

Waltham Police Station Roof Replacement

**Waltham Police Department
155 Lexington Street
Waltham, MA 02452**

SPECIFICATIONS

Bid Due Date: Thursday April 19, 2012 at 10:00 am

Pre-Bid Meeting & Inspection:

Wednesday April 11, 2012 at 10:00 am



Maguire Group Inc.
33 Commercial Street, Suite 1
Foxborough, MA 02035

COVER

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SPECIFICATIONS

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OWNER:

CITY OF WALTHAM
Waltham, Massachusetts

City of Waltham

Waltham, MA 02452

ARCHITECT:

MAGUIRE GROUP INC.
33 Commercial Street, Suite 1, Foxborough, Massachusetts 02035
Telephone: 508.543.1700; Facsimile: 508.543.5157

DOCUMENT 001113 – ADVERTISEMENT FOR BIDS

The City of Waltham, the Awarding Authority, invites sealed Bids from General Contractors for the Waltham Police Station Roof Replacement at the Waltham Police Department, according to the documents prepared by Maguire Group Inc.

The Project consists of stripping of existing roofing, insulation and accessories and replace with new. The work is estimated to cost \$170,000.00

General Bidders must be certified by the Division of Capital Asset Management for roofing construction.

Bids are subject to M.G.L. c.149, §44A-J and to minimum wage rates as required by M.G.L. c.149, §26 to §27D inclusive.

General Bids will be received until **10:00 a.m. on Thursday April 19, 2012**, at the address indicated below. All General Bids will be publicly opened at City Hall, Waltham, MA. After opening of Bids, Bids cannot be withdrawn until 60 days after opening. Bids delivered to:

Joseph Pedulla, MCPPO
Purchasing Department
Waltham City Hall
610 Main Street
Waltham, MA 02452

Mailed Bids should be sent to City of Waltham and received by the date and time specified above.

General Bids shall be accompanied by a Bid Deposit that is not less than five percent (5%) of the Bid Amount, made payable to the City of Waltham.

Bid Forms and Contract Documents will be available only on the City's Web Site at www.city.waltham.ma.us/open-bids or via e-mail request at jpedulla@city.waltham.ma.us

Bid Documents will not be mailed.

All Bidders shall visit the site and examine all Contract Documents before submitting Bids, to become thoroughly familiar with Documents and conditions under which work shall be performed. Neither the Awarding Authority nor the Architect will be responsible for errors, omissions, and/or changes for extra work arising from the Bidder's failure to familiarize themselves with the Contract Documents or existing conditions. By submitting a Bid, the Bidder agrees and warrants complete familiarity with conditions and requirements for the performance of the work of this Contract and that the Contract Documents are adequate to produce the required result.

A **Pre-Bid Conference will be held at 10:00 a.m. on Wednesday April 11, 2012** at the job site 155 Lexington Street, Waltham.

The Contract Documents may be seen, but not removed at:

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

Construction Market Data
75 Second Ave., Suite 320
Needham, MA 02494

City of Waltham

END OF DOCUMENT

DOCUMENT 002113 - INSTRUCTIONS TO BIDDERS

ARTICLE 1 - BIDDER'S REPRESENTATION

- 1.1 Each General Bidder (called the "Bidder"), by making a Bid (called "Bid") represents that:
- .1 The Bidder has read and understands the Contract Documents and the Bid is made in accordance therewith.
 - .2 The Bidder has visited the site and is familiar with the local conditions under which the work has to be performed.
- 1.2 Failure to examine the Contract Documents and site will not relieve Bidder from any obligation under the Bid as submitted.

ARTICLE 2 - GENERAL BIDDER'S CERTIFICATION

- 2.1 General Bids shall be submitted with the following:
- .1 A Certificate of Eligibility issued by the Division of Capital Asset Management (DCAM), DCAM Form CQ1, showing that the Bidder has been approved to bid on projects the size and nature of this project; and
 - .2 A Contractor Update Statement, DCAM Form CQ7.
- 2.2 It is the Bidder's responsibility to obtain the necessary forms from DCAM and make application in sufficient time for evaluation of the application and issuance of a Certificate of Eligibility before Bid.
- 2.3 The Contractor Update Statement is not a public record as defined in M.G.L. c.4, §7 and will not be open to public inspection.

ARTICLE 3 – MBE AND WBE PARTICIPATION – NOT APPLICABLE

ARTICLE 4 - REQUESTS FOR INTERPRETATION

- 4.1 Bidders shall promptly notify the Architect of any ambiguity, inconsistency, or error which they may discover on examination of the Contract Documents, the site, and local conditions.
- 4.2 Bidders requiring technical clarification or technical interpretation of the Contract Documents shall make a written request to the Architect.
- 4.3 Bidder shall refer all contractual questions to Joseph Pedulla, Purchasing Agent, Via E-Mail ONLY at Jpedulla@city.waltham.ma.us . Last day to submit question is Friday April 13, 2012 at 12 noon.
- All questions will be answered if requests are received six (6) calendar days before the date for receipt of the Bids.
- 4.4 Interpretation, correction, or change in the Contract Documents will be made by Addendum which will become part of the Contract Documents.

Neither the Awarding Authority nor the Architect will be held accountable for any oral instructions.

- 4.5 Addenda will be distributed by the Awarding Authority via e-mail to every individual or firm of record as having registered with the City..
- 4.6 Copies of Addenda will be made available for inspection at the locations listed in the Advertisement where Contract Documents are on file.

ARTICLE 5 - PREPARATION AND SUBMISSION OF BIDS

- 5.1 Bids shall be submitted on the "Form for General Bid," as furnished at no cost by the Awarding Authority.

The forms enclosed in the Project Manual may be extracted or used.

There will be no mailing of additional forms by the Architect.

Additional forms will be available at the location listed in the Advertisement.

- 5.2 All entries on the Bid form shall be made by typewriter or in ink.
- 5.3 Where so indicated on the Bid Form, sums shall be expressed in both words and figures. Where there is a discrepancy between the words and figures, the words will control.
- 5.4 If the requirement of Performance and Payment Bonds for Filed Subcontractors is left blank by the General Bidder on the Form for General Bid, the Awarding Authority shall interpret this as a "yes."

No increase in Contract Price will be allowed for providing these bonds.
- 5.5 Costs for subcontractor's bond premiums shall be paid by the General Contractor in accordance with M.G.L. c.149, §44F.
- 5.6 If the General Bidders are instructed to carry an amount for a given sub trade listed under Item 2, General Bidder's shall list the sub trade and amount provided by the Awarding Authority.

The line under "bonds required" on the General Bid Form shall be left blank or marked "N/A" in order for Subparagraph 5.7.2 to be applicable.
- 5.7 On solicitation of a subcontractor to perform the work required by the sub trade mentioned in Paragraph 5.6, the General Bidder's Contract Amount will be adjusted as follows:
 - .1 The difference between the Subcontract Amount and the amount carried in the Bid.
 - .2 The total cost of the Subcontractor's bonds, if the General Contractor requires bonds after the solicitation is completed and if the General Contractor complied with Paragraph 5.6.
 - .3 The costs for General Contractor's Bonds for the incremental difference between the amount carried and the actual solicited Subcontract Amount.

- 5.8 Overhead and Profit for supervision of the sub trade in question shall be included by all General Bidders in Item 1.

Additional overhead and profit is not allowed on the incremental difference as stated in M.G.L. c.149, §44F(4)(a)(2).

- 5.9 Sales Taxes shall not be included in Bid Amounts. The Awarding Authority is exempt from certain taxes. It is required that the Contractor and subcontractors purchasing taxable goods or services make suppliers of taxable goods or services aware of Awarding Authority's tax-exempt status. The Awarding Authority will furnish the necessary evidence and certificates of tax-exempt status to the Contractor at a Preconstruction Conference for use by all subcontractors and material suppliers.

- 5.10 Bid Deposits shall be five percent (5%) of the Bid Amount, including all Add-Alternates, made payable to the Awarding authority in the form of cash, certified check, treasurer's or cashier's check issued by a responsible bank or trust company, or a Bid Bond issued by a surety licensed to do business in the Commonwealth of Massachusetts, and conditioned on the faithful performance by the principal of the agreements contained in the Bid.

Bid Deposits of the three (3) lowest responsible and eligible General Bidders and Sub-Bidders will be retained until execution and delivery of the Owner/Contractor Agreement.

- 5.11 The General Bid, including the Bid Deposit, Certificate of Eligibility, and Update Statement shall be enclosed in a sealed envelope with the following plainly marked on the outside:

- .1 GENERAL BID FOR:
- .2 NAME OF AWARDING AUTHORITY AND PROJECT NUMBER AND/OR NAME
- .3 BIDDER'S NAME, BUSINESS ADDRESS, AND TELEPHONE NUMBER

- 5.12 Date and time for receipt of Bids is set forth in the Advertisement.

- 5.13 Timely delivery of a bid at the location designated shall be the full responsibility of the Bidder.

ARTICLE 6 – ALTERNATES – NOT APPLICABLE

ARTICLE 7 - WITHDRAWAL OF BIDS

- 7.1 Any Bid may be withdrawn before the designated Bid Opening date and time written request.

Written withdrawal of Bids must be confirmed over the Bidder's signature by written notice postmarked on or before the date and time set for receipt of Bids.

- 7.2 Withdrawn Bids may be resubmitted up to the time designated for the receipt of Bids.

ARTICLE 8 - CONTRACT AWARD

- 8.1 "Award" means the determination and selection of the lowest responsible and eligible Bidder by the Awarding Authority. The Awarding Authority will award the Contract to the lowest

responsible and eligible Bidder within thirty days (Saturdays, Sundays, and legal Holidays excluded) after the opening of Bids in accordance with M.G.L. c.149, §44A.

- 8.2 The Awarding Authority reserves the right to waive any informalities in or to reject any or all Bids if it be in the public interest to do so.
- 8.3 The Awarding Authority reserves the right to reject any Sub-Bid if it determines that such Sub-Bid does not represent the bid of a person competent to perform the work as specified, or if less than three Sub-Bids are received for a sub trade, or if bid prices are not acceptable without further competition.
- 8.4 The Contract will be awarded to the lowest responsible and eligible Bidder, except in the event of substitution as provided under M.G.L. c.149, §44E and §44F, in which case the procedure as required by said Sections shall govern the award of the Contract.
- 8.5 As used, the term "lowest responsible and eligible Bidder" shall mean the General Bidder whose bid is the lowest of those Bidders demonstrably possessing the skill, ability, and integrity necessary for the faithful performance of the work, and who meets the requirements for Bidders set forth in M.G.L. c.149, §44A through J, and is not debarred from bidding under M.G.L. c.149, §44C; and who shall certify that it is able to furnish labor that can work in harmony with all other elements of labor employed or to be employed on the work.
- 8.6 The Awarding Authority will not enter into a Contract with a General Bidder that is a foreign corporation until such foreign corporation has filed a certificate from the State Secretary for the Commonwealth with the Awarding Authority, stating that such corporation has complied with M.G.L. c.181, §3 and 5 and the date of such compliance. See also requirements of M.G.L. c.30, §39L.
- 8.7 The contract is subject to the appropriation of funds by the City.

ARTICLE 9 - FORMS REQUIRED AT CONTRACT APPROVAL

- 9.1 On award, the General Bidder shall complete the following forms to ensure prompt contract validation. These forms will be provided to the General Contractor by the Awarding Authority.

Submit three (3) originals of each.

- .1 Owner/Contractor Agreement and Form of Corporate Vote.
- .2 Form of Contractor's Equal Employment Certification in accordance with Article 13 of the Supplementary Conditions; or Form of Subcontractor's Equal Employment Certification in accordance with Article 13 of the Supplementary Conditions.
- .3 Form of Performance Bond and Form of Payment Bond must be submitted by the General Contractor on the Awarding Authority's Form, in accordance with Article 11 of the General Conditions. The dates on the bonds must coincide with the contract date, and a current Power-of-Attorney must be attached to each bond.
Performance and Payment Bonds must also be submitted for all Filed Subcontractors, if required by the General Contractor on its Form for General Bid, in the total amount of the Subcontract payable to the General Contractor.

- .4 Insurance Certificates for the General Contractor and all Filed Subcontractors are required and must be submitted in accordance with Article 11 of the General Conditions. General Contractors must indicate on Builders' Risk Insurance if Stored Materials is covered.
- .5 Form of Estimated Progress Payment Schedule is to be submitted at the time the Contractor submits its Contract Forms. This information is necessary to provide for prompt processing of payments.
- .6 Statement of Management on Internal Accounting Controls and a Statement prepared by a Certified Public Accountant expressing an opinion as to the state of Management Controls, as required by M.G.L. c.30, §39R.
 - .1 This applies to General Contractors; and
 - .2 This applies to Contracts of \$100,000.00 or more.

END OF DOCUMENT

DOCUMENT 004113 - BID FORM – STIPULATED SUM

TO THE AWARDING AUTHORITY

A. The Undersigned proposes to furnish all labor and materials required for the City of Waltham called the Awarding Authority, according to the Contract Documents prepared by Maguire Group Inc. for Waltham Police Station Roof Replacement at the Waltham Police Station, Waltham, Massachusetts for the Contract Price specified below, subject to Additions and Deductions according to the terms of the Specifications.

B. This Bid includes Addenda Number(s):

ADDENDUM NUMBER	DATE	ADDENDUM NUMBER	DATE

C. The proposed Contract Price is:

_____ Dollars
(words)

\$ _____
(figures)

D. The subdivision of the proposed Contract Price is as follows:

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

TOTAL OF ITEM 1: \$.

2. ITEM 2: Sub-Bids as Follows: N/A

TOTAL OF ITEM 2: \$.

3. GRAND TOTAL (ITEM 1 AND ITEM 2): \$.

E. The Undersigned agrees that each of the above named Sub-Bidders will be used for the work indicated, at the amount stated, unless a substitution is made. The Undersigned agrees to pay the premiums for the Performance and Payment Bonds furnished by Sub-Bidders as requested, and that all of the cost of all such premiums is included in the amount set forth in Item 1 of this Bid.

- F. The Undersigned agrees that, if 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 filed with the Awarding Authority by another Sub-Bidder for the sub trade against whose standing and ability the Undersigned makes no objection; and that the Undersigned will use all such 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 they had been originally named in this General Bid, the total Contract Price being adjusted to conform thereto.
- G. The Undersigned agrees that, if selected as General Contractor, it will, within five days (Saturdays, Sundays, and legal Holidays excluded) after presentation by the Awarding Authority, execute a Contract according to the terms of this Bid and furnish a Performance Bond and a Labor and Materials or Payment Bond, each of a surety company qualified to do business under the laws of the Commonwealth and satisfactory to the Awarding Authority and each in the Sum of the Contract Price, the premiums for which are to be paid by the General Contractor and are included in the Contract Price.
- H. The Undersigned hereby certifies it can furnish labor, that it can work in harmony with all other elements of labor employed or to be employed on the work, and that it will comply fully with all laws and regulations applicable to awards made subject to M.G.L. c.149, §44A.
- I. The Undersigned certifies under the penalties of perjury that this Bid is in all respects bona fide, fair, and made without collusion or fraud with any other person. As used in this Subsection the word "person" shall mean natural person, joint venture, partnership, corporation, or other business or legal entity.
- J. The Undersigned certifies under penalty of perjury that it is not currently debarred from doing public construction work in the Commonwealth under the provisions of M.G.L. c.29, §29F, or any other applicable debarment provisions of any other chapter of the General Laws, or any rule or regulation promulgated thereunder.
- K. The Undersigned agrees and warrants that complete familiarization with the Contract Documents and existing conditions has been achieved for the submission of this Bid and the performance of the work of this Contract and that the Contract Documents are adequate to produce the required result.

(Name of General Bidder)

(Signature and Title of
Person Signing Bid)

(Business Address)

(City, State, and Zip Code)

(Telephone Number)

Date:

(Facsimile Number)

(called the Bidder, which is):

check one of the following:

- a corporation, organized and existing under the laws of the State of _____ and
duly authorized to sign for the corporation as evidenced by Document 006100.
- a partnership.
- an individual
- a joint venture (each joint venture shall sign).

The manner of signing for each individual, partnership, or corporation that is part of the joint
venture shall be indicated and evidenced as before.

Note: If the General Bidder is a corporation, indicate state of incorporation under signature and affix corporate seal and complete the following information for items (a) through (c); if a partnership, give full names and residential addresses if different from business addresses.

(a) Place of Business of the Corporation:

Address

City, State, Zip Code

(b) The Power of Attorney Required by M.G.L. c.181, §3 was filed on:

(c) The Certificate and copy of its Charter, Article, or Certificate of Incorporation Required by M.G.L. c181, §5 were filed on:

(d) Corporate Seal:

END OF DOCUMENT

DOCUMENT 005100 - NOTICE OF AWARD

This Agreement made the _____ day of _____, 20____, by and between the City of Waltham, Massachusetts, called the "Awarding Authority," and _____, called the "Contractor."

Witnesseth, that the Awarding Authority and the Contractor, for the consideration named, agree as follows:

1. Article 1. Scope of Work: The Contractor shall perform all work required by the Contract Documents for Waltham Police Station Roof Replacement prepared by Maguire Group Inc., acting and referred to in the Contract Documents as the "Architect."
2. Article 2. Time of Completion: The Contractor shall begin work under this Contract on the date specified in the written "Notice to Proceed" of the Awarding Authority and shall bring the work to Substantial Completion within 30 days. Damages for delays in the performance of the work shall be in accordance with Articles 8 and 9 of the Supplementary Conditions.
3. Article 3. Contract Sum: The Awarding Authority shall pay the Contractor, in current funds, for the performance of the work, subject to Additions and Deductions by Change Order, the Contract Sum of:

_____ Dollars
(words)

\$ _____
(figures)

The Contract Sum is subdivided as follows:

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

_____ Dollars
(words)

\$ _____
(figures)

4. Article 4. The Contract Documents:

The following, together with this Agreement, form the Contract and all are as fully a part of the Contract as if attached to this Agreement or herein repeated: the Advertisement, Bidding Documents, Contract Forms, Conditions of the Contract, and Specifications as enumerated in the Table of Contents, the Drawings as enumerated in the List of Contract Drawings, and all Modifications issued after execution of the Contract.

Terms used in this Agreement which are defined in the Conditions of the Contract shall have the meanings designated in those Conditions.

5. Article 6. REAP Certification: Pursuant to M.G.L. c62(c), §49(a), the individual signing this Contract on behalf of the Contractor certifies, under the penalties of perjury, that, to the best of his/her knowledge and belief, the Contractor has complied with any and all applicable state tax laws.
6. Article 7. Performance: The work performed under this Contract shall be rendered in conformity with the standards of the trade and shall be professional and of the highest fabrication and installation quality in all respects. Substandard fabrication and installation quality shall be deemed a breach of this Contract.
7. Article 8. Compliance: This Contract shall be construed in accordance with and shall be governed by the laws of the Commonwealth of Massachusetts. Any Contract provision inconsistent with state law shall be given no force or effect. In the event that a provision is deemed to be unlawful, it shall be severed from the Contract, and at the option of the Awarding Authority, the balance of the provision and/or Contract shall continue in full force and effect.
8. Article 9. Executive Order 195: The Governor, the Awarding Authority or Governor's designee, the Secretary of Administration and Finance, and the state Auditor or Auditor's designee shall have the right at reasonable times and on reasonable notice to examine the books, records, and other compilations of data of the Contractor which pertain to the performance of the provisions and requirements of this Contract.
9. The Awarding Authority shall have the right to examine the books.
10. Article 10. Contributions: I hereby certify, under the penalties of perjury, that, within the meaning of M.G.L. c151A, §19A, has complied with all Commonwealth of Massachusetts laws relating to contributions and payments instead of contributions.

In witness whereof, the Parties have caused this Instrument to be executed under seal.

_____ (Name of Contractor)		_____ (Awarding Authority)
(Address)		(Name and Title)
By:		
(Name and Seal)		(Seal)
Witness: _____		Attest: _____

Note: If Contractor is a corporation, attach a notarized copy of the Certificate of Corporate Vote of Authorization authorizing Signatory to sign Contract.

END OF DOCUMENT

DOCUMENT 006110 - CERTIFICATE OF CORPORATE VOTE OF AUTHORIZATION

, 20

PROJECT: WALTHAM POLICE STATION ROOF REPLACEMENT
WALTHAM POLICE STATION
PROJECT LOCATION: WALTHAM, MASSACHUSETTS
AWARDING AUTHORITY: CITY OF WALTHAM, MASSACHUSETTS

I hereby certify that, at a meeting of the Board of Directors of the _____, duly called and held at _____ on the _____ day of _____, 20____, when a quorum was present and acting, the Board voted that _____ of the _____, be, and is, authorized to execute and deliver for and on behalf of the Corporation a Contract with the General Contractor as a Filed Sub-Bidder (Subcontractor) for the construction of the above Project and, as Principal, execute a Performance and Payment Bond for this Project, of which Contract and Bond were presented to and made a part of the records of said meeting.

I further certify that:

_____ is duly qualified and acting:
of the Corporation and that said vote has not been repealed, rescinded, or amended.

A true copy of the record,

ATTEST:

(Corporate Seal)

Subscribed and Sworn to this _____ day of _____ before me:

(Notary Public)

My Commission Expires:

END OF DOCUMENT

DOCUMENT 006120 - FORM OF CONTRACTOR'S EQUAL EMPLOYMENT CERTIFICATION

PROJECT: WALTHAM POLICE STATION ROOF REPLACEMENT
WALTHAM POLICE STATION
PROJECT LOCATION: WALTHAM, MASSACHUSETTS
AWARDING AUTHORITY: CITY OF WALTHAM, MASSACHUSETTS

This Form must be completed and submitted by the Contractor before signing the Awarding Authority-Contractor Agreement.

(Name and Address of Contractor)

Certifies that it:

1. Intends to use the following listed construction trades in the work under this Contract:

2. Will comply with the minority work force ratio and specific affirmative action steps contained herein; and
3. Will obtain from each of its Subcontractors and submit to the Awarding Authority before the award of any Subcontract under this Contract the Subcontractor's Certification.

(Signature of Authorized Contractor's Representative)

Date

(Name and Title)

END OF DOCUMENT

DOCUMENT 006130 - CONTRACTOR'S PERFORMANCE BOND

PROJECT: WALTHAM POLICE STATION ROOF REPLACEMENT
WALTHAM POLICE STATION
PROJECT LOCATION: WALTHAM, MASSACHUSETTS
AWARDING AUTHORITY: CITY OF WALTHAM, MASSACHUSETTS

KNOW ALL PERSONS BY THESE PRESENTS:

That we,
as Principal, and

Surety, are held and firmly bound unto the Awarding Authority, as Obligee, in the sum of _____ Dollars

(words)
\$ _____ (figures)

to be paid to the Obligee, for which payments, well and truly to be made, we bind ourselves, our respective heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

Whereas, the said Principal has made a Contract with the Obligee, bearing the date of _____, 20 ____, for the construction of the Project.

The condition of this obligation is such that if the Principal and all Subcontractors under said Contract shall well and truly keep and perform all the undertakings, covenants, agreement, terms, and conditions of said Contract on its part to be kept and performed during the original term of said Contract and any extensions that may be granted by the Obligee, with or without notice to the Surety, and during the life and any guarantee required under the Contract, and shall also well and truly keep and perform all the undertakings, covenants, agreements, terms, and conditions of all duly authorized modifications, alterations changes or additions to said Contract that may be made, notice to the Surety of such modifications, alterations, changes or additions being hereby waived, then this obligation shall become void; otherwise, it shall remain in full force and virtue.

In the event that the Contract is abandoned by the Principal, or in the event that the Obligee, under the provisions of Article 14 of the Supplementary Conditions of said Contract ends the employment of the Principal or the authority of the Principal to continue the work, said Surety hereby further agrees that it shall, if requested in writing by the Obligee, take action as is necessary to complete said Contract.

In witness whereof, the Principal and Surety have set their hands and seals this ____day of _____ 20__

PRINCIPAL	SURETY
(Name and Seal)	(Attorney-in-Fact - Seal)
(Title)	
Attest:	Attest:

The rate for this Bond is ____ % for the first \$ _____ and ____ % for the next \$ _____ .

The total Premium for this Bond is \$ _____ .

END OF DOCUMENT

DOCUMENT 006140 - CONTRACTOR'S PAYMENT BOND

PROJECT: WALTHAM POLICE STATION ROOF REPLACEMENT
WALTHAM POLICE STATION
PROJECT LOCATION: WALTHAM, MASSACHUSETTS
AWARDING AUTHORITY: CITY OF WALTHAM, MASSACHUSETTS

KNOW ALL PERSONS BY THESE PRESENTS:

That we,

as Principal, and

Surety, are held and firmly bound unto the Awarding Authority, as Obligee, in the sum of

Dollars

(words)

\$

(figures)

to be paid to the Obligee, for which payments, well and truly to be made, we bind ourselves, our respective heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

Whereas, the said Principal has made a Contract with the Obligee, bearing the date of _____, 20____, for the construction of the Project.

The conditions of this obligation are such that, if the Principal and all Subcontractors under said Contract shall pay for all labor performed or furnished and for all materials used or employed in said Contract and in all duly authorized modifications, alterations, extensions of time, changes, or additions to said Contract that may be made, notice to the Surety of such modifications, alterations, extensions of time, changes, or additions being hereby waived, the foregoing to include any other purposes or items set out in, and to be subject to, provisions of M.G.L. c.30, §39A, and M.G.L. c.149, §29, as amended, then this obligation shall become void; otherwise, it shall remain in full force and virtue.

In witness whereof, the Principal and Surety have set their hands and seals this ___ day of _____20____.

PRINCIPAL	SURETY
(Name and Seal)	(Attorney-in-Fact - Seal)
(Title)	
Attest:	Attest:

The rate for this Bond is ____% for the first \$ _____ and ____% for the next \$ _____.
The total Premium for this Bond is \$ _____.

END OF DOCUMENT

DOCUMENT 006300 - STATEMENT OF STATE TAX COMPLIANCE

PROJECT: WALTHAM POLICE STATION ROOF REPLACEMENT
WALTHAM POLICE STATION
PROJECT LOCATION: WALTHAM, MASSACHUSETTS
AWARDING AUTHORITY: CITY OF WALTHAM, MASSACHUSETTS

Pursuant to Chapter 62C of Massachusetts General Laws, Section

49A (b), I, _____
(Name and Title), authorized signatory for

(Contracting Party),

whose principal place of business is

(Street Address, City/Town, State)

do hereby certify under the pains and penalties of perjury that Contracting Party has complied with all laws of the Commonwealth of Massachusetts relating to taxes.

(Authorized Signature)

END OF DOCUMENT

DOCUMENT 006340 - NON-COLLUSION AFFIDAVIT

Contract/Bid Number: _____

State of _____

County of _____

I state that I am _____
(Title)

of _____ (Name of Corporation) and that I am authorized to make this Affidavit on behalf of firm and its owners and officers. I am the person responsible in firm for the price(s) and the amount of this Bid.

I state that:

1. The price(s) and amount of this Bid have been arrived at independently and without consultation, communication, or agreement with any other contractor, bidder, or potential bidder.
2. Neither the price nor the amount of this Bid, and neither the approximate price(s) nor approximate amount of this Bid, have been disclosed to any other firm or person who is a bidder or potential bidder, and they will not be disclosed before Bid opening.
3. No attempt has been made or will be made to induce any firm or person to refrain from bidding on this Contract, or to submit a Bid higher than this Bid, or to submit any intentionally high or noncompetitive Bid or other form of complementary Bid.
4. The Bid of my firm is made in good faith and not pursuant to any agreement or discussion with, or inducement from, any firm or person to submit a complementary or other noncompetitive Bid.
5. _____ (Name of Firm), its affiliates, subsidiaries, officers, directors, and employees are not currently under investigation by any governmental agency and have not in the last four years been convicted or found liable for any act involving conspiracy or collusion prohibited by state or federal law in any jurisdiction with respect to bidding on any public contract except as follows:
6. I state that _____ (Name of Firm) understands and acknowledges that the above representations are materials and important, and will be relied on by Awarding Authority in awarding the contract(s) for which this Bid is submitted. I understand and my firm understands that any misstatement in this Affidavit is and shall be treated as fraudulent concealment from Awarding Authority of the true facts relating to the submission of Bids for this Contract.

Name and Company Position

SWORN TO AND SUBSCRIBED BEFORE ME THIS ___ day of _____, 20__.

_____ (Notary Public)

My Commission Expires:

Notary Public Seal:

END OF DOCUMENT

DOCUMENT 007000 - GENERAL CONDITIONS

PART 1 - GENERAL

1.1 DESCRIPTION

- A. AIA Document A201, General Conditions of the Contract for Construction, Fifteenth Edition, 1997, 44 pages.
- B. Document is amended as per Article 008110 bound as part of this Project Manual.

END OF DOCUMENT

DOCUMENT 008110 - SUPPLEMENTARY CONDITIONS

PART 1 - GENERAL

1.1 GENERAL CONDITIONS

- A. Standard Form: The General Conditions of the Contract forming a part of the Contract Documents and these Specifications consists of AIA Document A201, 1997 Edition.
 - 1. When any Article, Section, or Subsection in the General Conditions is supplemented as provided herein, the provisions of the Article, Section, or Subsection shall remain in effect and the supplemental provisions shall be considered added hereto.
 - 2. When any Article, Section, or Subsection in the General Conditions is amended, deleted, or superseded as hereinafter provided, the provisions of the Article, Section, or Subsection not so amended, deleted, or superseded shall remain in effect.
- B. Modifications and Additions: Where Contract Documents refer to General Conditions; such reference shall be interpreted to include Supplementary Conditions.

1.2 REFERENCE TO DIVISION 01

- A. Where provisions of General Requirements relate to Project administrative or work-related requirements of the Contract, those paragraphs are deleted from General Conditions, and are specified in Division 01, General Requirements of the Specifications.

1.3 ARTICLE 1; GENERAL PROVISIONS

- A. 1.1 BASIC DEFINITIONS (Make the following changes in wording to Subparagraph 1.1.1):
 - 1.1.1 In the third sentence delete the words "Unless specifically enumerated in the Agreement," and the word "not".
- B. 1.2 CORRELATION AND INTENT OF THE CONTRACT DOCUMENTS (Add the following Clauses 1.2.1.1, 1.2.1.2, 1.2.1.3, 1.2.1.4, and 1.2.1.5 to Subparagraph 1.2.1, add the following at the end of Subparagraph 1.2.1, add the following at the end of Subparagraph 1.2.2, and add new Subparagraphs 1.2.4 through 1.2.11 to follow Subparagraph 1.2.3):
 - 1.2.1 If conflicts or discrepancies occur in the Contract Documents, interpretations will be based on the following priorities:
 - 1.2.1.1 Awarding Authority-Contractor Agreement.
 - 1.2.1.2 Addenda, with those of later date having precedence over those of earlier date.
 - 1.2.1.3 The Supplementary Conditions.
 - 1.2.1.4 The General Conditions of the Contract for Construction.
 - 1.2.1.5 Drawings and Specifications.
 - For an inconsistency between Drawings and Specifications or within either Document not clarified by Addendum, the better quality or greater quantity of work shall be provided according to the Architect's interpretation.

- 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. Should the Drawings or the Specifications disagree in themselves or with each other, the Contractor shall provide the better quality or greater quantity of Work unless otherwise directed by written addendum to the Contract.
- 1.2.2 The performance of subcontract work shall comply with the provisions of Chapter 149 of the General Laws of the Commonwealth of Massachusetts (M.G.L.). The Contractor and all subcontractors shall refer to all of the Drawings, including those showing primarily the Work of specialized trades, and to all of the Sections of the Specifications, and shall perform all Work reasonably inferable therefrom as being necessary to produce the indicated results except sections designated for filed sub-bids.
- 1.2.4 All indications or notations which apply to one of a number of similar situations, materials or processes shall be deemed to apply to all such situations, materials or processes wherever they appear in the Work, except where a contrary result is clearly indicated by the Contract Documents.
- 1.2.5 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 revision prior to the date of receiving bids, except where otherwise indicated.
- 1.2.6 Where no explicit quality or standards for materials or workmanship are established for Work, such Work is to be of good quality for the intended use and consistent with the quality of the surrounding Work and of the construction of the Project generally.
- 1.2.7 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.
- 1.2.11 Where the Work is to fit with existing conditions or work to be performed by others, the Contractor shall fully and completely join the Work with such conditions or work, unless otherwise specified.
- C. 1.5 EXECUTION OF CONTRACT DOCUMENTS (Make the following changes in wording to Subparagraph 1.5.2):
- 1.5.2 Delete the word "generally" in line 2.
- D. 1.6 OWNERSHIP AND USE OF DRAWINGS, SPECIFICATIONS AND OTHER INSTRUMENTS OF SERVICE

All Drawings, Specifications and copies thereof furnished by the Owner are and shall remain the Owner's property. They are to be used only with respect to this Project and are not to be used on any other project without the prior written consent of the Owner. With the exception of one contract set for each party to the Contract, such documents are to be returned or suitably accounted for to the Owner at the completion of the Work. Submission or distribution to meet official regulatory requirements or for other purposes in connection with the Project is not to be construed as publication in derogation of any reserved rights.

1.4 ARTICLE 2; OWNER

- A. 2.1 GENERAL (Add the following to the end of Subparagraph 2.1.1, delete Subparagraph 2.1.2 in its entirety):
The term "Owner," also called the "Awarding Authority," means the entity identified in the Owner-Contractor Agreement, organized and existing under the provisions of M.G.L.
- B. 2.2 INFORMATION AND SERVICES REQUIRED OF THE OWNER (Make the following changes in wording to Subparagraphs 2.2.1, 2.2.3, 2.2.4, and 2.2.5):
- 2.2.1 Delete the second and third sentences.
- 2.2.3 In the first line of subparagraph 2.2.3 insert the word "available" after the word "furnish".
- Delete all text after the word "Owner" in line 3 and insert the following:
- "except to the extent that the Contractor's review thereof reveals, or in the exercise of reasonable diligence should have revealed, any inaccuracy or incompleteness therein. The Contractor shall exercise proper precautions relating to the safe performance of the Work."
- 2.2.4 Delete the second sentence.
- 2.2.5 In the second line of subparagraph 2.2.5 delete the word "such" and insert "no. of contracts to be provided by Contractor".
- Add the following to the end of subparagraph 2.2.5:
", all additional copies will be furnished upon request at the cost of reproduction."
- C. 2.3 OWNER'S RIGHT TO STOP THE WORK (Make the following changes in wording to Subparagraph 2.3.1):
Add the following to the end of Subparagraph 2.3.1:
- "The Contractor shall resume the Work after such stoppage promptly upon written notice to do so from the Owner. If such stoppage is required through no fault of the Contractor, the Contract Time (and the dates for achieving Substantial Completion and Final Completion) shall be extended by a period equal to the period of the stoppage."
- D. 2.4 OWNER'S RIGHT TO CARRY OUT THE WORK (Make the following changes in wording to Subparagraph 2.4.1):
- 2.4.1 Delete the following words in Subparagraph 2.4.1 beginning in line four:
- "the Owner may after such seven-day period give the Contractor a second written notice... fails to commence and continue to correct any deficiencies,"
- Delete the fourth Sentence.

1.5 ARTICLE 3; CONTRACTOR

- A. 3.2 REVIEW OF CONTRACT DOCUMENTS AND FIELD CONDITIONS BY CONTRACTOR (Make the following changes in wording to Subparagraph 3.2.1 and add Subparagraph 3.2.4 to follow Subparagraph 3.2.3):
- 3.2.1 Delete the second Sentence of Subparagraph 3.2.1.
- 3.2.2 Insert a period after the word "Architect" in line 2, delete the balance of Subparagraph 3.2.2 and substitute the following:
"The Contractor shall not be liable to the Owner or Architect for damage resulting from errors, inconsistencies or omissions in the Contract Documents, but shall be liable for damage to the extent he reasonably should have, but failed to, discover such error, inconsistency or omission. If the Contractor performs any construction activity knowing it involves a recognized error, inconsistency or omission in the Contract Documents without such notice to the Architect, the Contractor shall assume appropriate responsibility for such performance and shall bear an appropriate amount of the attributable costs for such correction.
- 3.2.3 Delete the third Sentence.
- 3.2.4 Any claim by the Contractor or Subcontractors that, in submitting their respective bids, they did not include all items as shown in the Contract Documents, will be given no consideration for an adjustment of any kind. If any item is specified in a Section which would not normally furnish this items it shall be the responsibility of the Contractor to coordinate the situation with the Subcontractor, and if the item under consideration is not to be provided by the Subcontractor it shall be the responsibility of the Contractor to provide the work in question, without any additional cost to the Owner.
- B. 3.3 SUPERVISION AND CONSTRUCTION PROCEDURES (Make the following changes in wording to Subparagraphs 3.3.1 and 3.3.2, add the following Subparagraphs 3.3.4, 3.3.5, and 3.3.6):
- 3.3.1 Add the following to the end of the first Sentence in Subparagraph 3.3.1:

"which shall not be less than such state of skill and attention generally rendered by the contracting profession for projects similar to the Project in scope, difficulty and location."
- 3.3.2 Delete the last Sentence.
Add the following to the end of Subparagraph 3.3.2:

"This obligation shall also extend to the presence on the Site of suppliers of materials or equipment, their employees, contractors, and agents engaged in the Work."
- 3.3.4 The Contractor shall perform all necessary cutting, coring, drilling, grouting, and patching required to fit together the several parts of the work, except as may be specifically noted otherwise under any particular Filed Sub-Bid Section of the Specifications.

- 3.3.5 The Contractor shall perform engineering required for establishing grades, lines, levels, dimensions, layouts, and reference points for the trades; be responsible for maintaining bench marks and other survey marks; and shall replace any disturbed or destroyed bench or other survey marks.
- 3.3.6 Working Hours: Unless otherwise required by the Contract Documents, or directed in writing by the Architect, work shall be performed during regular working hours.
- 3.3.6.1 If the Contractor wants to perform work outside regular working hours or on Saturdays, Sundays, or Massachusetts holidays, the Contractor shall allow ample time for arranging for inspecting the work in progress and shall bear the costs of the inspection. The Owner shall bill the Contractor directly for inspection costs.
- 3.3.6.2 Work done outside regular working hours without the consent or knowledge of the Architect shall be subject to additional inspection and testing as directed by the Architect. The cost of additional inspection and testing shall be paid by the Contractor, whether or not the work is acceptable.
- C. 3.4 LABOR AND MATERIALS (Add the following Subparagraphs 3.4.4, 3.4.5, 3.4.6, 3.4.7, 3.4.8, 3.4.9, 3.4.10, 3.4.11, 3.4.12, and 3.4.13):
 - 3.4.4 After the Contract has been executed, the Owner and Architect will consider a formal request for the substitution of products instead of those specified only under the conditions set forth in the General Requirements (Division 01 of the Specifications). Three (3) or more named products or manufacturers are governed by requirements of Section 016000. Products or manufacturers not named in the Specifications when other products or manufacturers are named are governed by requirements of "or equal" submissions and shall be processed according to the requirements of Section 01631. Where performance information is specified with no products or manufacturers named, comply with requirements of Section 016000 for product selection.
 - 3.4.5 By making requests for substitutions based on Subparagraph 3.4.4 above, the Contractor:
 - 3.4.5.1 represents that the Contractor has personally investigated the proposed substitute product and determined that it is equal or superior in all respects to that specified;
 - 3.4.5.2 represents that the Contractor will provide the same warranty for the substitution that the Contractor would for that specified;
 - 3.4.5.3 certifies that the cost data presented is complete and includes all related costs under this Contract except the Architect's redesign costs, and waives all claims for additional costs related to the substitution that subsequently become apparent; and
 - 3.4.5.4 will coordinate the installation of the accepted substitute, making changes required for the work to be complete in all respects.
 - 3.4.6 Or Equal Submissions/Substitutions:
 - 3.4.6.1 Except where a product has been specified as a proprietary material, the words "or equal" are understood to follow the name of any maker, vendor, or product specified to be used in the Contract Documents. Submission of an "or equal" product under these requirements is governed by requirements of Section 01631 and is subject to rejection if requirements are not followed.

- 3.4.6.2 To determine whether materials or articles proposed by the Contractor are equal to those specified, the Architect shall review the manufacturer's data submitted according to requirements of Section 01631 for the materials or articles proposed against the manufacturer's data of the specified materials or articles, both types of manufacturer's data being submitted by the Contractor, to ascertain whether the proposed materials or articles are at least equal in quality, durability, appearance, strength and design to the material or articles named or described, and whether they will perform at least equally the functions imposed by the design. See M.G.L. c.30 §39M.
- 3.4.6.3 The Contractor shall be responsible for providing the Architect with all information and test results, submitted according to requirements of Section 01631, the Architect requires to determine if a material is equal to a material named or described in the Contract Documents.
- 3.4.6.4 Whenever the Contractor submits a material for approval as a substitute for a material named or described in the Contract Documents according to requirements of Section 01631, such submission shall be made at least thirty (30) days before the date the materials will be used on the Project. In no event shall the Contractor maintain a claim for delays based on the Architect's review of such substituted materials if the Contractor has failed to comply with the thirty (30) day submission requirement.
- 3.4.7 Rejection of Defective Materials: The Architect may reject materials if the Architect determines that such materials do not conform to the Contract Documents. No rejected materials, the defects of which have been subsequently corrected, shall be used in the work except with the permission of the Architect. No extra time shall be allowed for completion of the work due to the rejection of nonconforming materials.
- 3.4.8 Rejection of Defective Work: The Architect's inspection of the work shall not relieve the Contractor of its responsibilities to fulfill the Contract obligations, and all defective work shall be corrected. Unsuitable work may be rejected by the Architect, whether or not such work and materials have been previously overlooked or misjudged by the Architect and accepted for payment. If the work or any part of the work shall be found defective any time before the final acceptance of the whole work, the Contractor shall immediately correct such defect satisfactory to the Architect. If any material brought on the site for use in the work, or selected for use in the work, shall be rejected by the Architect as unsuitable or nonconforming with Contract requirements, the Contractor shall immediately remove such materials from the vicinity of the work.
- 3.4.9 Materials Attached or Affixed to the Work: Nothing in this Contract shall be construed as vesting in the Contractor any right of property in the materials used after they have been attached or affixed to the work or the soil; but all such materials shall, on being so attached or affixed, become the property of the Owner.
- 3.4.10 Debris, Chemical Waste:
- 3.4.10.1 The Contractor shall not permit the accumulation of debris, both exterior and interior. The work area shall always be kept satisfactorily clean. The Contractor shall remove debris from the work site and dispose of it at any private or public dump the Contractor may choose. The Contractor shall arrange for and obtain any approvals necessary from the owners or officials

- in charge of such dumps and shall bear all cost, including fees resulting from such disposal.
- 3.4.10.2 Garbage shall be removed daily.
- 3.4.10.3 No open fire shall be permitted on site.
- 3.4.10.4 Chemical waste shall be stored in corrosion- resistant containers, removed from the Project site, and disposed of not less frequently than monthly unless directed otherwise. Disposal of chemical waste shall be according to requirements of the Environmental Protection Agency (EPA) and the Department of Environmental Protection (DEP).
- 3.4.10.5 Fueling and lubricating of vehicles and equipment shall be conducted to afford the maximum protection against spills and evaporation. Lubricants to be discarded or burned shall be disposed of according to approved procedures meeting all applicable federal, state, and local regulations. In case of an oil or hazardous materials spill large enough to violate federal, state, or applicable local regulations, the Architect shall be notified immediately. The Contractor shall be responsible for immediately cleaning up any oil or hazardous waste spills resulting from its operations, Any costs incurred in cleaning up any such spills shall be borne by the Contractor.
- 3.4.11 Site and Weather Protection:
- 3.4.11.1 The Contractor shall take necessary precautions during the execution of work involving demolition not to disturb or damage any existing structures, landscaping, walks, roads, or other items scheduled to remain. The Contractor shall restore any damaged items to original condition as directed by the Architect. The Contractor shall provide and erect acceptable barricades, fences, signs, and other traffic devices to protect the work from traffic and the public as necessary and as required by the Massachusetts Building Code.
- 3.4.11.2 The Contractor shall install weather protection and provide adequate heat in the protected areas from November 1 to March 31 as required by M.G.L. c.149, §44G.
- 3.4.12 Archaeological and Historical Resources: All items having any apparent historical or archaeological interest discovered during any construction activities shall be carefully preserved and reported immediately to the Architect for determination of appropriate actions to be taken.
- 3.4.13 Safety Requirements:
- 3.4.13.1 The Contractor must comply with all federal, state, and local safety laws and regulations of the applicable authority to work performed under this Contract.
- 3.4.13.2 If the Contractor uses or stores toxic or hazardous substances it is subject to M.G.L. c.111F, the "Right to Know" law and regulations promulgated by the Department of Public Health, 105 CMR 670, the Department of Environmental Quality Engineering, 310 CMR 33, and the Department of Labor and Industries, 441 CMR 21; and must post a Workplace Notice obtainable from the Department of Labor and Industries.
- 3.4.13.3 The Contractor must comply with Dig-Safe Laws. Dig-Safe is the Utility Underground Plant Damage Prevention System, 111 South Bedford Road, Burlington, MA 01803, 1.800.322.4844. The Contractor shall notify Dig-Safe of contemplated excavation, demolition, or explosive work in public or private ways, and in any utility company right of way or easement, by

certified mail, with a copy to Department of Environmental Protection (DEP). This notice shall be given at least 72 hours before the work, but not more than sixty days before the work is to be done. Such notice shall state the name of the street or the route number of the way and an accurate description of the location and nature of the proposed work. Dig-Safe is hired to respond to the notice within 72 hours of receipt by designating the location of pipes, mains, wires, or conduits at the site. The Contractor shall not commence work until Dig-Safe has responded. The work shall be performed with reasonable precautions taken to avoid damage to utilities under the surface at the work location. The Contractor shall maintain current Dig-Safe regulations and copy of M.G.L. c.82, §40 on Project site. Any costs related to the services performed by Dig-Safe shall be borne by the Contractor.

3.4.13.4 This project is subject to compliance with Public Law 92-596 "Occupational Safety and Health Act of 1970"(OSHA) with respect to all rules and regulations concerning construction, U.S. Code Title 29, §651 et seq. including Volume 36, numbers 75 and 105, of the Federal Register as amended, published by the U.S. Department of Labor.

3.4.13.5 If this Project requires the containment or removal of asbestos or material containing asbestos, the Contractor shall ensure that the person or company performing the asbestos related services is licensed pursuant to applicable state laws and regulations.

D. 3.5 WARRANTY (make the following changes in wording to Subparagraph 3.5.1 and add Subparagraphs 3.5.2 through 3.5.8 to follow Subparagraph 3.5.1):

3.5.1 Add the following to the end of the first Sentence of Subparagraph 3.5.1:

"and, promptly after written notification of non-conformance, shall be repaired or replaced by the Contractor with Work conforming to such requirements."

3.5.2 Insert the word "or" after "maintenance" in line 8 and delete the balance of the second Sentence after "operation" in line 8.

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.
- 3.5.4 In informing the Architect of deviations or substitutions, the Contractor shall provide, upon request, evidence leading to a reasonable certainty that the proposed substitution or deviation will provide a quality of result at least equal to that otherwise attainable. 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 without further investigation.
- 3.5.5 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.
- 3.5.6 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.
- 3.5.7 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 warranty will be performed in accordance with its terms and conditions.
- 3.5.8 The Contractor shall guarantee all Work for a period of one year after Date of Substantial Completion, or by the terms of any special guarantee required by the Contract Documents. The Contractor shall, upon written notice from the Owner, promptly correct defective Work or Work not in accordance with the Contract Documents.
- E. 3.6 TAXES (Delete Subparagraph 3.6.1 in its entirety and substitute the following Subparagraph 3.6.1):
- 3.6.1 The project is exempt from the Massachusetts Sales Tax to the extent permitted by M.G.L. c.64H, §6(f). The exemption number can be obtained from the Awarding Authority upon request by the successful bidder.
- F. 3.7 PERMITS, FEES AND NOTICES (Make the following changes in wording to Subparagraphs 3.7.3 and 3.7.4):
- 3.7.3 Delete the first Sentence of Subparagraph 3.7.3 and delete the word "However" from the second Sentence.
- 3.7.4 In the first Sentence of Subparagraph 3.7.4 delete the word "knowing" and insert the following after the word "it":
- "knows or should know".
- G. 3.8 ALLOWANCES (Delete Paragraph 3.8 in its entirety).
- H. 3.9 SUPERINTENDENT (Make the following changes in wording to Subparagraph 3.9.1 and add Subparagraphs 3.9.2 through 3.9.3 to follow Subparagraph 3.9.1):

- 3.9.1 In the second line of Subparagraph 3.9.1 insert the following after the words "Project site": "at all times".
- 3.9.2 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. 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.
- 3.9.3 The Contractor shall arrange for and attend job meetings with the Architect and such other persons as the Architect may from time to time wish to have present. The Contractor shall be represented by a principal, project manager, general superintendent or other authorized main office representative, as well as by the Contractor's own superintendent. An authorized representative of any subcontractor or sub-subcontractor shall attend such meetings if the representative's presence is requested by the Architect. Such representatives shall be empowered to make binding commitments on all matters to be discussed at such meetings, including costs, payments, change orders, time schedules and manpower. Any notices required under the Contract may be served on such representatives.
- I. 3.12 SHOP DRAWINGS, PRODUCT DATA AND SAMPLES (Make the following changes in wording to Subparagraph 3.12.6):
- 3.12.6 Add the following at the end of Subparagraph 3.12.6:
- "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."
- J. 3.18 INDEMNIFICATION (Make the following changes in wording to Subparagraph 3.18.1);
- 3.18.1 Delete the text following the word "and" in line 1 through the words "Paragraph 11.3" in line 3.
- Delete the phrase "(other than the Work itself)" in line 8.
- Insert the words "or wrongful" after the word "negligent" in line 8.

1.6 ARTICLE 4; ADMINISTRATION OF THE CONTRACT

- A. 4.1 ARCHITECT (Make the following changes in wording to Subparagraphs 4.1.2 and delete Subparagraph 4.1.3 in its entirety):
- 4.1.2 In the first Sentence of Subparagraph 4.1.2 delete the word "Contractor".
- B. 4.2 ARCHITECT'S ADMINISTRATION OF THE CONTRACT (Add the following words to the end of Subparagraph 4.2.4. and make the following changes in wording to Subparagraphs 4.2.11 and 4.2.12):
- 4.2.4 The intent of directing all communications through the Architect is to ensure all questions and answers to questions, directives of the Architect or Owner, and Project management are coordinated and in compliance or conformance with the design. Should the Owner retain a representative (i.e., clerk of the works or similar project management individual), the Owner's Representative and the Architect will jointly manage communications.
- 4.2.11 Add the following to Subparagraph 4.2.11:
- "The parties agree that the Architect's duties under this subparagraph shall be governed by M.G.L. c.30, §39P, as amended."
- 4.2.12 Delete the second Sentence.
- C. 4.3 CLAIMS AND DISPUTES (make the following changes in wording to Subparagraphs 4.3.2 and 4.3.4, make the following changes in wording to Clause 4.3.7.2, and delete Subparagraph 4.3.10 in its entirety):
- 4.3.2 Delete all but the second Sentence of Subparagraph 4.3.2.
- 4.3.4 Delete the text of Subparagraph 4.3.4 and substitute the following:
- "Claims for concealed or unknown conditions shall be governed by M.G.L. c.30, §39N, as amended."
- 4.3.7.2 Delete Clause 4.3.7.2.
- D. 4.4 RESOLUTION OF CLAIMS AND DISPUTES (Make the following changes in wording to Subparagraph 4.4.5, delete Subparagraph 4.4.6 in its entirety, and make the following changes in wording to Subparagraph 4.4.8):
- 4.4.5 Revise the second Sentence of Subparagraph 4.4.5 to read:
- "The approval or rejection of a Claim by the Architect shall be final and binding on the parties but subject to final dispute resolution in accordance with the terms of this Contract."
- Add the following Sentence to the end of Subparagraph 4.4.5:
- "The provisions of this Paragraph 4.4 shall not prevent the parties from pursuing such other remedies as may be available at law if they are not satisfied with the Architect's decision."
- 4.4.8 Delete the text after the word "Architect" in line 3.

- E. 4.5 MEDIATION (Delete Paragraph 4.5 in its entirety).

It is the intent of the parties hereto to reserve any and all rights to pursue claims arising out of this contract in any forum of competent jurisdiction or by such alternative dispute resolution means as the parties may hereafter stipulate in writing.

- F. 4.6 ARBITRATION (Delete Paragraph 4.5 in its entirety).

It is the intent of the parties hereto to reserve any and all rights to pursue claims arising out of this contract in any forum of competent jurisdiction or by such alternative dispute resolution means as the parties may hereafter stipulate in writing.

1.7 ARTICLE 5; SUBCONTRACTORS

- A. 5.2 AWARD OF SUBCONTRACTS AND OTHER CONTRACTS FOR PORTIONS OF THE WORK (Make the following changes in wording to Subparagraph 5.2.1, add Clause 5.2.1.1 to Subparagraph 5.2.1, make the following changes in wording to Subparagraphs 5.2.2 and 5.2.3, and delete Subparagraph 5.2.4 in its entirety due to its violation with M.G.L. c.149, §44F(4)(a)(2), as amended):

5.2.1 Delete the last Sentence of Subparagraph 5.2.1.

5.2.1.1 Not later than five (5) days after the date of commencement, the Contractor shall furnish, in writing to the Owner through the Architect, the names of persons or entities proposed as manufacturers for each product identified in the General Requirements (Division 1 of the Specifications) and, where applicable, the name of the installing Subcontractor.

5.2.2 Insert the following after the words "made reasonable" in the second Sentence: "and legally permissible".

5.2.3 Delete Sentence two and three of Subparagraph 5.2.3.

- B. 5.3 SUBCONTRACTOR RELATIONS (Make the following changes in wording to Subparagraph 5.3.1):

5.3.1 Add at the end of Subparagraph 5.3.1:

"The applicable provisions of M.G.L. c.149, §44F shall apply to filed sub-bid subcontractors."

- C. 5.4 CONTINGENT ASSIGNMENT OF SUBCONTRACTS (Delete Subparagraph 5.4.2 in its entirety).

1.8 ARTICLE 6; OWNER'S RIGHT TO PERFORM CONSTRUCTION AND TO AWARD SEPARATE CONTRACTS

- A. 6.1 OWNER'S RIGHT TO PERFORM CONSTRUCTION AND TO AWARD SEPARATE CONTRACTS (Make the following changes in wording to Subparagraph 6.1.1 and delete Subparagraph 6.1.4 in its entirety):

- 6.1.1 In Sentence one of Subparagraph 6.1.1 delete the following:
"including those portions related to insurance and waiver of subrogation".
- B. 6.2 MUTUAL RESPONSIBILITY (Make the following changes in wording to Subparagraph 6.2.3 and delete Subparagraph 6.2.5 in its entirety):
 - 6.2.3 Delete the second Sentence.

1.9 ARTICLE 7; CHANGES IN THE WORK

- A. 7.1 **No change order shall be valid and no work shall be done until the Change order is signed by the Mayor.**
- 7.2 CHANGE ORDERS (Make the following changes in wording to Subparagraphs 7.2.2, delete Subparagraph 7.2.3 in its entirety and substitute the following):
 - 7.2.2 Revise Subparagraph 7.2.2 to read as follows:
"Unless otherwise provided in the Contract Documents, methods used in determining adjustments to the Contract Sum shall include those listed in Subparagraph 7.3.3."
 - 7.2.3 Adjustments to the Contract Sum shall be determined by one of the following methods as selected by the Owner.
 - 7.2.3.1 By unit prices, where provided in the Contract Documents or otherwise agreed upon.
 - 7.2.3.2 By costs and percentages estimated by the Contractor and accepted by the Owner. The Contractor's estimate shall become a fixed price which shall not be affected by any variation in the actual cost of executing the work.
 - 7.2.3.3 By actual cost determined after the work is completed, plus a percentage.
 - 7.2.3.4 By submission to a court having competent jurisdiction (or by arbitration if mutually agreed upon by Owner and Contractor or as mandated by laws or regulations of the governing authority), which shall determine the fair value of the work covered by the change.

As used above, 'cost' shall be limited to the following: cost of materials, including sales tax (if applicable) and cost of delivery; cost of labor, including Social Security, Worker's Compensation, Old Age and Unemployment insurance (labor cost may include a prorate share of the foreperson's time only when an extension of contract time is granted on account of the change); and rental value of power tools and equipment.

As used above, 'overhead' shall include all other expenses not included in 'cost.' "All other expenses" shall include, but not be limited to, bond premiums, insurance premiums, supervision, forepersons, superintendents, time-keepers, watchmen, clerks, small tools, incidentals, general office expenses, supervisory personnel, accounting and home office expenses.

As used above, 'percentage' shall mean an allowance to be added to the cost in lieu of overhead and profit. The allowance for overhead and profit combined, included in the total cost to the Owner, shall be based on the following schedule:

For the Contractor, subcontractor, or sub-subcontractor for any work performed by its own forces, 17.5 percent of the cost.

For the Contractor, subcontractor, or sub-subcontractor for the work performed by its respective subcontractor, 8 percent of the amount due the subcontractor.

When, in the judgment of the Architect, a series of additive or credit change orders accumulate to a single change, the percentage shall be calculated on the cumulative net increase in cost, if any. In the case of changes which result in a net decrease in cost, the credit to the Owner shall be the exact amount of the decrease in cost. No credit shall be given for overhead or profit on such decrease.

If the Owner elects to determine the cost of the work 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 review, of the actual quantities of such work put in place, and deliver 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 distinguish such from other similar material delivered for use in work included in the 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.

If the Owner elects to determine the cost of the work using unit prices, and if the quantities originally contemplated are so extensively altered by a proposed Change Order that application of the agreed-upon unit prices to the quantities proposed will create a hardship on the Owner or the Contractor, the applicable unit prices shall be equitably adjusted to prevent such hardship. Notwithstanding the inclusion of unit prices in the Contract Documents, the Owner retains the option to determine the cost of any given change in the work by one of the other methods stated herein.

If the Owner elects to determine the cost of the work as provided by methods 7.2.3.1 or 7.2.3.2 above, 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 material costs applicable to the work.

Upon request of the Owner or the Architect, the Contractor shall submit to the Architect, in such form as the Architect may require, an accurate written estimate of the cost of any proposed change in the work before its execution. The estimate shall indicate the quantity and unit cost for each item of

materials and the number of work hours and hourly rate for each class of labor, and the descriptions 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.

If the Architect determines that the estimate is not in compliance with the requirements of this Article, or that it contains errors of fact or mathematics, the Contractor shall promptly revise and resubmit such estimate. If required by the Architect, in order to establish the exact cost of 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 or labor 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 estimate of time required for the completion of the work if the proposed change in the work is implemented.

- B. 7.3 CONSTRUCTION CHANGE DIRECTIVES (Make following changes in wording to Subparagraph 7.3.6, make the following changes in wording to Subparagraph 7.3.8, and add Subparagraph 7.3.10 to follow Subparagraph 7.3.9):
- 7.3.6 In the first Sentence, delete the words "a reasonable allowance for overhead and profit" and substitute "an allowance for overhead and profit according to Clauses 7.3.10.1 through 7.3.10.6 below."
 - 7.3.8 Delete the second and third sentences.
 - 7.3.10 In Subparagraph 7.3.6, the allowance for the combined overhead and profit included in the total cost to the Owner shall be based on the following schedule:
 - 7.3.10.1 For the Contractor, for work performed by the Contractor's own forces, ten (10) percent of the cost.
 - 7.3.10.2 For the Contractor, for work performed by the Contractor's Subcontractor, ten (10) percent of the amount due the Subcontractor.
 - 7.3.10.3 For each Subcontractor or Sub-subcontractor involved, for work performed by the Subcontractor's or Sub-subcontractor's own forces, ten (10) percent of the cost.
 - 7.3.10.4 For each Subcontractor, for work performed by the Subcontractor's Sub-subcontractors, ten (10) percent of the amount due the Sub-subcontractor.
 - 7.3.10.5 Cost to which overhead and profit is to be applied shall be determined according to Subparagraph 7.3.6.
 - 7.3.10.6 To facilitate checking of quotations for extras or credits, all proposals, except those so minor that their propriety can be seen by inspection, shall be accompanied by a complete itemization of costs including labor, materials, and Subcontracts. Labor and materials shall be itemized in the manner prescribed above. Where major cost items are Subcontracts, they shall also be itemized.
- C. 7.5 STATUTORY CHANGE ORDER PROVISIONS (Add following Paragraph 7.5 to Article 7):

- 7.5.1 The Contractor's attention is directed to the M.G.L. c.30, §39I, §39J, §39N, §39O, and §39P, the provisions of which apply to this Contract.
- 7.5.2 Differing Site Conditions, M.G.L. c.30, §39N:
- 7.5.2.1 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 Drawings or indicated in the Contract Documents, either the Contractor or the Owner may request an appropriate time extension and an equitable adjustment in the Contract Price, applying to the 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 when possible after such conditions are discovered.
- 7.5.2.2 On receipt of such a claim from a Contractor or, on its own initiative, the Owner shall make an investigation of the physical conditions and, if they differ substantially or materially from those shown on the Drawings 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 Drawings and Contract Documents, and 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 that results in an increase or decrease in the cost of the work, the Owner shall on submission by the Contractor of a properly submitted and approved Change Order request, adjust the Contract price and the Contract shall be modified in writing accordingly.
- 7.5.3 Timely Decision by Owner, M.G.L. c.30, §39P: Whenever this Contract requires the Owner or its Architect to make a decision during construction of the Project, on interpretation of the Specifications, approval of equipment, material, or any other approval, or progress of the work, that decision shall be made promptly and, in any event, by thirty (30) days after receipt of a written submission for such decision by the Contractor. If such decision requires extended investigation and study, the Owner or the Architect shall, within thirty days after receipt of the submission, give the Contractor written notice of the reasons why the decision cannot be made within the thirty (30) day period and the date by which the decision will be made.

1.10 ARTICLE 8; TIME

- A. 8.1 DEFINITIONS (Delete Subparagraph 8.1.4 and substitute the following):
- 8.1.4 The term "day" as used in the Contract Documents shall mean working day, excluding weekends and legal holidays.
- B. 8.3 DELAYS AND EXTENSIONS OF TIME (Make the following changes of working in Subparagraph 8.3.1, delete Subparagraph 8.3.3 in its entirety, and add Subparagraph 8.3.4):
- 8.3.1 Change the words "other causes beyond the Contractor's control" in line 4 to read "other causes (except weather) beyond the Contractor's control".
- Delete the words "pending mediation and arbitration" in line five.

Add the following words at the end:

", and this shall be the Contractor's sole remedy for such delay."

- 8.3.4 Owner Delays:
- 8.3.4.1 The Owner may delay the commencement of the work, or any part thereof, due to unforeseen circumstances or conditions that have a bearing on the work required under this Contract or for any other reason if it is deemed to be in the best interest of the Owner to do so. Except as expressly provided in the following Subparagraphs 8.3.4.2, 8.3.4.3, and 8.3.4.4, the Contractor shall have no claim for additional compensation due to such delay, but shall be entitled to an extension of Contract Time as determined reasonable by the Architect.
- 8.3.4.2 The Contractor and the Owner agree that the following Subparagraph 8.4.3.3 provides the Contractor with the right to request additional compensation for Owner caused delays only in the following two circumstances:
 - 8.3.4.2.1 When the Owner provides the Contractor with a written order to suspend or delay the work, or a portion thereof, for a period of fifteen (15) days or more.
 - 8.3.4.2.2 When the Owner or its Architect fails to make a decision within the thirty (30) day period described in Subparagraph 7.5.3 and such failure delays the work, or a portion thereof, for fifteen (15) days or more.
- 8.3.4.3 The Owner may, for its convenience, order the Contractor in writing to suspend, delay, or interrupt all or any part of the work for such time as it may determine appropriate, provided however, that if there is a suspension, delay, or interruption for fifteen (15) days or more or due to a failure of the Owner to act within the time specified in this Contract, the Owner shall adjust the Contract Price for any increase in the cost of performance of this Contract, but shall not include any profit to the Contractor because of such increase; and provided further, which the Owner shall not adjust the Contract Price under this provision for any suspension, delay, interruption, or failure to act to the extent that such is due to any cause for which this Contract provides for an equitable adjustment of the Contract Price under any other Contract provisions. M.G.L. c.30, Section 390(a).
- 8.3.4.4 The Contractor shall submit the amount of a claim under Subparagraph 8.3.4.3 to the Owner in writing when practicable after the end of the suspension, delay, interruption, or failure to act and, in any event, not later than the date of final payment under this Contract and except for costs due to a suspension order, the Owner shall not approve any costs in the claim incurred more than twenty (20) days before the Contractor notified the Owner in writing of the act or failure to act involved in the claim. M.G.L. c.30, §390(b).
- 8.3.4.5 The Owner and the Contractor agree that the preceding Subparagraph 8.3.4.4 places a burden on the Contractor to inform the Owner, when practicable, whenever the Contractor considers that an action or inaction of the Owner, or its Architect could result or has resulted in a delay in the Project, thereby providing the Owner with the opportunity to take action to avoid or lessen the time extensions or damages that might be associated with such action or inaction.

- 8.3.4.6 The Contractor must file any claim for additional compensation made pursuant to Subparagraph 8.3.4.4 as a Change Order request. The amount of any such claim shall be calculated only according to Subparagraph 7.3.10 but the amount shall be calculated without any allowance for additional profit unless expressly permitted under M.G.L. c.30, §390, as amended.

1.11 ARTICLE 9; PAYMENTS AND COMPLETION

- A. 9.3 APPLICATIONS FOR PAYMENT (Add the following Sentences to Subparagraph 9.3.1 and delete Subparagraph 9.3.1.1 in its entirety):
- 9.3.1 The form of Application for Payment shall be a notarized AIA Document G702, Application and Certification for Payment, supported by AIA Document G703, Continuation Sheet.
- In order for current progress payment to be processed, Contractor shall submit Release of Liens, Claims, Security Interests, or Encumbrances from subcontractors or material suppliers or other persons or entities for the preceding processed progress payment to verify that Contractor is in compliance with Subparagraph 9.3.3 for the preceding processed progress payment.
- If Owner discovers that payment has not been made to subcontractor, material supplier, or other persons or entities from preceding progress payment, Owner will process current progress payment in compliance with Subparagraph 9.11.3 and Paragraph 9.12.
- B. 9.6 PROGRESS PAYMENTS (Delete Subparagraphs 9.6.5 and 9.6.7 in their entirety and add the following Subparagraph 9.6.8 to follow Subparagraph 9.6.7):
- 9.6.8 Notwithstanding the provisions of paragraph 9.6 all progress payments shall be made in accordance with M.G.L. c.30, §39F and 39K, as amended.
- C. 9.7 FAILURE OF PAYMENT (Delete Paragraph 9.7 in its entirety).
- D. 9.8 SUBSTANTIAL COMPLETION (Delete Subparagraph 9.8.5 in its entirety and substitute the following):
- 9.8.5 The Certificate of Substantial Completion shall be submitted to the Owner and Contractor by the Architect. The Certificate shall state the date of substantial completion shall state any consequent responsibilities of the Contractor and the Owner in accordance with the Contract Documents and shall fix the time within which the Contractor shall complete or correct any incomplete or defective work.
- E. 9.9 PARTIAL OCCUPANCY OR USE (Make the following changes in wording to Subparagraph 9.9.1):
- 9.9.1 In the first Sentence of Subparagraph 9.9.1 delete the words "when such portion is designated by separate agreement with the Contractor" and "consented to by the insurer as required under Clause 11.4.1.5. and".

- F. 9.10 FINAL COMPLETION AND FINAL PAYMENT (Delete Subparagraph 9.10.4 in its entirety, add Subparagraph 9.10.6 to follow Subparagraph 9.10.5):
- 9.10.6 Notwithstanding anything in the Contract Documents to the contrary, final payment shall be made in accordance with the requirements of M.G.L. c.30, §39K, as amended.
- G. 9.11 PAYMENT FOR STORED MATERIALS (Add Paragraph 9.11 to Article 9):
- 9.11.1 The Contractor shall include in such Application for Payment only such materials as are incorporated in the work. The Contractor may on delivery of a bill of sale to the Owner accompanied by receipted vouchers or other acceptable proof of payment by the Contractor or Subcontractor for such materials, include the value of materials or equipment delivered at the site of the work (or at some location agreed to in writing). This must be, in the judgment of the Architect, materials or equipment which meet the requirements of the Contract, ready for use, which the Contractor can adequately protect until incorporated in the work. The Contractor must also present to the Architect a stored materials insurance binder covering materials for which payment is requested, that names the Owner as an insured party should the stored materials be subjected to any casualty, loss, or theft before their inclusion in the work.
- 9.11.2 Certificates for Payment:
- 9.11.2.1 The Architect shall mark the date of receipt on the Contractor's Application for Payment. 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.
- 9.11.2.2 The Owner may make changes in any Application for Payment submitted by the Contractor according to M.G.L. c.30, §39K, and the payment due on said Application for Payment shall be computed according to the changes so made. The provisions of M.G.L. c.30, §39K shall govern payments pursuant to Applications for Payment on which the Owner has made changes.
- 9.11.2.3 No Certificate for Payment or any progress payment shall constitute acceptance of work not according to the Contract Documents.
- 9.11.3 Statutory Payment Provisions:
- 9.11.3.1 After the Architect has issued a Certificate for Payment the Owner shall make payment to the Contractor according to M.G.L. c.30, §39K that provides as follows:
- .1 Within fifteen (15) 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 on 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) a retention based on its

estimate of the fair value of its claims against the Contractor and less (2) a retention for direct payments to Subcontractors based on demands for same according to the provisions of M.G.L. c.30, §39F, and less (3) a retention not exceeding five percent (5%) of the approved amount of the periodic payment.

- .2 After the receipt of a periodic estimate requesting final payment and within sixty-five (65) 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 (1%) of the original Contract Price, 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 of the cost of completing the incomplete and unsatisfactory items of work and less (2) a retention for direct payments to Subcontractors based on demands for same according to the provisions of M.G.L. c.30, §39F, 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 M.G.L. c.30, §39F.
- .3 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 percent (3%) points above the rediscount rate then charged by the Federal Reserve Bank of Boston commencing on the first day after said payment was 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 (15) 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 part of any such interest paid according to the amount due each Subcontractor.

- H. 9.12 DIRECT PAYMENT TO SUBCONTRACTORS (Add Paragraph 9.12 to Article 9):
- 9.12.1 The Contractor shall make payments to filed Subcontractors according to M.G.L. c.30,§39F that provides as follows:
- 9.12.1.1 Immediately after the Contractor receives a payment due to a periodic estimate, the Contractor shall pay to each Subcontractor the amount for the labor performed and the materials furnished by the Subcontractor, less any amount specified in any court proceedings barring such payment and less any amount claimed due from the Subcontractor by the Contractor.
- 9.12.1.2 Not later than the sixty-fifth (65) day after each Subcontractor substantially completes the work according to the Drawings 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 less any amount claimed due from the Subcontractor by the Contractor.
- 9.12.2 Each payment made by the Owner to the Contractor pursuant to Subclause 9.12.1.2 and Subclause 9.12.1.1 or 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 that 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 Subclause 9.12.1.1 and 9.12.1.2, the Owner shall act upon the demand as provided in this Section.
- 9.12.3 If, within seventy (70) 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 valid even if delivered or mailed before the seventieth (70) day after the Subcontractor has substantially completed the subcontract work. Within ten (10) 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 simultaneously. 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 and of the amount due for each claim made by the Contractor against the Subcontractor.
- 9.12.4 Within fifteen (15) days after receipt of the demand by the Owner but in no event before the seventieth (70) 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:
- 9.12.4.1 retained by the Owner as the estimated cost of completing the incomplete or unsatisfactory items of work;
- 9.12.4.2 specified in any court proceedings banning such payment, or;
- 9.12.4.3 disputed by the Contractor in the sworn reply; provided, that the Owner shall not deduct from a direct payment any amount as provided in Clause 9.12.4.3 if the reply is not sworn to or for which the sworn reply does not contain the detailed breakdown required by Subclause 9.12.3. 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 Clauses 9.12.4.1 and 9.12.4.2.

- 9.12.5 The Owner shall forthwith deposit the amount deducted from a direct payment as provided in Clause 9.12.4.3 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.
- 9.12.6 All direct payments and all deductions from demands for direct payments deposited in an interest-bearing account or accounts in a bank pursuant to Clauses 9.12.5 and 9.12.7 shall be made out of amounts payable to the Contractor at the time of receipt of a demand for direct payment from a Subcontractor and out of amounts that later become payable to the Contractor and in 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.
- 9.12.7 The Owner shall deduct from payments to the Contractor amounts that, with the deposits in interest-bearing accounts pursuant to Clause 9.12.5 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 to such deductions before any claims against such amounts by creditors of the Contractor.
- 9.12.8 If the Subcontractor does not receive payment as provided in Subclause 9.12.1.1 or if the Contractor does not submit a periodic estimate for the value of the labor and materials performed or furnished by the Subcontractor and the Subcontractor does not receive payment for same when due less the deductions provided for in Subclause 9.12.1.1 the Subcontractor may demand direct payment by following the procedure in Subparagraph 9.12.3 and the Contractor may file a sworn reply as provided in that same Subclause. 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 before the time payment was due on a periodic estimate from the Contractor. Thereafter the Owner shall proceed as provided in Subparagraphs 9.12.4, 9.12.5, and 9.12.6.
- I. 9.13 PAYMENT LIABILITIES OF CONTRACTOR (Add Paragraph 9.13 to Article 9):
- 9.13.1 The Contractor shall be responsible to the Owner for all expenses, losses, and damages incurred in consequence of any defect, omission, or mistake of the Contractor or any of its employees, Subcontractors, or suppliers.
- 9.13.2 The Owner may retain any monies that would otherwise be payable under this Contract and apply the same, or so much as may be necessary therefor, to the payment of any expenses, losses, or damages incurred by the Owner as a direct result of the Contractor's failure to perform its obligations hereunder.

- J. 9.12 LIQUIDATED DAMAGES (Add the following Paragraph 9.12 to Article 9):
- 9.12.1 It is expressly understood and agreed, by and between the Contractor and Owner, that the time for the completion of the Work described herein is a reasonable time for the completion of same, taking into consideration the average climatic range and usual industrial and/or residential conditions prevailing in this locality.
- 9.12.2 If the said Contractor shall neglect, fail or refuse to complete the Work within the times herein specified, or any proper extension thereof granted by the Owner, then the Contractor does hereby agree, as a part consideration for the awarding of this Contract, to pay to the Owner the amount of one thousand dollars (\$1,000.00), not as a penalty, but as liquidated damages for such breach of contract, for each and every calendar day that the Contractor shall be in default after the time stipulated for completing the Work.
- 9.12.3 The said amount is fixed and agreed upon by and between the Contractor and the Owner because of the impracticability and extreme difficulty of fixing and ascertaining the actual damages the Owner would in such event sustain, and said amount is agreed to be the amount of damages which the Owner would sustain and said amount shall be deducted by the Owner from periodic payments.

1.12 ARTICLE 10; PROTECTION OF PERSONS AND PROPERTY

- A. 10.2 SAFETY OF PERSONS AND PROPERTY (Add Clause 10.2.4.1 to Subparagraph 10.2.4, make changes in wording to Subparagraph 10.2.5, add Subparagraphs 10.2.8 through 10.2.11 to follow Subparagraph 10.2.7):
- 10.2.4.1 When use or storage of explosives or other hazardous materials or equipment or unusual methods are necessary, the Contractor shall give the Owner reasonable advance notice.
- 10.2.5 In line six of the first Sentence of Subparagraph 10.2.5 insert the word "solely" after the word "attributable".
- 10.2.8 Delete the phrase "or by anyone for whose acts either of them may be liable," in lines 7 and 8, and insert the words "either in whole or in part" after "attributable" in line 8.
- 10.2.9 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.
- 10.2.10 The Contractor shall at all times protect buildings and materials from rainwater, and from water of any other origin and shall remove promptly any accumulation of water.
- 10.2.11 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 of the Work, the Contractor shall provide temporary enclosure, adequate to prevent damage to the building, completed Work or Work in progress, or to materials stored on the premises.
- B. 10.3 HAZARDOUS MATERIALS (Delete Subparagraph 10.3.1 in its entirety and substitute the following, delete Subparagraphs 10.3.2 through 10.3.3 in their entirety):
- 10.3.1 If the Contractor encounters or recognizes on the site any material known or reasonably believed to be hazardous, including but not limited to asbestos or polychlorinated biphenyl (PCB), the Contractor shall immediately stop Work in the area affected and report the condition to the Owner and Architect in writing. The Contractor and the Owner shall cooperate in implementing measures to remove or contain said material and the Contractor shall comply with all directions of the Architect in the implementation of such removal or containment.
- C. 10.4 Delete this paragraph in its entirety.
- D. 10.5 Delete this paragraph in its entirety.

1.13 ARTICLE 11; INSURANCE AND BONDS

- A. 11.1 CONTRACTOR'S LIABILITY INSURANCE (Delete the semicolon at the end of Clause 11.1.1.1 and add the following; delete the semicolon at the end of Clause 11.1.1.2 and add the following; add Clauses 11.1.1.9 and 11.1.1.10; delete Subparagraph 11.1.2 and insert the following, add the following Sentence to Subparagraph 11.1.3, and add Subparagraph 11.1.4 to follow Subparagraph 11.1.3):
- 11.1.1.1 , including private entities performing work at the site and exempt from the coverage due to number of employees or occupation, which entities shall maintain voluntary compensation coverage at the same limits specified for mandatory coverage for the duration of the Project;.
- 11.1.1.2 or persons or entities excluded by statute from the requirements of Clause 11.1.1.1 but required by the Contract Documents to provide the insurance required by that Clause;.
- 11.1.1.9 Liability insurance shall include all major divisions of coverage and be on a comprehensive basis including:
- .1 Premises Operations (including X, C, and U coverage, as applicable).
 - .2 Independent Contractors' Protective.
 - .3 Products and Completed Operations.
 - .4 Personal Injury Liability with Employment Exclusion deleted.
 - .5 Contractual, including specified provision for Contractor's obligations under Paragraph 3.18.
 - .6 Owner, non-owned, and hired motor vehicles.
 - .7 Broad Form Property Damage including Completed Operations.
 - .8 Umbrella Excess Liability.

11.1.1.10 If the General Liability coverages are provided by a Commercial General Liability Policy on a claims-made basis, the policy date or Retroactive Date shall predate the Contract; the termination date of the policy or applicable extended reporting period shall be no earlier than the termination date of coverage required to be maintained after final payment, certified according to Subparagraph 9.10.2.

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, Non-owned, 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. Coverage, 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.

Coverage for such liability insurance shall be provided by a company or companies reasonably acceptable to the Owner and authorized to do business in Massachusetts and which have, and shall maintain throughout the pendency of this contract, a minimum financial rating of not less than A+ according to A.M. Best or AAA according to Moody's. Contractor shall furnish to Owner written confirmation as to the insurance carrier's most current financial ratings prior to commencing work.

11.1.3 Add the following at the end of the second Sentence of Subparagraph 11.1.3.

"These certificates shall set forth evidence of all coverage required by Subparagraphs 11.1.1 and 11.1.2. The Contractor shall furnish to the Owner copies of any endorsements that are subsequently issued amending limits of coverage."

11.1.4 In no case shall the limits of liability be less than the following:

11.1.4.1 Workers Compensation:

.1 State, Statutory.

.2 Employer Liability:

\$1,000,000.00 Bodily Injury by Accident.

\$2,000,000.00 Bodily Injury by Disease - policy limit.

11.1.4.2 Contractor's Public Liability:

\$1,000,000.00 Bodily Injury by Disease - each.

\$4,000,000.00 Umbrella Liability - all limits.

11.1.4.3 Comprehensive General Liability (including Premises-Operations; Independent Contractor's Protective; Products and Completed Operations; Broad Form Property Damage):

.1 Bodily Injury:

- \$1,000,000.00 Each Occurrence.
\$2,000,000.00 Aggregate, Products and Completed.
\$2,000,000.00 Operations.
- .2 Property Damage Liability (including coverage for XCU hazards).
\$1,000,000.00 Each Occurrence.
\$2,000,000.00 Aggregate.
- 11.1.4.4 Products and Completed Operations insurance shall be maintained for a minimum period of 2 years after final payment and Contractor shall continue to provide evidence of such coverage to Owner on an annual basis during the aforementioned.
- 11.1.4.5 Contractual Liability (Hold Harmless Coverage):
\$1,000,000.00 Bodily Injury Each Occurrence.
\$1,000,000.00 Property Damage Each Occurrence.
\$2,000,000.00 Property Damage Aggregate.
- 11.1.4.6 Personal Injury, with Employment Exclusion deleted:
\$2,000,000.00 All Limits.
- 11.1.4.7 Comprehensive Automobile Liability (owned, non-owned, hired):
.1 Bodily Injury:
\$1,000,000.00 Each Person.
\$1,000,000.00 Each Accident.
.2 Property Damage:
\$1,000,000.00 Each Accident.
.3 Umbrella Liability Coverage:
\$4,000,000.00 All Limits.
- 11.2.1 The Contractor shall procure and pay for an Owner's policy of Owner's protective liability insurance insuring the Owner and its officers, employees and agents against claims which may arise from operations under the Contract or relating thereto.
- B. 11.3 PROPERTY INSURANCE (Delete Paragraph 11.3 in its entirety).
- C. 11.4 PROPERTY INSURANCE (Delete subparagraphs 11.4.1 through 11.4.4 and insert the following subparagraph 11.4.1, delete Subparagraphs 11.4.5 through 11.4.7 in their entirety, make the following changes in wording to Subparagraph 11.4.8, and delete Subparagraphs 11.4.9 through 11.4.10 and substitute following Subparagraph 11.4.9):
- 11.4.1 The Contractor shall purchase and maintain property insurance upon the entire Work at the site to the full insurable value thereof. Coverage for such liability insurance shall be provided by a company or companies reasonably acceptable to the Owner and which have, and shall maintain throughout the pendency of this contract, a minimum financial rating of not less than A+ according to A.M. Best or AAA according to Moody's. Contractor shall furnish to Owner written confirmation as to the insurance carrier's most current financial ratings prior to commencing work. Such insurance shall include the interests of the Owner, the Contractor, Subcontractors and Sub-subcontractors in the work and shall insure against the perils of fire and extended coverage and shall include "all risks" insurance for physical loss or damage including without duplication, theft, vandalism and malicious mischief. This insurance shall also cover portions of the Work stored off the

site or in transit. If this insurance is written with stipulated amounts deductible, the Owner shall not be responsible for any difference between the payments made by the insurance carrier and the claim. The policy shall contain a provision that coverages afforded under policies will not be canceled or allowed to expire until at least 30 days' written notice has been given to the Owner. The Owner shall be named insured within the policy.

11.4.8 Delete the first Sentence of Subparagraph 11.4.8.

11.4.9 The Owner shall have the power to adjust and settle with its insurers any loss for which it has obtained insurance.

Upon the occurrence of an insured loss, the Owner and the Contractor shall cooperate with each other and with each other's insurer in the submission of claims and related information and the distribution of any insurance proceeds. If after such a loss no other special agreement is made, replacement of damaged work shall be covered by an appropriate change order.

D. 11.5 PERFORMANCE BOND AND PAYMENT BOND (Delete Subparagraph 11.5.1 and substitute the following, add new Subparagraphs 11.5.3 and 11.5.4 to follow Subparagraph 11.5.2):

11.5.1 The Contractor shall furnish bonds covering faithful performance of the Contract and payment of obligations arising thereunder. Bonds may be obtained through the Contractor's usual source and the cost thereof shall be included in the Contract Sum. The amount of each bond shall be equal to one hundred (100) percent of the Contract Sum.

11.5.1.1 The Contractor shall deliver the required bonds to the Owner not later than five (5) days, excluding Saturdays, Sundays, and legal holidays in accordance with M.G.L. c.149 §44E(2)E, following the date the Agreement is entered.

11.5.1.2 The Contractor shall require the attorney-in-fact who executes the required bonds on behalf of the surety to affix thereto a certified and current copy of the power of attorney.

11.5.3 Contractor Bonds:

11.5.3.1 The Contractor shall provide the Owner with the performance and payment (labor and materials) bonds in the form acceptable to the Owner, executed by a surety company licensed by the Commonwealth's Division of Insurance. Each such bond shall be for the Contract price.

11.5.3.2 If any time before final payment to the Contractor, the Surety:

- .1 is adjudged bankrupt or has made a general assignment for the benefit of its creditors;
- .2 has liquidated all assets and has made a general assignment for the benefit of its creditors;
- .3 is placed in receivership;
- .4 otherwise petitions a state or federal court for protection from its creditors; or
- .5 allows its license to do business in Massachusetts to lapse or be revoked; the Contractor shall, within 21 days of any such action listed above, provide the Owner with new performance and payment bonds. Such bonds shall be provided solely at the Contractor's expense.

- 11.5.4 Subcontractor Bonds:
- 11.5.4.2 The Contractor may list in its Bid that any or all filed Subcontractors provide the Contractor with a payment and performance bonds for the full amount of the Subcontract. The costs for said bonds shall be the responsibility of the Contractor.
- 11.5.4.3 In the event the Contractor lists in its Bid that filed Subcontractors provide bonds, and subsequently waives the requirement, the Contractor shall provide the Owner with a credit change order in an amount equal to the bond premium it would have paid had it required the filed Subcontractor to provide such bonds.

1.14 ARTICLE 12; UNCOVERING AND CORRECTION OF WORK

- A. 12.2 CORRECTION OF WORK (Make the following changes in wording to Subparagraphs 12.2.1 and 12.2.2 as follows and make the following changes in wording to Clause 12.2.2.1):
 - 12.2.1 Add at the end of subparagraph 12.2.1:

"The Contractor shall bear the cost of any cost, loss, or damages to the Owner resulting from such failure or defect."
 - 12.2.2 Change all references to "one year" in Subparagraph 12.2.2 to "three (3) years."
 - 12.2.2.1 Delete the third Sentence.

1.15 ARTICLE 13; MISCELLANEOUS PROVISIONS

- A. 13.1 GOVERNING LAW (Add the following Subparagraph 13.1.2):
 - 13.1.2 The Contractor shall stay fully informed of all existing and future federal and state laws and municipal ordinances and regulations in any manner affecting those engaged or employed in the work, the materials used or employed in the work, or in any way affecting the conduct of the work, and of all such orders and decrees of bodies or tribunals having any jurisdiction or authority over the Contract work. All provisions of laws that apply to this Contract are hereby made a part of this Contract. If any discrepancy laws or if any inconsistency is discovered between any Contract Documents provision and any law, ordinance, regulation, order, or decree, the Contractor shall report the same to the Owner in writing. The Contract shall cause all of its agents and employees to observe and comply with all such existing and future laws, ordinances, regulations, orders, and decrees.
- B. 13.2 SUCCESSORS AND ASSIGNS (Delete Subparagraph 13.2.2 in its entirety).
- C. 13.5 TESTS AND INSPECTIONS (Delete Subparagraph 13.5.4 in its entirety and add the following):
 - 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.

- D. 13.7 COMMENCEMENT OF STATUTORY LIMITATION PERIOD (Delete Paragraph 13.7 in its entirety).
- E. 13.8 MISCELLANEOUS LEGAL REQUIREMENTS (Add the following Paragraph 13.8 to Article 13):
- 13.8.1 Corporate Disclosures: The Contractor, if a foreign corporation, shall comply with M.G.L. c.181, §3 and §5, and M.G.L. c.30, §39L.
- 13.8.2 Veterans Preference: In the employment of mechanics and apprentices, teamsters, chauffeurs, and laborers in the construction of public works in the Commonwealth, preference shall;
- 13.8.2.1 First be given to citizens of the Commonwealth who have been residents of the Commonwealth for at least six (6) months at the commencement of their employment who are veterans as defined in M.G.L. c.4, §7(34), who are qualified to perform the work to which the employment relates,
- 13.8.2.2 Secondly, to citizens of the Commonwealth generally who have been residents of the Commonwealth for at least six (6) months at the commencement of their employment, and
- 13.8.2.3 If they cannot be obtained in sufficient numbers, then to citizens of the United States.
- 13.8.3 Prevailing Wage Rates: The Commissioner of the Department of Labor and Industries has established the Schedule bound into the Specifications, listing the prevailing minimum wage rates that must be paid to all workers employed on the Contract, such Schedule shall continue to be the minimum rate of wages payable to workers on this Contract throughout the term of the Contract. The Contractor shall not have any claim for extra compensation from the Owner if the actual wages paid to employees on the Contract exceeds the rates listed on the Schedule. The Contractor shall post a copy of the Schedule in a conspicuous place at the Project site during the term of the Contract. (See M.G.L. c.149, §27.) If reserve police officers are employed by the Contractor, they shall be paid the prevailing wage of regular police officers. (See M.G.L. c.149, §343).
- 13.8.4 Vehicle and Equipment Operations: If the Commissioner of Labor and Industries has established a Schedule of wage rates to be paid to the operators of trucks, vehicles, or equipment for this Project, the Contractor shall be obligated to pay such operators at least the minimum wage rate contained in such Schedule. (See M.G.L. c.149, §27, as amended).
- 13.8.5 Eight Hour Day and Lodging:
- 13.8.5.1 No laborer, worker, mechanic, foreperson, or inspector working in the employment of the Contractor, Subcontractor, or other person doing or contracting to do the whole or part of the work, shall be required or permitted to work any more than eight (8) hours in any one (1) day, or more than forty-eight (48) hours in any one (1) week, or more than six (6) days in any one (1) week, except in cases of emergency.

- 13.8.5.2 Every employee on the work shall lodge, board, and trade where and with whom he/she elects, and the Contractor and any Subcontractor shall not directly or indirectly require, as a condition of employment, that an employee lodge, board, or trade at a particular place or with a particular person.
- 13.8.6 Executive Orders: The Contractor shall comply with the provisions of M.G.L. c.151B; Executive Order No. 227, Governor's Code of Fair Practices, amending and Revising Executive Orders No. 116 and 117; Executive Order No. 237 pertaining to minority and women business development; Executive Order No. 246 concerning the handicapped and all regulations pursuant thereto. The aforementioned law, Executive Orders, and regulations are incorporated herein by reference and made a part of this Contract.
- F. 13.9 CONTRACTOR'S ACCOUNTING REQUIREMENTS (Add the following Paragraph 13.9 to Article 13):
- 13.9.1 Definitions:
- 13.9.1.1 "Contractor" means any person, corporation, partnership, joint venture, sole proprietorship, or other entity awarded this Contract.
- 13.9.1.2 "Contract" means any contract awarded or executed pursuant to M.G.L. c.30, §39M, or M.G.L. c.149, §44A-J, which is for an amount greater than one hundred thousand dollars (\$ 100,000.00).
- 13.9.1.3 "Records" means books of original entry, accounts, checks, bank statements and all other banking documents, correspondence, memoranda, invoices, computer printouts, tapes, discs, papers, and other documents or transcribed information of any type, whether expressed in ordinary or machine language.
- 13.9.1.4 "Independent Certified Public Accountant" means a person duly registered in good standing and entitled to practice as a certified public accountant under the laws of the place of his/her residence or principal office who is independent.
- 13.9.1.5 "Audit" when used regarding financial statements, means an examination of records by an independent certified public accountant according to generally accepted accounting principles and auditing standards for the purpose or expressing a certified opinion thereon, or, in the alternative, a qualified opinion or a declination to express an opinion for stated reasons.
- 13.9.1.6 "Accountant's Report" when used regarding financial statements, means a document in which an independent certified public accountant indicates the scope of the audit he/she has made and sets forth his/her opinion regarding the financial statements taken as a whole with a listing of noted exceptions and qualifications, or an assertion to the effect that an overall opinion cannot be expressed. When an overall opinion cannot be expressed the reason therefor shall be stated. An accountant's report shall include a signed statement by the responsible corporate officer attesting that management has fully disclosed all material facts to the independent certified public accountant, and that the audited financial statement is a true and complete statement of the financial condition of the Contractor.

- 13.9.1.7 "Management" when used herein, means the chief executive officers, partners, principals or other person or persons primarily responsible for the financial and operational policies and practices of the Contractor.
- 13.9.1.8 Accounting terms, unless otherwise defined herein, shall have a meaning according to generally accepted accounting principles and auditing standards.
- 13.9.2 Record Keeping
- 13.9.2.1 The Contractor shall make and keep for at least six (6) years after final payment, books, records, and accounts that in reasonable detail accurately and fairly reflect the transactions and dispositions of the Contractor.
- 13.9.2.2 Until the expiration of six (6) years after final payment, the office of the Inspector General, the Deputy Commissioner of Capital Planning and Operations, and the Owner, shall have the right to examine any books, documents, papers, or records of the Contractor and Subcontractors that directly pertain to, and involve transactions relating to the Contractor and Subcontractors.
- 13.9.2.3 The Contractor shall describe any change in the method of maintaining records or recording transactions that materially affects any statements filed with the Owner including the date of the change and reasons therefor, and shall accompany said description with a letter from the Contractor's independent certified public accountant approving or otherwise commenting on the changes.
- 13.9.2.4 Before the execution of the Contract, the Contractor shall file a statement of management on internal accounting controls as set forth in Subparagraph 13.9.3.
- 13.9.2.5 Before the execution of the Contract, the Contractor shall file an audited financial statement for the most recent completed fiscal year as set forth in Subparagraph 13.9.4 and will continue to file such statement annually during the term of the Contract.
- 13.9.3 Statement of Management Controls:
- 13.9.3.1 Before execution of the Contract, the Contractor shall file with the Owner a statement of management as to whether the system of internal accounting controls of the Contractor and its subsidiaries assure that:
- .1 Transactions are executed according to management's general and specific authorization;
 - .2 Transactions are recorded as necessary:
 - .1 to permit preparation of financial statements in conformity with generally accepted accounting principles, and
 - .2 to maintain accountability for assets;
 - .3 access to assets is permitted only according to management's general or specific authorization; and
 - .4 the recorded accountability for assets is compared with the existing assets at reasonable intervals and appropriate action was taken with respect to any difference.
- 13.9.3.2 Before execution of the Contract, the Contractor shall also file with the Owner a statement prepared and signed by an independent certified public accountant, stating that the accountant has examined the statement of management on internal accounting controls, and expressing an opinion as to:

- .1 whether the representations of management in response to clause 13.9.3.1 above are consistent with the results of management's evaluation of the system of internal accounting controls; and
 - .2 whether such representations of management are reasonable with respect to transactions and assets in amounts that would be material when measured in relation to the applicant's financial statement.
- 13.9.4 Annual Financial Statement: Every Contractor awarded a contract shall annually file with the Owner and the Deputy Commissioner of Capital Planning and Operations during the term of the Contract a financial statement prepared by an independent certified public accountant based on an audit by such accountant. The final statement filed shall include the date of final payment. All statements shall be accompanied by an accountant's report.
- G. 13.10 EQUAL EMPLOYMENT OPPORTUNITY REQUIREMENTS (Add the following Paragraph 13.10 to Article 13):
 - 13.10.1 Definitions: For purposes of this Article 13, the following additional definitions shall apply:
 - 13.10.1.1 "Minority" means Asian-Americans, Black, Western Hemisphere Hispanic Americans, North American Indians, Eskimos and Aleuts, and Cape Verdeans.
 - 13.10.1.2 "Commission" or "MCAD" means the Massachusetts Commission Against Discrimination.
 - 13.10.1.3 "E.E.O. Officer" or "Equal Employment Opportunity Officer" means those persons designated by the Contractor, the Owner, or any other agency or party having jurisdiction under this contract, that serve in a capacity to carry out this Article.
 - 13.10.2 Conditions:
 - 13.10.2.1 The provisions of Article 13 shall apply to the Contractor and all Subcontractors.
 - 13.10.2.2 The Contractor shall not discriminate against any employee or applicant for employment because of race, color, religious creed, national origin, age, handicap, 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.
 - 13.10.2.3 The Contractor shall post notices provided by the Commission, in conspicuous places, setting forth the provisions of the Fair Employment Practices Law of the Commonwealth.
 - 13.10.2.4 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, handicap, or sex, and to eliminate and remedy any effects of past discrimination. Such affirmative action shall entail positive and aggressive measures to ensure equal opportunity concerning 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 actions required to guarantee equal employment opportunity for all persons, regardless of race, color, religious creed, national origin, age or sex.
- 13.10.2.5 The Contractor shall 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.
- 13.10.3 Minority Goal:
- 13.10.3.1 The provisions of paragraphs 13.10.3 to 13.10.9 shall only apply to contracts with an advertised estimated value of one hundred thousand dollars (\$100,000) or more.
- 13.10.3.2 The Contractor shall maintain on this Project a percent ratio of minority employee man-hours in each job category not less than the percentages found in Document 00813. Such job categories shall include but not be limited to those "Classes of Work" enumerated in M.G.L. c.149, §44F and for trades covered by Item I of the Contractor's Bid.
- 13.10.4 Referrals:
- 13.10.4.1 In the hiring of minority journeymen, apprentices, trainees, and advanced trainees, the Contractor shall rely on referrals from a multiemployer affirmative action program approved by the Owner and traditional referral methods utilized by the construction industry, where such referrals are needed to meet minority hiring requirements. The Contractor shall keep accurate records of such requests for referrals.
- 13.10.4.2 Records of employment referral orders, prepared by the Contractor, shall be made available to the Owner on request.
- 13.10.5 Work Force Tables: The Contractor shall provide the weekly and quarterly information to the Owner on copies of forms that can be found in Document 008140.
- 13.10.6 Compliance - Reports and Information: The Contractor will provide all information and reports required by the Owner on instructions issued by either of them and will permit access to its facilities and to any books, records, accounts and other sources of information that may be determined by the Owner to affect the employment of personnel. 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 Owner as appropriate and shall set forth what efforts have been made to obtain the information.
- 13.10.7 Compliance - Investigations:
- 13.10.7.1 Whenever the Owner's EEO Officer or the MCAD believes the Contractor may not be operating according to the terms of these requirements, the Owner shall investigate, and may confer with the parties, to verify such allegations. The Owner shall not initiate an investigation without prior notice to the Contractor.
- 13.10.7.2 If the Owner finds the Contractor in noncompliance, it shall make a preliminary report, and notify the Contractor in writing of the steps necessary to bring such Contractor into compliance. A copy of this report shall be sent to the Owner's Affirmative Action Officer.
- 13.10.8 Compliance - Affirmative Action Investigation:

- 13.10.8.1 If the Contractor fails or refuses to fully perform the steps necessary to achieve compliance, the Owner shall make a report of noncompliance to the Owner's Affirmative Action Officer, who will then investigate.
- 13.10.8.2 Should the Owner's Affirmative Action Officer find the Contractor in noncompliance a final report recommending the imposition of one or more of the sanctions listed below shall be issued.
- .1 Within fifteen (15) days of said report the Owner shall after due notice and giving the Contractor an opportunity to respond, move to impose one or more of the following sanctions to attain compliance.
- .2 If the Owner's Affirmative Action Officer believes the Contractor has taken or is taking every possible measure to achieve compliance, a report shall show the Contractor is in compliance.
- 13.10.9 Sanctions:
- 13.10.9.1 For each week that the Contractor fails or refuses to comply, the Owner may recover from the Contractor, 1/100 of 1% of the original Contract price or \$1000.00, whichever sum is greater, in the nature of liquidated damages.
- 13.10.9.2 If a Subcontractor is in noncompliance, the Owner may recover from the Contractor, 1/10 of 1% of the subcontract price, or \$400.00, whichever sum is greater, in the nature of liquidated damages, to be assessed by the Contractor as a back charge against the Subcontractor for each week that Subcontractor fails or refuses to comply.
- 13.10.9.3 The Owner may suspend part or all of any payment due under the contract until the Contractor or any Subcontractor demonstrates compliance with the terms of the Contract.
- 13.10.9.4 The Owner may terminate, or cancel part or all of the Contract, according to the provisions of Article 14, unless the Contractor or any Subcontractor demonstrates, within a specified time, compliance with the terms of the Contract.
- 13.10.9.5 The Contractor may request the Owner to suspend the sanctions conditionally. Whereupon the Owner shall investigate corrective measures taken by the Contractor and shall either lift or reimpose the sanctions.
- 13.10.10 Severability: The provisions of this article 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 of the Contract.
- H. 13.11 MINORITY OR WOMAN-OWNED BUSINESS ENTERPRISE SET ASIDE REQUIREMENTS (Add the following Paragraph 13.11 to Article 13):
- 13.11.1 Definitions: For purposes of this Article 13, the following additional definitions shall apply:
- 13.11.1.1 "Minority" means a person who is a citizen or permanent resident of the United States who is either; Black, Western Hemisphere Hispanic, Native American Indian, Eskimo and Aleut, Asian, and Cape Verdean as defined by Executive Order 237.
- 13.11.1.2 "SOMWBA" means the State Office of Minority and Women Business Assistance, 100 Cambridge Street, Room 1300, Boston, Massachusetts 02202.

- 13.11.1.3 "Minority Business Enterprise" (MBE) means a business organization that is owned and controlled fifty one percent (51%) or more by one or more minority group members and certified as such by SOMWBA.
- 13.11.1.4 "Women Business Enterprise" (WBE) means a business organization that is owned and controlled fifty one percent (51%) or more by one or more women and certified as such by SOMWBA.
- 13.11.1.5 "SOMWBA Certified Enterprise" (SCE) means a MBE or WBE as defined in 13.11.1.3 and 13.11.1.4.
- 13.11.1.6 "MBE/WBE Manufacturer" means a person or firm certified by SOMWBA and engaged in making, fabricating, constructing, forming, or assembling a product(s) from raw, unfinished, semi-finished, or finished materials through a direct contract with a Contractor, Subcontractor, or supplier.
- 13.11.1.7 "MBE/WBE Subcontractor" means a person or firm certified as such by SOMWBA and contractually engaged by the contractor to perform a portion (a) of the contracted work, including labor, materials and supplies, or (b) labor, materials and supplies, or any combination thereof.
- 13.11.1.8 "MBE/WBE Supplier" means a person or firm certified as such by SOMWBA and engaged in selling of materials and supplies to contractors, Subcontractors, and/or manufacturers for constructing, repairing, remodeling, adding to or subtracting from, or improving any building, structure, or property through a direct contract with a contractor or Subcontractor.
- 13.11.1.9 "Single Trade" means a construction contract where only one (1) category of work is being undertaken.
- 13.11.1.10 "Amount of Participation" means the percentage stated on the advertisement of the final contract amount which is to be contracted to SCEs for work to be performed on this contract according to this Article 13.
- 13.11.2 Joint Ventures:
 - 13.11.2.1 A Joint Venture shall mean a business arrangement between SOMWBA certified MBE/WBEs and a non-SOMWBA certified General Contractor, in which the MBE or WBE has at least a twenty-five percent (25%) interest in the Contract, and in which the other has at least the required minimum percentage of participation in the Contract. It is expected that the MBE/WBE having the minimum 25% interest will participate in the management and decision making aspects of the Project proportionate to its percentage of ownership and interest in the Contract.
 - 13.11.2.2 An MBE/WBE Joint Venture shall mean a business arrangement in which a SOMWBA certified MBE or WBE serves as a General Contractor and engages the services of another SOMWBA certified MBE or WBE (whichever is required) in an amount not less than twenty-five percent (25%) of the Contract amount, and in which the management and decision making aspects of the project are shared to the degree of participation and ownership in the Contract.
- 13.11.3 Conditions: The provisions of this Article shall apply to all contracts with an advertised estimate of one hundred thousand dollars (\$100,000.00) or greater.
 - 13.11.3.1 Within five (5) working days after receipt of Bids, unless an extension of time for compliance is granted according to Article 3 of the Instructions to Bidders, the apparent low Bidder must submit a completed Participation

- Schedule and Letters of Intent covering each SCE used to satisfy the requirements of this Article. These letters shall include the contract items the SCE is proposing to perform and the prices that the SCE proposes to charge for the work.
- 13.11.3.2 SCEs listed on the Participation Schedule may be any combination of MBE/WBE Subcontractors, MBE/WBE manufactures, or MBE/WBE suppliers as defined in this Article.
- 13.11.3.3 Letters of Intent are not required from filed Sub-Bidders who are SCEs.
- 13.11.3.4 The amount of participation of SCEs listed in the Participation Schedule must total at least the percentage set forth in the Advertisement. The amounts indicated in the Letter of Intent shall not be less than the amount shown on the Participation Schedule. The SCEs for whom Letters of Intent are submitted must be identical to the ones listed on the Participation Schedule. No substitutions shall be made without the written approval of the Owner.
- 13.11.3.5 Before the Validation of the Contract, the Contractor shall furnish the Owner with executed copies of all subcontracts with all of the SCEs listed on the Participation Schedule.
- 13.11.3.6 Subcontractors are encouraged, but not required to subcontract portions of their work to SCEs. Participation forms, available with the Bidding Documents shall be used to list those SCEs with whom they wish to sub-subcontract and the dollar amount of those proposed sub-subcontracts.
- 13.11.3.7 The Contractor may include SCEs utilized by noncertified Subcontractors to satisfy the requirements of this article.
- 13.11.3.8 SCEs listed on the Participation Schedule must be SOMWBA certified MBE's and WBE's at the time of the opening of Bids.
- 13.11.3.9 MBE/WBE Certification from any other agency/municipality shall not be considered applicable for this Contract.
- 13.11.3.10 If a filed Sub-Bidder listed as a SCE is rejected for failure to obtain performance and payment bond from a surety qualified to do business in the Commonwealth when requested by the General Bidder to do so at the time of Bid, said failure shall not entitle the General Bidder to avoid the requirements of this Article.
- 13.11.3.11 The Contractor shall not change the SCEs listed in the Participation Schedule or make any other SCE substitutions after the Contract has been executed or during construction without the written approval of the Owner.
- 13.11.3.12 The Contractor shall not terminate any subcontract for, nor perform with its own organization, work designated to an SCE on the Participation Schedule without the written approval of the Owner. Such approval shall be withheld until the Contractor demonstrates that the amount of Participation is still met or any substituted SCE, provided however, that compliance with this paragraph shall not limit the terms of M.G.L. c.149, §44F. Notice of all MBE/WBE status changes, before Final Completion, must be sent to the Owner.
- 13.11.4 Single Trade Contracts: The Contractor is not required to provide MBE/WBE participation on Single Trade Contracts unless otherwise stated in the Advertisement. However, this provision does not prohibit the Contractor from including MBE/WBE participation in its Bid, if so desired.
- 13.11.5 Compliance:

- 13.11.5.1 The Contractor must provide information as is necessary, in the judgment of the Owner to ascertain compliance with the terms of this Article 13.
- 13.11.5.2 The Contractor shall provide, an executed Contractor's Affidavit of Payment to Minority Business Enterprises as found in Document 00814.
- 13.11.5.3 If an SCE listed on the Participation Schedule has its SCE certified status revoked, the Contractor shall be considered out of compliance with Article 13 and must proceed as outlined in Subparagraph 13.11.3.11.
- 13.11.5.4 If the Contractor desires to comply with Article 13, but for reasons beyond its control cannot do so according to the Participation Schedule, the Contractor must submit to the Owner the reason for its inability to comply and proposed revisions to the Participation Schedule stating how conditions of Article 13 are to be met.
- 13.11.5.5 Failure to comply with any provisions of Article 13 shall constitute a substantial violation and breach of the Contract.
- 13.11.6 Sanctions:
- 13.11.6.1 If at anytime during the life of this Contract, the Contractor is found out of compliance with Article 13, sanctions shall be imposed within fifteen (15) working days after notification to the Contractor of said violation. If within those fifteen (15) days the Contractor remedies the noncompliance to the satisfaction of the Owner, provides compelling documentation as outlined in Article 13, said sanctions may be postponed or waived. If the Contractor requires more than fifteen (15) days to remedy noncompliance, it shall make a written request to the Owner for a time extension. This request shall be made within the original fifteen (15) day period. Failure to respond shall result in immediate implementation of sanctions.
- 13.11.6.2 If the Contractor fails to comply with the terms of these conditions, the Owner may impose the following sanctions:
- .1 Suspend any payment for the work that should have been but was not performed by an SCE pursuant to the Participation Schedule; or
 - .2 Require the Contractor to provide equivalent substitute participation with SCEs acceptable to the Owner and at no additional cost to the Owner.
- 13.11.6.3 To the extent that the Contractor has not complied with the terms of these conditions, the Owner may withhold from any Certificate for Payment monies equivalent to the product of the percentage of completion times the SCE dollar amount, minus the amount already paid to SCE's for work performed under the contract, minus any amounts withheld for previous noncompliance.
- 13.11.6.4 Besides the sanctions allowed under Paragraph 13.11.6, the Owner may suspend or terminate this Contract in whole or in part, or may call upon the Contractor's surety to perform all terms and conditions in the Contract.
- 13.11.7 Recourse:
- 13.11.7.1 The Owner has the option not to impose sanctions if the Contractor demonstrates, to the satisfaction of the Owner that the Contractor has taken every possible measure to comply with Article 13. This may constitute a reason for waiving this Article in whole or in part.
- 13.11.7.2 To demonstrate every possible measure, the Contractor shall furnish:

- .1 the name of each firm solicited for quotations on each Subcontract, the price quoted by each, and whether or not the firm solicited was a minority or woman owned business;
 - .2 the reason for not subcontracting with a minority or woman owned business enterprise when applicable;
 - .3 evidence showing efforts by the Contractor to supplement its own and SOMWBA lists of minority and woman owned business sources by contacting the Small Business Administration, trade organizations, the General Services Administration (U.S. Government), minority contractor's organization, community organizations, and other likely sources of names of additional minority or woman owned business firms capable of performing the work; and
 - .4 evidence showing other efforts to comply with this Article.
- 13.11.7.3 The Owner may then determine that no such substitute MBE or WBE exists.
- 13.11.8 Waivers: The Owner reserves the right, in its sole discretion, to waive all, or part of the requirements of this Article.
- 13.11.9 Severability: The provisions of this article 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 of this Contract.
- I. 13.12 LIMITATION OF LIABILITY (Add Paragraph 13.12 to follow Paragraph 13.11):
- 13.12.1 The Owner shall be liable, if ever, only to the extent of its interest in the Project; and no officer, director, partner, agent or employee of the Owner 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.
- J. 13.13 DEFENSE OF SUITS (Add Paragraph 13.13 to follow Paragraph 13.12):
- 13.13.1 The Contractor shall be responsible for, shall defend and pay all costs, attorneys' fees and liabilities both direct and indirect as a result of suits arising out of this Contract.
- 13.13.2 Neither final acceptance nor occupation of the premises by the Owner shall relieve the Contractor of responsibility for all claims for labor, materials, and equipment arising out of this contract.
- 13.9.3 The Contractor shall indemnify and hold harmless the Owner and the Architect and their agents and employees from and against all claims, damages, losses, and expenses including attorneys' fees arising out of or resulting from the performance of the work.

1.16 ARTICLE 14; TERMINATION OR SUSPENSION OF THE CONTRACT

- A. 14.1 TERMINATION BY THE CONTRACTOR (Delete Paragraph 14.1 in its entirety and substitute the following):
- 14.1 TERMINATION FOR CAUSE
- 14.1.1 The Owner may terminate this contract for cause if it determines that any of the following circumstances have occurred.
- 14.1.1.1 The Contractor is adjudged bankrupt or has received a general assignment for the benefit of its creditors;
- 14.1.1.2 A receiver has been appointed of the Contractor's property;
- 14.1.1.3 All or a part of the work has been abandoned;
- 14.1.1.4 The Contractor has sublet or assigned all or any portion of the work, the Contract, or claims thereunder, without the prior written consent of the Owner, except as provided in the Contract;
- 14.1.1.5 The Architect has determined that the rate of progress required on the project is not being met; or
- 14.1.1.6 The Contractor has substantially violated any provisions of this Contract.
- 14.1.2 In case of such termination, the Owner may hold the Contractor and its sureties liable in damages as for a breach of contract, or the Owner may notify the Contractor to discontinue all work, or any part thereof, and the Contractor shall discontinue all work, or any part thereof, as the Owner may designate.
- 14.1.3 If one of the above reasons exists, the Contractor may, upon seven additional day's written notice to the Owner and Architect, terminate the Contract and recover from the Owner payment for the Work executed and for all materials or equipment not incorporated in the Work, but delivered and suitably stored at the site. The payment for materials or equipment stored at the site shall be conditioned upon submission by the Contractor of bills of sale or such other evidence as is satisfactory to the Owner to establish the Owner's title to such material or equipment or otherwise protect the Owner's interest.
- 14.1.4 The Owner may take possession of and use any materials, machinery, implements and tools found on the site of said work. The Owner shall not be liable for any depreciation, loss, or damage to said materials, machinery, implements, or tools during said use and the Contractor shall be solely responsible for their removal from the Project site after the Owner has no further use for them.
- 14.1.5 The Owner may, at its option, require the surety or sureties to complete the Contract.
- B. 14.2 TERMINATION BY THE OWNER FOR CAUSE (make the following changes in wording to Subparagraph 14.2.2 and Clause 14.2.2.3):
- 14.2.2 Delete the words ", upon certification by the Architect that sufficient cause exists to justify such action," in lines 1 and 2.
- 14.2.2.3 Delete the last Sentence of item .3.
Delete the second Sentence of this Clause.

- C. 14.3 SUSPENSION BY THE OWNER FOR CONVENIENCE (Delete Paragraph 14.3 in its entirety and substitute the following):
- 14.3 TERMINATION - NO FAULT
- 14.3.1 In the event that this Contract is terminated by the Owner, and termination is not based on a reason listed in Paragraph 14.1, the Contractor shall be compensated for its costs incurred on the Project, including reasonable costs or demobilization, calculated on a percent completion basis, covering the time between the last periodic payment and the date of termination.
- 14.3.2 Payment by the Owner pursuant to Subparagraph 14.3.1 shall be considered to fully compensate the Contractor for all claims and expenses and those of any consultants, Subcontractors, and suppliers, directly or indirectly attributable to the termination, including any claims for lost profits.
- 14.3.3 In the event that the Contract is terminated pursuant to paragraph 14.1, the Contractor shall be reimbursed in accordance with the Contract Documents for all Work performed up to the termination date, and for all materials or equipment not incorporated in the Work, but delivered and suitably stored at the site. Payment for materials or equipment stored at the site shall be conditioned upon submission by the Contractor of bills of sale or such other evidence as is satisfactory to the Owner to establish the Owner's title to such material or equipment or otherwise protect the Owner's interest.

END OF DOCUMENT

DOCUMENT 008120 - LABOR REGULATIONS

1. WAGE RATES

- a. The rate per hour to be paid to mechanics, apprentices, teamsters, chauffeurs, and laborers employed on the work shall not be less than the rate of wages as determined by the Deputy Director of the Department of Labor and Workforce Development. The Prevailing Wage Rates are included by reference and can be obtained from the City of Waltham Purchasing Department at anytime by request.
- b. This Schedule shall continue to be the minimum rate of wages for said employees during the life of this Contract.
- c. Keep a legible copy of the Schedule posted on the site.
- d. Keep the wage rates and classifications of labor employed on this work on file so they may be available for inspection by the Awarding Authority and Architect.
- e. Apprentices employed pursuant to this determination of wage rates must be registered and approved by the State Apprenticeship Council wherever rates for journeymen or apprentices are not listed.
- f. Pay reserve police officers employed on the work the prevailing rate of wages paid to regular police officers as required by M.G.L. c.149, §34B, as amended; such police officers shall be covered by Workmen's Compensation Insurance and Employers Liability Insurance by the Contractor.
- g. When requested by the Awarding Authority, the Contractor and all Subcontractors shall provide certified payroll affidavits verifying compliance with M.G.L. c.149, §27, §27A, and §27B.
- h. The Contractor and all Subcontractors shall provide a Statement of Compliance within 15 days of the completion of its portion of the work; submitted to the Awarding Authority on the Form included as part of the Commonwealth of Massachusetts Department of Labor and Occupational Safety, Minimum Wage Rates, Weekly Payroll Records Report & Statement of Compliance.

END OF DOCUMENT

DOCUMENT 008130 - WAGE RATES

PART 1 - GENERAL

1.1 DESCRIPTION

- A. The Wage Rate Schedule appended to this Document, obtained by the Awarding Authority for this Project, is current as published by the Commonwealth of Massachusetts, Department of Labor and Occupational Safety.
- B. The Wage Rate Schedule establishes the minimum rate per hour to be paid in compliance with requirements of Document 008120, Labor Regulations.

END OF DOCUMENT

DOCUMENT 008500 - PROJECT REPRESENTATIVE DUTIES AND LIMITATIONS

1.1 GENERAL PROVISIONS

- A. The Awarding Authority will retain a local Project Representative (Clerk of Works) to assist the Architect in observing the Project.
- B. The duties, responsibilities and limitations of authority of the Awarding Authority's Project Representative are as described in this Document.
- C. The intent of this Document is to inform Bidders of the Project Representative's role during the work.

1.2 DUTIES AND RESPONSIBILITIES

- A. Contract Document Conformance and Compliance:
 - 1. Observe progress and quality of work, as is reasonably necessary, at each stage of construction to determine that work is proceeding in accordance with Contract Documents.
 - 2. Monitor construction schedule and report conditions which may cause delay in completion of work to Architect.
 - 3. Immediately notify Architect if, in Project Representative's opinion, work does not conform to Contract Documents or requires special inspection or testing.
 - 4. Review Contract Documents with Contractor's superintendent.
 - 5. Obtain necessary interrelations and instructions from Architect and transmit them to Contractor.
 - 6. Receive Contractor's suggestions and recommendations for changes or adjustments, perform evaluation of suggestions and recommendations, and submit suggestions and recommendations, accompanied with Project Representative's own recommendations, to Architect for final decision.
- B. Observations and Reporting:
 - 1. Attend meetings and review meeting minutes as prepared by Architect.
 - 2. Observe and monitor tests required by Contract Documents.
 - 3. Record test procedures and report results to Architect, as applicable.
 - 4. Verify accuracy of testing invoices to be paid by Awarding Authority.
- C. Records:
 - 1. Maintain records at site in orderly manner, including, but not limited to:
 - a. Correspondence.
 - b. Contract Documents.
 - c. Change Orders.
 - d. Request for information.
 - e. Construction Change Authorizations.
 - f. Architect's Supplemental Instructions.
 - g. Site Meeting Reports.

- h. Shop Drawings, Product Data, Samples, Supplementary Drawings, and Color Schedules.
 - i. Names and Addresses of Contractor, Subcontractors, and Principal Material Suppliers.
 2. Maintain Record Log of Following:
 - a. Project Representative's time and activities related to Project.
 - b. Weather conditions.
 - c. Nature and location of work being performed.
 - d. Verbal instructions and interpretations given to Contractor.
 - e. Specific observations of work being performed.
 - f. Record of any occurrence or work that might result in claim for change in Contract Sum or Contract Time.
 - D. Project Completion:
 1. Review list of items to be completed or corrected by Contractor as submitted with Request for Issuance of Certificate of Substantial Completion.
 2. Inspect work and, if list is accurate, forward list to Architect for final disposition.
 3. If list not accurate, advise Architect and return list to Contractor for correction.

1.3 LIMITATIONS OF ARCHITECT/DESIGNER AUTHORITY

- A. Project Representative/Architect/Designer is not authorized to perform following:
 1. Authorize deviations from Contract Documents.
 2. Approve substitute materials or equipment.
 3. Personally conduct or participate in tests or third party inspections, except as authorized in writing by Architect.
 4. Assume any responsibilities of Contractor's superintendent or subcontractors.
 5. Expedite work for Contractor.
 6. Advise or issue directions concerning any aspects of constructions means, methods, techniques, sequences or procedures, or safety precautions and programs in connection with work.
 7. Authorize or suggest that Awarding Authority occupy Project in whole or in part.
 8. Issue Certificate for Payment or Certificate of Substantial Completion.
 9. Prepare or certify preparation of Record Drawings.
 10. Reject work or require special inspection or testing, except when authorized in writing by Architect.
 11. Order Contractor to stop work or any portion of work.
 12. Approve or authorize Change Orders.

END OF DOCUMENT

DOCUMENT 008600 - CONSTRUCTION PERMIT APPLICATIONS AND FEES

1.1 GENERAL

- A. This Document includes Documents and Fee Schedules required to obtain the Electrical, Plumbing, and Building Permits from the City of Waltham, Massachusetts.
- B. The City of Waltham has waived the Building, Electrical and Plumbing fees for this Project; Contractor is required to file an Application and obtain all pertinent Permits before construction.
- C. Contractor shall be responsible for all costs associated with police duties, fire watches and other ancillary fees (other than those waived) required to perform the Contract work.
- D. The following Applications are required:
 - 1. City of Waltham, Massachusetts - Building Permit Application.
- E. Obtain forms from Building Department.

END OF DOCUMENT

SECTION 011000 - SUMMARY

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.
 - 1. Work requirements are contained in Contract Documents and include cross-references to published information, which are not necessarily bound as part of this Project Manual.
 - 2. Drawings and General Provisions of Contract, including General and Supplementary Conditions, and other Division 01 Specification Sections, apply to work and all Specification Sections of this Project.

1.2 CONTRACTOR USE OF PREMISES

A. General:

- 1. During construction period, Contractor shall have limited use of premises for construction operations, including use of site.
- 2. Contractor's use of premises is limited by Owner's right to occupy the facility during the work. The Contractor shall coordinate all activities and service disruption with the Owner and Project Representative.

1.3 OCCUPANCY REQUIREMENTS

A. Partial Owner Occupancy:

- 1. Owner will occupy facility during construction and reserves the right to install equipment as necessary in completed areas of building before Substantial Completion, provided such occupancy does not interfere with completion of work.
- 2. Such placing of equipment and partial occupancy shall not constitute acceptance of total work.
- 3. Architect will prepare Certificate of Substantial Completion for each specific portion of work to be occupied before Owner occupancy.
- 4. Obtain Certificate of Occupancy from local building officials before Owner occupancy.
- 5. Mechanical and Electrical Systems:
 - a. Before partial Owner occupancy, mechanical and electrical systems shall be fully operational.
 - b. Required inspections and tests shall have been successfully completed.
 - c. On occupancy, Owner will provide operation and maintenance of mechanical and electrical systems in occupied portions of Building.

1.4 MISCELLANEOUS PROVISIONS

- A. Accessibility Compliance: N/A
- B. Construction Site Runoff Controls: N/A
- C. Prevention of Biological Contamination by Harmful Mold: N/A

1.5 COORDINATION RESPONSIBILITIES

- A. Coordinate work of various Sections of Specifications to assure efficient and orderly sequence of installation of construction elements, with provisions for accommodating items installed later.
- B. Verify characteristics of elements of interrelated operating equipment are compatible; coordinate work of various Sections having interdependent responsibilities for installing, connecting to, and placing in service, such equipment.
- C. Subcontractor Coordination:
 - 1. Ensure subcontractors are knowledgeable of all Division 01, General Requirements, Sections, and are responsible for conforming to applicable requirements and instructions stated.
 - 2. Assume responsibility for administering work performed by subcontractors according to Division 1, General Requirements.
- D. Installation Sequencing:
 - 1. Examine materials and installations performed by others before starting next stage or adjacent work.
 - 2. Notify Architect immediately of unsatisfactory conditions that hinder or restrict correct installation of next stage or adjacent work.
 - 3. Start of next stage or adjacent work will be construed as acceptance of previous or adjacent work, whether or not conditions are satisfactory.
 - 4. Any work requiring subsequent removal or replacement due to unsatisfactory or defective work shall not be at expense of Owner.
- E. Contract Document Review:
 - 1. Before execution of work, review all Drawings and Specifications and immediately report all errors, discrepancies, and/or omissions discovered to Architect, in writing, with one set of Contract Documents marked in red pencil clearly indicating discrepancies.
 - 2. Omissions from Drawings and/or Specifications or misdescription of details of work that are manifestly necessary to carry out intent of Drawings and Specifications, or are customarily performed, shall not relieve Contractor from performing such omitted or mis-described details of work; but shall be performed as if fully and correctly set forth and described in Drawings and Specifications, using most appropriate method, with final approval issued by Architect to alleviate conflicts of scheduling, Drawings, Details, and/or Specifications.

3. Design Intent:
 - a. Purpose of Drawings is to graphically depict characteristics and extent of Project.
 - b. Specifications included as part of Project Manual are provided to state material type, function, and source of materials.
 - c. Reference standards used in Specifications describe, by inference, specific materials and may include recommended methods of installation or application based on industry standards.

1.6 FIELD ENGINEERING

- A. Provide field engineering services; establish grades, lines, and levels, by use of recognized engineering survey practices.
- B. Locate and protect control and reference points.

1.7 REFERENCE STANDARDS

- A. Compliance: Work shall conform to standards published by recognized professional and industry organizations when referenced in this Project Manual.
- B. Edition Date of Reference Standards:
 1. Code Listing: Any reference to standards of any society, institute, association, or governmental agency that is part of building code in effect for this Project shall comply with edition date published in referenced edition of Building Code.
 2. Non-Code Listing: Any reference to standards of any society, institute, association, or governmental agency that is not part of Building Code for this Project shall be edition in effect at time of opening of Bids, except as otherwise specifically stated in this Project Manual.
 3. Project Manual Listing: Edition dates listed with reference standards in each Section of this Project Manual are included for reference only.
- C. If reference standards are revised before completion of any part of work to which such revision would pertain, Contractor may, if acceptable to Architect and if not violating Building Code, perform such work according to revised Specifications.

1.8 ABBREVIATIONS

- A. Reference to technical society, institution, association, or governmental agency made in these Specifications is in form of standard acronym or abbreviation as published in Encyclopedia of Associations, published by Gale Research Co., available in most libraries.
- B. Use of abbreviations for technical terms in text of Specifications are restricted to most commonly used terms and comply with U.S. Government Printing Office Style Manual, published by U.S. Government Printing Office (GPO).

PART 2 – PRODUCTS (Not Used)

PART 3 – EXECUTION (Not Used)

END OF SECTION 011000

SECTION 012500 – SUBSTITUTION PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes administrative and procedural requirements for processing substitution requests for specified products, materials, equipment, or methods of construction in Specification Sections when made after Contract award.
- B. Related Sections:
 - 1. 013300, Submittal Procedures; for requirements related to submitting Contractor's Construction Schedule and submittal Schedule.
 - 2. 016000, Product Requirements; for requirements governing Contractor's selection of products and product options specified in Specification Sections.
- C. Definitions:
 - 1. General: Definitions in this Article do not change or modify meaning of other terms used in Contract Documents.
 - 2. Substitutions: Changes in products, materials, equipment, and methods of construction required by Contract Documents and proposed by Contractor after Contract Award are considered requests for substitutions; substitutions will be processed as Change Order Requests.
 - 3. Non-substitutions: Following criteria are not considered to be requests for substitutions:
 - a. Substitutions requested during bidding period and accepted by Addendum before Contract award are included in Contract Documents and are not subject to requirements specified in this Section for substitutions.
 - b. Revisions to Contract Documents requested by Owner or Architect.
 - c. Specified options of products and construction methods included in Contract Documents.
 - d. Contractor's determination of, and compliance with, governing regulations and orders issued by governing authorities.

1.2 SUBMITTALS

- A. Substitution Request Submittal:
 - 1. General:
 - a. Architect will consider substitution request if request is received according to requirements of Document 008110.
 - b. Request received not in compliance with time requirements of Document 008110 may be considered or rejected, at Architect's discretion.

2. Submit 3 copies of each substitution request for consideration, using forms and procedures required for Change Order Proposals.
3. Identify product or fabrication or installation method to be replaced in each request, including related Specification Section and Drawing numbers.
4. Provide complete documentation showing compliance with requirements for substitutions, and following information, as appropriate:
 - a. Coordination information, including list of changes or modifications needed to other parts of work and to construction performed by Owner and separate contractors, that will be necessary to accommodate proposed substitution.
 - b. Detailed comparison of significant qualities of proposed substitution with those of work specified, in tabular format with significant qualities including elements applicable to product, material, equipment, or method of construction being proposed for substitution to include such items as performance, life cycle cost, resale value, adjustments due to incompatibility with other work, energy usage, risks of delays, physical properties, weight, size, durability, and visual effect.
 - c. Product data, including drawings and description of products and fabrication and installation procedures.
 - d. Samples, where applicable or requested.
 - e. Statement indicating substitution's effect on Contractor's Construction Schedule compared to Schedule without approval of substitution, indicating effect of proposed substitution on overall Contract Time.
 - f. Cost information, including proposal of net change, if any, in Contract Sum.
 - g. Contractor's certification that proposed substitution conforms to requirements in Contract Documents in every respect and is appropriate for applications indicated.
 - h. Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of substitution to perform adequately.

B. Architect's Action:

1. On receipt of product substitution request, Architect will perform initial analysis of request and submit fee proposal to Contractor for cost of processing substitution request; Architect reserves right to waive fee on case-by-case (submittal) basis, dependent on extent of review and determination whether substitution conforms to intent of M.G.L. Chapter 30, §39M.
2. Contractor shall countersign fee proposal and return with payment.
3. If necessary, Architect will request additional information or documentation for evaluation within one week of receipt of request for substitution.
4. Architect will notify Contractor of acceptance or rejection of substitution within two weeks of receipt of request, or one week of receipt of additional information or documentation, whichever is later.
5. Acceptance will be in form of Change Order, with acceptance by Architect for suitability only; Contractor to hold Architect harmless for compliance with design and codes for use of substitution.
6. Use product specified, if Architect cannot make decision on use of proposed substitute within time allocated.

PART 2 - PRODUCTS

2.1 SUBSTITUTIONS

A. Conditions for Substitution Consideration:

1. General:

- a. Architect will receive and consider Contractor's substitution request when one or more of following conditions are satisfied, as determined by Architect.
 - b. If following conditions are not satisfied, Architect will return substitution request without action, except to record noncompliance with these requirements.
2. Extensive revisions to Contract Documents are not required.
 3. Proposed substitution, with changes, are in keeping with general intent of Contract Documents.
 4. Substitution request is timely, fully documented, and properly submitted; incomplete requests are subject to immediate rejection.
 5. Specified product or construction method cannot be provided within Contract time.
 6. Substitution request is directly related to "Or Equal" clause or similar language in Contract Documents.
 7. Requested substitution offers Owner substantial advantage in cost, time, energy conservation, or other considerations, after deducting additional responsibilities Owner must assume, such as compensation to Architect for redesign and evaluation services, increased cost of other construction by Owner, and similar considerations.

B. Rejection of Substitution Request:

1. If substitution request is result of Contractor's failure to pursue work promptly or coordinate construction activities, substitution request is subject to immediate rejection and Contractor shall be assessed for all penalties for such failures.
2. If substitution request is rejected, arrange for and deliver specified product or begin specified construction method.
3. Adjust Construction Schedule and Submittal Schedule accordingly to accommodate Contractor's failure to pursue work and coordinate construction activities.
4. Due to Contractor's failure to pursue work and coordinate construction activities as defined in this Section, Owner may assess penalties for damages resulting due to extended Construction Schedule and inability of Owner to take possession of Project for each calendar day of delay until work is Substantially Complete, at rate established by Owner when Contractor's failure is discovered.

C. Submittal's Disclaimer:

1. Contractor's submission of shop drawings, product data, or samples under requirements of Section 013300 for construction products, materials, equipment, and construction methods not complying with Contract Documents, do not constitute acceptable or valid substitution request.
2. Architect's inadvertent acceptance of such submissions of shop drawings, product data, or samples under requirements of Section 013300 for construction products, materials,

- equipment, and construction methods not complying with Contract Documents does not constitute approval of such submissions.
3. When Architect discovers submission of any shop drawings, product data, or samples under requirements of Section 013300 for construction products, materials, equipment, and construction methods not complying with Contract Documents, Contractor shall immediately remove nonconforming work and shall pay for corrections to work due to nonconforming work.

PART 3 – EXECUTION (Not Used)

END OF SECTION 012500

SECTION 012900 - PAYMENT PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section specifies administrative and procedure requirements governing Contractor's Applications for Payment.
- B. Related Sections:
 - 1. Section 013300, Submittal Procedures; for Contractor's Construction Schedule.

1.2 SCHEDULE OF VALUES

- A. Coordination: Coordinate preparation of Schedule of Values with preparation of Contractor's Construction Schedule.
- B. Submit Schedule of Values to Architect at earliest possible date, min. 7 days before date scheduled for submittal of initial Applications for Payment.
- C. Sub-schedules: Where work is separated into phases requiring separately phased payments, provide Sub-schedules showing values correlated with each phase of payment.
- D. Preparation Coordination:
 - 1. Coordinate preparation of Schedule of Values for work with preparation of Construction Schedule.
 - 2. Correlate Line Items in Schedule of Values with other required administrative Schedules and Forms, including:
 - a. Contractor's Construction Schedule.
 - b. Application for Payment form.
 - c. List of Subcontractors.
 - d. Schedule of Allowances.
 - e. Schedule of Alternates.
 - f. List of Products.
 - g. List of Principal Suppliers and Fabricators.
 - h. Schedule of Submittals.
- E. Form and Content:
 - 1. Use Project Manual Table of Contents as guide to establish format for Schedule of Values.
 - 2. Provide min. 1 line item for each Specification Section.
 - 3. Include following Project identification on Schedule of Values:
 - a. Project name and location.
 - b. Name of Architect.

- c. Project number.
 - d. Contractor's name and address.
 - e. Date of submittal.
4. Arrange Schedule of Values in tabular form with separate columns to indicate following for each item listed.
 - a. Related Specification Section or Division.
 - b. Description of work.
 - c. Name of subcontractor.
 - d. Name of manufacturer or fabricator.
 - e. Name of supplier.
 - f. Change Order Numbers that affect value.
 - g. Dollar value; percentage of Contract Sum to nearest 1/100 percent, adjusted to total 100 percent.
 5. Provide breakdown of Contract Sum in sufficient detail to facilitate continued evaluation of Applications for Payment and Progress Reports; coordinate with Project Manual Table of Contents.
 6. Break principal subcontract amounts down into several line items.
 7. Round amounts to nearest whole dollar; total shall equal Contract Sum.
 8. For each part of work where Application for Payment may include materials or equipment, purchased or fabricated and stored but not yet installed, provide separate Line Items on Schedule of Values for initial cost of materials for each subsequent stage of completion, and for total installed value of that part of work.
 9. Unit Cost Allowances: Show Line Item Value of Unit Cost Allowances as product of Unit Cost times Measured Quantity as estimated from best indication in Contract Documents.
 10. Provide separate line item in Schedule of Values for each part of work where Applications for Payment may include materials or equipment, purchased or fabricated and stored, but not yet installed.
 11. Differentiate between items stored onsite and items stored offsite; include requirements for insurance and bonded warehousing, if required.
- F. Margins of Cost:
1. Show line items for indirect costs and margins on actual costs only when such items are listed individually in Applications for Payment.
 2. Each item in Schedule of Values and Applications for Payment shall be complete.
 3. Include total cost and proportionate share of general overhead and profit margin for each item.
- G. Temporary Facilities: Show temporary facilities and other major cost items that are not direct cost of actual work-in-place either as separate line items in schedule of values, or distributed as general overhead expense, at Contractor's option.
- H. Schedule Updating: Update and resubmit Schedule of Values before next Application for Payment when Change Orders or Construction Change Directives result in change in Contract Sum.

1.3 APPLICATION FOR PAYMENT

A. General:

1. Each Application for Payment shall be consistent with previous Applications and payments as certified by Architect and paid for by Owner.
2. Initial Application for Payment, Application for Payment at Substantial Completion, and final Application for Payment involve additional requirements.

B. Payment Application Times:

1. Date for each progress payment is 15th day of each month.
2. Period covered by each Application for Payment starts on day following end of preceding period and ends 15 days before date for each progress payment.

C. Payment Application Forms: Use AIA Document G702 and Continuation Sheets G703 as form for Application for Payment.

D. Application Preparation:

1. Complete every entry on form.
2. Include notarization and execution by person authorized to sign legal documents on behalf of Contractor.
3. Architect will return incomplete Applications without action.
4. Entries shall match data on Schedule of Values and Contractor's Construction Schedule; use updated Schedules if revisions were made.
5. Include amounts of Change Orders and Construction Change Directives issued before last day of construction period covered by Application.

E. Transmittal:

1. Submit 3 signed and notarized original copies of each Application for Payment to Architect by method ensuring receipt within 24 hours.
2. One copy shall be complete, including waivers of lien and similar attachments, when required.
3. Transmit each copy with transmittal form listing attachments and recording appropriate information related to application, in manner acceptable to Architect.

F. Waivers of Mechanic Lien: With each Application for Payment, submit waivers of mechanics lien from every entity who is lawfully entitled to file mechanics lien arising out of Contract and related to work covered by payment.

G. Waiver Delays:

1. Submit each application for payment with Contractor's waiver of mechanics lien for period of construction covered by Application.
2. Submit final Applications for Payment with or preceded by final waivers from every entity involved with performance of work covered by Application who is lawfully entitled to lien.

- H. Initial Application for Payment: Administrative actions and submittals, that must precede or coincide with submittal, include following:
1. List of subcontractors.
 2. List of principal suppliers and fabricators.
 3. Schedule of Values.
 4. Contractor Construction Schedule.
 5. Schedule of principal products.
 6. Submittal Schedule.
 7. List of Contractor's staff assignments.
 8. List of Contractor's principal consultants.
 9. Copies of building permits.
 10. Copies of authorizations and licenses from governing authorities for performance of work.
 11. Initial progress report.
 12. Report of preconstruction meeting.
 13. Certificates of insurance and insurance policies.
- I. Application of Payment at Substantial Completion:
1. Following issuance of Certificate of Substantial Completion, submit Application for Payment.
 2. Application shall reflect certificates of partial Substantial Completion issued previously for Owner occupancy of designated portions of work.
 3. Administrative actions and submittals shall precede or coincide with this Application and shall be as defined in Section 017700.
- J. Administrative Actions and Submittals that shall Proceed or Coincide with Application include:
1. Occupancy Permits and similar approvals.
 2. Warranties (Guarantees) and Maintenance Agreements.
 3. Test/adjust/balance records.
 4. Maintenance instructions.
 5. Meter readings.
 6. Start-up Performance Reports.
 7. Changeover information related to Owner's occupancy, use, operation, and maintenance.
 8. Final cleaning.
 9. Application for reduction of retainage, and consent of surety.
 10. Advice on shifting insurance coverages.
 11. Final progress photographs.
 12. List of incomplete work, recognized as exceptions to Designer's Certificate of Substantial Completion.
- K. Final Payment Application: Administrative actions and submittals that must precede or coincide with submittal for final application for payment include following:
1. Completion of Project closeout requirements.
 2. Completion of items specified for completion after Substantial Completion.

3. Ensure that unsettled claims will be settled.
 4. Ensure that incomplete work is not accepted and will be completed without undue delay.
 5. Transmittal of required Project construction record to Owner.
 6. Removal of temporary facilities and services.
 7. Removal of surplus materials, rubbish, and similar elements.
- L. Retainage. There will be applied with each payment request a 5% retainage for labor and a 5% for materials.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 012900

SECTION 013300 - SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section specifies administrative and procedural requirements for submittals required for performance of work, including:
 - 1. Contractor's Construction Schedule.
 - 2. Shop drawings.
 - 3. Product data.
 - 4. Samples.
 - 5. Applications for Payment.

1.2 SUBMITTAL PROCEDURES

- A. Coordination:
 - 1. Coordinate preparation and processing of submittals with performance of construction activities.
 - 2. Transmit each submittal sufficiently in advance of performance of related construction activities to avoid delay.
 - 3. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities requiring sequential activity.
 - 4. Coordinate transmittal of different types of submittals for related elements of work so processing will not be delayed by need to review submittals concurrently for coordination.
 - 5. Architect reserves right to withhold action on submittal requiring coordination with other submittals until related submittals are received.
- B. Processing:
 - 1. Allow sufficient review time so installation will not be delayed as result of time required to process submittals, including time for resubmittals.
 - 2. Allow 2 weeks for initial review.
 - 3. Allow additional time if processing must be delayed to permit coordination with subsequent submittals.
 - 4. Architect will promptly advise Contractor when submittal being processed must be delayed for coordination.
 - 5. If intermediate submittal is necessary, process same as initial submittal.
 - 6. Allow 2 weeks for reprocessing each submittal.
 - 7. No extension of Contract Time will be authorized because of failure to transmit submittals to Architect sufficiently in advance of work to permit processing.
- C. Submittal Preparation:
 - 1. Place permanent label or title block on each submittal for identification.
 - 2. Indicate name of entity who prepared each submittal on label or title block.

3. Provide space approximately 4 in. x 5 in. on label or beside title block on shop drawings to record Contractor's review and approval markings and action taken.
4. Include following information on label for processing and recording action taken:
 - a. Project Name.
 - b. Date.
 - c. Name and address of Architect.
 - d. Name and address of Contractor.
 - e. Name and address of Subcontractor.
 - f. Name and address of Supplier.
 - g. Name of Manufacturer.
 - h. Number and Title of appropriate Specification Section.
 - i. Drawing Number and Detail References, as appropriate.

D. Submittal Transmittal:

1. Package each submittal appropriately for transmittal and handling.
2. Transmit each submittal from Contractor to Architect using transmittal form.
3. Submittals received from sources other than Contractor will be returned without action.
4. On transmittal record relevant information and requests for data.
5. On Form, or Separate Sheet, record deviations from Contract Document requirements, including minor variations and limitations.
6. Include Contractor's certification that information complies with Contract Document requirements.
7. Transmittal Form: AIA Document G810.

E. Submit minimum 8 copies of each type of Submittal.

1.3 CONTRACTOR'S CONSTRUCTION SCHEDULE

A. Bar-Chart Schedule:

1. Prepare fully developed, horizontal bar-chart-type Contractor's Construction Schedule.
2. Submit within 30 days of date established for start of work.
3. Provide separate time bar for each significant construction activity.
4. Provide continuous vertical line to identify first working day of each week.
5. Within each time bar indicate estimated completion percentage in 10 percent increments.
6. As work progresses, place contrasting mark in each bar to indicate Actual Completion.
7. Prepare Schedule on sheet, or series of sheets, of stable transparency, or other reproducible media, of sufficient width to show data for entire construction period.
8. Secure time commitments for performing critical elements of work from parties involved.
9. Coordinate each element on Schedule with other construction activities; include minor elements involved in sequence of work.
10. Show each activity in proper sequence.
11. Indicate graphically sequences necessary for completion of related portions of work.
12. Indicate completion in advance of date established for Substantial Completion.
13. Indicate Substantial Completion on Schedule to allow time for Architect's procedures necessary for certification of Substantial Completion.

14. Work Stages: Indicate important stages of construction for each major portion of work, including testing and installation.
15. Area Separations:
 - a. Provide separate time bar to identify each major construction area for each major portion of work.
 - b. Indicate where each element in area must be sequenced or integrated with other activities.
16. Cost Correlation:
 - a. At head of Schedule, provide two-item cost correlation line, indicating pre-calculated and actual costs.
 - b. On line shown dollar-volume of work performed as of dates used for preparation of payment requests.
17. Distribution:
 - a. Following response to initial submittal, print and distribute copies to Architect, Owner, subcontractors, and other parties required to comply with scheduled dates.
 - b. Post copies in Project Meeting Room and Temporary Field Office.
 - c. When revisions are made, distribute to same parties and post in same locations.
 - d. Delete parties from distribution when they have completed their assigned portion of work and are no longer involved in construction activities.
18. Schedule Updating:
 - a. Revise Schedule after each meeting or activity, where revisions have been recognized or made.
 - b. Issue updated Schedule concurrently with report of each meeting.

1.4 SHOP DRAWINGS

A. General:

1. Submit newly prepared information, drawn to accurate scale.
2. Highlight, encircle, or otherwise indicate deviations from Contract Documents.
3. Do not reproduce Contract Documents or copy standard information as basis of shop drawings.
4. Standard information prepared without specific reference to Project is not considered shop drawings.
5. Shop drawings include Fabrication and Installation Drawings, Setting Diagrams, Schedules, Patterns, Templates, and similar Drawings.
6. Include following information:
 - a. Dimensions.
 - b. Identification of products and materials included.
 - c. Compliance with specified standards.
 - d. Notation of coordination requirements.

- e. Notation of dimensions established by field measurement.
7. Submittal:
- a. Submit 8 blue or black-line prints and 2 additional prints where required for maintenance manuals, and number of prints needed by Architect for distribution.
 - b. 2 prints will be retained; remainder returned.
 - c. Mark up and maintain one of returned prints as Record Document.
8. Do not use shop drawings without appropriate final stamp indicating action taken in connection with construction.

B. Coordination Drawings:

- 1. A special type of shop drawing showing relationship and integration of different construction elements requiring careful coordination during fabrication or installation to fit in space provided or function as intended.
- 2. Preparation of coordination drawings may include components previously shown in detail on shop drawings or product data.
- 3. Submit Coordination Drawings for integration of different construction elements.
- 4. Show sequences and relationships of separate components to avoid conflicts in use of space.

1.5 PRODUCT DATA

A. General:

- 1. Collect product data into single submittal for each element of construction or system.
- 2. 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.
- 3. Where product data must be specially prepared because standard printed data is not suitable for use, submit as shop drawings.
- 4. Mark each copy to show applicable choices and options.
- 5. Where printed product data includes information on several products, some of which are not required, mark copies to indicate applicable information.
- 6. Include 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 measurements.
 - f. Notation of coordination requirements.
- 7. Do not submit product data until compliance with requirements of Contract Documents has been confirmed.

- B. Material Safety Data Sheets (MSDS):
 - 1. Submit three copies of MSDS for all products scheduled or planned for use on Project.
 - 2. Do not purchase any products until MSDS have been submitted to Architect and reviewed.
 - 3. Label MSDS with Project Manual Section Number.
- C. Preliminary Submittal: Submit preliminary single copy of product data where selection of options is required.
- D. Submittals:
 - 1. Submit 8 copies of each required submittal; submit 4 copies where required for Maintenance Manuals.
 - 2. Architect will retain one, and will return other marked with action taken and corrections or modifications required.
 - 3. Unless noncompliance with Contract Document provisions is observed, submittal may serve as final submittal.
- E. Distribution:
 - 1. Furnish copies of final submittal to installers, subcontractors, suppliers, manufacturers, fabricators, and others required for performance of construction activities; show distribution on Transmittal Forms.
 - 2. Do not proceed with installation until applicable copy of product data applicable is in installer's possession.
 - 3. Do not permit use of unmarked copies of product data in connection with construction.

1.6 SAMPLES

- A. General:
 - 1. Submit full-size, fully fabricated samples cured and finished as specified and physically identical with material or product proposed.
 - 2. Samples include Partial Sections of Manufactured or Fabricated Components, Cuts or Containers of Materials, Color Range Sets, and Swatches showing color, texture, and pattern.
 - 3. Mount, display, or package samples in manner specified to facilitate review of qualities indicated.
 - 4. Prepare samples to match Architect's sample.
 - 5. Include following:
 - a. Generic description of sample.
 - b. Sample source.
 - c. Product name or name of manufacturer.
 - d. Compliance with recognized Standards.
 - e. Availability and delivery time.

6. Submit samples for review of kind, color, pattern, and texture, for final check of these characteristics with other elements, and for comparison of these characteristics between final submittal and actual component as delivered and installed.
 7. Where variation in color, pattern, texture, or other characteristics are inherent in material or product represented, submit min. 3 multiple units showing approximate limits of variations.
 8. Refer to other Specification Sections for requirements for samples illustrating installation, fabrication techniques, details of assembly, connections, operations, and similar construction characteristics.
 9. Refer to other Sections for samples to be returned to Contractor for incorporation in work; such samples must be undamaged at time of use.
 10. On Transmittal, indicate special requests regarding disposition of sample submittals.
- B. Preliminary Submittals:
1. Where samples are for selection of color, pattern, texture, or similar characteristics from range of standard choices, submit full set of choices for material or product.
 2. Preliminary submittals will be reviewed and returned with Architect's mark indicating selection and other action.
- C. Submittals:
1. Except for samples illustrating assembly details, installation, fabrication techniques, connections, operation, and similar characteristics, submit 3 sets; one will be returned marked with action taken.
 2. Maintain sets of samples, as returned, at Project site, for quality comparisons throughout course of construction.
 3. Unless noncompliance with Contract Document provisions is observed, submittal may serve as final submittal.
 4. Sample sets may be used to obtain final Acceptance of construction associated with each set.
- D. Distribution of Samples:
1. Prepare and distribute additional sets to subcontractors, manufacturers, fabricators, suppliers, installers, and others as required for performance of work.
 2. Show distribution on Transmittal Forms.
- E. Field Samples:
1. Specified in individual Sections are special types of samples.
 2. Field samples are full-size examples erected on site to illustrate finishes, coatings, or finish materials and to establish standard by which work will be judged.
 3. Comply with submittal requirements to fullest extent possible.
 4. Process Transmittal Forms to provide record of activity.

1.7 APPLICATIONS FOR PAYMENT

A. Schedule of Values:

1. Coordination: Coordinate preparation of Schedule of Values with preparation of Contractor's Construction Schedule.
2. Submit Schedule of Values to Architect at earliest possible date, min. 7 days before date scheduled for submittal of initial Applications for Payment.
3. Sub-schedules: Where work is separated into phases requiring separately phased payments, provide Sub-schedules showing values correlated with each phase of payment.
4. Margins of Cost:
 - a. Show line items for indirect costs and margins on actual costs only when such items are listed individually in Applications for Payment.
 - b. Each item in Schedule of Values and Applications for Payment shall be complete.
 - c. Include total cost and proportionate share of general overhead and profit margin for each item.
5. Temporary Facilities: Show temporary facilities and other major cost items that are not direct cost of actual work-in-place either as separate line items in schedule of values, or distributed as general overhead expense, at Contractor's option.
6. Schedule Updating: Update and resubmit Schedule of Values before next Application for Payment when Change Orders or Construction Change Directives result in change in Contract Sum.

B. Schedule of Values - Form and Content:

1. Use Project Manual Table of Contents as guide to establish format for Schedule of Values.
2. Provide min. 1 line item for each Specification Section.
3. Include following Project identification on Schedule of Values:
 - a. Project name and location.
 - b. Name of Architect.
 - c. Project number.
 - d. Contractor's name and address.
 - e. Date of submittal.
4. Arrange Schedule of Values in tabular form with separate columns to indicate following for each item listed.
 - a. Related Specification Section or Division.
 - b. Description of work.
 - c. Name of subcontractor.
 - d. Name of manufacturer or fabricator.
 - e. Name of supplier.
 - f. Change Order Numbers that affect value.

- g. Dollar value; percentage of Contract Sum to nearest 1/100 percent, adjusted to total 100 percent.
- 5. Provide breakdown of Contract Sum in sufficient detail to facilitate continued evaluation of Applications for Payment and Progress Reports; coordinate with Project Manual Table of Contents.
 - 6. Break principal subcontract amounts down into several line items.
 - 7. Round amounts to nearest whole dollar; total shall equal Contract Sum.
 - 8. Provide separate line item in Schedule of Values for each part of work where Applications for Payment may include materials or equipment, purchased or fabricated and stored, but not yet installed.
 - 9. Differentiate between items stored onsite and items stored offsite; include requirements for insurance and bonded warehousing, if required.
- C. Payment Application:
- 1. Each Application for Payment shall be consistent with previous Applications and payments as certified by Architect and paid for by Owner.
 - 2. Initial Application for Payment, Application for Payment at Substantial Completion, and final Application for Payment involve additional requirements.
 - 3. Payment Application Times:
 - a. Date for each progress payment is 15th day of each month.
 - b. Period covered by each Application for Payment starts on day following end of preceding period and ends 15 days before date for each progress payment.
 - 4. Payment Application Forms: Use AIA Document G702 and Continuation Sheets G703 as form for Application for Payment.
 - 5. Application Preparation:
 - a. Complete every entry on form.
 - b. Include notarization and execution by person authorized to sign legal documents on behalf of Contractor.
 - c. Architect will return incomplete Applications without action.
 - d. Entries shall match data on Schedule of Values and Contractor's Construction Schedule; use updated Schedules if revisions were made.
 - e. Include amounts of Change Orders and Construction Change Directives issued before last day of construction period covered by Application.
 - 6. Transmittal:
 - a. Submit 3 signed and notarized original copies of each Application for Payment to Architect by method ensuring receipt within 24 hours.
 - b. One copy shall be complete, including waivers of lien and similar attachments, when required.
 - c. Transmit each copy with transmittal form listing attachments and recording appropriate information related to application, in manner acceptable to Architect.

7. Waivers of Mechanic Lien: With each Application for Payment, submit waivers of mechanics lien from every entity who is lawfully entitled to file mechanics lien arising out of Contract and related to work covered by payment.
8. Waiver Delays:
 - a. Submit each application for payment with Contractor's waiver of mechanics lien for period of construction covered by Application.
 - b. Submit final Applications for Payment with or preceded by final waivers from every entity involved with performance of work covered by Application who is lawfully entitled to lien.
9. Initial Application for Payment: Administrative actions and submittals, that must precede or coincide with submittal, include following:
 - a. List of subcontractors.
 - b. List of principal suppliers and fabricators.
 - c. Schedule of Values.
 - d. Contractor Construction Schedule.
 - e. Schedule of principal products.
 - f. Submittal Schedule.
 - g. List of Contractor's staff assignments.
 - h. List of Contractor's principal consultants.
 - i. Copies of building permits.
 - j. Copies of authorizations and licenses from governing authorities for performance of work.
 - k. Initial progress report.
 - l. Report of preconstruction meeting.
 - m. Certificates of insurance and insurance policies.
10. Application of Payment at Substantial Completion:
 - a. Following issuance of Certificate of Substantial Completion, submit Application for Payment.
 - b. Application shall reflect certificates of partial Substantial Completion issued previously for Owner occupancy of designated portions of work.
 - c. Administrative actions and submittals shall precede or coincide with this Application and shall be as defined in Section 01770.
11. Final Payment Application: Administrative actions and submittals that must precede or coincide with submittal for final application for payment include following:
 - a. Completion of Project closeout requirements.
 - b. Completion of items specified for completion after Substantial Completion.
 - c. Ensure that unsettled claims will be settled.
 - d. Ensure that incomplete work is not accepted and will be completed without undue delay.
 - e. Transmittal of required Project construction record to Owner.
 - f. Removal of temporary facilities and services.
 - g. Removal of surplus materials, rubbish, and similar elements.

1.8 ARCHITECT'S ACTION

A. General:

1. Except for submittals for record, information, or similar purposes, where action and return is required or requested, Architect will review each submittal, mark to indicated action taken, and promptly return.
2. Compliance with specified characteristics is Contractor's responsibility.

PART 2 – PRODUCTS (Not Used)

PART 3 – EXECUTION (Not Used)

END OF SECTION 013300

SECTION 015000 - TEMPORARY FACILITIES AND CONTROLS

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes:

1. Requirements for temporary facilities and controls, including temporary utilities, support facilities, and security and protection facilities.
2. Temporary utilities include, but are not limited to, following:
 - a. Drainage.
 - b. Sanitary facilities, including toilets, wash facilities, and drinking-water facilities.
 - c. Electric power service.
 - d. Telephone, facsimile, and modem service.
3. Support facilities include, but are not limited to, following:
 - a. Waste disposal facilities.
 - b. Field offices.
 - c. Storage and fabrication sheds.
 - d. Lifts and hoists.
 - e. Construction aids and miscellaneous services and facilities.
4. Security and protection facilities include, but are not limited to, following:
 - a. Environmental protection.
 - b. Storm water control.
 - c. Security enclosure and lockup.
 - d. Barricades, warning signs, and lights.

B. Related Sections:

1. 013300, Submittal Procedures; for procedures for submitting copies of Implementation and Termination Schedule and Utility Reports.
2. 017700, Closeout Procedures; for progress cleaning requirements.

C. Drawing Coordination: At minimum, following information is provided on Drawings.

1. General:

- a. Locations of environmental protection commitments.
- b. Locations of field offices, sanitary facilities, and similar features, when Project is located in congested urban area.

D. Definitions:

1. Truck cranes and similar devices used for hoisting materials are considered tools and equipment, not temporary facilities.

1.2 USE CHARGES

A. General:

1. Cost for temporary facilities are not chargeable to Owner or Architect.
2. Include costs in Contract Sum.
3. Allow other entities to use temporary services and facilities without cost including, but not limited to, following:
 - a. Architect.
 - b. Testing agencies, as required to perform testing and inspection work of Project.
 - c. Personnel of authorities having jurisdiction, as required to perform inspection work of Project.
 - d. Subcontractors, as required to perform their work.
4. The Contractor(s) shall have access to building services such as water and electricity, without usage charge as required by the Construction.
5. The Contractor(s) shall provide and pay for all costs associated with phone, facsimile or other similar services required in conducting this work.

1.3 SUBMITTALS

- A. Implementation and Termination Schedule: Within 15 days of date established for submittal of Contractor's Construction Schedule, submit Schedule indicating implementation and termination of each temporary utility.

1.4 QUALITY ASSURANCE

- A. Standards: Comply with ANSI A10.6, NECA's Temporary Electrical Facilities, and NFPA 241.
1. Trade Jurisdictions: Assigned responsibilities for installation and operation of temporary utilities are not intended to interfere with trade regulations and union jurisdictions.
 2. Electric Service:
 - a. Comply with NECA, NEMA, and UL standards and regulations for temporary electric service.
 - b. Install service to comply with NFPA 70.
- B. Tests and Inspections: Arrange for authorities having jurisdiction to test and inspect each temporary utility before use and obtain required certifications and permits.

1.5 PROJECT CONDITIONS

- A. Temporary Utilities: Not Used.

PART 2 – PRODUCTS

2.1 MATERIALS

- A. General:
 - 1. Provide new materials.
 - 2. Undamaged, previously-used materials in serviceable condition may be used if approved by Architect.
 - 3. Provide materials suitable for use intended.

2.2 EQUIPMENT

- A. General: Provide equipment suitable for use intended.
- B. Field Offices: Will not be allowed due to restrictions associated with an occupied facility.
- C. Fire Extinguishers:
 - 1. Hand-carried, portable, UL-rated; provide class and extinguishing agent as indicated or combination of extinguishers of NFPA-recommended classes for exposures.
 - 2. Comply with NFPA 10 and NFPA 241 for classification, extinguishing agent, and size required by location and class of fire exposure.
- D. Self-Contained Toilet Units: Use of on-site facility will be allowed.
- E. Drinking Water Fixtures: Containerized, tap-dispenser, bottled-water drinking-water units, including paper cup supply.
- F. Heating Equipment: Not Used.
- G. Electrical Outlets: Properly configured, NEMA-polarized outlets to prevent insertion of 110 to 120 V plugs into higher-voltage outlets; equipped with ground-fault circuit interrupters, reset button, and pilot light.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Temporary Utilities:
 - 1. Sanitary Facilities: Provide temporary toilets, wash facilities, and drinking water for use of construction personnel. Comply with requirements of authorities having

jurisdiction for type, number, location, operation, and maintenance of fixtures and facilities.

2. Electric Power Service:
 - a. Provide weatherproof, grounded electric power service and distribution system of sufficient size, capacity, and power characteristics during construction period.
 - b. Include meters, transformers, overload-protection disconnection means, automatic ground-fault interrupters, and main distribution switchgear.
 - c. Install power distribution wiring for least exposure to damage.
3. Electric Distribution:
 - a. Provide receptacle outlets adequate for connection of power tools and equipment.
 - b. Provide waterproof connectors to connect separate lengths of electrical power cords if single lengths will not reach areas where construction activities are in progress.
 - c. Do not exceed safe length-voltage ratio.
 - d. Provide warning signs at power outlets other than 110 VAC to 120 VAC.
 - e. Provide metal conduit, tubing, or metallic cable for wiring exposed to possible damage.
 - f. Provide rigid steel conduits for wiring exposed on grades, floors, decks, or other traffic areas.
 - g. Provide metal conduit enclosures or boxes for wiring devices.
 - h. Provide 4-gang outlets, spaced so 100 ft. (30m) extension cord can reach each area for power hand tools and task lighting.
 - i. Provide separate 125 VAC, 20-A circuit for each outlet.
4. Telephone Service:
 - a. Furnish superintendent with electronic paging device or portable two-way radio for use when away from field office.
 - b. Provide portable cellular telephone for superintendent's use in making and receiving telephone calls when away from field office.

3.2 SUPPORT FACILITIES INSTALLATION

A. General:

1. Locate field offices, storage sheds, sanitary facilities, and other temporary construction and support facilities for easy access.
2. Provide incombustible construction for offices, shops, and sheds located within construction area or within 30 ft. (9m) of building lines; comply with NFPA 241.
3. Maintain support facilities until Substantial Completion.
4. Remove before Substantial Completion.
5. Personnel remaining after Substantial Completion will be permitted to use permanent facilities as acceptable to Owner.

B. Waste Disposal Facilities:

1. Provide waste-collection containers in sizes adequate to handle waste from construction operations.
2. Containerize and clearly label hazardous, dangerous, or unsanitary waste materials separately from other waste.

C. Lifts and Hoists: Contractor shall pay for all required facilities necessary for hoisting materials and personnel.

3.3 SECURITY AND PROTECTION FACILITIES INSTALLATION

A. Environmental Protection:

1. Provide protection, operate temporary facilities, and conduct construction to comply with environmental regulations and minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects.
2. Avoid using tools and equipment that produce harmful noise.
3. Restrict use of noisemaking tools and equipment to hours that will minimize complaints from persons or firms near Project site.

B. Barricades, Warning Signs, and Lights:

1. Comply with standards and code requirements for erecting structurally-adequate barricades.
2. Paint with appropriate colors, graphics, and warning signs to inform personnel and public of possible hazard.
3. Where appropriate and needed, provide lighting, including flashing red or amber lights.
4. For safety barriers, sidewalk bridges, and similar uses, provide min. 5/8 in. (16mm) thick exterior plywood.

3.4 OPERATION, TERMINATION, AND REMOVAL

A. Supervision:

1. Enforce strict discipline in use of temporary facilities.
2. To minimize waste and abuse, limit availability of temporary facilities to essential and intended uses.

B. Maintenance:

1. Maintain facilities in good operating condition until removal.
2. Protect from damage caused by freezing temperatures and similar elements.

C. Termination and Removal:

1. Remove each temporary facility when need for its service has ended, when it has been replaced by authorized use of permanent facility, or at Substantial Completion.
2. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with temporary facility.

3. Repair damaged work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.
4. Materials and facilities that constitute temporary facilities are property of Contractor.
5. Substantial Completion:
 - a. Clean and renovate permanent facilities used during construction period.
 - b. Comply with final cleaning requirements in Section 017700.

END OF SECTION 015000

SECTION 016000 - PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section specifies administrative and procedural requirements governing Contractor's selection of products for use in Project where named by specific manufacturer and/or product or described by physical properties without naming manufacturer and/or product.
- B. Related Sections:
 - 1. 013300, Submittal Procedures; for Contractor's Construction Schedule and Schedule of Submittals.
 - 2. 016310, Product Substitutions; for procedures related to substitution requests for specified products, materials, equipment, or construction methods.
- C. Definitions:
 - 1. General:
 - a. Definitions used in this Article are not intended to change meaning of other terms used in Contract Documents, such as, specialties, systems, structure, finishes, accessories, and similar terms.
 - b. Such terms are self-explanatory and have well-recognized meanings in construction industry.
 - 2. Products:
 - a. Items purchased for incorporation in work, whether purchased for Project or taken from previously purchased stock.
 - b. The term product includes terms material, equipment, system, and terms of similar intent.
 - c. Named Products: Items identified by manufacturer's product name, including make or model designation, indicated in manufacturer's published product literature, current as of date of Contract Documents.
 - 3. Materials: Products substantially shaped, cut, worked, mixed, finished, refined, or otherwise fabricated, processed, or installed to form part of work.
 - 4. Equipment: Product with operational parts, whether motorized or manually operated, requiring service connections such as wiring or piping.

1.2 SUBMITTALS

- A. Product List Schedule:
 - 1. Prepare Schedule showing products specified in tabular form acceptable to Architect.
 - 2. Include generic names of products required.
 - 3. Include manufacturer's name and proprietary product names for each item listed.

4. Coordinate Product List Schedule with Contractor's Construction Schedule and Schedule of Submittals.
5. Form: Prepare Product Listing Schedule with information on each item tabulated under following column headings.
 - a. Related Specification Section number.
 - b. Generic name as used in Contract Documents.
 - c. Proprietary name, model number, and similar designations.
 - d. Manufacturer's name and address.
 - e. Supplier's name and address.
 - f. Installer's name and address.
 - g. Projected delivery date, or time span of delivery period.

B. Submittal:

1. Within 10 days after date of commencement of work, submit 3 copies of initial Product List Schedule.
2. Provide written explanation for omissions of data, and for known variations from Contract requirements.
3. At Contractor's option, initial submittal may be limited to product selections and designations that must be established early in Contract period.

C. Completed Schedule:

1. Within 10 days after commencement of work, submit 3 copies of completed Product List Schedule.
2. Provide written explanation for omissions of data and for known variations from Contract requirements.

D. Architect's Action:

1. Architect will respond to Contractor in writing within 2 weeks of receipt of completed Product List Schedule.
2. No response within this time constitutes no objection to listed products or manufacturers, but does not constitute waiver of requirement that products comply with Contract Documents.
3. Architect's response will include following: List of unacceptable product selections, containing brief explanation of reasons for this action.

1.3 QUALITY ASSURANCE

A. Source Limitations:

1. To fullest extent possible, provide products of same kind, from single source.
2. When specified products are available only from sources that do not or cannot produce quantity adequate to complete Project requirements in timely manner, consult with Architect for determination of most important product qualities before proceeding.
3. Qualities may include attributes relating to visual appearance, strength, structural, durability, or compatibility.

4. When determination has been made, select products from sources that produce products possessing these qualities, to fullest extent possible.

B. Compatibility of Options:

1. When Contractor is given option of selecting between two or more products for use on Project, product selected shall be compatible with products previously selected, even if previously selected products were also options.
2. Each prime Contractor is responsible for providing products and construction methods compatible with products and construction methods of other prime or separate Contractors.
3. If dispute arises between prime Contractors over concurrently selectable, but incompatible products, Architect will determine which products shall be retained and which are incompatible and must be replaced.

C. Nameplates:

1. Except for required labels and operating data, do not attach or imprint manufacturer's or producer's nameplates or trademarks on exposed surfaces of products that will be exposed to view in occupied spaces or on exterior.
2. Labels: Locate required product labels and stamps on concealed surface or, where required for observation after installation, on accessible surface that is not conspicuous.
3. Equipment Nameplates:
 - a. Provide permanent nameplate on each item of service-connected or power-operated equipment.
 - b. Locate on easily accessible surface that is inconspicuous in occupied spaces.
 - c. Nameplate shall contain following information and other essential operating data: Name of Product or Manufacturer, Model and Serial Number, Capacity, Speed, Ratings.

1.4 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, and handle products in accordance with manufacturer's recommendations, using means and methods to prevent damage, deterioration and loss, including theft.

B. Delivery:

1. Schedule delivery to minimize long-term storage at site and to prevent overcrowding of construction spaces.
2. Coordinate delivery and installation to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.
3. Deliver products to site in manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
4. Inspect products on delivery to ensure compliance with Contract Documents, and to ensure products are undamaged and properly protected.

C. Storage:

1. Store products at site to facilitate inspection and measurement of quantity or counting of units.
2. Store heavy materials away from Project structure in manner that will not endanger supporting construction.
3. Store products subject to damage by elements above ground, under cover in weather tight enclosure, with ventilation adequate to prevent condensation.
4. Maintain temperature and humidity within range required by manufacturer's instructions.

PART 2 - PRODUCTS

2.1 PRODUCT SELECTION

A. General Product Requirements:

1. Provide undamaged products complying with Contract Documents and, unless otherwise indicated, unused at time of installation.
2. Provide products complete with all accessories, trim, finish, safety guards, and other devices and details needed for complete installation and for intended use and effect.
3. Standard Products: Where available, provide standard products of types that have been produced and used successfully in similar situations on other projects.

B. Product Selection Procedures:

1. Product selection is governed by Contract Documents and governing regulations, not by previous Project experience.
2. Semi-proprietary Specification Requirements:
 - a. Where three or more products or manufacturers are named, provide one of indicated products.
 - b. Where products or manufacturers are specified by name, it is inferred terms "or equal," or "or approved equal," are included in compliance with M.G.L. Chapter 30, §39M; comply with Section 016300 concerning "substitutions" for "or equal," or "or approved equal," to obtain approval for use of unnamed product; substitutions will be processed as Change Order Requests.
3. Performance Specification Requirements:
 - a. Where Specifications require compliance with performance requirements, provide products complying with these requirements, and are recommended by manufacturer for application indicated.
 - b. General overall performance of product is implied where product is specified for specific application.
 - c. Manufacturer's recommendations may be contained in published product literature, or by manufacturer's certification of performance.

4. Compliance with Standards, Codes and Regulations: Where Specifications only require compliance with imposed code, standard, or regulation, select product complying with standards, codes, or regulations specified.
5. Visual Matching:
 - a. Where Specifications require matching established sample, Architect's decision will be final on whether proposed product matches satisfactorily.
 - b. Where no product available within specified category matches satisfactorily and also complies with other specified requirements, comply with provisions of Contract Documents concerning "substitutions" for selection of matching product in another product category, or for noncompliance with specified requirements.
6. Visual Selection:
 - a. Where specified product requirements include phrase ". . . as selected from manufacturer's standard colors, patterns, textures . . ." or similar phrase, select product and manufacturer complying with other specified requirements.
 - b. Architect will select color, pattern, and texture from product line selected.

PART 3 - EXECUTION

3.1 INSTALLATION OF PRODUCTS

- A. Comply with manufacturer's instructions and recommendations for installation of products in applications indicated.
- B. Anchor each product securely in space, accurately located, and aligned with other work.
- C. Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.

END OF SECTION 016000

SECTION 017700 - CLOSEOUT PROCEDURES

PART 1 - GENERAL

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 appropriate Sections in Divisions 02 through 33.

1.2 SUBSTANTIAL COMPLETION

- A. Preliminary Procedures: Before requesting inspection for certification of Substantial Completion, complete following.
 - 1. List exceptions in request.
 - 2. In Application for Payment that coincides with, or first follows, date Substantial Completion is claimed, show 100 percent Completion for portion of work claimed as Substantially Complete.
 - 3. Include supporting documentation for Completion as indicated in these Contract Documents and statement showing accounting of changes to Contract Sum.
 - 4. If 100 percent Completion cannot be shown, include list of incomplete items, value of incomplete construction, and reasons work is not complete.
 - 5. Advise Owner of pending insurance change-over requirements.
 - 6. Submit specific warranties, workmanship bonds, release of liens from material suppliers or subcontractors as work progresses, maintenance agreements, final certifications, and similar documents.
 - 7. Obtain and submit releases enabling Owner unrestricted use of work and access to services and utilities; include occupancy permits, operating certificates, and similar releases.
 - 8. Submit Record Drawings, Maintenance Manuals, Damage or Settlement Survey, Property Survey, and similar final Record information.
 - 9. Deliver tools, spare parts, extra stock, and similar items.
 - 10. Make final change-over of permanent locks and transmit keys to Owner.
 - 11. Advise Owner's personnel of change-over in security provisions.
 - 12. Complete start-up testing of systems, and instruction of Owner's operating and maintenance personnel.
 - 13. Discontinue or change-over and remove temporary facilities from site, along with construction tools, mockups, and similar elements.
 - 14. Complete final clean up requirements, including touch-up painting.
 - 15. Touch-up and otherwise repair and restore marred exposed finishes.

B. Inspection Procedures:

1. On receipt of request for inspection, Architect will either proceed with inspection or advise Contractor of unfulfilled requirements.
2. The Architect will prepare Certificate of Substantial Completion following inspection, or advise Contractor of construction that must be completed or corrected before Certificate will be issued.
3. The Architect will repeat inspection when requested and assured that work has been Substantially Completed.
4. Results of completed inspection will form 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 following.

1. List exceptions in request.
2. Submit Final Payment Request with final releases, including all releases of liens from material suppliers and subcontractors for all placed work, and supporting documentation not previously submitted and accepted.
3. Include certificates of insurance for products and completed operations where required.
4. Submit updated final statement, accounting for final additional changes to Contract Sum.
5. Submit certified copy of 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 list has been endorsed and dated by Architect.
6. Submit final meter readings for utilities, measured record of stored fuel, and similar data as of date of Substantial Completion, or when Owner took possession of and responsibility for corresponding elements of work.
7. Submit consent of surety to Final Payment.
8. Submit final Liquidated Damages Settlement Statement.
9. Submit evidence of final, continuing insurance coverage complying with insurance requirements.

B. Re-inspection Procedure:

1. The Architect will reinspect work on receipt of notice that work, including inspection list items from earlier inspections, has been completed, except items whose completion has been delayed because of circumstances acceptable to Architect.
2. On completion of reinspection, Architect will prepare Certificate of Final Acceptance, or advise Contractor of work that is incomplete or of obligations that have not been fulfilled but are required for Final Acceptance.
3. If necessary, reinspection will be repeated.

1.4 RECORD DOCUMENT SUBMITTALS

A. General:

1. Do not use Record Documents for construction purposes; protect from deterioration and loss in secure, fire-resistive location.
2. Provide access to Record Documents for Architect's reference during normal working hours.

B. Record Drawings:

1. Maintain clean, undamaged set of blue or black line white-prints of Contract Drawings and Shop Drawings.
2. Mark set to show actual installation where installation varies substantially from work as originally shown.
3. Mark whichever drawing is most capable of showing conditions fully and accurately.
4. Where shop drawings are used, record cross-reference at corresponding location on Contract Drawings.
5. Give particular attention to concealed elements that would be difficult to measure and record at later date.
6. Mark Record Sets with red erasable pencil; use other colors to distinguish between variations in separate categories of work.
7. Mark new information that is important to Owner, but was not shown on Contract Drawings or Shop Drawings.
8. Note related Change Order numbers where applicable.
9. Organize Record Drawing Sheets into manageable sets, bind with durable paper cover sheets, and print suitable titles, dates, and other identification on cover of each set.

C. Record Specifications:

1. Maintain one complete copy of Project Manual, including addenda, and one copy of other written Construction Documents such as Change Orders and modifications issued in printed form during construction.
2. Mark these documents to show substantial variations in actual work performed in comparison with text of Specifications and modifications.
3. Give particular attention to substitutions, selection of options, and similar information on elements that are concealed or cannot otherwise be readily discerned later by direct observation.
4. Note related Record Drawing information and Product Data.
5. On completion of work, submit Record Specifications to Architect for Owner's records.

D. Record Product Data:

1. Maintain one copy of each product data submittal.
2. Mark these documents to show significant variations in actual work performed in comparison with information submitted.
3. Include variations in products delivered to site and from manufacturer's installation instructions and recommendations.

4. Give particular attention to concealed products and portions of work that cannot otherwise be readily discerned later by direct observation.
5. Note related Change Orders and mark-up of Record Drawings and Specifications.
6. On completion of mark-up, submit complete set of Record Product Data to Architect for Owner's records.

E. Record Sample Submittal:

1. Immediately before date or dates of Substantial Completion, Contractor will meet at site with Architect and Owner's personnel to determine which of submitted Samples that have been maintained during progress of work, are to be transmitted to Owner for record purposes.
2. Comply with delivery to Owner's sample storage area.

F. Miscellaneous Record Submittals:

1. Refer to other Specification Sections for requirements of miscellaneous record-keeping and submittals in connection with actual performance of work.
2. Immediately before date or dates of Substantial Completion, complete miscellaneous records and place in good order, properly identified and bound or filed, ready for continued use and reference.
3. Submit to Architect for Owner's records.

G. Maintenance Manuals:

1. Organize operating and maintenance data into suitable sets of manageable size.
2. Bind properly indexed data in individual heavy-duty 2 inch, 3-ring vinyl-covered binders, with pocket folders for folded sheet information.
3. Mark appropriate identification on front and spine of each binder.
4. Include following type of information:
 - b. Spare parts list.
 - c. Copies of warranties.
 - f. Inspection procedures.
 - g. Shop drawings and product data.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 CLOSEOUT PROCEDURES

A. Operating and Maintenance Instructions:

1. Arrange for each installer of equipment that requires regular maintenance to meet with Owner's personnel to provide instruction in proper operation and maintenance.
2. If installers are not experienced in procedures, provide instruction by manufacturer's representatives; complete with step-by-step operating manuals written for each operating sequence or combination of sequences.

3. Include detailed review of following items:
 - a. Maintenance manuals complete with step-by-step instructions for maintenance.
 - b. Record documents.
 - c. Spare parts and materials.
 - d. Tools.
 - e. Hazards.
 - f. Cleaning.
 - g. Warranties and bonds.
 - h. Maintenance agreements and similar continuing commitments.

4. As part of instruction for operating equipment, demonstrate following procedures:
 - a. Startup.
 - b. Shutdown.
 - c. Emergency operations.
 - d. Noise and vibration adjustments.
 - e. Safety procedures.
 - f. Economy and efficiency adjustments.
 - g. Effective energy utilization.

3.2 FINAL CLEANING

- A. General: General Cleaning during construction is required by General Conditions and is included in Section 015000.

- B. Cleaning:
 1. Employ experienced workers or professional cleaners for final cleaning.
 2. Clean each surface or unit to condition expected in normal, commercial building cleaning and maintenance program.
 3. Comply with manufacturer's instructions.
 4. Complete following cleaning operations before requesting inspection for Certificate of Substantial Completion.
 - a. Remove labels that are not permanent labels.
 - b. Clean exposed exterior and interior hard-surfaced finishes to dust-free condition, free of stains, films, and similar foreign substances.
 - c. Wipe surfaces of mechanical and electrical equipment.
 - d. Clean site, including landscape development areas, of rubbish, litter, and other foreign substances.
 - e. Sweep paved areas broom clean; remove stains, spills, and other foreign deposits.
 - f. Rake grounds that are neither paved nor planted, to smooth even-textured surface.

- C. Removal of Protection: Remove temporary protection and facilities installed for protection of work during construction.

D. Compliance:

1. Comply with regulations of authorities having jurisdiction and safety standards for cleaning.
2. Do not burn waste materials.
3. Do not bury debris or excess materials on Owner's property.
4. Do not discharge volatile, harmful, or dangerous materials into drainage systems.
5. Remove waste materials from site and dispose of in lawful manner.
6. Where extra materials of value remaining after completion of associated work have become Owner's property, arrange for disposition of these materials as directed.

END OF SECTION 017700

SECTION 061000 - ROUGH CARPENTRY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
 - 1. Rooftop equipment bases and support curbs.
 - 2. Wood blocking, cants, and nailers.

1.3 DEFINITIONS

- A. Exposed Framing: Framing not concealed by other construction.
- B. Dimension Lumber: Lumber of 2 inches nominal or greater but less than 5 inches nominal in least dimension.
- C. Timber: Lumber of 5 inches nominal or greater in least dimension.
- D. Lumber grading agencies, and the abbreviations used to reference them, include the following:
 - 1. NeLMA: Northeastern Lumber Manufacturers' Association.
 - 2. NLGA: National Lumber Grades Authority.
 - 3. RIS: Redwood Inspection Service.
 - 4. SPIB: The Southern Pine Inspection Bureau.
 - 5. WCLIB: West Coast Lumber Inspection Bureau.
 - 6. WWPA: Western Wood Products Association.

1.4 ACTION SUBMITTALS

- A. Product Data: For each type of process and factory-fabricated product. Indicate component materials and dimensions and include construction and application details.
 - 1. Include data for wood-preservative treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements. Indicate type of preservative used and net amount of preservative retained.
 - 2. Include data for fire-retardant treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements. Include physical properties of treated materials based on testing by a qualified independent testing agency.
 - 3. For fire-retardant treatments, include physical properties of treated lumber both before and after exposure to elevated temperatures, based on testing by a qualified independent testing agency according to ASTM D 5664.

4. For products receiving a waterborne treatment, include statement that moisture content of treated materials was reduced to levels specified before shipment to Project site.
5. Include copies of warranties from chemical treatment manufacturers for each type of treatment.

B. Fastener Patterns: Full-size templates for fasteners in exposed framing.

1.5 INFORMATIONAL SUBMITTALS

- A. Material Certificates: For dimension lumber specified to comply with minimum allowable unit stresses. Indicate species and grade selected for each use and design values approved by the ALSC Board of Review.
- B. Evaluation Reports: For the following, from ICC-ES:
 1. Wood-preservative-treated wood.
 2. Power-driven fasteners.
 3. Expansion anchors.

1.6 QUALITY ASSURANCE

- A. Testing Agency Qualifications: For testing agency providing classification marking for fire-retardant treated material, an inspection agency acceptable to authorities having jurisdiction that periodically performs inspections to verify that the material bearing the classification marking is representative of the material tested.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Stack lumber flat with spacers beneath and between each bundle to provide air circulation. Protect lumber from weather by covering with waterproof sheeting, securely anchored. Provide for air circulation around stacks and under coverings.

PART 2 - PRODUCTS

2.1 WOOD PRODUCTS, GENERAL

- A. Certified Wood: Materials shall be produced from wood obtained from forests certified by an FSC-accredited certification body to comply with FSC STD-01-001, "FSC Principles and Criteria for Forest Stewardship." for the following:
 1. Dimension lumber framing.
 2. Timber.
 3. Miscellaneous lumber.
- B. Lumber: DOC PS 20 and applicable rules of grading agencies indicated. If no grading agency is indicated, provide lumber that complies with the applicable rules of any rules-writing agency certified by the ALSC Board of Review. Provide lumber graded by an agency certified by the ALSC Board of Review to inspect and grade lumber under the rules indicated.

1. Factory mark each piece of lumber with grade stamp of grading agency.
2. Where nominal sizes are indicated, provide actual sizes required by DOC PS 20 for moisture content specified. Where actual sizes are indicated, they are minimum dressed sizes for dry lumber.
3. Provide dressed lumber, S4S, unless otherwise indicated.

- C. Maximum Moisture Content of Lumber: 15 percent for 2-inch nominal thickness or less, 19 percent for more than 2-inch nominal thickness unless otherwise indicated.

2.2 WOOD-PRESERVATIVE-TREATED LUMBER

- A. Preservative Treatment by Pressure Process: AWWA U1; Use Category UC3b for exterior construction not in contact with the ground.

1. Preservative Chemicals: Acceptable to authorities having jurisdiction and containing no arsenic or chromium.
2. For exposed items indicated to receive a stained or natural finish, use chemical formulations that do not require incising, contain colorants, bleed through, or otherwise adversely affect finishes.

- B. Kiln-dry lumber after treatment to a maximum moisture content of 19 percent. Do not use material that is warped or that does not comply with requirements for untreated material.

- C. Mark lumber with treatment quality mark of an inspection agency approved by the ALSC Board of Review.

1. For exposed lumber indicated to receive a stained or natural finish, mark end or back of each piece.

- D. Application: Treat all rough carpentry unless otherwise indicated and the following:

1. Wood cants, nailers, curbs, equipment support bases, blocking, stripping, and similar members in connection with roofing, flashing, vapor barriers, and waterproofing.

2.3 MISCELLANEOUS LUMBER

- A. General: Provide miscellaneous lumber indicated and lumber for support or attachment of other construction, including the following:

1. Blocking.
2. Nailers.
3. Rooftop equipment bases and support curbs.
4. Cants.
5. Grounds.

- B. For items of dimension lumber size, provide Construction or No. 2 Standard, grade lumber and any of the following species:

1. Hem-fir (north); NLGA.
2. Mixed southern pine; SPIB.

3. Spruce-pine-fir; NLGA.
4. Hem-fir; WCLIB or WWPA.
5. Spruce-pine-fir (south); NeLMA, WCLIB, or WWPA.
6. Western woods; WCLIB or WWPA.
7. Northern species; NLGA.
8. Eastern softwoods; NeLMA.

2.4 FASTENERS

- A. General: Provide fasteners of size and type indicated that comply with requirements specified in this article for material and manufacture.
 1. Where rough carpentry is exposed to weather, in ground contact, pressure-preservative treated, or in area of high relative humidity, provide fasteners with hot-dip zinc coating complying with ASTM A 153/A 153M or Type 304 stainless steel.
- B. Nails, Brads, and Staples: ASTM F 1667.
- C. Power-Driven Fasteners: NES NER-272.
- D. Wood Screws: ASME B18.6.1.
- E. Lag Bolts: ASME B18.2.1.
- F. Bolts: Steel bolts complying with ASTM A 307, Grade A; with ASTM A 563 hex nuts and, where indicated, flat washers.

2.5 MISCELLANEOUS MATERIALS

- A. Water-Repellent Preservative: NWWDA-tested and -accepted formulation containing 3-iodo-2-propynyl butyl carbamate, combined with an insecticide containing chlorpyrifos as its active ingredient.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

- A. Set rough carpentry to required levels and lines, with members plumb, true to line, cut, and fitted. Fit rough carpentry to other construction; scribe and cope as needed for accurate fit. Locate nailers, blocking, grounds, and similar supports to comply with requirements for attaching other construction.
- B. Sort and select lumber so that natural characteristics will not interfere with installation or with fastening other materials to lumber. Do not use materials with defects that interfere with function of member or pieces that are too small to use with minimum number of joints or optimum joint arrangement.
- C. Comply with AWPAC M4 for applying field treatment to cut surfaces of preservative-treated lumber.

1. Use inorganic boron for items that are continuously protected from liquid water.
 2. Use copper naphthenate for items not continuously protected from liquid water.
- D. Securely attach rough carpentry work to substrate by anchoring and fastening as indicated, complying with the following:
1. NES NER-272 for power-driven fasteners.
 2. Table 2304.9.1, "Fastening Schedule," in ICC's International Building Code.
 3. Table R602.3(1), "Fastener Schedule for Structural Members," and Table R602.3(2), "Alternate Attachments," in ICC's International Residential Code for One- and Two-Family Dwellings.
- E. Use steel common nails unless otherwise indicated. Select fasteners of size that will not fully penetrate members where opposite side will be exposed to view or will receive finish materials. Make tight connections between members. Install fasteners without splitting wood. Drive nails snug but do not countersink nail heads unless otherwise indicated.

3.2 WOOD GROUND, BLOCKING, AND NAILER INSTALLATION

- A. Attach items to substrates to support applied loading. Recess bolts and nuts flush with surfaces unless otherwise indicated.
- B. Where wood-preservative-treated lumber is installed adjacent to metal decking, install continuous flexible flashing separator between wood and metal decking.
- C. Provide permanent grounds of dressed, pressure-preservative-treated, key-beveled lumber not less than 1-1/2 inches wide and of thickness required to bring face of ground to exact thickness of finish material. Remove temporary grounds when no longer required.

END OF SECTION 061000

SECTION 075419 - POLYVINYL-CHLORIDE (PVC) ROOFING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:

1. Adhered PVC membrane roofing system.
2. Vapor retarder.
3. Roof insulation.
4. Joint sealants.

- B. Related Sections:

1. Section 061000 "Rough Carpentry" for wood nailers, curbs, and blocking.
2. Section 077100 "Roof Specialties."

1.3 DEFINITIONS

- A. Roofing Terminology: See ASTM D 1079 and glossary in NRCA's "The NRCA Roofing and Waterproofing Manual" for definition of terms related to roofing work in this Section.

1.4 PERFORMANCE REQUIREMENTS

- A. General Performance: Installed membrane roofing and base flashings shall withstand specified uplift pressures, thermally induced movement, and exposure to weather without failure due to defective manufacture, fabrication, installation, or other defects in construction. Membrane roofing and base flashings shall remain watertight.
- B. Material Compatibility: Provide roofing materials that are compatible with one another under conditions of service and application required, as demonstrated by membrane roofing manufacturer based on testing and field experience.
- C. Roofing System Design: Provide membrane roofing system that is identical to systems that have been successfully tested by a qualified testing and inspecting agency to resist uplift pressure calculated according to ASCE/SEI 7.
 1. Roofing System to comply with an 80 mph manufacturer's wind speed requirement.
- D. Solar Reflectance Index: Not less than 78 when calculated according to ASTM E 1980, based on testing identical products by a qualified testing agency.

- E. Energy Performance: Provide roofing system that is listed on the DOE's ENERGY STAR "Roof Products Qualified Product List" for low-slope roof products.

1.5 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Shop Drawings: For roofing system. Include plans, elevations, sections, details, and attachments to other work.
 - 1. Base flashings and membrane terminations.
 - 2. Tapered insulation, including slopes.
 - 3. Roof plan showing orientation of steel roof deck and orientation of membrane roofing and fastening spacings and patterns for mechanically fastened membrane roofing.
 - 4. Insulation fastening patterns for corner, perimeter, and field-of-roof locations.
- C. Samples for Verification: For the following products:
 - 1. Sheet roofing, of color specified, including T-shaped side and end lap seam.
 - 2. Roof insulation.
 - 3. Walkway pads or rolls.
 - 4. Metal termination bars.
 - 5. Battens.
 - 6. Six insulation fasteners of each type, length, and finish.

1.6 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For qualified Installer and manufacturer.
- B. Manufacturer Certificates: Signed by roofing manufacturer certifying that roofing system complies with requirements specified in "Performance Requirements" Article.
 - 1. Submit evidence of compliance with performance requirements.
- C. Product Test Reports: Based on evaluation of comprehensive tests performed by manufacturer and witnessed by a qualified testing agency, for components of membrane roofing system.
- D. Research/Evaluation Reports: For components of membrane roofing system, from the ICC-ES.
- E. Field quality-control reports.
- F. Warranties: Sample of special warranties.

1.7 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For roofing system to include in maintenance manuals.

1.8 QUALITY ASSURANCE

- A. **Manufacturer Qualifications:** A qualified manufacturer that is FM Approvals approved for membrane roofing system identical to that used for this Project.
- B. **Installer Qualifications:** A qualified firm that is approved, authorized, or licensed by membrane roofing system manufacturer to install manufacturer's product and that is eligible to receive manufacturer's special warranty.
- C. **Source Limitations:** Obtain components including roof insulation fasteners for membrane roofing system from same manufacturer as membrane roofing or approved by membrane roofing manufacturer.
- D. **Preinstallation Roofing Conference:** Conduct conference at Project site.
 - 1. Meet with Owner, Architect, Owner's insurer if applicable, testing and inspecting agency representative, roofing Installer, roofing system manufacturer's representative and installers whose work interfaces with or affects roofing, including installers of roof accessories and roof-mounted equipment.
 - 2. Review methods and procedures related to roofing installation, including manufacturer's written instructions.
 - 3. Review and finalize construction schedule and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
 - 4. Examine deck substrate conditions and finishes for compliance with requirements, including flatness and fastening.
 - 5. Review structural loading limitations of roof deck during and after roofing.
 - 6. Review base flashings, special roofing details, roof drainage, roof penetrations, equipment curbs, and condition of other construction that will affect roofing system.
 - 7. Review governing regulations and requirements for insurance and certificates if applicable.
 - 8. Review temporary protection requirements for roofing system during and after installation.
 - 9. Review roof observation and repair procedures after roofing installation.

1.9 DELIVERY, STORAGE, AND HANDLING

- A. Deliver roofing materials to Project site in original containers with seals unbroken and labeled with manufacturer's name, product brand name and type, date of manufacture, approval or listing agency markings, and directions for storing and mixing with other components.
- B. Store liquid materials in their original undamaged containers in a clean, dry, protected location and within the temperature range required by roofing system manufacturer. Protect stored liquid material from direct sunlight.
 - 1. Discard and legally dispose of liquid material that cannot be applied within its stated shelf life.
- C. Protect roof insulation materials from physical damage and from deterioration by sunlight, moisture, soiling, and other sources. Store in a dry location. Comply with insulation manufacturer's written instructions for handling, storing, and protecting during installation.

- D. Handle and store roofing materials and place equipment in a manner to avoid permanent deflection of deck.

1.10 PROJECT CONDITIONS

- A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit roofing system to be installed according to manufacturer's written instructions and warranty requirements.

1.11 WARRANTY

- A. Special Warranty: Manufacturer's standard or customized form, without monetary limitation, in which manufacturer agrees to repair or replace components of membrane roofing system that fail in materials or workmanship within specified warranty period.
 - 1. Special warranty includes membrane roofing, base flashings, roof insulation, fasteners, cover boards, roofing accessories, roof walkway pads, and other components of membrane roofing system.
 - 2. Warranty Period: 20 years from date of Substantial Completion.
- B. Special Project Warranty: Submit roofing Installer's warranty, on warranty form at end of this Section, signed by Installer, covering the Work of this Section, including all components of membrane roofing system such as membrane roofing, base flashing, roof insulation, fasteners, cover boards, vapor retarders and walkway products, for the following warranty period:
 - 1. Warranty Period: Two years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 PVC MEMBRANE ROOFING

- A. PVC Sheet: ASTM D 4434, Type III, fabric reinforced.
 - 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Carlisle SynTec, Incorporated.
 - b. GAF Materials Corporation.
 - c. GenFlex Roofing Systems.
 - d. Johns Manville.
 - e. Sarnafil Inc.
 - f. Versico Incorporated.
 - 2. Thickness: 60 mils, nominal.
 - 3. Exposed Face Color: White.

2.2 AUXILIARY MEMBRANE ROOFING MATERIALS

- A. General: Auxiliary membrane roofing materials recommended by roofing system manufacturer for intended use, and compatible with membrane roofing.
1. Liquid-type auxiliary materials shall comply with VOC limits of authorities having jurisdiction.
 2. Adhesives and sealants that are not on the exterior side of weather barrier shall comply with the following limits for VOC content when calculated according to 40 CFR 59, Subpart D (EPA Method 24):
 - a. Plastic Foam Adhesives: 50 g/L.
 - b. Gypsum Board and Panel Adhesives: 50 g/L.
 - c. Multipurpose Construction Adhesives: 70 g/L.
 - d. Fiberglass Adhesives: 80 g/L.
 - e. Single-Ply Roof Membrane Adhesives: 250 g/L.
 - f. Other Adhesives: 250 g/L.
 - g. PVC Welding Compounds: 510 g/L.
 - h. Adhesive Primer for Plastic: 650 g/L
 - i. Single-Ply Roof Membrane Sealants: 450 g/L.
 - j. Nonmembrane Roof Sealants: 300 g/L.
 - k. Sealant Primers for Nonporous Substrates: 250 g/L.
 - l. Sealant Primers for Porous Substrates: 775 g/L.
 3. Adhesives and sealants that are not on the exterior side of weather barrier shall comply with the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."
- B. Sheet Flashing: Manufacturer's standard sheet flashing of same material, type, reinforcement, thickness, and color as PVC sheet membrane.
- C. Bonding Adhesive: Manufacturer's standard, water based.
- D. Slip Sheet: Manufacturer's standard, of thickness required for application.
- E. Metal Termination Bars: Manufacturer's standard, predrilled stainless-steel or aluminum bars, approximately 1 by 1/8 inch thick; with anchors.
- F. Metal Battens: Manufacturer's standard, aluminum-zinc-alloy-coated or zinc-coated steel sheet, approximately 1 inch wide by 0.05 inch thick, prepunched.
- G. Fasteners: Factory-coated steel fasteners and metal or plastic plates complying with corrosion-resistance provisions in FM Approvals 4470, designed for fastening membrane to substrate, and acceptable to membrane roofing system manufacturer.
- H. Miscellaneous Accessories: Provide pourable sealers, preformed cone and vent sheet flashings, preformed inside and outside corner sheet flashings, T-joint covers, lap sealants, termination reglets, and other accessories.

2.3 VAPOR RETARDER

- A. Polyethylene Film: ASTM D 4397, 6 mils thick, minimum, with maximum permeance rating of 0.13 perm.
 - 1. Tape: Pressure-sensitive tape of type recommended by vapor-retarder manufacturer for sealing joints and penetrations in vapor retarder.
 - 2. Adhesive: Manufacturer's standard lap adhesive, FM Approvals approved for vapor-retarder application.

2.4 ROOF INSULATION

- A. General: Preformed roof insulation boards manufactured or approved by PVC membrane roofing manufacturer, selected from manufacturer's standard sizes suitable for application, of thicknesses indicated.
- B. Polyisocyanurate Board Insulation: ASTM C 1289, Type II, Class 1, Grade 2, felt or glass-fiber mat facer on both major surfaces.
- C. Tapered Insulation: Provide factory-tapered insulation boards fabricated to slope of 1/4 inch per 12 inches unless otherwise indicated.
- D. Provide preformed saddles, crickets, tapered edge strips, and other insulation shapes where indicated for sloping to drain. Fabricate to slopes indicated.

2.5 INSULATION ACCESSORIES

- A. General: Furnish roof insulation accessories recommended by insulation manufacturer for intended use and compatibility with membrane roofing.
- B. Fasteners: Factory-coated steel fasteners and metal or plastic plates complying with corrosion-resistance provisions in FM Approvals 4470, designed for fastening roof insulation and cover boards to substrate, and acceptable to roofing system manufacturer.
- C. Cover Board: ASTM C 1177/C 1177M, glass-mat, water-resistant gypsum substrate, 1/4 inch thick, factory primed.
 - 1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Georgia-Pacific Corporation; Dens Deck Prime.

2.6 WALKWAYS

- A. Flexible Walkways: Factory-formed, nonporous, heavy-duty, slip-resisting, surface-textured walkway pads or rolls, approximately 3/16 inch thick, and acceptable to membrane roofing system manufacturer.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with the following requirements and other conditions affecting performance of roofing system:
 - 1. Verify that roof openings and penetrations are in place and curbs are set and braced and that roof drain bodies are securely clamped in place.
 - 2. Verify that wood blocking, curbs, and nailers are securely anchored to roof deck at penetrations and terminations and that nailers match thicknesses of insulation.

3.2 PREPARATION

- A. Clean substrate of dust, debris, moisture, and other substances detrimental to roofing installation according to roofing system manufacturer's written instructions. Remove sharp projections.
- B. Prevent materials from entering and clogging roof drains and conductors and from spilling or migrating onto surfaces of other construction. Remove roof-drain plugs when no work is taking place or when rain is forecast.
- C. Complete terminations and base flashings and provide temporary seals to prevent water from entering completed sections of roofing system at the end of the workday or when rain is forecast. Remove and discard temporary seals before beginning work on adjoining roofing.

3.3 VAPOR-RETARDER INSTALLATION

- A. Polyethylene Film: Loosely lay polyethylene-film vapor retarder in a single layer over area to receive vapor retarder, side and end lapping each sheet a minimum of 2 inches and 6 inches, respectively.
 - 1. Continuously seal side and end laps with tape adhesive.
- B. Completely seal vapor retarder at terminations, obstructions, and penetrations to prevent air movement into membrane roofing system.

3.4 INSULATION INSTALLATION

- A. Coordinate installing membrane roofing system components so insulation is not exposed to precipitation or left exposed at the end of the workday.
- B. Comply with membrane roofing system and insulation manufacturer's written instructions for installing roof insulation.
- C. Install tapered insulation under area of roofing to conform to slopes indicated.
- D. Install insulation under area of roofing to achieve required thickness. Where overall insulation thickness is 2.7 inches or greater, install two or more layers with joints of each succeeding layer staggered from joints of previous layer a minimum of 6 inches in each direction.

- E. Trim surface of insulation where necessary at roof drains so completed surface is flush and does not restrict flow of water.
- F. Install insulation with long joints of insulation in a continuous straight line with end joints staggered between rows, abutting edges and ends between boards. Fill gaps exceeding 1/4 inch with insulation.
 - 1. Cut and fit insulation within 1/4 inch of nailers, projections, and penetrations.
- G. Mechanically Fastened Insulation: Install each layer of insulation and secure to deck using mechanical fasteners specifically designed and sized for fastening specified board-type roof insulation to deck type.
 - 1. Fasten insulation to resist uplift pressure at corners, perimeter, and field of roof.
- H. Loosely Laid Insulation: Loosely lay insulation units over substrate.
- I. Install cover boards over insulation with long joints in continuous straight lines with end joints staggered between rows. Offset joints of insulation below a minimum of 6 inches in each direction. Loosely butt cover boards together and fasten to roof deck.
 - 1. Fasten cover boards to resist uplift pressure at corners, perimeter, and field of roof.

3.5 ADHERED MEMBRANE ROOFING INSTALLATION

- A. Adhere membrane roofing over area to receive roofing and install according to membrane roofing system manufacturer's written instructions.
 - 1. Install sheet according to ASTM D 5036.
- B. Start installation of membrane roofing in presence of membrane roofing system manufacturer's technical personnel.
- C. Accurately align membrane roofing and maintain uniform side and end laps of minimum dimensions required by manufacturer. Stagger end laps.
- D. Bonding Adhesive: Apply to substrate and underside of membrane roofing at rate required by manufacturer and allow to partially dry before installing membrane roofing. Do not apply to splice area of membrane roofing.
- E. In addition to adhering, mechanically fasten membrane roofing securely at terminations, penetrations, and perimeter of roofing.
- F. Apply membrane roofing with side laps shingled with slope of roof deck where possible.
- G. Seams: Clean seam areas, overlap membrane roofing, and hot-air weld side and end laps of membrane roofing and sheet flashings according to manufacturer's written instructions to ensure a watertight seam installation.

1. Test lap edges with probe to verify seam weld continuity. Apply lap sealant to seal cut edges of sheet membrane.
2. Verify field strength of seams a minimum of twice daily and repair seam sample areas.
3. Repair tears, voids, and lapped seams in roofing that does not comply with requirements.

H. Spread sealant bed over deck drain flange at roof drains and securely seal membrane roofing in place with clamping ring.

3.6 BASE FLASHING INSTALLATION

- A. Install sheet flashings and preformed flashing accessories and adhere to substrates according to membrane roofing system manufacturer's written instructions.
- B. Apply bonding adhesive to substrate and underside of sheet flashing at required rate and allow to partially dry. Do not apply to seam area of flashing.
- C. Flash penetrations and field-formed inside and outside corners with cured or uncured sheet flashing.
- D. Clean seam areas, overlap, and firmly roll sheet flashings into the adhesive. Hot-air weld side and end laps to ensure a watertight seam installation.
- E. Terminate and seal top of sheet flashings and mechanically anchor to substrate through termination bars.

3.7 WALKWAY INSTALLATION

- A. Flexible Walkways: Install walkway products in locations indicated. Heat weld to substrate or adhere walkway products to substrate with compatible adhesive according to roofing system manufacturer's written instructions.

3.8 FIELD QUALITY CONTROL

- A. Testing Agency: Engage a qualified testing agency to perform tests and inspections.
- B. Final Roof Inspection: Arrange for roofing system manufacturer's technical personnel to inspect roofing installation on completion.
- C. Repair or remove and replace components of membrane roofing system where inspections indicate that they do not comply with specified requirements.
- D. Additional inspections, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.

3.9 PROTECTING AND CLEANING

- A. Protect membrane roofing system from damage and wear during remainder of construction period. When remaining construction will not affect or endanger roofing, inspect roofing for deterioration and damage, describing its nature and extent in a written report, with copies to Architect and Owner.

- B. Correct deficiencies in or remove membrane roofing system that does not comply with requirements; repair substrates; and repair or reinstall membrane roofing system to a condition free of damage and deterioration at time of Substantial Completion and according to warranty requirements.
- C. Clean overspray and spillage from adjacent construction using cleaning agents and procedures recommended by manufacturer of affected construction.

3.10 ROOFING INSTALLER'S WARRANTY

- A. WHEREAS <Insert name> of <Insert address>, herein called the "Roofing Installer," has performed roofing and associated work ("work") on the following project:
 - 1. Owner: <Insert name of Owner>.
 - 2. Address: <Insert address>.
 - 3. Building Name/Type: <Insert information>.
 - 4. Address: <Insert address>.
 - 5. Area of Work: <Insert information>.
 - 6. Acceptance Date: <Insert date>.
 - 7. Warranty Period: <Insert time>.
 - 8. Expiration Date: <Insert date>.
- B. AND WHEREAS Roofing Installer has contracted (either directly with Owner or indirectly as a subcontractor) to warrant said work against leaks and faulty or defective materials and workmanship for designated Warranty Period,
- C. NOW THEREFORE Roofing Installer hereby warrants, subject to terms and conditions herein set forth, that during Warranty Period he will, at his own cost and expense, make or cause to be made such repairs to or replacements of said work as are necessary to correct faulty and defective work and as are necessary to maintain said work in a watertight condition.
- D. This Warranty is made subject to the following terms and conditions:
 - 1. Specifically excluded from this Warranty are damages to work and other parts of the building, and to building contents, caused by:
 - a. Lightning;
 - b. Peak gust wind speed exceeding <Insert wind speed> mph;
 - c. Fire;
 - d. Failure of roofing system substrate, including cracking, settlement, excessive deflection, deterioration, and decomposition;
 - e. Faulty construction of parapet walls, copings, chimneys, skylights, vents, equipment supports, and other edge conditions and penetrations of the work;
 - f. Vapor condensation on bottom of roofing; and
 - g. Activity on roofing by others, including construction contractors, maintenance personnel, other persons, and animals, whether authorized or unauthorized by Owner.

2. When work has been damaged by any of foregoing causes, Warranty shall be null and void until such damage has been repaired by Roofing Installer and until cost and expense thereof have been paid by Owner or by another responsible party so designated.
3. Roofing Installer is responsible for damage to work covered by this Warranty but is not liable for consequential damages to building or building contents resulting from leaks or faults or defects of work.
4. During Warranty Period, if Owner allows alteration of work by anyone other than Roofing Installer, including cutting, patching, and maintenance in connection with penetrations, attachment of other work, and positioning of anything on roof, this Warranty shall become null and void on date of said alterations, but only to the extent said alterations affect work covered by this Warranty. If Owner engages Roofing Installer to perform said alterations, Warranty shall not become null and void unless Roofing Installer, before starting said work, shall have notified Owner in writing, showing reasonable cause for claim, that said alterations would likely damage or deteriorate work, thereby reasonably justifying a limitation or termination of this Warranty.
5. During Warranty Period, if original use of roof is changed and it becomes used for, but was not originally specified for, a promenade, work deck, spray-cooled surface, flooded basin, or other use or service more severe than originally specified, this Warranty shall become null and void on date of said change, but only to the extent said change affects work covered by this Warranty.
6. Owner shall promptly notify Roofing Installer of observed, known, or suspected leaks, defects, or deterioration and shall afford reasonable opportunity for Roofing Installer to inspect work and to examine evidence of such leaks, defects, or deterioration.
7. This Warranty is recognized to be the only warranty of Roofing Installer on said work and shall not operate to restrict or cut off Owner from other remedies and resources lawfully available to Owner in cases of roofing failure. Specifically, this Warranty shall not operate to relieve Roofing Installer of responsibility for performance of original work according to requirements of the Contract Documents, regardless of whether Contract was a contract directly with Owner or a subcontract with Owner's General Contractor.

E. IN WITNESS THEREOF, this instrument has been duly executed this <Insert day> day of <Insert month>, <Insert year>.

1. Authorized Signature: <Insert signature>.
2. Name: <Insert name>.
3. Title: <Insert title>.

END OF SECTION 075419

SECTION 077100 - ROOF SPECIALTIES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
 - 1. Roof-edge flashings.
 - 2. Roof-edge drainage systems.
 - 3. Reglets.
- B. Related Sections:
 - 1. Section 061000 "Rough Carpentry" for wood nailers, curbs, and blocking.
 - 2. Section 079200 "Joint Sealants" for field-applied sealants between roof specialties and adjacent materials.

1.3 PERFORMANCE REQUIREMENTS

- A. General Performance: Roof specialties shall withstand exposure to weather and resist thermally induced movement without failure, rattling, leaking, or fastener disengagement due to defective manufacture, fabrication, installation, or other defects in construction.
- B. FM Approvals' Listing: Manufacture and install copings roof-edge flashings that are listed in FM Approvals' "RoofNav" and approved for windstorm classification, Class 1-90. Identify materials with FM Approvals' markings.
- C. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes to prevent buckling, opening of joints, hole elongation, overstressing of components, failure of joint sealants, failure of connections, and other detrimental effects. Provide clips that resist rotation and avoid shear stress as a result of thermal movements. Base calculations on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.
 - 1. Temperature Change (Range): 120 deg F, ambient; material surfaces.

1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes.
- B. Shop Drawings: For roof specialties. Include plans, elevations, expansion-joint locations, keyed details, and attachments to other work. Distinguish between plant- and field-assembled work. Include the following:

1. Details for expansion and contraction; locations of expansion joints, including direction of expansion and contraction.
2. Pattern of seams and layout of fasteners, cleats, clips, and other attachments.
3. Details of termination points and assemblies, including fixed points.
4. Details of special conditions.

C. Samples for Initial Selection: For each type of roof specialty indicated with factory-applied color finishes.

D. Samples for Verification: For copings roof-edge flashings roof-edge drainage systems reglets and counterflashings made from 12-inch lengths of full-size components including fasteners, cover joints, accessories, and attachments.

1.5 INFORMATIONAL SUBMITTALS

A. Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency, for copings and roof-edge flashings.

B. Warranty: Sample of special warranty.

1.6 CLOSEOUT SUBMITTALS

A. Maintenance Data: For roofing specialties to include in maintenance manuals.

1.7 QUALITY ASSURANCE

A. Preinstallation Conference: Conduct conference at Project site.

1. Meet with Owner, Architect, Owner's insurer if applicable, Installer, and installers whose work interfaces with or affects roof specialties including installers of roofing materials and accessories.
2. Examine substrate conditions for compliance with requirements, including flatness and attachment to structural members.
3. Review special roof details, roof drainage, and condition of other construction that will affect roof specialties.

1.8 DELIVERY, STORAGE, AND HANDLING

A. Do not store roof specialties in contact with other materials that might cause staining, denting, or other surface damage. Store roof specialties away from uncured concrete and masonry.

B. Protect strippable protective covering on roof specialties from exposure to sunlight and high humidity, except to extent necessary for the period of roof specialties installation.

1.9 WARRANTY

A. Special Warranty on Painted Finishes: Manufacturer's standard form in which manufacturer agrees to repair finish or replace roof specialties that show evidence of deterioration of factory-applied finishes within specified warranty period.

1. Fluoropolymer Finish: Deterioration includes, but is not limited to, the following:
 - a. Color fading more than 5 Hunter units when tested according to ASTM D 2244.
 - b. Chalking in excess of a No. 8 rating when tested according to ASTM D 4214.
 - c. Cracking, checking, peeling, or failure of paint to adhere to bare metal.
2. Finish Warranty Period: 20 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 EXPOSED METALS

- A. Aluminum Sheet: ASTM B 209, alloy as standard with manufacturer for finish required, with temper to suit forming operations and performance required.
 1. Surface: Smooth, flat finish.
 2. Mill Finish: As manufactured.
 3. Exposed Coil-Coated Finishes: Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.
 - a. Two-Coat Fluoropolymer: AAMA 620. System consisting of primer and fluoropolymer color topcoat containing not less than 70 percent PVDF resin by weight.
 - b. Concealed Surface: Pretreat with manufacturer's standard white or light-colored acrylic or polyester backer finish, consisting of prime coat and wash coat with a minimum total dry film thickness of 0.5 mil.

2.2 UNDERLAYMENT MATERIALS

- A. Self-Adhering, High-Temperature Sheet: Minimum 30 to 40 mils thick, consisting of slip-resisting polyethylene-film top surface laminated to layer of butyl or SBS-modified asphalt adhesive, with release-paper backing; cold applied. Provide primer when recommended by underlayment manufacturer.
 1. Thermal Stability: ASTM D 1970; stable after testing at 240 deg F.
 2. Low-Temperature Flexibility: ASTM D 1970; passes after testing at minus 20 deg F.
 3. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Carlisle Coatings & Waterproofing; CCW WIP 300HT.
 - b. Grace Construction Products, a unit of W. R. Grace & Co.; Ultra.
 - c. Henry Company; Blueskin PE200 HT.
 - d. Metal-Fab Manufacturing, LLC; MetShield.
 - e. Owens Corning; WeatherLock Metal High Temperature Underlayment.

2.3 MISCELLANEOUS MATERIALS

- A. General: Provide materials and types of fasteners, protective coatings, sealants, and other miscellaneous items required by manufacturer for a complete installation.

- B. Fasteners: Manufacturer's recommended fasteners, suitable for application and designed to meet performance requirements. Furnish the following unless otherwise indicated:
 - 1. Exposed Penetrating Fasteners: Gasketed screws with hex washer heads matching color of sheet metal.
 - 2. Fasteners for Aluminum: Aluminum or Series 300 stainless steel.
- C. Elastomeric Sealant: ASTM C 920, elastomeric polyurethane polymer sealant of type, grade, class, and use classifications required by roofing-specialty manufacturer for each application.
- D. Bituminous Coating: Cold-applied asphalt emulsion complying with ASTM D 1187.
- E. Asphalt Roofing Cement: ASTM D 4586, asbestos free, of consistency required for application.

2.4 ROOF-EDGE FLASHINGS

- A. Roof-Edge Fascia: Manufactured, two-piece, roof-edge fascia consisting of snap-on metal fascia cover in section lengths not exceeding 12 feet and a continuous formed anchor bar with integral drip-edge cleat to engage fascia cover. Provide matching corner units.
 - 1. Manufacturers: Subject to compliance with roofing system requirements.
 - 2. Fascia Cover: Fabricated from the following exposed metal:
 - a. PVC Coated Formed Aluminum: 0.050 inch thick.
 - 3. Corners: Factory mitered and mechanically clinched and sealed watertight.
 - 4. Splice Plates: Concealed, of same material, finish, and shape as fascia cover.
 - 5. Fascia Accessories: Downspout scuppers with integral conductor head and downspout adapters and perforated screens.

2.5 ROOF-EDGE DRAINAGE SYSTEMS

- A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - 1. Andreas Renner KG.
 - 2. Architectural Products Company.
 - 3. ATAS International, Inc.
 - 4. Berger Building Products, Inc.
 - 5. Castle Metal Products.
 - 6. Cheney Flashing Company.
 - 7. CopperCraft by FABRAL; a Euramax company.
 - 8. Hickman Company, W. P.
 - 9. Klauer Manufacturing Company.
 - 10. Merchant & Evans, Inc.
 - 11. Metal-Era, Inc.
 - 12. Metal-Fab Manufacturing, LLC.
 - 13. MM Systems Corporation.
 - 14. National Sheet Metal Systems, Inc.
 - 15. Perimeter Systems; a division of Southern Aluminum Finishing Company, Inc.

- B. Downspouts: Corrugated rectangular complete with machine-crimped smooth-curve elbows, manufactured from the following exposed metal. Furnish with metal hangers, from same material as downspouts, and anchors.
 - 1. Formed Aluminum: 0.040 inch thick.
 - 2. Size to match existing.
- C. Parapet Scuppers: Manufactured with closure flange trim to exterior, 4-inch- wide wall flanges to interior, and base extending 4 inches beyond cant or tapered strip into field of roof. Fasten gravel guard angles to base of scuppers.
 - 1. Fabricate from the following exposed metal:
 - a. Formed Aluminum: 0.032 inch thick.
 - b. Size to match existing.
- D. Conductor Heads: Manufactured conductor heads, each with flanged back and stiffened top edge and of dimensions and shape indicated, complete with outlet tube that nests into upper end of downspout, exterior flange trim.
 - 1. Fabricate from the following exposed metal:
 - a. PVC Coated Formed Aluminum: 0.032 inch thick.
 - b. Size to match existing.
- E. Copper Finish: Non-patinated, mill Pre-patinated dark brown Pre-patinated verdigris.
- F. Aluminum Finish: Two-coat fluoropolymer.
 - 1. Color: As selected by Architect from manufacturer's full range.

2.6 REGLETS AND COUNTERFLASHINGS

- A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - 1. Castle Metal Products.
 - 2. Cheney Flashing Company.
 - 3. Fry Reglet Corporation.
 - 4. Heckmann Building Products Inc.
 - 5. Hickman Company, W. P.
 - 6. Keystone Flashing Company, Inc.
 - 7. Metal-Era, Inc.
 - 8. Metal-Fab Manufacturing, LLC.
 - 9. MM Systems Corporation.
 - 10. National Sheet Metal Systems, Inc.
- B. Reglets: Manufactured units formed to provide secure interlocking of separate reglet and counterflashing pieces, from the following exposed metal:

1. Formed Aluminum: 0.050 inch thick.
2. Surface-Mounted Type: Provide reglets with slotted holes for fastening to substrate, with neoprene or other suitable weatherproofing washers, and with channel for sealant at top edge.

C. Aluminum Finish: Two-coat fluoropolymer.

1. Color: As selected by Architect from manufacturer's full range.

2.7 GENERAL FINISH REQUIREMENTS

- A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
- B. Protect mechanical and painted finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.
- C. Appearance of Finished Work: Noticeable variations in same piece are not acceptable. Variations in appearance of adjoining components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, to verify actual locations, dimensions, and other conditions affecting performance of the Work.
- B. Examine walls, roof edges, and parapets for suitable conditions for roof specialties.
- C. Verify that substrate is sound, dry, smooth, clean, sloped for drainage, and securely anchored.
- D. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 UNDERLAYMENT INSTALLATION

- A. Self-Adhering Sheet Underlayment: Install wrinkle free. Apply primer if required by underlayment manufacturer. Comply with temperature restrictions of underlayment manufacturer for installation; use primer rather than nails for installing underlayment at low temperatures. Apply in shingle fashion to shed water. Overlap edges not less than 3-1/2 inches. Roll laps with roller. Cover underlayment within 14 days.

3.3 INSTALLATION, GENERAL

- A. General: Install roof specialties according to manufacturer's written instructions. Anchor roof specialties securely in place, with provisions for thermal and structural movement. Use fasteners, solder, protective coatings, separators, sealants, and other miscellaneous items as required to complete roof-specialty systems.

1. Install roof specialties level, plumb, true to line and elevation; with limited oil-canning and without warping, jogs in alignment, buckling, or tool marks.
 2. Provide uniform, neat seams with minimum exposure of sealant.
 3. Install roof specialties to fit substrates and to result in watertight performance. Verify shapes and dimensions of surfaces to be covered before manufacture.
 4. Torch cutting of roof specialties is not permitted.
 5. Do not use graphite pencils to mark metal surfaces.
- B. Metal Protection: Protect metals against galvanic action by separating dissimilar metals from contact with each other or with corrosive substrates by painting contact surfaces with bituminous coating or by other permanent separation as recommended by manufacturer.
1. Coat concealed side of uncoated aluminum roof specialties with bituminous coating where in contact with wood, ferrous metal, or cementitious construction.
 2. Underlayment: Where installing metal flashing directly on cementitious or wood substrates, install a course of adhering, high-temperature sheet underlayment.
 3. Bed flanges in thick coat of asphalt roofing cement where required by manufacturers of roof specialties for waterproof performance.
- C. Expansion Provisions: Allow for thermal expansion of exposed roof specialties.
1. Space movement joints at a maximum of 12 feet with no joints within 18 inches of corners or intersections unless otherwise shown on Drawings.
 2. When ambient temperature at time of installation is between 40 and 70 deg F, set joint members for 50 percent movement each way. Adjust setting proportionately for installation at higher ambient temperatures.
- D. Fastener Sizes: Use fasteners of sizes that will penetrate wood blocking not less than 1-1/4 inches for nails and not less than 3/4 inch for wood screws.
- E. Seal joints with elastomeric sealant as required by roofing-specialty manufacturer.
- F. Seal joints as required for watertight construction. Place sealant to be completely concealed in joint. Do not install sealants at temperatures below 40 deg F.
- ### 3.4 COPING INSTALLATION
- A. Install cleats, anchor plates, and other anchoring and attachment accessories and devices with concealed fasteners.
- B. Anchor copings to meet performance requirements.
1. Interlock face and back leg drip edges of snap-on coping cap into cleated anchor plates anchored to substrate at 30-inch centers 40-inch.
 2. Interlock face leg drip edge into continuous cleat anchored to substrate at 16-inch centers. Anchor back leg of coping with screw fasteners and elastomeric washers at manufacturer's required spacing that meets performance requirements.

3.5 ROOF-EDGE FLASHING INSTALLATION

- A. Install cleats, cants, and other anchoring and attachment accessories and devices with concealed fasteners.
- B. Anchor roof edgings with manufacturer's required devices, fasteners, and fastener spacing to meet performance requirements.

3.6 ROOF-EDGE DRAINAGE-SYSTEM INSTALLATION

- A. General: Install components to produce a complete roof-edge drainage system according to manufacturer's written instructions. Coordinate installation of roof perimeter flashing with installation of roof-edge drainage system.
- B. Downspouts: Join sections with manufacturer's standard telescoping joints. Provide hangers with fasteners designed to hold downspouts securely to walls and 1 inch away from walls; locate fasteners at top and bottom and at approximately 60 inches o.c.
 - 1. Provide elbows at base of downspout to direct water away from building.
 - 2. Connect downspouts to underground drainage system.
- C. Splash Pans: Install where downspouts discharge on low-slope roofs. Set in asphalt roofing cement elastomeric sealant.
- D. Parapet Scuppers: Install scuppers through parapet where indicated. Continuously support scupper, set to correct elevation, and seal flanges to interior wall face, over cants or tapered edge strips, and under roofing membrane.
 - 1. Anchor scupper closure trim flange to exterior wall and seal or solder to scupper.
 - 2. Loosely lock front edge of scupper with conductor head.
 - 3. Seal exterior wall scupper flanges into back of conductor head.
- E. Conductor Heads: Anchor securely to wall with elevation of conductor top edge 1 inch below scupper discharge.

3.7 REGLET AND COUNTERFLASHING INSTALLATION

- A. General: Coordinate installation of reglets and counterflashings with installation of base flashings.
- B. Surface-Mounted Reglets: Install reglets to receive flashings where flashing without embedded reglets is indicated on Drawings. Install at height so that inserted counterflashings overlap 4 inches over top edge of base flashings.

3.8 CLEANING AND PROTECTION

- A. Clean exposed metal surfaces of substances that interfere with uniform oxidation and weathering.
- B. Clean off excess sealants.

- C. Remove temporary protective coverings and strippable films as roof specialties are installed. On completion of installation, clean finished surfaces including removing unused fasteners, metal filings, pop rivet stems, and pieces of flashing. Maintain roof specialties in a clean condition during construction.
- D. Replace roof specialties that have been damaged or that cannot be successfully repaired by finish touchup or similar minor repair procedures.

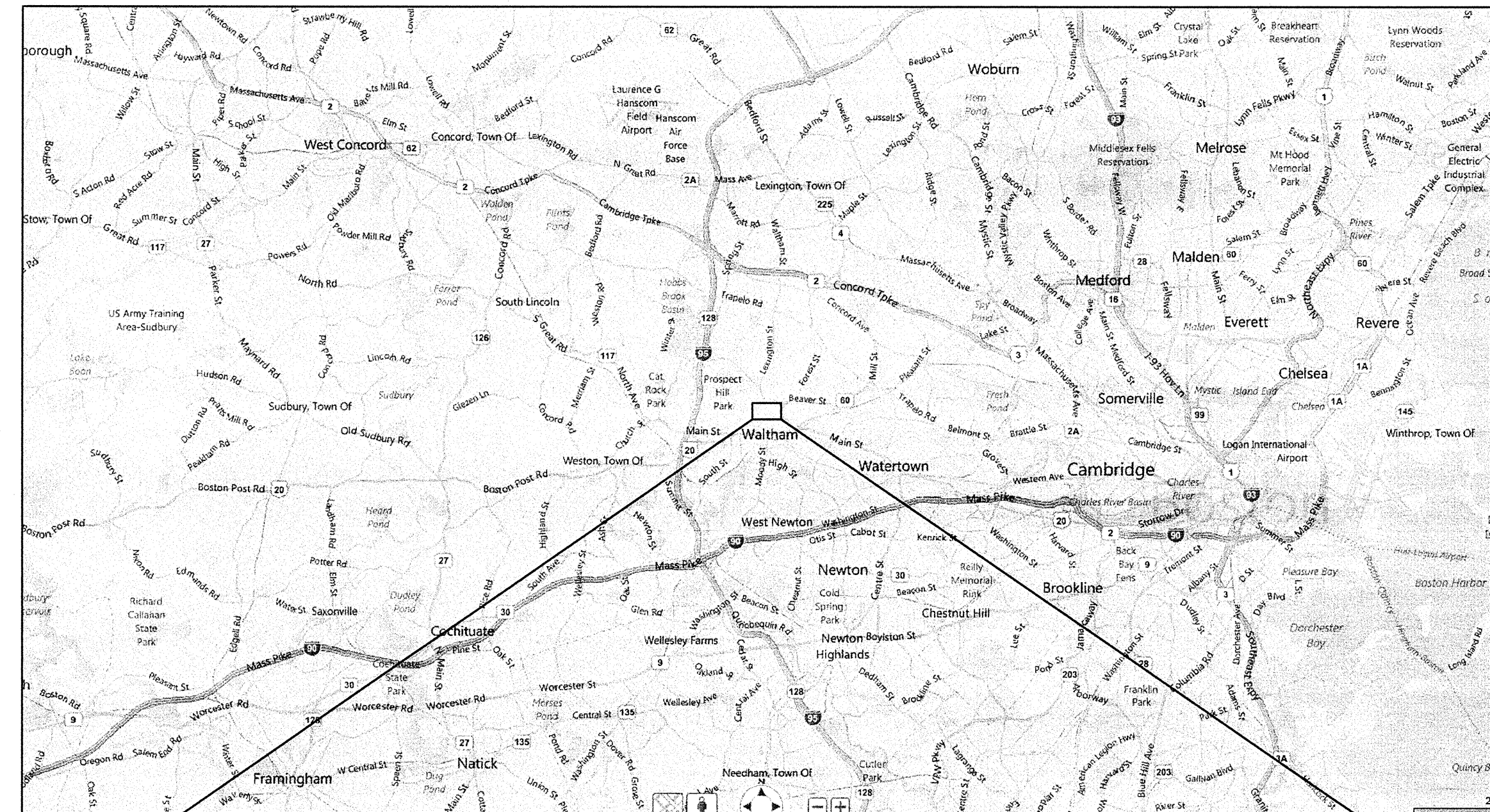
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City of Waltham

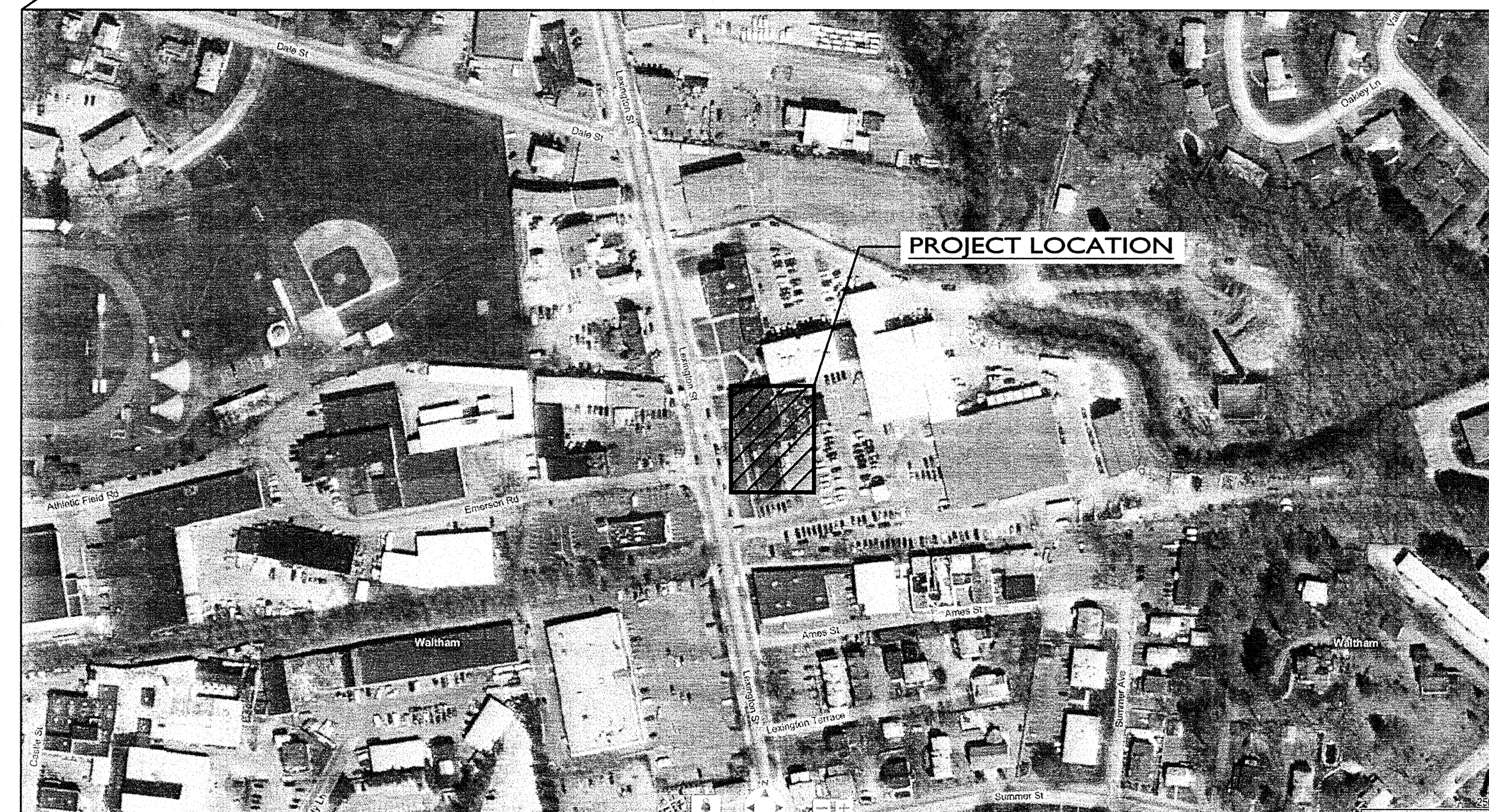
Waltham Police Station

Roof Replacement

155 Lexington Street
Waltham, Massachusetts 02453



VICINITY MAP



LOCUS MAP

LIST OF DRAWINGS

GENERAL

COVER SHEET

ARCHITECTURAL

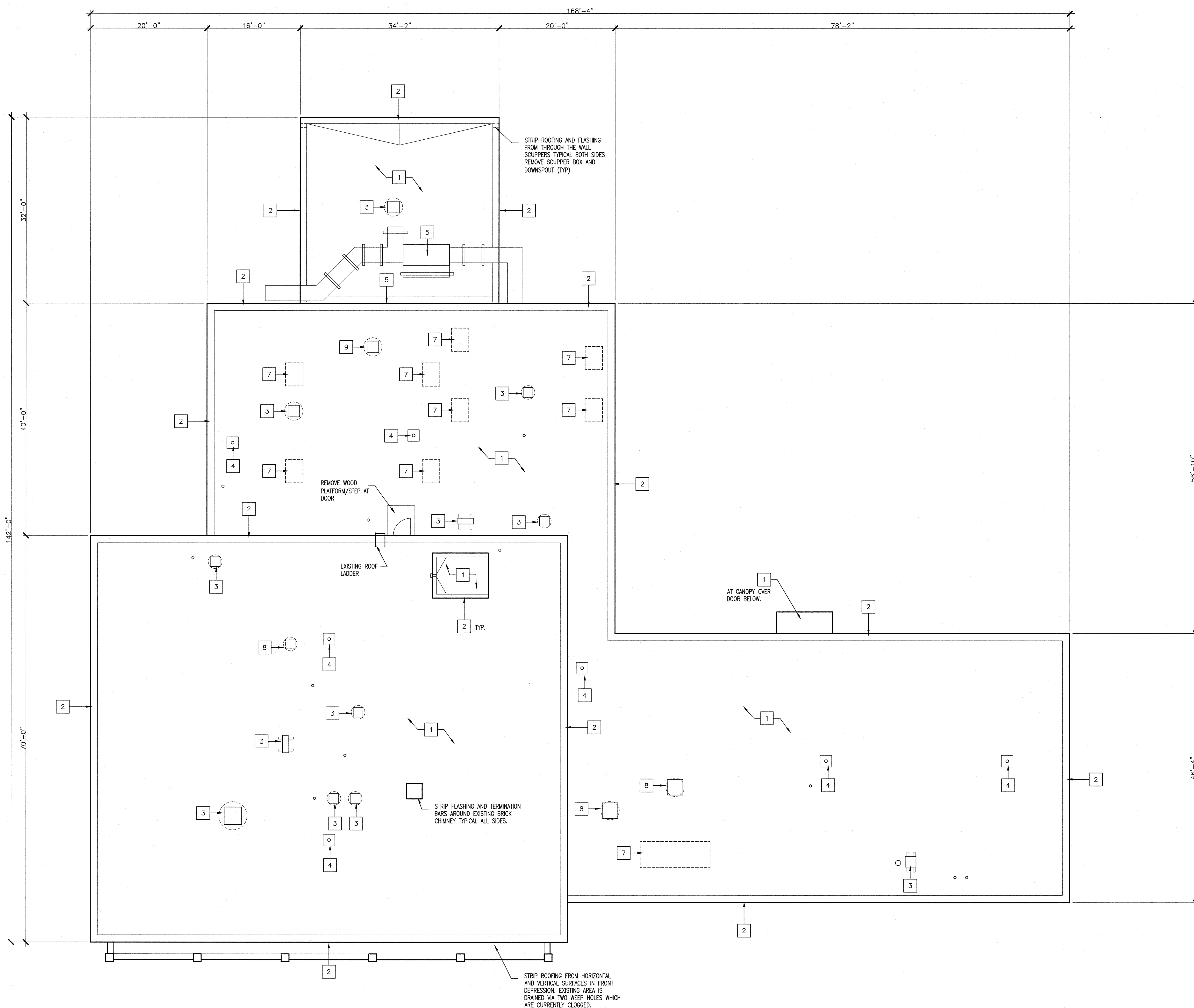
- A-001 OVERALL ROOF PLAN - DEMOLITION
- A-002 ROOF PLAN
- A-003 ROOF DETAILS

ISSUED FOR
CONSTRUCTION
MAY 25, 2011



Maguire Group Inc.
Architects / Engineers / Planners

33 Commercial Street, Suite 1
Foxborough, Massachusetts 02035



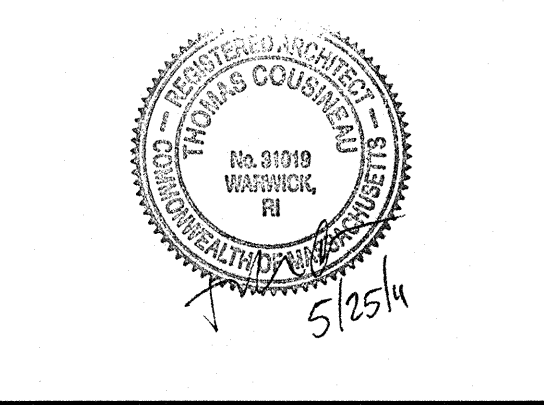
- ### DEMOLITION KEY NOTES
- REMOVE EXISTING ROOFING MEMBRANE, ROOFING INSULATION, WOOD BLOCKING, CANTS AND ASSOCIATED APPURTENANCES TO STEEL DECK. (TYP)
 - REMOVE EXISTING METAL DRIP EDGE AND FASCIA. (TYP)
 - TEMPORARILY REMOVE AND REINSTALL EXISTING ROOF TOP MECHANICAL EQUIPMENT AS REQUIRED FOR THE INSTALLATION OF THE ROOF. SCHEDULE THE DISCONNECTION OF THE UNIT WITH THE OWNER
 - REMOVE AND REPLACE EXISTING ROOF DRAIN BODY AND STRAINERS
 - TEMPORARILY REMOVE AND REINSTALL EXISTING FIRING RANGE EXHAUST SYSTEM EQUIPMENT AND ASSOCIATED DUCT WORK AS REQUIRED FOR THE INSTALLATION OF THE ROOF. SCHEDULE THE DISCONNECTION OF THE UNIT WITH THE OWNER
 - REMOVE EXPANSION JOINT COVER, SPONGE TUBE AND ASSOCIATED WOOD BLOCKING.
 - REMOVE EXISTING SKYLIGHT, WOOD BLOCKING AND INFILL OPENING WITH STEEL DECK TO MATCH EXISTING. REFER TO DETAIL 12 ON SHEET A-003
 - REMOVE EXISTING HVAC VENTILATOR, WOOD BLOCKING AND INFILL OPENING WITH STEEL DECK TO MATCH EXISTING. REFER TO DETAIL 12 ON SHEET A-003. CONTRACTOR SHALL DISCONNECT ROOFTOP UNIT FROM EXISTING POWER SUPPLY FOR REMOVAL OF UNIT. REMOVE ALL CONDUITS AND WIRING, INCLUDING ALL PULL AND JUNCTION BOXES, BACK TO PANELBOARDS. MODIFY EXISTING PANEL DIRECTORIES TO INDICATE CIRCUIT BREAKERS FEEDING REMOVED ROOFTOP UNITS AS "SPARE".
 - REMOVE EXISTING HVAC VENTILATOR, AND REPLACE IN KIND TO MINIMIZE DOWN TIME, COORDINATE THE DISCONNECTION AND REMOVAL OF UNIT WITH THE OWNER.

- ### DEMOLITION GENERAL NOTES
- THE CONTRACTOR SHALL VISIT THE SITE AND CAREFULLY EXAMINE ALL AREAS OF THE WORK FOR EXISTING CONDITIONS WHICH MAY AFFECT PROPER EXECUTION OF THE WORK. ALL EXISTING CONDITIONS INCLUDING DIMENSIONS AND QUANTITIES SHALL BE FIELD VERIFIED BY THE CONTRACTOR. NO CLAIMS FOR ADDITIONAL COSTS WILL BE PERMITTED DUE TO LACK OF KNOWLEDGE OF UNCONCEALED EXISTING CONDITIONS BY THE CONTRACTOR.
 - THE DRAWINGS DO NOT SHOW EVERY DETAIL OR CONDITION. CONTRACTOR SHALL PROVIDE ALL DEMOLITION WORK REQUIRED TO MEET THE NEW DESIGN BASED ON ALL INFORMATION PROVIDED AND INFORMATION OBTAINED DURING SITE WALK-THRU. DISCREPANCIES BETWEEN THE CONTRACT DOCUMENTS AND EXISTING CONDITIONS SHALL BE REPORTED TO THE OWNER AND ARCHITECT IMMEDIATELY UPON DISCOVERY.
 - ALL INDICATED EXISTING DIMENSIONS ARE PLUS OR MINUS (+/-) AND SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO DEMOLITION OPERATIONS.
 - "REMOVE AND SALVAGE" MEANS THAT THE CONTRACTOR SHALL CAREFULLY DETACH ITEMS FROM EXISTING CONSTRUCTION, IN A MANNER TO PREVENT DAMAGE, AND DELIVER TO OWNER.
 - "REMOVE AND RESET" MEANS THAT CONTRACTOR SHALL DETACH ITEMS FROM EXISTING CONSTRUCTION, PREPARE FOR REUSE, AND REINSTALL WHERE INDICATED.
 - "EXISTING TO REMAIN" DEFINES EXISTING ITEMS OF CONSTRUCTION THAT ARE NOT TO BE PERMANENTLY REMOVED AND THAT ARE NOT OTHERWISE INDICATED TO BE REMOVED, REMOVED AND SALVAGED, OR REMOVED AND REINSTALLED.
 - CONTRACTOR SHALL PROTECT ALL ADJACENT CONSTRUCTION THAT IS TO REMAIN, AND SHALL REPAIR AND PATCH ANY EXISTING CONSTRUCTION THAT IS DAMAGED DURING DEMOLITION OPERATIONS. REPAIRS SHALL MATCH EXISTING UNLESS AS OTHERWISE NOTED.
 - ANY MATERIALS OR ITEMS DAMAGED OR DISTURBED BY THE WORK SHALL BE RESTORED TO THEIR ORIGINAL CONDITION OR REPLACED TO MATCH EXISTING BY THE CONTRACTOR.
 - REMOVAL OF ANY WORK OR ITEM SHALL INCLUDE THE LEGAL DISPOSAL OF SAME UNLESS INDICATED OTHERWISE. ALL REMOVAL AND DISPOSAL WORK SHALL BE PERFORMED IN A SAFE AND LEGAL MANNER.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL AND REINSTALLATION OF ALL ITEMS AS REQUIRED FOR PROPER INSTALLATION OF THE ROOFING SYSTEM.
 - THE CONTRACTOR SHALL PROVIDE TEMPORARY ROOF PROTECTION AS REQUIRED DURING THE DEMOLITION AND INSTALLATION OF ADJACENT ROOF AREAS.
 - EXISTING ANTENNAS WILL REMAIN IN SERVICE. CONTRACTOR WILL NEED TO WORK AROUND THEM.
 - EXISTING SKYLIGHTS WILL BE REMOVED AND OPENINGS INFILLED WITH STEEL DECK AND ROOFING TO MATCH ADJACENT SURFACES. SEE DECK INFILL DETAIL ON A-003.
 - THE DISCONNECTION OF THE EXISTING MECHANICAL EXHAUST FANS TO REMOVE AND INSTALL THE ROOFING AND ASSOCIATED APPURTENANCES WILL NEED TO BE COORDINATED WITH THE OWNER.
 - CONTRACTOR SHALL NOTE THAT THE SITE HAS HIGH WIND GUSTS, AND THE FACILITY WILL REMAIN OPERATIONAL AT ALL TIMES. THEREFORE, DEMOLISHED (AND NEW) MATERIALS MUST BE HELD DOWN AND SECURED IN PLACE AT ALL TIMES.
 - CONTRACTOR IS TO WORK AROUND EXISTING CABLE LINES LOCATED ON THE ROOF.



REVISIONS		
Number	Description	Date

ISSUED FOR:
CONSTRUCTION
5-25-2011



WALTHAM POLICE
ROOF REPLACEMENT
WALTHAM MA

OVERALL ROOF PLAN -
DEMOLITION

PROJECT NO.: 19169
DESIGNED BY: FC
DRAWN BY: FC
CHKD BY:

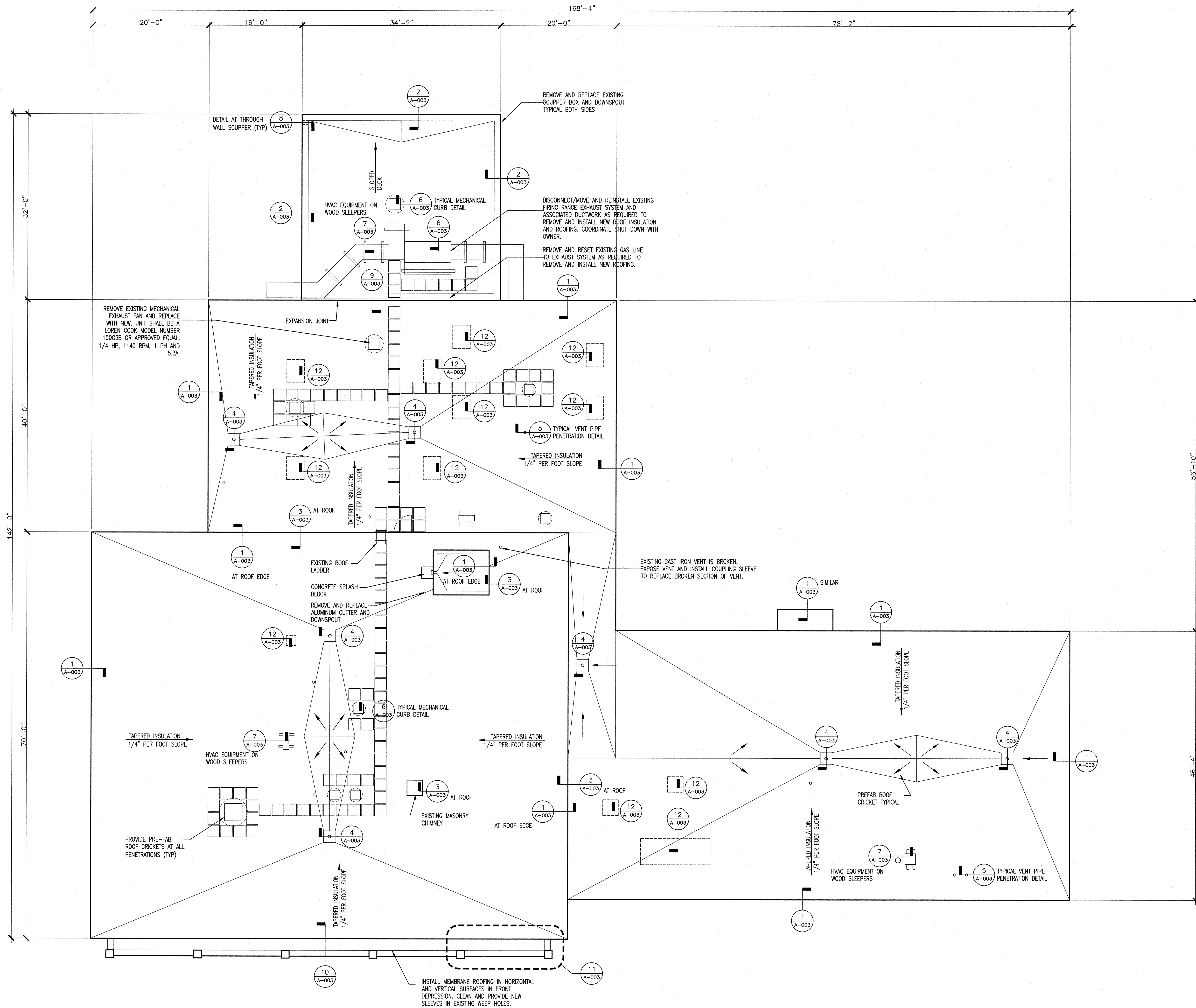
DATE: MAY 25, 2011
SCALE: AS NOTED

SHEET NO.:
A-001

1 ROOF PLAN - DEMOLITION
1/8" = 1'-0"

PLAN NORTH

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1 ROOF PLAN
 1/8" = 1'-0"
 PLAN NORTH

GENERAL NOTES

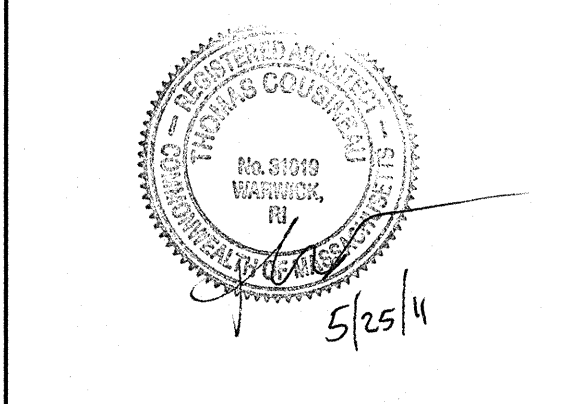
1. THE CONTRACTOR SHALL VISIT THE SITE AND CAREFULLY EXAMINE ALL AREAS OF THE WORK FOR EXISTING CONDITIONS WHICH MAY AFFECT PROPER EXECUTION OF THE WORK. ALL EXISTING CONDITIONS INCLUDING DIMENSIONS AND QUANTITIES SHALL BE FIELD VERIFIED BY THE CONTRACTOR. NO CLAIMS FOR ADDITIONAL COSTS WILL BE PERMITTED DUE TO LACK OF KNOWLEDGE OF UNCONCEALED EXISTING CONDITIONS BY THE CONTRACTOR.
2. DISCREPANCIES BETWEEN THE CONTRACT DOCUMENTS AND EXISTING CONDITIONS SHALL BE REPORTED TO THE OWNER AND ARCHITECT IMMEDIATELY UPON DISCOVERY.
3. AS PART OF THE SUBMITTALS PHASE, AND PRIOR TO COMMENCEMENT OF CONSTRUCTION, THE CONTRACTOR SHALL SUBMIT DOCUMENTATION THAT THE PROPOSED ROOF SYSTEM HAS BEEN TESTED AND APPROVED (OR LISTED) BY FACTORY MUTUAL RESEARCH CORPORATION AND UNDERWRITERS LABORATORIES, INC. AND IT MEETS THE REQUIREMENTS OF THE SPECIFICATIONS. ROOF WORK SHALL NOT COMMENCE WITHOUT WRITTEN DOCUMENTATION OF THE ROOF SYSTEM'S COMPLIANCE.
4. UPON EXPOSURE OF THE STEEL DECK, THE CONTRACTOR SHALL REMOVE ANY GYPSUM FILLERS AS REQUIRED.
5. THE NEW ROOFING SYSTEM SHALL CONSIST OF A LOOSE LAID (TAPED) VAPOR BARRIER INSTALLED OVER THE EXISTING STEEL DECK, A BASE COAT OF RIGID INSULATION, RIGID TAPERED INSULATION WITH A RECOVERY BOARD INSTALLED OVER THE INSULATION, AND ALL LAYERS MECHANICALLY FASTENED TO THE STRUCTURAL STEEL DECK. A SINGLE PLY PVC ROOF MEMBRANE SHALL BE FULLY ADHERED TO THE RECOVERY BOARD.
6. THE ROOFING SYSTEM OVER THE SALLY PORT AND THE ELEVATOR PENTHOUSE SHALL CONSIST OF A LOOSE LAID (TAPED) VAPOR BARRIER INSTALLED OVER THE EXISTING SLOPED STEEL DECK, TWO LAYERS OF RIGID INSULATION, WITH A RECOVERY BOARD INSTALLED OVER THE VAPOR BARRIER, AND ALL LAYERS MECHANICALLY FASTENED TO THE STRUCTURAL STEEL DECK. A SINGLE PLY PVC ROOF MEMBRANE SHALL BE FULLY ADHERED TO THE RECOVERY BOARD.
7. PROVIDE PREFABRICATED ROOF CRICKETS AT ALL PENETRATIONS TO DIVERT WATER AROUND THE PENETRATION. CRICKETS SHALL HAVE A MINIMUM SLOPE OF 1/4" PER FOOT. LAYOUT AND SLOPES SHALL STRICTLY CONFORM TO THE APPROVED SHOP DRAWINGS PREPARED BY THE ROOF MANUFACTURER.
8. THE TAPERED INSULATION SYSTEM SHALL SLOPE A MINIMUM OF 1/4" PER FOOT AND SHALL HAVE A MINIMUM THICKNESS OF 1" AT DRAINS AND AN AVERAGE INSULATING VALUE OF R-30. THE INSULATION THICKNESS, LAYOUT AND SLOPES SHALL STRICTLY CONFORM TO THE APPROVED SHOP DRAWINGS PREPARED BY THE ROOF MANUFACTURER.
9. FASTENER LOCATIONS, LENGTH AND SPACING SHALL BE IN STRICT ACCORDANCE WITH MANUFACTURER'S APPROVED SHOP DRAWINGS.
10. INSTALL CONTINUOUS WOOD NAILERS AT ROOF PERIMETER AND PERIMETERS OF ROOF PROJECTIONS AND PENETRATIONS AS REQUIRED OR AS INDICATED ON THE DRAWINGS. HEIGHT OF NAILERS SHALL BE AS REQUIRED TO MATCH THE ADJACENT INSULATION HEIGHT.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL AND REINSTALLATION OF ALL ITEMS AS REQUIRED FOR PROPER INSTALLATION OF THE ROOFING SYSTEM.
12. ALL METAL FLASHING AND DRIP EDGES SHALL BE PVC COATED TO BE COMPATIBLE WITH THE ROOFING SYSTEM.
13. THE DRIP EDGE SHALL BE CONSTRUCTED OF A TWO PIECE EDGE METAL TO MINIMIZE THE OIL CANNING OF A LARGER ONE PIECE ASSEMBLY.
14. THE CONTRACTOR SHALL PROVIDE TEMPORARY ROOF PROTECTION AS REQUIRED TO PROTECT ADJACENT SURFACES DURING THE RENOVATIONS.
15. ANY MATERIALS OR ITEMS DAMAGED OR DISTURBED BY THE WORK SHALL BE RESTORED TO THEIR ORIGINAL CONDITION OR REPLACED TO MATCH EXISTING BY THE CONTRACTOR.
16. EXISTING ANTENNAS AND CABLES WILL REMAIN IN SERVICE. THE CONTRACTOR WILL NEED TO WORK AROUND THEM. SEE DETAIL 18 ON A-003 FOR CABLE TIE DOWNS.
17. INFILL THE VOIDS LEFT BEHIND BY THE REMOVAL OF THE SKYLIGHTS WITH STEEL DECK SEE DETAIL 12 ON A-003.
18. THE DISCONNECTION OF THE EXISTING MECHANICAL UNITS AND THE FIRING RANGE EXHAUST UNITS TO REMOVE AND INSTALL THE ROOFING AND ASSOCIATED APPURTENANCES WILL NEED TO BE COORDINATED WITH THE OWNER.
19. CONTRACTOR SHALL REPLACE THE EXISTING ROOF DRAIN BODIES AND ROOF DRAIN COVERS.
20. CONTRACTOR SHALL NOTE THAT THE SITE HAS HIGH WIND GUSTS. THEREFORE, NEW AND DEMOLISHED MATERIALS MUST BE HELD DOWN AND SECURED IN PLACE AT ALL TIMES.


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REVISIONS

Number	Description	Date

**ISSUED FOR:
 CONSTRUCTION
 5-25-2011**



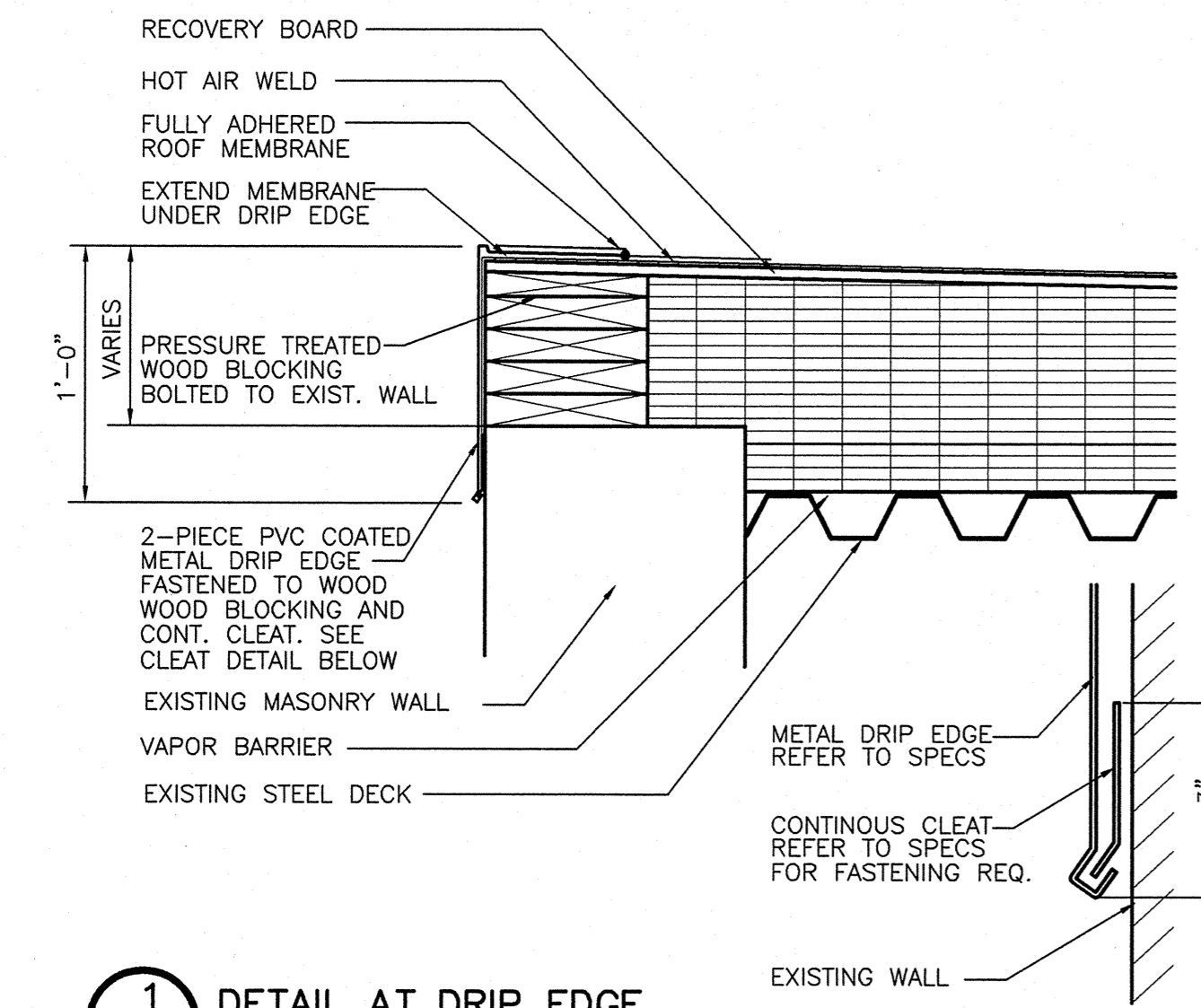
**WALTHAM POLICE
 ROOF REPLACEMENT
 WALTHAM MA**

ROOF PLAN

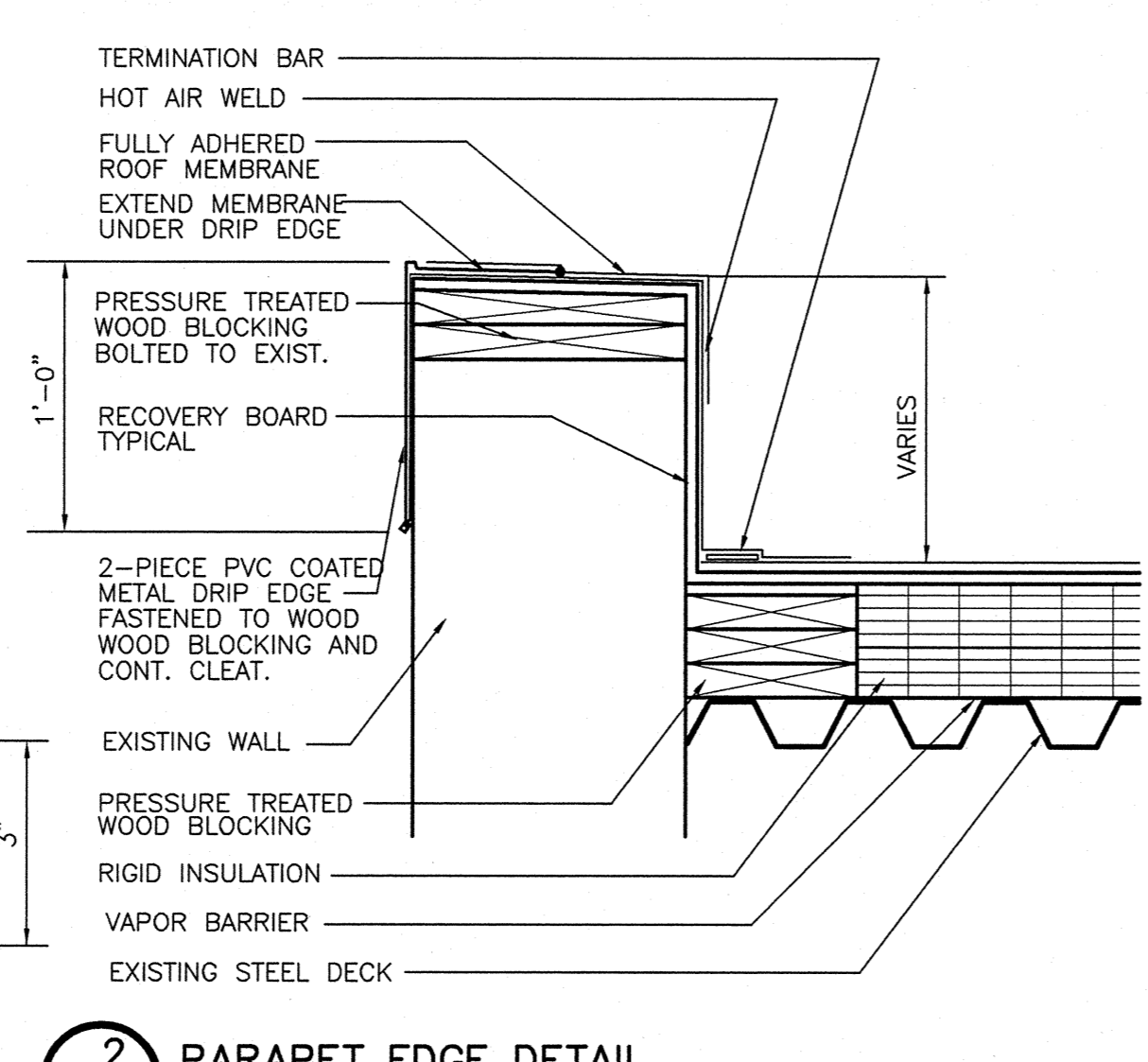
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 SCALE: AS NOTED

SHEET NO:
A-002

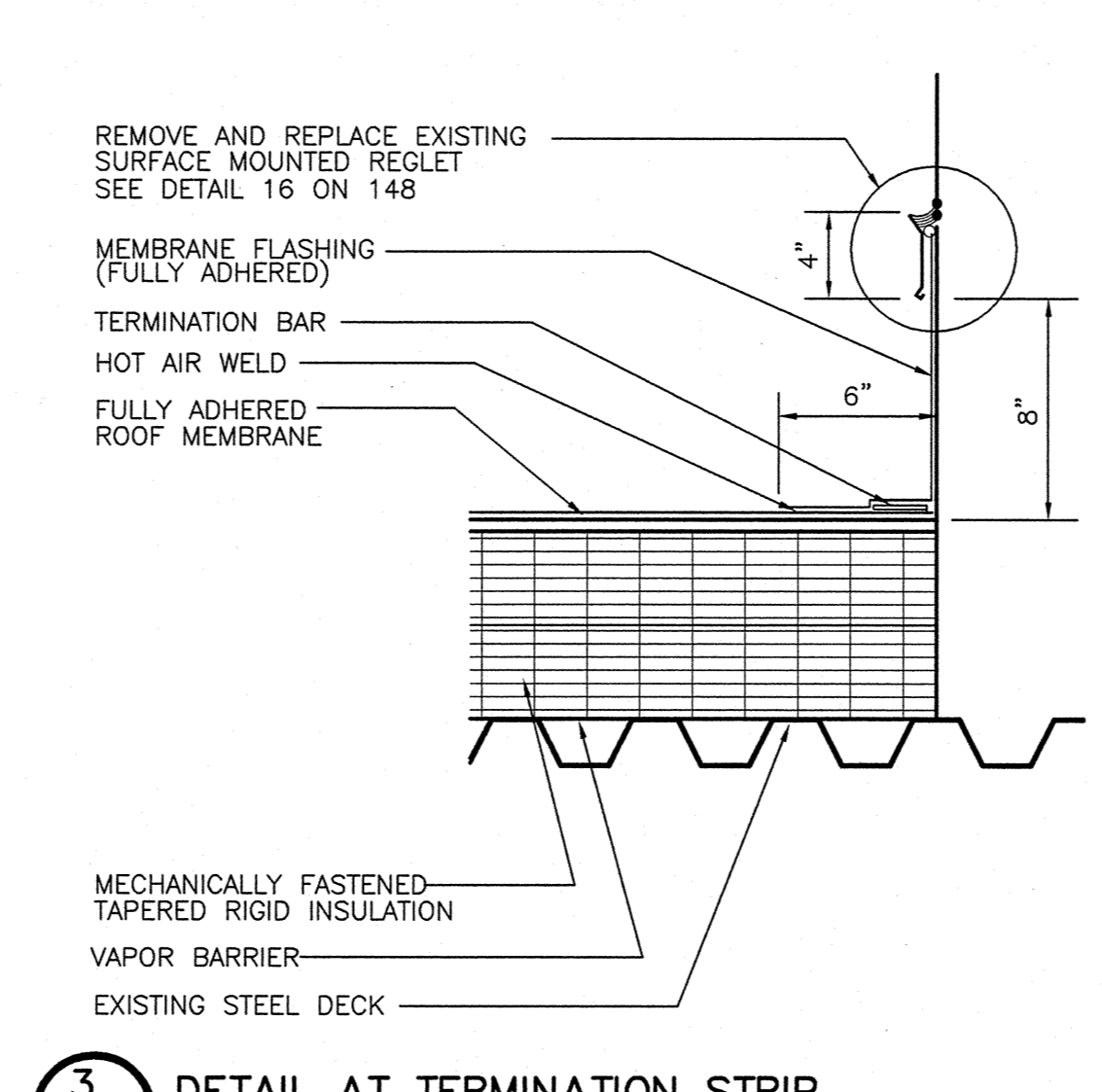
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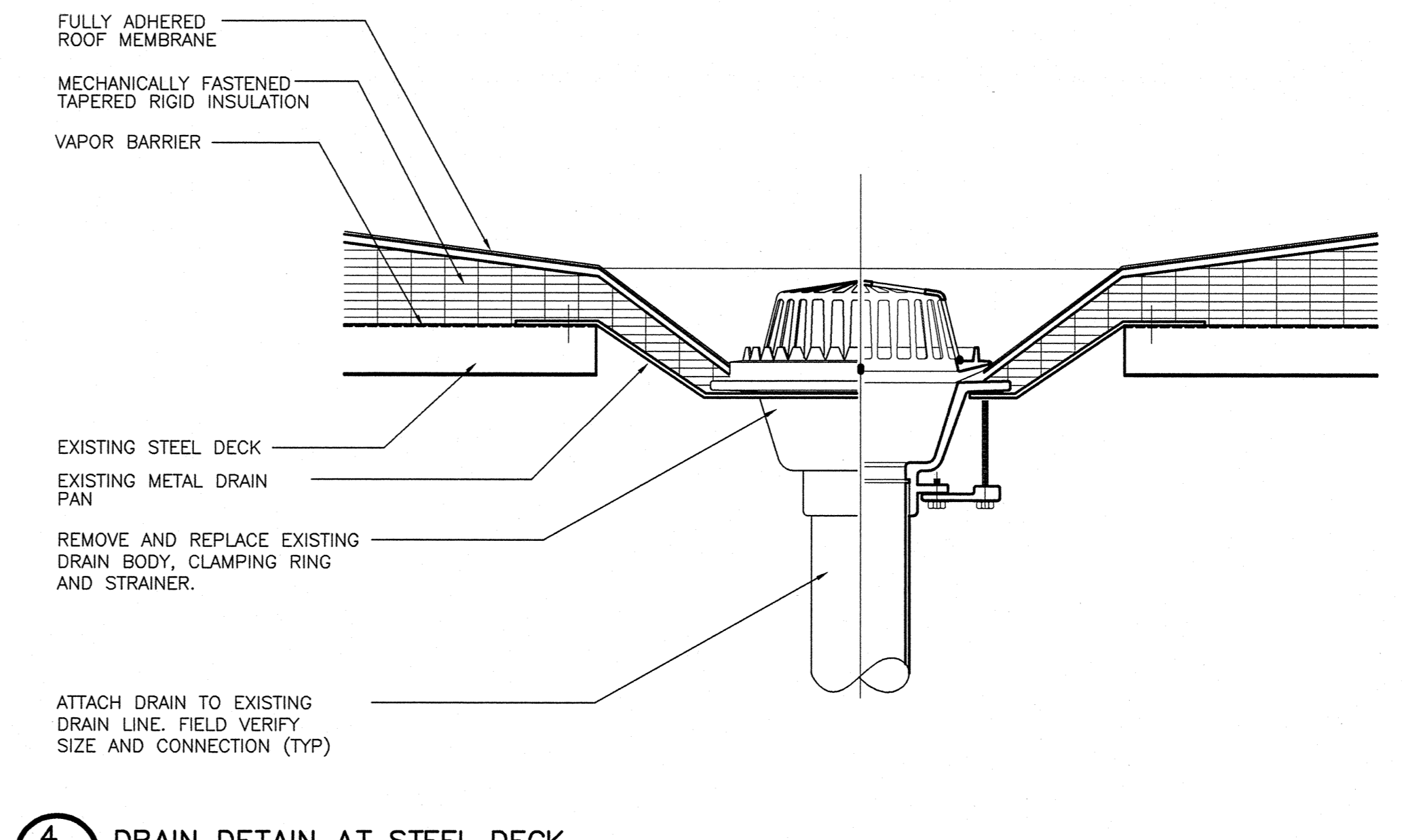
1 DETAIL AT DRIP EDGE
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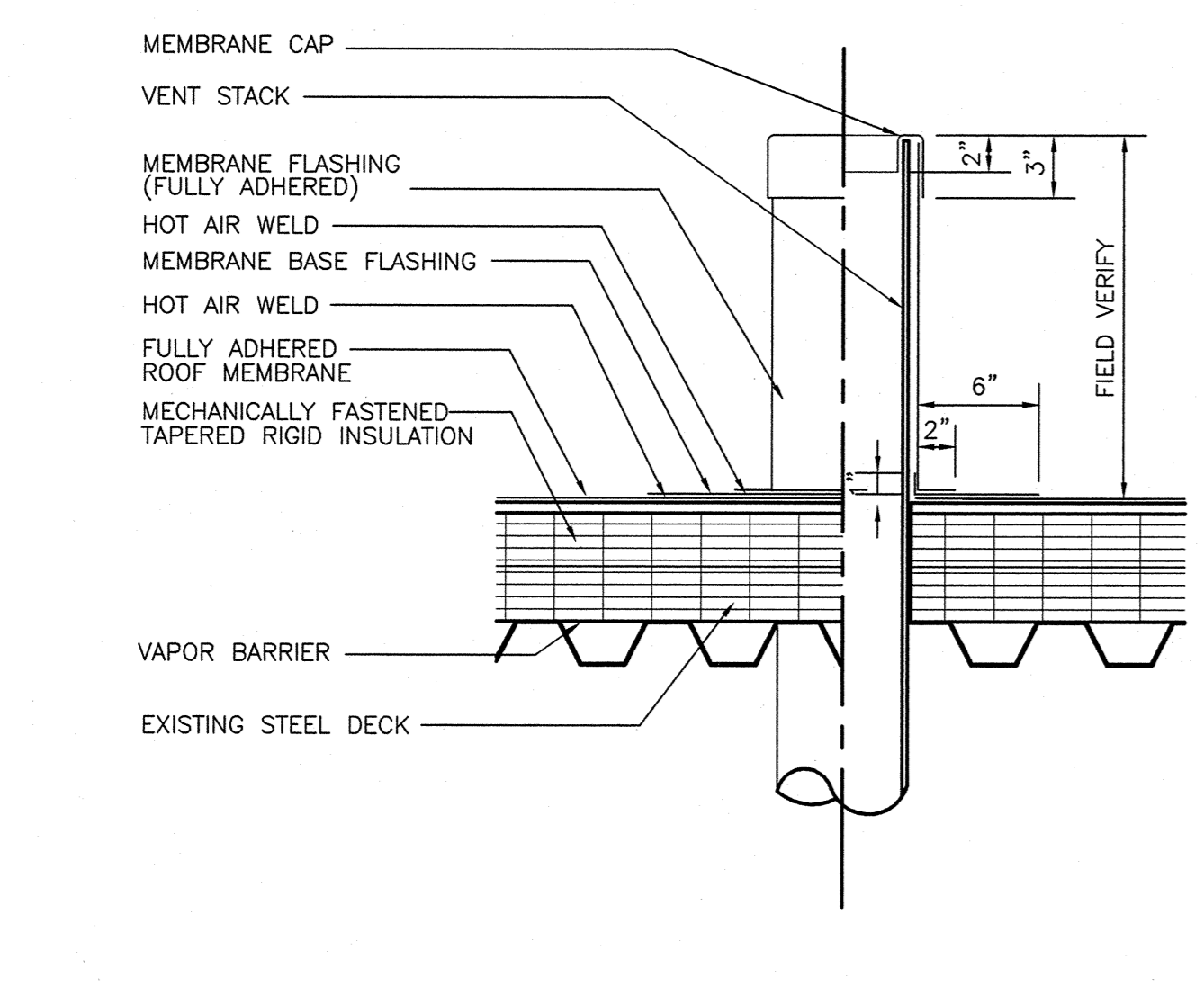
2 PARAPET EDGE DETAIL
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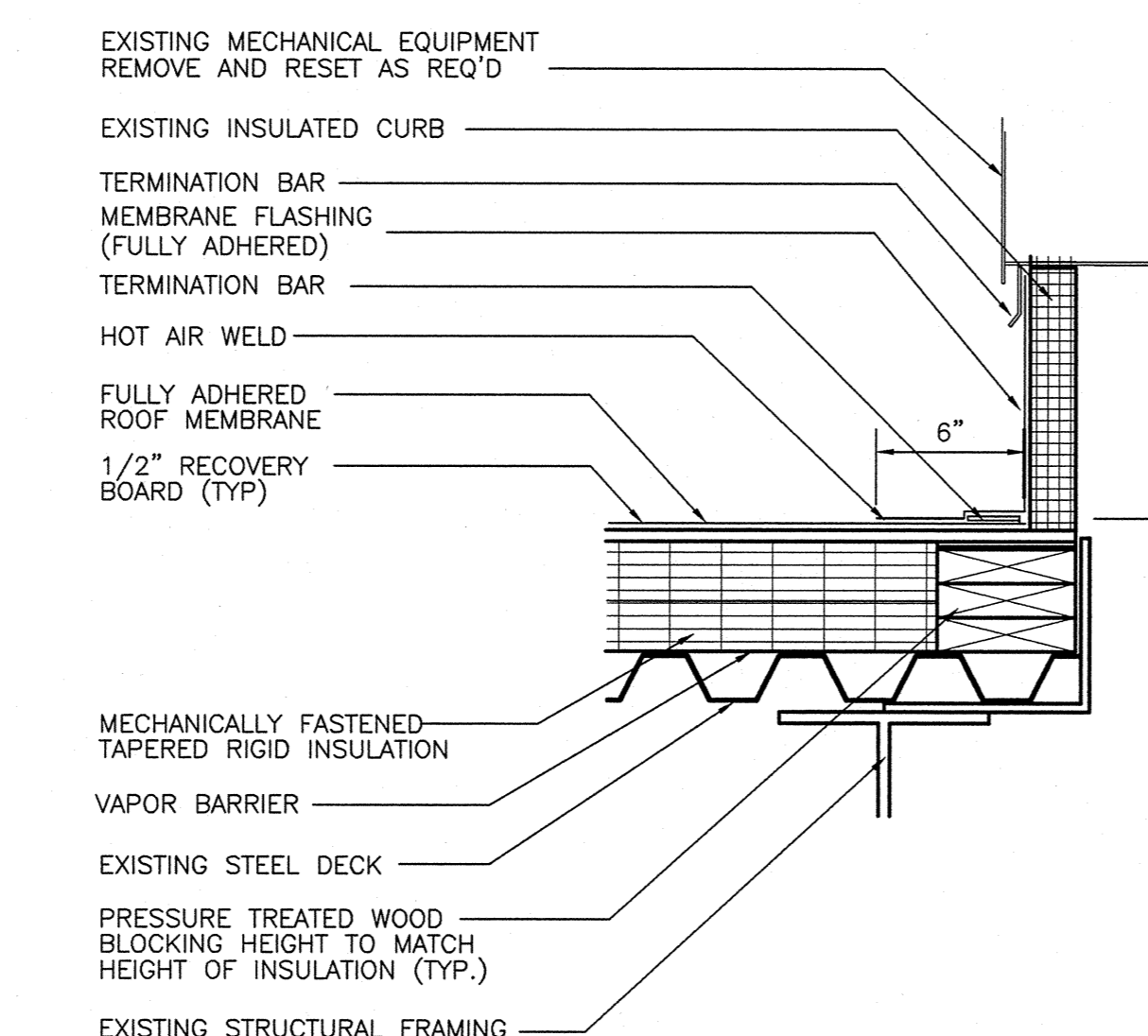
3 DETAIL AT TERMINATION STRIP
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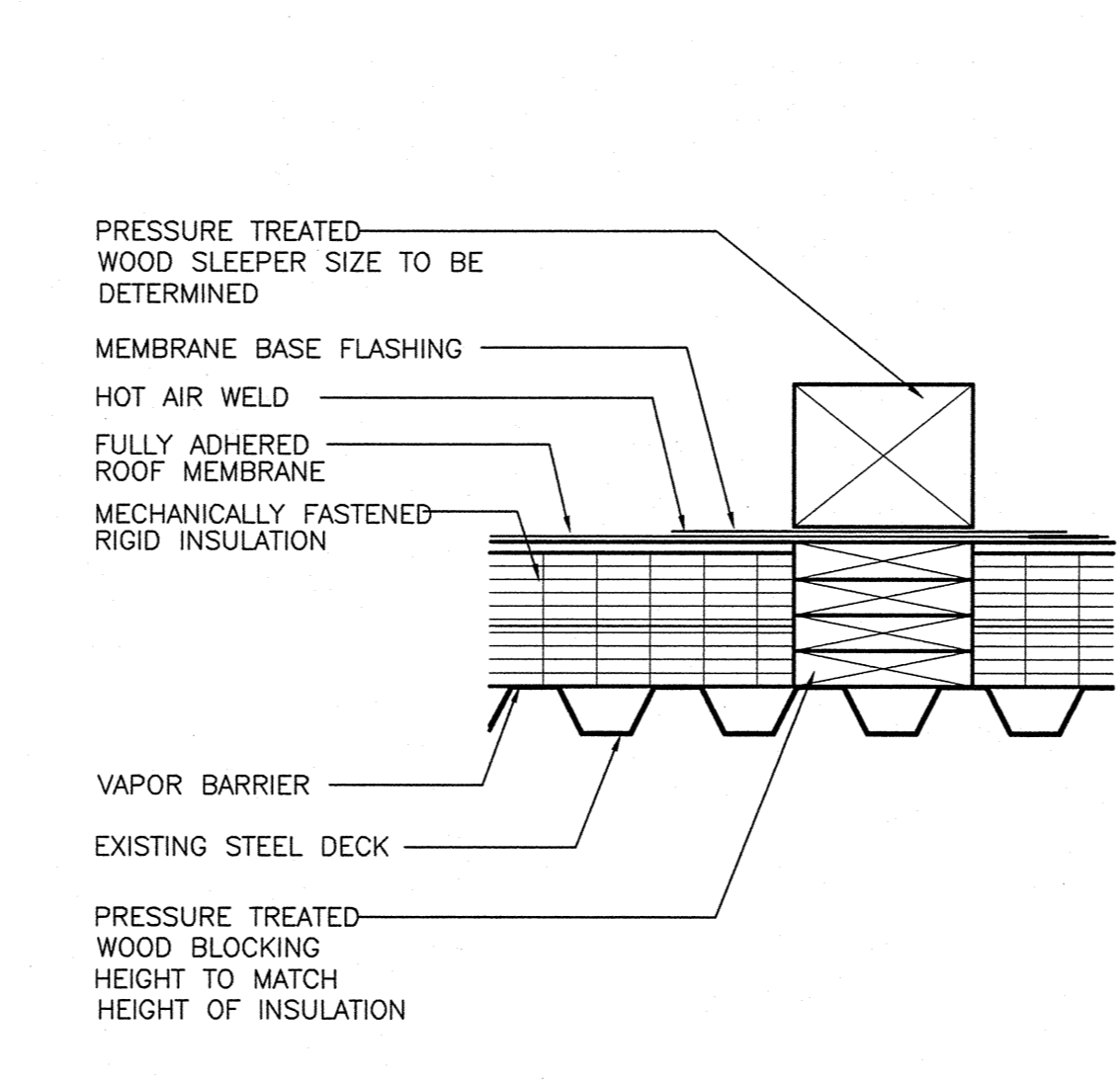
4 DRAIN DETAIL AT STEEL DECK
SCALE: 1-1/2" = 1'-0"



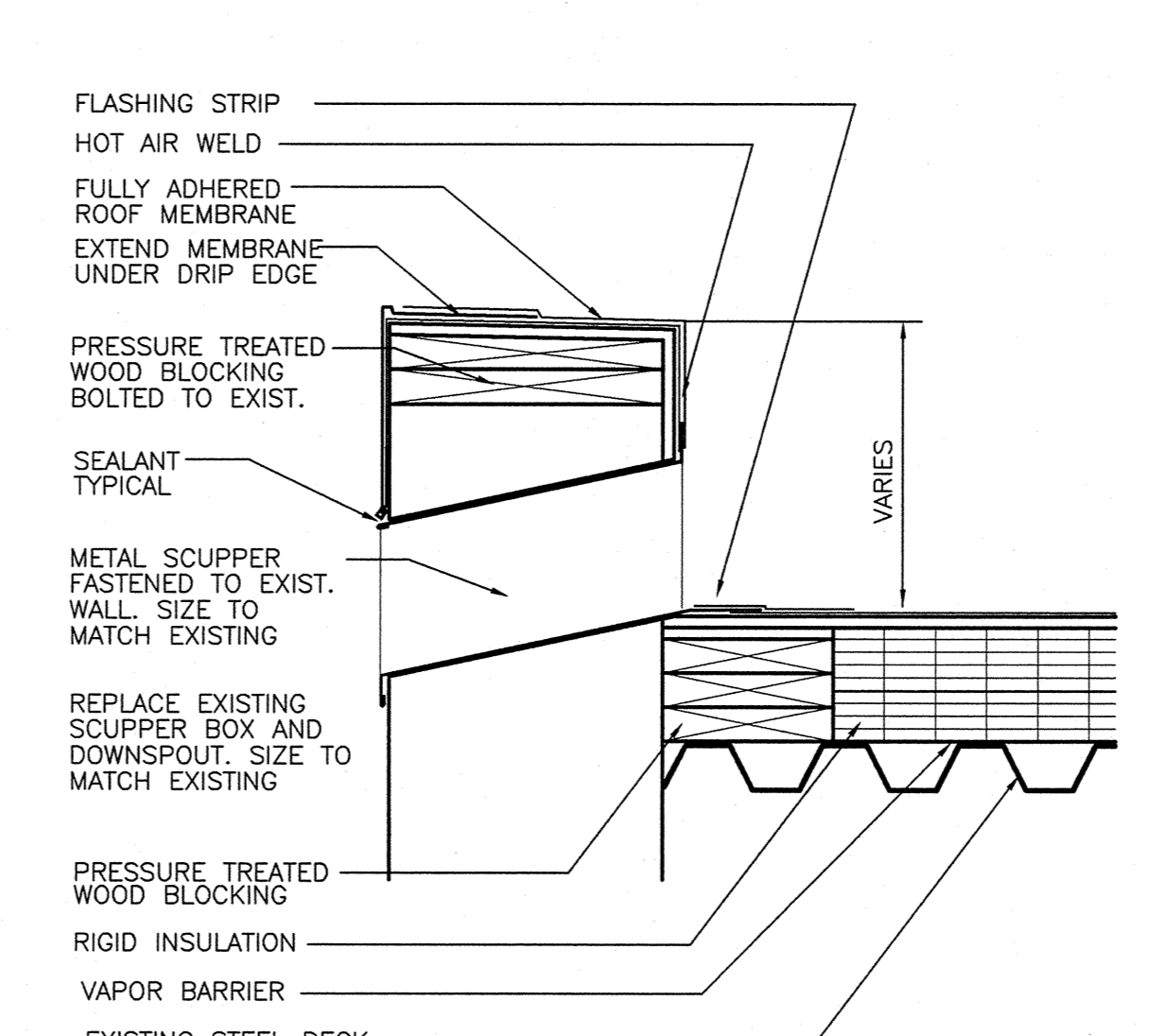
5 VENT STACK PENETRATION DETAIL
SCALE: 1-1/2" = 1'-0"



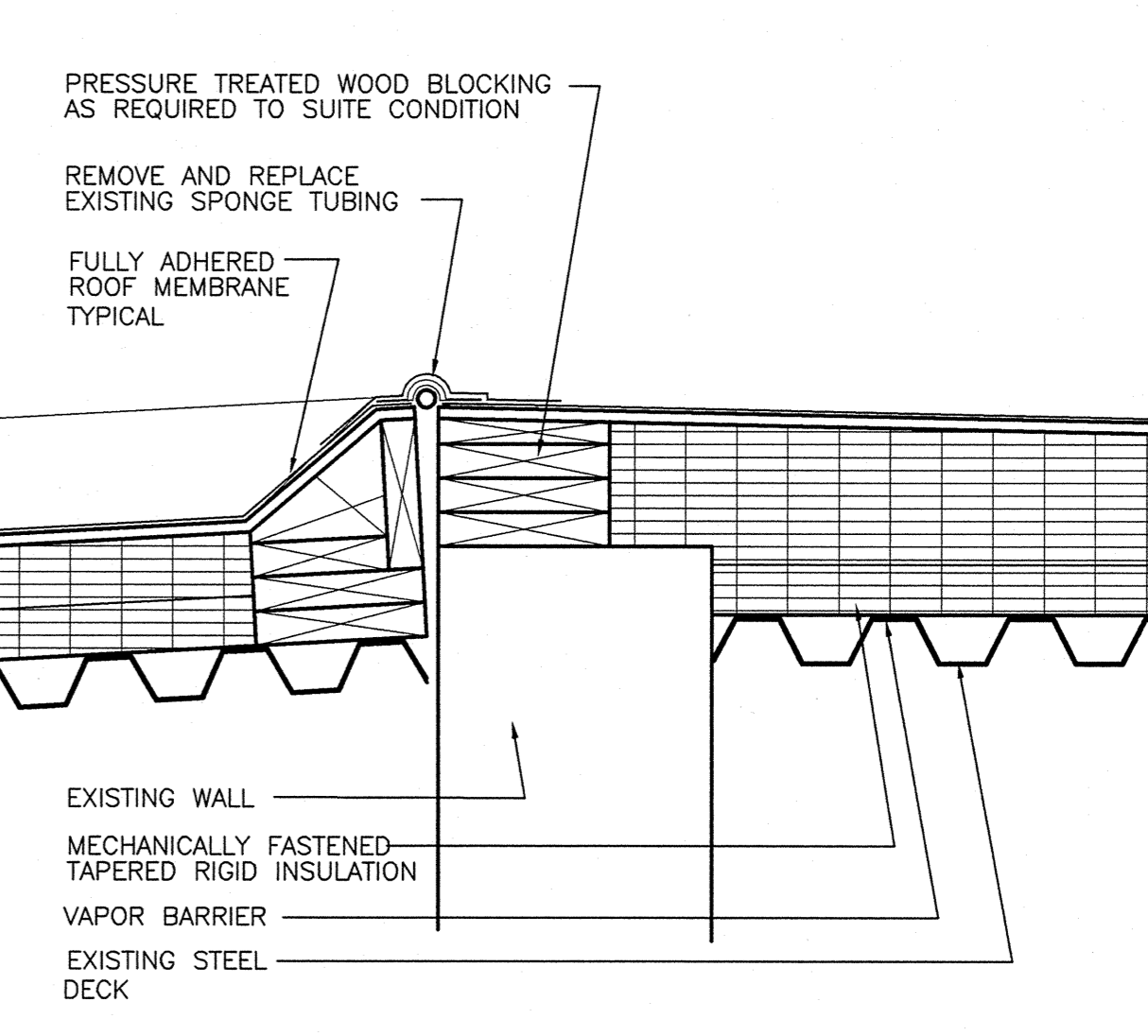
6 MECHANICAL CURB DETAIL
SCALE: 1-1/2" = 1'-0"



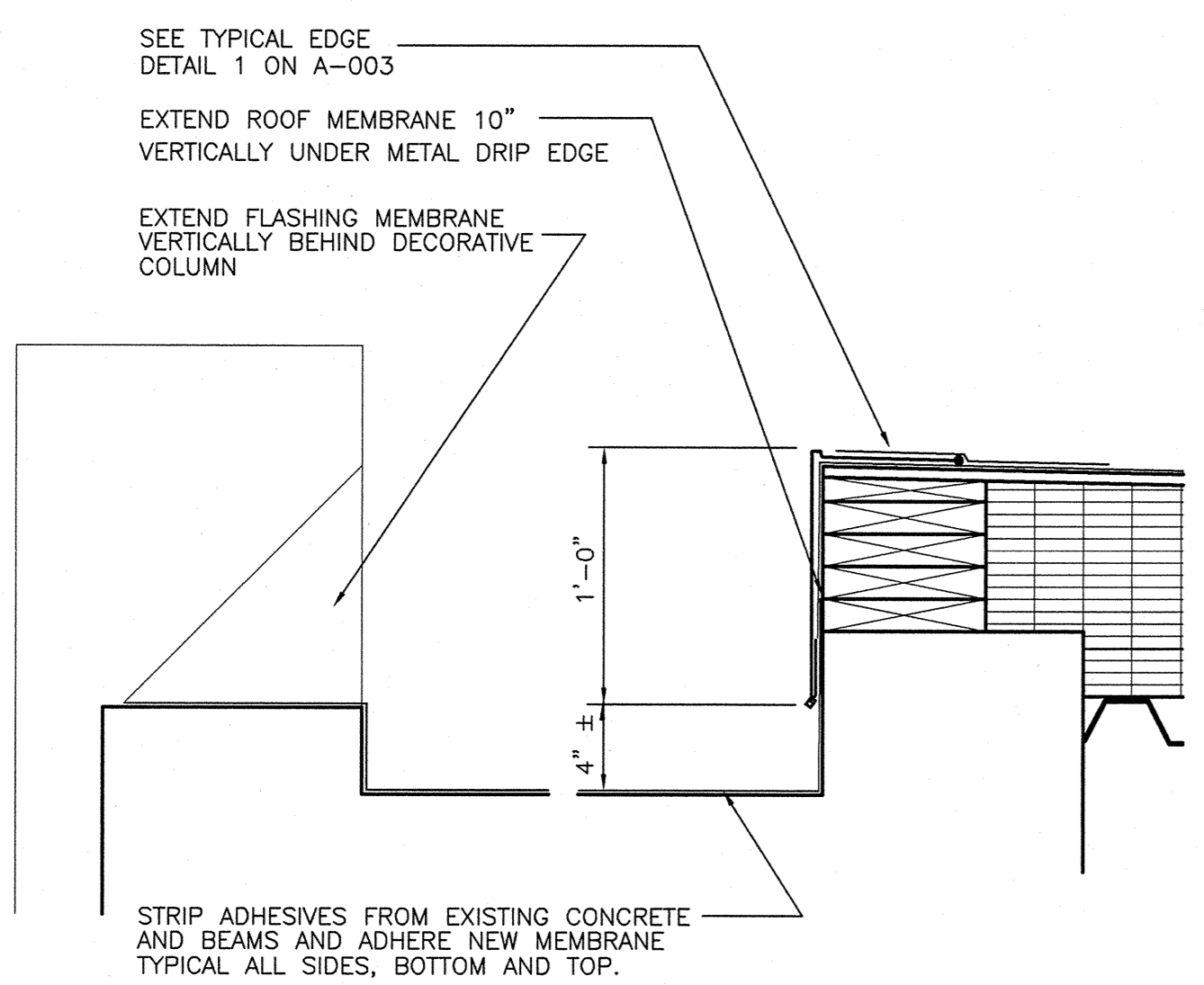
7 EXPOSED WOOD SLEEPERS
SCALE: 1-1/2" = 1'-0"



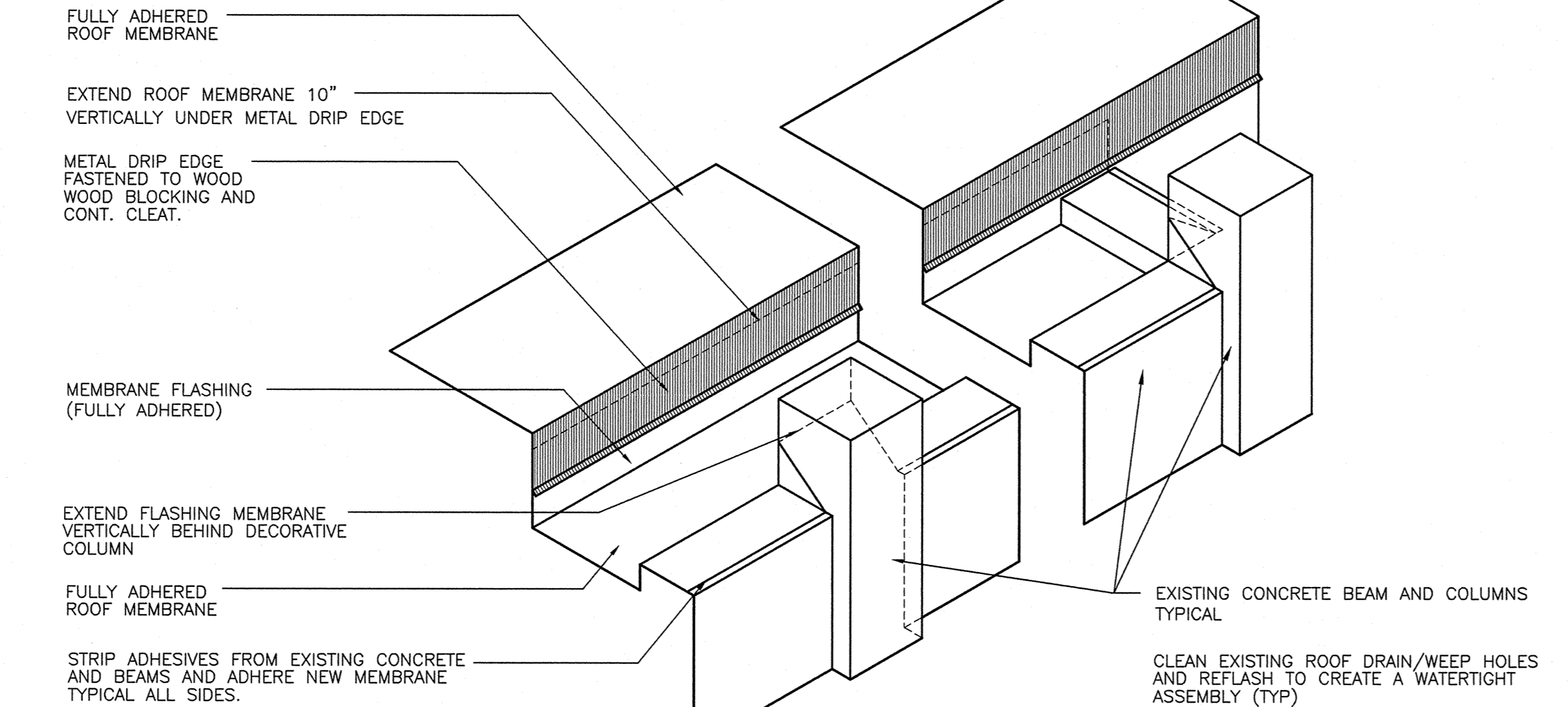
8 SCUPPER DETAIL
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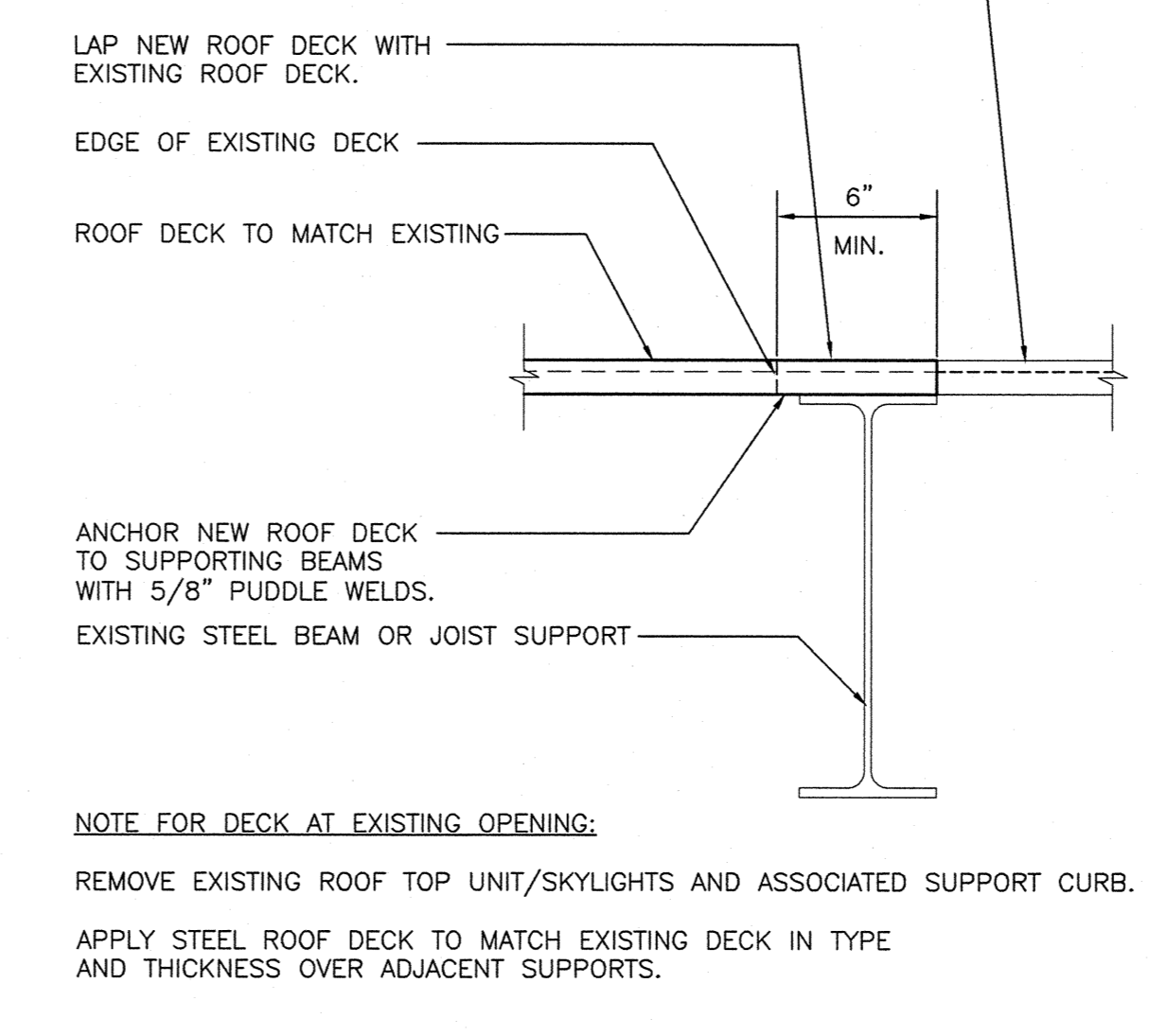
9 EXPANSION JOINT DETAIL
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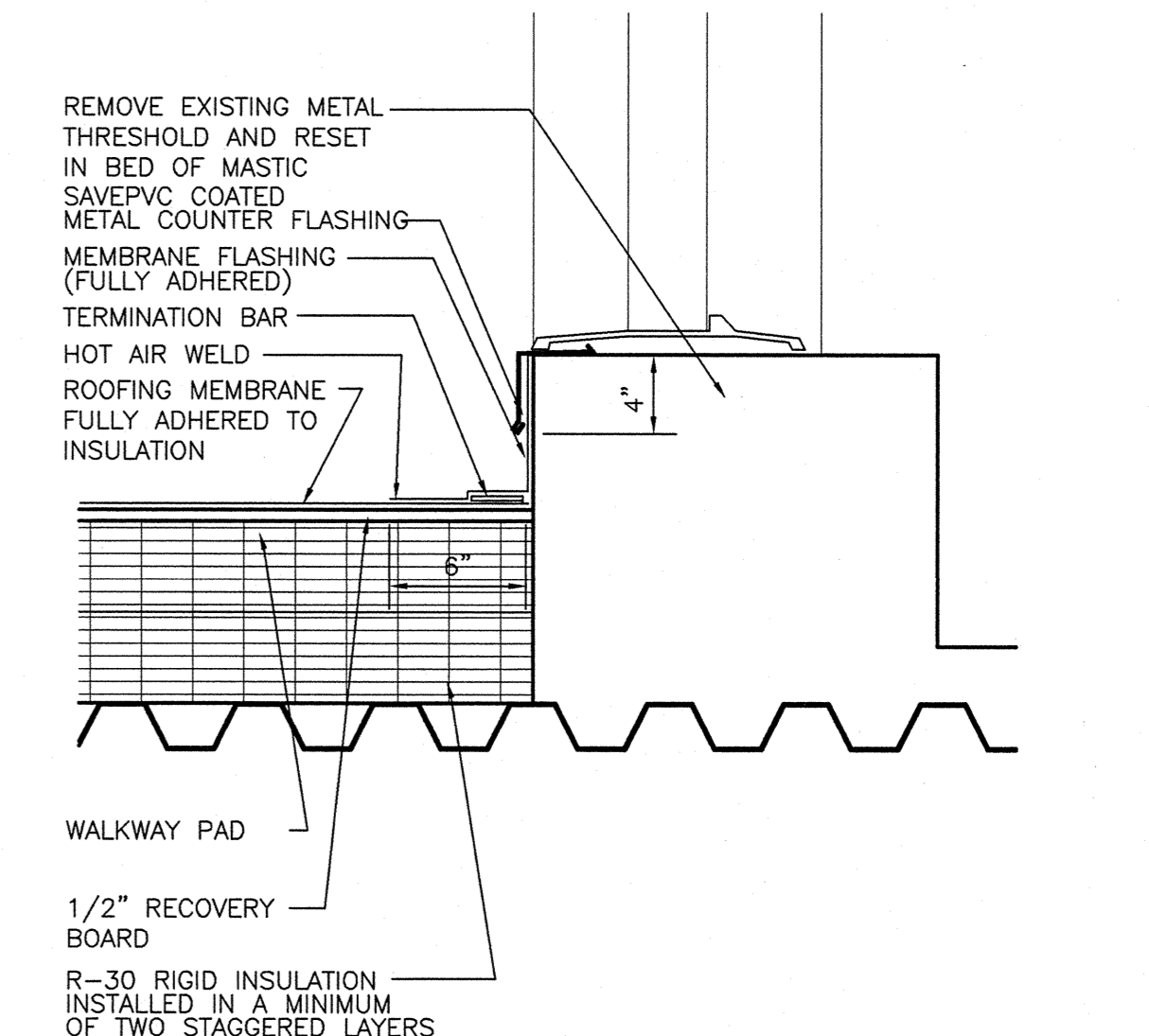
10 DETAIL AT FRONT DEPRESSION
SCALE: 1-1/2" = 1'-0"



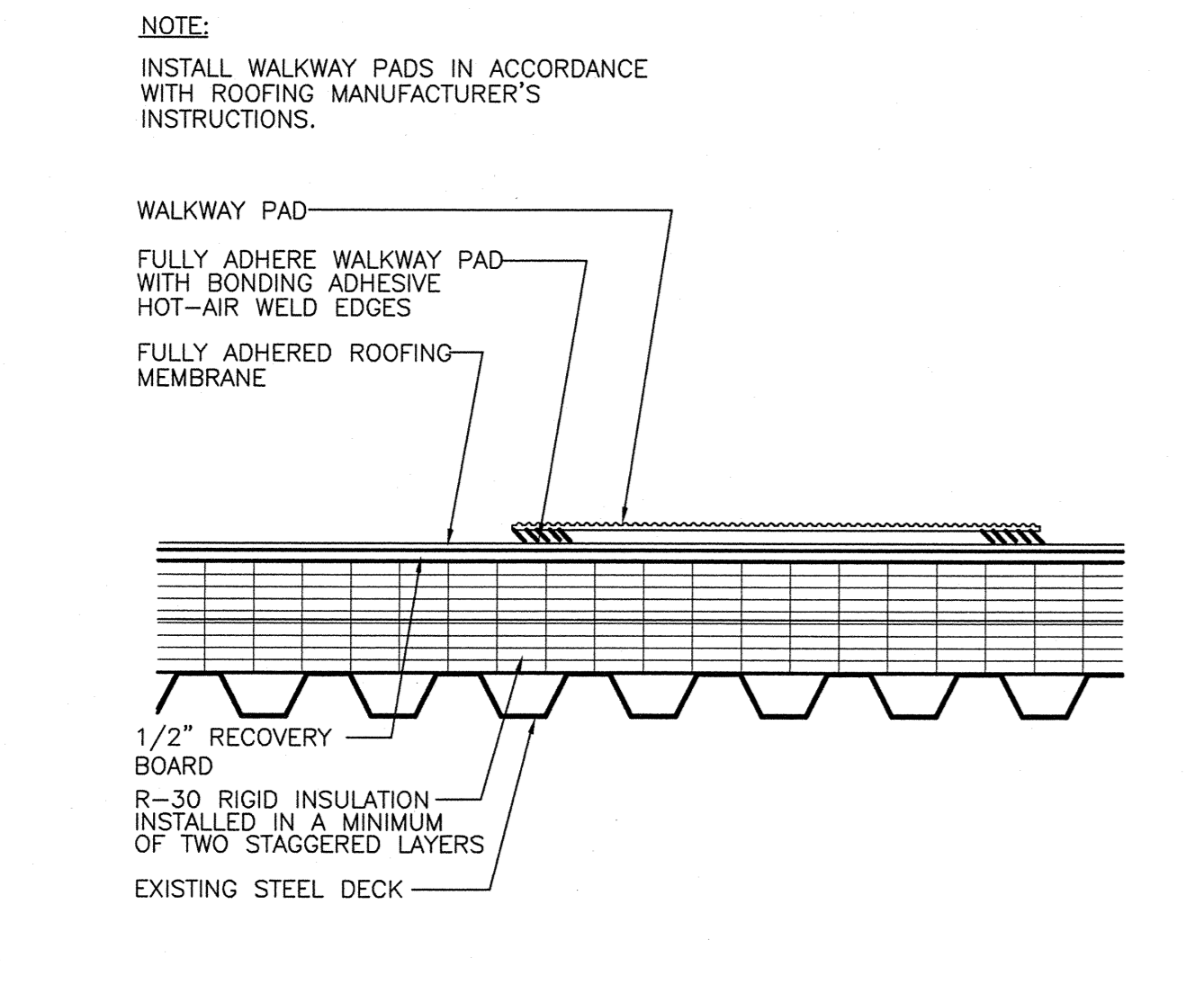
11 ISOMETRIC AT FRONT DEPRESSION
SCALE: NTS



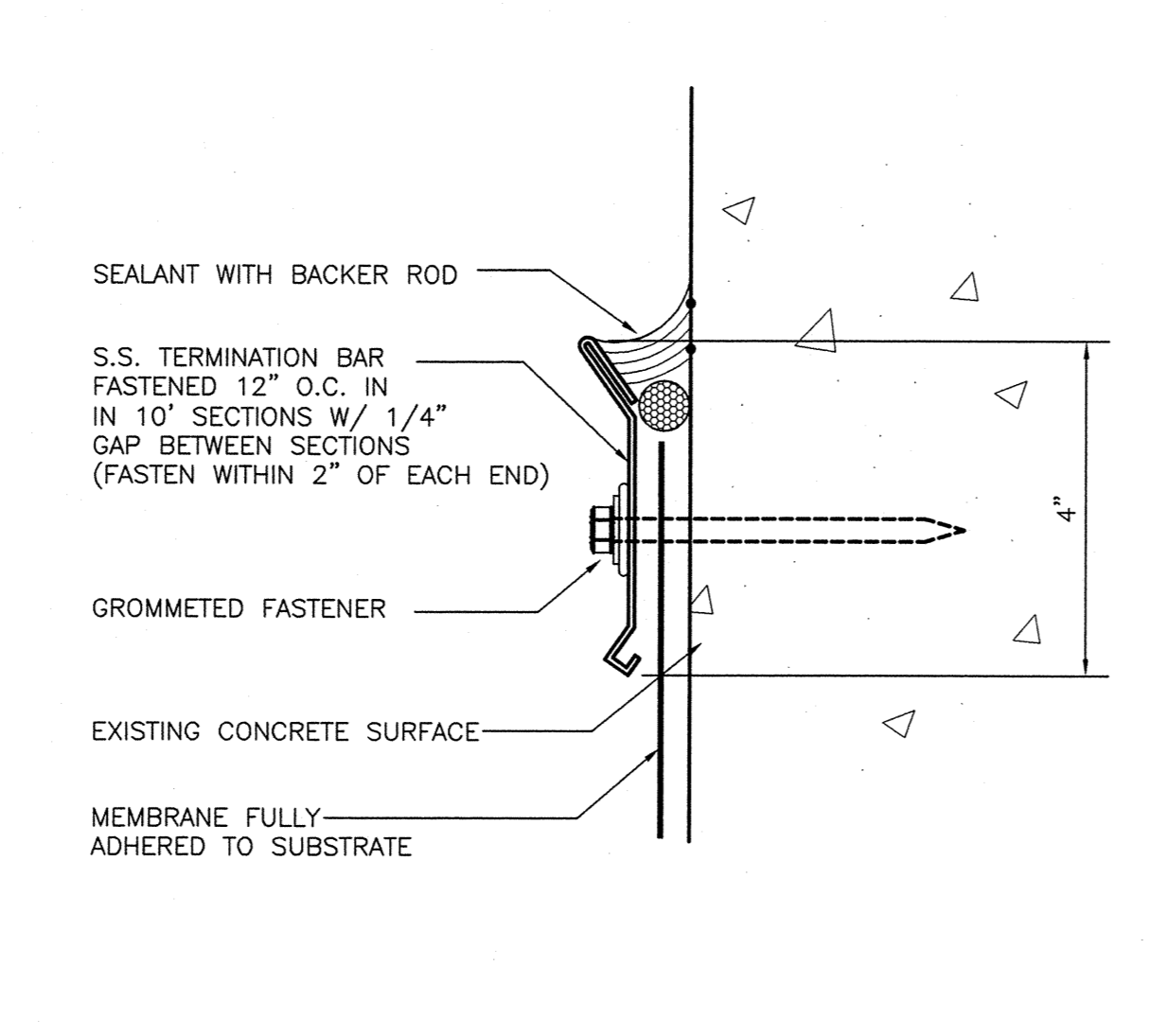
12 STEEL DECK INFILL DETAIL
SCALE: 1-1/2" = 1'-0"



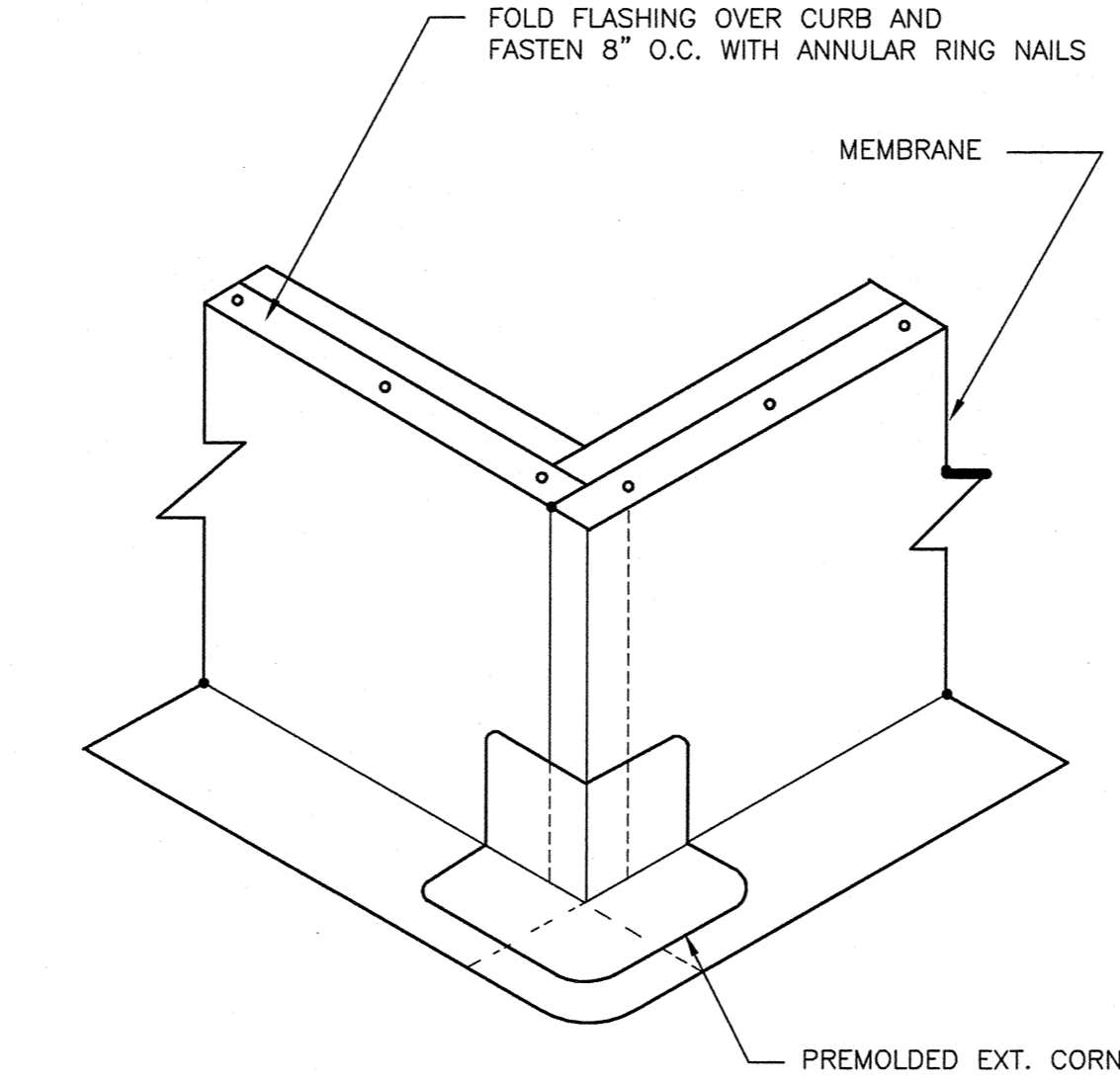
13 DETAIL AT DOOR THRESHOLD
SCALE: 1-1/2" = 1'-0"



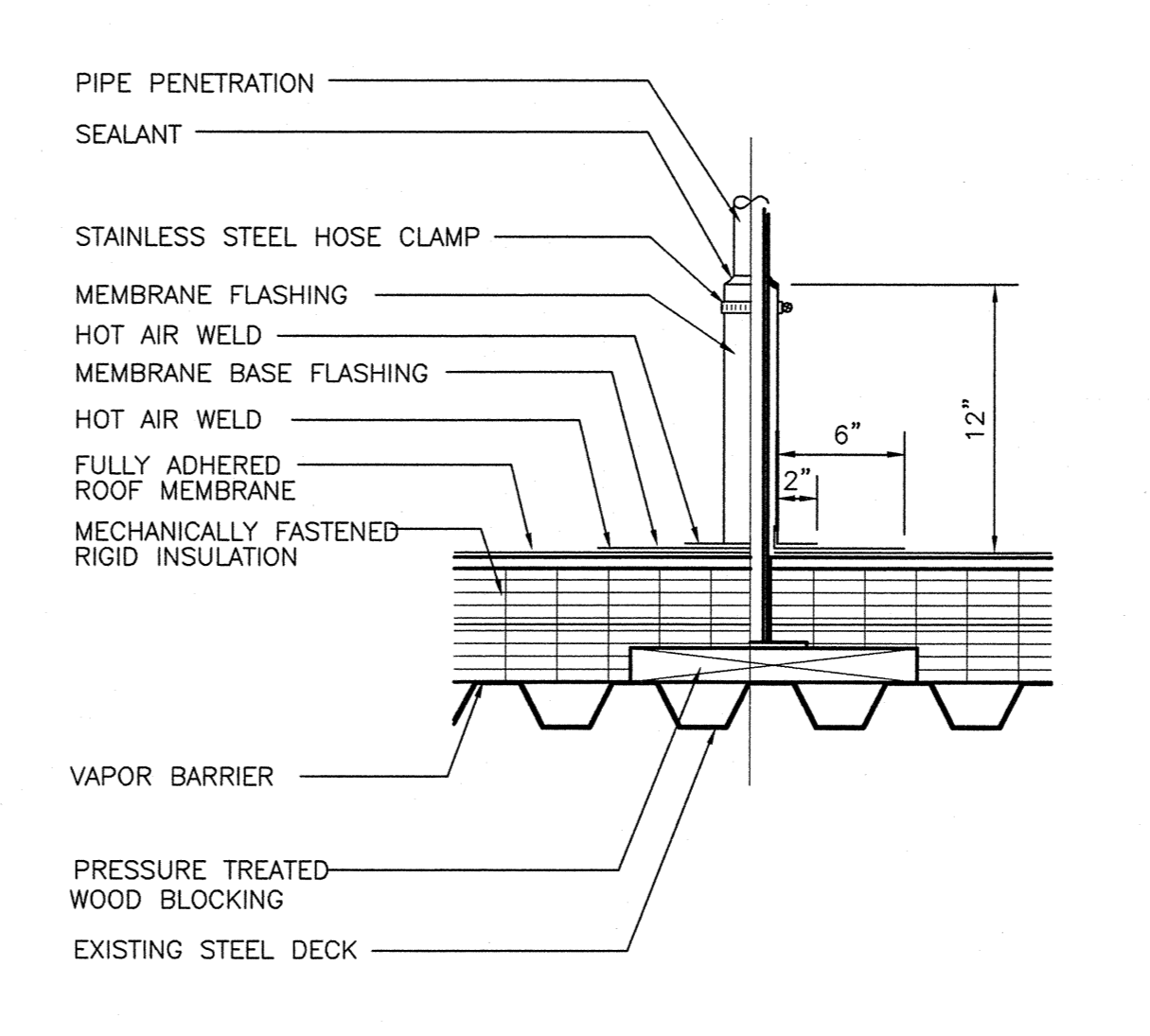
14 DETAIL AT WALKWAY MAT
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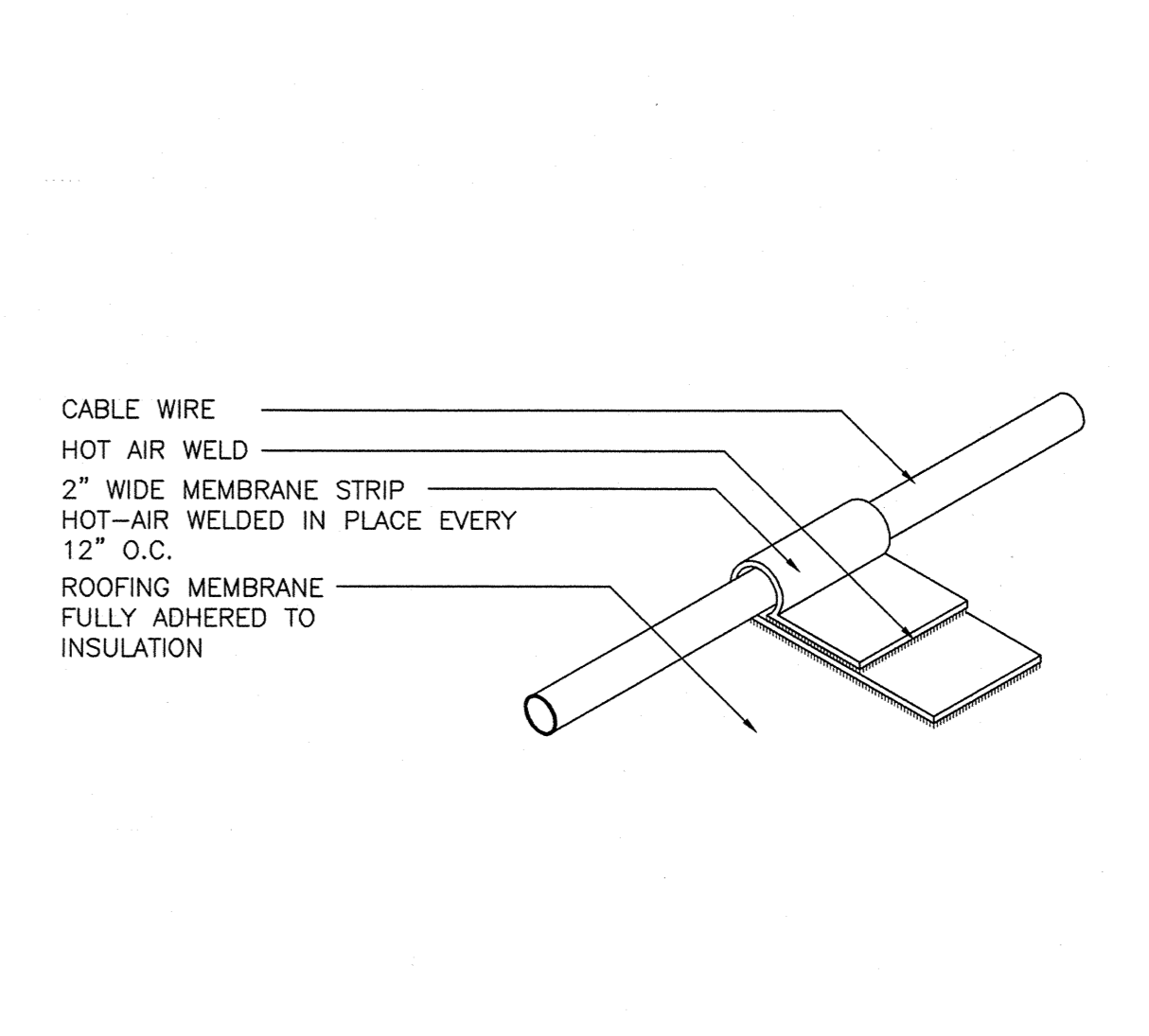
15 DETAIL AT SURFACE MOUNTED REGLETS
SCALE: 6" = 1'-0"



16 CORNER FLASHING DETAIL
SCALE: 1-1/2" = 1'-0"



17 PIPE PENETRATION DETAIL
SCALE: 1-1/2" = 1'-0"

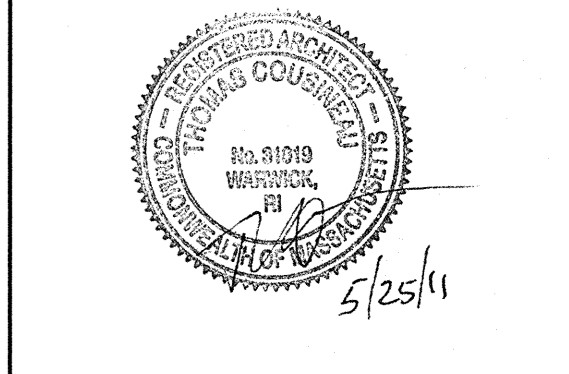


18 CABLE TIE DOWNS
SCALE: NTS

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REVISIONS		
Number	Description	Date

ISSUED FOR:
CONSTRUCTION
5-25-2011



WALTHAM POLICE
ROOF REPLACEMENT
WALTHAM MA

ROOF DETAILS

PROJECT NO: 19189
 DESIGNED BY: FC
 DRAWN BY: FC
 CHKD BY: [Signature]
 DATE: MAY 25, 2011
 SCALE: AS NOTED
 SHEET NO:

A-003