.39
	02/01/2014	\$48.87	\$10.18	\$17.90	\$0.00	\$76.95
	08/01/2014	\$49.77	\$10.18	\$17.97	\$0.00	\$77.92
	02/01/2015	\$50.33	\$10.18	\$17.97	\$0.00	\$78.48
	08/01/2015	\$51.23	\$10.18	\$18.04	\$0.00	\$79.45
	02/01/2016	\$51.80	\$10.18	\$18.04	\$0.00	\$80.02
	08/01/2016	\$52.70	\$10.18	\$18.12	\$0.00	\$81.00
	02/01/2017	\$53.27	\$10.18	\$18.12	\$0.00	\$81.57

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

Effective Date - 02/01/2013

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$23.71	\$10.18	\$17.83	\$0.00	\$51.72
2	60	\$28.45	\$10.18	\$17.83	\$0.00	\$56.46
3	70	\$33.19	\$10.18	\$17.83	\$0.00	\$61.20
4	80	\$37.93	\$10.18	\$17.83	\$0.00	\$65.94
5	90	\$42.67	\$10.18	\$17.83	\$0.00	\$70.68

Effective Date - 08/01/2013

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$24.16	\$10.18	\$17.90	\$0.00	\$52.24
2	60	\$28.99	\$10.18	\$17.90	\$0.00	\$57.07
3	70	\$33.82	\$10.18	\$17.90	\$0.00	\$61.90
4	80	\$38.65	\$10.18	\$17.90	\$0.00	\$66.73
5	90	\$43.48	\$10.18	\$17.90	\$0.00	\$71.56

Notes:

Apprentice to Journeyworker Ratio:1:5

BULLDOZER/GRADER/SCRAPER <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2012	\$39.72	\$10.00	\$13.02	\$0.00	\$62.74
	06/01/2013	\$40.49	\$10.00	\$13.02	\$0.00	\$63.51
	12/01/2013	\$41.27	\$10.00	\$13.02	\$0.00	\$64.29

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

CAISSON & UNDERPINNING BOTTOM MAN <i>LABORERS - FOUNDATION AND MARINE</i>	12/01/2012	\$33.45	\$7.10	\$12.60	\$0.00	\$53.15
	06/01/2013	\$34.20	\$7.10	\$12.60	\$0.00	\$53.90
	12/01/2013	\$34.95	\$7.10	\$12.60	\$0.00	\$54.65
	06/01/2014	\$35.70	\$7.10	\$12.60	\$0.00	\$55.40
	12/01/2014	\$36.45	\$7.10	\$12.60	\$0.00	\$56.15
	06/01/2015	\$37.20	\$7.10	\$12.60	\$0.00	\$56.90
	12/01/2015	\$37.95	\$7.10	\$12.60	\$0.00	\$57.65
	06/01/2016	\$38.70	\$7.10	\$12.60	\$0.00	\$58.40
	12/01/2016	\$39.70	\$7.10	\$12.60	\$0.00	\$59.40

For apprentice rates see "Apprentice- LABORER"

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
CAISSON & UNDERPINNING LABORER <i>LABORERS - FOUNDATION AND MARINE</i>	12/01/2012	\$32.30	\$7.10	\$12.60	\$0.00	\$52.00
	06/01/2013	\$33.05	\$7.10	\$12.60	\$0.00	\$52.75
	12/01/2013	\$33.80	\$7.10	\$12.60	\$0.00	\$53.50
	06/01/2014	\$34.55	\$7.10	\$12.60	\$0.00	\$54.25
	12/01/2014	\$35.30	\$7.10	\$12.60	\$0.00	\$55.00
	06/01/2015	\$36.05	\$7.10	\$12.60	\$0.00	\$55.75
	12/01/2015	\$36.80	\$7.10	\$12.60	\$0.00	\$56.50
	06/01/2016	\$37.55	\$7.10	\$12.60	\$0.00	\$57.25
	12/01/2016	\$38.55	\$7.10	\$12.60	\$0.00	\$58.25
For apprentice rates see "Apprentice- LABORER"						
CAISSON & UNDERPINNING TOP MAN <i>LABORERS - FOUNDATION AND MARINE</i>	12/01/2012	\$32.30	\$7.10	\$12.60	\$0.00	\$52.00
	06/01/2013	\$33.05	\$7.10	\$12.60	\$0.00	\$52.75
	12/01/2013	\$33.80	\$7.10	\$12.60	\$0.00	\$53.50
	06/01/2014	\$34.55	\$7.10	\$12.60	\$0.00	\$54.25
	12/01/2014	\$35.30	\$7.10	\$12.60	\$0.00	\$55.00
	06/01/2015	\$36.05	\$7.10	\$12.60	\$0.00	\$55.75
	12/01/2015	\$36.80	\$7.10	\$12.60	\$0.00	\$56.50
	06/01/2016	\$37.55	\$7.10	\$12.60	\$0.00	\$57.25
	12/01/2016	\$38.55	\$7.10	\$12.60	\$0.00	\$58.25
For apprentice rates see "Apprentice- LABORER"						
CARBIDE CORE DRILL OPERATOR <i>LABORERS - ZONE 1</i>	12/01/2012	\$32.55	\$7.10	\$12.45	\$0.00	\$52.10
	06/01/2013	\$33.30	\$7.10	\$12.45	\$0.00	\$52.85
	12/01/2013	\$34.05	\$7.10	\$12.45	\$0.00	\$53.60
	06/01/2014	\$34.80	\$7.10	\$12.45	\$0.00	\$54.35
	12/01/2014	\$35.55	\$7.10	\$12.45	\$0.00	\$55.10
	06/01/2015	\$36.30	\$7.10	\$12.45	\$0.00	\$55.85
	12/01/2015	\$37.05	\$7.10	\$12.45	\$0.00	\$56.60
	06/01/2016	\$37.80	\$7.10	\$12.45	\$0.00	\$57.35
	12/01/2016	\$38.80	\$7.10	\$12.45	\$0.00	\$58.35
For apprentice rates see "Apprentice- LABORER"						
CARPENTER <i>CARPENTERS -ZONE 2 (Eastern Massachusetts)</i>	03/01/2013	\$33.92	\$9.80	\$15.61	\$0.00	\$59.33
	09/01/2013	\$34.53	\$9.80	\$15.61	\$0.00	\$59.94
	03/01/2014	\$35.13	\$9.80	\$15.61	\$0.00	\$60.54
	09/01/2014	\$35.90	\$9.80	\$15.61	\$0.00	\$61.31
	03/01/2015	\$36.67	\$9.80	\$15.61	\$0.00	\$62.08

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - CARPENTER - Zone 2 Eastern MA

Effective Date - 03/01/2013

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$16.96	\$9.80	\$1.57	\$0.00	\$28.33
2	60	\$20.35	\$9.80	\$1.57	\$0.00	\$31.72
3	70	\$23.74	\$9.80	\$10.90	\$0.00	\$44.44
4	75	\$25.44	\$9.80	\$10.90	\$0.00	\$46.14
5	80	\$27.14	\$9.80	\$12.47	\$0.00	\$49.41
6	80	\$27.14	\$9.80	\$12.47	\$0.00	\$49.41
7	90	\$30.53	\$9.80	\$14.04	\$0.00	\$54.37
8	90	\$30.53	\$9.80	\$14.04	\$0.00	\$54.37

Effective Date - 09/01/2013

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$17.27	\$9.80	\$1.57	\$0.00	\$28.64
2	60	\$20.72	\$9.80	\$1.57	\$0.00	\$32.09
3	70	\$24.17	\$9.80	\$10.90	\$0.00	\$44.87
4	75	\$25.90	\$9.80	\$10.90	\$0.00	\$46.60
5	80	\$27.62	\$9.80	\$12.47	\$0.00	\$49.89
6	80	\$27.62	\$9.80	\$12.47	\$0.00	\$49.89
7	90	\$31.08	\$9.80	\$14.04	\$0.00	\$54.92
8	90	\$31.08	\$9.80	\$14.04	\$0.00	\$54.92

Notes:

Apprentice to Journeyworker Ratio:1:5

CEMENT MASONRY/PLASTERING	02/01/2013	\$42.55	\$10.65	\$18.61	\$1.30	\$73.11
BRICKLAYERS LOCAL 3 (BOSTON)	08/01/2013	\$43.32	\$10.65	\$18.61	\$1.30	\$73.88
	02/01/2014	\$43.75	\$10.65	\$18.61	\$1.30	\$74.31
	08/01/2014	\$44.50	\$10.65	\$18.61	\$1.30	\$75.06
	02/01/2015	\$44.93	\$10.65	\$18.61	\$1.30	\$75.49
	08/01/2015	\$45.68	\$10.65	\$18.61	\$1.30	\$76.24
	02/01/2016	\$46.13	\$10.65	\$18.61	\$1.30	\$76.69
	08/01/2016	\$46.88	\$10.65	\$18.61	\$1.30	\$77.44
	02/01/2017	\$47.33	\$10.65	\$18.61	\$1.30	\$77.89

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

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

Effective Date - 02/01/2013

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$21.28	\$10.65	\$12.11	\$1.30	\$45.34
2	60	\$25.53	\$10.65	\$13.61	\$1.30	\$51.09
3	65	\$27.66	\$10.65	\$14.61	\$1.30	\$54.22
4	70	\$29.79	\$10.65	\$15.61	\$1.30	\$57.35
5	75	\$31.91	\$10.65	\$16.61	\$1.30	\$60.47
6	80	\$34.04	\$10.65	\$17.61	\$1.30	\$63.60
7	90	\$38.30	\$10.65	\$18.61	\$1.30	\$68.86

Effective Date - 08/01/2013

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$21.66	\$10.65	\$12.11	\$1.30	\$45.72
2	60	\$25.99	\$10.65	\$13.61	\$1.30	\$51.55
3	65	\$28.16	\$10.65	\$14.61	\$1.30	\$54.72
4	70	\$30.32	\$10.65	\$15.61	\$1.30	\$57.88
5	75	\$32.49	\$10.65	\$16.61	\$1.30	\$61.05
6	80	\$34.66	\$10.65	\$17.61	\$1.30	\$64.22
7	90	\$38.99	\$10.65	\$18.61	\$1.30	\$69.55

Notes:

Steps are 6000 hours

Apprentice to Journeyworker Ratio:1:3

CHAIN SAW OPERATOR LABORERS - ZONE 1	12/01/2012	\$32.55	\$7.10	\$12.45	\$0.00	\$52.10
	06/01/2013	\$33.30	\$7.10	\$12.45	\$0.00	\$52.85
	12/01/2013	\$34.05	\$7.10	\$12.45	\$0.00	\$53.60
	06/01/2014	\$34.80	\$7.10	\$12.45	\$0.00	\$54.35
	12/01/2014	\$35.55	\$7.10	\$12.45	\$0.00	\$55.10
	06/01/2015	\$36.30	\$7.10	\$12.45	\$0.00	\$55.85
	12/01/2015	\$37.05	\$7.10	\$12.45	\$0.00	\$56.60
	06/01/2016	\$37.80	\$7.10	\$12.45	\$0.00	\$57.35
	12/01/2016	\$38.80	\$7.10	\$12.45	\$0.00	\$58.35

For apprentice rates see "Apprentice- LABORER"

CLAM SHELLS/SLURRY BUCKETS/HEADING MACHINES OPERATING ENGINEERS LOCAL 4	12/01/2012	\$41.09	\$10.00	\$13.02	\$0.00	\$64.11
	06/01/2013	\$41.87	\$10.00	\$13.02	\$0.00	\$64.89
	12/01/2013	\$42.65	\$10.00	\$13.02	\$0.00	\$65.67

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

COMPRESSOR OPERATOR OPERATING ENGINEERS LOCAL 4	12/01/2012	\$28.17	\$10.00	\$13.02	\$0.00	\$51.19
	06/01/2013	\$28.72	\$10.00	\$13.02	\$0.00	\$51.74
	12/01/2013	\$29.27	\$10.00	\$13.02	\$0.00	\$52.29

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

DELEADER (BRIDGE) PAINTERS LOCAL 35 - ZONE 2	01/01/2013	\$45.01	\$7.80	\$15.60	\$0.00	\$68.41
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Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - PAINTER Local 35 - BRIDGES/TANKS

Effective Date - 01/01/2013

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$22.51	\$7.80	\$0.00	\$0.00	\$30.31
2	55	\$24.76	\$7.80	\$3.52	\$0.00	\$36.08
3	60	\$27.01	\$7.80	\$3.84	\$0.00	\$38.65
4	65	\$29.26	\$7.80	\$4.16	\$0.00	\$41.22
5	70	\$31.51	\$7.80	\$13.68	\$0.00	\$52.99
6	75	\$33.76	\$7.80	\$14.00	\$0.00	\$55.56
7	80	\$36.01	\$7.80	\$14.32	\$0.00	\$58.13
8	90	\$40.51	\$7.80	\$14.96	\$0.00	\$63.27

Notes:

Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

DEMO: ADZEMAN LABORERS - ZONE 1	12/01/2011	\$31.80	\$7.10	\$12.45	\$0.00	\$51.35
For apprentice rates see "Apprentice- LABORER"						
DEMO: BACKHOE/LOADER/HAMMER OPERATOR LABORERS - ZONE 1	12/01/2011	\$32.80	\$7.10	\$12.45	\$0.00	\$52.35
For apprentice rates see "Apprentice- LABORER"						
DEMO: BURNERS LABORERS - ZONE 1	12/01/2011	\$32.55	\$7.10	\$12.45	\$0.00	\$52.10
For apprentice rates see "Apprentice- LABORER"						
DEMO: CONCRETE CUTTER/SAWYER LABORERS - ZONE 1	12/01/2011	\$32.80	\$7.10	\$12.45	\$0.00	\$52.35
For apprentice rates see "Apprentice- LABORER"						
DEMO: JACKHAMMER OPERATOR LABORERS - ZONE 1	12/01/2011	\$32.55	\$7.10	\$12.45	\$0.00	\$52.10
For apprentice rates see "Apprentice- LABORER"						
DEMO: WRECKING LABORER LABORERS - ZONE 1	12/01/2011	\$31.80	\$7.10	\$12.45	\$0.00	\$51.35
For apprentice rates see "Apprentice- LABORER"						
DIRECTIONAL DRILL MACHINE OPERATOR OPERATING ENGINEERS LOCAL 4	12/01/2012	\$39.72	\$10.00	\$13.02	\$0.00	\$62.74
	06/01/2013	\$40.49	\$10.00	\$13.02	\$0.00	\$63.51
	12/01/2013	\$41.27	\$10.00	\$13.02	\$0.00	\$64.29
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
DIVER PILE DRIVER LOCAL 56 (ZONE 1)	08/01/2012	\$54.88	\$9.80	\$17.67	\$0.00	\$82.35
	08/01/2013	\$56.98	\$9.80	\$17.67	\$0.00	\$84.45
	08/01/2014	\$59.08	\$9.80	\$17.67	\$0.00	\$86.55
	08/01/2015	\$61.18	\$9.80	\$17.67	\$0.00	\$88.65
DIVER TENDER PILE DRIVER LOCAL 56 (ZONE 1)	08/01/2012	\$54.88	\$9.80	\$17.67	\$0.00	\$82.35
	08/01/2013	\$56.98	\$9.80	\$17.67	\$0.00	\$84.45
	08/01/2014	\$59.08	\$9.80	\$17.67	\$0.00	\$86.55
	08/01/2015	\$61.18	\$9.80	\$17.67	\$0.00	\$88.65

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
DIVER TENDER (EFFLUENT) <i>PILE DRIVER LOCAL 56 (ZONE 1)</i>	08/01/2012	\$58.80	\$9.80	\$17.67	\$0.00	\$86.27
	08/01/2013	\$61.05	\$9.80	\$17.67	\$0.00	\$88.52
	08/01/2014	\$63.30	\$9.80	\$17.67	\$0.00	\$90.77
	08/01/2015	\$65.55	\$9.80	\$17.67	\$0.00	\$93.02
DIVER/SLURRY (EFFLUENT) <i>PILE DRIVER LOCAL 56 (ZONE 1)</i>	08/01/2012	\$82.32	\$9.80	\$17.67	\$0.00	\$109.79
	08/01/2013	\$85.47	\$9.80	\$17.67	\$0.00	\$112.94
	08/01/2014	\$88.62	\$9.80	\$17.67	\$0.00	\$116.09
	08/01/2015	\$91.77	\$9.80	\$17.67	\$0.00	\$119.24
DRAWBRIDGE OPERATOR (Construction) <i>ELECTRICIANS LOCAL 103</i>	03/01/2013	\$43.52	\$13.00	\$14.16	\$0.00	\$70.68
	09/01/2013	\$44.20	\$13.00	\$14.18	\$0.00	\$71.38
	03/01/2014	\$44.92	\$13.00	\$14.20	\$0.00	\$72.12
	09/01/2014	\$45.60	\$13.00	\$14.22	\$0.00	\$72.82
	03/01/2015	\$46.32	\$13.00	\$14.24	\$0.00	\$73.56
	09/01/2015	\$47.27	\$13.00	\$14.27	\$0.00	\$74.54
	03/01/2016	\$48.23	\$13.00	\$14.30	\$0.00	\$75.53
For apprentice rates see "Apprentice- ELECTRICIAN"						
ELECTRICIAN <i>ELECTRICIANS LOCAL 103</i>	03/01/2013	\$43.52	\$13.00	\$14.16	\$0.00	\$70.68
	09/01/2013	\$44.20	\$13.00	\$14.18	\$0.00	\$71.38
	03/01/2014	\$44.92	\$13.00	\$14.20	\$0.00	\$72.12
	09/01/2014	\$45.60	\$13.00	\$14.22	\$0.00	\$72.82
	03/01/2015	\$46.32	\$13.00	\$14.24	\$0.00	\$73.56
	09/01/2015	\$47.27	\$13.00	\$14.27	\$0.00	\$74.54
	03/01/2016	\$48.23	\$13.00	\$14.30	\$0.00	\$75.53

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - ELECTRICIAN - Local 103

Effective Date - 03/01/2013

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$17.41	\$13.00	\$0.52	\$0.00	\$30.93
2	40	\$17.41	\$13.00	\$0.52	\$0.00	\$30.93
3	45	\$19.58	\$13.00	\$10.53	\$0.00	\$43.11
4	45	\$19.58	\$13.00	\$10.53	\$0.00	\$43.11
5	50	\$21.76	\$13.00	\$10.85	\$0.00	\$45.61
6	55	\$23.94	\$13.00	\$11.19	\$0.00	\$48.13
7	60	\$26.11	\$13.00	\$11.51	\$0.00	\$50.62
8	65	\$28.29	\$13.00	\$11.85	\$0.00	\$53.14
9	70	\$30.46	\$13.00	\$12.17	\$0.00	\$55.63
10	75	\$32.64	\$13.00	\$12.51	\$0.00	\$58.15

Effective Date - 09/01/2013

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$17.68	\$13.00	\$0.53	\$0.00	\$31.21
2	40	\$17.68	\$13.00	\$0.53	\$0.00	\$31.21
3	45	\$19.89	\$13.00	\$10.54	\$0.00	\$43.43
4	45	\$19.89	\$13.00	\$10.54	\$0.00	\$43.43
5	50	\$22.10	\$13.00	\$10.86	\$0.00	\$45.96
6	55	\$24.31	\$13.00	\$11.20	\$0.00	\$48.51
7	60	\$26.52	\$13.00	\$11.53	\$0.00	\$51.05
8	65	\$28.73	\$13.00	\$11.86	\$0.00	\$53.59
9	70	\$30.94	\$13.00	\$12.19	\$0.00	\$56.13
10	75	\$33.15	\$13.00	\$12.53	\$0.00	\$58.68

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
FENCE & GUARD RAIL ERECTOR <i>LABORERS - ZONE 1</i>	12/01/2012	\$32.55	\$7.10	\$12.45	\$0.00	\$52.10
	06/01/2013	\$33.30	\$7.10	\$12.45	\$0.00	\$52.85
	12/01/2013	\$34.05	\$7.10	\$12.45	\$0.00	\$53.60
	06/01/2014	\$34.80	\$7.10	\$12.45	\$0.00	\$54.35
	12/01/2014	\$35.55	\$7.10	\$12.45	\$0.00	\$55.10
	06/01/2015	\$36.30	\$7.10	\$12.45	\$0.00	\$55.85
	12/01/2015	\$37.05	\$7.10	\$12.45	\$0.00	\$56.60
	06/01/2016	\$37.80	\$7.10	\$12.45	\$0.00	\$57.35
	12/01/2016	\$38.80	\$7.10	\$12.45	\$0.00	\$58.35
For apprentice rates see "Apprentice- LABORER"						
FIELD ENG.INST.PERSON-BLDG,SITE,HVY/HWY <i>OPERATING ENGINEERS LOCAL 4</i>	11/01/2012	\$38.26	\$10.00	\$12.65	\$0.00	\$60.91
	05/01/2013	\$38.50	\$10.00	\$13.02	\$0.00	\$61.52
	11/01/2013	\$39.26	\$10.00	\$13.02	\$0.00	\$62.28
	05/01/2014	\$40.03	\$10.00	\$13.02	\$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>	11/01/2012	\$39.66	\$10.00	\$12.65	\$0.00	\$62.31
	05/01/2013	\$39.91	\$10.00	\$13.02	\$0.00	\$62.93
	11/01/2013	\$40.68	\$10.00	\$13.02	\$0.00	\$63.70
	05/01/2014	\$41.45	\$10.00	\$13.02	\$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>	11/01/2012	\$21.18	\$10.00	\$12.65	\$0.00	\$43.83
	05/01/2013	\$21.17	\$10.00	\$13.02	\$0.00	\$44.19
	11/01/2013	\$21.63	\$10.00	\$13.02	\$0.00	\$44.65
	05/01/2014	\$22.08	\$10.00	\$13.02	\$0.00	\$45.10
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
FIRE ALARM INSTALLER <i>ELECTRICIANS LOCAL 103</i>	03/01/2013	\$43.52	\$13.00	\$14.16	\$0.00	\$70.68
	09/01/2013	\$44.20	\$13.00	\$14.18	\$0.00	\$71.38
	03/01/2014	\$44.92	\$13.00	\$14.20	\$0.00	\$72.12
	09/01/2014	\$45.60	\$13.00	\$14.22	\$0.00	\$72.82
	03/01/2015	\$46.32	\$13.00	\$14.24	\$0.00	\$73.56
	09/01/2015	\$47.27	\$13.00	\$14.27	\$0.00	\$74.54
	03/01/2016	\$48.23	\$13.00	\$14.30	\$0.00	\$75.53
For apprentice rates see "Apprentice- ELECTRICIAN"						
FIRE ALARM REPAIR / MAINTENANCE / COMMISSIONING <i>ELECTRICIANS</i> <i>LOCAL 103</i>	03/01/2013	\$32.64	\$13.00	\$12.51	\$0.00	\$58.15
	09/01/2013	\$33.15	\$13.00	\$12.52	\$0.00	\$58.67
	03/01/2014	\$33.69	\$13.00	\$12.54	\$0.00	\$59.23
	09/01/2014	\$34.20	\$13.00	\$12.56	\$0.00	\$59.76
	03/01/2015	\$34.74	\$13.00	\$12.57	\$0.00	\$60.31
	09/01/2015	\$35.45	\$13.00	\$12.59	\$0.00	\$61.04
	03/01/2016	\$36.17	\$13.00	\$12.62	\$0.00	\$61.79
For apprentice rates see "Apprentice- TELECOMMUNICATIONS TECHNICIAN"						
FIREMAN (ASST. ENGINEER) <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2012	\$33.61	\$10.00	\$13.02	\$0.00	\$56.63
	06/01/2013	\$34.26	\$10.00	\$13.02	\$0.00	\$57.28
	12/01/2013	\$34.92	\$10.00	\$13.02	\$0.00	\$57.94
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
FLAGGER & SIGNALER <i>LABORERS - ZONE 1</i>	12/01/2012	\$20.50	\$7.10	\$12.45	\$0.00	\$40.05
	06/01/2013	\$20.50	\$7.10	\$12.45	\$0.00	\$40.05
	12/01/2013	\$20.50	\$7.10	\$12.45	\$0.00	\$40.05
	06/01/2014	\$20.50	\$7.10	\$12.45	\$0.00	\$40.05
	12/01/2014	\$20.50	\$7.10	\$12.45	\$0.00	\$40.05
	06/01/2015	\$20.50	\$7.10	\$12.45	\$0.00	\$40.05
	12/01/2015	\$20.50	\$7.10	\$12.45	\$0.00	\$40.05
	06/01/2016	\$20.50	\$7.10	\$12.45	\$0.00	\$40.05
For apprentice rates see "Apprentice- LABORER"						
FLOORCOVERER <i>FLOORCOVERERS LOCAL 2168 ZONE 1</i>	03/01/2013	\$38.61	\$9.80	\$16.71	\$0.00	\$65.12
	09/01/2013	\$38.61	\$9.80	\$16.71	\$0.00	\$65.12
	03/01/2014	\$38.61	\$9.80	\$16.71	\$0.00	\$65.12

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - FLOORCOVERER - Local 2168 Zone I

Effective Date - 03/01/2013

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$19.31	\$9.80	\$1.79	\$0.00	\$30.90
2	55	\$21.24	\$9.80	\$1.79	\$0.00	\$32.83
3	60	\$23.17	\$9.80	\$11.34	\$0.00	\$44.31
4	65	\$25.10	\$9.80	\$11.34	\$0.00	\$46.24
5	70	\$27.03	\$9.80	\$13.13	\$0.00	\$49.96
6	75	\$28.96	\$9.80	\$13.13	\$0.00	\$51.89
7	80	\$30.89	\$9.80	\$14.92	\$0.00	\$55.61
8	85	\$32.82	\$9.80	\$14.92	\$0.00	\$57.54

Effective Date - 09/01/2013

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$19.31	\$9.80	\$1.79	\$0.00	\$30.90
2	55	\$21.24	\$9.80	\$1.79	\$0.00	\$32.83
3	60	\$23.17	\$9.80	\$11.34	\$0.00	\$44.31
4	65	\$25.10	\$9.80	\$11.34	\$0.00	\$46.24
5	70	\$27.03	\$9.80	\$13.13	\$0.00	\$49.96
6	75	\$28.96	\$9.80	\$13.13	\$0.00	\$51.89
7	80	\$30.89	\$9.80	\$14.92	\$0.00	\$55.61
8	85	\$32.82	\$9.80	\$14.92	\$0.00	\$57.54

Notes:

Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

FORK LIFT/CHERRY PICKER <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2012	\$40.09	\$10.00	\$13.02	\$0.00	\$63.11
	06/01/2013	\$40.87	\$10.00	\$13.02	\$0.00	\$63.89
	12/01/2013	\$41.65	\$10.00	\$13.02	\$0.00	\$64.67
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
GENERATOR/LIGHTING PLANT/HEATERS <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2012	\$28.17	\$10.00	\$13.02	\$0.00	\$51.19
	06/01/2013	\$28.72	\$10.00	\$13.02	\$0.00	\$51.74
	12/01/2013	\$29.27	\$10.00	\$13.02	\$0.00	\$52.29
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
GLAZIER (GLASS PLANK/AIR BARRIER/INTERIOR SYSTEMS) <i>GLAZIERS LOCAL 35 (ZONE 2)</i>	01/01/2013	\$35.51	\$7.80	\$14.60	\$0.00	\$57.91

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - GLAZIER - Local 35 Zone 2

Effective Date - 01/01/2013

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$17.76	\$7.80	\$0.00	\$0.00	\$25.56
2	55	\$19.53	\$7.80	\$3.25	\$0.00	\$30.58
3	60	\$21.31	\$7.80	\$3.54	\$0.00	\$32.65
4	65	\$23.08	\$7.80	\$3.84	\$0.00	\$34.72
5	70	\$24.86	\$7.80	\$12.83	\$0.00	\$45.49
6	75	\$26.63	\$7.80	\$13.13	\$0.00	\$47.56
7	80	\$28.41	\$7.80	\$13.42	\$0.00	\$49.63
8	90	\$31.96	\$7.80	\$14.01	\$0.00	\$53.77

Notes:
Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

HOISTING ENGINEER/CRANES/GRADALLS	12/01/2012	\$40.09	\$10.00	\$13.02	\$0.00	\$63.11
OPERATING ENGINEERS LOCAL 4	06/01/2013	\$40.87	\$10.00	\$13.02	\$0.00	\$63.89
	12/01/2013	\$41.65	\$10.00	\$13.02	\$0.00	\$64.67

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - OPERATING ENGINEERS - Local 4

Effective Date - 12/01/2012

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	55	\$22.05	\$10.00	\$0.00	\$0.00	\$32.05
2	60	\$24.05	\$10.00	\$13.02	\$0.00	\$47.07
3	65	\$26.06	\$10.00	\$13.02	\$0.00	\$49.08
4	70	\$28.06	\$10.00	\$13.02	\$0.00	\$51.08
5	75	\$30.07	\$10.00	\$13.02	\$0.00	\$53.09
6	80	\$32.07	\$10.00	\$13.02	\$0.00	\$55.09
7	85	\$34.08	\$10.00	\$13.02	\$0.00	\$57.10
8	90	\$36.08	\$10.00	\$13.02	\$0.00	\$59.10

Effective Date - 06/01/2013

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	55	\$22.48	\$10.00	\$0.00	\$0.00	\$32.48
2	60	\$24.52	\$10.00	\$13.02	\$0.00	\$47.54
3	65	\$26.57	\$10.00	\$13.02	\$0.00	\$49.59
4	70	\$28.61	\$10.00	\$13.02	\$0.00	\$51.63
5	75	\$30.65	\$10.00	\$13.02	\$0.00	\$53.67
6	80	\$32.70	\$10.00	\$13.02	\$0.00	\$55.72
7	85	\$34.74	\$10.00	\$13.02	\$0.00	\$57.76
8	90	\$36.78	\$10.00	\$13.02	\$0.00	\$59.80

Notes:

Apprentice to Journeyworker Ratio:1:6

HVAC (DUCTWORK) 02/01/2013 \$42.32 \$9.82 \$18.24 \$2.11 \$72.49
 SHEETMETAL WORKERS LOCAL 17 - A

For apprentice rates see "Apprentice- SHEET METAL WORKER"

HVAC (ELECTRICAL CONTROLS) 03/01/2013 \$43.52 \$13.00 \$14.16 \$0.00 \$70.68
 ELECTRICIANS LOCAL 103
 09/01/2013 \$44.20 \$13.00 \$14.18 \$0.00 \$71.38
 03/01/2014 \$44.92 \$13.00 \$14.20 \$0.00 \$72.12
 09/01/2014 \$45.60 \$13.00 \$14.22 \$0.00 \$72.82
 03/01/2015 \$46.32 \$13.00 \$14.24 \$0.00 \$73.56
 09/01/2015 \$47.27 \$13.00 \$14.27 \$0.00 \$74.54
 03/01/2016 \$48.23 \$13.00 \$14.30 \$0.00 \$75.53

For apprentice rates see "Apprentice- ELECTRICIAN"

HVAC (TESTING AND BALANCING - AIR) 02/01/2013 \$42.32 \$9.82 \$18.24 \$2.11 \$72.49
 SHEETMETAL WORKERS LOCAL 17 - A

For apprentice rates see "Apprentice- SHEET METAL WORKER"

HVAC (TESTING AND BALANCING -WATER) 03/01/2013 \$49.34 \$8.75 \$14.39 \$0.00 \$72.48
 PIPEFITTERS LOCAL 537

For apprentice rates see "Apprentice- PIPEFITTER" or "PLUMBER/PIPEFITTER"

HVAC MECHANIC 03/01/2013 \$49.34 \$8.75 \$14.39 \$0.00 \$72.48
 PIPEFITTERS LOCAL 537

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
For apprentice rates see "Apprentice- PIPEFITTER" or "PLUMBER/PIPEFITTER"						
HYDRAULIC DRILLS LABORERS - ZONE 1	12/01/2012	\$33.05	\$7.10	\$12.45	\$0.00	\$52.60
	06/01/2013	\$33.80	\$7.10	\$12.45	\$0.00	\$53.35
	12/01/2013	\$34.55	\$7.10	\$12.45	\$0.00	\$54.10
	06/01/2014	\$35.30	\$7.10	\$12.45	\$0.00	\$54.85
	12/01/2014	\$36.05	\$7.10	\$12.45	\$0.00	\$55.60
	06/01/2015	\$36.80	\$7.10	\$12.45	\$0.00	\$56.35
	12/01/2015	\$37.55	\$7.10	\$12.45	\$0.00	\$57.10
	06/01/2016	\$38.30	\$7.10	\$12.45	\$0.00	\$57.85
	12/01/2016	\$39.30	\$7.10	\$12.45	\$0.00	\$58.85

For apprentice rates see "Apprentice- LABORER"						
INSULATOR (PIPES & TANKS) HEAT & FROST INSULATORS LOCAL 6 (BOSTON)	09/01/2012	\$41.46	\$10.65	\$11.50	\$0.00	\$63.61
	09/01/2013	\$43.06	\$10.65	\$11.50	\$0.00	\$65.21
	09/01/2014	\$45.06	\$10.65	\$11.50	\$0.00	\$67.21

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

Effective Date - 09/01/2012						
Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$20.73	\$10.65	\$8.60	\$0.00	\$39.98
2	60	\$24.88	\$10.65	\$9.18	\$0.00	\$44.71
3	70	\$29.02	\$10.65	\$9.76	\$0.00	\$49.43
4	80	\$33.17	\$10.65	\$10.34	\$0.00	\$54.16

Effective Date - 09/01/2013						
Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$21.53	\$10.65	\$8.60	\$0.00	\$40.78
2	60	\$25.84	\$10.65	\$9.18	\$0.00	\$45.67
3	70	\$30.14	\$10.65	\$9.76	\$0.00	\$50.55
4	80	\$34.45	\$10.65	\$10.34	\$0.00	\$55.44

Notes:
Steps are 1 year

Apprentice to Journeyworker Ratio:1:4

IRONWORKER/WELDER IRONWORKERS LOCAL 7 (BOSTON AREA)	03/16/2013	\$40.23	\$7.70	\$18.35	\$0.00	\$66.28
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Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - IRONWORKER - Local 7 Boston

Effective Date - 03/16/2013

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$24.14	\$7.70	\$18.35	\$0.00	\$50.19
2	70	\$28.16	\$7.70	\$18.35	\$0.00	\$54.21
3	75	\$30.17	\$7.70	\$18.35	\$0.00	\$56.22
4	80	\$32.18	\$7.70	\$18.35	\$0.00	\$58.23
5	85	\$34.20	\$7.70	\$18.35	\$0.00	\$60.25
6	90	\$36.21	\$7.70	\$18.35	\$0.00	\$62.26

Notes:

** Structural 1:6; Ornamental 1:4

Apprentice to Journeyworker Ratio:**

JACKHAMMER & PAVING BREAKER OPERATOR LABORERS - ZONE 1	12/01/2012	\$32.55	\$7.10	\$12.45	\$0.00	\$52.10
	06/01/2013	\$33.30	\$7.10	\$12.45	\$0.00	\$52.85
	12/01/2013	\$34.05	\$7.10	\$12.45	\$0.00	\$53.60
	06/01/2014	\$34.80	\$7.10	\$12.45	\$0.00	\$54.35
	12/01/2014	\$35.55	\$7.10	\$12.45	\$0.00	\$55.10
	06/01/2015	\$36.30	\$7.10	\$12.45	\$0.00	\$55.85
	12/01/2015	\$37.05	\$7.10	\$12.45	\$0.00	\$56.60
	06/01/2016	\$37.80	\$7.10	\$12.45	\$0.00	\$57.35
	12/01/2016	\$38.80	\$7.10	\$12.45	\$0.00	\$58.35

For apprentice rates see "Apprentice- LABORER"

LABORER LABORERS - ZONE 1	12/01/2012	\$32.30	\$7.10	\$12.45	\$0.00	\$51.85
	06/01/2013	\$33.05	\$7.10	\$12.45	\$0.00	\$52.60
	12/01/2013	\$33.80	\$7.10	\$12.45	\$0.00	\$53.35
	06/01/2014	\$34.55	\$7.10	\$12.45	\$0.00	\$54.10
	12/01/2014	\$35.30	\$7.10	\$12.45	\$0.00	\$54.85
	06/01/2015	\$36.05	\$7.10	\$12.45	\$0.00	\$55.60
	12/01/2015	\$36.80	\$7.10	\$12.45	\$0.00	\$56.35
	06/01/2016	\$37.55	\$7.10	\$12.45	\$0.00	\$57.10
	12/01/2016	\$38.55	\$7.10	\$12.45	\$0.00	\$58.10

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - LABORER - Zone 1

Effective Date - 12/01/2012

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$19.38	\$7.10	\$12.45	\$0.00	\$38.93
2	70	\$22.61	\$7.10	\$12.45	\$0.00	\$42.16
3	80	\$25.84	\$7.10	\$12.45	\$0.00	\$45.39
4	90	\$29.07	\$7.10	\$12.45	\$0.00	\$48.62

Effective Date - 06/01/2013

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$19.83	\$7.10	\$12.45	\$0.00	\$39.38
2	70	\$23.14	\$7.10	\$12.45	\$0.00	\$42.69
3	80	\$26.44	\$7.10	\$12.45	\$0.00	\$45.99
4	90	\$29.75	\$7.10	\$12.45	\$0.00	\$49.30

Notes:

Apprentice to Journeyworker Ratio:1:5

LABORER: CARPENTER TENDER LABORERS - ZONE 1	12/01/2012	\$32.30	\$7.10	\$12.45	\$0.00	\$51.85
	06/01/2013	\$33.05	\$7.10	\$12.45	\$0.00	\$52.60
	12/01/2013	\$33.80	\$7.10	\$12.45	\$0.00	\$53.35
	06/01/2014	\$34.55	\$7.10	\$12.45	\$0.00	\$54.10
	12/01/2014	\$35.30	\$7.10	\$12.45	\$0.00	\$54.85
	06/01/2015	\$36.05	\$7.10	\$12.45	\$0.00	\$55.60
	12/01/2015	\$36.80	\$7.10	\$12.45	\$0.00	\$56.35
	06/01/2016	\$37.55	\$7.10	\$12.45	\$0.00	\$57.10
	12/01/2016	\$38.55	\$7.10	\$12.45	\$0.00	\$58.10

For apprentice rates see "Apprentice- LABORER"

LABORER: CEMENT FINISHER TENDER LABORERS - ZONE 1	12/01/2012	\$32.30	\$7.10	\$12.45	\$0.00	\$51.85
	06/01/2013	\$33.05	\$7.10	\$12.45	\$0.00	\$52.60
	12/01/2013	\$33.80	\$7.10	\$12.45	\$0.00	\$53.35
	06/01/2014	\$34.55	\$7.10	\$12.45	\$0.00	\$54.10
	12/01/2014	\$35.30	\$7.10	\$12.45	\$0.00	\$54.85
	06/01/2015	\$36.05	\$7.10	\$12.45	\$0.00	\$55.60
	12/01/2015	\$36.80	\$7.10	\$12.45	\$0.00	\$56.35
	06/01/2016	\$37.55	\$7.10	\$12.45	\$0.00	\$57.10
	12/01/2016	\$38.55	\$7.10	\$12.45	\$0.00	\$58.10

For apprentice rates see "Apprentice- LABORER"

LABORER: HAZARDOUS WASTE/ASBESTOS REMOVER LABORERS - ZONE 1	12/01/2011	\$31.80	\$7.10	\$12.45	\$0.00	\$51.35
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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>	12/01/2012	\$32.55	\$7.10	\$12.45	\$0.00	\$52.10
	06/01/2013	\$33.30	\$7.10	\$12.45	\$0.00	\$52.85
	12/01/2013	\$34.05	\$7.10	\$12.45	\$0.00	\$53.60
	06/01/2014	\$34.80	\$7.10	\$12.45	\$0.00	\$54.35
	12/01/2014	\$35.55	\$7.10	\$12.45	\$0.00	\$55.10
	06/01/2015	\$36.30	\$7.10	\$12.45	\$0.00	\$55.85
	12/01/2015	\$37.05	\$7.10	\$12.45	\$0.00	\$56.60
	06/01/2016	\$37.80	\$7.10	\$12.45	\$0.00	\$57.35
	12/01/2016	\$38.80	\$7.10	\$12.45	\$0.00	\$58.35
For apprentice rates see "Apprentice- LABORER"						
LABORER: MULTI-TRADE TENDER <i>LABORERS - ZONE 1</i>	12/01/2012	\$32.30	\$7.10	\$12.45	\$0.00	\$51.85
	06/01/2013	\$33.05	\$7.10	\$12.45	\$0.00	\$52.60
	12/01/2013	\$33.80	\$7.10	\$12.45	\$0.00	\$53.35
	06/01/2014	\$34.55	\$7.10	\$12.45	\$0.00	\$54.10
	12/01/2014	\$35.30	\$7.10	\$12.45	\$0.00	\$54.85
	06/01/2015	\$36.05	\$7.10	\$12.45	\$0.00	\$55.60
	12/01/2015	\$36.80	\$7.10	\$12.45	\$0.00	\$56.35
	06/01/2016	\$37.55	\$7.10	\$12.45	\$0.00	\$57.10
	12/01/2016	\$38.55	\$7.10	\$12.45	\$0.00	\$58.10
For apprentice rates see "Apprentice- LABORER"						
LABORER: TREE REMOVER <i>LABORERS - ZONE 1</i>	12/01/2012	\$32.30	\$7.10	\$12.45	\$0.00	\$51.85
	06/01/2013	\$33.05	\$7.10	\$12.45	\$0.00	\$52.60
	12/01/2013	\$33.80	\$7.10	\$12.45	\$0.00	\$53.35
	06/01/2014	\$34.55	\$7.10	\$12.45	\$0.00	\$54.10
	12/01/2014	\$35.30	\$7.10	\$12.45	\$0.00	\$54.85
	06/01/2015	\$36.05	\$7.10	\$12.45	\$0.00	\$55.60
	12/01/2015	\$36.80	\$7.10	\$12.45	\$0.00	\$56.35
	06/01/2016	\$37.55	\$7.10	\$12.45	\$0.00	\$57.10
	12/01/2016	\$38.55	\$7.10	\$12.45	\$0.00	\$58.10
This classification applies to the wholesale removal of standing trees including all associated trimming of branches and limbs, and applies to the removal of branches at locations not on or around utility lines. For apprentice rates see "Apprentice- LABORER"						
LASER BEAM OPERATOR <i>LABORERS - ZONE 1</i>	12/01/2012	\$32.55	\$7.10	\$12.45	\$0.00	\$52.10
	06/01/2013	\$33.30	\$7.10	\$12.45	\$0.00	\$52.85
	12/01/2013	\$34.05	\$7.10	\$12.45	\$0.00	\$53.60
	06/01/2014	\$34.80	\$7.10	\$12.45	\$0.00	\$54.35
	12/01/2014	\$35.55	\$7.10	\$12.45	\$0.00	\$55.10
	06/01/2015	\$36.30	\$7.10	\$12.45	\$0.00	\$55.85
	12/01/2015	\$37.05	\$7.10	\$12.45	\$0.00	\$56.60
	06/01/2016	\$37.80	\$7.10	\$12.45	\$0.00	\$57.35
	12/01/2016	\$38.80	\$7.10	\$12.45	\$0.00	\$58.35
For apprentice rates see "Apprentice- LABORER"						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
MARBLE & TILE FINISHERS <i>BRICKLAYERS LOCAL 3 - MARBLE & TILE</i>	02/01/2013	\$36.20	\$10.18	\$16.51	\$0.00	\$62.89
	08/01/2013	\$36.91	\$10.18	\$16.58	\$0.00	\$63.67
	02/01/2014	\$37.36	\$10.18	\$16.58	\$0.00	\$64.12
	08/01/2014	\$38.07	\$10.18	\$16.65	\$0.00	\$64.90
	02/01/2015	\$38.52	\$10.18	\$16.65	\$0.00	\$65.35
	08/01/2015	\$39.23	\$10.18	\$16.72	\$0.00	\$66.13
	02/01/2016	\$39.68	\$10.18	\$16.72	\$0.00	\$66.58
	08/01/2016	\$40.38	\$10.18	\$16.80	\$0.00	\$67.36
	02/01/2017	\$40.84	\$10.18	\$16.80	\$0.00	\$67.82

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

Effective Date - 02/01/2013

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$18.10	\$10.18	\$16.51	\$0.00	\$44.79
2	60	\$21.72	\$10.18	\$16.51	\$0.00	\$48.41
3	70	\$25.34	\$10.18	\$16.51	\$0.00	\$52.03
4	80	\$28.96	\$10.18	\$16.51	\$0.00	\$55.65
5	90	\$32.58	\$10.18	\$16.51	\$0.00	\$59.27

Effective Date - 08/01/2013

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$18.46	\$10.18	\$16.58	\$0.00	\$45.22
2	60	\$22.15	\$10.18	\$16.58	\$0.00	\$48.91
3	70	\$25.84	\$10.18	\$16.58	\$0.00	\$52.60
4	80	\$29.53	\$10.18	\$16.58	\$0.00	\$56.29
5	90	\$33.22	\$10.18	\$16.58	\$0.00	\$59.98

Notes:

Apprentice to Journeyworker Ratio:1:3

MARBLE MASONS, TILELAYERS & TERRAZZO MECH <i>BRICKLAYERS LOCAL 3 - MARBLE & TILE</i>	02/01/2013	\$47.45	\$10.18	\$17.83	\$0.00	\$75.46
	08/01/2013	\$48.35	\$10.18	\$17.90	\$0.00	\$76.43
	02/01/2014	\$48.91	\$10.18	\$17.90	\$0.00	\$76.99
	08/01/2014	\$49.81	\$10.18	\$17.97	\$0.00	\$77.96
	02/01/2015	\$50.37	\$10.18	\$17.97	\$0.00	\$78.52
	08/01/2015	\$51.27	\$10.18	\$18.04	\$0.00	\$79.49
	02/01/2016	\$51.84	\$10.18	\$18.04	\$0.00	\$80.06
	08/01/2016	\$52.74	\$10.18	\$18.12	\$0.00	\$81.04
	02/01/2017	\$53.31	\$10.18	\$18.12	\$0.00	\$81.61

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

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

Effective Date - 02/01/2013

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$23.73	\$10.18	\$17.83	\$0.00	\$51.74
2	60	\$28.47	\$10.18	\$17.83	\$0.00	\$56.48
3	70	\$33.22	\$10.18	\$17.83	\$0.00	\$61.23
4	80	\$37.96	\$10.18	\$17.83	\$0.00	\$65.97
5	90	\$42.71	\$10.18	\$17.83	\$0.00	\$70.72

Effective Date - 08/01/2013

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$24.18	\$10.18	\$17.90	\$0.00	\$52.26
2	60	\$29.01	\$10.18	\$17.90	\$0.00	\$57.09
3	70	\$33.85	\$10.18	\$17.90	\$0.00	\$61.93
4	80	\$38.68	\$10.18	\$17.90	\$0.00	\$66.76
5	90	\$43.52	\$10.18	\$17.90	\$0.00	\$71.60

Notes:

Apprentice to Journeyworker Ratio:1:5

MECH. SWEEPER OPERATOR (ON CONST. SITES) <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2012	\$39.72	\$10.00	\$13.02	\$0.00	\$62.74
	06/01/2013	\$40.49	\$10.00	\$13.02	\$0.00	\$63.51
	12/01/2013	\$41.27	\$10.00	\$13.02	\$0.00	\$64.29
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
MECHANICS MAINTENANCE <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2012	\$39.72	\$10.00	\$13.02	\$0.00	\$62.74
	06/01/2013	\$40.49	\$10.00	\$13.02	\$0.00	\$63.51
	12/01/2013	\$41.27	\$10.00	\$13.02	\$0.00	\$64.29
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
MILLWRIGHT (Zone 1) <i>MILLWRIGHTS LOCAL 1121 - Zone 1</i>	04/01/2011	\$33.57	\$8.67	\$15.61	\$0.00	\$57.85

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - MILLWRIGHT - Local 1121 Zone 1

Effective Date - 04/01/2011

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$16.79	\$8.67	\$11.64	\$0.00	\$37.10
2	55	\$18.46	\$8.67	\$11.64	\$0.00	\$38.77
3	60	\$20.14	\$8.67	\$13.23	\$0.00	\$42.04
4	65	\$21.82	\$8.67	\$13.23	\$0.00	\$43.72
5	70	\$23.50	\$8.67	\$14.02	\$0.00	\$46.19
6	75	\$25.18	\$8.67	\$14.02	\$0.00	\$47.87
7	80	\$26.86	\$8.67	\$14.82	\$0.00	\$50.35
8	85	\$28.53	\$8.67	\$14.82	\$0.00	\$52.02

Notes:

Apprentice to Journeyworker Ratio:1:5

MORTAR MIXER <i>LABORERS - ZONE 1</i>	12/01/2012	\$32.55	\$7.10	\$12.45	\$0.00	\$52.10
	06/01/2013	\$33.30	\$7.10	\$12.45	\$0.00	\$52.85
	12/01/2013	\$34.05	\$7.10	\$12.45	\$0.00	\$53.60
	06/01/2014	\$34.80	\$7.10	\$12.45	\$0.00	\$54.35
	12/01/2014	\$35.55	\$7.10	\$12.45	\$0.00	\$55.10
	06/01/2015	\$36.30	\$7.10	\$12.45	\$0.00	\$55.85
	12/01/2015	\$37.05	\$7.10	\$12.45	\$0.00	\$56.60
	06/01/2016	\$37.80	\$7.10	\$12.45	\$0.00	\$57.35
	12/01/2016	\$38.80	\$7.10	\$12.45	\$0.00	\$58.35

For apprentice rates see "Apprentice- LABORER"

OILER (OTHER THAN TRUCK CRANES,GRADALLS) <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2012	\$21.28	\$10.00	\$13.02	\$0.00	\$44.30
	06/01/2013	\$21.70	\$10.00	\$13.02	\$0.00	\$44.72
	12/01/2013	\$22.12	\$10.00	\$13.02	\$0.00	\$45.14

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

OILER (TRUCK CRANES, GRADALLS) <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2012	\$24.62	\$10.00	\$13.02	\$0.00	\$47.64
	06/01/2013	\$25.10	\$10.00	\$13.02	\$0.00	\$48.12
	12/01/2013	\$25.59	\$10.00	\$13.02	\$0.00	\$48.61

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

OTHER POWER DRIVEN EQUIPMENT - CLASS II <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2012	\$39.72	\$10.00	\$13.02	\$0.00	\$62.74
	06/01/2013	\$40.49	\$10.00	\$13.02	\$0.00	\$63.51
	12/01/2013	\$41.27	\$10.00	\$13.02	\$0.00	\$64.29

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

PAINTER (BRIDGES/TANKS) <i>PAINTERS LOCAL 35 - ZONE 2</i>	01/01/2013	\$45.01	\$7.80	\$15.60	\$0.00	\$68.41
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Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - PAINTER Local 35 - BRIDGES/TANKS

Effective Date - 01/01/2013

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$22.51	\$7.80	\$0.00	\$0.00	\$30.31
2	55	\$24.76	\$7.80	\$3.52	\$0.00	\$36.08
3	60	\$27.01	\$7.80	\$3.84	\$0.00	\$38.65
4	65	\$29.26	\$7.80	\$4.16	\$0.00	\$41.22
5	70	\$31.51	\$7.80	\$13.68	\$0.00	\$52.99
6	75	\$33.76	\$7.80	\$14.00	\$0.00	\$55.56
7	80	\$36.01	\$7.80	\$14.32	\$0.00	\$58.13
8	90	\$40.51	\$7.80	\$14.96	\$0.00	\$63.27

Notes:
Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

PAINTER (SPRAY OR SANDBLAST, NEW) *	01/01/2013	\$35.91	\$7.80	\$15.60	\$0.00	\$59.31
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* If 30% or more of surfaces to be painted are new construction, NEW paint rate shall be used. PAINTERS LOCAL 35 - ZONE 2

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

Effective Date - 01/01/2013

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$17.96	\$7.80	\$0.00	\$0.00	\$25.76
2	55	\$19.75	\$7.80	\$3.52	\$0.00	\$31.07
3	60	\$21.55	\$7.80	\$3.84	\$0.00	\$33.19
4	65	\$23.34	\$7.80	\$4.16	\$0.00	\$35.30
5	70	\$25.14	\$7.80	\$13.68	\$0.00	\$46.62
6	75	\$26.93	\$7.80	\$14.00	\$0.00	\$48.73
7	80	\$28.73	\$7.80	\$14.32	\$0.00	\$50.85
8	90	\$32.32	\$7.80	\$14.96	\$0.00	\$55.08

Notes:

Apprentice to Journeyworker Ratio:1:1

PAINTER (SPRAY OR SANDBLAST, REPAINT)	01/01/2013	\$33.97	\$7.80	\$15.60	\$0.00	\$57.37
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PAINTERS LOCAL 35 - ZONE 2

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

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

Effective Date - 01/01/2013

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$16.99	\$7.80	\$0.00	\$0.00	\$24.79
2	55	\$18.68	\$7.80	\$3.52	\$0.00	\$30.00
3	60	\$20.38	\$7.80	\$3.84	\$0.00	\$32.02
4	65	\$22.08	\$7.80	\$4.16	\$0.00	\$34.04
5	70	\$23.78	\$7.80	\$13.68	\$0.00	\$45.26
6	75	\$25.48	\$7.80	\$14.00	\$0.00	\$47.28
7	80	\$27.18	\$7.80	\$14.32	\$0.00	\$49.30
8	90	\$30.57	\$7.80	\$14.96	\$0.00	\$53.33

Notes:

Apprentice to Journeyworker Ratio:1:1

PAINTER (TRAFFIC MARKINGS)	12/01/2012	\$32.30	\$7.10	\$12.45	\$0.00	\$51.85
LABORERS - ZONE 1	06/01/2013	\$33.05	\$7.10	\$12.45	\$0.00	\$52.60
	12/01/2013	\$33.80	\$7.10	\$12.45	\$0.00	\$53.35
	06/01/2014	\$34.55	\$7.10	\$12.45	\$0.00	\$54.10
	12/01/2014	\$35.30	\$7.10	\$12.45	\$0.00	\$54.85
	06/01/2015	\$36.05	\$7.10	\$12.45	\$0.00	\$55.60
	12/01/2015	\$36.80	\$7.10	\$12.45	\$0.00	\$56.35
	06/01/2016	\$37.55	\$7.10	\$12.45	\$0.00	\$57.10
	12/01/2016	\$38.55	\$7.10	\$12.45	\$0.00	\$58.10

For Apprentice rates see "Apprentice- LABORER"

PAINTER / TAPER (BRUSH, NEW) *	01/01/2013	\$34.51	\$7.80	\$15.60	\$0.00	\$57.91
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* If 30% or more of surfaces to be painted are new construction, NEW paint rate shall be used. PAINTERS LOCAL 35 - ZONE 2

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - PAINTER - Local 35 Zone 2 - BRUSH NEW

Effective Date - 01/01/2013

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$17.26	\$7.80	\$0.00	\$0.00	\$25.06
2	55	\$18.98	\$7.80	\$3.52	\$0.00	\$30.30
3	60	\$20.71	\$7.80	\$3.84	\$0.00	\$32.35
4	65	\$22.43	\$7.80	\$4.16	\$0.00	\$34.39
5	70	\$24.16	\$7.80	\$13.68	\$0.00	\$45.64
6	75	\$25.88	\$7.80	\$14.00	\$0.00	\$47.68
7	80	\$27.61	\$7.80	\$14.32	\$0.00	\$49.73
8	90	\$31.06	\$7.80	\$14.96	\$0.00	\$53.82

Notes:

Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

PAINTER / TAPER (BRUSH, REPAINT) PAINTERS LOCAL 35 - ZONE 2	01/01/2013	\$32.57	\$7.80	\$15.60	\$0.00	\$55.97
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Apprentice - PAINTER Local 35 Zone 2 - BRUSH REPAINT

Effective Date - 01/01/2013

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$16.29	\$7.80	\$0.00	\$0.00	\$24.09
2	55	\$17.91	\$7.80	\$3.52	\$0.00	\$29.23
3	60	\$19.54	\$7.80	\$3.84	\$0.00	\$31.18
4	65	\$21.17	\$7.80	\$4.16	\$0.00	\$33.13
5	70	\$22.80	\$7.80	\$13.68	\$0.00	\$44.28
6	75	\$24.43	\$7.80	\$14.00	\$0.00	\$46.23
7	80	\$26.06	\$7.80	\$14.32	\$0.00	\$48.18
8	90	\$29.31	\$7.80	\$14.96	\$0.00	\$52.07

Notes:

Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

PANEL & PICKUP TRUCKS DRIVER TEAMSTERS JOINT COUNCIL NO. 10 ZONE A	12/01/2012	\$31.38	\$8.91	\$8.00	\$0.00	\$48.29
PIER AND DOCK CONSTRUCTOR (UNDERPINNING AND DECK) PILE DRIVER LOCAL 56 (ZONE 1)	08/01/2012	\$39.20	\$9.80	\$17.67	\$0.00	\$66.67
	08/01/2013	\$40.70	\$9.80	\$17.67	\$0.00	\$68.17
	08/01/2014	\$42.20	\$9.80	\$17.67	\$0.00	\$69.67
	08/01/2015	\$43.70	\$9.80	\$17.67	\$0.00	\$71.17

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
PILE DRIVER <i>PILE DRIVER LOCAL 56 (ZONE 1)</i>	08/01/2012	\$39.20	\$9.80	\$17.67	\$0.00	\$66.67
	08/01/2013	\$40.70	\$9.80	\$17.67	\$0.00	\$68.17
	08/01/2014	\$42.20	\$9.80	\$17.67	\$0.00	\$69.67
	08/01/2015	\$43.70	\$9.80	\$17.67	\$0.00	\$71.17

Apprentice - PILE DRIVER - Local 56 Zone 1

Effective Date - 08/01/2012

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$19.60	\$9.80	\$17.67	\$0.00	\$47.07
2	60	\$23.52	\$9.80	\$17.67	\$0.00	\$50.99
3	70	\$27.44	\$9.80	\$17.67	\$0.00	\$54.91
4	75	\$29.40	\$9.80	\$17.67	\$0.00	\$56.87
5	80	\$31.36	\$9.80	\$17.67	\$0.00	\$58.83
6	80	\$31.36	\$9.80	\$17.67	\$0.00	\$58.83
7	90	\$35.28	\$9.80	\$17.67	\$0.00	\$62.75
8	90	\$35.28	\$9.80	\$17.67	\$0.00	\$62.75

Effective Date - 08/01/2013

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$20.35	\$9.80	\$17.67	\$0.00	\$47.82
2	60	\$24.42	\$9.80	\$17.67	\$0.00	\$51.89
3	70	\$28.49	\$9.80	\$17.67	\$0.00	\$55.96
4	75	\$30.53	\$9.80	\$17.67	\$0.00	\$58.00
5	80	\$32.56	\$9.80	\$17.67	\$0.00	\$60.03
6	80	\$32.56	\$9.80	\$17.67	\$0.00	\$60.03
7	90	\$36.63	\$9.80	\$17.67	\$0.00	\$64.10
8	90	\$36.63	\$9.80	\$17.67	\$0.00	\$64.10

Notes:

Apprentice to Journeyworker Ratio:1:3

PIPEFITTER & STEAMFITTER <i>PIPEFITTERS LOCAL 537</i>	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:**

PIPELAYER LABORERS - ZONE 1	12/01/2012	\$32.55	\$7.10	\$12.45	\$0.00	\$52.10
	06/01/2013	\$33.30	\$7.10	\$12.45	\$0.00	\$52.85
	12/01/2013	\$34.05	\$7.10	\$12.45	\$0.00	\$53.60
	06/01/2014	\$34.80	\$7.10	\$12.45	\$0.00	\$54.35
	12/01/2014	\$35.55	\$7.10	\$12.45	\$0.00	\$55.10
	06/01/2015	\$36.30	\$7.10	\$12.45	\$0.00	\$55.85
	12/01/2015	\$37.05	\$7.10	\$12.45	\$0.00	\$56.60
	06/01/2016	\$37.80	\$7.10	\$12.45	\$0.00	\$57.35
	12/01/2016	\$38.80	\$7.10	\$12.45	\$0.00	\$58.35

For apprentice rates see "Apprentice- LABORER"

PLUMBERS & GASFITTERS PLUMBERS & GASFITTERS LOCAL 12	03/01/2013	\$49.31	\$9.32	\$13.29	\$0.00	\$71.92
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Apprentice - PLUMBER/GASFITTER - Local 12

Effective Date - 03/01/2013

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	35	\$17.26	\$9.32	\$4.97	\$0.00	\$31.55
2	40	\$19.72	\$9.32	\$5.61	\$0.00	\$34.65
3	55	\$27.12	\$9.32	\$7.53	\$0.00	\$43.97
4	65	\$32.05	\$9.32	\$8.81	\$0.00	\$50.18
5	75	\$36.98	\$9.32	\$10.09	\$0.00	\$56.39

Notes:
 ** 1:2; 2:6; 3:10; 4:14; 5:19/Steps are 1 yr
 Step4 with lic\$53.29 Step5 with lic\$59.49

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>	12/01/2012	\$32.55	\$7.10	\$12.45	\$0.00	\$52.10
	06/01/2013	\$33.30	\$7.10	\$12.45	\$0.00	\$52.85
	12/01/2013	\$34.05	\$7.10	\$12.45	\$0.00	\$53.60
	06/01/2014	\$34.80	\$7.10	\$12.45	\$0.00	\$54.35
	12/01/2014	\$35.55	\$7.10	\$12.45	\$0.00	\$55.10
	06/01/2015	\$36.30	\$7.10	\$12.45	\$0.00	\$55.85
	12/01/2015	\$37.05	\$7.10	\$12.45	\$0.00	\$56.60
	06/01/2016	\$37.80	\$7.10	\$12.45	\$0.00	\$57.35
	12/01/2016	\$38.80	\$7.10	\$12.45	\$0.00	\$58.35
For apprentice rates see "Apprentice- LABORER"						
POWDERMAN & BLASTER <i>LABORERS - ZONE 1</i>	12/01/2012	\$33.30	\$7.10	\$12.45	\$0.00	\$52.85
	06/01/2013	\$34.05	\$7.10	\$12.45	\$0.00	\$53.60
	12/01/2013	\$34.80	\$7.10	\$12.45	\$0.00	\$54.35
	06/01/2014	\$35.55	\$7.10	\$12.45	\$0.00	\$55.10
	12/01/2014	\$36.30	\$7.10	\$12.45	\$0.00	\$55.85
	06/01/2015	\$37.05	\$7.10	\$12.45	\$0.00	\$56.60
	12/01/2015	\$37.80	\$7.10	\$12.45	\$0.00	\$57.35
	06/01/2016	\$38.55	\$7.10	\$12.45	\$0.00	\$58.10
	12/01/2016	\$39.55	\$7.10	\$12.45	\$0.00	\$59.10
For apprentice rates see "Apprentice- LABORER"						
POWER SHOVEL/DERRICK/TRENCHING MACHINE <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2012	\$40.09	\$10.00	\$13.02	\$0.00	\$63.11
	06/01/2013	\$40.87	\$10.00	\$13.02	\$0.00	\$63.89
	12/01/2013	\$41.65	\$10.00	\$13.02	\$0.00	\$64.67
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
PUMP OPERATOR (CONCRETE) <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2012	\$40.09	\$10.00	\$13.02	\$0.00	\$63.11
	06/01/2013	\$40.87	\$10.00	\$13.02	\$0.00	\$63.89
	12/01/2013	\$41.65	\$10.00	\$13.02	\$0.00	\$64.67
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
PUMP OPERATOR (DEWATERING, OTHER) <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2012	\$28.17	\$10.00	\$13.02	\$0.00	\$51.19
	06/01/2013	\$28.72	\$10.00	\$13.02	\$0.00	\$51.74
	12/01/2013	\$29.27	\$10.00	\$13.02	\$0.00	\$52.29
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
READY-MIX CONCRETE DRIVER <i>TEAMSTERS LOCAL 25c</i>	05/01/2011	\$31.21	\$7.25	\$6.19	\$0.00	\$44.65
RECLAIMERS <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2012	\$39.72	\$10.00	\$13.02	\$0.00	\$62.74
	06/01/2013	\$40.49	\$10.00	\$13.02	\$0.00	\$63.51
	12/01/2013	\$41.27	\$10.00	\$13.02	\$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> As of 9/1/09 Carpentry work on wood-frame residential WEATHERIZATION projects shall be paid the RESIDENTIAL WOOD FRAME CARPENTER rate.	05/01/2011	\$24.24	\$6.34	\$6.23	\$0.00	\$36.81

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
RIDE-ON MOTORIZED BUGGY OPERATOR <i>LABORERS - ZONE 1</i>	12/01/2012	\$32.55	\$7.10	\$12.45	\$0.00	\$52.10
	06/01/2013	\$33.30	\$7.10	\$12.45	\$0.00	\$52.85
	12/01/2013	\$34.05	\$7.10	\$12.45	\$0.00	\$53.60
	06/01/2014	\$34.80	\$7.10	\$12.45	\$0.00	\$54.35
	12/01/2014	\$35.55	\$7.10	\$12.45	\$0.00	\$55.10
	06/01/2015	\$36.30	\$7.10	\$12.45	\$0.00	\$55.85
	12/01/2015	\$37.05	\$7.10	\$12.45	\$0.00	\$56.60
	06/01/2016	\$37.80	\$7.10	\$12.45	\$0.00	\$57.35
	12/01/2016	\$38.80	\$7.10	\$12.45	\$0.00	\$58.35
For apprentice rates see "Apprentice- LABORER"						
ROLLER/SPREADER/MULCHING MACHINE <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2012	\$39.72	\$10.00	\$13.02	\$0.00	\$62.74
	06/01/2013	\$40.49	\$10.00	\$13.02	\$0.00	\$63.51
	12/01/2013	\$41.27	\$10.00	\$13.02	\$0.00	\$64.29
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
ROOFER (Inc.Roofing Waterproofing &Roofing Damproofing) <i>ROOFERS LOCAL 33</i>	02/01/2013	\$37.41	\$10.50	\$10.70	\$0.00	\$58.61

Apprentice - ROOFER - Local 33

Effective Date - 02/01/2013

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$18.71	\$10.50	\$3.38	\$0.00	\$32.59
2	60	\$22.45	\$10.50	\$10.70	\$0.00	\$43.65
3	65	\$24.32	\$10.50	\$10.70	\$0.00	\$45.52
4	75	\$28.06	\$10.50	\$10.70	\$0.00	\$49.26
5	85	\$31.80	\$10.50	\$10.70	\$0.00	\$53.00

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 <i>ROOFERS LOCAL 33</i>	02/01/2013	\$37.66	\$10.50	\$10.70	\$0.00	\$58.86
For apprentice rates see "Apprentice- ROOFER"						
SHEETMETAL WORKER <i>SHEETMETAL WORKERS LOCAL 17 - A</i>	02/01/2013	\$42.32	\$9.82	\$18.24	\$2.11	\$72.49

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - SHEET METAL WORKER - Local 17-A

Effective Date - 02/01/2013

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$16.93	\$9.82	\$4.00	\$0.00	\$30.75
2	40	\$16.93	\$9.82	\$4.00	\$0.00	\$30.75
3	45	\$19.04	\$9.82	\$8.00	\$1.11	\$37.97
4	45	\$19.04	\$9.82	\$8.00	\$1.11	\$37.97
5	50	\$21.16	\$9.82	\$8.75	\$1.19	\$40.92
6	50	\$21.16	\$9.82	\$9.00	\$1.20	\$41.18
7	60	\$25.39	\$9.82	\$10.24	\$1.36	\$46.81
8	65	\$27.51	\$9.82	\$10.99	\$1.45	\$49.77
9	75	\$31.74	\$9.82	\$12.49	\$1.62	\$55.67
10	85	\$35.97	\$9.82	\$13.49	\$1.78	\$61.06

Notes:

Steps are 6 mos.

Apprentice to Journeyworker Ratio:1:4

SIGN ERECTOR	06/01/2012	\$25.37	\$6.82	\$6.85	\$0.00	\$39.04
PAINTERS LOCAL 35 - ZONE 2	06/01/2013	\$25.81	\$7.07	\$7.05	\$0.00	\$39.93

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - SIGN ERECTOR - Local 35 Zone 2

Effective Date - 06/01/2012

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$12.69	\$6.82	\$0.00	\$0.00	\$19.51
2	55	\$13.95	\$6.82	\$2.35	\$0.00	\$23.12
3	60	\$15.22	\$6.82	\$2.35	\$0.00	\$24.39
4	65	\$16.49	\$6.82	\$2.35	\$0.00	\$25.66
5	70	\$17.76	\$6.82	\$6.85	\$0.00	\$31.43
6	75	\$19.03	\$6.82	\$6.85	\$0.00	\$32.70
7	80	\$20.30	\$6.82	\$6.85	\$0.00	\$33.97
8	85	\$21.56	\$6.82	\$6.85	\$0.00	\$35.23
9	90	\$22.83	\$6.82	\$6.85	\$0.00	\$36.50

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 <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE A</i>	12/01/2012	\$31.84	\$8.91	\$8.00	\$0.00	\$48.75
SPECIALIZED EARTH MOVING EQUIP > 35 TONS <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE A</i>	12/01/2012	\$32.13	\$8.91	\$8.00	\$0.00	\$49.04
SPRINKLER FITTER <i>SPRINKLER FITTERS LOCAL 550 - (Section A)</i>	03/01/2013	\$52.58	\$8.42	\$12.60	\$0.00	\$73.60

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - SPRINKLER FITTER - Local 550

Effective Date - 03/01/2013

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	35	\$18.40	\$8.42	\$8.00	\$0.00	\$34.82
2	40	\$21.03	\$8.42	\$8.00	\$0.00	\$37.45
3	45	\$23.66	\$8.42	\$8.00	\$0.00	\$40.08
4	50	\$26.29	\$8.42	\$8.00	\$0.00	\$42.71
5	55	\$28.92	\$8.42	\$8.00	\$0.00	\$45.34
6	60	\$31.55	\$8.42	\$8.00	\$0.00	\$47.97
7	65	\$34.18	\$8.42	\$8.00	\$0.00	\$50.60
8	70	\$36.81	\$8.42	\$8.00	\$0.00	\$53.23
9	75	\$39.44	\$8.42	\$8.00	\$0.00	\$55.86
10	80	\$42.06	\$8.42	\$8.00	\$0.00	\$58.48

Notes:

Steps are 850 hours

Apprentice to Journeyworker Ratio:1:1

STEAM BOILER OPERATOR <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2012	\$39.72	\$10.00	\$13.02	\$0.00	\$62.74
	06/01/2013	\$40.49	\$10.00	\$13.02	\$0.00	\$63.51
	12/01/2013	\$41.27	\$10.00	\$13.02	\$0.00	\$64.29

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

TAMPERS, SELF-PROPELLED OR TRACTOR DRAWN <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2012	\$39.72	\$10.00	\$13.02	\$0.00	\$62.74
	06/01/2013	\$40.49	\$10.00	\$13.02	\$0.00	\$63.51
	12/01/2013	\$41.27	\$10.00	\$13.02	\$0.00	\$64.29

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

TELECOMMUNICATION TECHNICIAN <i>ELECTRICIANS LOCAL 103</i>	03/01/2013	\$32.64	\$13.00	\$12.51	\$0.00	\$58.15
	09/01/2013	\$33.15	\$13.00	\$12.52	\$0.00	\$58.67
	03/01/2014	\$33.69	\$13.00	\$12.54	\$0.00	\$59.23
	09/01/2014	\$34.20	\$13.00	\$12.56	\$0.00	\$59.76
	03/01/2015	\$34.74	\$13.00	\$12.57	\$0.00	\$60.31
	09/01/2015	\$35.45	\$13.00	\$12.59	\$0.00	\$61.04
	03/01/2016	\$36.17	\$13.00	\$12.62	\$0.00	\$61.79

Apprentice - TELECOMMUNICATION TECHNICIAN - Local 103

Effective Date - 03/01/2013

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$13.06	\$13.00	\$0.39	\$0.00	\$26.45
2	40	\$13.06	\$13.00	\$0.39	\$0.00	\$26.45
3	45	\$14.69	\$13.00	\$10.77	\$0.00	\$38.46
4	45	\$14.69	\$13.00	\$10.77	\$0.00	\$38.46
5	50	\$16.32	\$13.00	\$11.02	\$0.00	\$40.34
6	55	\$17.95	\$13.00	\$11.27	\$0.00	\$42.22
7	60	\$19.58	\$13.00	\$11.52	\$0.00	\$44.10
8	65	\$21.22	\$13.00	\$11.77	\$0.00	\$45.99
9	70	\$22.85	\$13.00	\$12.02	\$0.00	\$47.87
10	75	\$24.48	\$13.00	\$12.26	\$0.00	\$49.74

Effective Date - 09/01/2013

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$13.26	\$13.00	\$0.40	\$0.00	\$26.66
2	40	\$13.26	\$13.00	\$0.40	\$0.00	\$26.66
3	45	\$14.92	\$13.00	\$9.79	\$0.00	\$37.71
4	45	\$14.92	\$13.00	\$9.79	\$0.00	\$37.71
5	50	\$16.58	\$13.00	\$10.04	\$0.00	\$39.62
6	55	\$18.23	\$13.00	\$10.29	\$0.00	\$41.52
7	60	\$19.89	\$13.00	\$10.54	\$0.00	\$43.43
8	65	\$21.55	\$13.00	\$10.79	\$0.00	\$45.34
9	70	\$23.21	\$13.00	\$11.04	\$0.00	\$47.25
10	75	\$24.86	\$13.00	\$11.29	\$0.00	\$49.15

Notes:

Apprentice to Journeyworker Ratio:1:1

TERRAZZO FINISHERS	02/01/2013	\$46.35	\$10.18	\$17.83	\$0.00	\$74.36
BRICKLAYERS LOCAL 3 - MARBLE & TILE	08/01/2013	\$47.25	\$10.18	\$17.90	\$0.00	\$75.33
	02/01/2014	\$47.81	\$10.18	\$17.90	\$0.00	\$75.89
	08/01/2014	\$48.71	\$10.18	\$17.97	\$0.00	\$76.86
	02/01/2015	\$49.27	\$10.18	\$17.97	\$0.00	\$77.42
	08/01/2015	\$50.17	\$10.18	\$18.04	\$0.00	\$78.39
	02/01/2016	\$50.74	\$10.18	\$18.04	\$0.00	\$78.96
	08/01/2016	\$51.64	\$10.18	\$18.12	\$0.00	\$79.94
	02/01/2017	\$52.21	\$10.18	\$18.12	\$0.00	\$80.51

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - TERRAZZO FINISHER - Local 3 Marble & Tile

Effective Date - 02/01/2013

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$23.18	\$10.18	\$17.83	\$0.00	\$51.19
2	60	\$27.81	\$10.18	\$17.83	\$0.00	\$55.82
3	70	\$32.45	\$10.18	\$17.83	\$0.00	\$60.46
4	80	\$37.08	\$10.18	\$17.83	\$0.00	\$65.09
5	90	\$41.72	\$10.18	\$17.83	\$0.00	\$69.73

Effective Date - 08/01/2013

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$23.63	\$10.18	\$17.90	\$0.00	\$51.71
2	60	\$28.35	\$10.18	\$17.90	\$0.00	\$56.43
3	70	\$33.08	\$10.18	\$17.90	\$0.00	\$61.16
4	80	\$37.80	\$10.18	\$17.90	\$0.00	\$65.88
5	90	\$42.53	\$10.18	\$17.90	\$0.00	\$70.61

Notes:

Apprentice to Journeyworker Ratio:1:3

TEST BORING DRILLER <i>LABORERS - FOUNDATION AND MARINE</i>	12/01/2012	\$33.70	\$7.10	\$12.60	\$0.00	\$53.40
	06/01/2013	\$34.45	\$7.10	\$12.60	\$0.00	\$54.15
	12/01/2013	\$35.20	\$7.10	\$12.60	\$0.00	\$54.90
	06/01/2014	\$35.95	\$7.10	\$12.60	\$0.00	\$55.65
	12/01/2014	\$36.70	\$7.10	\$12.60	\$0.00	\$56.40
	06/01/2015	\$37.45	\$7.10	\$12.60	\$0.00	\$57.15
	12/01/2015	\$38.20	\$7.10	\$12.60	\$0.00	\$57.90
	06/01/2016	\$38.95	\$7.10	\$12.60	\$0.00	\$58.65
	12/01/2016	\$39.95	\$7.10	\$12.60	\$0.00	\$59.65

For apprentice rates see "Apprentice- LABORER"

TEST BORING DRILLER HELPER <i>LABORERS - FOUNDATION AND MARINE</i>	12/01/2012	\$32.42	\$7.10	\$12.60	\$0.00	\$52.12
	06/01/2013	\$33.17	\$7.10	\$12.60	\$0.00	\$52.87
	12/01/2013	\$33.92	\$7.10	\$12.60	\$0.00	\$53.62
	06/01/2014	\$34.67	\$7.10	\$12.60	\$0.00	\$54.37
	12/01/2014	\$35.42	\$7.10	\$12.60	\$0.00	\$55.12
	06/01/2015	\$36.17	\$7.10	\$12.60	\$0.00	\$55.87
	12/01/2015	\$36.92	\$7.10	\$12.60	\$0.00	\$56.62
	06/01/2016	\$37.67	\$7.10	\$12.60	\$0.00	\$57.37
	12/01/2016	\$38.67	\$7.10	\$12.60	\$0.00	\$58.37

For apprentice rates see "Apprentice- LABORER"

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
TEST BORING LABORER <i>LABORERS - FOUNDATION AND MARINE</i>	12/01/2012	\$32.30	\$7.10	\$12.60	\$0.00	\$52.00
	06/01/2013	\$33.05	\$7.10	\$12.60	\$0.00	\$52.75
	12/01/2013	\$33.80	\$7.10	\$12.60	\$0.00	\$53.50
	06/01/2014	\$34.55	\$7.10	\$12.60	\$0.00	\$54.25
	12/01/2014	\$35.30	\$7.10	\$12.60	\$0.00	\$55.00
	06/01/2015	\$36.05	\$7.10	\$12.60	\$0.00	\$55.75
	12/01/2015	\$36.80	\$7.10	\$12.60	\$0.00	\$56.50
	06/01/2016	\$37.55	\$7.10	\$12.60	\$0.00	\$57.25
	12/01/2016	\$38.55	\$7.10	\$12.60	\$0.00	\$58.25
For apprentice rates see "Apprentice- LABORER"						
TRACTORS/PORTABLE STEAM GENERATORS <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2012	\$39.72	\$10.00	\$13.02	\$0.00	\$62.74
	06/01/2013	\$40.49	\$10.00	\$13.02	\$0.00	\$63.51
	12/01/2013	\$41.27	\$10.00	\$13.02	\$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>	12/01/2012	\$32.42	\$9.07	\$8.00	\$0.00	\$49.49
TUNNEL WORK - COMPRESSED AIR <i>LABORERS (COMPRESSED AIR)</i>	12/01/2012	\$44.58	\$7.10	\$13.00	\$0.00	\$64.68
	06/01/2013	\$45.33	\$7.10	\$13.00	\$0.00	\$65.43
	12/01/2013	\$46.08	\$7.10	\$13.00	\$0.00	\$66.18
	06/01/2014	\$46.83	\$7.10	\$13.00	\$0.00	\$66.93
	12/01/2014	\$47.58	\$7.10	\$13.00	\$0.00	\$67.68
	06/01/2015	\$48.33	\$7.10	\$13.00	\$0.00	\$68.43
	12/01/2015	\$49.08	\$7.10	\$13.00	\$0.00	\$69.18
	06/01/2016	\$49.83	\$7.10	\$13.00	\$0.00	\$69.93
	12/01/2016	\$50.83	\$7.10	\$13.00	\$0.00	\$70.93
For apprentice rates see "Apprentice- LABORER"						
TUNNEL WORK - COMPRESSED AIR (HAZ. WASTE) <i>LABORERS (COMPRESSED AIR)</i>	12/01/2012	\$46.58	\$7.10	\$13.00	\$0.00	\$66.68
	06/01/2013	\$47.33	\$7.10	\$13.00	\$0.00	\$67.43
	12/01/2013	\$48.08	\$7.10	\$13.00	\$0.00	\$68.18
	06/01/2014	\$48.83	\$7.10	\$13.00	\$0.00	\$68.93
	12/01/2014	\$49.58	\$7.10	\$13.00	\$0.00	\$69.68
	06/01/2015	\$50.33	\$7.10	\$13.00	\$0.00	\$70.43
	12/01/2015	\$51.08	\$7.10	\$13.00	\$0.00	\$71.18
	06/01/2016	\$51.83	\$7.10	\$13.00	\$0.00	\$71.93
	12/01/2016	\$52.83	\$7.10	\$13.00	\$0.00	\$72.93
For apprentice rates see "Apprentice- LABORER"						
TUNNEL WORK - FREE AIR <i>LABORERS (FREE AIR TUNNEL)</i>	12/01/2012	\$36.65	\$7.10	\$13.00	\$0.00	\$56.75
	06/01/2013	\$37.40	\$7.10	\$13.00	\$0.00	\$57.50
	12/01/2013	\$38.15	\$7.10	\$13.00	\$0.00	\$58.25
	06/01/2014	\$38.90	\$7.10	\$13.00	\$0.00	\$59.00
	12/01/2014	\$39.65	\$7.10	\$13.00	\$0.00	\$59.75
	06/01/2015	\$40.40	\$7.10	\$13.00	\$0.00	\$60.50
	12/01/2015	\$41.15	\$7.10	\$13.00	\$0.00	\$61.25
	06/01/2016	\$41.90	\$7.10	\$13.00	\$0.00	\$62.00
	12/01/2016	\$42.90	\$7.10	\$13.00	\$0.00	\$63.00
For apprentice rates see "Apprentice- LABORER"						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
TUNNEL WORK - FREE AIR (HAZ. WASTE) <i>LABORERS (FREE AIR TUNNEL)</i>	12/01/2012	\$38.65	\$7.10	\$13.00	\$0.00	\$58.75
	06/01/2013	\$39.40	\$7.10	\$13.00	\$0.00	\$59.50
	12/01/2013	\$40.15	\$7.10	\$13.00	\$0.00	\$60.25
	06/01/2014	\$40.90	\$7.10	\$13.00	\$0.00	\$61.00
	12/01/2014	\$41.65	\$7.10	\$13.00	\$0.00	\$61.75
	06/01/2015	\$42.40	\$7.10	\$13.00	\$0.00	\$62.50
	12/01/2015	\$43.15	\$7.10	\$13.00	\$0.00	\$63.25
	06/01/2016	\$43.90	\$7.10	\$13.00	\$0.00	\$64.00
For apprentice rates see "Apprentice- LABORER"						
VAC-HAUL <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE A</i>	12/01/2012	\$31.84	\$8.91	\$8.00	\$0.00	\$48.75
WAGON DRILL OPERATOR <i>LABORERS - ZONE 1</i>	12/01/2012	\$32.55	\$7.10	\$12.45	\$0.00	\$52.10
	06/01/2013	\$33.30	\$7.10	\$12.45	\$0.00	\$52.85
	12/01/2013	\$34.05	\$7.10	\$12.45	\$0.00	\$53.60
	06/01/2014	\$34.80	\$7.10	\$12.45	\$0.00	\$54.35
	12/01/2014	\$35.55	\$7.10	\$12.45	\$0.00	\$55.10
	06/01/2015	\$36.30	\$7.10	\$12.45	\$0.00	\$55.85
	12/01/2015	\$37.05	\$7.10	\$12.45	\$0.00	\$56.60
	06/01/2016	\$37.80	\$7.10	\$12.45	\$0.00	\$57.35
For apprentice rates see "Apprentice- LABORER"						
WASTE WATER PUMP OPERATOR <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2012	\$40.09	\$10.00	\$13.02	\$0.00	\$63.11
	06/01/2013	\$40.87	\$10.00	\$13.02	\$0.00	\$63.89
	12/01/2013	\$41.65	\$10.00	\$13.02	\$0.00	\$64.67
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
WATER METER INSTALLER <i>PLUMBERS & GASFITTERS LOCAL 12</i>	03/01/2013	\$49.31	\$9.32	\$13.29	\$0.00	\$71.92
For apprentice rates see "Apprentice- PLUMBER/PIPEFITTER" or "PLUMBER/GASFITTER"						
Outside Electrical - East						
CABLE TECHNICIAN (Power Zone) <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	03/03/2013	\$25.18	\$8.20	\$4.17	\$0.00	\$37.55
	09/01/2013	\$25.66	\$8.70	\$4.48	\$0.00	\$38.84
For apprentice rates see "Apprentice- LINEMAN"						
CABLEMAN (Underground Ducts & Cables) <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	03/03/2013	\$35.67	\$8.20	\$4.98	\$0.00	\$48.85
	09/01/2013	\$36.55	\$8.70	\$6.58	\$0.00	\$51.83
For apprentice rates see "Apprentice- LINEMAN"						
DRIVER / GROUNDMAN CDL <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	03/03/2013	\$29.38	\$8.20	\$5.68	\$0.00	\$43.26
	09/01/2013	\$29.94	\$8.70	\$6.05	\$0.00	\$44.69
For apprentice rates see "Apprentice- LINEMAN"						
DRIVER / GROUNDMAN -Inexperienced (<2000 Hrs) <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	03/03/2013	\$23.08	\$8.20	\$3.94	\$0.00	\$35.22
	09/01/2013	\$23.52	\$8.70	\$5.24	\$0.00	\$37.46
For apprentice rates see "Apprentice- LINEMAN"						
EQUIPMENT OPERATOR (Class A CDL) <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	03/03/2013	\$35.67	\$8.20	\$8.98	\$0.00	\$52.85
	09/01/2013	\$36.35	\$8.70	\$9.43	\$0.00	\$54.48
For apprentice rates see "Apprentice- LINEMAN"						
EQUIPMENT OPERATOR (Class B CDL) <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	03/03/2013	\$31.48	\$8.20	\$6.19	\$0.00	\$45.87
	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>	03/03/2013	\$23.08	\$8.20	\$3.42	\$0.00	\$34.70
	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>	03/03/2013	\$18.89	\$8.20	\$2.61	\$0.00	\$29.70
	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>	03/03/2013	\$41.97	\$8.20	\$11.26	\$0.00	\$61.43
	09/01/2013	\$42.77	\$8.70	\$11.78	\$0.00	\$63.25

Apprentice - LINEMAN (Outside Electrical) - East Local 104

Effective Date - 03/03/2013

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$25.18	\$8.20	\$3.92	\$0.00	\$37.30
2	65	\$27.28	\$8.20	\$4.36	\$0.00	\$39.84
3	70	\$29.38	\$8.20	\$5.06	\$0.00	\$42.64
4	75	\$31.48	\$8.20	\$5.76	\$0.00	\$45.44
5	80	\$33.58	\$8.20	\$6.46	\$0.00	\$48.24
6	85	\$35.67	\$8.20	\$7.17	\$0.00	\$51.04
7	90	\$37.77	\$8.20	\$8.36	\$0.00	\$54.33

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>	02/01/2009	\$16.59	\$2.42	\$0.00	\$0.00	\$19.01
This classification applies only to the trimming of branches on and around utility lines.						
TREE TRIMMER GROUNDMAN <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	02/01/2009	\$14.64	\$2.42	\$0.00	\$0.00	\$17.06
This classification applies only to the trimming of branches on and around utility lines.						

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.

CONSOLIDATED GENERAL CONDITIONS
OF THE CONTRACT FOR CONSTRUCTION

ARTICLE 1

GENERAL PROVISIONS

1.1 BASIC DEFINITIONS

1.1.1 THE CONTRACT DOCUMENTS

The Contract Documents consist of the Agreement between Owner and Contractor (hereinafter the Agreement), the Consolidated General Conditions of the Contract and the Supplemented Statutory Conditions, Drawings, Specifications, including all numbered sections, addenda issued prior to execution of the Contract, other documents listed in the Agreement, and Modifications issued after execution of the Contract. A Modification is (1) a written amendment to the Contract signed by both parties, (2) a Change Order, (3) a Construction Change Directive or (4) a written order for a minor change in the Work issued by the Architect. Unless specifically enumerated in the Agreement, the Contract Documents do not include other documents such as bidding requirements (advertisement or invitation to bid, Instructions to Bidders, sample forms, the Contractor's bid or portions of addenda relating to bidding requirements).

In the event of any conflict among the Contract Documents, the Documents shall be construed according to the following priorities:

Highest Priority:	Modifications
Second Priority:	Agreement
Third Priority:	Addenda--later date to take precedence
Fourth Priority:	Consolidated General Conditions and Supplemental Statutory Conditions
Fifth Priority:	Drawings and Specifications

Any references throughout the contract documents to "General Conditions" or "Supplementary General Conditions" are deleted and "Consolidated General Conditions and Supplemental Statutory Conditions" is substituted therefor. All bidders and sub-bidders take note that the Town has consolidated the standard form AIA Document A210 General Conditions of the Contract for Construction with the Town's desired Supplementary General Conditions into one document. The Supplemental Statutory Conditions remain intact and separate, and form a part of the Contract Documents.

1.1.2 THE CONTRACT

The Contract Documents form the Contract for Construction. The Contract represents the entire

and integrated agreement between the parties hereto and supersedes prior negotiations, representations or agreements, either written or oral. The Contract may be amended or modified only by a Modification. Except as provided in Paragraph 3.18, nothing contained in the Contract Documents shall be construed to create any contractual relationship (1) between the Architect and the Contractor, (2) between the Owner or the Architect and a Subcontractor or Sub-subcontractor, (3) between the Owner and the Architect, or (4) between any persons or entities other than the Owner and the Contractor. The Contract Documents shall comply with the requirements of Mass. Gen. Laws Chapter 44, Section 31C.

1.1.3 THE WORK

The term "Work" means the construction and services required by the Contract Documents, whether completed or partially completed, and includes all other labor, materials, equipment and services provided or to be provided by the Contractor to fulfill the Contractor's obligations. The Work may constitute the whole or a part of the Project.

1.1.4 THE PROJECT

The Project is the total construction of which the Work performed under the Contract Documents may be the whole or a part and which may include construction by the Owner or by separate contractors.

1.1.5 THE DRAWINGS

The Drawings are the graphic and pictorial portions of the Contract Documents, wherever located and whenever issued, showing the design, location and dimensions of the Work, generally including plans, elevations, sections, details, schedules and diagrams.

1.1.6 THE SPECIFICATIONS

The Specifications are that portion of the Contract Documents consisting of the written requirements for materials, equipment, construction systems, standards and workmanship for the Work, and performance of related services.

1.1.7 THE PROJECT MANUAL

The Project Manual is the volume usually assembled for the work which may include the bidding requirements, sample forms, Conditions of the Contract and Specifications.

1.2 EXECUTION, CORRELATION AND INTENT

1.2.1 The Contract Documents shall be signed by the Owner and Contractor as provided in the Agreement. A copy of the signed set shall be deposited with the Architect. If either the Owner or Contractor or both do not sign all the Contract Documents, the Architect shall identify such unsigned Documents upon request.

1.2.2 Execution of the Contract by the Contractor is a representation that the Contractor has visited the site, become familiar with local conditions under which the Work is to be performed, and correlated personal observations with requirements of the Contract Documents. By executing the Contract, the Contractor also certifies, under penalties of perjury, that to the best of his information, knowledge and belief he has complied with all laws of the Commonwealth of Massachusetts relating to taxes.

1.2.3 The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work by the Contractor. The Contract Documents are complementary, and what is required by one shall be as binding as if required by all; performance by the Contractor shall be required only to the extent consistent with the Contract Documents and reasonably inferable from them as being necessary to produce the intended results. All Work mentioned or indicated in the Contract Documents shall be performed by the Contractor as part of this Contract unless it is specifically indicated in the Contract Documents that such Work is to be done by others.

1.2.4 Organization of the Specifications into divisions, sections and articles, and arrangement of Drawings shall not control the Contractor in dividing the Work among Subcontractors or in establishing the extent of Work to be performed by any trade.

1.2.5 Unless otherwise stated in the Contract Documents, words which have well-known technical or construction industry meanings are used in the Contract Documents in accordance with such recognized meanings.

1.2.6 Where codes, standards, requirements and publications of public and private bodies are referred to in the Specifications, references shall be understood to be to the latest revisions prior to the date of receiving bids, except where otherwise indicated.

1.2.7 Where no explicit quality or standards for materials or workmanship are established for Work, such Work is to be of good, workmanlike quality for the intended use and consistent with the quality of the surrounding Work and of the construction of the Project generally.

1.2.8 All manufactured articles, materials, and equipment shall be applied, installed, connected, erected, used, cleaned, and conditioned in accordance with the manufacturer's written or printed directions and instructions unless otherwise indicated in the Contract Documents.

1.2.9 The Mechanical, Electrical and Fire Protection Drawings are diagrammatic only, and are not intended to show the alignment, physical locations or configurations of such Work. Such Work shall be installed without additional cost to the Owner to clear all obstructions, permit proper clearances for the Work of other trades, and present an orderly appearance where exposed. Prior to beginning such Work, the Contractor shall prepare coordination drawings showing the exact alignment, physical location and configuration of the Mechanical, Electrical and Fire Protection installations and demonstrating to the Contractor's satisfaction that the installations will comply with the preceding sentence.

1.2.10 Exact locations of fixtures and outlets shall be obtained from the Architect as provided in Subparagraph 3.2.5 before the Work is roughed in; Work installed without such information from the Architect shall be relocated at the Contractor's expense.

1.2.11 Test boring or soil test information included with the Contract Documents or otherwise made available to the Contractor was obtained by the Owner for use by the Architect in the design of the Project or Work. The Owner does not hold out such information to the Contractor as an accurate or approximate indication of subsurface conditions, and no claim for extra cost or extension of time resulting from a reliance by the Contractor on such information shall be allowed except as provided in Subparagraph 4.3.6.

1.3 OWNERSHIP AND USE OF ARCHITECT'S DRAWINGS, SPECIFICATIONS AND OTHER DOCUMENTS

1.3.1 The Drawings, Specifications and other documents prepared by the Architect are instruments of the Architect's service through which the Work to be executed by the Contractor is described. The Contractor may retain one contract record set. Neither the Contractor nor any Subcontractor, Sub-subcontractor or material or equipment supplier shall own or claim a copyright in the Drawings, Specifications and other documents prepared by the Architect, and unless otherwise indicated the Architect shall be deemed the author of them and will retain all common law, statutory and other reserved rights, in addition to the copyright. All copies of them, except the Contractor's record set, shall be returned or suitably accounted for to the Architect, on request, upon completion of the Work. The Drawings, Specifications and other documents prepared by the Architect, and copies thereof furnished to the Contractor, are for use solely with respect to this Project. They are not to be used by the Contractor or any Subcontractor, Sub-subcontractor or material or equipment supplier on other projects or for additions to this Project outside the scope of the Work without the specific written consent of the Owner and Architect. The Contractor, Subcontractors, Sub-subcontractors and material or equipment suppliers are granted a limited license to use and reproduce applicable portions of the Drawings, Specifications and other documents prepared by the Architect appropriate to and for use in the execution of their Work under the Contract Documents. All copies made under this license shall bear the statutory copyright notice, if any, shown on the Drawings, Specifications and other documents prepared by the Architect. Submittal or distribution to meet official regulatory requirements or for other purposes in connection with this Project is not to be construed as publication in derogation of the Architect's copyright or other reserved rights.

1.4 CAPITALIZATION

1.4.1 Terms capitalized in these General Conditions include those which are (1) specifically defined, (2) the titles of numbered articles and identified references to Paragraphs, Subparagraphs and Clauses in a document or (3) the titles of documents published by the American Institute of Architects.

1.5 INTERPRETATION

1.5.1 In the interest of brevity the Contract Documents frequently omit modifying

words such as “all” and “any” and articles such as “the” and “an,” but the fact that a modifier or an article is absent from one statement and appears in another is not intended to affect the interpretation of either statement.

ARTICLE 2

OWNER

2.1 DEFINITIONS

2.1.1 The Owner is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number.

2.1.2 The Project Engineer is the person or entity identified as such in writing by the Owner. The Project Engineer shall act as the Owner’s representative with respect to all matters pertaining to the Project. The duties, responsibilities, and obligations of the Project Engineer under this Contract may be modified from time to time by the Town, so long as such modifications do not interfere materially with the Contractor’s performance of the Work hereunder, and so long as the Contractor is given notice of any such modifications that affect the Contractor’s performance of the Work.

2.2 INFORMATION AND SERVICES REQUIRED OF THE OWNER

2.2.1 The Owner upon reasonable written request shall furnish to the Contractor in writing information which is necessary and relevant for the Contractor to evaluate, give notice of, or enforce mechanic’s lien rights. Such information shall include a correct statement of the record legal title to the property on which the Project is located, usually referred to as the site, and the Owner’s interest therein at the time of execution of the Agreement.

2.2.2 The Owner shall furnish surveys describing physical characteristics, legal limitations and utility locations for the site of the Project, and a legal description of the site.

2.2.3 Except for permits and fees which are the responsibility of the Contractor under the Contract Documents, the Owner shall secure and pay for necessary approvals, easements, assessments and charges required for construction, use or occupancy of permanent structures, or for permanent changes in existing facilities.

2.2.4 Information or services required of the Owner hereunder shall be furnished by the Owner with reasonable promptness after receipt from the Contractor of a written request for such information or services.

2.2.5 Unless otherwise provided in the Contract Documents, the Contractor will be furnished, free of charge, such copies of Drawings and Project Manuals as are reasonably necessary for execution of the Work.

2.2.6 The foregoing are in addition to other duties and responsibilities of the Owner

enumerated herein and especially those in respect to Article 6 (Construction by Owner or by Separate Contractors), Article 9 (Payments and Completion) and Article 11 (Insurance and Bonds).

2.3 OWNER'S RIGHT TO STOP THE WORK

2.3.1 If the Contractor fails to correct Work which is not in accordance with the requirements of the Contract Documents as required by Paragraph 12.2 or persistently fails to carry out Work in accordance with the Contract Documents, the Owner, by written order signed by the Project Engineer, may order the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, the right of the Owner to stop the Work shall not give rise to a duty on the part of the Owner to exercise this right for the benefit of the Contractor or any other person or entity.

2.3.2 The Owner may order the Contractor in writing to suspend, delay, or interrupt all or any part of the Work for such period of time as it may determine to be appropriate for the convenience of the Owner; provided however, that if there is a suspension, delay or interruption for fifteen days or more or due to a failure of the Owner to act within the time specified in this Contract, the Owner shall make an adjustment in the Contract Sum for any increase in the cost of performance of this Contract, but shall not include any profit to the Contractor on such increase; and provided further, that the Owner shall not make any adjustment in the Contract Sum under this provision for any suspension, delay, interruption or failure to act to the extent that such is due to any cause for which this Contract provides for an equitable adjustment of the Contract Sum under any other contract provisions.

2.3.3 The Contractor must submit the amount of a claim under Subparagraph 2.3.2 to the Owner in writing as soon as practicable after the end of the suspension, delay, interruption or failure to act and, in any event, not later than the date of final payment under this Contract and, except for costs due to a suspension order, the Owner shall not approve any costs in the claim incurred more than twenty days before the Contractor notified the Owner in writing of the act or failure to act involved in the claim.

2.4 OWNER'S RIGHT TO CARRY OUT THE WORK

.If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within a seven-day period after receipt of written notice from the Owner to begin and prosecute correction of such default or neglect with diligence and promptness, the Owner may, without prejudice to other remedies the Owner may have, correct such deficiencies. In such case an appropriate Construction Change Directive shall be issued deducting from payments then or thereafter due the Contractor the cost of correcting such deficiencies, including compensation for the Architect's additional services and expenses made necessary by such default, neglect or failure. If payments then or thereafter due the Contractor are not sufficient to cover such amounts, the Contractor shall pay the difference to the Owner.

ARTICLE 3

CONTRACTOR

3.1 DEFINITION

3.1.1 The Contractor is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The term “Contractor” means the Contract or the Contractor’s authorized representative.

3.2 REVIEW OF CONTRACT DOCUMENTS AND
FIELD CONDITIONS BY CONTRACTOR

3.2.1 Before starting the Work, and at frequent intervals during the progress thereof, the Contractor shall carefully study and compare the Contract Documents with each other and with any information furnished by the Owner pursuant to Subparagraph 2.2.2 and shall at once report to the Architect any error, inconsistency or omission the Contractor may discover. Any necessary change shall be ordered as provided in Article 7, subject to the requirements of Paragraph 1.2 and other provisions of the Contract Documents. If the Contractor proceeds with the Work without such notice to the Architect, having discovered such errors, inconsistencies or omissions, or if by reasonable study of the Contract Documents the Contractor could have discovered such, the Contractor shall bear all costs arising therefrom.

3.2.2 The Contractor shall take field measurements and verify field conditions and shall carefully compare such field measurements and conditions and other information known to the Contractor with the Contract Documents before commencing activities. Errors, inconsistencies or omissions discovered shall be reported to the Architect at once. Any necessary change shall be ordered as provided in Article 7, subject to the requirements of Paragraph 1.2 and other provisions of the Contract Documents. If the Contractor proceeds with the Work without such notice to the Architect, having discovered such errors, inconsistencies or omissions, the Contractor shall bear all costs arising therefrom.

3.2.3 The Contractor shall perform the Work in accordance with the Contract Documents and any submittals made in accordance with Paragraph 3.12.

3.2.4 The Contractor shall give the Architect timely notice of any additional Drawings, Specifications, or instructions required to define the Work in greater detail, or to permit the proper progress of the Work.

3.2.5 The Contractor shall not proceed with any Work not clearly and consistently defined in detail in the Contract Documents, but shall request additional drawings or instructions from the Architect as provided in Subparagraph 3.2.4. If the Contractor proceeds with such Work without obtaining further Drawings, Specifications or instructions, the Contractor shall correct Work incorrectly done at the Contractor’s own expense.

3.3 SUPERVISION AND CONSTRUCTION PROCEDURES

3.3.1 The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for, and have control over construction means, methods, techniques, sequences and procedures and for coordinating all portions of the Work under the Contract. Where the Contract Documents refer to particular construction means, methods, techniques, sequences or procedures or indicate or imply that such are to be used in the Work, such mention is intended only to indicate that the operations of the Contractor shall be such as to produce at least the quality of work implied by the operations described, but the actual determination of whether or not the described operations may be safely and suitably employed on the Work shall be the responsibility of the Contractor, who shall notify the Architect in writing of the actual means, methods, techniques, sequences or procedures which will be employed on the Work, if these differ from those mentioned in the Contract Documents. All loss, damage, liability, or cost of correcting defective work arising from the employment of any construction means, methods, techniques, sequences or procedures shall be borne by the Contractor, notwithstanding that such construction means, methods, techniques, sequences or procedures are referred to, indicated or implied by the Contract Documents, unless the Contractor has given timely notice to the Owner and Architect in writing that such means, methods, techniques, sequences or procedures are not safe or suitable, and the Owner has then instructed the Contractor in writing to proceed at the Owner's risk.

3.3.2 The Contractor shall be responsible to the Owner for acts and omissions of the Contractor's employees, Subcontractors and their agents and employees, and other persons performing portions of the Work under a contract with the Contractor.

3.3.3 The Contractor shall not be relieved of obligations to perform the Work in accordance with the Contract Documents either by activities or duties of the Architect in the Architect's administration of the Contract, or by tests, inspections or approvals required or performed by persons other than the Contractor.

3.3.4 The Contractor shall be responsible for inspection of portions of Work already performed under this Contract to determine that such portions are in proper condition to receive subsequent Work.

3.4 LABOR AND MATERIALS

3.4.1 Unless otherwise provided in the Contract Documents, the Contractor shall provide and pay for labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities and services necessary for proper execution and completion of the Work, whether temporary or permanent and whether or not incorporated or to be incorporated in the Work. The word "provide" shall mean furnish and install completely, including connections, unless otherwise specified.

3.4.2 The Contractor shall enforce strict discipline and good order among the Contractor's employees and other persons carrying out the Contract. The Contractor shall not permit

employment of unfit persons or persons not skilled in tasks assigned to them.

3.5 WARRANTY

3.5.1 The Contractor warrants to the Owner and Architect that materials and equipment furnished under the Contract will be of good quality and new unless otherwise required or permitted by the Contract Documents, that the Work will be free from defects not inherent in the quality required or permitted, and that the Work will conform with the requirements of the Contract Documents. Work not conforming to these requirements, including substitutions not properly approved and authorized, may be considered defective. The Contractor's warranty excludes remedy for damage or defect occurring after Substantial Completion and caused by abuse, modifications not executed by the Contractor, improper or insufficient maintenance, improper operation, or normal wear and tear under normal usage.

3.5.2 The Contractor shall be responsible for determining that all materials furnished for the Work meet all requirements of the Contract Documents. The Architect may require the Contractor to produce reasonable evidence that a material meets such requirements, such as certified reports of past tests by qualified testing laboratories, reports of studies by qualified experts, or other evidence which, in the opinion of the Architect, would lead to a reasonable certainty that any material used, or proposed to be used in the Work, meets the requirements of the Contract Documents. All such data shall be furnished at the Contractor's expense. This provision shall not require the Contractor to pay for periodic testing of different batches of the same material, unless such testing is specifically required by the Contract Documents to be performed at the Contractor's expense.

3.5.3 If the Contractor proposes to use a material which, while suitable for the intended use, deviates in any way from the detailed requirements of the Contract Documents, the Contractor shall inform the Architect in writing of the nature of such deviations at the time the material is submitted for approval, and shall request written approval of the deviation from the requirements of the Contract Documents, in accordance with the procedures set forth in Mass. Gen. Laws Chapter 30, Section 39I.

3.5.4 In requesting approval of deviations or substitutions, the Contractor shall provide, upon request, evidence leading to a reasonable certainty that the proposed substitution or deviation meets or exceeds the requirements set forth in Mass. Gen. Laws Chapter 30, Section 39M(b). If, in the opinion of the Architect, the evidence presented by the Contractor does not provide a sufficient basis for such reasonable certainty, the Architect may reject such substitution or deviation.

3.5.5 The Contract Documents are intended to produce a building of consistent character and quality of design. All components of the building including visible items of mechanical and electrical equipment have been selected to have a coordinated design in relation to the overall appearance of the building. The Architect shall judge the design and appearance of proposed substitutes on the basis of their suitability in relation to the overall design of the Project, as well as for their intrinsic merits. The Architect will not approve as equal to materials specified proposed substitutes which, in the Architect's opinion, would be out of character,

obtrusive, or otherwise inconsistent with the character or quality of design of the Project. In order to permit coordinated design of color and finishes the Contractor shall, if required by the Architect, furnish the substituted material in any color, finish, texture, or pattern which would have been available from the manufacturer originally specified, at no additional cost to the Owner.

3.5.6 Any additional cost, or any loss or damage arising from the substitution of any material or any method for those originally specified shall be borne by the Contractor, notwithstanding approval or acceptance of such substitution by the Owner or the Architect, unless such substitution was made at the written request or direction of the Owner or the Architect.

3.5.7 The warranty provided in this paragraph 3.5 shall be in addition to and not in limitation of any other warranty required by the Contract Documents or otherwise prescribed by law.

3.5.8 The Contractor shall procure and deliver to the Architect, no later than the date claimed by the Contractor as the date of Substantial Completion, all special warranties required by the Contract Documents. Delivery by the Contractor shall constitute the Contractor's guarantee to the Owner that the warranties shall be performed in accordance with their terms and conditions.

3.6 TAXES

3.6.1 The Contractor shall pay sales, consumer, use and similar taxes for the Work or portions thereof provided by the Contractor which are legally enacted when bids are received or negotiations concluded, whether or not yet effective or merely scheduled to go into effect.

3.7 PERMITS, FEES AND NOTICES

3.7.1 Unless otherwise provided in the Contract Documents, the Contractor shall secure and pay for the building permit and other permits and governmental fees, licenses and inspections necessary for proper execution and completion of the Work which are customarily secured after execution of the Contract and which are legally required when bids are received or negotiations concluded. Notwithstanding the foregoing, the Town waives all of the Town's building, plumbing, gas, electrical, and other applicable inspection fees of the Town associated with the Work.

3.7.2 The Contractor shall comply with and give notices required by laws, ordinances, rules, regulations and lawful orders of public authorities bearing on performance of the Work.

3.7.3 It is not the Contractor's responsibility to ascertain that the Contract Documents are in accordance with applicable laws, statutes, ordinances, building codes, and rules and regulations. However, if the Contractor observes that portions of the Contract Documents are at variance therewith, the Contractor shall promptly notify the Architect and Owner in writing, and

necessary changes shall be accomplished by appropriate Modification.

3.7.4 If the Contractor performs Work knowing it to be contrary to laws, statutes, ordinances, building codes, and rules and regulations without such notice to the Architect and Owner, the Contractor shall assume full responsibility for such Work and shall bear the attributable costs.

3.8 ALLOWANCES

3.8.1 The Contractor shall include in the Contract Sum all allowances stated in the Contract Documents. Items covered by allowances shall be supplied for such amounts and by such persons or entities as the Owner may direct, but the Contractor shall not be required to employ persons or entities against which the Contractor makes reasonable objection.

3.8.2 Unless otherwise provided in the Contract Documents:

- .1 materials and equipment under an allowance shall be selected promptly by the Owner to avoid delay in the Work;
- .2 allowances shall cover the cost to the Contractor of materials and equipment delivered at the site and all required taxes, less applicable trade discounts;
- .3 Contractor's costs for unloading and handling at the site, labor, installation costs, overhead, profit and other expenses contemplated for stated allowance amounts shall be included in the Contract Sum and not in the allowances;
- .4 whenever costs are more than or less than allowances, the Contract Sum shall be adjusted accordingly by Change Order. The amount of the Change Order shall reflect (1) the difference between actual costs and the allowances under Clause 3.8.2.2 and (2) changes in Contractor's costs under Clause 3.8.2.3.

3.9 SUPERINTENDENCE

3.9.1 The Contractor shall employ a competent superintendent, acceptable to the Owner, and necessary assistants who shall be in attendance at the Project site full time during the progress of the Work until the date of Substantial Completion, and for such additional time thereafter as the Architect may determine to be necessary for the expeditious completion of the Work. The superintendent shall be licensed in accordance with Article 15 of the By-Laws of the Town of Arlington. The Contractor shall remove the superintendent if requested to do so in writing by the Owner, and shall promptly replace him with a competent person reasonably acceptable to the Owner. The superintendent shall represent the Contractor, and communications given to the superintendent shall be as binding as if given to the Contractor.

3.9.2 The Contractor shall retain a competent Registered Professional Engineer or

Registered Land Surveyor, acceptable to the Architect, who shall establish the exterior lines and required elevations of all buildings and structures to be erected on the site and shall establish sufficient lines and grades for the construction of associated Work such as, but not limited to, roads, utilities and site grading. The Engineer or Land Surveyor shall certify as to the actual location of the constructed facilities in relation to property lines, building lines, easements, and other restrictive boundaries.

3.9.3 The Contractor shall establish the building grades, lines, levels, column, wall and partition lines required by the various Subcontractors in laying out their Work.

3.9.4 The Contractor shall coordinate and supervise the Work performed by Subcontractors to the end that the Work is carried out without conflict between trades and so that no trade, at any time, causes delay to the general progress of the Work. If such delays occur, the Owner may deduct anticipated liquidation damages from the Progress Payments to the Contractor. The Contractor and all Subcontractors shall at all times afford each trade, any separate contractor, or the Owner, every reasonable opportunity for the installation of Work and the storage of materials.

3.10 CONTRACTOR'S CONSTRUCTION SCHEDULES

3.10.1 The Contractor shall prepare and submit to the Architect a progress schedule, and shall comply with such schedule, as described in Subparagraphs 8.2.4 through 8.2.8.

3.11 DOCUMENTS AND SAMPLES AT THE SITE

3.11.1 The Contractor shall maintain at the site for the Owner one record copy of the Drawings, Specifications, Addenda, Change Orders and other Modifications, in good order and marked currently to record changes and selections made during construction, and in addition approved Shop Drawings, Product Data, Samples and similar required submittals. These shall be available to the Architect and shall be delivered to the Architect for submittal to the Owner upon completion of the Work.

3.12 SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

3.12.1 Shop Drawings are drawings, diagrams, schedules and other data specially prepared for the Work by the Contractor or a Subcontractor Sub-subcontractor, manufacturer, supplier or distributor to illustrate some portion of the Work.

3.12.2 Product Data are illustrations, standard schedules, performance charts, instructions, brochures, diagrams and other information furnished by the Contractor to illustrate materials or equipment for some portion of the work.

3.12.3 Samples are physical examples which illustrate materials, equipment or workmanship and establish standards by which the Work will be judged.

3.12.4 Shop Drawings, Product Data, Samples and similar submittals are not Contract

Documents. The purpose of their submittal is to demonstrate for those portions of the Work for which submittals are required the way the Contractor proposes to conform to the information given and the design concept expressed in the Contract Documents. Review by the Architect is subject to the limitations of this Paragraph 3.12 and Paragraph 4.2.

3.12.5 The Contractor shall review, approve and submit to the Architect Shop Drawings, Product Data, Samples and similar submittals required by the Contract Documents with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of the Owner or of separate contractors. Submittals made by the Contractor which are not required by the Contract Documents may be returned without action.

3.12.6 The Contractor shall perform no portion of the Work requiring submittal and review of Shop Drawings, Product Data, Samples or similar submittals until the respective submittal has been reviewed by the Architect. Such Work shall be in accordance with reviewed submittals.

3.12.7 By approving and submitting Shop Drawings, Product Data, Samples, and similar submittals, the Contractor thereby represents that the Contractor has determined and verified all dimensions, quantities, field dimensions, relations to existing work, coordination with work to be installed later, coordination with information on previously accepted Shop Drawings, Product Data, Samples, or similar submittals and verification of compliance with all the requirements of the Contract Documents. The accuracy of all such information is the responsibility of the Contractor. In reviewing Shop Drawings, Product Data, Samples, and similar submittals the Architect shall be entitled to rely upon the Contractor's representation that such information is correct and accurate.

3.12.8 The Contractor shall not be relieved of responsibility for deviations from requirements of the Contract Documents by the Architect's review of Shop Drawings, Product Data, Samples or similar submittals unless the Contractor has specifically informed the Architect in writing of such deviation at the time of submittal and the Architect has given written approval to the specific deviation. The Contractor shall not be relieved of responsibility for errors or omissions in Shop Drawings, Product Data, Samples or similar submittals by the Architect's review thereof.

3.12.9 The Contractor shall direct specific attention, in writing or on resubmitted Shop Drawings, Product Data, Samples or similar submittals, to revisions other than those requested by the Architect on previous submittals. Unless such notice has been given, the Architect's review of a resubmitted Shop Drawing, Product Date, Sample, or similar submittal shall not constitute acceptance of any changes not requested on the prior submittal.

3.12.10 Informational submittals upon which the Architect is not expected to take responsible action may be so identified in the Contract Documents.

3.12.11 When professional certification of performance criteria of materials, systems or equipment is required by the Contract Documents, the Owner shall be entitled to rely upon such certifications, and neither the Owner nor the Architect shall be expected to make any independent examination with respect thereto.

3.12.12 The Architect will not check dimensions or quantities on any Shop Drawings and will not assume any responsibility for any errors in dimensions or quantities on Shop Drawings.

3.13 USE OF SITE

3.13.1 The right of possession of the premises and the improvements made thereon by the Contractor shall remain at all times in the Owner. The Contractor's right to entry and use thereof arises solely from the permission granted by the Owner under the Contract Documents. The Contractor shall confine the Contractor's apparatus, the storage of materials and the operations of the Contractor's workers to limits indicated by law, ordinances, the Contract Documents and permits and/or directions of the Architect, and shall not unreasonably encumber the premises with the Contractor's materials. The Owner shall not be liable to the Contractor, the Subcontractors, their employees or anyone else with respect to the conditions of the premises, except only for a condition caused directly and solely by the negligence of the Owner.

3.14 CUTTING AND PATCHING

3.14.1 The Contractor shall be responsible for cutting, fitting or patching required to complete the Work or to make its parts fit together properly.

3.14.2 The Contractor shall not damage or endanger a portion of the Work or fully or partially completed construction of the Owner or separate contractors by cutting, patching or otherwise altering such construction, or by excavation. The Contractor shall not cut or otherwise alter such construction by the Owner or a separate contractor except with written consent of the Owner and of such separate contractor; such consent shall not be unreasonably withheld. The Contractor shall not unreasonably withhold from the Owner or a separate contractor the Contractor's consent to cutting or otherwise altering the Work.

3.15 CLEANING UP

3.15.1 The Contractor shall keep the premises and surrounding area free from accumulation of waste materials or rubbish caused by operations under the Contract. At completion of the Work the Contractor shall remove from and about the Project waste materials, rubbish, the Contractor's tools, construction equipment, machinery and surplus materials. Immediately prior to the Architect's inspection for Substantial Completion, the Contractor shall completely clean the premises. Concrete and ceramic surfaces shall be cleaned and washed. Resilient coverings shall be cleaned, waxed and buffed. Woodwork shall be dusted and cleaned. Sash, fixtures and equipment shall be thoroughly cleaned. Stains, spots, dust, marks and smears shall be removed from all surfaces. Hardware and all metal surfaces shall be cleaned and polished. Glass and plastic surfaces shall be thoroughly cleaned by professional window cleaners. All damaged, broken or scratched glass or plastic shall be replaced by the Contractor at the Contractor's expense.

3.15.2 If the Contractor fails to clean up as provided in the Contract Documents, the Owner may do so and the cost thereof shall be charged to the Contractor.

3.16 ACCESS TO WORK

3.16.1 The Contractor shall provide the Owner and Architect access to the work in preparation and progress wherever located.

3.17 ROYALTIES AND PATENTS

3.17.1 The Contractor shall pay all royalties and license fees. The Contractor shall defend suits or claims for infringement of patent rights and shall hold the Owner and Architect harmless from loss on account thereof, but shall not be responsible for such defense or loss when a particular design, process or product of a particular manufacturer or manufacturers is required by the Contract Documents. However, if the Contractor has reason to believe that the required design, process or product is an infringement of a patent, the Contractor shall be responsible for such loss unless such information is promptly furnished to the Architect.

3.18 INDEMNIFICATION AND COVENANT NOT TO SUE

3.18.1 To the fullest extent permitted by law, the Contractor shall indemnify and hold harmless the Owner, Architect, Architect's consultants, and agents and employees of any of them from and against claims, damages, losses and expense, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work, provided that such claim, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself) including loss of use resulting therefrom, caused in whole or in part by negligent acts or omissions of the Contractor, a Subcontractor, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, regardless of whether or not such claim, damage, loss or expense is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge, or reduce other rights or obligations of indemnity which would otherwise exist as to a party or person described in this Paragraph 3.18.

3.18.2 In claims against any person or entity indemnified under this Paragraph 3.18 by an employee of the Contractor, a Subcontractor, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, the indemnification obligation under this Paragraph 3.18 shall not be limited by a limitation on the amount or type of damages, compensation, or benefits payable by or for the Contractor or a Subcontractor under workers' or workmen's compensation acts, disability benefit acts, or other employee benefit acts.

3.18.3 The obligations of the Contractor under this Paragraph 3.18 shall not extend to the liability of the Architect, the Architect's consultants, and agents and employees of any of them arising out of (1) the preparation of maps, Drawings, opinions, reports, surveys, Change Orders, designs or Specifications, or (2) directions or instructions given by the Architect, the Architect's consultants, and agents or employees of any of them, provided such instructions or directions are the primary cause of the injury or damage.

3.18.4 In consideration of the Contractor's undertaking to indemnify and hold harmless the Architect, the Architect's consultants and agents or employees of any of them, in accordance

with this Paragraph 3.18, the Architect agrees that the Architect will not bring any civil suit, action or other proceeding in law, equity or arbitration against the Contractor, or the officers, employees, agents and servants of the Contractor, for or on account of any action which the Architect may have arising out of or in any manner connected with the Work, except to enforce the provisions of this Paragraph 3.18; and the Contractor, or any successor, assign or subrogee of the Contractor, agrees not to bring any civil suit, action or other proceeding in law, equity or arbitration against the Architect, or the officers, employees, agents and servants of the Architect, for the enforcement of any action which the Contractor may have arising out of or in any manner connected with the Work.

3.19 RECORD KEEPING REQUIREMENTS

3.19.1 The Contractor shall comply with all applicable requirements of Mass. Gen. Laws Chapter 30, Section 39R.

ARTICLE 4

ADMINISTRATION OF THE CONTRACT

4.1 ARCHITECT

4.1.1 The Architect is the person lawfully licensed to practice architecture or an entity lawfully practicing architecture identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The term "Architect" means the Architect or the Architect's authorized representative.

4.1.2 Duties, responsibilities and limitations of authority of the Architect as set forth in the Contract Documents shall not be restricted, modified or extended without written consent of the Owner, Contractor and Architect. Consent shall not be unreasonably withheld.

4.1.3 In case of termination of employment of the Architect, the Owner shall appoint an architect against whom the Contractor makes no reasonable objection and whose status under the Contract Documents shall be that of the former architect.

4.2 ARCHITECT'S ADMINISTRATION OF THE CONTRACT

4.2.1 The Architect will provide administration of the Contract as described in the Contract Documents. The Architect will advise and consult with the Owner. The Architect will have authority to act on behalf of the Owner only to the extent provided in the Contract Documents, unless otherwise modified by written instrument in accordance with other provisions of the Contract.

4.2.2 The Architect will visit the site at intervals appropriate to the stage of construction to become generally familiar with the progress and quality of the completed Work and to determine in general if the Work is being performed in a manner indicating that the Work, when

completed, will be in accordance with the Contract Documents. However, the Architect will not be required to make exhaustive or continuous on-site inspections to check quality or quantity of the Work. On the basis of on-site observations as an architect, the Architect will keep the Owner informed of progress of the Work, and will endeavor to guard the Owner against defects and deficiencies in the Work.

4.2.3 The Architect will not have control over or charge of and will not be responsible for construction means, methods, techniques, sequences or procedures, or for safety precautions and programs in connection with the Work, since these are solely the Contractor's responsibility as provided in Paragraph 3.3. The Architect will not be responsible for the Contractor's failure to carry out the Work in accordance with the Contract Documents. The Architect will not be responsible for acts or omissions of the Contractor, Subcontractors, or their agents or employees, or of any other persons performing portions of the Work.

4.2.4 Communications Facilitating Contract Administration. Except as otherwise provided in the Contract Documents or when direct communications have been specially authorized, the Owner and Contractor shall endeavor to communicate through the Project Engineer. Communications by and with the Architect's consultants shall be through the Architect. Communications by and with Subcontractors and material suppliers shall be through the Contractor. Communications by and with separate contractors shall be through the Owner.

4.2.5 The Architect will have authority to reject Work which does not conform to the Contract Documents. Whenever the Architect considers it necessary or advisable for implementation of the intent of the Contract Documents, the Architect will have authority to require additional inspection or testing of the Work in accordance with Subparagraphs 13.5.2 and 13.5.3, whether or not such Work is fabricated, installed or completed. However, neither this authority of the Architect nor a decision made in good faith either to exercise or not to exercise such authority shall give rise to a duty or responsibility of the Architect to the Contractor, Subcontractors, material and equipment suppliers, their agents or employees, or other persons performing portions of the Work.

4.2.6 The Architect will review and take other appropriate action upon the Contractor's submittals such as Shop Drawings, Product Data and Samples, but only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. The Architect's action will be taken with reasonable promptness, while allowing sufficient time in the Architect's professional judgment to permit adequate review. Review of such submittals is not conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, all of which remain the responsibility of the Contractor as required by the Contract Documents. The Architect's review of the Contractor's submittals shall not relieve the Contractor of obligations set forth in Paragraphs 3.3, 3.5 and 3.12. The Architect's review shall not constitute approval of safety precautions or, unless otherwise specifically stated by the Architect, of any construction means, methods, techniques, sequences or procedures. The Architect's action with respect to any specific item shall not indicate approval of an assembly of which the item is a component.

4.2.7 The Architect will prepare Change Orders and Construction Change Directives, and may authorize minor changes in the Work as provided in Paragraph 7.4.

4.2.8 The Architect will conduct inspections to determine the date or dates of Substantial Completion and the date of final completion, will receive and forward to the Owner for the Owner's review and records written warranties and related documents required by the Contract and assembled by the Contractor, and will issue a final Certificate for Payment upon compliance with the requirements of the Contract Documents.

4.2.9 If the Owner and Architect agree, the Architect will provide one or more project representatives to assist in carrying out the Architect's responsibilities at the site. The duties, responsibilities and limitations of authority of such project representatives shall be as set forth in an exhibit to be incorporated in the Contract Documents. If no such exhibit has been so incorporated, the duties, responsibilities, and limitations of authority of such project representatives shall be as set forth in the edition of AIA Document B352 current as of the date of the Agreement.

4.2.10 The Architect will interpret and decide matters concerning performance under and requirements of the Contract Documents on written request of either the Owner or Contractor. The Architect's response to such requests will be made with reasonable promptness and within any time limits agreed upon. The Architect may, as the Architect judges desirable, issue additional drawings or instructions indicating in greater detail the construction or design of the various parts of the Work; such drawings or instructions may be effected by field order or other notice to the Contractor, and provided such drawings or instructions are reasonably consistent with the previously existing Contract Documents, the Work shall be executed in accordance with such additional drawings or instructions without additional cost or extension of the Contract Time. If the Contractor claims additional cost or time on account of such additional drawings or instructions, the Contractor shall give the notice provided in Subparagraph 4.3.7.

4.2.11 Interpretations and decisions of the Architect will be consistent with the intent of and reasonably inferable from the Contract Documents and will be in writing or in the form of drawings. When making such interpretations and decisions, the Architect will endeavor to secure faithful performance by the Owner and Contractor, will not show partiality to either and will not be liable for results of interpretations or decisions so rendered in good faith.

4.2.12 The Architect's decisions on matters relating to aesthetic effect will be final if consistent with the intent expressed in the Contract Documents.

4.3 CLAIMS AND DISPUTES

4.3.1 Definition. A Claim is a demand or assertion by one of the parties seeking, as a matter of right, adjustment or interpretation of Contract terms, payment of money, extension of time or other relief with respect to the terms of the Contract. The term "Claim" also includes other disputes and matters in question between the Owner and Contractor arising out of or relating to the Contract. Claims must be made by written notice. The responsibility to substantiate Claims shall rest with the party making the Claim.

4.3.2 Decision of Architect. Claims arising prior to final payment or the earlier termination of the Contract shall be referred initially to the Architect for action as provided in Paragraph 4.4. Action by the Architect, as provided in Paragraph 4.4, shall be required as a condition precedent to arbitration of a Claim between the Contractor and Owner as to all such matters arising prior to the date final payment is due. Action by the Architect in response to a Claim shall not be a condition precedent to arbitration in the event (1) the position of Architect is vacant; (2) the Architect has failed to take action as required under Subparagraph 4.4.1 within 15 days after the Claim is made; (3) the Architect has failed to take action required under Subparagraph 4.4.4 within 30 days after the Claim is made, unless the Architect has notified the parties in writing of the reasons why action could not be taken within 30 days, and of the date by which action will be taken; or (4) the Claim relates to a mechanic's lien.

4.3.3 Time Limits on Claim. Claims by either party must be made within 30 days after occurrence of the event giving rise to such Claim or within 30 days after the claimant first recognizes the condition giving rise to the Claim, whichever is later. Claims must be made by written notice. Any change or addition to a previously made Claim shall be made by timely written notice in accordance with this Subparagraph 4.3.3.

4.3.4 Continuing Contract Performance. Pending final resolution of a Claim including arbitration, unless otherwise agreed in writing the Contractor shall proceed diligently with performance of the Contract and the Owner shall continue to make payments in accordance with the Contract Documents.

4.3.5 Waiver of Claims: Final Payment. The making of final payment shall constitute a waiver of Claims by the Owner except those arising from:

- .1 liens, Claims, security interests or encumbrances arising out of the Contract and unsettled;
- .2 failure of the Work to comply with the requirements of the Contract Documents;
or
- .3 terms of special warranties required by the Contract Documents.

Any Claim which has not been waived in accordance with this Subparagraph shall be deemed to have accrued upon discovery by the Owner of the condition or breach upon which such Claim is based, for the purpose of any applicable statute of limitation.

4.3.6 Claims for Differing Subsurface or Latent Physical Conditions. If, during the progress of the Work, the Contractor or the Owner discovers that the actual subsurface or latent physical conditions encountered at the site differ substantially or materially from those shown on the plans or indicated in the Contract Documents, either the Contractor or the Owner may request an equitable adjustment in the Contract Sum applying to Work affected by the differing site conditions. A request for such an adjustment shall be in writing and shall be delivered by the party making such claim to the other party as soon as possible after such conditions are

discovered. Upon receipt of such a claim from a Contractor, or upon its own initiative, the Owner shall make an investigation of such physical conditions, and, if they differ substantially or materially from those shown on the plans or indicated in the Contract Documents or from those ordinarily encountered and generally recognized as inherent in Work of the character provided for in the plans and Contract Documents and are of such a nature as to cause an increase or decrease in the cost of performance of the Work or a change in the construction methods required for the performance of the Work which results in an increase or decrease in the cost of the Work, the Owner shall make an equitable adjustment in the Contract Sum and the Contract shall be modified in writing accordingly.

4.3.6 .1 Should conditions encountered below the surface of the ground require that footings, foundations or other parts of the building or other structure be raised, lowered or changed, or if additional depth of excavation below the levels shown on the Drawings is required in order to provide proper bearing for the building or other structure or for any permanent utilities on the site or for permanent grading or other permanent site work, any change in the amount of excavation, dewatering, sheeting, protection, rock excavation, backfill, concrete or other structural work, or any other work permanently incorporated in the building shall be considered a change in the Work, and the Contract Sum shall be adjusted as provided in this Article, provided that the Work has been ordered in writing as provided in 7.1.1.

4.3.7 Claims for Additional Cost or Time. If the Contractor claims that any acts or omissions of the Owner or the Architect, including any instructions or orders, whether oral, written, by Drawings, or otherwise, involve extra cost or time, and the Contractor has not received a written acknowledgment by the Owner or Architect that extra payment will be made or time extended on account thereof, the Contractor shall promptly so notify the Architect in writing of such Claim and shall not proceed with the Work relating to such Claim until the Contractor has received a further written order to proceed except, as provided in Paragraph 10.3, in the case of an emergency affecting life or property. No Claim by the Contractor on account of such acts, omissions, instructions or orders shall be valid unless the Contractor has so notified the Architect before proceeding, and has received the further written order to proceed.

4.3.7.1 OMITTED

4.3.7.2 The Contractor shall have the burden of demonstrating the effect of the claimed act or omission on the Contract Sum or Contract Time, and shall furnish the Architect with such documentation relating thereto as the Architect may reasonably require. In the case of a continuing act or omission only one Claim is necessary.

4.3.7.3 If adverse weather conditions are the basis for a Claim for additional time or cost, such Claim shall be documented by data substantiating that weather conditions were abnormal for the period of time and could not have been reasonably anticipated, and that weather conditions had an adverse effect on the scheduled construction.

4.3.8 Injury or Damage to Person or Property. If either party to the Contract suffers injury or damage to person or property because of an act or omission of the other party, of any of the other party's employees or agents, or of others for whose acts such party is legally liable,

written notice of such injury or damage, whether or not insured, shall be given to the other party within a reasonable time not exceeding 21 days after first observance. The notice shall provide sufficient detail to enable the other party to investigate the matter. If a Claim for additional cost or time related to this Claim is to be asserted, it shall be filed as provided in Subparagraph 4.3.7.

4.4 REVIEW OF CLAIMS BY ARCHITECT

4.4.1 The Architect shall take one or more of the following actions within ten days of receipt of a Claim: (1) defer any action with respect to all or any part of a Claim and request additional information from either party; (2) decline to render a decision for any reason which he deems appropriate (including but not limited to the fact that the Claim involves allegations of fault on the part of the Architect); (3) render a decision on all or a part of the Claim, or (4) submit a schedule to the parties indicating when the Architect expects to take action. The Architect shall notify the parties in writing of any action taken with respect to such Claim. If the Architect renders a decision or declines to render a decision, either party may proceed in accordance with Paragraph 4.5. If the Architect decides that the Work relating to such Claim should proceed regardless of his disposition of such Claim, the Architect shall issue to the Contractor a written order to proceed. The Contractor shall proceed as instructed, and all rights of both parties with respect to such Claim shall be deemed to have been reserved.

4.4.2 If a Claim has been resolved, the Architect will prepare or obtain appropriate documentation.

4.4.3 If a Claim has not been resolved, the party making the Claim shall, within ten days after the Architect's preliminary response, take one or more of the following actions: (1) submit additional supporting data requested by the Architect, (2) modify the initial Claim or (3) notify the Architect that the initial Claim stands.

4.4.4 If a Claim has not been resolved after consideration of the foregoing and of further evidence presented by the parties or requested by the Architect, the Architect will notify the parties in writing that the Architect's decision will be made within seven days. Upon expiration of such time period, the Architect will render to the parties the Architect's written decision relative to the Claim, including any change in the Contract Sum or Contract Time or both. If there is a surety and there appears to be a possibility of a Contractor's default, the Architect may, but is not obligated to, notify the surety and request the surety's assistance in resolving the controversy.

4.5 ARBITRATION

4.5.1 Controversies and Claims Subject to Arbitration. Any Claim arising out of or related to the Contract, or the breach thereof, except claims relating to aesthetic effect, shall be settled by arbitration, subject to the foregoing provisions of paragraph 4.4 and the provisions of Subparagraph 4.5.7. Arbitration will be conducted in accordance with the Construction Industry Arbitration Rules of the American Arbitration Association and judgment upon the award rendered by the Arbitrator or Arbitrators may be entered in any Court having jurisdiction thereof. In any such arbitration in which the amount stated in the demand is \$100,000 or less, a single

arbitrator shall be appointed in accordance with the procedures set forth in the American Arbitration Association Construction Industry Arbitration Rules. In any such arbitration in which the amount stated in the demand is in excess of \$100,000, a panel of three arbitrators shall be appointed in accordance with the procedures set forth in the American Arbitration Association Construction Industry Arbitration Rules.

4.5.2 Rules For Arbitration. If the neutral arbitrator is appointed by the American Arbitration Association, the said Association shall administer the arbitration and its Construction Industry Arbitration Rules shall govern all aspects of the proceeding including the enforcement of any award. If the neutral arbitrator is not appointed by the American Arbitration Association, then the panel of arbitrators shall act as the administrator of the arbitration but the Construction Industry Arbitration Rules of the Association shall nonetheless govern all aspects of the proceeding, including the enforcement of any award. The arbitration panel shall have all of the powers and duties conferred on the Association pursuant to said rules.

In addition, the following rules shall govern the selection of arbitrators and the proceedings:

4.5.2.1 Neither party may appoint as arbitrator an employee or an owner of that party, nor the parent, spouse or child of an employee or owner of that party.

4.5.2.2 After the neutral arbitrator has been appointed, neither party may engage in ex - parte communication with the arbitrator appointed by that party.

4.5.3 Contract Performance During Arbitration. During arbitration proceedings, the Owner and Contractor shall comply with Subparagraph 4.3.4.

4.5.4 When a written decision of the Architect states that the decision is final, any demand for arbitration of the matter covered by such decision must be made within two months after substantial completion of the project, as determined by the Architect in accordance with paragraph 9.8.2 hereof. The failure to demand arbitration within said two month period will result in the Architect's decision becoming final and binding upon the Owner and the Contractor.

4.5.4.1 A demand for arbitration shall be made within the time limits specified in Subparagraph 4.5.4, and in no event shall be made after the date when the institution of legal or equitable proceedings based on such Claim would be barred by the applicable statute of limitations.

4.5.5 Claims and Timely Assertion of Claims. A party who files a notice of demand for arbitration must assert in the demand all Claims then known to that party on which arbitration is permitted to be demanded. When a party fails to include a Claim through oversight, inadvertence or excusable neglect, or when a Claim has matured or been acquired subsequently, the arbitrator or arbitrators may permit amendment.

4.5.6 Judgment on Final Award. The award rendered by the arbitrator or arbitrators shall be final, and judgment may be entered upon it in accordance with applicable law in any court having jurisdiction thereof.

4.5.7 Notwithstanding any provision contained in this Paragraph 4.5 or elsewhere in the Contract Documents, the Owner reserves the following rights in connection with Claims and disputes between the Owner and the Contractor:

- .1 the right to institute legal action against the Contractor in any court of competent jurisdiction in lieu of demanding arbitration pursuant to this Paragraph 4.5, in which case the dispute or disputes which are the subject of such action shall be decided by such court, and not by arbitration;
- .2 the right to obtain from any court of competent jurisdiction a stay of any arbitration instituted by the Contractor, provided that the application for such stay is made before the appointment of the neutral arbitrator in such arbitration, in which case the dispute or disputes which are the subject of such arbitration shall be decided by such court, and not by arbitration;
- .3 the right to require the Contractor to join as a party in any arbitration between the Owner and the Architect relating to the Project, in which case the Contractor agrees to be bound by the decision of the arbitrator or arbitrators in such arbitration.

In case the Owner elects to proceed in accordance with 4.5.7.1 or 4.5.7.2 above, the word “litigation” shall be deemed to replace the word “arbitration” wherever the latter word appears in the Contract Documents.

ARTICLE 5

SUBCONTRACTORS

5.1 DEFINITIONS

5.1.1 A Subcontractor is a person or entity who has a direct contract with the Contractor to perform a portion of the Work at the site. The term “Subcontractor” is referred to throughout the Contract Documents as if singular in number and means a Subcontractor or an authorized representative of the Subcontractor. The term “Subcontractor” does not include a separate contractor or Subcontractors of a separate contractor.

5.1.2 A Sub-subcontractor is a person or entity who has a direct or indirect contract with a Subcontractor to perform a portion of the Work at the site. The term “Sub-subcontractor” is referred to throughout the Contract Documents as if singular in number and means a Sub-subcontractor or an authorized representative of the Sub-subcontractor.

5.2 AWARD OF SUBCONTRACTS AND OTHER CONTRACTS FOR PORTIONS OF THE WORK

5.2.1 Unless otherwise stated in the Contract Documents or the bidding requirements,

the Contractor, as soon as practicable after award of the Contract, shall furnish in writing to the Owner through the Architect the names of persons or entities (including those who are to furnish materials or equipment fabricated to a special design) proposed for each principal portion of the Work. The Architect will promptly reply to the Contractor in writing stating whether or not the Owner or the Architect, after due investigation, has reasonable objection to any such proposed person or entity. Failure of the Owner or Architect to reply promptly shall constitute notice of no reasonable objection.

5.2.2 The Contractor shall not contract with a proposed person or entity to whom the Owner or Architect has made reasonable and timely objection. The Contractor shall not be required to contract with anyone to whom the Contractor has made reasonable objection.

5.2.3 If the Owner or Architect has reasonable objection to a person or entity proposed by the Contractor, the Contractor shall propose another to whom the Owner or Architect has no reasonable objection. The Contract Sum shall be increased or decreased by the difference in cost occasioned by such change and an appropriate Change Order shall be issued. However, no increase in the Contract Sum shall be allowed for such change unless the Contractor has acted promptly and responsively in submitting names as required.

5.2.4 The Contractor shall not change a Subcontractor, person or entity previously selected if the Owner or Architect makes reasonable objection to such change.

5.2.5 The form of each filed Subcontract shall be submitted to the Owner for its acceptance, which shall not be unreasonably withheld or delayed. The form of subcontract shall be that set forth in Mass. Gen. Laws Chapter 149, Section 44F. Each Subcontract shall expressly provide for the contingent assignment referred to in Paragraph 5.4.

5.3 SUBCONTRACTUAL RELATIONS

5.3.1 By appropriate agreement, written where legally required for validity, the Contractor shall require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound to the Contractor by terms of the Contract Documents, and to assume toward the Contractor all the obligations and responsibilities which the Contractor, by these Documents, assumes toward the Owner and Architect, including without limitation the obligations set forth in Paragraph 3.18. Each Subcontract agreement shall preserve and protect the rights of the Owner and Architect under the Contract Documents with respect to the Work to be performed by the Subcontractor so that Subcontracting thereof will not prejudice such rights, and shall allow to the Subcontractor, unless specifically provided otherwise in the Subcontract agreement, the benefit of all rights, remedies and redress against the Contractor that the Contractor, by the Contract Documents, has against the Owner. Where appropriate, the Contractor shall require each Subcontractor to enter into similar agreements with Sub-subcontractors. The Contractor shall make available to each proposed Subcontractor, prior to the execution of the Subcontract agreement, copies of the Contract Documents to which the Subcontractor will be bound, and, upon written request of the Subcontractor, identify to the Subcontractor terms and conditions of the proposed Subcontract agreement which may be at variance with the Contract Documents. Subcontractors shall similarly make copies of applicable

portions of such documents available to their respective proposed Sub-subcontractors.

5.4 CONTINGENT ASSIGNMENT OF SUBCONTRACTS

5.4.1 Each Subcontract agreement for a portion of the Work is assigned by the Contractor to the Owner provided that:

- .1 assignment is effective only after termination of the Contract by the Owner for cause pursuant to Paragraph 14.2 and only for those Subcontract agreements which the Owner accepts by notifying the Subcontractor in writing; and
- .2 assignment is subject to the prior rights of the surety, if any, obligated under bond relating to the Contract.

ARTICLE 6

CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTS

6.1 OWNER'S RIGHT TO PERFORM CONSTRUCTION AND TO AWARD SEPARATE CONTRACTS

6.1.1 The Owner reserves the right to perform construction or operations related to the Project with the Owner's own forces, and to award separate contracts in connection with other portions of the Project or other construction or operations on the site under Conditions of the Contract identical or substantially similar to these, including those portions related to insurance and waiver of subrogation. If the Contractor claims that delay or additional cost is involved because of such action by the Owner, the Contractor shall make such Claim as provided elsewhere in the Contract Documents.

6.1.2 When separate contracts are awarded for different portions of the Project or other construction or operations on the site, the term "Contractor" in the Contract Documents in each case shall mean the Contractor who executes each separate Owner-Contractor Agreement.

6.1.3 The Owner shall provide for coordination of the activities of the Owner's own forces and of each separate contractor with the work of the Contractor, who shall cooperate with them. The Contractor shall participate with other separate contractors and the Owner in reviewing their progress schedules when directed to do so. The Contractor shall make any revisions to the progress schedules and Contract Sum deemed necessary after a joint review and mutual agreement. The progress schedules shall then constitute the schedules to be used by the Contractor, separate contractors and the Owner until subsequently revised.

6.2 MUTUAL RESPONSIBILITY

6.2.1 The Contractor shall afford the Owner and separate contractors reasonable

opportunity for introduction and storage of their materials and equipment and performance of their activities and shall connect and coordinate the Contractor's construction and operations with theirs as required by the Contract Documents.

6.2.2 If part of the Contractor's Work depends for proper execution or results upon construction or operations by the Owner or a separate contractor, the Contractor shall, prior to proceeding with that portion of the Work, promptly report to the Architect apparent discrepancies or defects in such other construction that would render it unsuitable for such proper execution and results. Failure of the Contractor so to report shall constitute an acknowledgement that the Owner's or separate contractors' completed or partially completed construction is fit and proper to receive the Contractor's Work, except as to defects not then reasonable discoverable.

6.2.3 Costs caused by delays or by improperly timed activities or defective construction shall be borne by the party responsible therefor.

6.2.4 The Contractor shall promptly remedy damage wrongfully caused by the Contractor to completed or partially completed construction or to property of the Owner or separate contractors as provided in Subparagraph 10.2.5. If such separate contractor sues or initiates an arbitration proceeding against the Owner on account of any damage alleged to have been caused by the Contractor, the Owner shall notify the Contractor, who shall defend such proceedings at the Contractor's expense, and if any judgment or award against the Owner arises therefrom the Contractor shall pay or satisfy it and shall reimburse the Owner for all attorneys' fees and court or arbitration costs which the Owner has incurred.

6.2.5 Claims and other disputes and matters in question between the Contractor and a separate contractor shall be subject to the provisions of Paragraph 4.3 provided the separate contractor has reciprocal obligations.

6.2.6 The Owner and each separate contractor shall have the same responsibilities for cutting and patching as are described for the Contractor in Paragraph 3.14.

6.3 OWNER'S RIGHT TO CLEAN UP

6.3.1 If a dispute arises among the Contractor, separate contractors and the Owner as to the responsibility under their respective contracts for maintaining the premises and surrounding area free from waste materials and rubbish as described in Paragraph 3.15, the Owner may clean up and allocate the cost among those responsible as the Architect determines to be just.

ARTICLE 7

CHANGES IN THE WORK

7.1 CHANGES

7.1.1 Changes in the Work may be accomplished after execution of the Contract, and without invalidating the Contract, by Change Order, Construction Change Directive or order for

a minor change in the Work, subject to the limitations stated in this Article 7 and elsewhere in the Contract Documents.

7.1.2 A Change Order shall be based upon agreement among the Owner, Contractor and Architect; a Construction Change Directive requires agreement by the Owner and Architect and may or may not be agreed to by the Contractor; an order for a minor change in the Work may be issued by the Architect alone.

7.1.3 Changes in the Work shall be performed under applicable provisions of the Contract Documents, and the Contractor shall proceed promptly, unless otherwise provided in the Change Order, Construction Change Directive or order for a minor change in the Work.

7.1.4 If unit prices are stated in the Contract Documents or subsequently agreed upon, and if quantities originally contemplated are so changed in a proposed Change Order or Construction Change Directive that application of such unit prices to quantities of Work proposed will cause substantial inequity to the Owner or Contractor, the applicable unit prices shall be equitably adjusted.

7.2 CHANGE ORDERS

7.2.1 A Change Order is a written instrument prepared by the Architect and signed by the Owner, Contractor and Architect, stating their agreement upon all of the following:

- .1 a change in the Work;
- .2 the amount of the adjustment in the Contract Sum, if any; and
- .3 the extent of the adjustment in the Contract Time, if any.

7.3 CONSTRUCTION CHANGE DIRECTIVES

7.3.1 A Construction Change Directive is a written order prepared by the Architect and signed by the Owner and Architect, directing a change in the Work and stating a proposed basis for adjustment, if any, in the Contract Sum or Contract Time, or both. The Owner may by Construction Change Directive, without invalidating the Contract, order changes in the Work within the general scope of the Contract consisting of additions, deletions or other revisions, the Contract Sum and Contract Time being adjusted accordingly.

7.3.2 A Construction Change Directive shall be used in the absence of total agreement on the terms of a Change Order.

7.3.3 Upon request of the Owner or the Architect, the Contractor shall without cost to the Owner submit to the Architect, in such form as the Architect may require, an accurate written estimate of the cost of any proposed extra Work or change contemplated by a Construction Change Directive. The estimate shall indicate the quantity and unit cost of each item of materials, and the number of hours of work and hourly rate for each class of labor, as well as the description and amounts of all other costs chargeable under the terms of this Article. Unit labor

costs for the installation of each item of materials shall be shown if required by the Architect. The Contractor shall promptly revise and resubmit such estimate if the Architect determines that it is not in compliance with the requirements of this Article, or that it contains errors of fact or mathematical errors. If required by the Architect, in order to establish the exact cost of new Work added or of previously required Work omitted, the Contractor shall obtain and furnish to the Architect bona fide proposals from recognized suppliers for furnishing any material included in such Work. Such estimates shall be furnished promptly so as to occasion no delay in the Work, and shall be furnished at the Contractor's expense. The Contractor shall state in the estimate any extension of time required for the completion of the Work if the change or extra work is ordered.

7.3.3 .1 If the Construction Change Directive provides for an adjustment to the Contract Sum, the adjustment shall be based on one of the following methods, as selected by the Owner:

- (a) By unit prices stated in the Contract Documents or otherwise mutually agreed upon.
- (b) By Cost and Percentages (as defined below) estimated by the Contractor as provided in Subparagraph 7.3.3 and accepted by the Owner; the Contractor's estimate shall become a fixed price which shall not be changed by any variation in the actual cost of executing the Work covered by the change.
- (c) By actual Cost determined after the Work covered by the change is completed, plus Percentage.
- (d) By use of the dispute resolution procedures set forth in Paragraph 4.3.

As used in this Paragraph 7.3, "Cost" shall mean the estimated or actual net increase or decrease in cost to the Contractor, Subcontractor, or Sub-subcontractor for performing the Work covered by the change, including actual payments for materials, equipment, rentals, expendable items, wages and associated benefits to workmen and to supervisors employed full time at the site, insurance, bonds and other provable direct costs, but not including any administrative, accounting or expediting costs, or other indirect or overhead costs, or any wages or benefits of supervisory personnel not assigned full time to the site, or any amount for profit or fee to the Contractor, Subcontractor or Sub-subcontractor.

"Percentage" shall mean an allowance to be added to or subtracted from the Cost in lieu of overhead and profit and of any other expense which is not included in the Cost of the Work covered by the change, as defined above. Percentage for a Sub-subcontractor shall be 10% of any net increase or decrease of Cost of any Work performed by the Sub-subcontractor's own forces plus 5% of any aggregate net increase in Cost of any Work performed for the Sub-subcontractor by other contractors. Percentage for a Subcontractor shall be such percentage allowances for overhead and profit as are set forth in the Subcontract between such Subcontractor and the Contractor. Percentage for the Contractor shall be 10% of any net increase or decrease of Cost of any Work performed by the Contractor's own forces plus 5% of any net increase or decrease in the Cost for all other Work covered by the change.

When in the reasonable judgment of the Architect a series of Construction Change Directives or Change Orders effect a single change, Percentage shall be calculated on the cumulative net increase or decrease in Cost, if any.

7.3.3.2 If the Owner elects to determine the cost of the Work as provided in method (a) of sub-Subparagraph 7.3.3.1, the unit prices shall be subject to Subparagraph 7.1.4. Notwithstanding the inclusion of unit prices in the Contract Documents, it shall be the Owner's option to require the Cost of any given change to be determined by one of the other methods stated in 7.3.3.1. If the Owner elects to determine the Cost of the change by unit prices and the nature of the work is such that its extent cannot readily be measured after the completion of such work or any subsequent work, the Contractor shall keep daily records, available at all times to the Architect for inspection, of the actual quantities of such work put in place, and delivery receipts or other adequate evidence, acceptable to the Architect, indicating the quantities of materials delivered to the site for use in such unit price work, and distinguishing such other similar material delivered for use in work included in the base Contract Sum. If so required by the Architect, materials for use in unit price work shall be stored apart from all other materials on the Project.

7.3.3.3 If the Owner elects to determine the cost of the Work as provided in methods (c) or (d) of sub-Subparagraph 7.3.3.1 or if the method of determining the cost has not been established before the Work is begun, the Contractor shall keep detailed daily records of labor and materials costs applicable to the Work.

7.3.4 Upon receipt of a Construction Change Directive, the Contractor shall promptly proceed with the change in the Work involved and advise the Architect of the Contractor's agreement or disagreement with the method, if any, provided in the Construction Change Directive for determining the proposed adjustment in the Contract Sum or Contract Time.

7.3.5 A Construction Change Directive signed by the Contractor indicates the agreement of the Contractor therewith, including adjustment in Contract Sum and Contract Time or the method for determining them. Such agreement shall be effective immediately and shall be recorded as a Change Order.

7.3.6 If the Owner and Contractor do not agree with the adjustment in Contract Sum or Contract Time or the method for determining the adjustment, the dispute shall be governed by the procedures set forth in Paragraph 4.3.

7.4 MINOR CHANGES IN THE WORK

7.4.1 The Architect will have authority to order minor changes in the Work not involving adjustment in the Contract Sum or extension of the Contract Time and not inconsistent with the intent of the Contract Documents. Such changes shall be effected by written order and shall be binding on the Owner and Contractor. The Contractor shall carry out such written orders promptly.

ARTICLE 8

TIME

8.1 DEFINITIONS

8.1.1 Unless otherwise provided, Contract Time is the period of time, including authorized adjustments, allotted in the Contract Documents for Substantial Completion of the Work.

8.1.2 The date of commencement of the Work is the date established in the Agreement. The date shall not be postponed by the failure to act of the Contractor or of persons or entities for whom the Contractor is responsible.

8.1.3 The date of Substantial Completion is the date certified by the Architect in accordance with Paragraph 9.8.

8.1.4 The term “day” as used in the Contract Documents shall mean calendar day unless otherwise specifically defined.

8.2 PROGRESS AND COMPLETION

8.2.1 Time limits stated in the Contract Documents are of the essence of the Contract. By executing the Agreement the Contractor confirms that the Contract Time is a reasonable period for performing the Work.

8.2.2 The Contractor shall not knowingly, except by agreement or instruction of the Owner in writing, prematurely commence operations on the site or elsewhere prior to the effective date of insurance required by Article 11 to be furnished by the Contractor. The date of commencement of the Work shall not be changed by the effective date of such insurance. Unless the date of commencement is established by a notice to proceed given by the Owner, the Contractor shall notify the Owner in writing not less than five days or other agreed period before commencing the Work to permit the timely filing of mortgages, mechanic’s liens and other security interests.

8.2.3 The Contractor shall proceed expeditiously with adequate forces and shall achieve Substantial Completion within the Contract Time.

8.2.4 Within two weeks after award of the Contract, the Contractor shall submit to the Architect a Progress Schedule showing for each class of work the percentage completion to be obtained and the total dollar value of work to be completed as of the first of each month until Substantial Completion.

8.2.5 The Progress Schedule shall be based on an orderly progression of the Work, allowing adequate time for each operation (including adequate time for submission and review of

submittals), and leading to a reasonable certainty of Substantial Completion by the date established in the Agreement. The Progress Schedule will be reviewed by the Architect for compliance with the requirements of this Article and will be accepted by the Architect or returned to the Contractor for revision and resubmittal. Unless specifically required by law, no payment under this Contract shall be due until the Progress Schedule has been approved by the Architect.

8.2.6 If in any application for payment as provided for in Paragraph 9.2, the total value of the completed Work in place, as certified by the Architect, is less than 90% of the total value of the Work in place estimated in the Progress Schedule, the Owner may, at the Owner's option, require the Contractor to accelerate the progress of the Work without cost to the Owner by increasing the work force or hours of work, or by other reasonable means approved by the Architect.

8.2.7 If each of three successive applications for payment indicate that the actual Work completed, as certified by the Architect, is less than 90% of the values estimated in the Progress Schedule to be completed by the respective dates, the Owner may at the Owner's option, treat the Contractor's delinquency as a default justifying the action permitted under Paragraph 14.2.

8.2.8 If the Architect has determined that the Contractor should be permitted to extend the time for completion as provided in Paragraph 8.3, the calendar dates in the Progress Schedule shall be adjusted accordingly to retain their same relationship to the adjusted date of Substantial Completion, and the dollar value of Work to be completed as of the first of each month shall be adjusted pro rata.

8.2.9 If the Contractor fails to submit any application for payment in any month, the Architect shall, for the purpose of this evaluation of progress, certify separately to the actual value of the Work in place completed as of the first of the month and to the best of the Architect's knowledge.

8.2.10 Nothing herein shall limit the Owner's right to liquidated or other damages for delays by the Contractor or to any other remedy which the Owner may possess under other provisions of the Contract Documents or by law.

8.3 DELAYS AND EXTENSION OF TIME

8.3.1 If the Contractor is delayed at any time in progress of the Work by an act or neglect of the Owner or Architect, of an employee of either, or of a separate contractor employed by the Owner, or by changes ordered in the Work, or by labor disputes, fire, unusual delay in deliveries, unavoidable casualties or other causes (except weather) beyond the Contractor's control, or by delay authorized by the Owner, or by other causes which the Architect determines may justify delay, then the Contract Time shall be extended for such reasonable time as the Architect may determine.

8.3.2 Claims relating to time shall be made in accordance with applicable provisions of Paragraph 4.3.

8.3.3 The Contractor hereby agrees that the Contractor shall have no claim for damages of any

kind against the Owner or the Architect on account of any delay in the commencement of the Work and/or any delay or suspension of any portion of the Work, whether such delay is caused by the Owner, the Architect, or otherwise, except as specifically provided in Subparagraphs 2.3.2 and 2.3.3. The Contractor acknowledges that, except as provided therein, the Contractor's sole remedy for any such delay and/or suspension will be an extension of time as provided in this Article.

8.3.4 No claim for delay shall be allowed on account of failure of the Architect to furnish Drawings, Specifications or instructions or to return Shop Drawings or Samples until the expiration of the applicable time period referred to in Mass. Gen. Laws Chapter 30, Section 39P, and not then unless such claim be reasonable.

8.3.5 No extension of time shall be granted because of seasonal or abnormal variations in temperature, humidity or precipitation, which conditions shall be wholly at the risk of the Contractor, whether occurring within the time originally scheduled for completion or within the period of any extension granted. There shall be no increase in the Contract Sum on account of any additional costs of operations or conditions resulting therefrom.

ARTICLE 9

PAYMENTS AND COMPLETION

9.1 CONTRACT SUM

9.1.1 The Contract Sum is stated in the Agreement and, including authorized adjustments, is the maximum amount payable by the Owner to the Contractor for performance of the Work under the Contract Documents.

9.2 APPLICATIONS FOR PAYMENT

9.2.1 Within fifteen days after receipt from the Contractor, at the place designated by the Owner if such a place is so designated, of a periodic estimate requesting payment of the amount due for the preceding month, the Owner will make a periodic payment to the Contractor for the Work performed during the preceding month and for the materials not incorporated in the Work but delivered and suitably stored at the site (or at some location agreed upon in writing) to which the Contractor has title or to which a Subcontractor has title and has authorized the Contractor to transfer title to the Owner, less (1) retention based on the Owner's estimate of the fair value of its claims against the Contractor and less (2) a retention for direct payments to Subcontractors based on demands for same in accordance with the provisions of Subparagraph 9.6.2, and less (3) a retention not exceeding five percent of the approved amount of the periodic payment.

9.2.2 After the receipt of a periodic estimate requesting final payment and within sixty-five days after (a) the Contractor fully completes the Work or substantially completes the Work so that the value of the Work remaining to be done is, in the estimate of the Owner, less than one

percent of the original Contract Sum, or (b) the Contractor substantially completes the work and the Owner takes possession for occupancy, whichever occurs first, the Owner shall pay the Contractor the entire balance due on the Contract less (1) a retention based on its estimate of the fair value of its claims against the Contractor and the cost of completing the incomplete and unsatisfactory items of Work and less (2) a retention for direct payments to Subcontractors based on demands for same in accordance with the provisions of Subparagraph 9.6.2, or based on the record of payments by the Contractor to the Subcontractors under this Contract if such record of payment indicates that the Contractor has not paid Subcontractors as provided in Subparagraph 9.6.2. If the Owner fails to make payment as herein provided, there shall be added to each such payment daily interest at the rate of three percentage points above the rediscount rate then charged by the Federal Reserve Bank of Boston commencing on the first day after said payment is due and continuing until the payment is delivered or mailed to the Contractor; provided, that no interest shall be due, in any event, on the amount due on a periodic estimate for final payment until fifteen days after receipt of such a periodic estimate from the Contractor, at the place designated by the Owner if such a place is so designated. The Contractor agrees to pay to each Subcontractor a portion of any such interest paid in accordance with the amount due each Subcontractor.

9.2.3 The Owner may make changes in any periodic estimate submitted by the Contractor, and the payment due on said periodic estimate shall be computed in accordance with the changes so made, but such changes or any requirement for a corrected periodic estimate shall not affect the due date for the periodic payment or the date for the commencement of interest charges on the amount of the periodic payment computed in accordance with the changes made, as provided herein; provided, that the Owner may, within seven days after receipt, return to the Contractor for correction, any periodic estimate which is not in the required form or which contains computations not arithmetically correct and, in that event, the date of receipt of such periodic estimate shall be the date of receipt of the corrected periodic estimate in proper form and with arithmetically correct computations. The date of receipt of a periodic estimate received on a Saturday shall be the first working day thereafter.

9.2.4 All periodic estimates shall be submitted to the Owner, or to the Owner's representative, and the date of receipt by the Owner or its representative shall be marked on the estimate. All periodic estimates shall contain a separate item for each filed subtrade and each sub-subtrade listed in sub-bid form as required by the Specifications and a column listing the amount paid to each Subcontractor and Sub-subcontractor as of the date the periodic estimate is filed. The person making payment for the Owner shall add the daily interest provided for herein to each payment for each day beyond the due date based on the date of receipt marked on the estimate.

9.2.5 The format and number of copies of applications for payment shall be as directed by the Architect. Such application shall be notarized, if required, and supported by such data substantiating the Contractor's right to payment as the Owner or Architect may require, such as copies of requisitions from Subcontractors and material suppliers, and reflecting retainage if provided for elsewhere in the Contract Documents.

9.2.5.1 Such applications may include requests for payment on account of changes in the Work

which have been properly authorized by Construction Change Directives but not yet included in Change Orders when such Construction Change Directives have set forth an adjustment to the Contract Sum.

9.2.5.2 Such applications may not include requests for payment of amounts the Contractor does not intend to pay to a Subcontractor or material supplier because of a dispute or other reason.

9.2.6 Unless otherwise provided in the Contract Documents, payments shall be made on account of materials and equipment delivered and suitably stored at the site for subsequent incorporation in the Work. If approved in advance by the Owner, payment may similarly be made for materials and equipment suitably stored off the site at a location agreed upon in writing. Payment for materials and equipment stored on or off the site shall be conditioned upon compliance by the Contractor with procedures satisfactory to the Owner to establish the Owner's title to such materials and equipment or otherwise protect the Owner's interest, and shall include applicable insurance, storage and transportation to the site for such materials and equipment stored off the site.

9.3 The Contractor warrants that title to all Work covered by an application for payment will pass to the Owner either by incorporation in the construction or upon receipt of payment by the Contractor, whichever occurs first, free and clear of all liens, claims, security interests or encumbrances, hereinafter referred to in this Article 9 as "liens."

9.4 CERTIFICATES FOR PAYMENT

9.4.1 The Architect will, within seven days after receipt of the Contractor's application for payment, either issue to the Owner a Certificate for Payment, with a copy to the Contractor, for such amount as the Architect determines is properly due, or notify the Contractor and Owner in writing of the Architect's reasons for withholding certification in whole or in part as provided in Subparagraph 9.5.1.

9.4.2 The issuance of a Certificate for Payment will constitute a representation by the Architect to the Owner, based on the Architect's observations at the site and the date comprising the application for payment, that the Work has progressed to the point indicated and that, to the best of the Architect's knowledge, information and belief, quality of the Work is in accordance with the Contract Documents. The foregoing representations are subject to an evaluation of the Work for conformance with the Contract Documents upon Substantial Completion, to results of subsequent tests and inspections, to minor deviations from the Contract Documents correctable prior to completion and to specific qualifications expressed by the Architect. The issuance of a Certificate for Payment will further constitute a representation that the Contractor is entitled to payment in the amount certified. However, the issuance of a Certificate for Payment will not be a representation that the Architect has (1) made exhaustive or continuous on-site inspections to check the quality or quantity of the Work, (2) reviewed construction means, methods, techniques, sequences or procedures, (3) reviewed copies of requisitions received from Subcontractors and material suppliers and other data requested by the Owner to substantiate the Contractor's right to payment or (4) made examination to ascertain how or for what purpose the Contractor has used money previously paid on account of the Contract Sum.

9.5 DECISIONS TO WITHHOLD CERTIFICATION

9.5.1 The Architect may decide not to certify payment and may withhold a Certificate for Payment in whole or in part, to the extent reasonably necessary to protect the Owner, if in the Architect's opinion the representations to the Owner required by Subparagraph 9.4.2 cannot be made. If the Architect is unable to certify payment in the amount of the Application, the Architect will notify the Contractor and Owner as provided in Subparagraph 9.4.1. If the Contractor and Architect cannot agree on a revised amount, the Architect will promptly issue a Certificate for Payment for the amount for which the Architect is able to make such representations to the Owner. The Architect may also decide not to certify payment or, because of subsequently discovered evidence or subsequent observations, may nullify the whole or a part of a Certificate for Payment previously issued, to such extent as may be necessary in the Architect's opinion to protect the Owner from loss because of:

- .1 defective Work not remedied;
- .2 third party claims filed or reasonable evidence indicating probable filing of such claims;
- .3 failure of the Contractor to make payments properly to Subcontractors or for labor, materials or equipment;
- .4 reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Sum;
- .5 damage to the Owner or another contractor;
- .6 reasonable evidence that the Work will not be completed within the Contract Time, and that the retainage currently held by the Owner would not be adequate to cover actual or liquidated damages for the anticipated delay; or
- .7 persistent failure to carry out the Work in accordance with the Contract Documents.

9.5.2 When the above reasons for withholding certification are removed, certification will be made for amounts previously withheld.

9.6 PROGRESS PAYMENTS

9.6.1 After the Architect has issued a Certificate for Payment, the Owner shall make payment in the manner and within the time provided in the Contract Documents, and shall so notify the Architect.

9.6.2 Payments to Subcontractors

9.6.2.1 Forthwith after the Contractor receives payment on account of a periodic estimate, the Contractor shall pay to each Subcontractor the amount paid for the labor performed and the materials furnished by that Subcontractor, less any amount specified in any court proceedings barring such payment and also less any amount claimed due from the Subcontractor by the Contractor.

9.6.2.2 Not later than the sixty-fifth day after each Subcontractor substantially completes his work in accordance with the plans and Specifications, the entire balance due under the Subcontract less amounts retained by the Owner as the estimated cost of completing the incomplete and unsatisfactory items of work, shall be due the Subcontractor; and the Owner shall pay that amount to the Contractor. The Contractor shall forthwith pay to the Subcontractor the full amount received from the Owner less any amount specified in any court proceedings barring such payment and also less any amount claimed due from the Subcontractor by the Contractor.

9.6.2.3 Each payment made by the Owner to the Contractor pursuant to Subparagraphs 9.6.2.1 and 9.6.2.2 of this paragraph for the labor performed and the materials furnished by a Subcontractor shall be made to the Contractor for the account of that Subcontractor; and the Owner shall take reasonable steps to compel the Contractor to make each such payment to each such Subcontractor. If the Owner has received a demand for direct payment from a Subcontractor for any amount which has already been included in a payment to the Contractor or which is to be included in a payment to the Contractor for payment to the Subcontractor as provided in Subparagraphs 9.6.2.1 and 9.6.2.2, the Owner shall act upon the demand as provided in this section.

9.6.2.4 If, within seventy days after the Subcontractor has substantially completed the Subcontract work, the Subcontractor has not received from the Contractor the balance due under the Subcontract including any amount due for extra labor and materials furnished to the Contractor, less any amount retained by the Owner as the estimated cost of completing the incomplete and unsatisfactory items of Work, the Subcontractor may demand direct payment of that balance from the Owner. The demand shall be by a sworn statement delivered to or sent by certified mail to the Owner, and a copy shall be delivered to or sent by certified mail to the Contractor at the same time. The demand shall contain a detailed breakdown of the balance due under the Subcontract and also a statement of the status of completion of the Subcontract work. Any demand made after substantial completion of the Subcontract work shall be valid even if delivered or mailed prior to the seventieth day after the Subcontractor has substantially completed the Subcontract work. Within ten days after the Subcontractor has delivered or so mailed the demand to the Owner and delivered or so mailed a copy to the Contractor, the Contractor may reply to the demand. The reply shall be by a sworn statement delivered to or sent by certified mail to the Owner and a copy shall be delivered to or sent by certified mail to the Subcontractor at the same time. The reply shall contain a detailed breakdown of the balance due under the Subcontract including any amount due for extra labor and materials furnished to the Contractor and of the amount due for each claim made by the Contractor against the Subcontractor.

9.6.2.5 Within fifteen days after receipt of the demand by the Owner, but in no event prior to the seventieth day after substantial completion of the Subcontract work, the Owner shall make direct

payment to the Subcontractor of the balance due under the Subcontract including any amount due for extra labor and materials furnished to the Contractor, less any amount (i) retained by the Owner as the estimated cost of completing the incomplete or unsatisfactory items of Work, (ii) specified in any court proceedings barring such payment, or (iii) disputed by the Contractor in the sworn reply; provided, that the Owner shall not deduct from a direct payment any amount as provided in part (iii) if the reply is not sworn to, or for which the sworn reply does not contain the detailed breakdown required by Subparagraph 9.6.2.4. The Owner shall make further direct payments to the Subcontractor forthwith after the removal of the basis for deductions from direct payments made as provided in parts (i) and (ii) of this Subparagraph.

9.6.2.6 The Owner shall forthwith deposit the amount deducted from a direct payment as provided in part (iii) of Subparagraph 9.6.2.5 in an interest-bearing joint account in the names of the Contractor and the Subcontractor in a bank in Massachusetts selected by the Owner or agreed upon by the Contractor and the Subcontractor and shall notify the Contractor and the Subcontractor of the date of the deposit and the bank receiving the deposit. The bank shall pay the amount in the account, including accrued interest, as provided in an agreement between the Contractor and the Subcontractor or as determined by decree of a court of competent jurisdiction.

9.6.2.7 All direct payments and all deductions from demands for direct payments deposited in an interest-bearing account or accounts in a bank pursuant to Subparagraph 9.6.2.6 shall be made out of amounts payable to the Contractor at the time of receipt of demand for direct payment from a Subcontractor and out of amounts which later become payable to the Contractor and in the order of receipt of such demands from Subcontractors. All direct payments shall discharge the obligation of the Owner to the Contractor to the extent of such payment.

9.6.2.8 The Owner shall deduct from payments to the Contractor amounts which, together with the deposits in interest-bearing accounts pursuant to Subparagraph 9.6.2.6 are sufficient to satisfy all unpaid balances of demands for direct payment received from Subcontractors. All such amounts shall be earmarked for such direct payments, and the Subcontractors shall have a right in such deductions prior to any claims against such amounts by creditors of the Contractor.

9.6.2.9 If the Subcontractor does not receive payments as provided in Subparagraph 9.6.2.1 or if the Contractor does not submit a periodic estimate for the value of the labor or materials performed or furnished by the Subcontractor and the Subcontractor does not receive payment for same when due less the deductions provided for in Subparagraph 9.6.2.1, the Subcontractor may demand direct payment by following the procedure in Subparagraph 9.6.2.4 and the Contractor may file a sworn reply as provided in that same Subparagraph. A demand made after the first day of the month following that for which the Subcontractor performed or furnished the labor and materials for which the Subcontractor seeks payment shall be valid even if delivered or mailed prior to the time payment was due on a periodic estimate from the Contractor. Thereafter the Owner shall proceed as provided in Subparagraphs 9.6.2.5, 9.6.2.6, 9.6.2.7 and 9.6.2.8.

9.6.3 Neither the Owner nor Architect shall have an obligation to pay or to see to the payment of money to a Subcontractor, Sub-subcontractor or material supplier, except as provided in Subparagraph 9.6.2.

9.6.4 A Certificate for Payment, a progress payment, or partial or entire use or occupancy of the Project by the Owner shall not constitute acceptance of Work not in accordance with the Contract Documents.

9.7 FAILURE OF PAYMENT

9.7.1 If the Architect does not issue a Certificate for Payment, through no fault of the Contractor, within seven days after receipt of the Contractor's application for payment, or if the Owner does not pay the Contractor within seven days after the date established in the Contract Documents the amount certified by the Architect, then the Contractor may, upon seven additional days' written notice to the Owner and Architect, stop the Work until payment of the amount owing has been received. The Contract Time shall be extended as provided in Article 7.

9.8 SUBSTANTIAL COMPLETION

9.8.1 Substantial Completion is the stage in the progress of the Work when the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents so the Owner can occupy or utilize the Work for its intended use and only minor items which can be corrected or completed without any material interference with the Owner's use of the Work remain to be corrected or completed.

9.8.2 When the Contractor considers that the Work, or a portion thereof designated in the Contract Documents for separate completion, is substantially complete and the premises comply with Subparagraph 3.15.1, the Contractor shall submit to the Architect (1) a list of items to be completed or corrected, (2) all special warranties required by the Contract Documents, endorsed by the Contractor and in a form reasonably acceptable to the Architect and (3) the permits and certificates referred to in Subparagraph 13.5.4. The failure to include any items on the list mentioned in the preceding sentence does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents. When the Architect on the basis of an inspection determines that the Work or designated portion thereof is substantially complete and the other conditions have been met, the Architect will then prepare a Certificate of Substantial Completion which shall establish the Date of Substantial Completion, shall state the responsibilities of the Owner and the Contractor for security, maintenance, heat, utilities, damage to the Work, and insurance, and shall fix the time within which the Contractor shall complete the items listed therein. Warranties required by the Contract Documents shall commence on the date of Substantial Completion. The Certificate of Substantial Completion shall be submitted to the Owner and Contractor for their written acceptance of the responsibilities assigned to them in such Certificate.

9.8.3 Upon Substantial Completion of the Work or designated portion thereof and upon application by the Contractor and certification by the Architect, the Owner shall make payment, reflecting adjustment in retainage, if any, for such Work or portion thereof as provided in the Contract Documents.

9.9 PARTIAL OCCUPANCY OR USE

9.9.1 The Owner may occupy or use any completed or partially completed portion of the Work at any stage. Such partial occupancy or use may begin whether or not the portion is substantially complete, provided that the respective responsibilities of the Owner and Contractor with respect to payments, retainage, if any, security, maintenance, heat, utilities, damage to the Work, insurance, correction of the Work, and warranties shall be established by agreement of the Owner and Contractor or, absent such agreement, shall be determined by the Architect subject to the right of either party to contest such determination as provided in Paragraph 4.5.

9.9.2 Immediately prior to such partial occupancy or use, the Owner, Contractor and Architect shall jointly inspect the area to be occupied or portion of the Work to be used in order to determine and record the condition of the Work.

9.9.3 Unless otherwise agreed upon, partial occupancy or use of a portion or portions of the Work shall not constitute acceptance of Work not complying with the requirements of the Contract Documents.

9.10 FINAL COMPLETION AND FINAL PAYMENT

9.10.1 Upon receipt of written notice that the Work is ready for final inspection and acceptance and upon receipt of a final application for payment, the Architect will promptly make such inspection and, when the Architect finds the Work acceptable under the Contract Documents and the Contract fully performed, the Architect will promptly issue a final Certificate for Payment stating that to the best of the Architect's knowledge, information and belief, and on the basis of the Architect's observations and inspections, the Work has been completed in accordance with terms and conditions of the Contract Documents. The Architect's final Certificate for Payment will constitute a further representation that conditions listed in Subparagraph 9.10.2 as precedent to the Contractor's being entitled to final payment have been fulfilled.

9.10.2 Neither final payment nor any remaining retained percentage shall become due until the Contractor submits to the Architect (1) an affidavit that payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the Owner or the Owner's property might be responsible or encumbered (less amounts withheld by Owner) have been paid or otherwise satisfied, (2) a certificate evidencing that insurance required by the Contract Documents to remain in force after final payment is currently in effect and will not be canceled or allowed to expire until at least 30 days' prior written notice has been given to the Owner, (3) a written statement that the Contractor knows of no substantial reason that the insurance will not be renewable to cover the period required by the Contract Documents, (4) consent of surety, if any, to final payment and (5), if required by the Owner, other data establishing payment or satisfaction of obligations, such as receipts, releases and waivers of liens, claims, security interests or encumbrances arising out of the Contract, to the extent and in such form as may be designated by the Owner. If a Subcontractor refuses to furnish a release or waiver required by the Owner, the Contractor may furnish a bond satisfactory to the Owner to indemnify the Owner against such lien. If such lien remains unsatisfied after payments are made, the Contractor shall refund to the Owner all money that the Owner may be compelled to pay in discharging such lien,

including all costs and reasonable attorneys' fees.

9.10.3 If, after Substantial Completion of the Work, final completion thereof is materially delayed through no fault of the Contractor or by issuance of Change Orders affecting final completion, and the Architect so confirms, the Owner shall, upon application by the Contractor and certification by the Architect, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance for Work not fully completed or corrected is less than retainage stipulated in the Contract Documents, and if bonds have been furnished, the written consent of surety to payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by the Contractor to the Architect prior to certification of such payment. Such payment shall be made under terms and conditions governing final payment, except that it shall not constitute a waiver of claims. The making of final payment shall constitute a waiver of claims by the Owner as provided in Subparagraph 4.3.5.

9.10.4 Acceptance of final payment by the Contractor, a Subcontractor or material supplier shall constitute a waiver of claims by that payee except those previously made in writing and identified by that payee as unsettled at the time of final application for payment. Such waivers shall be in addition to the waiver described in Subparagraph 4.3.5.

ARTICLE 10

PROTECTION OF PERSONS AND PROPERTY

10.1 SAFETY PRECAUTIONS AND PROGRAMS

10.1.1 The Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the performance of the Contract.

10.2 SAFETY OF PERSONS AND PROPERTY

10.2.1 The Contractor shall take reasonable precautions for safety of, and shall provide reasonable protection to prevent damage, injury or loss to:

- .1 employees performing the Work and other persons who may be affected thereby;
- .2 the Work and materials and equipment to be incorporated therein, whether in storage on or off the site, under care, custody or control of the Contractor or the Contractor's Subcontractors or Sub-subcontractors;
- .3 other property at the site or adjacent thereto, such as trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction; and
- .4 any other property of the Owner, whether or not forming part of the Work,

located at the site or adjacent thereto in areas to which the Contractor has access.

10.2.2 The Contractor shall give notices and comply with applicable laws, ordinances, rules, regulations and lawful orders of public authorities bearing on safety of persons or property or their protection from damage, injury or loss.

10.2.3 The Contractor shall erect and maintain, as required by existing conditions and performance of the Contract, reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards, promulgating safety regulations and notifying owners and users of adjacent sites and utilities.

10.2.4 When use or storage of explosives or other hazardous materials or equipment or unusual methods are necessary for execution of the Work, the Contractor shall exercise utmost care and carry on such activities under supervision of properly qualified personnel.

10.2.5 The Contractor shall promptly remedy damage and loss to property referred to in Clauses 10.2.1.2, 10.2.1.3 and 10.2.1.4. If the damage or loss is due in whole or in part to the Contractor's failure to take the precautions required by this Paragraph 10.2, the Contractor shall, subject to any reimbursement to which the Contractor is entitled under the property insurance required by the Contract Documents, bear the cost.

10.2.6 The Contractor shall designate a responsible member of the Contractor's organization at the site whose duty shall be the prevention of accidents. This person shall be the Contractor's superintendent unless otherwise designated by the Contractor in writing to the Owner and Architect.

10.2.7 The Contractor shall not load or permit any part of the construction or site to be loaded so as to endanger its safety.

10.2.8 The Contractor shall provide and maintain in good operating condition suitable and adequate fire protection equipment and services, and shall comply with all reasonable recommendations regarding fire protection made by the representatives of the fire insurance company carrying insurance on the Work or by the local fire chief or fire marshal. The area within the site limits shall be kept orderly and clean, and all combustible rubbish shall be promptly removed from the site.

10.2.9 The Contractor shall at all time protect excavations, trenches, buildings and materials, from rain water, ground water, backup or leakage of sewers, drains and other piping, and from water of any other origin and shall remove promptly any accumulation of water. The Contractor shall provide and operate all pumps, piping and other equipment necessary to this end.

10.2.10 The Contractor shall remove snow and ice which might result in damage or delay.

10.2.11 During the progress of the Work and at all times prior to the date of Substantial Completion or occupancy of the Work by the Owner, whichever is earlier, the Contractor shall

provide temporary heat, ventilation, and enclosure, as required by Mass. Gen. Laws Chapter 149, Section 44F(1). The permanent heating and ventilation systems may be used for these purposes when available unless otherwise provided in the Contract Documents.

10.3 EMERGENCIES

10.3.1 In an emergency affecting safety of persons or property, the Contractor shall act, at the Contractor's discretion, to prevent threatened damage, injury or loss. Additional compensation or extension of time claimed by the Contractor on account of an emergency shall be determined as provided in Paragraph 4.3 and Article 7.

ARTICLE 11

INSURANCE AND BONDS

11.1 CONTRACTOR'S LIABILITY INSURANCE

11.1.1 The Contractor shall purchase from and maintain in a company or companies lawfully authorized to do business in the jurisdiction in which the Project is located and to which the Owner has no reasonable objection such insurance as will protect the Contractor from claims set forth below which may arise out of or result from the Contractor's operations under the Contract and for which the Contractor may be legally liable, whether such operations be by the Contractor or by a Subcontractor or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable:

- .1 claims under workers' or workmen's compensation, disability benefit and other similar employee benefit acts which are applicable to the Work to be performed;
- .2 claims for damages because of bodily injury, occupational sickness or disease, or death of the Contractor's employees;
- .3 claims for damages because of bodily injury, sickness or disease, or death of any person other than the Contractor's employees;
- .4 claims for damages insured by usual personal injury liability coverage which are sustained (1) by a person as a result of an offense directly or indirectly related to employment of such person by the Contractor, or (2) by another person;
- .5 claims for damages, other than to the Work itself, because of injury to or destruction of tangible property, including loss of use resulting therefrom;
- .6 claims for damages because of bodily injury, death of a person or property damage arising out of ownership, maintenance or use of a motor vehicle; and

- .7 claims involving contractual liability insurance applicable to the Contractor's obligations under Paragraph 3.18.

11.1.2 The insurance required by Subparagraph 11.1.1 shall include all major divisions of coverage, and shall be on a comprehensive general basis including Premises and Operations (including X-C-U), Owner's and Contractor's Protective, Products and Completed Operations, and Owned, Nonowned, and Hired Motor Vehicles. Such insurance shall be written for not less than any limits of liability required by law or those set forth in the Contract Documents, whichever is greater.

All insurance shall be written on an occurrence basis, unless the Owner approves in writing coverage on a claims-made basis. Coverages, whether written on an occurrence or claims-made basis, shall be maintained without interruption from date of commencement of the Work until date of final payment and termination of any coverage required to be maintained after final payment. The Owner shall be added as an Additional Insured on all policies, which shall constitute primary insurance for the Owner in relation to any similar or concurrent insurance independently maintained by the Owner.

11.1.3 Certificates of insurance acceptable to the Owner shall be filed with the Owner prior to commencement of the Work. These Certificates and the insurance policies required by this Paragraph 11.1 shall contain a provision that coverages afforded under the policies will not be canceled or allowed to expire until at least 30 days' prior written notice has been given to the Owner. These certificates shall set forth evidence of all coverage required by 11.1.1 and 11.1.2. The form of certificate shall be AIA Document G705. The Contractor shall furnish to the Owner copies of any endorsements that are subsequently issued amending limits of coverage. If any of the foregoing insurance coverages are required to remain in force after final payment and are reasonably available, an additional certificate evidencing continuation of such coverage shall be submitted with the final application for payment as required by Subparagraph 9.10.2.

11.1.4 In addition to Statutory Workers' Compensation Coverage, the Contractor shall provide Employers Liability Coverage at the following limits of liability:

Each accident - \$2,000,000;

Disease - policy limit \$2,000,000;

Disease - each employee \$2,000,000.

11.1.5 The liability insurance coverage purchased by the Contractor in order to comply with Section 11.1.1 (.1-.7) above shall contain the following limits of liability:

\$5,000,000 - general aggregate;

\$2,000,000 - products/completed operations aggregate;

\$2,000,000 - personal injury and advertising;

\$2,000,000 - each occurrence.

11.2 OWNER'S LIABILITY INSURANCE

11.2.1 The Owner shall be responsible for purchasing and maintaining the Owner's usual liability insurance. Optionally, the Owner may purchase and maintain other insurance for self-protection against claims which may arise from operations under the Contract. The Contractor shall not be responsible for purchasing and maintaining this optional Owner's liability insurance unless specifically required by the Contract Documents.

11.3 PROPERTY INSURANCE

11.3.1 Unless otherwise provided, the Owner shall purchase and maintain, in a company or companies lawfully authorized to do business in the jurisdiction in which the Project is located, property insurance in the amount of the initial Contract Sum as well as subsequent modifications thereto for the entire Work at the site on a replacement cost basis. Such property insurance shall be maintained, unless otherwise provided in the Contract Documents or otherwise agreed in writing by all persons and entities who are beneficiaries of such insurance, until final payment has been made as provided in Paragraph 9.10 or until no person or entity other than the Owner has an insurable interest in the property required by this Paragraph 11.3 to be covered, whichever is earlier. This insurance shall include interests of the Owner, the Contractor, Subcontractors and Sub-subcontractors in the Work.

11.3.1.1 Property insurance shall be on an all-risk policy form and shall insure against the perils of fire and extended coverage and physical loss or damage including, without duplication of coverage, theft, vandalism, malicious mischief, collapse, false-work, temporary buildings and debris removal including demolition occasioned by enforcement of any applicable legal requirements, and shall cover reasonable compensation for Architect's services and expenses required as a result of such insured loss. Coverage for other perils shall not be required unless otherwise provided in the Contract Documents. The form of policy for this coverage shall provide for coverage in the event of a loss up to the contemplated value of the property following completion of all Work required under the Contract.

11.3.1.2 If the Owner does not intend to purchase such property insurance required by the Contract and with all of the coverages in the amount described above, the Owner shall so inform the Contractor in writing prior to commencement of the Work. The Contractor may then effect insurance which will protect the interests of the Contractor, Subcontractors and Sub-subcontractors in the Work, and by appropriate Change Order the cost thereof shall be charged to the Owner. If the Contractor is damaged by the failure or neglect of the Owner to purchase or maintain insurance as described above, without so notifying the Contractor, then the Owner shall bear all reasonable costs properly attributable thereto.

11.3.1.3 If the property insurance requires a minimum deductible, the Contractor shall bear the cost not covered because of such deductible. If the Owner elects to accept a voluntary

deductible in excess of the minimum deductible, the Owner shall bear the cost not covered by such excess deductible amount, except as provided in Subparagraph 10.2.5.

11.3.1.4 Property insurance for portions of the Work stored off site and in transit shall be procured and the cost borne by the Contractor, unless otherwise provided in the Contract Documents.

11.3.2 Boiler and Machinery Insurance. The Owner shall purchase and maintain boiler and machinery insurance required by the Contract Documents or by law, which shall specifically cover such insured objects during installation and until final acceptance by the Owner; this insurance shall include interests of the Owner, Contractor, Subcontractors and Sub-subcontractors in the Work, and the Owner and Contractor shall be named insureds.

11.3.3 Loss of Use Insurance. The Owner, at the Owner's option, may purchase and maintain such insurance as will insure the Owner against loss of use of the Owner's property due to fire or other hazards, however caused. The Owner waives all rights of action against the Contractor for loss of use of the Owner's property, including consequential losses due to fire or other hazards however caused, to the extent covered and paid by insurance under this Subparagraph 11.3.3.

11.3.4 If the Contractor requests in writing that insurance for risks other than those described herein or for other special hazards be included in the property insurance policy, the Owner shall, if possible, include such insurance, and the cost thereof shall be borne by the Contractor.

11.3.5 If during the Project construction period the Owner insures properties, real or personal or both, adjoining or adjacent to the site by property insurance under policies separate from those insuring the Project, or if after final payment property insurance is to be provided on the completed Project through a policy or policies other than those insuring the Project during the construction period, the Owner shall waive all rights in accordance with the terms of Subparagraph 11.3.7 for damages caused by fire or other perils covered by this separate property insurance. All separate policies shall provide this waiver of subrogation by endorsement or otherwise.

11.3.6 Before an exposure to loss may occur, the Owner shall file with the Contractor a copy of each policy that includes insurance coverages required by this Paragraph 11.3. Each policy shall contain all generally applicable conditions, definitions, exclusions and endorsements related to this Project. Each policy shall contain a provision that the policy will not be canceled or allowed to expire until at least 30 days' prior written notice has been given to the Contractor.

11.3.7 Waivers of Subrogation. The Owner and Contractor waive all rights against (1) each other and any of their Subcontractors, Sub-subcontractors, agents and employees, each of the other, and (2) the Architect, Architect's consultants, separate contractors described in Article 6, if any, and any of their Subcontractors, Sub-subcontractors, agents and employees, for damages caused by fire or other perils to the extent covered by property insurance obtained pursuant to this Paragraph 11.3 or other property insurance applicable to the Work, except such rights as they have to proceeds of such insurance held by the Owner as fiduciary. The Owner or Contractor, as appropriate, shall require of the Architect, Architect's consultants, separate contractors described

in Article 6, if any, and the Subcontractors, Sub-subcontractors, agents and employees of any of them, by appropriate agreements, written where legally required for validity, similar waivers each in favor of other parties enumerated herein. The policies shall provide such waivers of subrogation by endorsement or otherwise. A waiver of subrogation shall be effective as to a person or entity even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise, did not pay the insurance premium directly or indirectly, and whether or not the person or entity had an insurable interest in the property damaged.

11.3.8 A loss insured under Owner's property insurance shall be adjusted by the Owner as fiduciary and made payable to the Owner as fiduciary for the insureds, as their interests may appear, subject to requirements of any applicable mortgagee clause and of Subparagraph 11.3.10. The Contractor shall pay Subcontractors their just shares of insurance proceeds received by the Contractor, and by appropriate agreements, written where legally required for validity, shall require Subcontractors to make payments to their Subcontractors in similar manner.

11.3.9 If required in writing by a party in interest, the Owner as fiduciary shall, upon occurrence of an insured loss, give bond for proper performance of the Owner's duties all subject to the requirements, if any, of the Owner's construction and/or permanent lender. The cost of required bonds shall be charged against proceeds received as fiduciary. The Owner shall deposit in a separate account proceeds so received, which the Owner shall distribute in accordance with such agreement as the parties in interest may reach, or in accordance with an arbitration award in which case the procedure shall be as provided in Paragraph 4.5.

11.3.10 The Owner as fiduciary shall have power to adjust and settle a loss with insurers unless one of the parties in interest shall object in writing within five days after occurrence of loss to the Owner's exercise of this power; if such objection be made, arbitrators shall be chosen as provided in Paragraph 4.5. The Owner as fiduciary shall, in that case, make settlement with insurers in accordance with directions of such arbitrators. If distribution of insurance proceeds by arbitration is required, the arbitrators will direct such distribution.

11.4 PERFORMANCE BOND AND PAYMENT BOND

11.4.1 The Contractor shall furnish bonds covering faithful performance of the Contract and payment of obligations arising thereunder as stipulated in bidding requirements or specifically required in the Contract Documents on the date of execution of the Contract. Said bonds shall satisfy the applicable statutory requirements of the place in which the Work is to be performed.

11.4.2 Upon the request of any person or entity appearing to be a potential beneficiary of bonds covering payment of obligations arising under the Contract, the Contractor shall promptly furnish a copy of the bonds or shall permit a copy to be made.

ARTICLE 12

UNCOVERING AND CORRECTION OF WORK

12.1 UNCOVERING OF WORK

12.1.1 If a portion of the Work is covered, contrary to the Architect's request or to requirements specifically expressed in the Contract Documents, it must, if required in writing by the Architect, be uncovered for the Architect's observation and be replaced at the Contractor's expense without change in the Contract Time.

12.1.2 If a portion of the Work has been covered in accordance with the requirements specifically expressed in the contract documents, and which the Architect has not specifically requested to observe prior to its being covered, the Architect may request to see such Work and it shall be uncovered by the Contractor. If such Work is in accordance with the Contract Documents, costs of uncovering and replacement shall, by appropriate Change Order, be charged to the Owner. If such Work is not in accordance with the Contract Documents, the Contractor shall pay such costs unless the condition was caused by the Owner or a separate contractor in which event the Owner shall be responsible for payment of such costs.

12.2 CORRECTION OF WORK

12.2.1 The Contractor shall promptly correct Work rejected by the Architect or failing to conform to the requirements of the Contract Documents, whether observed before or after Substantial Completion and whether or not fabricated, installed or completed. The Contractor shall bear costs of correcting such rejected work, including additional testing and inspections and compensation for the Architect's services and expenses made necessary thereby and any cost, loss, or damages to the Owner resulting from such failure or defect.

12.2.2 If, within one year after the date of Substantial Completion of the Work or designated portion thereof, or after the date for commencement of warranties established under Subparagraph 9.9.1, or by terms of an applicable special warranty required by the Contract Documents, any of the Work is found to be not in accordance with the requirements of the Contract Documents, the Contractor shall correct it promptly after receipt of written notice from the Owner to do so unless the Owner has previously given the Contractor a written acceptance of such condition. This period of one year shall be extended with respect to portions of Work first performed after Substantial Completion by the period of time between Substantial Completion and the actual performance of the Work. This obligation under this Subparagraph 12.2.2 shall survive acceptance of the Work under the Contract and termination of the Contract. The Owner shall give such notice promptly after discovery of the condition.

12.2.3 The Contractor shall remove from the site portions of the Work which are not in accordance with the requirements of the Contract Documents and are neither corrected by the Contractor nor accepted by the Owner.

12.2.4 If the Contractor fails to correct nonconforming Work within a reasonable time, the Owner may correct it in accordance with Paragraph 2.4. If the Contractor does not proceed with correction of such nonconforming Work within a reasonable time fixed by written notice from the Architect, the Owner may remove it and store the salvable materials or equipment at the Contractor's expense. If the Contractor does not pay costs of such removal and storage within

ten days after written notice, the Owner may upon ten additional days' written notice sell such materials and equipment at auction or at private sale and shall account for the proceeds thereof, after deducting costs and damages that should have been borne by the Contractor, including compensation for the Architect's services and expenses made necessary thereby. If such proceeds of sale do not cover costs which the Contractor should have borne, the Contract Sum shall be reduced by the deficiency. If payments then or thereafter due the Contractor are not sufficient to cover such amount, the Contractor shall pay the difference to the Owner.

12.2.5 The Contractor shall bear the cost of correcting destroyed or damaged construction, whether completed or partially completed, of the Owner or separate contractors caused by the Contractor's correction or removal of Work which is not in accordance with the requirements of the Contract Documents.

12.2.6 Nothing contained in this Paragraph 12.2 shall be construed to establish a period of limitation with respect to other obligations which the Contractor might have under the Contract Documents. Establishment of the time period of one year as described in Subparagraph 12.2.2 relates only to the specific obligation of the Contractor to correct the Work, and has no relationship to the time within which the obligation to comply with the Contract Documents may be sought to be enforced, nor to the time within which proceedings may be commenced to establish the Contractor's liability with respect to the Contractor's obligations other than specifically to correct the Work.

12.3 ACCEPTANCE OF NONCONFORMING WORK

12.3.1 If the Owner prefers to accept Work which is not in accordance with the requirements of the Contract Documents, the Owner may do so instead of requiring its removal and correction, in which case the Contract Sum will be reduced as appropriate and equitable. Such adjustment shall be effected whether or not final payment has been made.

ARTICLE 13

MISCELLANEOUS PROVISIONS

13.1 GOVERNING LAW

13.1.1 The Contract shall be governed by the law of the place where the Project is located.

13.2 SUCCESSORS AND ASSIGNS

13.2.1 The Owner and Contractor respectively bind themselves, their partners, successors, assigns and legal representatives to the other party hereto and to partners, successors, assigns and legal representatives of such other party in respect to covenants, agreements and obligations contained in the Contract Documents. Except as hereinafter provided, neither party to the Contract shall assign the Contract or sublet it as a whole without the written consent of the other, nor shall the Contractor assign any moneys due or to become due to him hereunder, without the previous written consent of the Owner. The Owner may assign the Contract to any institutional

lender providing construction or permanent financing for the Project or to any person acquiring the Owner's interest in the Project, and the Contractor agrees to execute all consents, certificates, and other documents required by such lender or other person in connection with such assignment.

13.2.2 If the Owner conveys its interest in the Project to a third party, any rights which the Owner may have against the Contractor arising from this Agreement shall automatically transfer to such third party.

13.3 WRITTEN NOTICE

13.3.1 Written notice shall be deemed to have been duly served if delivered in person to the individual or a member of the firm or entity or to an officer of the corporation for which it was intended, or if delivered at or sent by registered or certified mail to the last business address known to the party giving notice.

13.4 RIGHTS AND REMEDIES

13.4.1 Duties and obligations imposed by the Contract Documents and rights and remedies available thereunder shall be in addition to and not a limitation of duties, obligations, rights and remedies otherwise imposed or available by law.

13.4.2 No action or failure to act by the Owner, Architect or Contractor shall constitute a waiver of a right or duty afforded them under the Contract, nor shall such action or failure to act constitute approval of or acquiescence in a breach thereunder, except as may be specifically agreed in writing.

13.5 TESTS AND INSPECTIONS

13.5.1 Tests, inspections and approvals of portions of the Work required by the Contract Documents or by laws, ordinances, rules, regulations or orders of public authorities having jurisdiction shall be made at an appropriate time. Unless otherwise provided, the Contractor shall make arrangements for such tests, inspections and approvals with an independent testing laboratory or entity acceptable to the Owner, or with the appropriate public authority, and shall bear all related costs of tests, inspections and approvals. The Contractor shall give the Architect timely notice of when and where tests and inspections are to be made so the Architect may observe such procedures. The Owner shall bear costs of tests, inspections or approvals which do not become requirements until after bids are received or negotiations concluded.

13.5.2 If the Architect, Owner or public authorities having jurisdiction determine that portions of the Work require additional testing, inspection or approval not included under Subparagraph 13.5.1, the Architect will, upon written authorization from the Owner, instruct the Contractor to make arrangements for such additional testing, inspection or approval by an entity acceptable to the Owner, and the Contractor shall give timely notice to the Architect of when and where tests and inspections are to be made so the Architect may observe such procedures. The Owner shall bear such costs except as provided in Subparagraph 13.5.3.

13.5.3 If such procedures for testing, inspection or approval under Subparagraphs 13.5.1 and 13.5.2 reveal failure of the portions of the Work to comply with requirements established by the Contract Documents, the Contractor shall bear all costs made necessary by such failure including those of repeated procedures and compensation for the Architect's services and expenses.

13.5.4 The Contractor shall obtain and deliver promptly to the Architect any occupancy permit and any certificates of final inspection of any part of the Contractor's work and operating permits for any mechanical apparatus, such as elevators, escalators, boilers, air compressors, etc., which may be required by law to permit full use and occupancy of the premises by the Owner. Receipt of such permits or certificates by the Architect shall be a condition precedent to Substantial Completion of the Work.

13.5.5 Tests or inspections conducted pursuant to the Contract Documents shall be made promptly to avoid unreasonable delay in the Work.

13.6 LIMITATION OF LIABILITY

13.6.1 The Owner shall be liable only to the extent of its interest in the Project; and no officer, director, partner, agent or employee of the Owner (or any partner of a partner or any agent or employee of a partner) shall ever be personally or individually liable with respect to this Contract or the Work. Each Subcontract shall include the foregoing limitation, which shall be effective if the Owner ever succeeds to the Contractor's rights and obligations under a Subcontract.

13.7 The Contractor shall comply with any decisions of the Arlington Redevelopment Board applicable to the Project, and with any other Laws, By-Laws, Rules, and Regulations or Ordinances within the Town of Arlington.

ARTICLE 14

TERMINATION OR SUSPENSION OF THE CONTRACT

14.1 TERMINATION BY THE CONTRACTOR

14.1.1 The Contractor may terminate the Contract if the Work is stopped for a period of 30 days through no act or fault of the Contractor or a Subcontractor, Sub-subcontractor or their agents or employees or any other persons performing portions of the Work under contract with the Contractor, for any of the following reasons:

- .1 issuance of an order of a court or other public authority having jurisdiction;
- .2 an act of government, such as declaration of national emergency, making material unavailable; or

- .3 because the Architect has not issued a Certificate for Payment and has not notified the Contractor of the reason for withholding certification as provided in Subparagraph 9.4.1, or because the Owner has not made payment on a Certificate for Payment within the time stated in the Contract Documents.

14.1.2 If one of the above reasons exists, the Contractor may, upon seven additional days' written notice to the Owner and Architect, terminate the Contract and recover from the Owner payment for Work executed and for proven loss with respect to materials, equipment, tools, and construction equipment and machinery, including reasonable overhead, profit and damages.

14.1.3 If the Work is stopped for a period of 60 days through no act or fault of the Contractor or a Subcontractor or their agents or employees or any other persons performing portions of the Work under contract with the Contractor because the Owner has persistently failed to fulfill the Owner's obligations under the Contract Documents with respect to matters important to the progress of the Work, the Contractor may, upon seven additional days' written notice to the Owner and the Architect, terminate the Contract and recover from the Owner as provided in Subparagraph 14.1.2.

14.2 TERMINATION BY THE OWNER.

14.2.1 If the Contractor is adjudged a bankrupt, or if the Contractor makes a general assignment for the benefit of the Contractor's creditors, or if a receiver is appointed on account of the Contractor's insolvency, or if the Contractor persistently or repeatedly refuses or fails, except in cases for which extension of time is provided, to supply enough properly skilled workmen or proper materials, or if the Contractor fails to make prompt payment to Subcontractors for materials or labor, or persistently disregards laws, ordinances, rules, regulations or orders of any public authority having jurisdiction, or otherwise is guilty of a substantial violation of any provision of the Contract, then the Contractor shall be in default, and the Owner may, without prejudice to any other right or remedy, and upon seven days' written notice to the Contractor, take possession of all materials, tools, appliances, equipment, construction equipment and machinery and vehicles, offices and other facilities on the Project site, and all materials intended for the Work, wherever stored, and may terminate the employment of the Contractor, accept assignment of any or all Subcontracts pursuant to Paragraph 5.4, and finish the Work by whatever method the Owner may deem expedient. The Owner shall be entitled to collect from the Contractor all direct, indirect, liquidated, and consequential damages suffered by the Owner on account of the Contractor's default, including without limitation additional services and expenses of the Architect made necessary thereby. The Owner shall be entitled to hold all amounts due the Contractor at the date of termination until all of the Owner's damages have been established, and to apply such amounts to such damages.

14.2.2 When the Owner terminates the Contract for one of the reasons stated in Subparagraph 14.2.1, the Contractor shall not be entitled to receive further payment until the Work is finished.

14.2.3 If the unpaid balance of the Contract Sum exceeds costs of finishing the Work, including compensation for the Architect's services and expenses made necessary thereby, such excess

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shall be paid to the Contractor. If such costs exceed the unpaid balance, the Contractor shall pay the difference to the Owner. The amount to be paid to the Contractor or Owner, as the case may be, shall be certified by the Architect, upon application, and this obligation for payment shall survive termination of the Contract.

SUPPLEMENTAL STATUTORY CONDITIONS

ARTICLE 1 - WAGES AND EMPLOYMENT PRACTICES

- 1.1 Preference To Veterans and Citizens In Public Work; Rate of Wages. (Statutory reference: Mass. Gen. Laws Chapter 149, Section 26) This Paragraph applies to every contract or subcontract for the construction of public works by the Commonwealth or by a county, town or district, or by persons contracting or subcontracting for such works.
- 1.1.1 In the employment of mechanics and apprentices, teamsters, chauffeurs and laborers, preference shall first be given to citizens of the Commonwealth who have been residents of the Commonwealth for at least six months at the commencement of their employment, who are veterans as defined in Mass. Gen. Laws Chapter 4, Section 7, clause 43, and who are qualified to perform the work to which the employment relates; and secondly, to citizens of the Commonwealth generally who have been residents of the Commonwealth for at least six months at the commencement of their employment, and if they cannot be obtained in sufficient numbers, then to citizens of the United States, and every contract for such work shall contain a provision to this effect. Each county, town or district in the construction of public works, or persons contracting or subcontracting for such works, shall give preference to veterans and citizens who are residents of such county, town or district.
- 1.1.2 The rate per hour of the wages paid to said mechanics and apprentices, teamsters, chauffeurs and laborers in the construction of public works shall not be less than the rate or rates of wages to be determined by the Commissioner of Labor and Industries as hereinafter provided; provided, that the wages paid to laborers employed on said works shall not be less than those paid to laborers in the municipal service of the town or towns where said works are being constructed; provided, further, that where the same public work is to be constructed in two or more towns, the wages paid to laborers shall not be less than those paid to laborers in the municipal service of the town paying the highest rate; provided further, that if, in any of the towns where the works are to be constructed, a wage rate or wage rates have been established in certain trades and occupations by collective agreements or understandings in the private construction industry between organized labor and employers, the rate or rates to be paid on said works shall not be less than the rates so established; provided, further, that in towns where no such rate or rates have been so established, the wages paid to mechanics and apprentices, teamsters, chauffeurs and laborers on public works, shall not be less than the wages paid to the employees in the same trades and occupations by private employers engaged in the construction industry. This section shall also apply to regular employees of the Commonwealth or of a county, town or district, when such employees are employed in the construction, addition to or alteration

of public buildings for which special appropriations of more than one thousand dollars are provided. Payments by employers to health and welfare plans, pension plans and supplementary unemployment benefit plans under collective bargaining agreements or understandings between organized labor and employers shall be included for the purpose of establishing minimum wage rates as herein provided.

- 1.2 List of Jobs; Classifications; Determination of Rate of Wages; Schedule.
(Statutory reference; Mass. Gen. Laws Chapter 149, Section 27) This Paragraph applies to every contract or subcontract for the construction of public works by the Commonwealth, or by a county, town or district.

The Commissioner of Labor and Industries shall prepare, for the use of such public officials or public bodies whose duty it shall be to cause public works to be constructed, a list of the several jobs usually performed on various types of public works upon which mechanics and apprentices, teamsters, chauffeurs and laborers are employed. The Commissioner shall classify said jobs, and he may revise such classifications from time to time, as he may deem advisable. Prior to awarding a contract for the construction of public works, said public official or public body shall submit to the Commissioner a list of the jobs upon which mechanics and apprentices, teamsters, chauffeurs and laborers are to be employed, and shall request the Commissioner to determine the rate of wages to be paid on each job. Said rates shall apply to all persons engaged in transporting gravel or fill to the site of said public works or removing gravel or fill from such site, regardless of whether such persons are employed by a contractor or subcontractor or are independent contractors or owner-operators. The Commissioner, subject to the provisions of Paragraph 1.1 of these Supplementary Statutory Conditions, shall proceed forthwith to determine the same, and shall furnish said official or public body with a schedule of such rate or rates of wages as soon as said determination shall have been made. In advertising or calling for bids for said works, the awarding official or public body shall incorporate said schedule in the advertisement or call for bids by an appropriate reference thereto, and shall furnish a copy of said schedule without cost, to any person requesting the same. Said schedule shall be made a part of the contract for said works and shall continue to the minimum rate or rates of wages for said employees during the life of the contract. Any person engaged in the construction of said works shall cause a legible copy of said schedule to be kept posted in a conspicuous place at the site of said works during the life of the contract. The aforesaid rates of wages in the schedule of wage rates shall include payment by employers to health and welfare plans, pension plans, and supplementary unemployment benefit plans and such payments shall be considered as payments to persons under this section performing work as herein provided. Any employer engaged in the construction of such works who does not make payments to a health and welfare plan, a pension plan and a supplementary unemployment benefit plan, where such payments are included in said rates of wages, shall pay the amount of said payments directly to each employee engaged in said construction. Note: The

awarding authority does not guarantee the accuracy of any schedule of wage rates furnished to the Contractor hereunder, and the Contractor shall be responsible for ascertaining the prevailing wages in the area where the work will be performed.

1.3 Employment Records To Be Kept By Contractor, Subcontractor; Statement of Compliance. (Statutory reference; Mass. Gen. Laws Chapter 149, Section 27B) This Paragraph applies to every contract or subcontract for the construction of public works by the Commonwealth, or by a county, town or district.

Every Contractor, Subcontractor or public body engaged in said public works to which Paragraph 1.2 of these Supplementary Statutory Conditions applies shall keep a true and accurate record of all mechanics and apprentices, teamsters, chauffeurs and laborers employed thereon, showing the name, address and occupational classification of each such employee on said works, and the hours worked by, and the wages paid to, each such employee, and shall furnish to the Commissioner of Labor and Industries, upon his request, a copy of said record, signed by the employer or his authorized agent under the penalties of perjury. Such records shall be open to inspection by any authorized representative of the Department of Labor and Industries at any reasonable time, and as often as may be necessary.

Each such Contractor, Subcontractor or public body shall preserve its payroll records for a period of three years from the date of completion of the contract.

Each such Contractor, Subcontractor or public body shall furnish to the Commissioner of Labor and Industries within fifteen days after completion of its portion of the work a statement, executed by the Contractor, Subcontractor, or public body or by any authorized officer or employee of the Contractor, Subcontractor or public body who supervises the payment of wages in the following form:

STATEMENT OF COMPLIANCE _____, 20_ _____ -

I, _____ (Name of signatory party) _____ (Title)

do hereby state:

That I pay or supervise the payment of the persons employed by (Contractor, Subcontractor or public body) _____ on the _____ and that all mechanics (building or project) and apprentices, teamsters, chauffeurs and laborers employed on said project have been paid in accordance with wages determined under the provisions of sections twenty-six and twenty-seven of chapter one hundred and forty-nine of the General Laws.

Signature

Title

The above mentioned copies of payroll records and statements of compliance shall be available for inspection by any interested party filing a written request to the Commissioner for such inspection.

- 1.4 Wages Paid to Operators of Trucks and Other Equipment. (Statutory reference: Mass. Gen. Laws Chapter 149, Section 27F) This Paragraph applies to every contract for the construction of public works by the Commonwealth, or by a county, city, town or district.

Prescribed rates of wages, as determined by the Commissioner of Labor and Industries, shall be paid to the operators of all trucks, vehicles or equipment employed on the Project. Said rates of wages shall be requested of said Commissioner by the awarding authority and shall be furnished by the Commissioner in a schedule containing the classification of jobs, and the rate of wages to be paid for each job. Said rates of wages shall include payments to health and welfare plans, or, if no such plan is in effect between employer and employees, the amount of such payments shall be paid directly to said operators.

- 1.5 Reserve Police Officers (Statutory reference: Mass. Gen. Laws. Chapter 149, Section 27B) This Paragraph 1.5 applies to every contract for the construction, alteration, maintenance, repair or demolition of, or addition to, any public works for the Commonwealth or any political subdivision thereof.

The Contractor shall pay to any reserve police officer employed by him in any city or town the prevailing rate of wage paid to regular police officers in such city or town.

- 1.6 Eight-Hour Day, etc. This Paragraph 1.6 applies only to contracts which are subject to the provisions of Mass. Gen. Laws Chapter 149, Sections 30 and 34.

No laborer, worker, mechanic, foreman or inspector working within this Commonwealth in the employ of the Contractor, Subcontractor or other person doing or contracting to do the whole or part of the work contemplated by the contract, shall be required or permitted to work more than eight hours in any one day or more than forty-eight hours in any one week, or more than six days in any one week, except in cases of emergency.

- 1.7 Lodging, etc. (Statutory reference: Mass. Gen. Laws Chapter 149, Section 25) This Paragraph applies to every contract with the Commonwealth, a county, city

or town, or with a department, board, commission, or officer acting therefor, for the doing of public work.

Every employee under this contract shall lodge, board and trade where and with whom he elects, and neither the Contractor nor his agents or employees shall, either directly or indirectly, require as a condition of the employment of any person that the employee shall lodge, board or trade at a particular place or with a particular person.

- 1.8 Access to Contractor's Records (Executive Order No. 195) This paragraph applies to every contract for the purchase of services or material by any agency, bureau, board, commission, institution, or department of the Commonwealth.

The Governor or his designee, the secretary of administration and finance, and the state auditor or his designee shall have the right at reasonable times and upon reasonable notice to examine the books, records, and other compilations of data of the Contractor which pertain to the performance and requirements of this contract.

- 1.9 Worker's Compensation Insurance (Statutory reference: Mass. Gen. Laws Chapter 149, Section 34A) This Paragraph 1.9 applies to every contract for the construction, alteration, maintenance, repair or demolition of, or addition to, any public building or other public works for the Commonwealth or any political subdivision thereof.

The Contractor shall, before commencing performance of the contract, provide by insurance for the payment of compensation and the furnishing of other benefits under Mass. Gen. Laws Chapter 152 to all persons to be employed under the contract, and the Contractor shall continue such insurance in full force and effect during the term of the contract. Sufficient proof of compliance with this Paragraph 1.9 must be furnished at the time of execution of this contract. Failure to provide and continue in force such insurance as aforesaid shall be deemed a material breach of the contract and shall operate as an immediate termination thereof. No cancellation of such insurance, whether by the insurer or by the insured, shall be valid unless written notice thereof is given by the party proposing cancellation to the other party and to the awarding authority at least fifteen days prior to the intended effective date thereof, which date shall be expressed in full notice.

Article 2 - EQUAL EMPLOYMENT OPPORTUNITY AND AFFIRMATIVE ACTION

(Statutory reference: Mass. Gen. Laws Chapter 151B; Executive Orders No. 74, No. 116 and No. 246). The provisions of this Article 2 are intended to comply with the Commonwealth's Supplemental Equal Employment Opportunity Anti-Discrimination and Affirmative Action Program, referred to in Executive Order No. 116 and administered by the Massachusetts Commission Against Discrimination. If no specific percentage has been inserted in

Subparagraph 2.2.3 below, the applicable minimum percentage provided for in such Supplemental Program shall be deemed to have been so inserted.

- 2.1 Definitions. For purposes of this Contract, “minority” refers to Asian-Americans, Blacks, Spanish-Surnamed Americans, North American Indians, and Cape Verdeans. “Commission” refers to the Massachusetts Commission Against Discrimination.
- 2.2 Non-Discrimination and Affirmative Action Requirements. During the performance of this Contract, the Contractor and all of his Subcontractors (hereinafter “Contractor”), for himself, his assignees and successors in interest, agree to comply with Subparagraphs 2.2.1 through 2.2.11.
- 2.2.1 In connection with the performance of Work under this Contract, the Contractor shall not discriminate against any employee or applicant for employment because of race, color, religious creed, national origin, age or sex. The aforesaid provision shall include, but not be limited to, the following: employment upgrading, demotion, or transfer; recruitment advertising; recruitment layoff; termination; rates of pay or other forms of compensation; conditions or privileges of employment; and selection for apprenticeship. The Contractor shall post hereafter in conspicuous places, available for employees and applicants for employment, notices to be provided by the Commission setting forth the provisions of the Fair Employment Practices Law of the Commonwealth.
- 2.2.2 In connection with the performance of Work under this Contract, the Contractor shall undertake in good faith affirmative action measures designed to eliminate any discriminatory barriers in the terms and conditions of employment on the grounds of race, color, religious creed, national origin, age or sex, and to eliminate and remedy any effects of such discrimination in the past. Such affirmative action shall entail positive and aggressive measures to ensure equal opportunity in the areas of hiring, upgrading, demotion or transfer, recruitment, layoff or termination, rate of compensation, and in-service or apprenticeship training programs. This affirmative action shall include all action required to guarantee equal employment opportunity for all persons, regardless of race, color, religious creed, national origin, age or sex. A purpose of this provision is to ensure to the fullest extent possible an adequate supply of skilled tradesmen for this and future Commonwealth public construction projects.
- 2.2.3 As part of his obligation of remedial action under the foregoing Subparagraph 2.2.2, the Contractor shall maintain on this project a not less than ten percent (10%) ratio of minority employee man hours to total man hours in each job category including but not limited to bricklayers, carpenters, cement masons, electricians, ironworkers, operating engineers, and those “classes of work” enumerated in Mass. Gen. Laws Chapter 149, Section 44F.

2.2.4 In the hiring of minority journeymen, apprentices, trainees and advanced trainees, the Contractor shall rely on referrals from a multi-employer affirmative action program approved by the Commission, traditional referral methods utilized by the construction industry, and referrals from agencies, not more than three in number at any one time, designated by the Liaison Committee (described in Subparagraph 2.2.5 below) or the Commission.

2.2.5 At the discretion of the Commission there may be established for the life of this Contract a body to be known as the Liaison Committee. The Liaison Committee shall be composed of one representative each from the agency or agencies administering this project, hereinafter called the administering agency, the Commission and such other representatives as may be designated by the Commission in conjunction with the administering agency.

.6The Contractor (or his agent, if any, designated by him as the on-site equal employment opportunity officer) shall recognize the Liaison Committee as an affirmative action body, and shall establish a continuing working relationship with the Liaison Committee, consulting with the Liaison Committee on all matters related to minority recruitment, referral, employment and training.

.7The Contractor shall prepare projected manning tables on a quarterly basis. These shall be broken down into projections, by week, of workers required in each trade. Copies shall be furnished one week in advance of the commencement of the period covered, and also when updated, to the Commission and Liaison Committee.

2.2.8 Records of employment referral orders, prepared by the Contractor, shall be made available to the Commission and to the Liaison Committee on request.

2.2.9 The Contractor shall prepare weekly reports in a form approved by the Commission of hours worked in each trade by each employee, identified as a minority or non-minority. Copies of these shall be provided at the end of each week to the Commission and to the Liaison Committee.

If the Contractor shall use any Subcontractor on any work performed under this Contract, he shall take affirmative action to negotiate with qualified minority Subcontractors. This affirmative action shall cover both pre-bid and post-bid periods. It shall include notification to the Office of Minority Business Assistance (within the Executive Office of Communities and Development) or its designee, while bids are in preparation, of all products, work or services for which the Contractor intends to negotiate bids.

In the employment of journeymen, apprentices, trainees and advanced trainees, the Contractor shall give preference, first, to citizens of the Commonwealth who have served in the armed forces of the United States in time of war and have been

honorably discharged therefrom or released from active duty therein, and who are qualified to perform the work to which the employment relates, and, secondly, to citizens of the Commonwealth generally, and, if such cannot be obtained in sufficient numbers, then to citizens of the United States.

A designee of the Commission and a designee of the Liaison Committee shall each have right of access to the construction site.

2.2.10 The Contractor shall maintain as a goal on this project a not less than five percent ratio of women work force to total project hours in both the general contract and each individual filed sub-bid contract.

A Labor Scheduling Table will be used as a tool for achieving a range of women work force participation for the entire project in both the general contract and each individual filed sub-bid contract. Said Labor Scheduling Table shall be in a form acceptable to the Town.

2.2.11 Before starting work, the Contractors (includes the General Contractor, for itself and its Subcontractors, as well as all filed sub-bid Contractors) will submit plans for achievement of the equal opportunity goals of the contract. All Contractors will be required to make a good faith effort to achieve these goals. The plan will indicate if the Contractors expect to achieve the requirements during the first quarter. If there are reasons why the Contractors do not expect to achieve the requirements during the first quarter year of the contract construction phase, then the Contractors shall provide a plan calculated to address, to the extent reasonably possible, these obstacles to a good faith effort to achieve such goals.

Not more than ten days following the end of each work quarter, the Contractors will report on the achievement of the goals, detailing the good faith efforts that have been made and will continue to be made and any other appropriate efforts not yet undertaken.

All reports will be signed by an officer or principal of the company who has the authority to contractually obligate the company.

2.3 The Contractor shall comply with the provisions of Executive Order No. 74, as amended by Executive Order No. 166, dated May 1, 1975, and of Mass. Gen. Laws Chapter 151B, both of which are herein incorporated by reference and made a part of this Contract.

2.4 The Contractor, in the performance of all Work, and prior to completion of the Work, will not discriminate on grounds of race, color, religious creed, national origin, age or sex in employment practices, in the selection or retention of Subcontractors, or in the procurement of materials and rentals of equipment.

- 2.5 In all solicitations either by competitive bidding or negotiation made by the Contractor either for work to be performed under a subcontract or for the procurement of materials or equipment, each potential Subcontractor or supplier shall be notified in writing by the Contractor of the Contractor's obligations under this Contract relative to non-discrimination and affirmative action.
- 2.6 The Contractor hereby certifies that he shall comply with the minority manpower ratio and specific action steps contained herein. The Contractor shall be required to obtain from each of its Subcontractors and submit to the administering agency prior to the performance of any work under the Contract a certification by said Subcontractor, regardless of tier, that it will comply with the minority manpower ratio and specific affirmative action steps contained herein. Such certification shall be provided on forms furnished by the administering agency or, in the absence thereof, on forms prescribed by the Commission.
- 2.7 The Contractor's certification form must be signed by all successful low bidder(s) prior to award by the administering agency.
- 2.8 Compliance Information, Reports and Sanctions
- 2.8.1 The Contractor will provide all information and reports required by the administering agency or the Commission on instructions issued by either of them and will permit access to its facilities and books, records, accounts and other sources of information which may be determined by the Commission to affect the employment of personnel. This provision shall apply only to information pertinent to the Commonwealth's supplementary affirmative action contract requirements. Where information required is in the exclusive possession of another who fails or refuses to furnish this information, the Contractor shall so certify to the administering agency or the Commission as appropriate and shall set forth what efforts he has made to obtain the information.
- 2.8.2 Whenever the administering agency, the Commission or the Liaison Committee believes the Contractor or any Subcontractor may not be operating in compliance with the terms of this Paragraph 2.8, the Commission directly, or through its designated agent, shall conduct an appropriate investigation, and may confer with the parties, to determine if such Contractor is operating in compliance with the terms of this Paragraph 2.8. If the Commission or its agent finds the Contractor or any Subcontractor not in compliance, it shall make a preliminary report on noncompliance, and notify such Contractor in writing of such steps as will in the judgment of the Commission or its agent bring such Contractor into compliance. In the event that such Contractor fails or refuses to fully perform such steps, the Commission shall make a final report of non-compliance, and recommend to the administering agency the imposition of one or more of the sanctions listed below. If, however, the Commission believes the Contractor or any Subcontractor has taken or is taking every possible measure to achieve compliance, it shall not make

a final report of non-compliance. Within fourteen days of the receipt of the recommendations of the Commission, the administering agency shall move to impose one or more of the following sanctions, as it may deem appropriate to attain full and effective enforcement:

- (i) The recovery by the administering agency from the Contractor of 1/100 of 1% of the contract award price or \$1,000, whichever sum is greater, in the nature of liquidated damages or, if a Subcontractor is in non-compliance, the recovery by the administering agency from the Contractor, to be assessed by the Contractor as a back charge against the Subcontractor, of 1/10 or 1% of the subcontract price, or \$400, whichever sum is greater, in the nature of liquidated damages, for each week that such party fails or refuses to comply;
- (ii) The suspension of any payment or part thereof due under the Contract until such time as the Contractor or any Subcontractor is able to demonstrate his compliance with the terms of the contract;
- (iii) The termination, or cancellation, of the Contract, in whole or in part, unless the Contractor or any subcontractor is able to demonstrate within a specified time his compliance with the terms of the Contract;
- (iv) The denial to the Contractor or any Subcontractor of the right to participate in any future contracts awarded by the administering agency for a period of up to three years.

If at any time after the imposition of one or more of the above sanctions a Contractor is able to demonstrate that he is in compliance with this Paragraph 2.8, he may request that the administering agency, in consultation with the Commission, suspend the sanctions conditionally, pending a final determination by the Commission as to whether the Contractor is in compliance. Upon final determination of the Commission, the administering agency, based on the recommendation of the Commission, shall either lift the sanctions or reimpose them.

Sanctions enumerated under Subparagraph 2.8.2 of this Paragraph 2.8 shall not be imposed by the administering agency except after an adjudicatory proceeding, as that term is used in Mass. Gen. Laws Chapter 30A, has been conducted. No investigation by the Commission or its agent shall be initiated without prior notice to the Contractor.

- 2.9 Severability. The provisions of this Article 2 are severable, and if any of these provisions shall be held unconstitutional by any court of competent jurisdiction, the decision of such court shall not affect or impair any of the remaining provisions.

- 2.10 The Contractor shall comply with the provisions of Executive Order No. 246, relating to discrimination against and equal employment opportunity for the handicapped, which is herein incorporated by reference and made a part of this Contract. In connection with the performance of work under this Contract, the Contractor, Subcontractors and suppliers of goods and services shall not discriminate against the handicapped. Furthermore, Contractors, Subcontractors and suppliers of goods and services must give written notice of their commitments under this Paragraph 2.10 to any labor union, association or brotherhood with which they have a collective bargaining contract or other agreement, and must give such notice to handicapped contractors and to handicapped contractor associations. A copy of such notice must be furnished to the awarding authority at the time of the signing of the contract.
- 2.11 Suspension of Payments.
- 2.11.1 If the awarding authority determines after investigation that the Contractor or any Subcontractor is not in compliance with the terms of Article 2, it may suspend any payment or portion thereof due under the Contract until the Contractor demonstrates compliance with the terms of Article 2.
- 2.11.2 Payment shall not be suspended if the awarding authority finds that the Contractor made his best efforts to comply with Article 2, or that some other justifiable reason exists for waiving the provisions of Article 2 in whole or in part.
- 2.11.3 Payment may be suspended only after the Contractor and any other interested party shall have been given the opportunity to present evidence in support of its position at an informal hearing held by the awarding authority and the awarding authority has concluded upon review of all the evidence that such penalty is justified.
- 2.11.4 This temporary suspension of payments by the awarding authority is separate from the sanctions set forth in Paragraph 2.8 above, which are determined by the Commission and recommended to the awarding authority.

SECTION 01010 - SUMMARY OF WORK

1.0 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including SUPPLEMENTAL STATUTORY CONDITIONS and CONSOLIDATED GENERAL CONDITIONS and other Division-1 Specification Sections, apply to this Section.

1.1 PROJECT DESCRIPTION

- A. 23 MAPLE STREET HISTORIC EXTERIOR RESTORATION Arlington, Massachusetts

The project, including restoring porches removal of existing chimney to below roof level, new rubber roofing, and painting.

1.2 WORK SEQUENCE

- A. The Work will be conducted in construction sequencing to provide the least possible interference and disruption to the activities of 23 Maple Street, Arlington, MA.
 - 1. Safe pedestrian and vehicular access to 23 Maple St. and adjacent parking shall be maintained at all times.
 - 2. Construction staging, parking and activities shall be restricted to designated areas as determined by the Owner.
 - 3. Strict coordination with 23 Maple St. staff will be insisted upon. All functioning operations of the building will be ongoing throughout the construction period and the Contractor is expected to coordinate his activities with the Owner's activities in insure that paint fumes, dust, etc. do not become problematic to the inhabitants of the building.
 - 4. Work shall not conflict with Owners normal operations.

1.3 CONTRACTOR USE OF PREMISES

- A. General: Limit use of the premises to construction activities in areas indicated; allow for public access to the building throughout construction.
- B. Use of the Existing Site: Repair damage caused by construction operations. Take all precautions necessary to protect the existing building and landscaping during the construction period.
- C. The building will be fully occupied with full time residents throughout the construction process. Smoking, fowl language, and unnecessary noise must be avoided.

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1.4 OWNER OCCUPANCY

- A. Full Owner Occupancy: The Owner will occupy the site and existing building during the entire period. Perform the Work so as not to interfere with the Owner's operations.
 - 1. A Certificate of Substantial Completion will be executed for the Work.

1.5 LEAD BASED PAINT

The workers shall assume that the existing surfaces were originally painted with paint containing lead. All necessary precautions for the general public and workman shall be maintained throughout the painting process.

The Commonwealth of Massachusetts Department of Public Health Regulations 105 CMR 460.000 defines a dangerous level of lead “when present in a dried film including but not limited to paint, glaze, stain or varnish on walls, woodwork, or other surfaces or articles, or in plaster, putty or other substance to be the following:

- (1) a positive reaction with a 6% to 8% sodium sulfide solution indicative of more than 0.5% lead by dry weight; or
- (2) more than 1.2 milligrams lead per square centimeter of surface as measured on site by a mobile x-ray fluorescence analyzer or comparable equipment.”

CONCLUSIONS AND RECOMMENDATIONS FOR LEAD BASED PAINT

Building renovation projects which disturb building substrates that contain lead are regulated by the U. S. Department of Labor, Occupational Health and Safety Administration (OSHA), Lead in Construction Standard 29 CFR 1926.62 and the Massachusetts Department of Labor and Workforce Deleading Regulations 454 CMR 22.00.

The OSHA Lead in Construction Standard requires that an assessment of an employees exposure to lead be made on all construction work where an employee may be occupationally exposed to lead. This assessment may consist of collection and analysis of personal air samples for lead, representative of a full work shift (8 hours), including at least one sample for each shift or for the shift with the highest exposure level for each job classification in each work area. Alternatively, personal air sampling measurements made within the preceding twelve months, which were performed by the same employer and applicable to the same employee tasks may be used to assess employee exposure.

For projects where an initial exposure assessment has not been performed, or historical air monitoring data is not available, the employer must treat employees performing certain operations (i.e., manual demolition of structures, manual scraping, manual sanding) as if they were exposed to lead above the Permissible Exposure Limit (PEL), of $50 \mu \text{g}/\text{m}^3$ averaged over an 8-hour period. This means providing respiratory protection, protective work clothing and

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equipment, change areas, hand washing, biological monitoring and training as required by the standard.

The results of the initial exposure assessment determine the employer requirements to be followed in order to protect the employees. For initial determinations that indicate no employee is exposed at or above the action level ($30 \mu \text{g}/\text{m}^3$), further exposure determination is not required.

When an initial determination reveals employee exposures to be at or above the action level ($30 \text{mg}/\text{m}^3$) but at or below the PEL ($50 \text{mg}/\text{m}^3$), the employer shall continue to perform monitoring at least every 6 months. Monitoring shall continue until at least two consecutive measurements, taken at least seven days apart, are below the action level at which time the employer may discontinue monitoring for that employee. The OSHA standard also requires that biological monitoring of employees exposed to lead above the action level be performed. Biological monitoring shall include blood lead and zinc protoporphyrin (ZPP) level determination. A medical surveillance and a written training program are also required for all employees exposed above the action level.

For exposures determined to be above the PEL ($50 \mu \text{g}/\text{m}^3$) in addition to the above requirements, the employer shall establish and implement a written compliance program to reduce exposures to the PEL or below. Included in the written compliance program are engineering, work practice and administrative controls to be employed to reduce employee exposure to the lowest feasible levels.

According to the Massachusetts Department of Labor and Industries Regulations, 454 CMR 22.00, on all work areas where renovation or rehabilitation is performed in a manner that disturbs paint, plaster or other materials containing dangerous levels of lead, the employer shall comply with the following safe work practices:

- (1) No person under the age of 18 years shall be permitted to work on renovation and/or rehabilitation projects.
- (2) Whenever there is an exposure to lead dust, a respirator and personal protective clothing such as those listed in 454 CMR 22.08(2)(d) shall be worn.
- (3) The employer shall not permit employees to eat, drink, smoke, chew (gum or tobacco), or apply cosmetics in any work area.
- (4) When tools and/or equipment are removed from the work area, they shall be cleaned with a solution of tri-sodium phosphate or vacuumed with a HEPA vacuum. All work areas shall be cleaned at the end of the job with a HEPA vacuum.
- (5) Adequate precautions shall be implemented to insure that the outside environment is protected, according to applicable EPA and DEP regulations.

- (6) To prevent contamination of adjacent areas, the employer shall seal off the work areas, in accordance with 454 CMR 22.08(2)(b)(i).
- (7) The preparation, transportation and disposal of waste material containing lead shall follow the work practice requirements set forth in 454 CMR 22.08(2)(f).

Some of the waste generated in a renovation project impacting building components painted with lead based paint may be classified as hazardous. If the waste is determined to be hazardous, the waste must be treated, stored, transported and disposed of in accordance to the hazardous waste regulations. In order to determine disposal requirements of waste generated from the renovations, a Toxicity Characteristic Leaching Procedure (TCLP) analysis is required to be performed on the waste. TCLP is a laboratory analytical method which imitates the leaching action in a landfill. A waste is considered toxic if the TCLP analysis results in the extraction of lead above 5 parts per million, or 5 milligrams per liter in solution. Solid waste which has been determined not to be hazardous can be disposed of in a state approved landfill as conventional waste. Hazardous waste must be disposed of at an EPA approved hazardous waste disposal facility. The generator of the waste shall ensure that the facility meets all legal requirements.

END OF SECTION

SECTION 01027 - APPLICATIONS FOR PAYMENT

1.1 SUMMARY

- A. This Section specifies administrative and procedural requirements governing the Contractor's Applications for Payment.
 - 1. Coordinate the Schedule of Values and Applications for Payment with the Contractor's Construction Schedule, List of Subcontracts, and Submittal Schedule.
- B. The Contractor's Construction Schedule and Submittal Schedule are included in Section "Submittals".
- C. Payment procedures shall comply with the applicable procedures as required by Chapter 30 of the General Laws of the Commonwealth of Massachusetts are most recently amended.

1.2 SCHEDULE OF VALUES

- A. Coordinate preparation of the Schedule of Values with preparation of the Contractor's Construction Schedule.
 - 1. Submit the Schedule of Values to the Architect at the earliest feasible date, but in no case later than 7 days before the date scheduled for submittal of the initial Application for Payment.
- B. Format and Content: Use the Project Manual Table of Contents as a guide to establish the format for the Schedule of Values.
 - 1. Identification: Include the following Project identification on the Schedule of Values:
 - a. Project name and location.
 - b. Name of the Architect.
 - c. Project number.
 - d. Contractor's name and address.
 - e. Date of submittal.
 - 2. Arrange the Schedule of Values in a tabular form with separate columns to indicate the following for each item listed:
 - a. Contractor's construction schedule.
 - b. Related Specification Section.
 - c. Name of subcontractor.
 - d. Name of manufacturer or fabricator.
 - e. Name of supplier.
 - f. Change Orders (numbers) that have affected value.

- g. Dollar value.
 - h. Percentage of Contract Sum to the nearest one-hundredth percent, adjusted to total 100 percent.
- 3. Provide a breakdown of the Contract Sum in sufficient detail to facilitate continued evaluation of Applications for Payment and progress reports. Break principal subcontract amounts down into several line items.
 - 4. Round amounts off to the nearest whole dollar; the total shall equal the Contract Sum.
 - 5. For each part of the Work where an Application for Payment may include materials or equipment, purchased or fabricated and stored, but not yet installed, provide separate line items on the Schedule of Values for initial cost of the materials, for each subsequent stage of completion, and for total installed value of that part of the Work.
 - 6. Unit Cost Allowances: Show line item value of unit cost allowances as a product of unit cost times measured quantity as estimated from the best indication in the Contract Documents.
 - 7. Margins of Cost: Show line items for indirect costs, and margins on actual costs, only to the extent that such items will be listed individually in Applications for Payment. Each item in the Schedule of Values and Applications for Payment shall be complete including its total cost and proportionate share of general overhead and profit margin.
 - a. At the Contractor's option, temporary facilities and other major cost items that are not direct cost of actual work-in- place may be shown as separate line items in the Schedule of Values or distributed as general overhead expense.
 - 8. Schedule Updating: Update and resubmit the Schedule of Values when Change Orders or Construction Change Directives result in a change in the Contract Sum and at each application for payment.

1.3 APPLICATIONS FOR PAYMENT:

- A. Each Application for Payment shall be consistent with previous applications and payments as certified by the Architect and paid for by the Owner.
 - 1. The initial Application for Payment, the Application for Payment at time of Substantial Completion, and the final Application for Payment involve additional requirements.
- B. Payment Application Times: The date for each progress payment shall be established by the Town of Arlington, MA. The period of construction Work covered by each Application for Payment is the period ending 7 days prior to the date for each progress payment and starting the day following the end of the preceding period.
- C. Payment Application Forms: Use AIA Document G 702 and Continuation Sheets G 703 as the form for Application for Payment.

- D. Application Preparation: Complete every entry on the form, including notarization and execution by person authorized to sign legal documents on behalf of the Owner. Incomplete applications will be returned without action.
1. Entries shall match data on the Schedule of Values and Contractor's Construction Schedule. Use updated schedules if revisions have been made.
 2. Include amounts of Change Orders and Construction Change Directives issued prior to the last day of the construction period covered by the application.
- E. Transmittal: Submit 4 executed copies of each Application for Payment to the Architect by means ensuring receipt within 24 hours; one copy shall be complete, including waivers of lien and similar attachments, when required.
1. Transmit each copy with a transmittal form listing attachments, and recording appropriate information related to the application in a manner acceptable to the Architect.
- F. Waivers of Mechanics Lien:
1. Submit final Application for Payment with or preceded by final waivers from every entity involved with performance of Work covered by the application who could lawfully be entitled to a lien.
 2. Waiver Forms: Submit waivers of lien on forms, and executed in a manner, acceptable to Owner.
- G. Initial Application for Payment: Administrative actions and submittals that must precede or coincide with submittal of the first Application for Payment include the following:
1. List of subcontractors.
 2. List of principal suppliers and fabricators.
 3. Schedule of Values.
 4. Contractor's Construction Schedule (preliminary if not final).
 5. Schedule of principal products.
 6. Schedule of unit prices.
 7. Submittal Schedule (preliminary if not final).
 8. List of Contractor's staff assignments.
 9. List of Contractor's principal consultants.
 10. Copies of building permits
 11. Copies of authorizations and licenses from governing authorities for performance of the Work.
 12. Initial progress report.
 13. Report of pre-construction meeting.
 14. Certificates of insurance and insurance policies.
- H. Application for Payment at Substantial Completion: Following issuance of the Certificate of Substantial Completion, submit an Application for Payment; this application shall reflect any Certificates of Partial Substantial Completion issued previously for Owner occupancy of designated portions of the Work.

- I. Administrative actions and submittals that shall proceed or coincide with this application include:
 - 1. Occupancy permits and similar approvals.
 - 2. Warranties (guarantees) and maintenance agreements.
 - 3. Maintenance instructions.
 - 4. Final cleaning.
 - 5. List of incomplete Work, recognized as exceptions to Architect's Certificate of Substantial Completion.

- J. Final Payment Application: Administrative actions and submittals which must precede or coincide with submittal of the final payment Application for Payment include the following:
 - 1. Completion of Project closeout requirements.
 - 2. Completion of items specified for completion after Substantial Completion.
 - 3. Assurance that unsettled claims will be settled.
 - 4. Assurance that Work not complete and accepted will be completed without undue delay.
 - 5. Transmittal of required Project construction records to Owner.
 - 6. Proof that taxes, fees and similar obligations have been paid.
 - 7. Removal of temporary facilities and services.
 - 8. Removal of surplus materials, rubbish and similar elements.

END OF SECTION

SECTION 01035 - MODIFICATION PROCEDURES

1.1 SUMMARY

- A. This Section specifies administrative and procedural requirements for handling and processing Contract modifications.
- B. Related Sections: The following sections contain requirements that relate to this section:
 - 1. Division 1 Section "Submittals" for requirements for the Contractor's Construction Schedule.
 - 2. Division 1 Section "Application for Payment" for administrative procedures governing applications for payment.
 - 3. Division 1 Section "Product Substitutions" for administrative procedures for handling requests for substitutions made after award of the Contract.

1.2 MINOR CHANGES IN THE WORK

- A. Supplemental instructions authorizing minor changes in the Work, not involving an adjustment to the Contract Sum or Contract Time, will be issued by the Architect on AIA form G710, Architect's Supplemental Instructions.

1.3 CHANGE ORDER PROPOSAL REQUESTS

- A. Owner-Initiated Proposal Requests: Proposed changes in the Work that will require adjustment to the Contract Sum or Contract Time will be issued by the Architect, with a detailed description of the proposed change and supplemental or revised Drawings and Specifications, if necessary.
 - 1. Proposal requests issued by the Architect are for information only. Do not consider them an instruction either to stop work in progress, or to execute the proposed change.
 - 2. Unless otherwise indicated in the proposal request, within 15 days of receipt of the proposal request, submit to the Architect for the Owner's review an estimate of cost necessary to execute the proposed change.
 - a. Include a list of quantities of products to be purchased and unit costs, along with the total amount of purchases to be made. Where requested, furnish survey data to substantiate quantities.

- b. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
 - c. Include a statement indicating the effect the proposed change in the Work will have on the Contract Time.
- B. Contractor-Initiated Change Order Proposal Requests: When latent or other unforeseen conditions require modifications to the Contract, the Contractor may propose changes by submitting a request for a change to the Architect.
 - 1. Include a statement outlining the reasons for the change and the effect of the change on the Work. Provide a complete description of the proposed change. Indicate the effect of the proposed change on the Contract Sum and Contract Time.
 - 2. Include a list of quantities of products to be purchased and unit costs along with the total amount of purchases to be made. Where requested, furnish survey data to substantiate quantities.
 - 3. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
 - 4. Comply with requirements in Section "Product Substitutions" if the proposed change in the Work requires the substitution of one product or system for a product or system specified.
- C. Proposal Request Form: Use AIA Document G 709 for Change Order Proposal Requests.
- D. Proposal Request Form: Use forms provided by the Owner for Change Order Proposals; sample copies are included at the end of this Section

1.4 CONSTRUCTION CHANGE DIRECTIVE

- A. Construction Change Directive: When the Owner and Contractor are not in total agreement on the terms of a Change Order Proposal Request, the Architect may issue a Construction Change Directive on AIA Form G714, instructing the Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.
 - 1. The Construction Change Directive will contain a complete description of the change in the Work and designate the method to be followed to determine change in the Contract Sum or Contract Time.
- B. Documentation: Maintain detailed records on a time and material basis of work required by the Construction Change Directive.

1. After completion of the change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract.

1.5 CHANGE ORDER PROCEDURES

- A. Upon the Owner's approval of a Change Order Proposal Request, the Architect will issue a Change Order for signatures of the Owner and Contractor on AIA Form G701, as provided in the Conditions of the Contract.

END OF SECTION

SECTION 01200 - PROJECT MEETINGS

1.0 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including SUPPLEMENTAL STATUARY CONDITIONS and CONSOLIDATED GENERAL CONDITIONS and other Division-1 Specification Sections, apply to this Section.

1.1 SUMMARY

- A. This Section specifies administrative and procedural requirements for project meetings including but not limited to:
 - 1. Pre-Construction Conference.
 - 2. Progress Meetings.
- B. Construction schedules are specified in another Division-1 Section.

1.2 PRE-CONSTRUCTION CONFERENCE

- A. Schedule a pre-construction conference and organizational meeting at the Project site or other convenient location no later than 15 days after execution of the Agreement and prior to commencement of construction activities. Conduct the meeting to review responsibilities and personnel assignments.
- B. Attendees: The Owner, Architect, the Owner, and the Contractor and its superintendent, major subcontractors, manufacturers, suppliers and other concerned parties shall each be represented at the conference by persons familiar with and authorized to conclude matters relating to the Work.
- C. Agenda: Discuss items of significance that could affect progress including such topics as:
 - 1. Tentative construction schedule.
 - 2. Critical Work sequencing.
 - 3. Designation of responsible personnel.
 - 4. Procedures for processing field decisions and Change Orders.
 - 5. Procedures for processing Applications for Payment.
 - 6. Distribution of Contract Documents.
 - 7. Submittal of Shop Drawings, Product Data and Samples.
 - 8. Use of the premises.
 - 9. Office, Work and storage areas.
 - 10. Equipment deliveries and priorities.
 - 11. Safety procedures.
 - 12. First aid.
 - 13. Security.
 - 14. Housekeeping.
 - 15. Working hours.

1.3 PROGRESS MEETINGS

- A. Conduct progress meetings at the Project site at weekly intervals. Notify the Owner and Architect of scheduled meeting dates. Coordinate dates of meetings with preparation of the payment request.
- B. Attendees: In addition to representatives of the Owner and Architect, each subcontractor, supplier or other entity concerned with current progress or involved in planning, coordination or performance of future activities shall be represented at these meetings by persons familiar with the Project and authorized to conclude matters relating to progress.
- C. Architect shall record and prepare notes for each progress meeting, identifying issues to be resolved. Notes will be distributed at the following meeting.
- D. Agenda: Review and correct or approve minutes of the previous progress meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to the current status of the Project.
 - 1. Contractor's Construction Schedule: Review progress since the last meeting. Determine where each activity is in relation to the Contractor's Construction Schedule, whether on time or ahead or behind schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.
 - 2. Review the present and future needs of each entity present, including such items as:
 - a. Interface requirements.
 - b. Time.
 - c. Sequences.
 - d. Deliveries.
 - e. Off-site fabrication problems.
 - f. Access.
 - g. Site utilization.
 - h. Temporary facilities and services.
 - i. Hours of Work.
 - j. Hazards and risks.
 - k. Housekeeping.
 - l. Quality and Work standards.
 - m. Change Orders.
 - n. Documentation of information for payment requests.
- E. Revise the construction schedule after each progress meeting where revisions to the schedule have been made or recognized. Issue the revised schedule concurrently with the report of each meeting.

END OF SECTION

SECTION 01300 - SUBMITTALS

1.1 SUMMARY

- A. This Section specifies administrative and procedural requirements for submittals required for performance of the Work, including;
 - 1. Contractor's construction schedule.
 - 3. Shop Drawings.
 - 4. Product Data.
 - 5. Samples.

- B. Administrative Submittals: Refer to other Division-1 Sections and other Contract Documents for requirements for administrative submittals. Such submittals include, but are not limited to:
 - 1. Permits.
 - 2. Applications for payment.
 - 3. Performance and payment bonds.
 - 4. Insurance certificates.
 - 5. List of Subcontractors.

- C. The Schedule of Values submittal is included in Section "Applications for Payment."

1.2 SUBMITTAL PROCEDURES

- A. Coordination: Coordinate preparation and processing of submittals with performance of construction activities. Transmit each submittal sufficiently in advance of performance of related construction activities to avoid delay.
 - 1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals and related activities that require sequential activity.
 - 2. Coordinate transmittal of different types of submittals for related elements of the Work so processing will not be delayed by the need to review submittals concurrently for coordination.
 - a. The Architect reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.
 - 3. Processing: Allow sufficient review time so that installation will not be delayed as a result of the time required to process submittals, including time for resubmittals.

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- a. Allow ten days for initial review. Allow additional time if processing must be delayed to permit coordination with subsequent submittals. The Architect will promptly advise the Contractor when a submittal being processed must be delayed for coordination.
 - b. If an intermediate submittal is necessary, process the same as the initial submittal.
 - c. Allow two weeks for reprocessing each submittal.
 - d. No extension of Contract Time will be authorized because of failure to transmit submittals to the Architect sufficiently in advance of the Work to permit processing.
- B. Submittal Preparation: Place a permanent label or title block on each submittal for identification. Indicate the name of the entity that prepared each submittal on the label or title block.
1. Provide a space approximately 4" x 5" on the label or beside the title block on Shop Drawings to record the Contractor's review and approval markings and the action taken.
 2. Include the following information on the label for processing and recording action taken.
 - a. Project name.
 - b. Date.
 - c. Name and address of Contractor.
 - d. Name and address of subcontractor.
 - e. Name and address of supplier.
 - f. Name of manufacturer.
- C. Submittal Transmittal: Package each submittal appropriately for transmittal and handling. Transmit each submittal from Contractor to Architect using a transmittal form. Submittals received from sources other than the Contractor will be returned without action.
1. On the transmittal Record relevant information and requests for data. On the form, or separate sheet, record deviations from Contract Document requirements, including minor variations and limitations. Include Contractor's certification that information complies with Contract Document requirements.

1.3 CONTRACTOR'S CONSTRUCTION SCHEDULE

- A. Bar-Chart Schedule: Prepare a fully developed, horizontal bar- chart type Contractor's construction schedule. Submit within 15 days of the date established for "Commencement of the Work".

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1. Provide a separate time bar for each significant construction activity. Provide a continuous vertical line to identify the first working day of each week. Use the same breakdown of units of the Work as indicated in the "Schedule of Values".
 2. Within each time bar indicate estimated completion percentage in 10 percent increments. As Work progresses, place a contrasting mark in each bar to indicate Actual Completion.
 3. Prepare the schedule on a sheet, or series of sheets, of stable transparency, or other reproducible media, of sufficient width to show data for the entire construction period.
 4. Secure time commitments for performing critical elements of the Work from parties involved. Coordinate each element on the schedule with other construction activities; include minor elements involved in the sequence of the Work. Show each activity in proper sequence. Indicate graphically sequences necessary for completion of related portions of the Work.
 5. Coordinate the Contractor's construction schedule with the schedule of values, list of subcontracts, submittal schedule, progress reports, payment requests and other schedules.
 6. Indicate completion in advance of the date established for Substantial Completion. Indicate Substantial Completion on the schedule to allow time for the Architect's procedures necessary for certification of Substantial Completion.
- B. Work Stages: Indicate important stages of construction for each major portion of the Work, including testing and installation.
- C. Area Separations: Provide a separate time bar to identify each major construction area for each major portion of the Work. Indicate where each element in an area must be sequenced or integrated with other activities.
- D. Distribution: Following response to the initial submittal, print and distribute copies to the Architect, Owner, subcontractors, and other parties required to comply with scheduled dates. Post copies in the Project meeting room and temporary field office.
1. When revisions are made, distribute to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in construction activities.
- E. On the Construction Schedule provide dates indicating the beginning and end of each phase of construction. Provide dates for tenant relocation.
- F. Schedule Updating: Revise the schedule after each meeting or activity, where revisions have been recognized or made. Issue the updated schedule concurrently with report of each meeting.

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1.6 SHOP DRAWINGS

- A. Submit newly prepared information, drawn to accurate scale. Highlight, encircle, or otherwise indicate deviations from the Contract Documents. Do not reproduce Contract Documents or copy standard information as the basis of Shop Drawings. Standard information prepared without specific reference to the Project is not considered Shop Drawings.

- B. Shop Drawings include fabrication and installation drawings, setting diagrams, schedules, patterns, templates and similar drawings. Include the following information:
 - 1. Dimensions.
 - 2. Identification of products and materials included.
 - 3. Compliance with specified standards.
 - 4. Notation of coordination requirements.
 - 5. Notation of dimensions established by field measurement.
 - 6. Sheet Size: Except for templates, patterns and similar full- size Drawings, submit Shop Drawings on sheets at least 8-1/2" x 11" but no larger than 24" x 36".
 - 7. Initial Submittal: Submit one correctable translucent reproducible print and one blue- or black-line print for the Architect's review; the reproducible print will be returned.
 - 8. Final Submittal: Submit 8 sets of drawings. 2 prints will be retained; the remainder will be returned.
 - a. One of the prints returned shall be marked-up and maintained as a "Record Document".
 - 9. Do not use Shop Drawings without an appropriate final stamp indicating action taken in connection with construction.

- C. Coordination drawings are a special type of Shop Drawing that show the relationship and integration of different construction elements that require careful coordination during fabrication or installation to fit in the space provided or function as intended.
 - 1. Preparation of coordination Drawings is specified in section "Project Coordination" and may include components previously shown in detail on Shop Drawings or Product Data.
 - 2. Submit coordination Drawings for integration of different construction elements. Show sequences and relationships of separate components to avoid conflicts in use of space.

1.7 PRODUCT DATA

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- A. Collect Product Data into a single submittal for each element of construction or system. Product Data includes printed information such as manufacturer's installation instructions, catalog cuts, standard color charts, roughing-in diagrams and templates, standard wiring diagrams and performance curves. Where Product Data must be specially prepared because standard printed data is not suitable for use, submit as "Shop Drawings."
 1. Mark each copy to show applicable choices and options. Where printed Product Data includes information on several products, some of which are not required, mark copies to indicate the applicable information. Include the following information:
 - a. Manufacturer's printed recommendations.
 - b. Compliance with recognized trade association standards.
 - c. Compliance with recognized testing agency standards.
 - d. Application of testing agency labels and seals.
 - e. Notation of dimensions verified by field measurement.
 - f. Notation of coordination requirements.
 2. Do not submit Product Data until compliance with requirements of the Contract Documents has been confirmed.
 3. Preliminary Submittal: Submit a preliminary single-copy of Product Data where selection of options is required.
 4. Submittals: Submit 6 copies of each required submittal; submit 2 copies where required for maintenance manuals. The Architect will retain one, and will return the others marked with action taken and corrections or modifications required.
 - a. Unless noncompliance with Contract Document provisions is observed, the submittal may serve as the final submittal.
 5. Distribution: Furnish copies of final submittal to installers, subcontractors, suppliers, manufacturers, fabricators, and others required for performance of construction activities. Show distribution on transmittal forms.
 - a. Do not proceed with installation until an applicable copy of Product Data applicable is in the installer's possession.
 - b. Do not permit use of unmarked copies of Product Data in connection with construction.

1.8 SAMPLES

- A. Submit full-size, fully fabricated Samples cured and finished as specified and physically identical with the material or product proposed. Samples include partial

sections of manufactured or fabricated components, cuts or containers of materials, color range sets, and swatches showing color, texture and pattern.

1. Mount, display, or package Samples in the manner specified to facilitate review of qualities indicated. Prepare Samples to match the Architect's Sample. Include the following:
 - a. Generic description of the Sample.
 - b. Sample source.
 - c. Product name or name of manufacturer.
 - d. Compliance with recognized standards.
 - e. Availability and delivery time.

2. Submit Samples for review of kind, color, pattern, and texture, for a final check of these characteristics with other elements, and for a comparison of these characteristics between the final submittal and the actual component as delivered and installed.
 - a. Where variation in color, pattern, texture or other characteristics are inherent in the material or product represented, submit multiple units (not less than 3), that show approximate limits of the variations.
 - b. Refer to other Specification Sections for requirements for Samples that illustrate workmanship, fabrication techniques, details of assembly, connections, operation and similar construction characteristics.
 - c. Refer to other Sections for Samples to be returned to the Contractor for incorporation in the Work. Such Samples must be undamaged at time of use. On the transmittal, indicate special requests regarding disposition of Sample submittals.

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3. Preliminary submittals: Where Samples are for selection of color, pattern, texture or similar characteristics from a range of standard choices, submit a full set of choices for the material or product.
 - a. Preliminary submittals will be reviewed and returned with the Architect's mark indicating selection and other action.
 4. Submittals: Except for Samples illustrating assembly details, workmanship, fabrication techniques, connections, operation and similar characteristics, submit 3 sets; one will be returned marked with the action taken.
 5. Maintain sets of Samples, as returned, at the Project site, for quality comparisons throughout the course of construction.
 - a. Unless noncompliance with Contract Document provisions is observed, the submittal may serve as the final submittal.
 - b. Sample sets may be used to obtain final acceptance of the construction associated with each set.
- B. Distribution of Samples: Prepare and distribute additional sets to subcontractors, manufacturers, fabricators, suppliers, installers, and others as required for performance of the Work. Show distribution on transmittal forms.
1. Field Samples specified in individual Sections are special types of Samples. Field Samples are full-size examples erected on site to illustrate finishes, coatings, or finish materials and to establish the standard by which the Work will be judged.
 - a. Comply with submittal requirements to the fullest extent possible. Process transmittal forms to provide a record of activity.

1.9 ARCHITECT'S ACTION

- A. Except for submittals for record, information or similar purposes, where action and return is required or requested, the Architect will review each submittal, mark to indicate action taken, and return promptly.
1. Compliance with specified characteristics is the Contractor's responsibility.
- B. Action Stamp: The Architect will stamp each submittal with a uniform, self-explanatory action stamp. The stamp will be appropriately marked, as follows, to indicate the action taken:
1. Final Unrestricted Release: Where submittals are marked "Approved," that part of the Work covered by the submittal may proceed provided it complies with requirements of the Contract Documents; final acceptance will depend upon that compliance.

2. Final-But-Restricted Release: When submittals are marked "Approved as Noted," that part of the Work covered by the submittal may proceed provided it complies with notations or corrections on the submittal and requirements of the Contract Documents; final acceptance will depend on that compliance.

3. Returned for Resubmittal: When submittal is marked "Not Approved, Revise and Resubmit," do not proceed with that part of the Work covered by the submittal, including purchasing, fabrication, delivery, or other activity. Revise or prepare a new submittal in accordance with the notations; resubmit without delay. Repeat if necessary to obtain a different action mark.
 - a. Do not permit submittals marked "Not Approved, Revise and Resubmit" to be used at the Project site, or elsewhere where Work is in progress.
4. Other Action: Where a submittal is primarily for information or record purposes, special processing or other activity, the submittal will be returned, marked "Action Not Required".

END OF SECTION

SECTION 01700 - PROJECT CLOSEOUT

1.1 SUMMARY

- A. This Section specifies administrative and procedural requirements for project closeout, including but not limited to:
 - 1. Inspection procedures.
 - 2. Project record document submittal.
 - 3. Operating and maintenance manual submittal.
 - 4. Submittal of warranties.
 - 5. Final cleaning.
- B. Closeout requirements for specific construction activities are included in the appropriate Sections in Divisions-2 through -16.

1.2 SUBSTANTIAL COMPLETION

- A. Preliminary Procedures: Before requesting inspection for certification of Substantial Completion, complete the following. List exceptions in the request.
 - 1. In the Application for Payment that coincides with, or first follows, the date Substantial Completion is claimed, show 100 percent completion for the portion of the Work claimed as substantially complete. Include supporting documentation for completion as indicated in these Contract Documents and a statement showing an accounting of changes to the Contract Sum.
 - a. If 100 percent completion cannot be shown, include a list of incomplete items, the value of incomplete construction, and reasons the Work is not complete.
 - 2. Advise Owner of pending insurance change-over requirements.
 - 3. Submit specific warranties, workmanship bonds, maintenance agreements, final certifications and similar documents.
 - 4. Obtain and submit releases enabling the Owner unrestricted use of the Work and access to services and utilities; include occupancy permits, operating certificates and similar releases.
 - 5. Submit record drawings, maintenance manuals, final project photographs, damage or settlement survey, property survey, and similar final record information.
 - 6. Deliver tools, spare parts, extra stock, and similar items.
 - 7. Complete final clean up requirements, including touch-up painting. Touch-up and otherwise repair and restore marred exposed finishes.

- B. Inspection Procedures: On receipt of a request for inspection, the Architect will either proceed with inspection or advise the Contractor of unfilled requirements. The Architect will prepare the Certificate of Substantial Completion following inspection, or advise the Contractor of construction that must be completed or corrected before the certificate will be issued.
 - 1. The Architect will repeat inspection when requested and assured that the Work has been substantially completed.
 - 2. Results of the completed inspection will form the basis of requirements for final acceptance.

1.3 FINAL ACCEPTANCE

- A. Preliminary Procedures: Before requesting final inspection for certification of final acceptance and final payment, complete the following. List exceptions in the request.
 - 1. Submit the final payment request with releases and supporting documentation not previously submitted and accepted. Include certificates of insurance for products and completed operations where required.
 - 2. Submit an updated final statement, accounting for final additional changes to the Contract Sum.
 - 3. Submit a certified copy of the Architect's final inspection list of items to be completed or corrected, stating that each item has been completed or otherwise resolved for acceptance, and the list has been endorsed and dated by the Architect.
 - 4. Submit final meter readings for utilities, a measured record of stored fuel, and similar data as of the date of Substantial Completion, or when the Owner took possession of and responsibility for corresponding elements of the Work.
 - 5. Submit consent of surety to final payment.
 - 6. Submit a final liquidated damages settlement statement.
 - 7. Submit evidence of final, continuing insurance coverage complying with insurance requirements.
- B. Reinspection Procedure: The Architect will reinspect the Work upon receipt of notice that the Work, including inspection list items from earlier inspections, has been completed, except items whose completion has been delayed because of circumstances acceptable to the Architect.
 - 1. Upon completion of reinspection, the Architect will prepare a certificate of final acceptance, or advise the Contractor of Work that is incomplete or of obligations that have not been fulfilled but are required for final acceptance.
 - 2. If necessary, reinspection will be repeated.

1.6 FINAL CLEANING

- A. General: General cleaning during construction is required by the General Conditions and included in Section "Temporary Facilities".
- B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to the condition expected in a normal, commercial building cleaning and maintenance program. Comply with manufacturer's instructions.
 - 1. Complete the following cleaning operations before requesting inspection for Certification of Substantial Completion.
 - a. Remove labels that are not permanent labels.
 - b. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compound and other substances that are noticeable vision-obscuring materials. Replace chipped or broken glass and other damaged transparent materials.
 - c. Clean exposed exterior and interior hard-surfaced finishes to a dust-free condition, free of stains, films and similar foreign substances. Restore reflective surfaces to their original reflective condition. Leave concrete floors broom clean. Vacuum carpeted surfaces.
 - d. Wipe surfaces of mechanical and electrical equipment. Remove excess lubrication and other substances. Clean plumbing fixtures to a sanitary condition. Clean light fixtures and lamps.
 - e. Clean the site, including landscape development areas, of rubbish, litter and other foreign substances. Sweep paved areas broom clean; remove stains, spills and other foreign deposits. Rake grounds that are neither paved nor planted, to a smooth even-textured surface.
- C. Removal of Protection: Remove temporary protection and facilities installed for protection of the Work during construction.
- D. Compliance: Comply with regulations of authorities having jurisdiction and safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on the Owner's property. Do not discharge volatile, harmful or dangerous materials into drainage systems. Remove waste materials from the site and dispose of in a lawful manner.
 - 1. Where extra materials of value remaining after completion of associated Work have become the Owner's property, arrange for disposition of these materials as directed.

END OF SECTION

SECTION 01740 - WARRANTIES AND BONDS

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section specifies general administrative and procedural requirements for warranties and bonds required by the Contract Documents, including manufacturers standard warranties on products and special warranties.
 - 1. Refer to the General Conditions for terms of the Contractor's special warranty of workmanship and materials.
 - 2. General closeout requirements are included in Section "Project Closeout."
 - 3. Specific requirements for warranties for the Work and products and installations that are specified to be warranted, are included in the individual Sections of Divisions-2 through -16.
 - 4. Certifications and other commitments and agreements for continuing services to Owner are specified elsewhere in the Contract Documents.

- B. Disclaimers and Limitations: Manufacturer's disclaimers and limitations on product warranties do not relieve the Contractor of the warranty on the Work that incorporates the products, nor does it relieve suppliers, manufacturers, and subcontractors required to countersign special warranties with the Contractor.

1.2 WARRANTY REQUIREMENTS

- A. Related Damages and Losses: When correcting warranted Work that has failed, remove and replace other Work that has been damaged as a result of such failure or that must be removed and replaced to provide access for correction of warranted Work.

- B. Reinstatement of Warranty: When Work covered by a warranty has failed and been corrected by replacement or rebuilding, reinstate the warranty by written endorsement. The reinstated warranty shall be equal to the original warranty with an equitable adjustment for depreciation.

- C. Replacement Cost: Upon determination that Work covered by a warranty has failed, replace or rebuild the Work to an acceptable condition complying with requirements of Contract Documents. The Contractor is responsible for the cost of replacing or rebuilding defective Work regardless of whether the Owner has benefited from use of the Work through a portion of its anticipated useful service life.

- D. Owner's Recourse: Written warranties made to the Owner are in addition to implied warranties, and shall not limit the duties, obligations, rights and remedies otherwise available under the law, nor shall warranty periods be interpreted as limitations on time in which the Owner can enforce such other duties, obligations, rights, or remedies.
 - 1. Rejection of Warranties: The Owner reserves the right to reject warranties and to limit selections to products with warranties not in conflict with requirements of the Contract Documents.
- E. The Owner reserves the right to refuse to accept Work for the Project where a special warranty, certification, or similar commitment is required on such Work or part of the Work, until evidence is presented that entities required to countersign such commitments are willing to do so.

1.3 SUBMITTALS

- A. Submit written warranties to the Architect prior to the date certified for Substantial Completion. If the Architect's Certificate of Substantial Completion designates a commencement date for warranties other than the date of Substantial Completion for the Work, or a designated portion of the Work, submit written warranties upon request of the Architect.
 - 1. When a designated portion of the Work is completed and occupied or used by the Owner, by separate agreement with the Contractor during the construction period, submit properly executed warranties to the Architect within fifteen days of completion of that designated portion of the Work.
- B. When a special warranty is required to be executed by the Contractor, or the Contractor and a subcontractor, supplier or manufacturer, prepare a written document that contains appropriate terms and identification, ready for execution by the required parties. Submit a draft to the Owner through the Architect for approval prior to final execution.
 - 1. Refer to individual Sections of Divisions-2 through -16 for specific content requirements, and particular requirements for submittal of special warranties.
- C. Form of Submittal: At Final Completion compile two copies of each required warranty and bond properly executed by the Contractor, or by the Contractor, subcontractor, supplier, or manufacturer. Organize the warranty documents into an orderly sequence based on the table of contents of the Project Manual.

- D. Bind warranties and bonds in heavy-duty, commercial quality, durable 3-ring vinyl covered loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2" by 11" paper.
1. Provide heavy paper dividers with celluloid covered tabs for each separate warranty. Mark the tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product, and the name, address and telephone number of the installer.
 2. Identify each binder on the front and the spine with the typed or printed title "WARRANTIES AND BONDS, the Project title or name, and the name of the Contractor.
 3. When operating and maintenance manuals are required for warranted construction, provide additional copies of each required warranty, as necessary, for inclusion in each required manual.

END OF SECTION

SECTION 02070 - SELECTIVE DEMOLITION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including Consolidated General Conditions, Supplemental Statutory Conditions, and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Provide all labor, materials and equipment necessary to perform all removal and salvage work of existing materials on the building as indicated in the Contract Documents. This work shall include but not be limited to the following: Remove all flat roofing, slate roofing aluminum siding , panning and trim, metal handrails, masonry as indicated, porch columns and trim and porch and ramp flooring.
- B. The Contractor shall prepare schedules for operating and sequence procedures, traffic control installations and shall provide temporary protective structures and barricades for the, removal and salvage for reuse work.

1.3 SUBMITTALS

- A. General: Submit the following in accordance with Conditions of Contract and Division 1 Specification Sections.
- B. Schedule indicating proposed sequence of operations for selective demolition work to Owner's Representative for review prior to start of work. Include coordination for shutoff, capping, and continuation of utility services as required, together with details for dust and noise control protection.
 - 1. Provide detailed sequence of demolition and removal work to ensure uninterrupted progress of Owner's on-site operations.
 - 2. Coordinate with Owner's continuing occupation of portions of existing building.

1.4 JOB CONDITIONS

- A. Condition of Structures: Owner assumes no responsibility for actual condition of items or structures to be demolished.
 - 1. Conditions existing at time of inspection for bidding purposes will be maintained by Owner insofar as practicable. However, minor variations within structure may occur by Owner's removal and salvage operations prior to start of

selective demolition work.

- B. Partial Demolition and Removal: Items indicated to be removed and salvageable or reused such as slate roofing, shall be carefully removed to avoid damage and stored on site as directed.
 - 1. Storage or sale of removed items on site will not be permitted.
- C. Protections: Provide temporary barricades and other forms of protection to protect Owner's personnel and general public from injury due to selective demolition work.
 - 1. Provide protective measures as required to provide free and safe passage of building occupants , staff and visitors to the building.
 - 2. Provide protective measures as required to provide safe access to and from all entrances to the building the building. Coordinate work with Owner.
 - 3. Provide interior and exterior shoring, bracing, or support to prevent movement, settlement, or collapse of structure or element to be demolished and adjacent facilities or work to remain.
 - 4. Remove protections at completion of work.
 - 5. Maintain required code egresses from building while porch work is ongoing.
- D. Damages: Promptly repair damages caused to adjacent facilities by demolition work.
- E. Traffic: Conduct selective demolition operations and debris removal to ensure minimum interference with adjacent occupied or used facilities.
 - 1. Do not close, block, or otherwise obstruct streets, walks, parking spaces, or other occupied or used facilities without permission from the owner.
- F. Flame Cutting: Do not use cutting torches for removal work on the building.
- G. Environmental Controls: Use temporary enclosures, and other methods to limit dust and dirt migration. Comply with governing regulations pertaining to environmental protection. Note: Exterior paint is assumed to contain lead and proper regulated procedures must be followed for removal of same..

PART 2 - PRODUCTS

2.1 MATERIALS

- A. The patching, repairing, removing and relocation of existing items, and all new materials required for the renovation work shall conform to the requirements of similar materials and workmanship specified under the respective Sections of the Specifications

- B. The renovation of existing mechanical and electrical work and removal items shall be performed in a planned sequence as approved by the Architect. Refer to the Mechanical and Electrical Divisions of the Specifications.

PART 3 - EXECUTION

3.1 PREPARATION

- A. General: Provide interior and exterior shoring, bracing, or support to prevent movement, settlement, or collapse of areas to be demolished and adjacent facilities to remain.
 - 1. Cease operations and notify Owner's Representative immediately if safety of structure appears to be endangered. Take precautions to support structure until determination is made for continuing operations.
 - 2. Cover and protect equipment and fixtures from soilage or damage when demolition work is performed in areas where such items have not been removed.
 - 3. Erect and maintain dust-proof partitions and closures as required to prevent spread of dust or fumes to occupied portions of the building.
 - 4. Locate, identify, stub off, and disconnect utility services that are not indicated to remain.

3.2 DEMOLITION

- A. General: Perform selective demolition work in a systematic manner. Use such methods as required to complete work indicated on Drawings in accordance with demolition schedule and governing regulations.
 - 1. Provide services for effective air pollution controls as required by local authorities having jurisdiction.
- B. All materials indicated on the Drawings to be removed shall be taken down in a workmanlike manner so as not to damage the existing materials noted to remain.

3.3 DISPOSAL OF DEMOLISHED MATERIALS

- A. Remove from building site debris, rubbish, and other materials resulting from demolition operations. Transport and legally dispose off site.
 - 1. If hazardous materials are encountered during demolition operations, comply with applicable regulations, laws, and ordinances concerning removal, handling, and protection against exposure or environmental pollution.

3.5 GENERAL INTENT

- A. It is not the intent herein to describe all the items and work to be removed required under this Section. The Contractor shall assure himself that all of the work to be removed, not otherwise specified herein or shown on the Drawings, shall be removed under this Section at no additional cost to the Owner.

3.6 CLEANUP AND REPAIR

- A. Keep work area free from accumulated debris by frequently removing material and debris.
- B. General: Upon completion of demolition work, remove tools, equipment, and demolished materials from site. Remove protections and leave interior areas broom clean.
 - 1. Repair demolition performed in excess of that required. Return elements of construction and surfaces to remain to condition existing prior to start operations. Repair adjacent construction or surfaces soiled or damaged by selective demolition work.

END OF SECTION

Section 06100
ROUGH CARPENTRY

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Furnish and install the following:
 - 1. Wood framing at areas of repaired construction and at front and side porches and to supplement existing framing.
 - 2. Wood blocking, rough framing and other items as required.
 - 3. Blocking-in openings in roof sheathing, and overhangs.
 - 4. Various wood blockings, edgings, nailers, curbs, cants, grounds, furring, sheathing, framing members including wood preservative, as required for receipt of various finishes and surfacing materials, required to complete the work and not described herein above.
 - 5. Rough installation hardware, including bolts, screws, spikes, nails, clips, and connection assemblies, as needed for installation of the rough carpentry work.

- B. Install the following furnished under the designated Sections:
 - 1. Roofing furnished under Section, 07317, 07517, and 07600

- C. Coordinate work of this Section with the work of the various trades responsible for applying finish materials and other items to rough carpentry work. Furnish and install furring, blocking, and shims, and other usual items of normal rough carpentry work as required by the various trades for the proper completion of the project.
 - 1. The applicable requirements specified in Part 1 - GENERAL and Part 3 - EXECUTION of the individual specification sections furnishing materials to be installed under this Section, shall be included in and made a part of this Section.

- D. No attempt is made in this Section to list all elements of rough carpentry required on this project or to describe how each element will be installed. It is the responsibility of the Contractor to determine for itself the scope and nature of the work required for a complete installation from the information provided herein and in the Drawings.

E.

1.2 RELATED SECTIONS

- A. Section 06200 - FINISH CARPENTRY
- B. Section 07317 – SLATE ROOFING
- C. Section 07534 - EPDM ROOFING
- D. Section 07600 - SHEET METAL FLASHING AND TRIM:
- E. Section 09910 - PAINTS: Section 10810 - TOILET ACCESSORIES: Providing anchorage devices and mounting templates for toilet accessories.

1.3 REFERENCES

- A. Comply with applicable requirements of the following standards and those others referenced in this Section, under the provisions of Section 01420 - REFERENCES. Where these standards conflict with other specified requirements, the most restrictive requirements shall govern.
 - 1. EWA - applicable grades and specifications.
 - 2. EWA PRB-108 Performance Standards and Policies for Structural-Use Panels..
 - 3. ASTM D 3201 - Test Method for Hygroscopic Properties of Fire-Retardant Wood.
 - 4. AWPA Standards and references for preservative treated wood including Standards C1, C9, C15, and P5
 - 5. AWPA Standard C-20 - Structural Lumber Fire Retardant Treatment by Pressure Processes.
 - 6. AWPA C-27 - Plywood, Fire Retardant Treatment by Pressure Processes.
 - 7. AWPA M4 – Care Of Preservative Treated Wood Products.
 - 8. MIL L-1914OE - Lumber and Plywood, Fire Retardant Treated.
 - 9. SDI 122 - Installation and Troubleshooting Guide for Standard Steel Doors and Frames.
 - 10. SPIB Grading Rules, current edition.
 - 11. UL - Building Materials Directory
 - 12. US. Department of Commerce Voluntary Product Standard PS1 for Construction and Industrial

13. US. Department of Commerce Voluntary Product Standard PS2 for Wood-Based Structural-Use Panels.
14. US. Department of Commerce Voluntary Product Standard PS-20 - American Softwood Lumber Standard.
15. U.S. Department of Commerce Simplified Practice Recommendation R16, for sizes and use classifications of lumber
16. American Lumber Standards Committee, National Lumber Grades Authority for Canadian Lumber, and applicable grading rules and standards of the various lumber associations whose species are being used for grades specified.

1.4 SUBMITTALS

- A. Submit the following under provisions of Section 01330 - SUBMITTAL PROCEDURES:

NA.

1.5 QUALITY ASSURANCE

- A. All lumber shall:
1. Be new, dressed four sides (S4S), clear and free from warping and other defects.
 2. Have a moisture content not exceeding 19 percent when delivered to the project.
 3. Be in accordance with the grading rules of the lumber manufacturer's association under whose jurisdiction the lumber is produced and bear the mark of grade and mill identification.
- B. Plywood: Conform to the requirements of Product Standard PS-1, and bear applicable EWA grade trademarks.

1.6 DELIVERY, STORAGE AND HANDLING

- A. Store all materials in an elevated dry location, protected by waterproof coverings.

1.7 SEQUENCING AND SCHEDULING

- A. Coordinate work of this Section with the work of the various trades responsible for applying finish materials and other items to rough carpentry work, and ensure that the work performed hereunder is acceptable to such trades for the installation of their work.

PART 2 - PRODUCTS

2.2 BOARD AND SHEET MATERIALS

- A. Framing Lumber for studs, beams, joists, rafters, and headers: No. 2 Spruce/Pine/Fir (SPF), or No. 2 Southern Pine, Grade-stamped S-Dry or other surface dried wood species, Number 2 grade or better having a minimum bending stress Fb of 775 PSI (890 PSI repetitive) and modulus of elasticity E not less than 1100 KSI.
- B. Lumber for blocking, nailers and curbs as indicated or required: HemFir, Douglas Fir, Eastern Spruce, Eastern Hemlock, or Southern Pine, surfaced dried stud or utility grade. Wood members shall be of sizes indicated on the Drawings or of the same size as the members being braced.
- C. Timber:
 - 1. Exposed wood members 4 inches and thinner shall be Southern Yellow Pine #1 grade material.
 - 2. Exposed wood members 5 inches and greater shall be Southern Yellow Pine #2 DENSE SR grade material
- D. Furring: Nominal 1 by 3 inches or 1 by 4 inches Douglas Fir, Eastern Spruce, Eastern Hemlock, or Southern Pine, surfaced dried construction grade.
- E. Plywood and sheet products:
 - 1. For roof sheathing: EWA RATED SHEATHING, STRUCTURAL 1, exposure durability classified, EXPOSURE 1, 3/4 inch (19.1 mm) thick having a minimum span rating 48/24, touch-sanded.
 - a. At conditions where sheathing is continuation of existing, provide laminated thickness required to match existing sheathing.
 - 2. For unspecified interior concealed from view locations: EWA graded CD PLUGGED INT, Group 2 species, thickness as indicated on the Drawings.
- F. Cinch plates shall have a corrosion resistant coating of 1.25 oz. pot yield Commercial Class Hot Dipped Galvanized for equivalent corrosion protection.

2.3 WOOD TREATMENTS

- A. Treated wood products shall be produced by a single treatment plant, fully licensed by the chemical manufacturers, and conforming to the requirements specified herein.

1. Dye wood or otherwise color code all treated wood at treatment plant to clearly distinguish the different treatments in the field.
 2. Kiln dry all treated lumber and plywood to the following maximum moisture content after treatment.
 - a. Lumber: 19 percent.
 - b. Plywood 15 percent.
 - c. Discard pieces with defects which might impair quality of work.
 3. Quality marks: Each piece of lumber and plywood shall be permanently affixed with a quality mark, containing the following information:
 - a. Identification of the inspection agency.
 - b. Standard to which material was treated.
 - c. Identification of the treating plant.
- B. Pressure preservative treated wood. Designated as "PT"
1. Chemical Manufacturer: Subject to compliance with the requirements specified herein, Licensed products which may be incorporated in the work include:
 - a. Chemical Specialties, Inc., product "SupraTimber".
 - b. Hickson Corporation, product, "Wolmanized Pressure Treated Wood".
 - c. Hoover Treated Wood Products, Inc., product "CCA Outside Wood".
 2. Treatment: Chromated Copper Arsenate (CCA) Type C in accordance with AWWA Standard P5, free of sodium and sulphates. Registered by the United States Environmental Protection Agency as a pesticide containing inorganic arsenic.
 3. Minimum preservative retention:
 - a. All pressure preservative treated lumber and plywood must have an ALSC-recognized agency Quality Mark signifying a chemical retention level of 0.25 pounds per cubic foot of oxide chemical, rated for "Above Ground Use".

2.4 ACCESSORIES

- A. Adhesive for lamination and fabrication of wood and plywood items: Exterior grade, phenolic resin glue.
- B. Adhesive for subfloors and underlayment: High strength, waterproof and non-freezing adhesive complying with AFG-01 "Frozen Lumber Test" and ASTM 3498, equal to W.W. Henry Company, Huntington Park, CA., product "217 - Subfloor & Construction Adhesive".

- C. Nails (interior and exterior): Galvanized common nails, of size and type to suit application and as required by state and local building codes.
- D. Screws:
 - 1. Screws for interior applications: Flat head electroplated-galvanized wood screws of the appropriate sizes.
 - 2. Screws for exterior applications: Flat head hard aluminum, or stainless steel, wood screws, of the appropriate sizes.
- E. Anchor bolts, expansion bolts and lag screws: Hot-dipped galvanized steel, of the following types:
 - 1. For lumber having actual thickness of 1 1/2 inches or greater to masonry and concrete: Anchor bolts or expansion bolts, as most applicable for the specific receiving surface material, 3/8inch minimum diameter, spaced as shown on drawings, and staggered as far as practicable. Countersink all bolt heads, and provide head washers of matching material.
 - 2. For lumber having actual thickness of greater than 7/8inch but less than 1 1/2 inches to masonry and concrete: Anchor bolts or expansion bolts, as most applicable for the specific receiving surface material, at least 1/4inch diameter of the most appropriate lengths for the specific application, spaced as shown, and staggered as far as practicable. Countersink all bolt heads, and provide head washers of matching material.
 - 3. For lumber having actual thickness of 7/8-inch and less: Anchor bolts or expansion bolts, at least 1/4-inch in diameter; or screws, of the most appropriate sizes; in lengths most suitable for the specific application, countersunk, spaced, and staggered.
- F. Protection paper: Canadian red-rosen paper or kraft paper.
- G. Air infiltration barrier: Vapor permeable, water-resistant, spun bonded polyethylene fabric, 6 mils thick
 - 1. Dupont product "Tyvek Housewrap".
 - 2. Owens-Corning Fiberglas Corp., Toledo OH., product "PinkWrap".
 - 3. Reemay, Inc., product "Typar Housewrap".
- H. Building paper: ASTM D 226, Non-perforated, No. 15 asphalt-saturated building felt.

PART 3 - EXECUTION

3.1 PREPARATION

- A. All materials shall be inspected before use, with all checked, split and otherwise deficient stock rejected, or used only for miscellaneous blocking, furring or other incidental use. The Contractor shall be responsible for replacing all lumber which, due to warpage, twist, splitting, or checking, results in unsatisfactory work. Such replacement shall be required at any time, whether before or after application of finish material under other Sections.
- B. Verify exact locations of toilet accessories, door stops and similar items with Architect prior to installation of blocking for accessories.

3.2 INSTALLATION - GENERAL

- A. Closely coordinate the installation of the rough carpentry work with the work of other trades responsible for the installation of interfacing or overlaying materials, so as not to delay the work of the related trades.
- B. Erect all rough carpentry work plumb, level, and true with tight, close fitting joints, securely attached and braced to surrounding construction, all in a first class workmanlike manner. Counterbore for bolt heads, nuts, and washers where required to avoid interference with other materials. Bear complete responsibility for structural integrity, connections, and anchorage of all rough carpentry work.
- C. Make provisions for erection loads, and for sufficient temporary bracing to maintain structure safe, plumb, and in true alignment until completion of erection and installation of permanent bracing.
- D. Use as long lengths as practicable for wood nailers, blockings, and curbs, to minimize number of joints, and attach the members with the types, and spacing, of fasteners specified herein.
- E. Install blocking, grounds and furring, as required for proper attachment of the work of other trades, in accordance with the requirements provided by the respective related trades.
 - 1. Spacing for furring and strapping shall not exceed 16 inches on center.
- F. Field cuts of inorganic arsenical pressure-treated lumber: Apply solution of copper naphthenate containing a minimum of 2 percent metallic copper in solution, in accordance with AWWA standard M4. Brush liberally all cuts and holes.

- G. Install concealed from view plywood with specified fasteners spaced not more than 10 inches on centers.

3.3 FRAMING

- A. Make provisions for erection loads, and for sufficient temporary bracing to maintain structure safe, plumb, and in true alignment until completion of erection and installation of permanent bracing.
- B. Place horizontal members flat, crown side up.
- C. Construct framing and curb members full length without splices.
- D. Double members at openings over 24 inches wide. Space jack studs over and under opening to stud spacing.
- E. Construct double joint headers at floor and ceiling openings and under wall stud partitions that are parallel to floor joints.

3.4 INSTALLATION - ROOF NAILERS, BLOCKING, 7 MISC. FRAMING

- A. General: Provide anchorage for nailers as required for roof and edging to obtain FM Class A/I90 rating, coordinate requirements with Section 07534 - EPDM ROOFING.
 - 1. Secure nailers and blocking to metal deck with electro-galvanized screws at not greater than 12 inch on center spacing, extending a minimum of 3/4-inch below deck.
 - 2. Secure nailers and blocking to wood substrates with electro-galvanized screws at not greater than 12 inch on center spacing, extending a minimum of 1-1/2 inch into board substrates and 3/4 inches into sheet materials.
- B. When building up layers of nailers and blocking, fully secure each layer to at least the one below, alternating location of fasteners, spacing at 12 inches on center. Provide fasteners in lengths to penetrate through more than one substrate layer of blocking. Stagger locations of butt ends of boards, such that no two joints are "lined up".
- C. Ensure finished height of nailers is same as top surface of roof insulation within 1/4-inch, plus or minus.
 - 1. 2 by 4's. Provide a nominal space of 3-1/2 inches behind panels to permit

3.5 TOLERANCES

- A. Framing members: Maximum deviation more than 1/4 inch in 10 feet from true or plumb position.

- B. Door frames: Maximum diagonal distortion 1/16 inch measured with straight edge, corner to corner.

End of Section

Section 06200
FINISH CARPENTRY

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Furnish and install:
 - 1. Exterior trim, including wood trim, casings and stools.
 - 2. Wood handrails, balustrades and newels, brackets, columns and bases, as indicated.
- B. Backprime exterior wood trim, and all wood which comes in contact with cementitious and masonry materials.
- C. Epoxy wood filler fill for rotten wood at window sills and misc. areas.
- D. No attempt is made in this Section to list all elements of finish carpentry required on this project or to describe how each element will be installed. It is the responsibility of the Contractor to determine for itself the scope and nature of the work required for a complete installation from the information provided herein and in the Drawings.

1.2 RELATED SECTIONS

- A. Section 06100 - ROUGH CARPENTRY: Wood blocking, framing, curbs, nailers, and backer boards.
- B. Section 07900 - JOINT SEALERS: Sealant and backing materials, for joints between casework, countertops and abutting surfaces.
- C. Section 09900 - PAINTS: Field applied primer (excluding backpriming) and finish coatings.

1.3 REFERENCES

- A. Comply with applicable requirements of the following standards and those others referenced in this Section, under the provisions of Section 01420 - REFERENCES. Where these standards conflict with other specified requirements, the most restrictive requirements shall govern.
 - 1. AWI Quality Standards, Seventh edition, for the following sections.
 - a. AWI Section 100: Lumber.
 - b. AWI Section 200: Panel Products.
 - c. AWI Section 300: Standing and Running Trim (Interior and Exterior).

- d. AWI Section 600: Closet and Storage Shelving.
- e. AWI Section 900: Door Frames – Exterior.
- f. AWI Section 1000: Exterior Windows.
- g. AWI Section 1700: Installation.
2. EWA - applicable grades and specifications.
3. FS MM-L-736 - Lumber; Hardwood
4. PS-1 - Construction and Industrial Plywood.
5. PS-20 - American Softwood Lumber Standard.
6. SDI 122 - Installation and Troubleshooting Guide for Standard Steel Doors and Frames.
7. SPIB Grading Rules, current edition.
8. U.S. Department of Commerce Simplified Practice Recommendation R16, for sizes and use classifications of lumber
9. American Lumber Standards Committee, National Lumber Grades Authority for Canadian Lumber, and applicable grading rules and standards of the various lumber associations whose species are being used for grades specified.

1.4 SUBMITTALS

- A. Submit the following under provisions of Section 01330 - SUBMITTAL PROCEDURES:
 1. Literature: Manufacturer's product data sheets, specifications, performance data, installation instructions for hardware, adhesives and accessories furnished hereunder.
 2. Shop drawings:
 - a. Large scale design details, minimum 1-1/2 inch to one foot scale, showing profiles, jointing and fastening methods; and complete installation details.
 - b. Provide full scale drawings of wood trim elements showing all profiles and dimensions.
 - c. Provide shop drawings bearing dimensions of actual measurements taken at the project.
 3. Samples: Provide samples as requested by Architect for selection of colors and finishes.

1.5 QUALITY ASSURANCE

- A. Install work in accordance with the latest specified AWI quality standards, except that standing and running trim joints shall be field mitered and fitted.

- B. Discard lengths of material which are unsound, warped, bowed, twisted, improperly treated, not adequately seasoned or too small to fabricate work with minimum of joints or optimum jointing arrangements, or which are of defective manufacture with respect to surfaces, sizes or patterns.

1.6 DELIVERY STORAGE AND HANDLING

- A. Do not deliver interior finish carpentry materials to the project until all concrete, masonry, plaster, and other wet work has been completed and dry.
- B. Ship and handle all materials and fabricated items in a manner which will prevent damage thereto, and store all materials and fabricated items at a dry, elevated, ventilated, and protected interior location maintaining 60 degrees Fahrenheit and a maximum relative humidity of 55 percent.

1.7 SEQUENCING AND SCHEDULING

- A. Coordinate the work of this Section with the respective trades responsible for installing interfacing work, and ensure that the work performed hereunder is acceptable to such trades for the installation of their work.

PART 2 – PRODUCTS

2.2 WOOD MATERIALS, GENERAL

- A. Quality Standards: All materials and workmanship scheduled to receive transparent finishes shall meet AWI Premium grade quality standards. All other materials and workmanship shall meet AWI Custom grade quality standards.
- B. Moisture content:
 - 1. Wood for interior use shall have a moisture content between 5 and 10 percent, when delivered to the project.
 - 2. Wood for exterior use shall have a moisture content between 9 to 15 percent, when delivered to the project.
- C. Filler:
 - 1. Provide epoxy wood repair for sills and trim that are rotten or broken. Pieces containing more than 20 percent area needing repair should be replaced with new wood.

2.3 BOARD AND PANEL MATERIALS

- A. Interior woodwork furnished under this Section to receive paint (opaque finish): Clear straight-grained Poplar, Sugar Pine, Ponderosa Pine, or Idaho

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12:00 AM
or 508-840-3106

- White Pine, CSelect or better matching profiles indicated on the Drawings as approved by the Architect.
- B. Interior molded trim and woodwork furnished under this Section, scheduled to receive transparent finish: Red Oak, AWI Grade 1, matching profiles indicated on the Drawings as approved by the Architect.
 - C. Exterior finish lumber: Pine graded B & better per WWPA grading rules, except where otherwise indicated on the Drawings or herein.
 - D. Wood thresholds: Solid red oak, plain sawn.
 - E. Plywood and panel products:
 - 1. Shelving to receive paint: 3/4 inch thick Birch veneer plywood (AA) with 3/8 inch hardwood edge banding at all edges.
 - F. Provide other finish carpentry products, not specifically described, but required for a complete and proper installation, as selected by the Contractor subject to the approval of the Architect.
 - 1. Latex Wood Primer", N°. B42W41

2.4 FABRICATION - WOOD HANDRAILS

- A. Fabricate as detailed on the drawings. Construct end returns and all joint conditions where railing changes direction, with mitered corners, pressure glued with concealed splines or dowelled. Ease all edges.

PART 3 - EXECUTION

3.2 EXAMINATION

- A. Verify adequacy of blocking, backing and support framing for all finish carpentry work.
- B. Beginning of installation means acceptance of site conditions.

3.3 PREPARATION

- A. Back prime with specified primer all exterior wood trim prior to installation.
- B. Prime all wood surfaces of items or assemblies to be in contact with cementitious and masonry materials, prior to installation.

3.4 INSTALLATION - GENERAL

- A. Dress and sand woodwork until free from machine and tool marks, abrasions, raised grain, or other defects that will show through the finish on surfaces exposed to view. Wherever possible, carry out sanding on a shop

- belt sander, not in the field. Sandpaper field joints and leave in perfect condition for finishing.
- B. Make all joints tight, and form to conceal shrinkage. Glue all miters having a dimension of 4 inches or more from heel to point. Joints shall be glued tight and so formed as to conceal shrinkage. Cope trim at returns and miter at corners to produce tight-fitting joints with full surface contact throughout length of joint.
 - C. Make a minimum of splices and joints in running trim, and where such splices and joints occur, fasten securely, with all exposed surfaces having smooth, continuous planes. Stagger joints in adjacent or relate members. Use scarf joints for end-to-end joints.
 - D. Scribe and cut work to fit adjoining work closely. Refinish cut surfaces in prefinished items.
 - E. All nails in interior finished work shall be blind nailed wherever possible. Nail trim with finish nails only, set using appropriate nailpunch and fill with matching wood filler. Sand smooth wood filler. Do not fasten trim with screws or bolts unless otherwise directed, or is to be subsequently covered with smaller trim.
 - F. Woodwork shall be properly framed, closely fitted and accurately set to the required lines and levels and shall be rigidly secured in place. Shim as required using concealed shims to achieve specified tolerances.
 - G. Cover exposed edges of plywood shelving with 3/8 inch hardwood edging. Width of edging to match thickness of shelving.

3.5 INSTALLATION - WOOD HANDRAILS

- A. Secure brackets to wall with flat head countersunk toggle or molly bolts secured into continuous steel plate concealed in wall construction, with heads matching finish of bracket .
 - 1. Provide brackets for 2'-6" centers with minimum 2 brackets for any single length of run.
- B. Maximum variation for wood work from true position of 1/8 inch in 8 feet for plumb and level and with a maximum of 1/16 inch offsets in adjoining surfaces intended to be flush.
- C. Maximum variation for doors and frames: Maximum diagonal distortion 1/16 inch measured with straight edge, corner to corner.

3.6 CLEANING

- A. Daily clean work areas by sweeping and disposing of scraps and sawdust.
- B. Upon completion of the work of this Section in any given area, remove tools, equipment and all rubbish and debris from the work area; leave area in broom-clean condition.
- C. Remove protective material from pre-finished surfaces.

3.7 PROTECTION

- A. During the operation of finish carpentry, protect the work of other trades against undue soilage and damage by the exercise of reasonable care and precautions. Repair or replace any work so damaged and soiled.

End of Section

Arlington, Massachusetts

Section 07534

ETHYLENE PROPYLENE DIENE MONOMER (EPDM) ROOFING

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Furnish and install the following:
 - 1. EPDM roofing as indicated on the drawings.
- B. Provide existing roof manufacturer's final inspection for re-certification of roof to maintain the existing warranty intact and in full force shall be included in the base bid; additional inspections, or work incurred as a result of the final inspection shall be without additional cost to the Owner.

1.2 RELATED SECTIONS

- A. Section 06100 - ROUGH CARPENTRY: Pressure treated blocking, curbing and nailers.
- B. Section 07620 - SHEET METAL FLASHING AND TRIM: Metal flashing.
- C. Section 07900 - JOINT SEALERS: Sealants other than those specified in this Section 07534.

1.3 REFERENCES

- A. Comply with applicable requirements of the following standards and those others referenced in this Section, under the provisions of Section 01420 - REFERENCES. Where these standards conflict with other specified requirements, the most restrictive requirements shall govern.
 - 1. FM Roof Assembly Classifications and Loss Prevention requirements I-28 and I-29S
 - 2. UL Fire Resistance Directory.
 - 3. All applicable federal, state and municipal codes, laws and regulations for fire-resistance roof ratings.
- B. The following reference materials are hereby made a part of this Section by reference thereto:
 - 1. NRCA Roofing and Waterproofing Manual, latest printing.

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1.4 SUBMITTALS

- A. Submit the following under provisions of Section 01330 - SUBMITTAL PROCEDURES:
1. Literature: Manufacturer's product data sheets, specifications, performance data, physical properties and installation instructions for each item furnished hereunder.
 2. Manufacturer's specimen warranties: Provide sample copies of manufacturers' actual warranties for all materials to be furnished under this Section, clearly defining all terms, conditions, and time periods for the coverage thereof.
 3. Review statement: Written statement, signed by the roofing applicator, stating that the Contract Drawings have been reviewed by an agent of the roofing system manufacturer; accompanied by a pre-installation written statement from the manufacturer that the modifications to the roof system are proper, compatible, and adequate for the application shown.
 - a. The roofing applicator will notify the Architect and Owner in writing if the existing conditions when exposed are in conflict with the Contract Documents or the warranty requirements.
 4. Project roofing superintendent's resume and project experience list for similar installations.
 5. Shop drawings:
 - a. Large scale design details, minimum of 1-1/2 inch per foot scale, showing penetrations. Details shall show dimensions of actual measurements taken at the project and reflect actual conditions; manufacturer's standard preprinted details will not be accepted as substitute for shop drawings.
 6. Verification samples :
 - a. Provide 8-1/2 by 11 inch samples of membrane flashing materials.
 - b. Provide 12 inch long samples of each metal flashing type.
 - c. Furnish additional samples are requested by the Architect.
- B. Submit the following under provisions of Section 01780 - CLOSEOUT SUBMITTALS:
1. Manufacturer's field quality control reports of field inspections, including, revised "as-built" shop drawings and manufacturer's final punch list.

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2. Manufacturer's warranties: Re-certify coverage of existing materials and installation provide coverage for all new work as applicable..

1.5 QUALIFICATIONS

- A. Roofing manufacturer, with a minimum of 10 years documented experience demonstrating previously successful work of the type specified herein.
- B. Roofing applicator, with a minimum of 5 years documented experience demonstrating previously successful work of the type specified herein, and approved by product manufacturer.
- C. Roofing applicator's foreman with a minimum of 5 years documented experience of the type specified herein, and trained by product manufacturer.

1.6 QUALITY ASSURANCE

- A. The manufacturer's authorized representative shall provide a final inspection at the completion of the project to insure, that the project has been completed in accordance with the manufacturer's requirements. Upon approval and acceptance of the project, then a manufacturer's warranty re-certification/certification shall be written, executed and furnished to the Owner.
- B. Submit Manufacturer's field quality control reports of field inspections, including, revised "as-built" shop drawings and manufacturer's final punch list.
- C. All roofing shall be as described in this Section and shall be provided and approved by the roof system manufacturer. Any materials not manufacturer or provided by manufacturer shall have written approval from the manufacturer stating the materials are acceptable and are compatible with the other materials and systems required.
- D. UL listing: Provide labeled materials which have been tested and listed by UL in "Building Materials Directory" for application indicated, with "Class A" rated materials/system for roof slopes shown.
- E. Fire performance characteristics: Provide insulation materials which are identical to those whose fire performance characteristics, as listed for each material or assembly of which insulation is a part, have been determined by testing, per methods indicated below, by UL or other testing and inspecting agency acceptable to authorities having jurisdiction:

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- F. The roof system manufacturer's Technical Specifications shall be considered a part of this specification and should be used as a reference for specific application procedures and recommendations. Where a conflict does exist between the manufacturer's written specifications and those procedures specified in this Section, the more stringent requirements meeting the Manufacturer's minimum requirements for the provided warranty shall apply.
 - 1. Roofing Filed-Sub-contractor shall provide at no additional cost to this contract, all additional labor and materials to conform to manufacturer's required installation procedures which are necessary to provide a total roofing system which is in full compliance with manufacturer's warranty requirements, including additional materials, installation procedures, manufacturer's inspections, sample testing and other requirements.

1.7 REGULATORY REQUIREMENTS

- A. Modifications to roofing system shall meet Underwriters Laboratories, Inc. Fire Hazard Classification "Class A" roof.
- B. Refer to applicable building codes for roofing system installation requirements and limitations. When a conflict exists, the more restrictive document will govern.

1.8 PRE-INSTALLATION CONFERENCE

- A. At least two weeks prior to commencing the work of this Section, conduct a pre-installation conference at the Project site. Coordinate time of meeting to occur prior to installation of work under the related sections named below.
 - 1. Required attendees: Owner, Architect, Contractor, Roofing Applicator's Project Superintendent, roof manufacturer's technical representative and representatives of other related trades as directed by the Architect or Contractor, and representatives for installers of related work specified under the following Sections:
 - a. Section 06100 – Rough Carpentry
 - b. .
 - 2. Agenda:
 - a. Scheduling of roofing operations.
 - b. Review of staging and material storage locations.
 - c. Coordination of work by other trades.

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- d. Protection of existing roofing.
- e. Establish weather and working temperature conditions to which Architect and Contractor must agree.
- f. Emergency rain protection procedure.
- g. Discuss process for manufacturer's inspection and acceptance of completed roofing and flashings.

1.9 DELIVERY, STORAGE AND HANDLING

- A. Deliver materials in manufacturer's original, unopened containers or packages with labels and package seals intact and legible.
- B. Store all materials in accordance with the manufacturer's recommendations. Store rolled goods on clean, raised platforms. Store other materials in dry areas, protected from water and direct sunlight.
- C. Do not expose stored curable roofing materials and accessories, including uncured flashing, adhesives, sealant and pourable sealer, to a constant temperature in excess of 80 degrees Fahrenheit.
- D. Provide continuous protection of stored materials against deterioration for duration of project.
- E. Distribute any materials stored on roof levels for immediate use to prevent concentrated loads that would impose excessive strain on deck or structural members. Protect roof stored materials to prevent displacement by the wind and protect from exposure to inclement weather and sun.
- F. Damaged material: Remove any damaged or contaminated materials from job site immediately, including materials in broken packages, or show other evidence of damage, unless Architect specifically authorizes correction thereof and usage on project.

1.10 ENVIRONMENTAL REQUIREMENTS

- A. Modify roofing in dry weather; do not perform work in inclement weather or when precipitation is predicted with greater than 20 percent possibility.
- B. Apply roofing when ambient temperature is above 40 degrees Fahrenheit.

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1.11 SEQUENCING AND SCHEDULING

- A. Coordinate the work of this Section with the respective trades responsible for installing interfacing work, and ensure that the work performed hereunder is acceptable to such trades for the installation of their work.
- B. Notify manufacturer's representative 48 hours in advance for deck acceptance. Plan the lay-up roofing membrane with respect to deck slope. Avoid situations where excessive drainage could pass into completed roofing.
- C. The Roofing applicator shall maintain communication with roofing manufacturer's representative to inform of progress and to schedule period sample testing.

1.12 WARRANTY

- A. Deliver to the Owner upon completion of the work of this Section, an unconditional warranty, on the work of this Section and the existing roof to remain agreeing to promptly repair the roofing as necessary to prevent penetration of water through it.
 - 1. Warranty shall cover product quality, performance, and workmanship for a period of 15 years.
 - 2. Warranty shall cover total roofing system including membrane, insulation, adhesives, sealant, fasteners, membrane flashings, and other materials furnished and installed under this Section.
 - 3. Warranty shall provide coverage for uplift created by maximum wind speed of 72 miles per hour (measured 10 meters above grade).
 - 4. Warranty shall provide coverage for maximum peak gust wind speed of 72 miles per hour.

PART 2 - PRODUCTS

2.2 MANUFACTURERS

- A. Manufacturers: Subject to compliance with the requirements specified herein, manufacturers offering products which may be incorporated in the work include, the following, or approved equal:
 - 1. Carlisle Syntec Systems, Carlisle PA.
 - 2. Firestone Building Products Co., Carmel IN.
 - 3. Mule-Hide Products Co., Inc., Beloit WI.

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4. Versico Inc., Akron OH.

2.3 ROOFING MATERIALS

- A. EPDM membrane: Ethylene propylene diene monomers formed into uniform, flexible sheets, complying with ASTM D 4637 and ANSI/RAM IPR-1, with a nominal thickness of 60 mils.
- B. Cant strips, tapered edge strips and flashing accessories: Types recommended by manufacturer of EPDM material, provided at locations indicated and at locations recommended by manufacturer, including adhesive tapes, flashing cements, and sealant.
- C. Flashing material: Manufacturer's standard system compatible with flexible sheet membrane.
- D. Membrane adhesive: As recommended by EPDM membrane manufacturer for particular substrate and project conditions, formulated to withstand min. 60 psf uplift force.

2.4 ACCESSORIES

- A. Bonding adhesive shall be as recommended by manufacturer. Adhesive shall be compatible with all materials to which the elastomeric membrane is to be bonded.
- B. Water cutoff mastic shall be as recommended by membrane manufacturer.
- C. Night sealer shall be as recommended by membrane manufacturer.
- D. Prefabricated elastomeric accessories (pipe seals, inside and outside comers, etc.) shall be as manufactured and recommended by membrane manufacturer.
- E. Walkway pads: Manufacturer's standard 3/8 inch thick black molded rubber walkway pad with factory rounded corners, nominally sized 30 by 30 inches.
- F. Nailing Strips and Fasteners: Nailing strips shall be extruded rubber and fasteners shall be non corrodible.
- G. Screws: Steel fastener with fluorocarbon coating. Minimum thread diameter 0.22 inches and minimum shank diameter of 0.172 inches.

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- H. Miscellaneous materials: Best grade or quality approved by the roofing manufacturer for the specific application.

PART 3 - EXECUTION

3.2 EXAMINATION

- A. Inspect all surfaces and verify that they are in proper condition to receive the work of this Section.
- B. Verify curbs and penetrations are in place prior to roofing, so that the roof system can be installed as continuously as possible.
- C. Any condition requiring correction or completion shall be corrected or completed prior to the installation of the roofing system Notify Contractor of unacceptable conditions.
- D. Do not proceed until defects are corrected.
- E. Beginning of installation means acceptance of existing substrate and site conditions.

3.3 PREPARATION

- A. During the operation of work of this Section, protect the work of other trades against undue soilage and damage by the exercise of reasonable care and precautions. Repair or replace any work so damaged and soiled.

3.4 EMERGENCY MATERIALS AND PROCEDURES

- A. Maintain continuous temporary protection prior to and during installation of new roofing system. Do not leave unfinished roof areas uncovered overnight or during inclement weather.
 - 1. Provide temporary protective sheeting over uncovered deck surfaces.
 - 2. Turn sheeting up and over parapets and curbing. Retain sheeting in position with weights or temporary fasteners.
 - 3. Provide for surface drainage from sheeting to existing drainage facilities.
 - 4. Do not permit traffic over unprotected or repaired deck surface.
- B. Maintain on site equipment and materials necessary to apply emergency temporary coverage in the event of sudden storms or inclement weather.

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- C. Roofing subcontractor is fully responsible for all damage due to water penetration occurring during the Work of this Section.

3.5 INSTALLATION - GENERAL

- A. The entire work of this Section shall be performed in accordance with the best standards of practice relating to trades involved.
- B. Follow local, state and federal regulations, safety standards and codes. When a conflict exists, the more restrictive document shall govern.
- C. Follow insurance underwriter's requirements acceptable for use with specified products or systems.
- D. Review all special conditions, such as at projections, at connections to sheet metal gravel stops, flashings, etc. with the Roofing Manufacturer, submit the Roofing Manufacturer's recommendations and details to the Architect for approval.
- E. Special Cautions:
 - 1. Do not use oil-based or plastic roof cement.
 - 2. Do not subject elastomeric materials to contact with petroleum, grease, oil, solvents, vegetable or mineral oil, nor animal fat. Prevent contact with hot pipes, and ducts.
 - 3. Cements and bonding adhesive contain petroleum distillates and are extremely volatile and flammable. Avoid breathing vapors and do not use near fire or flame.
 - 4. Ensure that splicing and bonding surfaces are dry during installation.

3.6 MEMBRANE ADHERED INSTALLATION

- A. Provide additional membrane securement at roof top penetrations, at interior wall and penthouse perimeters, and at any angle change which exceeds 2 inches in on horizontal foot.
 - 1. Install continuous reinforcement strips 3 inches to 6 inches from inside and outside corners where additional membrane securement is required and where recommended by roofing manufacturer. Secure reinforcement strips with 2 -inch diameter aluminum or stainless steel seam fastening plates; space fastening plates not greater than 12 inches on center.
 - 2. Install reinforcement strips either horizontally into deck or vertically into curbs as recommended by roofing manufacturer.

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3. Cement EPDM flashing over installed fastening plates and reinforcement strips as recommended by roofing manufacturer, and in no case provide flashing of less than 6 inches in width, and at ends of flashing, provide a minimum 2 inch splice from edge of plate/strip.
- B. Extend membrane up cant strips and a minimum of 8 inches onto vertical surfaces.
- C. Seal membrane around roof penetrations.
- D. Walkway protection: Install additional membrane at locations shown and where required for access to roof-mounted equipment.
 1. Clean roofing membrane and fully adhere walkway pads as recommended by manufacturer's instructions.
- E. Provide daily night seal at loose edges to prevent water flow beneath finished roofing.
 1. Mix sealer components as instructed by manufacturer. Apply at rate of 1 gallon/100 linear foot, 12 inch. back from sheet edges on exposed substrate.
 2. Embed membrane in sealer and apply continuous pressure with 2-1/2 inch tubing filled with sand. Pull sheet free before continuing permanent installation.

3.7 INSTALLATION - ELASTOMERIC FLASHINGS

- A. Elastomeric Flashings. Provide elastomeric sheet flashings at elastomeric sheet roofing work, as indicated.
 1. Use longest practical lengths and widths of elastomeric sheet flashing material to eliminate or minimize joints. Complete splices between flashings and main-roof sheet before bonding flashings to vertical surfaces. Splices shall be sealed 3 inches beyond fasteners that attach membrane to horizontal nailer in same manner as splices within roofing membrane. Flashings shall be bonded 100 percent to subsurfaces, except at coves where movement is anticipated.
 - a. Install flexible tube at coves where movement is anticipated.
 2. Apply bonding adhesive to flashing and surface to which it is being bonded. When bonding adhesive has dried to the point where it does not string or stick to a dry finger touch, roll flashing into adhesive. Do not bridge flashing at changes of direction.

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3. Nail top of flashing 12 inches on center under sheet metal copings, counter flashing, and other sheet metal work.
4. Expansion Joints: Treat expansion joints as indicated in expansion joint manufacturer's standard details and published instructions for specific conditions.
5. Sheet metal copings, fascias, gravel stops, and flashings will be furnished and installed under Section 07610 - SHEET METAL FLASHING AND TRIM.

3.8 CLEANING

- A. Remove elastomeric adhesive markings from finished surfaces.
- B. In areas where finished surfaces are soiled by work of this section, consult manufacturer of surfaces for cleaning advice and conform to their instructions.
- C. Repair or replace defaced, or disfigured finishes caused by the work of this Section.

3.9 PROTECTION

- A. Provide special protection or avoid traffic on completed work. Restore to original condition, or replace, work and roofing materials damaged.

End of Section

Section 07620
SHEET METAL FLASHING, TRIM, & GUTTERS & DOWNSPOUTS

1.1
GENERAL PROVISIONS

SECTION INCLUDES

- A. Furnish and install the following:
 - 1. Copper gutters and rain leaders.
 - 2. Copper flashings and running sheet metal work, for all non-specified locations in conjunction with the roofs.
 - 3. Sealant in conjunction with sheet metal work specified herein.

1.2 RELATED SECTIONS

- A. Section 06100 - ROUGH CARPENTRY: Wood blocking, nailers.
- B. Section 07900 - JOINT SEALERS: Sealant and backing material not specified herein.
- C. Flashing sleeves and collars for mechanical and electrical items protruding through roofing: By respective trade sections furnishing same.

1.3 REFERENCES

- A. Comply with applicable requirements of the following standards and those others referenced in this Section, under the provisions of Section 01420 - REFERENCES. Where these standards conflict with other specified requirements, the most restrictive requirements shall govern.
 - 1. ASTM B 370 - Copper Sheet and Strip for Building Construction.
 - 2. ASTM B 486 - Paste Solder.
 - 3. ASTM D 226 - Asphalt-Saturated Organic Felt Used in Roofing and Waterproofing.
- B. The following reference materials are hereby made a part of this Section by reference thereto:
 - 1. CDA - Copper in Architecture Handbook.
 - 2. Revere Copper Products, Inc., Rome NY. - Copper and Common Sense, seventh edition.
 - 3. SMACNA - Architectural Sheet Metal Manual, referred to herein as "Sheet Metal Manual".
 - 4. NRCA - Roofing and Waterproofing Manual.

1.4 SUBMITTALS

- A. Submit the following under provisions of Section 01330 - SUBMITTAL PROCEDURES:
 - 1. Literature: Manufacturer's data sheets for each metal type and accessories furnished hereunder, include material specifications, performance data, physical properties and finishes.
 - 2. Certification: Provide certifications that materials and systems comply with the specified requirements for the use indicated.
 - 3. Shop drawings:
 - a. Fully dimensioned large scale design details showing material profiles, splices, flashing terminations and other jointing details, fastening methods and installation details. Indicate material type, sizes, and weights or gages. Indicate extent of adjacent work specified under other Sections of the Specifications.
 - b. Fully detail methods of relieving stresses due to thermal movement, including sealing of expansion seams.
 - c. All details bearing dimensions of actual measurements taken at the project.
 - d. 6-inch (150-mm) or 12-inch (300-mm) long samples of fabricated products exposed as finished work. Provide complete with specified finish.

1.5 QUALITY ASSURANCE

- A. Company specializing in fabrication and installation of sheet metal flashing work with minimum 5 years documented experience.
- B. Flashing and sheet metal applicator, with a minimum of 5 years documented experience demonstrating previously successful work of the type specified herein, and approved by product manufacturer.

1.6 DELIVERY, STORAGE AND HANDLING

- A. Store preformed material to prevent twisting, bending, or abrasion, and to provide ventilation. Slope metal sheets to ensure drainage.
- B. Prevent contact with materials during storage which may cause discoloration, staining, or damage.

1.7 SEQUENCING AND SCHEDULING

- A. Coordinate the installation of flashings and sheet metal work with the various trades responsible for installing interfacing materials, and install the work at appropriate times so as not to delay the progress of related work.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Copper (Flashing and gutters and rain leaders): CDA numbered alloy 110, cold-rolled sheet Natural "red" copper conforming to ASTM B 370, having a minimum weigh of 16 ounces per square foot.

- B. Copper: ASTM B 370; minimum temper H00 (cold-rolled) except where temper 060 is required for forming;
- C. Hung Gutters and Downspouts: 8" K style, 16 oz. per sq. ft. (0.0216-inch thick) (0.55-mm) except as otherwise indicated.
- D. Downspouts, 4" corrugated round, 16 oz. per sq. ft. (0.0216-inch thick) (0.55-mm) except as otherwise indicated.
- E. Gutter Cover Guards: 20-gage bronze mesh or fabricated units, with selvaged edges and noncorrosive fasteners. Select materials for compatibility with gutters and downspouts.
- F. Bronze wire ball downspout strainer meeting the Copper Development Association Inc details.

2.1 ACCESSORIES

- A. Underlayment: Asphalt saturated building felt, non-perforated, 30 pounds per square as recommended for use in waterproofing and in construction of built-up roofs.
- B. Solder: ASTM B 32; Provide 50-50 tin/lead or lead free alternative of similar or greater strength solder. Killed acid flux.
- C. Flux: Muriatic acid neutralized with zinc or approved brand of soldering flux.
- D. Fasteners: Same metal as flashing/sheet metal or other non-corrosive metal as recommended by sheet manufacturer. Match finish of exposed heads with material being fastened.
- E. Bituminous Coating: SSPC-Paint 12, Cold-Applied Asphalt Mastic (Extra Thick Film), nominally free of sulfur, compounded for 15-mil dry film thickness per coat.
- F. Joint Sealant: One-part, copper compatible elastomeric polyurethane, polysulfide, butyl or silicone rubber sealant as tested by sealant manufacturer for copper substrates. Refer to Division 07.
- G. Metal Accessories: Provide cleats, straps, hangers, anchoring devices, and similar accessory units as required for installation of work, noncorrosive, size and gage required for performance.

2.2 RIVETS:

- A. Pop Rivets: 1/8-inch (3-mm) to 3/16-inch (4.5-mm) diameter, with solid brass mandrels.
- B. Provide solid copper rivet (tinner ' s rivets) where structural integrity of seam is required.
- C. Joint Sealer: Low modulus single component gun-grade polyurethane sealant, non-sagging, conforming to FS TT-S-000227E, Type II, Class A, and ASTM C 920, Type S, Class 12-1/2, Grade NS, use NT,M, A and O with a minimum movement capability of ± 25 percent, equal to the following:
 - 1. Mameco International, Inc., product "Vulkem 116".
 - 2. Sika Corp., Lyndhurst NJ; product, "Sikaflex".

3. Sonneborn Building Products Inc., Minneapolis MN.; product, "Sonolastic NP1".
 4. Tremco, Beachwood OH.; product, "Dymonic".
 5. Pecora Corporation, Harleysville PA.; product "Dynatrol I".
- D. Plastic cement as recommended by roofing manufacturer and eave protection manufacturer.
- E. Solder: Conforming to ASTM B 32 with non-acid flux, solder: 50 percent tin/50 percent lead solder.

2.3 FLASHING FABRICATION – GENERAL

- A. General Metal Fabrication: Shop-fabricate work to greatest extent possible. Comply with details shown and with applicable requirements of Copper Development Association Inc. (CDA) "Copper in Architecture" handbook and other recognized industry practices. Fabricate for waterproof and weather-resistant performance, with expansion provisions for running work, sufficient to permanently prevent leakage, damage, or deterioration of the work. Form work to fit substrates. Comply with material manufacturer instructions and recommendations for forming material. Form exposed copper work without excessive oil-canning, buckling, and tool marks, true to line and levels indicated, with exposed edges folded back to form hems.
- B. Fabricate to allow for adjustments in field for proper anchoring and joining.
- C. Form sections true to shape, accurate in size, square, free from distortion and defects.
- D. Cleats, Spacers, Straps, and Hanger Brackets: Fabricate of same material as gutters and downspouts, interlockable with sheet in accordance with CDA recommendations.
- E. Fabricate corners from one piece with minimum 18-inch (450-mm) long returns; solder corners for rigidity.
- F. Seams: Fabricate nonmoving seams with 1-inch (25-mm) lapped riveted and soldered seams. Tin edges to be seamed, lap seams, rivet seams, and solder.
- G. Expansion Provisions: Follow CDA Copper in Architecture Handbook guidance and provisions to accommodate expansion and contraction of gutter systems.
- H. Form flashings as required, or to profiles indicated on the Drawings, to protect materials from physical damage and shed water.
- I. Form sections square and accurate to profile, in maximum possible lengths, free from distortion or defects detrimental to appearance or performance. To the greatest extent applicable, fabricate sheet metal components in shop, and thoroughly clean all joints on both sides of the sheet metal work.
- J. Fabricate cleats and starter strips of same material as sheet.
- K. Form pieces in longest practical lengths, with flat lock seams. Hem exposed edges on underside 1/4 inch, miter and seam corners.
- L. Fabricate corners from one piece with minimum 18 inch long legs, solder for rigidity, seal with sealant.

2.4 FABRICATION – COPPER GUTTERS AND DOWNSPOUTS

- A. Installation Requirements: Fabricator is responsible for installing system, including anchorage to substrate and necessary modifications to meet specified and drawn requirements and maintain visual design concepts in accordance with Contract Documents and following installation methods as stipulated in the "Copper in Architecture" handbook published by the Copper Development Association (CDA).
1. Drawings are diagrammatic and are intended to establish basic dimension of units, sight lines, and profiles of units.
 2. Make modifications only to meet field conditions and to ensure fitting of system components.
 3. Obtain Architect's approval of modifications.
 4. Provide concealed fastening wherever possible.
 5. Attachment considerations: Account for site peculiarities and expansion and contraction movements so there is no possibility of loosening, weakening and fracturing connection between units and building structure or between components themselves.
 6. Obtain Architect's approval for connections to building elements at locations other than indicated in Drawings.
 7. Accommodate building structure deflections in system connections to structure.
- B. PERFORMANCE REQUIREMENTS:
1. System shall accommodate movement of components without buckling, failure of joint seals, undue stress on fasteners, or other detrimental effects when subjected to seasonal temperature changes and live loads.
 2. Design system capable of withstanding building code requirements for negative wind pressure.

3. PART 3 - EXECUTION

3.1 EXAMINATION

- A. Beginning of work shall constitute acceptance of the conditions of the surfaces to which this work is to be applied.

3.2 PREPARATION

- A. Install starter and edge strips, and cleats before starting installation.
- B. Secure flashings in place using concealed fasteners. Use exposed fasteners only where permitted.
- C. Cleat and seam all joints. Apply plastic cement compound between metal flashings and felt flashings, asphalt shingle roofing or asphalt roll roofing.
- D. Fit flashings tight in place. Make corners square, surfaces true and straight in planes, and lines accurate to profiles.
- E. Seal all metal joints watertight.

- F. During the installation of work of this Section, protect the work of other trades against undue soilage and damage by the exercise of reasonable care and precautions. Repair or replace any work so damaged and soiled.

3.3 FLASHING INSTALLATION - GENERAL

- A. Except as otherwise shown on the reviewed shop drawings or specified herein, the workmanship of sheet metal work, method for forming joints anchoring, cleating, provisions for thermal movement, etc., shall conform to the standard details and recommendations of the sheet metal producer and those of producer organizations and research institutions and associations concerning the sheet metal used, in addition to the standards and details set forth in the referenced materials specified this Section.
- B. Face nailing will not be permitted, concealed cleating or other concealed method must be used to attach sheet metal work to structure.
- C. Ensure that fastenings do not exceed 8 inches on centers. Use flat head fasteners throughout, and seal all fastener heads after installation thereof.
- D. Fill all slip joints and overlapping surfaces in the assembly with specified sealant material, removing all excess sealant material from the prefinished surfaces immediately, to prevent staining the finish.

3.4 INSTALLATION - COPPER GUTTER AND DOWNSPOUTS

- A. Install gutter and downspout following fabricator's recommendations.
 - 1. Prevent contact between copper and dissimilar materials.
- B. Install gutter with two screw-shank fasteners at maximum 30 inch on-center spacing. Provide expansion joints at all gutter runs exceeding 40 feet and on all sides of hip roofs.
- C. Mount downspouts securely in place.

End of Section

SECTION 07901 – ROOF SEALANTS AND CAULKING

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Incidental caulking as related to sheet metal work required for a complete and thorough job.
- B. The drawings indicate and show limits of construction for this project. The specifications specify materials and work requirements for this project. Both are complementary to each other and both shall be followed to complete the work.

1.02 RELATED WORK

- A. Section 07601 – Roof Flashing and Sheet Metal

1.03 SUBMITTALS

- A. Submit the following under provisions of Section 01300:
 - 1. Manufacturer's descriptive literature and data sheets on each type of caulking and sealant material proposed.
 - 2. Manufacturer's descriptive literature and data sheets for primer, foam backer rod, bond breaker tape and other sealant joint accessories.

1.04 REFERENCES

- A. Except as modified by the requirements of other governing codes, the sealant and its installation shall conform to the provisions and recommendations of the following codes and standards:
 - 1. Federal Specification TT-S-00230C (COM-NBS) Type II Class A.
 - 2. Federal Specification TT-S-001543A (COM-NBS) Class A.
 - 3. ASTM C-920-86, Type S, Grade NS, Class 25, Use NT, M, G, A and O.

1.05 ENVIRONMENTAL REQUIREMENTS

- A. Roof removal and roofing system installation shall not take place during inclement weather or when the air temperature or wind chill temperature is below 40° F.
- B. Material safety data sheets of all specified products of this section shall be kept on site daily for project duration.

PART 2 - PRODUCTS

2.01 MANUFACTURER

- A. Sealant shall be manufactured by TREMCO Corp., Cleveland, Ohio, or approved equal product.

2.02 MATERIALS

- A. Sealant shall be SPECTREM 1, a low modulus, high performance, one-part moisture curing silicone joint sealant at metal to metal intersections, or approved equal product.
- B. Sealant shall be Dymonic, a one part moisture curing modified urethane sealant at metal to masonry intersections (reglet joint) and masonry to masonry joints; or approved equal product.
- C. Backer rod for reglet joints shall be closed cell polyethylene foam as recommended by the sealant manufacturer.
- D. Bond breaker tape shall be as recommended by sealant manufacturer.
- E. Masking materials for the protection of surrounding work during installation of sealants and other caulking.

PART 3 - EXECUTION

3.01 PREPARATION

- A. All caulking and sealant installation must be done by skilled mechanics in accordance with the manufacturer's written instructions so as to produce weathertight and watertight joints.
- B. Do not apply caulking when the ambient air temperature or the temperature of surface to be caulked or sealed is below 50°F or above 100°F. Do not apply caulking or sealant during rain or snow.
- C. Bond Breaker Tape: Install bond breaker tape to the back of the sealant joints neatly, such that sealant will adhere only to sides of the joint when installed.
- D. Mask off the edges of joints to prevent staining unless it can be demonstrated that the quality of workmanship is high enough so that this protection is not needed.
- E. All joints to receive caulking or sealant shall be dry and free of loose particles, oil or grease, or other material that would prevent or interfere with full adhesion of the caulk or sealant.
- F. Rout out cracks to provide reasonably uniform profiles with depth slightly larger than the width in order to accommodate a sealant joint.

3.02 INSTALLATION

- A. Force sealant tightly into the joint, forcing out all air pockets and filling the void completely. Nozzle size shall be of the proper size to the particular joint.
- B. Sealant shall be dry-tooled immediately after application to provide a smooth, uniform surface of the recommended profile.
- C. Backer rod shall be installed at all regleft joints and elsewhere as indicated on the drawings.
- D. Install backer rod carefully with approximately 30% compression avoiding tearing, twisting, or stretching. Splices shall be butted tightly.
- E. Install backer rod to provide a depth-to-width ratio for the sealant joint of 1/2.

3.03 CLEAN-UP

- A. All surfaces stained, soiled or discolored during caulking or sealing shall be cleaned or restored.

- B. Smears and excess caulking and sealant shall be removed with a cleaning agent as recommended by the sealant manufacturer.

END OF SECTION

Section 09910
PAINTS

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Summary: This Section consists of painting work where shown on the Drawings, as specified herein, and as required for a complete and proper installation of the work. Painting work includes, but is not limited to the surface preparation (stripping of all existing paint) and application of coated finishes, and subsequent touch-up, of exterior items and surfaces as indicated on the Contract Drawings and as scheduled herein.
1. No attempt is made in this Section to list all surfaces, fixtures and equipment requiring painting on this project. It is the responsibility of the Subcontractor to determine for itself the scope and nature of the Work required for a complete installation from the information provided herein and in the Drawings.
- B. Surfaces and Materials: In general, without limiting the generality thereof, the following surfaces, fixtures and equipment require a painted finish:
1. New and existing exterior wood trim and decking. Siding where effected by the work shall be painted to match existing from end to end, and side to side.

1.2 RELATED SECTIONS

- A. Section 06200 - FINISH CARPENTRY: Wood trim items, setting and filling of nails, sanding of wood trim.

1.3 REFERENCES

- A. Comply with applicable requirements of the following standards and those others referenced in this Section, under the provisions of Section 01420 - REFERENCES.
1. ANSI/ASTM D 16 - Definitions of Terms Relating to Paint, Varnish, Lacquer, and Related Products.
 2. ASTM D 2016 - Test Method for Moisture Content of Wood.
 3. All applicable federal, state and municipal codes, laws and regulations for flammability and smoke generation of interior finishes.

1.4 DEFINITIONS

- A. "Paint" includes coating systems materials, primers, emulsions, enamels, stains, sealers and fillers, and other applied materials specified herein, whether used as prime, intermediate or finish coats.

1.5 SUBMITTALS

- A. Submit the following under provisions of Section 01330 - SUBMITTAL PROCEDURES:
1. Literature: Manufacturer's product data sheets, specifications, performance data, physical properties, material compositions, and application instructions for all finishing products to be applied hereunder.
 - a. Include certification of data indicating Volatile Organic Compound (VOC) content of all paint materials.
 2. Samples:
 - a. Manufacturer's color selector for custom mixed colors for Architect's color scheduling.
 - b. Opaque coatings: Two 9 x 12 inch finished samples on hardboard of each color scheduled in each finish for review and approval. Identify boards with finish type, color mix number and scheduled substrate surfaces or materials.
 - c. Transparent finishes and stains: Two 9 x 12 inch finished samples on same species of solid wood and plywood to be furnished under Section 06200 - FINISH CARPENTRY, of each color scheduled in each finish for review and approval. Identify boards with finish type, color mix number and scheduled substrate surfaces or materials.
- B. Submit the following under provisions of Section 01780 - CLOSEOUT SUBMITTALS:
1. Color chips: After final approval of all colors and tints by the Architect, submit to the Owner, color chips of all coatings used, with manufacturer's name and mix designation of the coating for the purpose of future re-ordering of coatings. Color chips shall be at least six (6) square inches in size, for each color and tint.

1.6 QUALITY ASSURANCE

- A. Applicator: Company specializing in commercial painting and finishing with 3 years minimum documented experience.

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- B. Single source responsibility: Provide primers and other undercoat paint produced by same manufacturer as finish coats. Use only thinners approved by paint manufacturer, and use only within recommended limits.

1.7 FIELD SAMPLES

- A. Provide field samples under provisions of Section 01450 - QUALITY CONTROL for purpose of verifying selected colors.
- B. Paint on-site sample areas, minimum 16 square feet, illustrating selected color, and tint.
- C. Locate samples where directed. The Contractor shall provide in the base Contract, a total amount maximum amount of ten samples.
- D. Accepted samples may not remain as part of the work.

1.8 DELIVERY, STORAGE AND HANDLING

- A. Deliver products to site in sealed and labeled containers; container labeling shall include manufacturer's name, type of paint, color mix designation, expected coverage, surface preparation instructions, instructions for mixing and reducing, drying time, and clean-up recommendations.
- B. Store materials, conforming with applicable codes and fire regulations, in designated spaces. Keep storage area secure when direct access is not required or when not performing work under this Section. Take precautionary measures to prevent fire hazards and spontaneous combustion, maintain a dry-chemical type fire extinguisher in all areas where materials of this Section are being stored or used.
- C. Store paint materials in a well ventilated area at minimum ambient temperature of 45 degrees Fahrenheit and a maximum of 90 degrees Fahrenheit.
- D. Do not use the sanitary system for mixing or disposal of refuse material. Carry water to mixing rooms and dump waste material in a suitable refuse receptacle. Remove oily rags and waste each day.

1.9 PROJECT CONDITIONS

- A. Provide continuous ventilation and heating facilities to maintain surface and ambient temperatures above 45 degrees Fahrenheit for 24 hours before, during and 48 hours after application of finishes, unless required otherwise by manufacturer's instructions.

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- B. Do not apply exterior coatings during rain or snow, or when relative humidity is above 50 percent unless required otherwise by manufacturer's instructions.
- C. Apply paints and finishes above minimum temperature conditions in strict accordance with manufacturer's instructions.
- D. Provide sufficient lighting to maintain 80 foot-candles measured mid-height at substrate surface.

1.10 SEQUENCING AND SCHEDULING

- A. The applicator of work specified herein is responsible to ensure that all paints, enamels, and coatings, proposed to be applied hereunder, are compatible with coatings used for shop-primed items and items which have been prime-coated under the work of other trades.
- B. Immediately notify the Architect in writing of conditions which may require a change in the specifications of this Section before proceeding with the work. Failure to do so, in a timely fashion, so as not to interfere with the schedule of work of this Contract, shall be construed as acceptance of the coatings specified. Perform all corrective measures, at no cost to the Owner, for any defects in the work, resulting from the use of such materials.
- C. Painting work should be scheduled so as to minimize touch-ups. Interior painting is to be without flashmarks. Should flashmarks occur due to touch-ups, the Contractor shall be required to redo the entire surrounding wall surface.
- D. Do not order materials until all required schedules have been properly submitted, reviewed by the Contractor and Approved by Architect.

1.11 EXTRA MATERIALS

- A. Provide a minimum of one, one gallon container of trim paints and one full gallon container of all other paints and finishes, to the Owner of each color and finish scheduled herein.
 - 1. Label each container with paint mix number, and identify locations where color and tint was used.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Subject to compliance with the requirements specified herein, manufacturers offering products which may be incorporated in the work include, but are not limited to, the following:
1. Paints and general finishes:
 - a. Benjamin Moore & Company, Montvale, NJ.
 - b. California Paints, Cambridge MA,
 - c. ICI – Devco Paints, Louisville, KY
 - d. Pittsburgh Paints / PPG Industries, Inc., Pittsburgh PA.
 - e. Pratt & Lambert Inc., Buffalo, NY.
 - f. Sherwin Williams, Cleveland OH.
 2. Caulking
 - a. Pecora Corporation, Harleysville PA.; product “ AC-20+”.
 - b. Sonneborn Building Products Inc., Minneapolis MN.; product, “Sonolac”.
 - c. Tremco, Beachwood OH.; product, “Trimflex 834”.
 3. Stripper: Provide any commercial grade stripper, bellow are examples.
 - a. KutZit Remover
 - b. Strip Ease

2.2 MATERIALS

- A. Coatings: Ready mixed, except for field catalyzed coatings with good flow and brushing properties; capable of drying or curing free of streaks or sags. Color pigments shall be processed to a soft paste consistency, capable of being readily and uniformly dispersed to a homogeneous coating. Provide best quality grade, where manufacturer makes more than one grade of any material specified.
- B. Joint sealant for fill of minor cracks in plaster prior to painting: One component acrylic latex caulking compound, conforming to FS 19-TP-21M and ASTM C 834, paintable within 24 hours after application, with a minimum movement capability of ± 12.5 percent, equal to one of the following:
1. Pecora, product “ AC-20+”.
 2. Sonneborn Building Products Inc., product, “Sonolac”.

3. Tremco, product, "Trimflex 834".

2.3 ACCESSORIES

- A. Accessory materials: Linseed oil, shellac, turpentine, paint thinners and other materials not specifically indicated, but are required to achieve the finishes specified of commercial quality.

PART 3 - EXECUTION

3.2 EXAMINATION

- A. Inspect all surfaces and verify that they are in proper condition to receive the work of this Section. Notify Contractor of any condition that may potentially affect proper application of coatings.
- B. Measure moisture content of surfaces, do not apply finishes unless moisture content of surfaces are below the following maximums:
 1. Exterior wood: 18 percent.
- C. Beginning Work of this Section means acceptance of existing substrate surfaces and site conditions.

3.3 PREPARATION

- A. Furnish and lay suitable drop cloths in all areas where coating work is being done to protect floors and all other surfaces from damage during the work. Protect adjoining surfaces with painters mask tape.
- B. Prior to preparing surfaces or finishing, remove all finish hardware for painting doors and frames, except hinges and locks on exterior door; remove electrical plates, light fixture trim and fittings. Re-install hardware and other removed items after painted surfaces are thoroughly dry.
- C. Mix coatings thoroughly, unless otherwise directed by the manufacturer of the specific coating used, to ensure uniformity of color and mass. Strain previously opened coatings to remove skins, lumps, and other foreign matter prior to painting.
- D. Thin or reduce materials only as recommended by the specific material manufacturer, and only with the approval of the Architect.
- E. Impervious surfaces: Remove mildew by scrubbing with solution of tri-sodium phosphate and bleach. Rinse with clean water and allow surface to thoroughly dry.
- F. New exterior wood scheduled to receive paint finish.

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1. Smooth minor defects by sanding. Remove all foreign matter with commercial paint remover and fine sandpaper.
 2. Treat wood with a dip or heavy flood coat of Water Repellant Wood Preservative, allow to dry. Touch up knots, pitch streaks, and sappy sections with commercial stain sealer.
 3. Fill up nail holes and cracks with wood putty or plastic wood after primer of first coat of finish is dry, and sand smooth.
- G. Existing exterior wood trim scheduled to receive paint finish.
1. For trim where paint base is in good condition, Scrape surfaces to remove loose, peeling and chipped paint. Sand only to ease edges and roughen existing paint surfaces.
 2. For trim where old paint has built-up and has cracked and peeled, such as siding and window and door casings, strip paint completely with commercial paint remover and fill and sand. Thoroughly neutralize paint remover as recommended by manufacturer. Allow wood to dry (15 percent moisture content maximum) and sand affected surfaces smooth.
 3. Wash all with a solution of tri-sodium phosphate (TSP), and rinse surfaces well.
 4. Remove all remaining foreign matter, use commercial paint remover, if deemed necessary. Thoroughly neutralize paint remover as recommended by manufacturer. Allow wood to dry (15 percent moisture content maximum) and sand affected surfaces smooth.
 5. Touch up knots, pitch streaks, and sappy sections with two coats commercial exterior stain sealer, "Kilz" or equal.
 6. Fill up nail holes, wood defects, chips in layers of paint, and cracks with exterior wood putty or plastic wood after primer of first coat of finish is dry, and sand smooth.

3.4 APPLICATION

- A. Apply all materials in strict accordance with the approved manufacturer's printed instruction, and in accordance with the best trade practices. Each coat shall be reviewed and approved by the Architect before succeeding coats are applied.
- B. Do not apply successive coating until the preceding coat is thoroughly dry, and in no case in less than 24 hours after the preceding coat.
- C. Apply each coat to a uniform finish; Apply primer and first coat of slightly lighter in color tint than the scheduled color of the final coat.

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- D. Sand lightly between coats to achieve required finish and remove sanding dust prior to applying succeeding coat.
- E. Where clear finishes are required, tint fillers to match wood. Work fillers into the grain before set. Wipe excess from surface.
- F. Prime back surfaces of all interior and exterior woodwork scheduled for painted finish with primer.
- G. Prime back surfaces of interior woodwork scheduled to receive stain or varnish finish with gloss varnish reduced 25 percent with mineral spirits.

3.5 CLEANING

- A. Upon completion of the work in each area, remove all coating splatters from glass, prefinished surfaces, bright metals, and from other surfaces that have not been painted or finished hereunder. Do not use abrasive paper or abrasive cleaner on any prefinished surface or bright metal. Remove all materials and debris; leave work area in a clean condition.

3.6 PROTECTION AND TOUCH-UP

- A. During painting work, protect the work of other trades against undue soilage and damage by the exercise of reasonable care and precautions. Properly clean, repair or replace any work so damaged and soiled.
- B. Protect all painted and finished surfaces against damage until the date of final acceptance of the work. The Architect will conduct a final review of all work performed hereunder. Re-coat or touch-up, all scratches and other blemishes on surfaces, and as directed by the Architect, any areas found which do not comply with the requirements of this Section, and bear all costs therefor.
- C. Any re-coating or touch-up work, required after the work of this Section has been reviewed and accepted by the Architect, will be paid for by the Contractor.

3.7 PAINTING SCHEDULE - GENERAL FINISHES AND COLORS

- A. General: Number of coats scheduled herein below is minimum required, refer to Article entitled "APPLICATION" regarding coverage.
- B. The Architect will furnish a schedule of colors for each area and surface. Tinting and matching shall be to the satisfaction of the Architect. No limit is placed on the number of colors that may be required, or the number of colors in any one room, area, or surface. Premium paints of deep-hued, bright, pigment intensive, accent and primary colors may be scheduled for

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up to 25 percent of all exterior surfaces without additional cost to the Owner.

- C. Colors of priming coats (and body coats where specified) shall be lighter in tint than those of finish coat.
- D. Colorants shall be pure, non-fading pigments, mildew-proof, ultra-violet resistant, finely ground in approved medium; and be limeproof, when used in coatings to be applied on masonry, concrete, plaster, and gypsum board surfaces.

3.8 EXTERIOR PAINTING SCHEDULE

- A. Exterior WOOD TRIM, windows and doors, fascias and soffits, new, primed and previously painted:

- 1. One coat alkyd enamel primer at bare wood. (Touch up primed and previously painted surfaces)
 - a. California: "Trouble-Shooter Universal Wood Primer", N°. 21700
 - b. ICI / Dulux: Ultra Hide 2110-1200 Alkyd Primecoat.
 - c. Moore: "Moorwhite Primer" N°. 100
 - d. Pittsburgh: "Sun-Proof Universal Exterior Oil-Based Primer", 1-70 Series
 - e. Pratt & Lambert: "Pro Hide Exterior Alkyd Primer" N°. C299
 - f. Sherwin-Williams: "A-100 Ext. Alkyd Exterior Wood Primer", Y24 W200
- 2. Two coats latex semi-gloss paint:
 - a. California: "100 % Acrylic Latex House and Trim Paint", N°. 471
 - b. ICI / Dulux: Decrashield N°. 2406xxxx Semi-Gloss Finish..
 - c. Moore: "MoorGlo Latex House & Trim Paint" N°. 96
 - d. Pittsburgh: "Sun-Proof Acrylic Latex House & Trim Semi-Gloss", 78 Series
 - e. Pratt & Lambert: "Pro Hide Gold Latex Semi-Gloss House Paint", N°. Z 8600
 - f. Sherwin-Williams: "Metalatex Semi-Gloss Coating" B42 Series

- B. Exterior clapboard siding:

- 1. One coat alkyd enamel primer at bare wood. (Touch up primed and previously painted surfaces)

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- a. California: "Trouble-Shooter Universal Wood Primer", N°. 21700
 - b. ICI / Dulux: Ultra Hide 2110-1200 Alkyd Primecoat.
 - c. Moore: "Moorwhite Primer" N°. 100
 - d. Pittsburgh: "Sun-Proof Universal Exterior Oil-Based Primer", 1-70 Series
 - e. Pratt & Lambert: "Pro Hide Exterior Alkyd Primer" N°. C299
 - f. Sherwin-Williams: "A-100 Ext. Alkyd Exterior Wood Primer", Y24 W200
2. Two coats latex flat paint:
- a. California: "100 % Acrylic Latex House and Trim Paint", N°. 471
 - b. ICI / Dulux: Decrashield N°. 2406xxxx Flat Finish..
 - c. Moore: "Latex House & Trim Paint" N°. 96
 - d. Pittsburgh: "Sun-Proof Acrylic Latex House & Trim flat", 78 Series
 - e. Pratt & Lambert: "Pro Hide Gold Latex Flat House Paint", N°. Z 8600
 - f. Sherwin-Williams: "Metalatex Flat Coating" B42 Series

C.

End of Section