

REBID IFB #24-43

**SOLICITATION FOR:** Installation of Three (3) Standalone Portland Loo Prefabricated Toilets



**CITY OF SOMERVILLE, MASSACHUSETTS**  
**Katjana Ballantyne, Mayor**

Procurement and Contracting Services Department  
Angela M. Allen, Chief Procurement Officer

**RELEASE DATE:** 03/07/2024

**QUESTIONS DUE:** 03/14/2024 by 5PM EST

**DUE DATE AND TIME:** 03/21/2024 by 2:00 PM EST

**DELIVER TO:**  
**City of Somerville**  
**Procurement & Contracting Services**

**Attn:** Andrea Caruth  
Deputy Chief Procurement Officer  
[acaruth@somervillema.gov](mailto:acaruth@somervillema.gov)

**93 Highland Avenue**  
**Somerville, MA 02143**

**REBID IFB #24-43**  
Installation of Three (3) Standalone Portland Loo Prefabricated Toilets

## Key Project Information

Project Address	377 Summer Street; 92 Union Square; 165 Broadway, Somerville, MA
Estimated Construction Cost	\$200,000.00
Anticipated Contract Award	03/28/2024
Date of Substantial Completion	06/30/2024
Date of Final Completion	08/31/2024
Est. Contract Commencement Date	04/04/2024
Est. Contract Completion Date	04/03/2025
Governing Bid Law	<b>MGL 30.39M (Horizontal Construction)</b>
Wage Requirements	<b>State Prevailing Wages</b>
Payment Bond Requirements	<b>100% of Contract Value</b>
Performance Bond Requirements	<b>100% of Contract Value</b>
Liquidated Damages (\$ per Day)	<b>\$250.00</b>

## Managing Department Information

Managing City Department	Engineering
Project Manager	Brian Postlewaite
Project Manager Email	bpostlewaite@somervillema.gov

## Designer Information

Designer Name	Madden Fabrication, Inc.
Designer Address	2550 NW 25th Place, Portland, OR 92710
Designer Specialty	<b>Engineering</b>
Designer Contact	Evan Madden
Designer Contact Email	emadden@theloo.biz

## TABLE OF CONTENTS

### • PART 1: INVITATION FOR BID DOCUMENTS

#### **Section 1: GENERAL INFORMATION ON BID PROCESS**

1.1	General Instructions
1.2	Bid Schedule
1.3	Submission Instructions
1.4	Questions
1.5	General Terms

#### **Section 2: RULE FOR AWARD, QUALITY REQUIREMENTS, AND PROJECT BACKGROUND**

2.1	Rule For Award
2.2	Project Background
2.3	Minimum Quality Requirements

#### **Section 3: BID PRICING**

3.0	Form for General Bid
	Bid Form for Alternates (if applicable)
	Unit Price Form (if applicable)

#### **Section 4: REQUIRED BID FORMS / BIDDERS' CHECKLIST**

4.1 <i>(required with bid)</i>	Signed Cover Letter
	Somerville Living Wage Form
	Quality Requirements Form (Section 2.0)
	Certificate of Non-Collusion & Tax Compliance
	Certificate of Signature Authority
	Reference Form (or equivalent may be attached)
	5% Bid Deposit
	Prevailing / Davis Bacon Wages, Statement of Compliance Form
	OSHA Form
	Vulnerable Road Users Ordinance
	Somerville Wage Theft Ordinance
	Acknowledgement of Addenda (if applicable)
	Signed W9
4.2 <i>(required post bid)</i>	Certificate of Good Standing (will be required of awarded Vendor; please furnish with bid if available)
	Insurance Specifications (will be required of awarded Vendor; furnish sample certificate with bid, if possible)
	Performance Bond (100% of Contract Value)
	Statement of Management (if applicable)
	Payment Bond (100% of Contract Value)

### • PART 2: SAMPLE CONSTRUCTION CONTRACT / CITY's GENERAL TERMS AND CONDITIONS

- **PART 3: TECHNICAL SPECIFICATIONS**

**TABLE OF CONTENTS**

- Portland Loo Installation Instructions
- Installation Specs
- Site Design Plan
- Structural Drawings
- Structural Calculations



# Part 1: Invitation for Bid Documents

REBID IFB #24-43  
Installation of Three (3) Standalone Portland Loo Prefabricated Toilets

## 1.1 General Instructions

This solicitation will be publicly available on the Procurement & Contracting Services (PCS) Department webpage <https://www.somervillema.gov/procurement> on and after 03/07/2024. Interested parties can also contact the PCS department during the below-noted City Hall hours of operation.

Hall Hours of Operation:	
Monday – Wednesday	8:30 a.m. and 4:30 p.m.
Thursday	8:30 a.m. to 7:30 p.m.
Friday	8:30 a.m. to 12:30 p.m.

<b>All Responses Must be Sealed and Delivered To:</b>
Procurement & Contracting Services Department City of Somerville 93 Highland Avenue Somerville, MA 02143
<i>It is the sole responsibility of the Offeror to ensure that the bid arrives on time at the designated place. Late bids will not be considered and will be rejected and returned.</i>
<b>Bid Format:</b>
Submit one, original (1) sealed bid package; it must be marked with the solicitation title and number. Online submission procedures are described below in Section 1.3.
<b>BIDS SUBMITTED MUST BE AN ORIGINAL.</b> <b>The completion of the following forms is necessary for consideration of a potential contract award. submitting bid documents, please retain the order of documents as provided below:</b> 1) Form for General Bid 2) Unit Price Form (if applicable) 3) Somerville Living Wage Form 4) Quality Requirements Form 5) Certificate of Non-Collusion & Tax Compliance 6) Certificate of Signature Authority 7) Reference Form 8) 5% Bid Deposit 9) Prevailing Wages Statement of Compliance Form 10) OSHA Form 11) Somerville Vulnerable Road Users Ordinance Form 12) Somerville Wage Theft Ordinance
<b>If all required documents are not present, the bid may be deemed non-responsive and may result in disqualification of the bid unless the City determines that such failure(s) constitute(s) a minor informality, as defined in Chapter MGL 30B.</b>
A complete bid must also include a cover letter signed by an official authorized to bind the Offeror contractually and contain a statement that the proposal is firm for ninety (90) days. <b>An unsigned letter, or one signed by an individual not authorized to bind the Offeror, may be disqualified.</b>

The Offeror's authorized official(s) must sign all required bid forms.
The Price Form in <b>Section 3.0</b> must be completed. No substitute form will be accepted. Pricing must remain firm for the entire contract period.
All information in the Offeror's response should be clear and concise. The successful response will be incorporated into a contract as an exhibit; therefore, Offerors should not make claims to which they are not prepared to commit themselves contractually.
The successful Offeror must be an Equal Opportunity Employer.
The City of Somerville values a diverse workforce and believes it contributes to a work product and customer experience that best reflects the community in our city. Applicants are highly encouraged to include any certifications and documents that recognize the diversity of the Offeror's work force, including ownership of the offering firm/organization, executive leadership, management, and employees proposed for the work in Somerville, including diversity of sub-consultants. <b>Please use the supplier diversity form (see Section 4.0) with supporting documentation to share your diversity data with the City.</b>

## 1.2 Bid Schedule

Key dates for this Invitation for Bids:	
IFB Issued	03/07/2024
Deadline for Submitting Questions to IFB	03/14/2024 by <b>5PM EST</b>
Bids Due	03/21/2024 by <b>2:00 PM EST</b>
Anticipated Contract Award	03/28/2024
Est. Contract Commencement Date	04/04/2024
Est. Contract Completion Date	04/03/2025

<b>Responses must be delivered by 03/21/2024 by 2:00 PM EST to:</b>	City of Somerville Procurement & Contracting Services Department Attn: Andrea Caruth 93 Highland Avenue Somerville, MA 02143
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## 1.3 Submission Instructions

If you submitting your bid online via Bidexpress.com , then you do not need to also submit a sealed bid package as instructed below. Email is not an acceptable method of submission of bids.

Please submit *one sealed bid package* with the following contents and marked in the following manner:

<b>Contents of Sealed Bid Package</b>	<b>Marked As</b>
<b>Envelope 1: Sealed Bid:</b> Shall Include (1) original and one (1) electronic copy. [Electronic copies are to be submitted on USB drives and are to be saved in Adobe Acrobat format. ("Read only" files are acceptable.)]	<b>To Be Marked:</b> REBID IFB #24-43 Installation of Three (3) Standalone Portland Loo Prefabricated Toilets
<b>Please send the complete sealed package to the attention of :</b>	Andrea Caruth Deputy Chief Procurement Officer Procurement & Contracting Services Department Somerville City Hall 93 Highland Avenue Somerville, MA 02145
<b>Live Bid Opening Link</b> Join Zoom Meeting <a href="https://us02web.zoom.us/j/81206982311?pwd=MFRZSEJ5Ump6Kyt3MEMwV1ZsQ01odz09">https://us02web.zoom.us/j/81206982311?pwd=MFRZSEJ5Ump6Kyt3MEMwV1ZsQ01odz09</a>  Meeting ID: 812 0698 2311 Passcode: 740061	
<b>Methods of Bid Submission</b> Bidders may submit bids in any of the following ways. All bids will be timestamped and must be received no later than due date and time.  1) Sealed bids can be sent to City Hall through the US Postal Service or other delivery service (e.g. FedEx, UPS).  2) BidExpress.com is an online bidding platform where bidders can submit all required documents. The fee to use this service is approximately \$40.00 unless your company has a subscription with BidExpress. You can access the bid package and forms via the City of Somerville BidExpress page at: <a href="https://www.bidexpress.com/businesses/33100/home">https://www.bidexpress.com/businesses/33100/home</a> A user guide is attached for your reference.  3) For any technical assistance while submitting the online bid, please contact the BidExpress Customer support team at <a href="http://www.bidexpress.com">www.bidexpress.com</a> . Bidders may submit bids in any of the following ways. All bids will be timestamped and must be received no later than due date and time.	

## Bid Format

Responses shall be prepared on standard 8.5 x 11 inch paper (charts may be landscaped but must be on 8.5 x 11 inch paper) and shall be in a legible font size (12). All pages of each response shall be appropriately numbered (and with consecutive page numbering across tabs). **In an effort to reduce waste, we discourage the use of 3-ring binders.**

*Elaborate format and binding are neither necessary nor desirable.*

## **Qualifications & Experience**

The Offeror may include any additional literature and product brochures. The Quality Requirements Form (Section 2), or set of basic business standards, must be submitted with bid.

## **References**

The Offeror shall list at least three relevant references, which the City may contact. The City of Somerville reserves the right to use ourselves as a reference. References shall include the following information:

●The name, address, telephone number, and email address of each client listed above.	
●A description of the work performed under each contract.	●The amount of the contract.
●A description of the nature of the relationship between Offeror and the customer.	
●The dates of performance.	●The volume of the work performed.

## **1.4 Questions**

**Questions are due: 03/14/2024 by 5PM EST**

**Questions concerning this solicitation must be delivered in writing to:**

Andrea Caruth  
Deputy Chief Procurement Officer  
Somerville City Hall  
Procurement & Contracting Services Department  
93 Highland Avenue  
Somerville, MA 02143  
**Or emailed to:**  
acaruth@somervillema.gov

**Or faxed to:**

617-625-1344

Answers will be sent via an addendum to all Offerors who have registered as bid holders. Bidders are encouraged to contact the Procurement & Contracting Services Department to register as a bid document holder to automatically be alerted as to addenda as they are issued. It is the responsibility of the Offeror to also monitor the bid portal on the City's website for any updates, addenda, etc. regarding that specific solicitation. The web address is:

<https://www.somervillema.gov/procurement>.

**Any bidders that contact City personnel outside of the Procurement & Contracting Services Department regarding this bid may be disqualified.**

## **1.5 General Terms**

### **Estimated Quantities**

The City of Somerville has provided estimated quantities, which will be ordered/purchased over the course of the contract period. These estimates are estimates only and not guaranteed.

## **Bid Signature**

A response must be signed as follows: 1) if the Offeror is an individual, by her/him personally; 2) if the Offeror is a partnership, by the name of the partnership, followed by the signature of each general partner; and 3) if the Offeror is a corporation, by the authorized officer, whose signature must be attested to by the clerk/secretary of the corporation (& with corporate seal).

## **Time for Bid Acceptance and City Contract Requirements**

The contract will be awarded within 90 days after the bid opening. The time for award may be extended for up to 45 additional days by mutual agreement between the City and the apparent lowest responsive and responsible bidder. The Offeror's submission will remain in effect for a period of 90 days from the response deadline or until it is formally withdrawn, a contract is executed, or this solicitation is canceled, whichever occurs first. The Offeror will be required to sign a standard City contract per the City's general terms included herein as Part 2.

## **Holidays are as follows:**

New Year's Day	Martin Luther King Day	Presidents' Day	Patriots' Day
Memorial Day	Juneteenth Independence Day	Independence Day	Labor Day
Indigenous Peoples' Day	Veterans' Day	Thanksgiving Day	Thanksgiving Friday
Christmas Eve (half day)	Christmas Day		

Please visit <http://www.somervillema.gov/> for the City's most recent calendar. \*Under State Law, all holidays falling on Sunday must be observed on Monday.

If the awarded Offeror for their convenience desires to perform work during other than normal working hours or on other than normal work days, or if the Offeror is required to perform work at such times, the Offeror shall reimburse the City for any additional expense occasioned the City, thereby, such as, but not limited to, overtime pay for City employees, utilities service, etc. UNLESS otherwise specified in these provisions, services will be performed during normal work hours. When required services occur on holidays, work will be performed on either the previous or following work day, unless specified otherwise.

## **Unforeseen Office Closure**

If, at the time of the scheduled bid opening, the Procurement & Contracting Services Department is closed due to uncontrolled events such as fire, snow, ice, wind, or building evacuation, the bid due date will be postponed until 2:00 p.m. on the next normal business day. Bids will be accepted until that date and time. In the event of inclement weather, the Offeror is responsible for listening to the media to determine if the City has been closed due to weather.

## **Changes & Addenda**

If any changes are made to this solicitation, an addendum will be issued. All proposers on record as having picked up the solicitation will be alerted via email as to the posting of all addenda. The City will also post addenda on its website (<https://www.somervillema.gov/procurement>). No changes may be made to the solicitation documents by the Offerors without written authorization and/or an addendum from the Procurement & Contracting Services Department.

## **Modification or Withdrawal of Bids, Mistakes, and Minor Informalities**

An Offeror may correct, modify, or withdraw a bid by written notice received by the City of Somerville prior to the time and date set for the bid opening. Bid modifications must be submitted in a sealed envelope clearly labeled "Modification No. \_\_" to the address listed in Section 1. Each modification must be numbered in sequence and must reference the original solicitation. After the bid opening, an Offeror may not change any provision of the bid in a manner prejudicial to the interests of the City or fair competition. Minor informalities will be waived or the proposer will be allowed to correct them. If a mistake and the intended bid are clearly evident on the face of the bid document, the mistake will be corrected to reflect the intended correct bid, and the proposer will be notified in writing; the proposer may not withdraw the bid. A proposer may withdraw a bid if a mistake is clearly evident on the face of the bid document, but the intended correct bid is not similarly evident.

**Right to Cancel/Reject Bids**

The City of Somerville may cancel this solicitation, or reject in whole or in part any and all bids, if the City determines that cancellation or rejection serves the best interests of the City.

**Unbalanced Bids**

The City reserves the right to reject unbalanced, front-loaded, and conditional bids.

**Brand Name “or Equal”**

Any references to any brand name or proprietary product in the specifications shall require the acceptance of an equal or better brand. The City has the right to make the final determination as to whether an alternate brand is equal to the brand specified.

**Electronic Funds Transfer (EFT)**

For EFT payment, the following shall be included with invoices to the point of contact:

- Contract/Order number; Contractor’s name & address as stated in the contract;
- The signature (manual or electronic, as appropriate) title, and telephone number of the Offeror’s representative authorized to provide sensitive information;
- Name of financial institution; Financial institution nine (9) digit routing transit number;
- Offeror’s account number; Type of account, i.e., checking or saving.

**Project Schedule**

Bidders are instructed to note the firmness of the dates of: Substantial Completion, and Final Completion. For the purpose of meeting these deadlines, the City may be prepared to authorize extended work hours beyond those prescribed by City ordinance, to include work on Sundays with the prior permission of the City.

Contractor submission of all paperwork required for the Construction Contract, including but not limited to insurance certificates, performance and payment bonds, a certificate of good standing from the Secretary of Corporations, and signature pages shall be submitted to the Chief Procurement Officer no later than 5 working days from award of the contract.

The successful bidder shall be required to submit a preliminary construction schedule within 10 days of the established date of award of the Contract and a more detailed Gantt-type construction schedule within 15 days of the established award of the contract, which shows the dates of substantial and final completion.

**Sales Tax Exemption**

Materials, equipment, and supplies for this project are exempt from sales tax in accordance with M.G.L. Chapter 64H, Section 6 (d). The city will furnish the successful bidder with its sales tax exemption number.

**Permit Fees (Contractor responsible for obtaining permits/City of Somerville permit fees waived)**

DPW permits to obstruct or excavate the public streets and/or sidewalks; ISD building code permits; and Traffic and Parking permits; are waived by the City of Somerville. However, license fees are not waived by the City of Somerville. The Contractor shall pay all license fees (e.g., drain layer’s license fee). The City of Somerville Traffic and Parking Department must be contacted directly for all required permits. The vendor must also provide the City of Somerville Traffic and Parking Department with a traffic management plan, prior to the start of all work.

If water usage is required in the commitment of this project, the Contractor needs to contact the DPW Water Dept., and make arrangements for a water meter. There will be a charge for the water meter and the water usage.

The Contractor is responsible for obtaining EVERSOURCE work orders and for all costs and fees associated with EVERSOURCE.

Permits to excavate the public way cannot be issued until the applicant has notified the appropriate utility companies, as required by Massachusetts General Laws, Chapter 370 of the Acts of 1963. The applicant must either: 1) obtain written receipts from the affected utilities, and provide copies of same to the owner; or 2) utilize the Dig-Safe System for the required notifications, and also submit written notifications for those utilities not participating in the Dig-Safe System. Written notifications must state that utility companies have been notified and the contractor cleared to begin work.

<i><b>The following utility companies must be notified in writing:</b></i>		
<b>M.B.T.A. Engineering and Maintenance Division</b> <b>617-722-5454</b> Attn: Chief Engineer 500 Arborway Jamaica Plain, MA 02130	<b>M.W.R.A. Sewer Division</b> <b>617-242-6000</b> 100 First Avenue Charlestown Navy Yard Boston, MA 02129	<b>M.W.R.A. Water Division</b> <b>617-242-6000</b> 100 First Avenue Charlestown Navy Yard Boston, MA 02129
<i><b>The following utility companies must be notified in writing or through Dig-Safe:</b></i>		
<b>Algonquin Gas Transmission Corp.</b> <b>617-254-4050</b> Manager of Land and Public Relations 1284 Soldiers Field Road Brighton, MA 02135	<b>Verizon</b> <b>781-290-5154</b> 460 Totten Pond Road Waltham, MA 02154	<b>Boston Edison</b> <b>617-541-5730</b> Right of Way 1165 Massachusetts Avenue Dorchester, MA 02125
<b>Boston Gas Company</b> <b>617-323-9210</b> 201 Rivermoor Street West Roxbury, MA 02132	<b>EVERSOURCE</b> <b>617-497-1236, x4195</b> 46 Blackstone Street Somerville, MA 02139	<b>EVERSOURCE Steam</b> <b>617-225-4568</b> Attn: Supervisor of Maintenance 265 First Street Somerville, MA 02142
<b>EVERSOURCE Gas</b> <b>617-369-5591</b> 303 Third Street Somerville, MA 02142	<b>A T &amp; T Broadband</b> <b>981-658-0400</b> 760 Main Street Malden, MA 01887	<b>Somerville Public Works Dept.</b> <b>617-625-6600, x5200</b> One Franey Road Somerville, MA 02145
<b>Somerville Fire Department</b> <b>617-625-6600, x8100</b> 266 Broadway Somerville, MA 02143	<b>Dig-Safe</b> <b>1-800-322-4844</b>	

The contractor shall have all utilities marked out along the course of this work by such means as the Engineer shall approve and shall preserve such marked locations until the work has progressed to the point where the encountered utility is fully exposed and protected as required. It shall be the contractor's responsibility to notify utilities at least 48 hours prior to the start of any excavation.

The contractor is responsible for contacting any other utilities that are not listed herein.

### **Rodent Control**

The Contractor shall retain the services of a licensed rodent exterminator to conduct an inspection of the work and laydown areas and report on the presence of rodents and take any necessary measures to eliminate rodent populations prior to start of work. All rodent control to be in place and approved prior to any equipment delivery or demolition.

A. Within ten (10) days after Notice to Proceed, submit to the Landscape Architect or Owners Representative a written description of rodent control measures to be used and the areas to be included.

B. Provide the names and background of the licensed rodent exterminator retained to provide any necessary rodent eradication measures prior to the start of work. The licensed rodent exterminator must be approved by the City Director of

Inspectional Services.

C. Containers: Use metal or heavy-duty plastic refuse containers with tight fitting lids for disposal of all garbage, or trash associated with food. These containers shall not have opening that allow access by rodents.

### **Schedule of Values**

Bidders do NOT need to include a Schedule of Values with their bid package. The successful bidder will be required to submit a refined and detailed schedule of values for review and approval by the design professional prior to signing the construction contract.

### **5% Bid Guaranty**

All bids shall be accompanied by a bid bond or bank certified check or bank treasurer's check in the amount of 5% of the bid price, which shall become the property of the City of Somerville if the bid is accepted and the bidder neglects or refuses to comply with the terms of the bid.

### **Prevailing Wage Rate Requirements**

The contractor shall pay Mass. Prevailing Wage Rates. The applicable prevailing wage rates are attached as part of this bid package and will be included in the resulting contract. Notwithstanding anything to the contrary, the City may, in its sole discretion withhold payment unless the City has in its possession payroll records that are complete, accurate, and current as of the date of said application for payment. A signed Compliance Form must be included with the bid package (form included).

#### **a) The Contractor shall:**

- Pay wages at least once a week;
- Submit payroll information on a weekly basis in a format approved by the City, numbered in numerical sequence and signed by the Contractor (including forms for weeks when the Contractor is not on the Project Site, in which case there shall be a notation to the effect "no work this payroll period" and a date anticipated for resuming work).

#### **b) The Contractor shall submit to the City within the first week of construction:**

- A list of apprenticeship programs with which the Contractor is affiliated;
- The number of apprentices that will be employed by the Contractor on the Project;
- A list of the Contractor's employee fringe benefits;
- A copy of each project schedule, including the anticipated commencement date for each Subcontractor; and
- A list of each Subcontractor's suppliers and material men.

#### **c) The Contractor shall include language similar to the above in all subcontracts.**

### **Reservation of Rights**

The City reserves the right to extend the deadline for submission of bids, to waive minor informalities, and to reject any and all bids, if in its sole judgment, the best interests of the City of Somerville would be served by doing so.

### **Maintenance Manual and As-Built Drawing Requirements**

Upon Final Completion of all construction, the contractor shall submit: two complete copies of a maintenance manual, and two copies of an as-built drawing set, with two USB copies of the as-built drawings. The City will not issue the final check for retainage until the submittal and approval of the maintenance manual and as-built drawings.

- 1) The Maintenance Manual shall be in the form of a three ring binder, organized and tabbed into appropriate sections, and shall include the following items:
  - A complete maintenance plan with recommended maintenance schedules and procedures for all systems including: HVAC, security (card access/cameras), fire suppression, irrigation, fertilization, and water systems shut-down procedures, etc., and all other applicable systems and procedures;



- A letter from the contractor stating the period of warranty for all parts, materials, and workmanship, from the date of Final Completion;
- A letter from the contractor stating the period of warranty for all systems (HVAC, irrigation, fire suppression, etc.);
- All product information, product directions, and warranties;
- List of all materials and sizes, etc.;
- Copies of City permits with signatures of inspectors;
- Contact information for all subcontractors including email addresses; and,
- A record of all submittals and dates of approvals.

2) As-Built drawings shall be a complete and accurate record that incorporates any and all changes to the construction plan set issued at the time of contract initiation. As-built drawings shall be clearly marked and annotated and shall include but not be limited to: all field changes, change orders, and supplemental drawing provided by the architect/designer.

3) The USB hard drive shall include an electronic copy of all as-built drawings.

### **Police Details**

Unless otherwise noted in the specifications, the Contractor will be responsible for requesting and paying for all necessary police details. These costs should be incorporated into the base bid amount. If use of the public way is required for staging, parking or deliveries, the Contractor is responsible for obtaining a Street Occupancy Permit, including a Traffic Management Plan (TMP) and for the cost of all police details.

### **Period of Performance**

The period of performance for this contract begins on or about 04/04/2024 and ends on or about 04/03/2025. If applicable, optional renewal years may be exercised by the sole discretion of the City (see cover page for anticipated contract term).

### **Place of Performance**

All services, delivery, and other required support shall be conducted in Somerville and other locations designated by the Department point of contact. Meetings between the Vendor and City personnel shall be held at the City of Somerville, Massachusetts, unless otherwise specified.

### **Vendor Conduct**

The Vendor's employees shall comply with all City regulations, policies, and procedures. The Vendor shall ensure that their employees present professional work attire at all times. The authorized contracting body of the City may, at his/her sole discretion, direct the Vendor to remove any Vendor employee from City facilities for misconduct or safety reasons. Such rule does not relieve the Vendor of their responsibility to provide sufficient and timely service. The City will provide the Vendor with immediate written notice for the removal of the employee. Vendors must be knowledgeable of the conflict of interest law found on the Commonwealth's website <http://www.mass.gov/ethics/laws-and-regulations-/conflict-of-interest-information/conflict-of-interest-law.html>. Vendors may be required to take the Conflict of Interest exam.

### **Vendor Personnel**

The Vendor shall clearly state the name of the proposed project manager. All proposed staff must demonstrate the ability to carry out the specified requirements.

### **Confidentiality**

The Vendor agrees that it will ensure that its employees and others performing services under this contract will not use or disclose any non-public information unless authorized by the City. That includes confidential reports, information, discussions, procedures, and any other data that are collected, generated or resulting from the performance of this scope of work. All documents, photocopies, computer data, and any other information of any kind collected or received by the Vendor in connection with the contract work shall be provided to the City upon request at the termination of the contract (i.e., the date on which final payment is made on the contract or at such other time as may be requested by the City or as otherwise agreed by City and the Vendor). The Vendor may not discuss the contract work in progress with any outside party, including responding to media and press inquiries, without the prior written permission of the City. In addition, the Vendor may not issue news releases or similar items regarding contract award, any subsequent contract modifications, or

any other contract-related matter without the prior written approval of the City. Requests to make such disclosures should be addressed in writing to the Vendor's point of contact.

## **OSHA**

Pursuant to M.G.L. c. 30, sec. 395 (a)(2) all employees to be employed on the project must have successfully completed a course in construction safety and health approved by OSHA and of at least 10 hours in duration. The vendor shall comply with all applicable OSHA standards, guidance, and rules and regulations relative to providing a safe working environment, in connection with the performance of its agents, servants, employees, contractors, and subcontractors under the terms of this contract.

## **Other Applicable Laws**

In addition to applicable federal and state laws, the City has several ordinances that apply to the services requested in this contract. Such ordinances include but are not limited to: [living wage ordinance](#), [ordinance to protect vulnerable road users](#), [responsible employer ordinance](#), and [ordinance to protect against wage theft](#). Workplace safety is of paramount importance to all workers who perform services on City contracts and all bidders must certify that they will disclose any citations they may have received for OSHA violations.

## **Notice and Certification Pursuant to Somerville Wage Theft Ordinance**

All Offerors, bidders, respondents have an affirmative duty to report to the Procurement & Contracting Services Department and provide a copy of any criminal or civil judgment, administrative citation, or final administrative determination, order, or debarment, relating to wage theft, against the bidder or any of its subcontractors entered within the five years prior to bid submission.

If you are the successful bidder, you and any of your subcontractors have an affirmative duty to report any criminal or civil judgment, administrative citation, final administrative determination, order, or debarment against the bidder or any its subcontractors while your contract with the City is in effect, within five business days of receipt.

You may not contract with the City if you have been either voluntarily or involuntarily debarred by the federal government, any agency of the Commonwealth of Massachusetts or any other state for the entire term of the debarment.

You may not use any subcontractor who has been debarred by the federal government or any state government during the period of that subcontractor's debarment.

You must post notices in accordance with M.G.L. c. 151 § 16 in a conspicuous location accessible to all of their employees in English and the primary language of the employee(s) at the particular workplace.

If not all employees would have reasonable access to the notice if posted in a single location, then you must inform the purchasing agent or other City Department of the number and location of postings in order to ensure that you provide reasonable notice to all of your employees.

As a condition of this bid, the bidder (a.k.a. Offeror, respondent) hereby certifies that neither the bidder nor any of the bidder's subcontractors have been subject to a criminal or civil judgment, administrative citation, final administrative determination, order, or debarment resulting from a violation of M.G.L. c. 149, M.G.L. c. 151, or 29 U.S.C. § 201 et seq. within five years prior to bid submission.

In the alternative, the Bidder hereby discloses a criminal or civil judgment, administrative citation, administrative determination, or debarment, within five years prior to bid submission. Included with the Bid is a copy of the same, in addition to documentation demonstrating that all damages, fines, costs, and fees have been paid.

**REBID IFB #24-43**  
**SECTION 2.0**  
**RULE FOR AWARD /**  
**PROJECT INFORMATION**

## 2.1 Rule For Award

The contract shall be awarded to the responsible and eligible Bidder submitting the lowest total price. The contract will be awarded within ninety (90) days after the bid opening. The time for award may be extended for up to 45 additional days by mutual agreement between the City and the apparent lowest responsive and responsible bidder.

## 2.2 Background

<b>Project Information</b>	
<b>Managing City Department:</b>	Engineering
<b>Project Manager:</b>	Brian Postlewaite
<b>Project Manager Email:</b>	bpostlewaite@somervillema.gov
<b>Designer:</b>	Madden Fabrication, Inc.
<b>Designer Contact:</b>	Evan Madden
<b>Project Address:</b>	377 Summer Street; 92 Union Square; 165 Broadway, Somerville, MA
<b>Brief Project Description:</b>	Installation of three prefabricated public bathrooms, supporting utility connections (sewer, water, electric), and related site work including sidewalk, curbing and street repair in Somerville, Massachusetts. The work includes excavation, gravel borrow, grading, manhole adjustments, curb removal and resetting, installation of MAAB/ADA compliant curb cuts, painted stop lines, and all other incidental work listed in the proposal.
<b>Estimated Project Cost:</b>	\$200,000.00
<b>Liquidated Damages</b>	\$250.00
<b>Project Schedule</b>	
<b>Estimated Award Date:</b>	03/28/2024
<b>Estimated Start Date:</b>	04/04/2024
<b>Date of Substantial Completion:</b>	06/30/2024
<b>Date of Final Completion:</b>	08/31/2024

## 2.3 Minimum Quality Requirements

Quality requirements, or basic business requirements, are the minimum set of standards that an entity must meet and certify to be considered responsible and responsive. **Please complete the Quality Requirements form, below, and submit it with your completed bid.** The City of Somerville will disqualify any response that does not meet the minimum quality requirements. A "No" response to items 1 and 2, or a failure to respond to any of the following minimum standards, will result in disqualification of your bid.

QUALITY REQUIREMENTS		YES	NO
1.	Proposer holds a Massachusetts construction supervisor's license		
2.	Can the Vendor certify that all employees to be provided, have successfully completed at least 10 hours of OSHA approved training in Construction Safety and Health?		
3.	Optional: Are you a Mass. Supplier Diversity Office MBE/WBE certified minority or woman owned business? Additional minority designations may be submitted by attaching supporting documentation.		

In order to provide verification of affirmative responses to items 1 and 2 under the quality requirements listed in the Quality Requirements Form, Offeror must submit written information that details the general background, experience, and qualifications of the organization. Subcontractors, if applicable, must be also included.

**REBID IFB #24-43**  
**SECTION 3.0**  
**FORM FOR GENERAL BID**

The undersigned proposes to furnish all labor and materials required for: Installation of Three (3) Standalone Portland Loo Prefabricated Toilets

In accordance with the accompanying plans and specifications prepared by Madden Fabrication, Inc. (2550 NW 25th Place, Portland, OR 92710) and specified below, subject to additions and deductions according to the terms of the specifications.

The bidder certifies the following bulleted statements and offers to supply and deliver the materials and services specified below in full accordance with the Contract Documents supplied by the City of Somerville

- The bids will be received at the office of the Chief Procurement Officer, Somerville City Hall, 93 Highland Avenue, Somerville, MA 02143 no later than **03/21/2024 by 2:00 PM EST**
- If the **awarded** vendor is a Corporation a “Certificate of Good Standing” (produced by the Mass. Sec. of State) must be furnished with the resulting contract (see Section 4.0.)
- **Awarded Vendor** must comply with Living Wage requirements (see Section 4.0; only for services)
- **Awarded Vendor** must comply with all applicable laws, including but not limited to the [Somerville Wage Theft Ordinance](#).
- **Awarded Vendor** must comply with insurance requirements as stated in Section 4.0.
- The Chief Procurement Officer reserves the right to accept or reject any or all bids and/or to waive any informalities if in her/his sole judgment it is deemed to be in the best interest of the City of Somerville.
- The following prices shall include delivery, the cost of fuel, the cost of labor, and all other charges.
- This form to be enclosed in sealed bid package.

<b>The proposed contract price is (total bid in figures):</b>	
\$	
Total in words:	
<b>(If applicable)</b> The contract price does not include the items listed on the attached “Bid Form for Alternates;” the bidder understands that the project construction cost estimate provided by the City is inclusive of all the work described in this form.	
The undersigned agrees that, if he is selected as general contractor, he will within five days, Saturdays, Sundays and legal holidays excluded, after presentation thereof by the awarding authority, execute a contract in accordance with the terms of this bid and furnish a performance bond and also a labor and materials or payment bond (as indicated in the “Key Project Information” section on the 2nd page of this bid), 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; provided, however, that if there is more than one surety company, the surety companies shall be jointly and severally liable.	
The undersigned hereby certifies that he is able to furnish labor that can work in harmony with all other elements of labor employed or to be employed on the work; that all employees to be employed at the worksite will have successfully completed a course in construction safety and health approved by the United States Occupational Safety and Health Administration that is at least 10 hours in duration at the time the employee begins work and who shall furnish documentation of successful completion of said course with the first certified payroll report for each employee; and that he will comply fully with all laws and regulations applicable to awards made subject to section 44A.	
The undersigned further certifies under the penalties of perjury that this bid is in all respects bona fide, fair and made without collusion or fraud with any other person. As used in this subsection the word “person” shall mean any natural person, joint venture, partnership, corporation or other business or legal entity. The undersigned further certifies under penalty of perjury that the said undersigned is not presently debarred from doing public construction work in the commonwealth under the provisions of section twenty-nine F of chapter twenty-nine, or any other applicable debarment provisions of any other chapter of the General Laws or any rule or regulation promulgated thereunder.	

<p>The Undersigned Bidder certifies under the penalties of perjury that:</p> <p>(1) Pursuant to M.G.L. c. 62C, §49A, to the best of the signatories knowledge and belief, that the Undersigned Bidder is in compliance with all laws of the Commonwealth relating to taxes, reporting of employees and contractors, and withholding and remitting child support, as well as paid all contributions and payments in lieu of contributions pursuant to MGL 151A, §19A(b); and,</p> <p>(2) the Federal Employer Identification Number (EIN) of the Bidder is:                      --</p>	
<p>The Undersigned Bidder certifies under penalties of perjury that the Bidder is not presently debarred from doing federal or state public construction work, that the Bidder has not had its low bid rejected by any municipality in the previous two years, except:</p>	
<p>in which case the reasons for rejection were as follows:</p>	
<p>The Undersigned Bidder certifies under penalties of perjury that the Bidder will comply with all applicable laws, including City of Somerville ordinances that include but are not limited to: <a href="#">living wage ordinance</a>, <a href="#">ordinance to protect vulnerable road users</a>, <a href="#">responsible employer ordinance</a>, and <a href="#">ordinance to protect against wage theft</a>.</p>	
<p>As a condition of this bid, the bidder hereby certifies that neither the bidder nor any of the bidder's subcontractors have been subject to a criminal or civil judgment, administrative citation, final administrative determination, order, or debarment resulting from a violation of M.G.L. c. 149, M.G.L. c. 151, or 29 U.S.C. § 201 et seq. within five years prior to bid submission.</p>	
<p>In the alternative, the Bidder hereby discloses a criminal or civil judgment, administrative citation, administrative determination, or debarment, within five years prior to bid submission. Included with the Bid is a copy of the same, in addition to documentation demonstrating that all damages, fines, costs, and fees have been paid.</p>	
<p>The Undersigned Bidder has submitted all requested referenced information on the Reference Form.</p>	
<p>The Undersigned Bidder understands that the contractor and subcontractors will be required to pay prevailing wages to laborers and mechanics, and that if the Undersigned's bid is significantly below the average bid, the Awarding Authority may require the Bidder to substantiate that the bid is based on payment of wages at prevailing rates.</p>	
<p>The Undersigned Bidder certifies that it can achieve substantial and final completion by the dates notes in Section 2.2, herein, unless otherwise noted in the Notice to Proceed as delivered to the awarded vendor.</p>	
<p>Should certain additional work be required, or should the quantities of certain classes of work be increased or decreased from those required by the Contract Documents, by authorization of the City, unit prices listed on the attached "Unit Price Form" shall at the option of the City be the basis of payment to the Contractor or credit to the City, for such increase or decrease in the work. The unit prices shall represent the exact net amount per unit to be paid the Contractor (in the case of addition or increase) or to be refunded the City (in the case of decrease). Contractually noted adjustments will be allowed for overhead, profit, insurance or other direct or indirect expenses of the Contractor or Subcontractors.</p>	
<p>The unit prices shall include cost of fuel, all labor, materials, equipment, overhead, profit, insurance, etc. to cover the finished work of the several kinds called for. Changes shall be processed in accordance with the provisions of the General Conditions governing changes in the work.</p>	
<p>Executed this                      day of                      , 20                      .</p>	
<p><b>Name of Company/Individual:</b></p>	
<p><b>Address, City, State, Zip:</b></p>	
<p><b>Tel #</b></p>	<p><b>Email:</b></p>
<p><b>Name and Title of Person Signing</b></p>	
<p><b>Signature of Authorized Individual</b></p>	

Please acknowledge receipt of any and all Addenda (if applicable) by signing below and including this form in your bid package. Failure to do so may subject the proposer to disqualification.

**ACKNOWLEDGEMENT OF ADDENDA:**

Addendum #1 \_\_\_\_\_ #2 \_\_\_\_\_ #3 \_\_\_\_\_ #4 \_\_\_\_\_ #5 \_\_\_\_\_ #6 \_\_\_\_\_ #7 \_\_\_\_\_ #8 \_\_\_\_\_ #9 \_\_\_\_\_ #10 \_\_\_\_\_

**REBID IFB #24-43**

**SECTION 4.0**

Installation of Three (3) Standalone Portland Loo Prefabricated Toilets

**REQUIRE BID FORMS /  
BIDDERS' CHECKLIST**

**Please ensure all documents listed on this checklist are included with your bid. Failure to do so may subject the proposer to disqualification.**

**Required with Sealed Bids**

	Signed Cover Letter
	Form for General Bid
	Unit Price Form (if applicable)
	Somerville Living Wage Form
	Quality Requirements Form (Section 2.0)
	Certificate of Non-Collusion & Tax Compliance
	Certificate of Signature Authority
	Reference Form (or equivalent may be attached)
	5% Bid Deposit
	Prevailing Wages Statement of Compliance Form
	Wage Theft Certification Form
	OSHA Form
	Vulnerable Road Users Ordinance
	Responsible Employer Ordinance (if applicable)
	Acknowledgement of Addenda (if applicable)
	Signed W9

**Required with Contract, *Post Award***

	Certificate of Good Standing from Secretary of State (furnish with bid if available)
	Certificate of Insurance (furnish sample certificate with bid, if possible)
	Statement of Management (if applicable)
	Performance Bond (100% of Contract Value)
	Payment Bond (100% of Contract Value)





**SOMERVILLE LIVING WAGE ORDINANCE CERTIFICATION FORM**  
**CITY OF SOMERVILLE CODE OF ORDINANCES SECTION 2-397 et seq.\***

**Instructions:** This form shall be included in all Invitations for Bids and Requests for Proposals which involve the furnishing of labor, time or effort (with no end product other than reports) by vendors contracting or subcontracting with the City of Somerville, where the contract price meets or exceeds the following dollar threshold: **\$10,000**. If the undersigned is selected, this form will be attached to the contract or subcontract and the certifications made herein shall be incorporated as part of such contract or subcontract. **Complete this form and sign and date where indicated below on page 2.**

**Purpose:** The purpose of this form is to ensure that such vendors pay a “Living Wage” (defined below) to all covered employees (i.e., all employees except individuals in a city, state or federally funded youth program). In the case of bids, the City will award the contract to the lowest responsive and responsible bidder paying a Living Wage. In the case of RFP’s, the City will select the most advantageous proposal from a responsive and responsible offeror paying a Living Wage. In neither case, however, shall the City be under any obligation to select a bid or proposal that exceeds the funds available for the contract.

**Definition of “Living Wage”:** For this contract or subcontract, as of **7/1/2023** “Living Wage” shall be deemed to be an hourly wage of no less than **\$17.09** per hour. From time to time, the Living Wage may be upwardly adjusted and amendments, if any, to the contract or subcontract may require the payment of a higher hourly rate if a higher rate is then in effect.

**CERTIFICATIONS**

1. The undersigned shall pay no less than the Living Wage to all covered employees who directly expend their time on the contract or subcontract with the City of Somerville.
2. The undersigned shall post a notice, (copy enclosed), to be furnished by the contracting City Department, informing covered employees of the protections and obligations provided for in the Somerville Living Wage Ordinance, and that for assistance and information, including copies of the Ordinance, employees should contact the contracting City Department. Such notice shall be posted in each location where services are performed by covered employees, in a conspicuous place where notices to employees are customarily posted.
3. The undersigned shall maintain payrolls for all covered employees and basic records relating hereto and shall preserve them for a period of three years. The records shall contain the name and address of each employee, the number of hours worked, the gross wages, a copy of the social

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\* Copies of the Ordinance are available upon request to the Procurement & Contracting Services Department.

Form: \_\_\_\_\_  
Contract Number: \_\_\_\_\_

CITY OF SOMERVILLE

Rev. 03/27/2023

security returns, and evidence of payment thereof and such other data as may be required by the contracting City Department from time to time.

4. The undersigned shall submit payroll records to the City upon request and, if the City receives information of possible noncompliance with the provisions the Somerville Living Wage Ordinance, the undersigned shall permit City representatives to observe work being performed at the work site, to interview employees, and to examine the books and records relating to the payrolls being investigated to determine payment of wages.

5. The undersigned shall not fund wage increases required by the Somerville Living Wage Ordinance by reducing the health insurance benefits of any of its employees.

6. The undersigned agrees that the penalties and relief set forth in the Somerville Living Wage Ordinance shall be in addition to the rights and remedies set forth in the contract and/or subcontract.

**CERTIFIED BY:**

**Signature:** \_\_\_\_\_  
**(Duly Authorized Representative of Vendor)**

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

**Name of Vendor:** \_\_\_\_\_

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

**INSTRUCTIONS: PLEASE POST**

**NOTICE TO ALL EMPLOYEES  
REGARDING PAYMENT OF LIVING WAGE**

Under the Somerville, Massachusetts' Living Wage Ordinance (Ordinance No. 1999-1), any person or entity who has entered into a contract with the City of Somerville is required to pay its employees who are involved in providing services to the City of Somerville no less than a "Living Wage".

The Living Wage as of 7/1/2023 is **\$17.09** per hour.

For assistance and information regarding the protections and obligations provided for in the Living Wage Ordinance and/or a copy of the Living Wage Ordinance, all employees should contact the City of Somerville's Procurement & Contracting Services Department directly.

Form:\_\_\_\_\_  
Contract Number:\_\_\_\_\_

CITY OF SOMERVILLE

Rev. 08/01/12



## **Non-Collusion Form and Tax Compliance Certification**

**Instructions:** Complete each part of this two-part form and sign and date where indicated below.

### **A. NON-COLLUSION FORM**

I, the undersigned, hereby certify under penalties of perjury that this bid or proposal has been made and submitted in good faith and without collusion or fraud with any other person.

As used in this certification, the word "person" shall mean any natural person, business, partnership, corporation, union, committee, club, or other organization, entity, or group of individuals.

**Signature:** \_\_\_\_\_  
(Individual Submitted Bid or Proposal)  
Duly Authorized

**Name of Business or Entity:** \_\_\_\_\_

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

### **B. TAX COMPLIANCE CERTIFICATION**

Pursuant to M.G.L. c. 62C, §49A, I certify under the penalties of perjury that, to the best of my knowledge and belief, I am in compliance with all laws of the Commonwealth relating to taxes, reporting of employees and contractors, and withholding and remitting child support, as well as paid all contributions and payments in lieu of contributions pursuant to MGL 151A, §19A(b).

**Signature:** \_\_\_\_\_  
(Duly Authorized Representative of Vendor)

**Name of Business or Entity:** \_\_\_\_\_

**Social Security Number or Federal Tax ID#:** \_\_\_\_\_

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



## **Certificate of Authority (Corporations Only)**

**Instructions:** Complete this form and sign and date where indicated below.

1. I hereby certify that I, the undersigned, am the duly elected Clerk/Secretary of

\_\_\_\_\_  
**(Insert Full Name of Corporation)**

2. I hereby certify that the following individual \_\_\_\_\_  
**(Insert the Name of Officer who Signed the Contract and Bonds)**

is the duly elected \_\_\_\_\_ of said Corporation.  
**(Insert the Title of the Officer in Line 2)**

3. I hereby certify that on \_\_\_\_\_  
**(Insert Date: Must be on or before Date Officer Signed Contract/Bonds)**

at a duly authorized meeting of the Board of Directors of said corporation, at which a quorum was present, it was voted that

\_\_\_\_\_  
**(Insert Name of Officer from Line 2) (Insert Title of Officer from Line 2)**

of this corporation be and hereby is authorized to make, enter into, execute, and deliver contracts and bonds in the name and on behalf of said corporation, and affix its Corporate Seal thereto, and such execution of any contract of obligation in this corporation's name and on its behalf, with or without the Corporate Seal, shall be valid and binding upon this corporation; and that the above vote has not been amended or rescinded and remains in full force and effect as of the date set forth below.

4. **ATTEST:**

**Signature:** \_\_\_\_\_  
**(Clerk or Secretary)**

**AFFIX CORPORATE SEAL HERE**

**Printed Name:** \_\_\_\_\_

**Printed Title:** \_\_\_\_\_

**Date:** \_\_\_\_\_  
**(Date Must Be on or after Date Officer Signed Contract/Bonds)**



**Certificate of Authority  
(Limited Liability Companies Only)**

**Instructions:** Complete this form and sign and date where indicated below.

1. I, the undersigned, being a member or manager of

\_\_\_\_\_,  
(Complete Name of Limited Liability Company)

a limited liability company (LLC) hereby certify as to the contents of this form for the purpose of contracting with the City of Somerville.

2. The LLC is organized under the laws of the state of: \_\_\_\_\_.

3. The LLC is managed by (**check one**) a     Manager or by its     Members.

4. I hereby certify that each of the following individual(s) is:

- a member/manager of the LLC;
- duly authorized to execute and deliver this contract, agreement, and/or other legally binding documents relating to any contract and/or agreement on behalf of the LLC;
- duly authorized to do and perform all acts and things necessary or appropriate to carry out the terms of this contract or agreement on behalf of the LLC; and
- that no resolution, vote, or other document or action is necessary to establish such authority.

<u>Name</u>	<u>Title</u>

5. **Signature:**\_\_\_\_\_

**Printed Name:** \_\_\_\_\_

**Printed Title:**\_\_\_\_\_

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

## **REFERENCE FORM**

Bidder: \_\_\_\_\_

**IFB Title:** \_\_\_\_\_

Bidder must provide references for: Three other similar sized Municipalities provided the same services

Reference:\_\_\_\_\_ Contact:\_\_\_\_\_

Address:\_\_\_\_\_ Phone:\_\_\_\_\_

\_\_\_\_\_ Email:\_\_\_\_\_

Description and date(s) of supplies or services provided:\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Reference:\_\_\_\_\_ Contact:\_\_\_\_\_

Address:\_\_\_\_\_ Phone:\_\_\_\_\_

\_\_\_\_\_ Email:\_\_\_\_\_

Description and date(s) of supplies or services provided:\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Reference:\_\_\_\_\_ Contact:\_\_\_\_\_

Address:\_\_\_\_\_ Phone:\_\_\_\_\_

\_\_\_\_\_ Email:\_\_\_\_\_

Description and date(s) of supplies or services provided:\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

## WEEKLY PAYROLL RECORDS REPORT & STATEMENT OF COMPLIANCE

In accordance with Massachusetts General Law c. 149, §27B, a true and accurate record must be kept of all persons employed on the public works project for which the enclosed rates have been provided. A Payroll Form is available from the Department of Labor Standards (DLS) at [www.mass.gov/dols/pw](http://www.mass.gov/dols/pw) and includes all the information required to be kept by law. Every contractor or subcontractor is required to keep these records and preserve them for a period of three years from the date of completion of the contract.

On a weekly basis, every contractor and subcontractor is required to submit a certified copy of their weekly payroll records to the awarding authority; this includes the payroll forms and the Statement of Compliance form. The certified payroll records must be submitted either by regular mail or by e-mail to the awarding authority. Once collected, the awarding authority is required to preserve those records for three years from the date of completion of the project.

Each such contractor and subcontractor shall furnish weekly **and** within 15 days after completion of its portion of the work, to the awarding authority directly by first-class mail or e-mail, a statement, executed by the contractor, subcontractor or by any authorized officer thereof who supervised the payment of wages, this form, accompanied by their payroll:

### STATEMENT OF COMPLIANCE

\_\_\_\_\_, 20\_\_\_\_

I, \_\_\_\_\_,  
(Name of signatory party) (Title)

do hereby state:

That I pay or supervise the payment of the persons employed by

\_\_\_\_\_ on the \_\_\_\_\_  
(Contractor, subcontractor or public body) (Building or project)

and that all mechanics and apprentices, teamsters, chauffeurs and laborers employed on said project have been paid in accordance with wages determined under the provisions of sections twenty-six and twenty-seven of chapter one hundred and forty nine of the General Laws.

Signature \_\_\_\_\_

Title \_\_\_\_\_





MAURA HEALEY  
Governor

KIM DRISCOLL  
Lt. Governor

THE COMMONWEALTH OF MASSACHUSETTS  
EXECUTIVE OFFICE OF LABOR AND WORKFORCE DEVELOPMENT  
DEPARTMENT OF LABOR STANDARDS

**Prevailing Wage Rates**

**As determined by the Director under the provisions of the  
Massachusetts General Laws, Chapter 149, Sections 26 to 27H**

LAUREN JONES  
Secretary

MICHAEL FLANAGAN  
Director

**Awarding Authority:** City of Somerville

**Contract Number:**

**City/Town:** SOMERVILLE

**Description of Work:** Installation of Three (3) Standalone Portland Loo Prefabricated Toilets

**Job Location:** 377 Summer St.; 92 Union Square; 165 Broadway

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**Information about Prevailing Wage Schedules for Awarding Authorities and Contractors**

- **The wage rates will remain in effect for the duration of the project, except in the case of multi-year public construction projects. For construction projects lasting longer than one year, awarding authorities must request an updated wage schedule no later than two weeks before the anniversary of the date the contract was executed by the awarding authority and the general contractor.** For multi-year CM AT RISK projects, the awarding authority must request an annual update no later than two weeks before the anniversary date, determined as the earlier of: (a) the execution date of the GMP Amendment, or (b) the execution date of the first amendment to permit procurement of construction services. The annual update requirement is not applicable to 27F "rental of equipment" contracts. **The updated wage schedule must be provided to all contractors, including general and sub-contractors, working on the construction project.**
- This wage schedule applies only to the specific project referenced at the top of this page and uniquely identified by the "Wage Request Number" on all pages of this schedule.
- An Awarding Authority must request an updated wage schedule if it has not opened bids or selected a contractor within 90 days of the date of issuance of the wage schedule. For CM AT RISK projects (bid pursuant to G.L. c.149A), the earlier of: (a) the execution date of the GMP Amendment, or (b) the bid for the first construction scope of work must be within 90-days of the wage schedule issuance date.
- The wage schedule shall be incorporated in any advertisement or call for bids for the project as required by M.G.L. c. 149, § 27. The wage schedule shall be made a part of the contract awarded for the project. The wage schedule must be posted in a conspicuous place at the work site for the life of the project in accordance with M.G.L. c. 149 § 27. The wages listed on the wage schedule must be paid to employees performing construction work on the project whether they are employed by the prime contractor, a filed sub-bidder, or a sub-contractor.
- Apprentices working on the project are required to be registered with the Massachusetts Division of Apprentice Standards (DAS). Apprentices must keep their apprentice identification card on their persons during all work hours on the project. An apprentice registered with DAS may be paid the lower apprentice wage rate at the applicable step as provided on the prevailing wage schedule. **Any apprentice not registered with DAS regardless of whether they are registered with another federal, state, local, or private agency must be paid the journeyworker's rate.**
- Every contractor or subcontractor working on the construction project must submit weekly payroll reports and a Statement of Compliance directly to the awarding authority by mail or email and keep them on file for three years. Each weekly payroll report must contain: the employee's name, address, occupational classification, hours worked, and wages paid. Do not submit weekly payroll reports to DLS. For a sample payroll reporting form go to <http://www.mass.gov/dols/pw>.
- Contractors with questions about the wage rates or classifications included on the wage schedule have an affirmative obligation to inquire with DLS at (617) 626-6953.
- Contractors must obtain the wage schedules from awarding authorities. Failure of a contractor or subcontractor to pay the prevailing wage rates listed on the wage schedule to all employees who perform construction work on the project is a violation of the law and subjects the contractor or subcontractor to civil and criminal penalties.
- Employees not receiving the prevailing wage rate set forth on the wage schedule may file a complaint with the Fair Labor Division of the office of the Attorney General at (617) 727-3465.

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
<b>Construction</b>						
(2 AXLE) DRIVER - EQUIPMENT <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE A</i>	12/01/2023	\$40.05	\$14.41	\$18.67	\$0.00	\$73.13
	06/01/2024	\$41.05	\$14.41	\$18.67	\$0.00	\$74.13
	08/01/2024	\$41.05	\$14.91	\$18.67	\$0.00	\$74.63
	12/01/2024	\$41.05	\$14.91	\$20.17	\$0.00	\$76.13
	06/01/2025	\$42.05	\$14.91	\$20.17	\$0.00	\$77.13
	08/01/2025	\$42.05	\$15.41	\$20.17	\$0.00	\$77.63
	12/01/2025	\$42.05	\$15.41	\$21.78	\$0.00	\$79.24
	06/01/2026	\$43.05	\$15.41	\$21.78	\$0.00	\$80.24
	08/01/2026	\$43.05	\$15.91	\$21.78	\$0.00	\$80.74
	12/01/2026	\$43.05	\$15.91	\$23.52	\$0.00	\$82.48
(3 AXLE) DRIVER - EQUIPMENT <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE A</i>	12/01/2023	\$40.12	\$14.41	\$18.67	\$0.00	\$73.20
	06/01/2024	\$40.88	\$14.41	\$18.67	\$0.00	\$73.96
	08/01/2024	\$40.88	\$14.91	\$18.67	\$0.00	\$74.46
	12/01/2024	\$40.88	\$14.91	\$20.17	\$0.00	\$75.96
	06/01/2025	\$41.12	\$14.91	\$20.17	\$0.00	\$76.20
	08/01/2025	\$41.12	\$15.41	\$20.17	\$0.00	\$76.70
	12/01/2025	\$41.12	\$15.41	\$21.78	\$0.00	\$78.31
	06/01/2026	\$43.12	\$15.41	\$21.78	\$0.00	\$80.31
	08/01/2026	\$43.12	\$15.91	\$21.78	\$0.00	\$80.81
	12/01/2026	\$43.12	\$15.91	\$23.52	\$0.00	\$82.55
(4 & 5 AXLE) DRIVER - EQUIPMENT <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE A</i>	12/01/2023	\$40.24	\$14.41	\$18.67	\$0.00	\$73.32
	06/01/2024	\$41.24	\$14.41	\$18.67	\$0.00	\$74.32
	08/01/2024	\$41.24	\$14.91	\$18.67	\$0.00	\$74.82
	12/01/2024	\$41.24	\$14.91	\$20.17	\$0.00	\$76.32
	06/01/2025	\$42.24	\$14.91	\$20.17	\$0.00	\$77.32
	08/01/2025	\$42.24	\$15.41	\$20.17	\$0.00	\$77.82
	12/01/2025	\$42.24	\$15.41	\$21.78	\$0.00	\$79.43
	06/01/2026	\$43.24	\$15.41	\$21.78	\$0.00	\$80.43
	08/01/2026	\$43.24	\$15.91	\$21.78	\$0.00	\$80.93
	12/01/2026	\$43.24	\$15.91	\$23.52	\$0.00	\$82.67
ADS/SUBMERSIBLE PILOT <i>PILE DRIVER LOCAL 56 (ZONE 1)</i>	08/01/2020	\$103.05	\$9.40	\$23.12	\$0.00	\$135.57
For apprentice rates see "Apprentice- PILE DRIVER"						
AIR TRACK OPERATOR <i>LABORERS - ZONE 1</i>	12/01/2023	\$45.08	\$9.65	\$18.07	\$0.00	\$72.80
For apprentice rates see "Apprentice- LABORER"						
AIR TRACK OPERATOR (HEAVY & HIGHWAY) <i>LABORERS - ZONE 1 (HEAVY &amp; HIGHWAY)</i>	12/01/2023	\$45.08	\$9.65	\$18.07	\$0.00	\$72.80
	06/01/2024	\$46.56	\$9.65	\$18.07	\$0.00	\$74.28
	12/01/2024	\$48.03	\$9.65	\$18.07	\$0.00	\$75.75
	06/01/2025	\$49.53	\$9.65	\$18.07	\$0.00	\$77.25
	12/01/2025	\$51.03	\$9.65	\$18.07	\$0.00	\$78.75
	06/01/2026	\$52.58	\$9.65	\$18.07	\$0.00	\$80.30
	12/01/2026	\$54.08	\$9.65	\$18.07	\$0.00	\$81.80
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
ASBESTOS REMOVER - PIPE / MECH. EQUIPT. <i>HEAT &amp; FROST INSULATORS LOCAL 6 (BOSTON)</i>	12/01/2023	\$40.80	\$14.50	\$11.05	\$0.00	\$66.35
	06/01/2024	\$41.80	\$14.50	\$11.05	\$0.00	\$67.35
	12/01/2024	\$42.80	\$14.50	\$11.05	\$0.00	\$68.35
	06/01/2025	\$43.80	\$14.50	\$11.05	\$0.00	\$69.35
	12/01/2025	\$44.80	\$14.50	\$11.05	\$0.00	\$70.35
ASPHALT RAKER <i>LABORERS - ZONE 1</i>	12/01/2023	\$44.58	\$9.65	\$18.07	\$0.00	\$72.30
For apprentice rates see "Apprentice- LABORER"						
ASPHALT RAKER (HEAVY & HIGHWAY) <i>LABORERS - ZONE 1 (HEAVY &amp; HIGHWAY)</i>	12/01/2023	\$44.58	\$9.65	\$18.07	\$0.00	\$72.30
	06/01/2024	\$46.06	\$9.65	\$18.07	\$0.00	\$73.78
	12/01/2024	\$47.53	\$9.65	\$18.07	\$0.00	\$75.25
	06/01/2025	\$49.03	\$9.65	\$18.07	\$0.00	\$76.75
	12/01/2025	\$50.53	\$9.65	\$18.07	\$0.00	\$78.25
	06/01/2026	\$52.08	\$9.65	\$18.07	\$0.00	\$79.80
	12/01/2026	\$53.58	\$9.65	\$18.07	\$0.00	\$81.30
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"						
ASPHALT/CONCRETE/CRUSHER PLANT-ON SITE <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2023	\$55.03	\$15.00	\$16.40	\$0.00	\$86.43
	06/01/2024	\$56.33	\$15.00	\$16.40	\$0.00	\$87.73
	12/01/2024	\$57.78	\$15.00	\$16.40	\$0.00	\$89.18
	06/01/2025	\$59.08	\$15.00	\$16.40	\$0.00	\$90.48
	12/01/2025	\$60.53	\$15.00	\$16.40	\$0.00	\$91.93
	06/01/2026	\$61.83	\$15.00	\$16.40	\$0.00	\$93.23
	12/01/2026	\$63.28	\$15.00	\$16.40	\$0.00	\$94.68
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
BACKHOE/FRONT-END LOADER <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2023	\$55.03	\$15.00	\$16.40	\$0.00	\$86.43
	06/01/2024	\$56.33	\$15.00	\$16.40	\$0.00	\$87.73
	12/01/2024	\$57.78	\$15.00	\$16.40	\$0.00	\$89.18
	06/01/2025	\$59.08	\$15.00	\$16.40	\$0.00	\$90.48
	12/01/2025	\$60.53	\$15.00	\$16.40	\$0.00	\$91.93
	06/01/2026	\$61.83	\$15.00	\$16.40	\$0.00	\$93.23
	12/01/2026	\$63.28	\$15.00	\$16.40	\$0.00	\$94.68
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
BARCO-TYPE JUMPING TAMPER <i>LABORERS - ZONE 1</i>	12/01/2023	\$44.58	\$9.65	\$18.07	\$0.00	\$72.30
For apprentice rates see "Apprentice- LABORER"						
BLOCK PAVER, RAMMER / CURB SETTER <i>LABORERS - ZONE 1</i>	12/01/2023	\$45.08	\$9.65	\$18.07	\$0.00	\$72.80
For apprentice rates see "Apprentice- LABORER"						
BLOCK PAVER, RAMMER / CURB SETTER (HEAVY & HIGHWAY) <i>LABORERS - ZONE 1 (HEAVY &amp; HIGHWAY)</i>	12/01/2023	\$45.08	\$9.65	\$18.07	\$0.00	\$72.80
	06/01/2024	\$46.56	\$9.65	\$18.07	\$0.00	\$74.28
	12/01/2024	\$48.03	\$9.65	\$18.07	\$0.00	\$75.75
	06/01/2025	\$49.53	\$9.65	\$18.07	\$0.00	\$77.25
	12/01/2025	\$51.03	\$9.65	\$18.07	\$0.00	\$78.75
	06/01/2026	\$52.58	\$9.65	\$18.07	\$0.00	\$80.30
	12/01/2026	\$54.08	\$9.65	\$18.07	\$0.00	\$81.80
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"						
BOILER MAKER <i>BOILERMAKERS LOCAL 29</i>	01/01/2024	\$48.12	\$7.07	\$20.60	\$0.00	\$75.79

Classification		Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
Apprentice - BOILERMAKER - Local 29							
Effective Date - 01/01/2024							
Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate	
1	65	\$31.28	\$7.07	\$13.22	\$0.00	\$51.57	
2	65	\$31.28	\$7.07	\$13.22	\$0.00	\$51.57	
3	70	\$33.68	\$7.07	\$14.23	\$0.00	\$54.98	
4	75	\$36.09	\$7.07	\$15.24	\$0.00	\$58.40	
5	80	\$38.50	\$7.07	\$16.25	\$0.00	\$61.82	
6	85	\$40.90	\$7.07	\$17.28	\$0.00	\$65.25	
7	90	\$43.31	\$7.07	\$18.28	\$0.00	\$68.66	
8	95	\$45.71	\$7.07	\$19.32	\$0.00	\$72.10	
Notes:							
Apprentice to Journeyworker Ratio:1:4							
BRICK/STONE/ARTIFICIAL MASONRY (INCL. MASONRY WATERPROOFING)		02/01/2024	\$62.40	\$11.49	\$23.59	\$0.00	\$97.48
BRICKLAYERS LOCAL 3 (BOSTON)		08/01/2024	\$64.50	\$11.49	\$23.59	\$0.00	\$99.58
		02/01/2025	\$65.80	\$11.49	\$23.59	\$0.00	\$100.88
		08/01/2025	\$67.95	\$11.49	\$23.59	\$0.00	\$103.03
		02/01/2026	\$69.30	\$11.49	\$23.59	\$0.00	\$104.38
		08/01/2026	\$71.50	\$11.49	\$23.59	\$0.00	\$106.58
		02/01/2027	\$72.90	\$11.49	\$23.59	\$0.00	\$107.98

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

Effective Date - 02/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$31.20	\$11.49	\$23.59	\$0.00	\$66.28
2	60	\$37.44	\$11.49	\$23.59	\$0.00	\$72.52
3	70	\$43.68	\$11.49	\$23.59	\$0.00	\$78.76
4	80	\$49.92	\$11.49	\$23.59	\$0.00	\$85.00
5	90	\$56.16	\$11.49	\$23.59	\$0.00	\$91.24

Effective Date - 08/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$32.25	\$11.49	\$23.59	\$0.00	\$67.33
2	60	\$38.70	\$11.49	\$23.59	\$0.00	\$73.78
3	70	\$45.15	\$11.49	\$23.59	\$0.00	\$80.23
4	80	\$51.60	\$11.49	\$23.59	\$0.00	\$86.68
5	90	\$58.05	\$11.49	\$23.59	\$0.00	\$93.13

Notes:

Apprentice to Journeyworker Ratio:1:5

BULLDOZER/GRADER/SCRAPER	12/01/2023	\$54.43	\$15.00	\$16.40	\$0.00	\$85.83
OPERATING ENGINEERS LOCAL 4	06/01/2024	\$55.71	\$15.00	\$16.40	\$0.00	\$87.11
	12/01/2024	\$57.15	\$15.00	\$16.40	\$0.00	\$88.55
	06/01/2025	\$58.43	\$15.00	\$16.40	\$0.00	\$89.83
	12/01/2025	\$59.87	\$15.00	\$16.40	\$0.00	\$91.27
	06/01/2026	\$61.15	\$15.00	\$16.40	\$0.00	\$92.55
	12/01/2026	\$62.59	\$15.00	\$16.40	\$0.00	\$93.99

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

CAISSON & UNDERPINNING BOTTOM MAN	12/01/2023	\$45.48	\$9.65	\$18.22	\$0.00	\$73.35
LABORERS - FOUNDATION AND MARINE	06/01/2024	\$46.96	\$9.65	\$18.22	\$0.00	\$74.83
	12/01/2024	\$48.43	\$9.65	\$18.22	\$0.00	\$76.30
	06/01/2025	\$49.93	\$9.65	\$18.22	\$0.00	\$77.80
	12/01/2025	\$51.43	\$9.65	\$18.22	\$0.00	\$79.30
	06/01/2026	\$52.98	\$9.65	\$18.22	\$0.00	\$80.85
	12/01/2026	\$54.48	\$9.65	\$18.22	\$0.00	\$82.35

For apprentice rates see "Apprentice- LABORER"

CAISSON & UNDERPINNING LABORER	12/01/2023	\$44.33	\$9.65	\$18.22	\$0.00	\$72.20
LABORERS - FOUNDATION AND MARINE	06/01/2024	\$45.81	\$9.65	\$18.22	\$0.00	\$73.68
	12/01/2024	\$47.28	\$9.65	\$18.22	\$0.00	\$75.15
	06/01/2025	\$48.78	\$9.65	\$18.22	\$0.00	\$76.65
	12/01/2025	\$50.28	\$9.65	\$18.22	\$0.00	\$78.15
	06/01/2026	\$51.83	\$9.65	\$18.22	\$0.00	\$79.70
	12/01/2026	\$53.33	\$9.65	\$18.22	\$0.00	\$81.20

For apprentice rates see "Apprentice- LABORER"

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
CAISSON & UNDERPINNING TOP MAN <i>LABORERS - FOUNDATION AND MARINE</i>	12/01/2023	\$44.33	\$9.65	\$18.22	\$0.00	\$72.20
	06/01/2024	\$45.81	\$9.65	\$18.22	\$0.00	\$73.68
	12/01/2024	\$47.28	\$9.65	\$18.22	\$0.00	\$75.15
	06/01/2025	\$48.78	\$9.65	\$18.22	\$0.00	\$76.65
	12/01/2025	\$50.28	\$9.65	\$18.22	\$0.00	\$78.15
	06/01/2026	\$51.83	\$9.65	\$18.22	\$0.00	\$79.70
	12/01/2026	\$53.33	\$9.65	\$18.22	\$0.00	\$81.20
For apprentice rates see "Apprentice- LABORER"						
CARBIDE CORE DRILL OPERATOR <i>LABORERS - ZONE 1</i>	12/01/2023	\$44.58	\$9.65	\$18.07	\$0.00	\$72.30
For apprentice rates see "Apprentice- LABORER"						
CARPENTER <i>CARPENTERS -ZONE 1 (Metro Boston)</i>	09/01/2023	\$55.96	\$9.83	\$19.97	\$0.00	\$85.76
	03/01/2024	\$57.46	\$9.83	\$19.97	\$0.00	\$87.26
	09/01/2024	\$58.96	\$9.83	\$19.97	\$0.00	\$88.76
	03/01/2025	\$60.46	\$9.83	\$19.97	\$0.00	\$90.26
	09/01/2025	\$61.96	\$9.83	\$19.97	\$0.00	\$91.76
	03/01/2026	\$63.46	\$9.83	\$19.97	\$0.00	\$93.26
	09/01/2026	\$64.96	\$9.83	\$19.97	\$0.00	\$94.76
	03/01/2027	\$66.46	\$9.83	\$19.97	\$0.00	\$96.26

Apprentice - CARPENTER - Zone 1 Metro Boston

Effective Date - 09/01/2023

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$27.98	\$9.83	\$1.73	\$0.00	\$39.54
2	60	\$33.58	\$9.83	\$1.73	\$0.00	\$45.14
3	70	\$39.17	\$9.83	\$3.40	\$0.00	\$52.40
4	75	\$41.97	\$9.83	\$3.40	\$0.00	\$55.20
5	80	\$44.77	\$9.83	\$16.51	\$0.00	\$71.11
6	80	\$44.77	\$9.83	\$16.51	\$0.00	\$71.11
7	90	\$50.36	\$9.83	\$18.24	\$0.00	\$78.43
8	90	\$50.36	\$9.83	\$18.24	\$0.00	\$78.43

Effective Date - 03/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$28.73	\$0.00	\$1.73	\$0.00	\$30.46
2	60	\$34.48	\$0.00	\$1.73	\$0.00	\$36.21
3	70	\$40.22	\$0.00	\$3.40	\$0.00	\$43.62
4	75	\$43.10	\$0.00	\$3.40	\$0.00	\$46.50
5	80	\$45.97	\$11.41	\$5.10	\$0.00	\$62.48
6	80	\$45.97	\$11.41	\$5.10	\$0.00	\$62.48
7	90	\$51.71	\$11.44	\$6.80	\$0.00	\$69.95
8	90	\$51.71	\$11.44	\$6.80	\$0.00	\$69.95

Notes:

% Indentured After 10/1/17; 45/45/55/55/70/70/80/80

Step 1&2 \$36.74/ 3&4 \$44.01/ 5&6 \$65.51/ 7&8 \$72.84

Apprentice to Journeyworker Ratio:1:5

CARPENTER WOOD FRAME	10/01/2023	\$54.70	\$7.56	\$9.47	\$0.00	\$71.73
CARPENTERS -ZONE 1 (Wood Frame)	04/01/2024	\$55.50	\$7.56	\$9.47	\$0.00	\$72.53
	10/01/2024	\$56.30	\$7.56	\$9.47	\$0.00	\$73.33
	04/01/2025	\$57.10	\$7.56	\$9.47	\$0.00	\$74.13
	10/01/2025	\$57.90	\$7.56	\$9.47	\$0.00	\$74.93
	04/01/2026	\$58.70	\$7.56	\$9.47	\$0.00	\$75.73
	10/01/2026	\$59.50	\$7.56	\$9.47	\$0.00	\$76.53
	04/01/2027	\$60.30	\$7.56	\$9.47	\$0.00	\$77.33

All Aspects of New Wood Frame Work

Apprentice - CARPENTER (Wood Frame) - Zone 1

Effective Date - 10/01/2023

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$27.35	\$7.56	\$0.00	\$0.00	\$34.91
2	50	\$27.35	\$7.56	\$0.00	\$0.00	\$34.91
3	55	\$30.09	\$7.56	\$2.00	\$0.00	\$39.65
4	55	\$30.09	\$7.56	\$2.00	\$0.00	\$39.65
5	70	\$38.29	\$7.56	\$7.47	\$0.00	\$53.32
6	70	\$38.29	\$7.56	\$7.47	\$0.00	\$53.32
7	80	\$43.76	\$7.56	\$8.47	\$0.00	\$59.79
8	80	\$43.76	\$7.56	\$8.47	\$0.00	\$59.79

Effective Date - 04/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$27.75	\$7.56	\$0.00	\$0.00	\$35.31
2	50	\$27.75	\$7.56	\$0.00	\$0.00	\$35.31
3	55	\$30.53	\$7.56	\$2.00	\$0.00	\$40.09
4	55	\$30.53	\$7.56	\$2.00	\$0.00	\$40.09
5	70	\$38.85	\$7.56	\$7.47	\$0.00	\$53.88
6	70	\$38.85	\$7.56	\$7.47	\$0.00	\$53.88
7	80	\$44.40	\$7.56	\$8.47	\$0.00	\$60.43
8	80	\$44.40	\$7.56	\$8.47	\$0.00	\$60.43

Notes:

% Indentured After 10/1/17; 45/45/55/55/70/70/80/80  
Step 1&2 \$23.82/ 3&4 \$29.44/ 5&6 \$40.32/ 7&8 \$44.94

Apprentice to Journeyworker Ratio:1:5

CEMENT MASONRY/PLASTERING	01/01/2024	\$49.33	\$13.00	\$23.57	\$1.30	\$87.20
BRICKLAYERS LOCAL 3 (BOSTON)						

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

Effective Date - 01/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$24.67	\$13.00	\$15.93	\$0.00	\$53.60
2	60	\$29.60	\$13.00	\$18.57	\$1.30	\$62.47
3	65	\$32.06	\$13.00	\$19.57	\$1.30	\$65.93
4	70	\$34.53	\$13.00	\$20.57	\$1.30	\$69.40
5	75	\$37.00	\$13.00	\$21.57	\$1.30	\$72.87
6	80	\$39.46	\$13.00	\$22.57	\$1.30	\$76.33
7	90	\$44.40	\$13.00	\$23.57	\$1.30	\$82.27

Notes:

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

Apprentice to Journeyworker Ratio:1:3



Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
CHAIN SAW OPERATOR <i>LABORERS - ZONE 1</i>	12/01/2023	\$44.58	\$9.65	\$18.07	\$0.00	\$72.30
For apprentice rates see "Apprentice- LABORER"						
CLAM SHELLS/SLURRY BUCKETS/HEADING MACHINES <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2023	\$56.13	\$15.00	\$16.40	\$0.00	\$87.53
	06/01/2024	\$57.45	\$15.00	\$16.40	\$0.00	\$88.85
	12/01/2024	\$58.93	\$15.00	\$16.40	\$0.00	\$90.33
	06/01/2025	\$60.26	\$15.00	\$16.40	\$0.00	\$91.66
	12/01/2025	\$61.73	\$15.00	\$16.40	\$0.00	\$93.13
	06/01/2026	\$63.06	\$15.00	\$16.40	\$0.00	\$94.46
	12/01/2026	\$64.54	\$15.00	\$16.40	\$0.00	\$95.94
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
COMPRESSOR OPERATOR <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2023	\$35.62	\$15.00	\$16.40	\$0.00	\$67.02
	06/01/2024	\$36.47	\$15.00	\$16.40	\$0.00	\$67.87
	12/01/2024	\$37.42	\$15.00	\$16.40	\$0.00	\$68.82
	06/01/2025	\$38.27	\$15.00	\$16.40	\$0.00	\$69.67
	12/01/2025	\$39.22	\$15.00	\$16.40	\$0.00	\$70.62
	06/01/2026	\$40.08	\$15.00	\$16.40	\$0.00	\$71.48
	12/01/2026	\$41.03	\$15.00	\$16.40	\$0.00	\$72.43
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
DELEADER (BRIDGE) <i>PAINTERS LOCAL 35 - ZONE 1</i>	01/01/2024	\$56.06	\$9.95	\$23.95	\$0.00	\$89.96
	07/01/2024	\$57.26	\$9.95	\$23.95	\$0.00	\$91.16
	01/01/2025	\$58.46	\$9.95	\$23.95	\$0.00	\$92.36

Apprentice - PAINTER Local 35 - BRIDGES/TANKS

Effective Date - 01/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$28.03	\$9.95	\$0.00	\$0.00	\$37.98
2	55	\$30.83	\$9.95	\$6.66	\$0.00	\$47.44
3	60	\$33.64	\$9.95	\$7.26	\$0.00	\$50.85
4	65	\$36.44	\$9.95	\$7.87	\$0.00	\$54.26
5	70	\$39.24	\$9.95	\$20.32	\$0.00	\$69.51
6	75	\$42.05	\$9.95	\$20.93	\$0.00	\$72.93
7	80	\$44.85	\$9.95	\$21.53	\$0.00	\$76.33
8	90	\$50.45	\$9.95	\$22.74	\$0.00	\$83.14

Effective Date - 07/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$28.63	\$9.95	\$0.00	\$0.00	\$38.58
2	55	\$31.49	\$9.95	\$6.66	\$0.00	\$48.10
3	60	\$34.36	\$9.95	\$7.26	\$0.00	\$51.57
4	65	\$37.22	\$9.95	\$7.87	\$0.00	\$55.04
5	70	\$40.08	\$9.95	\$20.32	\$0.00	\$70.35
6	75	\$42.95	\$9.95	\$20.93	\$0.00	\$73.83
7	80	\$45.81	\$9.95	\$21.53	\$0.00	\$77.29
8	90	\$51.53	\$9.95	\$22.74	\$0.00	\$84.22

Notes:

Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

DEMO: ADZEMAN LABORERS - ZONE 1	12/01/2023	\$44.48	\$9.65	\$18.07	\$0.00	\$72.20
For apprentice rates see "Apprentice- LABORER"						
DEMO: BACKHOE/LOADER/HAMMER OPERATOR LABORERS - ZONE 1	12/01/2023	\$45.48	\$9.65	\$18.07	\$0.00	\$73.20
For apprentice rates see "Apprentice- LABORER"						
DEMO: BURNERS LABORERS - ZONE 1	12/01/2023	\$45.23	\$9.65	\$18.07	\$0.00	\$72.95
For apprentice rates see "Apprentice- LABORER"						
DEMO: CONCRETE CUTTER/SAWYER LABORERS - ZONE 1	12/01/2023	\$45.48	\$9.65	\$18.07	\$0.00	\$73.20
For apprentice rates see "Apprentice- LABORER"						
DEMO: JACKHAMMER OPERATOR LABORERS - ZONE 1	12/01/2023	\$45.23	\$9.65	\$18.07	\$0.00	\$72.95
For apprentice rates see "Apprentice- LABORER"						
DEMO: WRECKING LABORER LABORERS - ZONE 1	12/01/2023	\$44.48	\$9.65	\$18.07	\$0.00	\$72.20
For apprentice rates see "Apprentice- LABORER"						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
DIRECTIONAL DRILL MACHINE OPERATOR <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2023	\$54.43	\$15.00	\$16.40	\$0.00	\$85.83
	06/01/2024	\$55.71	\$15.00	\$16.40	\$0.00	\$87.11
	12/01/2024	\$57.15	\$15.00	\$16.40	\$0.00	\$88.55
	06/01/2025	\$58.43	\$15.00	\$16.40	\$0.00	\$89.83
	12/01/2025	\$59.87	\$15.00	\$16.40	\$0.00	\$91.27
	06/01/2026	\$61.15	\$15.00	\$16.40	\$0.00	\$92.55
	12/01/2026	\$62.59	\$15.00	\$16.40	\$0.00	\$93.99
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
DIVER <i>PILE DRIVER LOCAL 56 (ZONE 1)</i>	08/01/2020	\$68.70	\$9.40	\$23.12	\$0.00	\$101.22
For apprentice rates see "Apprentice- PILE DRIVER"						
DIVER TENDER <i>PILE DRIVER LOCAL 56 (ZONE 1)</i>	08/01/2020	\$49.07	\$9.40	\$23.12	\$0.00	\$81.59
For apprentice rates see "Apprentice- PILE DRIVER"						
DIVER TENDER (EFFLUENT) <i>PILE DRIVER LOCAL 56 (ZONE 1)</i>	08/01/2020	\$73.60	\$9.40	\$23.12	\$0.00	\$106.12
For apprentice rates see "Apprentice- PILE DRIVER"						
DIVER/SLURRY (EFFLUENT) <i>PILE DRIVER LOCAL 56 (ZONE 1)</i>	08/01/2020	\$103.05	\$9.40	\$23.12	\$0.00	\$135.57
For apprentice rates see "Apprentice- PILE DRIVER"						
DRAWBRIDGE OPERATOR (Construction) <i>DRAWBRIDGE - SEIU LOCAL 888</i>	07/01/2020	\$26.77	\$6.67	\$3.93	\$0.16	\$37.53
ELECTRICIAN <i>ELECTRICIANS LOCAL 103</i>	09/01/2023	\$61.39	\$13.00	\$21.69	\$0.00	\$96.08
	03/01/2024	\$61.86	\$13.00	\$22.21	\$0.00	\$97.07
	09/01/2024	\$63.78	\$13.00	\$22.26	\$0.00	\$99.04
	03/01/2025	\$64.98	\$13.00	\$22.30	\$0.00	\$100.28
	09/01/2025	\$66.89	\$13.00	\$22.36	\$0.00	\$102.25
	03/01/2026	\$68.09	\$13.00	\$22.39	\$0.00	\$103.48
	09/01/2026	\$70.00	\$13.00	\$22.45	\$0.00	\$105.45
	03/01/2027	\$71.19	\$13.00	\$22.49	\$0.00	\$106.68
	09/01/2027	\$73.11	\$13.00	\$22.54	\$0.00	\$108.65
	03/01/2028	\$74.31	\$13.00	\$22.58	\$0.00	\$109.89

Apprentice - ELECTRICIAN - Local 103

Effective Date - 09/01/2023

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$24.56	\$13.00	\$0.74	\$0.00	\$38.30
2	40	\$24.56	\$13.00	\$0.74	\$0.00	\$38.30
3	45	\$27.63	\$13.00	\$16.16	\$0.00	\$56.79
4	45	\$27.63	\$13.00	\$16.16	\$0.00	\$56.79
5	50	\$30.70	\$13.00	\$16.66	\$0.00	\$60.36
6	55	\$33.76	\$13.00	\$17.16	\$0.00	\$63.92
7	60	\$36.83	\$13.00	\$17.67	\$0.00	\$67.50
8	65	\$39.90	\$13.00	\$18.17	\$0.00	\$71.07
9	70	\$42.97	\$13.00	\$18.67	\$0.00	\$74.64
10	75	\$46.04	\$13.00	\$19.18	\$0.00	\$78.22

Effective Date - 03/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$24.74	\$13.00	\$0.74	\$0.00	\$38.48
2	40	\$24.74	\$13.00	\$0.74	\$0.00	\$38.48
3	45	\$27.84	\$13.00	\$16.67	\$0.00	\$57.51
4	45	\$27.84	\$13.00	\$16.67	\$0.00	\$57.51
5	50	\$30.93	\$13.00	\$17.17	\$0.00	\$61.10
6	55	\$34.02	\$13.00	\$17.67	\$0.00	\$64.69
7	60	\$37.12	\$13.00	\$18.17	\$0.00	\$68.29
8	65	\$40.21	\$13.00	\$18.68	\$0.00	\$71.89
9	70	\$43.30	\$13.00	\$19.18	\$0.00	\$75.48
10	75	\$46.40	\$13.00	\$19.69	\$0.00	\$79.09

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

Apprentice to Journeyworker Ratio:2:3\*\*\*

ELEVATOR CONSTRUCTOR	01/01/2022	\$65.62	\$16.03	\$20.21	\$0.00	\$101.86
ELEVATOR CONSTRUCTORS LOCAL 4						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
<b>Apprentice - ELEVATOR CONSTRUCTOR - Local 4</b>						
<b>Effective Date - 01/01/2022</b>						
Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$32.81	\$16.03	\$0.00	\$0.00	\$48.84
2	55	\$36.09	\$16.03	\$20.21	\$0.00	\$72.33
3	65	\$42.65	\$16.03	\$20.21	\$0.00	\$78.89
4	70	\$45.93	\$16.03	\$20.21	\$0.00	\$82.17
5	80	\$52.50	\$16.03	\$20.21	\$0.00	\$88.74
<b>Notes:</b> Steps 1-2 are 6 mos.; Steps 3-5 are 1 year						
<b>Apprentice to Journeyworker Ratio:1:1</b>						
ELEVATOR CONSTRUCTOR HELPER <i>ELEVATOR CONSTRUCTORS LOCAL 4</i>	01/01/2022	\$45.93	\$16.03	\$20.21	\$0.00	\$82.17
For apprentice rates see "Apprentice - ELEVATOR CONSTRUCTOR"						
FENCE & GUARD RAIL ERECTOR (HEAVY & HIGHWAY) <i>LABORERS - ZONE 1 (HEAVY &amp; HIGHWAY)</i>	12/01/2023	\$44.58	\$9.65	\$18.07	\$0.00	\$72.30
	06/01/2024	\$46.06	\$9.65	\$18.07	\$0.00	\$73.78
	12/01/2024	\$47.53	\$9.65	\$18.07	\$0.00	\$75.25
	06/01/2025	\$49.03	\$9.65	\$18.07	\$0.00	\$76.75
	12/01/2025	\$50.53	\$9.65	\$18.07	\$0.00	\$78.25
	06/01/2026	\$52.08	\$9.65	\$18.07	\$0.00	\$79.80
	12/01/2026	\$53.58	\$9.65	\$18.07	\$0.00	\$81.30
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"						
FIELD ENG.INST.PERSON-BLDG,SITE,HVY/HWY <i>OPERATING ENGINEERS LOCAL 4</i>	11/01/2023	\$50.30	\$14.50	\$16.15	\$0.00	\$80.95
	05/01/2024	\$51.54	\$14.50	\$16.15	\$0.00	\$82.19
	11/01/2024	\$52.83	\$14.50	\$16.15	\$0.00	\$83.48
	05/01/2025	\$54.27	\$14.50	\$16.15	\$0.00	\$84.92
	11/01/2025	\$55.56	\$14.50	\$16.15	\$0.00	\$86.21
	05/01/2026	\$57.00	\$14.50	\$16.15	\$0.00	\$87.65
	11/01/2026	\$58.29	\$14.50	\$16.15	\$0.00	\$88.94
	05/01/2027	\$59.72	\$14.50	\$16.15	\$0.00	\$90.37
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
FIELD ENG.PARTY CHIEF-BLDG,SITE,HVY/HWY <i>OPERATING ENGINEERS LOCAL 4</i>	11/01/2023	\$51.87	\$14.50	\$16.15	\$0.00	\$82.52
	05/01/2024	\$53.12	\$14.50	\$16.15	\$0.00	\$83.77
	11/01/2024	\$54.42	\$14.50	\$16.15	\$0.00	\$85.07
	05/01/2025	\$55.87	\$14.50	\$16.15	\$0.00	\$86.52
	11/01/2025	\$57.17	\$14.50	\$16.15	\$0.00	\$87.82
	05/01/2026	\$58.62	\$14.50	\$16.15	\$0.00	\$89.27
	11/01/2026	\$59.92	\$14.50	\$16.15	\$0.00	\$90.57
	05/01/2027	\$61.37	\$14.50	\$16.15	\$0.00	\$92.02
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
FIELD ENG.ROD PERSON-BLDG,SITE,HVY/HWY <i>OPERATING ENGINEERS LOCAL 4</i>	11/01/2023	\$24.93	\$14.50	\$16.15	\$0.00	\$55.58
	05/01/2024	\$25.66	\$14.50	\$16.15	\$0.00	\$56.31
	11/01/2024	\$26.42	\$14.50	\$16.15	\$0.00	\$57.07
	05/01/2025	\$27.27	\$14.50	\$16.15	\$0.00	\$57.92
	11/01/2025	\$28.03	\$14.50	\$16.15	\$0.00	\$58.68
	05/01/2026	\$28.88	\$14.50	\$16.15	\$0.00	\$59.53
	11/01/2026	\$29.64	\$14.50	\$16.15	\$0.00	\$60.29
	05/01/2027	\$30.49	\$14.50	\$16.15	\$0.00	\$61.14
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
FIRE ALARM INSTALLER <i>ELECTRICIANS LOCAL 103</i>	09/01/2023	\$61.39	\$13.00	\$21.69	\$0.00	\$96.08
	03/01/2024	\$61.86	\$13.00	\$22.21	\$0.00	\$97.07
	09/01/2024	\$63.78	\$13.00	\$22.26	\$0.00	\$99.04
	03/01/2025	\$64.98	\$13.00	\$22.30	\$0.00	\$100.28
	09/01/2025	\$66.89	\$13.00	\$22.36	\$0.00	\$102.25
	03/01/2026	\$68.09	\$13.00	\$22.39	\$0.00	\$103.48
	09/01/2026	\$70.00	\$13.00	\$22.45	\$0.00	\$105.45
	03/01/2027	\$71.19	\$13.00	\$22.49	\$0.00	\$106.68
	09/01/2027	\$73.11	\$13.00	\$22.54	\$0.00	\$108.65
	03/01/2028	\$74.31	\$13.00	\$22.58	\$0.00	\$109.89
For apprentice rates see "Apprentice- ELECTRICIAN"						
FIRE ALARM REPAIR / MAINTENANCE <i>LOCAL 103</i> / COMMISSIONING <i>ELECTRICIANS</i>	09/01/2023	\$49.11	\$13.00	\$19.68	\$0.00	\$81.79
	03/01/2024	\$49.49	\$13.00	\$20.19	\$0.00	\$82.68
	09/01/2024	\$51.02	\$13.00	\$20.24	\$0.00	\$84.26
	03/01/2025	\$51.98	\$13.00	\$20.27	\$0.00	\$85.25
	09/01/2025	\$53.51	\$13.00	\$20.32	\$0.00	\$86.83
	03/01/2026	\$54.47	\$13.00	\$20.34	\$0.00	\$87.81
	09/01/2026	\$56.00	\$13.00	\$20.39	\$0.00	\$89.39
	03/01/2027	\$56.95	\$13.00	\$20.42	\$0.00	\$90.37
	09/01/2027	\$58.49	\$13.00	\$20.46	\$0.00	\$91.95
	03/01/2028	\$59.45	\$13.00	\$20.49	\$0.00	\$92.94
For apprentice rates see "Apprentice- TELECOMMUNICATIONS TECHNICIAN"						
FIREMAN (ASST. ENGINEER) <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2023	\$44.47	\$15.00	\$16.40	\$0.00	\$75.87
	06/01/2024	\$45.53	\$15.00	\$16.40	\$0.00	\$76.93
	12/01/2024	\$46.71	\$15.00	\$16.40	\$0.00	\$78.11
	06/01/2025	\$47.77	\$15.00	\$16.40	\$0.00	\$79.17
	12/01/2025	\$48.94	\$15.00	\$16.40	\$0.00	\$80.34
	06/01/2026	\$50.00	\$15.00	\$16.40	\$0.00	\$81.40
	12/01/2026	\$51.18	\$15.00	\$16.40	\$0.00	\$82.58
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
FLAGGER & SIGNALER (HEAVY & HIGHWAY) <i>LABORERS - ZONE 1 (HEAVY &amp; HIGHWAY)</i>	12/01/2023	\$25.48	\$9.65	\$18.07	\$0.00	\$53.20
	06/01/2024	\$26.51	\$9.65	\$18.07	\$0.00	\$54.23
	12/01/2024	\$26.51	\$9.65	\$18.07	\$0.00	\$54.23
	06/01/2025	\$27.59	\$9.65	\$18.07	\$0.00	\$55.31
	12/01/2025	\$27.59	\$9.65	\$18.07	\$0.00	\$55.31
	06/01/2026	\$28.71	\$9.65	\$18.07	\$0.00	\$56.43
	12/01/2026	\$28.71	\$9.65	\$18.07	\$0.00	\$56.43
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
FLOORCOVERER	09/01/2023	\$53.48	\$8.83	\$20.27	\$0.00	\$82.58
FLOORCOVERERS LOCAL 2168 ZONE I	03/01/2024	\$54.73	\$8.83	\$20.27	\$0.00	\$83.83
	09/01/2024	\$56.23	\$8.83	\$20.27	\$0.00	\$85.33
	03/01/2025	\$57.73	\$8.83	\$20.27	\$0.00	\$86.83
	09/01/2025	\$59.23	\$8.83	\$20.27	\$0.00	\$88.33
	03/01/2026	\$60.73	\$8.83	\$20.27	\$0.00	\$89.83
	09/01/2026	\$62.23	\$8.83	\$20.27	\$0.00	\$91.33
	03/01/2027	\$63.73	\$8.83	\$20.27	\$0.00	\$92.83

**Apprentice - FLOORCOVERER - Local 2168 Zone I**

**Effective Date - 09/01/2023**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$26.74	\$8.83	\$1.76	\$0.00	\$37.33
2	55	\$29.41	\$8.83	\$1.76	\$0.00	\$40.00
3	60	\$32.09	\$8.83	\$3.52	\$0.00	\$44.44
4	65	\$34.76	\$8.83	\$3.52	\$0.00	\$47.11
5	70	\$37.44	\$8.83	\$16.75	\$0.00	\$63.02
6	75	\$40.11	\$8.83	\$16.75	\$0.00	\$65.69
7	80	\$42.78	\$8.83	\$18.51	\$0.00	\$70.12
8	85	\$45.46	\$8.83	\$18.51	\$0.00	\$72.80

**Effective Date - 03/01/2024**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$27.37	\$8.83	\$1.76	\$0.00	\$37.96
2	55	\$30.10	\$8.83	\$1.76	\$0.00	\$40.69
3	60	\$32.84	\$8.83	\$3.52	\$0.00	\$45.19
4	65	\$35.57	\$8.83	\$3.52	\$0.00	\$47.92
5	70	\$38.31	\$8.83	\$16.75	\$0.00	\$63.89
6	75	\$41.05	\$8.83	\$16.75	\$0.00	\$66.63
7	80	\$43.78	\$8.83	\$18.51	\$0.00	\$71.12
8	85	\$46.52	\$8.83	\$18.51	\$0.00	\$73.86

**Notes:** Steps are 750 hrs.  
% After 10/1/17; 45/45/55/55/70/70/80/80 (1500hr Steps)  
Step 1&2 \$34.65/ 3&4 \$41.76/ 5&6 \$63.02/ 7&8 \$70.12

**Apprentice to Journeyworker Ratio:1:1**

FORK LIFT/CHERRY PICKER	12/01/2023	\$55.03	\$15.00	\$16.40	\$0.00	\$86.43
OPERATING ENGINEERS LOCAL 4	06/01/2024	\$56.33	\$15.00	\$16.40	\$0.00	\$87.73
	12/01/2024	\$57.78	\$15.00	\$16.40	\$0.00	\$89.18
	06/01/2025	\$59.08	\$15.00	\$16.40	\$0.00	\$90.48
	12/01/2025	\$60.53	\$15.00	\$16.40	\$0.00	\$91.93
	06/01/2026	\$61.83	\$15.00	\$16.40	\$0.00	\$93.23
	12/01/2026	\$63.28	\$15.00	\$16.40	\$0.00	\$94.68

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
GENERATOR/LIGHTING PLANT/HEATERS <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2023	\$35.62	\$15.00	\$16.40	\$0.00	\$67.02
	06/01/2024	\$36.47	\$15.00	\$16.40	\$0.00	\$67.87
	12/01/2024	\$37.42	\$15.00	\$16.40	\$0.00	\$68.82
	06/01/2025	\$38.27	\$15.00	\$16.40	\$0.00	\$69.67
	12/01/2025	\$39.22	\$15.00	\$16.40	\$0.00	\$70.62
	06/01/2026	\$40.08	\$15.00	\$16.40	\$0.00	\$71.48
	12/01/2026	\$41.03	\$15.00	\$16.40	\$0.00	\$72.43
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
GLAZIER (GLASS PLANK/AIR BARRIER/INTERIOR SYSTEMS) <i>GLAZIERS LOCAL 35 (ZONE 1)</i>	01/01/2024	\$51.35	\$9.95	\$23.95	\$0.00	\$85.25
	07/01/2024	\$52.55	\$9.95	\$23.95	\$0.00	\$86.45
	01/01/2025	\$53.75	\$9.95	\$23.95	\$0.00	\$87.65

**Apprentice - GLAZIER - Local 35 Zone 1**

**Effective Date - 01/01/2024**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$25.68	\$9.95	\$0.00	\$0.00	\$35.63
2	55	\$28.24	\$9.95	\$6.66	\$0.00	\$44.85
3	60	\$30.81	\$9.95	\$7.26	\$0.00	\$48.02
4	65	\$33.38	\$9.95	\$7.87	\$0.00	\$51.20
5	70	\$35.95	\$9.95	\$20.32	\$0.00	\$66.22
6	75	\$38.51	\$9.95	\$20.93	\$0.00	\$69.39
7	80	\$41.08	\$9.95	\$21.53	\$0.00	\$72.56
8	90	\$46.22	\$9.95	\$22.74	\$0.00	\$78.91

**Effective Date - 07/01/2024**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$26.28	\$9.95	\$0.00	\$0.00	\$36.23
2	55	\$28.90	\$9.95	\$6.66	\$0.00	\$45.51
3	60	\$31.53	\$9.95	\$7.26	\$0.00	\$48.74
4	65	\$34.16	\$9.95	\$7.87	\$0.00	\$51.98
5	70	\$36.79	\$9.95	\$20.32	\$0.00	\$67.06
6	75	\$39.41	\$9.95	\$20.93	\$0.00	\$70.29
7	80	\$42.04	\$9.95	\$21.53	\$0.00	\$73.52
8	90	\$47.30	\$9.95	\$22.74	\$0.00	\$79.99

**Notes:**

Steps are 750 hrs.

**Apprentice to Journeyworker Ratio:1:1**

HOISTING ENGINEER/CRANES/GRADALLS <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2023	\$55.03	\$15.00	\$16.40	\$0.00	\$86.43
	06/01/2024	\$56.33	\$15.00	\$16.40	\$0.00	\$87.73
	12/01/2024	\$57.78	\$15.00	\$16.40	\$0.00	\$89.18
	06/01/2025	\$59.08	\$15.00	\$16.40	\$0.00	\$90.48
	12/01/2025	\$60.53	\$15.00	\$16.40	\$0.00	\$91.93
	06/01/2026	\$61.83	\$15.00	\$16.40	\$0.00	\$93.23
	12/01/2026	\$63.28	\$15.00	\$16.40	\$0.00	\$94.68



Apprentice - OPERATING ENGINEERS - Local 4

Effective Date - 12/01/2023

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	55	\$30.27	\$15.00	\$0.00	\$0.00	\$45.27
2	60	\$33.02	\$15.00	\$16.40	\$0.00	\$64.42
3	65	\$35.77	\$15.00	\$16.40	\$0.00	\$67.17
4	70	\$38.52	\$15.00	\$16.40	\$0.00	\$69.92
5	75	\$41.27	\$15.00	\$16.40	\$0.00	\$72.67
6	80	\$44.02	\$15.00	\$16.40	\$0.00	\$75.42
7	85	\$46.78	\$15.00	\$16.40	\$0.00	\$78.18
8	90	\$49.53	\$15.00	\$16.40	\$0.00	\$80.93

Effective Date - 06/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	55	\$30.98	\$15.00	\$0.00	\$0.00	\$45.98
2	60	\$33.80	\$15.00	\$16.40	\$0.00	\$65.20
3	65	\$36.61	\$15.00	\$16.40	\$0.00	\$68.01
4	70	\$39.43	\$15.00	\$16.40	\$0.00	\$70.83
5	75	\$42.25	\$15.00	\$16.40	\$0.00	\$73.65
6	80	\$45.06	\$15.00	\$16.40	\$0.00	\$76.46
7	85	\$47.88	\$15.00	\$16.40	\$0.00	\$79.28
8	90	\$50.70	\$15.00	\$16.40	\$0.00	\$82.10

Notes:

Apprentice to Journeyworker Ratio:1:6

HVAC (DUCTWORK)	02/01/2024	\$57.86	\$14.43	\$27.07	\$2.93	\$102.29
SHEETMETAL WORKERS LOCAL 17 - A	08/01/2024	\$59.61	\$14.43	\$27.07	\$2.93	\$104.04
	02/01/2025	\$61.36	\$14.43	\$27.07	\$2.93	\$105.79
	08/01/2025	\$63.21	\$14.43	\$27.07	\$2.93	\$107.64
	02/01/2026	\$65.16	\$14.43	\$27.07	\$2.93	\$109.59
For apprentice rates see "Apprentice- SHEET METAL WORKER"						
HVAC (ELECTRICAL CONTROLS)	09/01/2023	\$61.39	\$13.00	\$21.69	\$0.00	\$96.08
ELECTRICIANS LOCAL 103	03/01/2024	\$61.86	\$13.00	\$22.21	\$0.00	\$97.07
	09/01/2024	\$63.78	\$13.00	\$22.26	\$0.00	\$99.04
	03/01/2025	\$64.98	\$13.00	\$22.30	\$0.00	\$100.28
	09/01/2025	\$66.89	\$13.00	\$22.36	\$0.00	\$102.25
	03/01/2026	\$68.09	\$13.00	\$22.39	\$0.00	\$103.48
	09/01/2026	\$70.00	\$13.00	\$22.45	\$0.00	\$105.45
	03/01/2027	\$71.19	\$13.00	\$22.49	\$0.00	\$106.68
	09/01/2027	\$73.11	\$13.00	\$22.54	\$0.00	\$108.65
	03/01/2028	\$74.31	\$13.00	\$22.58	\$0.00	\$109.89
For apprentice rates see "Apprentice- ELECTRICIAN"						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
HVAC (TESTING AND BALANCING - AIR) <i>SHEETMETAL WORKERS LOCAL 17 - A</i>	02/01/2024	\$57.86	\$14.43	\$27.07	\$2.93	\$102.29
	08/01/2024	\$59.61	\$14.43	\$27.07	\$2.93	\$104.04
	02/01/2025	\$61.36	\$14.43	\$27.07	\$2.93	\$105.79
	08/01/2025	\$63.21	\$14.43	\$27.07	\$2.93	\$107.64
	02/01/2026	\$65.16	\$14.43	\$27.07	\$2.93	\$109.59
For apprentice rates see "Apprentice- SHEET METAL WORKER"						
HVAC (TESTING AND BALANCING -WATER) <i>PIPEFITTERS LOCAL 537</i>	09/01/2023	\$63.48	\$12.70	\$21.50	\$0.00	\$97.68
	03/01/2024	\$65.28	\$12.70	\$21.50	\$0.00	\$99.48
	09/01/2024	\$67.08	\$12.70	\$21.50	\$0.00	\$101.28
	03/01/2025	\$68.88	\$12.70	\$21.50	\$0.00	\$103.08
For apprentice rates see "Apprentice- PIPEFITTER" or "PLUMBER/PIPEFITTER"						
HVAC MECHANIC <i>PIPEFITTERS LOCAL 537</i>	09/01/2023	\$63.48	\$12.70	\$21.50	\$0.00	\$97.68
	03/01/2024	\$65.28	\$12.70	\$21.50	\$0.00	\$99.48
	09/01/2024	\$67.08	\$12.70	\$21.50	\$0.00	\$101.28
	03/01/2025	\$68.88	\$12.70	\$21.50	\$0.00	\$103.08
For apprentice rates see "Apprentice- PIPEFITTER" or "PLUMBER/PIPEFITTER"						
HYDRAULIC DRILLS <i>LABORERS - ZONE 1</i>	12/01/2023	\$45.08	\$9.65	\$18.07	\$0.00	\$72.80
For apprentice rates see "Apprentice- LABORER"						
HYDRAULIC DRILLS (HEAVY & HIGHWAY) <i>LABORERS - ZONE 1 (HEAVY &amp; HIGHWAY)</i>	12/01/2023	\$45.08	\$9.65	\$18.07	\$0.00	\$72.80
	06/01/2024	\$46.56	\$9.65	\$18.07	\$0.00	\$74.28
	12/01/2024	\$48.03	\$9.65	\$18.07	\$0.00	\$75.75
	06/01/2025	\$49.53	\$9.65	\$18.07	\$0.00	\$77.25
	12/01/2025	\$51.03	\$9.65	\$18.07	\$0.00	\$78.75
	06/01/2026	\$52.58	\$9.65	\$18.07	\$0.00	\$80.30
	12/01/2026	\$54.08	\$9.65	\$18.07	\$0.00	\$81.80
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"						
INSULATOR (PIPES & TANKS) <i>HEAT &amp; FROST INSULATORS LOCAL 6 (BOSTON)</i>	09/01/2023	\$53.50	\$14.75	\$19.61	\$0.00	\$87.86
	09/01/2024	\$56.92	\$14.75	\$19.61	\$0.00	\$91.28
	09/01/2025	\$60.34	\$14.75	\$19.61	\$0.00	\$94.70
	09/01/2026	\$63.76	\$14.75	\$19.61	\$0.00	\$98.12

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

Effective Date - 09/01/2023

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$26.75	\$14.75	\$14.32	\$0.00	\$55.82
2	60	\$32.10	\$14.75	\$15.37	\$0.00	\$62.22
3	70	\$37.45	\$14.75	\$16.43	\$0.00	\$68.63
4	80	\$42.80	\$14.75	\$17.49	\$0.00	\$75.04

Effective Date - 09/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$28.46	\$14.75	\$14.32	\$0.00	\$57.53
2	60	\$34.15	\$14.75	\$15.37	\$0.00	\$64.27
3	70	\$39.84	\$14.75	\$16.43	\$0.00	\$71.02
4	80	\$45.54	\$14.75	\$17.49	\$0.00	\$77.78

Notes:

Steps are 1 year

Apprentice to Journeyworker Ratio:1:4

IRONWORKER/WELDER	03/16/2023	\$52.72	\$8.35	\$26.70	\$0.00	\$87.77
IRONWORKERS LOCAL 7 (BOSTON AREA)	03/16/2024	\$53.97	\$8.35	\$26.70	\$0.00	\$89.02

Apprentice - IRONWORKER - Local 7 Boston

Effective Date - 03/16/2023

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$31.63	\$8.35	\$26.70	\$0.00	\$66.68
2	70	\$36.90	\$8.35	\$26.70	\$0.00	\$71.95
3	75	\$39.54	\$8.35	\$26.70	\$0.00	\$74.59
4	80	\$42.18	\$8.35	\$26.70	\$0.00	\$77.23
5	85	\$44.81	\$8.35	\$26.70	\$0.00	\$79.86
6	90	\$47.45	\$8.35	\$26.70	\$0.00	\$82.50

Effective Date - 03/16/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$32.38	\$8.35	\$26.70	\$0.00	\$67.43
2	70	\$37.78	\$8.35	\$26.70	\$0.00	\$72.83
3	75	\$40.48	\$8.35	\$26.70	\$0.00	\$75.53
4	80	\$43.18	\$8.35	\$26.70	\$0.00	\$78.23
5	85	\$45.87	\$8.35	\$26.70	\$0.00	\$80.92
6	90	\$48.57	\$8.35	\$26.70	\$0.00	\$83.62

Notes:

Apprentice to Journeyworker Ratio:1:4

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
JACKHAMMER & PAVING BREAKER OPERATOR <i>LABORERS - ZONE 1</i>	12/01/2023	\$44.58	\$9.65	\$18.07	\$0.00	\$72.30
For apprentice rates see "Apprentice- LABORER"						
LABORER <i>LABORERS - ZONE 1</i>	12/01/2023	\$44.33	\$9.65	\$18.07	\$0.00	\$72.05

**Apprentice - *LABORER - Zone 1***

**Effective Date - 12/01/2023**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$26.60	\$9.65	\$18.07	\$0.00	\$54.32
2	70	\$31.03	\$9.65	\$18.07	\$0.00	\$58.75
3	80	\$35.46	\$9.65	\$18.07	\$0.00	\$63.18
4	90	\$39.90	\$9.65	\$18.07	\$0.00	\$67.62

**Notes:**

**Apprentice to Journeyworker Ratio:1:5**

LABORER (HEAVY & HIGHWAY) <i>LABORERS - ZONE 1 (HEAVY &amp; HIGHWAY)</i>	12/01/2023	\$44.33	\$9.65	\$18.07	\$0.00	\$72.05
	06/01/2024	\$45.81	\$9.65	\$18.07	\$0.00	\$73.53
	12/01/2024	\$47.28	\$9.65	\$18.07	\$0.00	\$75.00
	06/01/2025	\$48.78	\$9.65	\$18.07	\$0.00	\$76.50
	12/01/2025	\$50.28	\$9.65	\$18.07	\$0.00	\$78.00
	06/01/2026	\$51.83	\$9.65	\$18.07	\$0.00	\$79.55
	12/01/2026	\$53.33	\$9.65	\$18.07	\$0.00	\$81.05

**Apprentice - *LABORER (Heavy & Highway) - Zone 1***

**Effective Date - 12/01/2023**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$26.60	\$9.65	\$18.07	\$0.00	\$54.32
2	70	\$31.03	\$9.65	\$18.07	\$0.00	\$58.75
3	80	\$35.46	\$9.65	\$18.07	\$0.00	\$63.18
4	90	\$39.90	\$9.65	\$18.07	\$0.00	\$67.62

**Effective Date - 06/01/2024**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$27.49	\$9.65	\$18.07	\$0.00	\$55.21
2	70	\$32.07	\$9.65	\$18.07	\$0.00	\$59.79
3	80	\$36.65	\$9.65	\$18.07	\$0.00	\$64.37
4	90	\$41.23	\$9.65	\$18.07	\$0.00	\$68.95

**Notes:**

**Apprentice to Journeyworker Ratio:1:5**

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
LABORER: CARPENTER TENDER <i>LABORERS - ZONE 1</i>	12/01/2023	\$44.33	\$9.65	\$18.07	\$0.00	\$72.05
For apprentice rates see "Apprentice- LABORER"						
LABORER: CEMENT FINISHER TENDER <i>LABORERS - ZONE 1</i>	12/01/2023	\$44.33	\$9.65	\$18.07	\$0.00	\$72.05
For apprentice rates see "Apprentice- LABORER"						
LABORER: HAZARDOUS WASTE/ASBESTOS REMOVER <i>LABORERS - ZONE 1</i>	12/01/2023	\$44.48	\$9.65	\$18.07	\$0.00	\$72.20
For apprentice rates see "Apprentice- LABORER"						
LABORER: MASON TENDER <i>LABORERS - ZONE 1</i>	06/01/2023	\$43.83	\$9.40	\$17.82	\$0.00	\$71.05
	06/01/2024	\$44.58	\$9.65	\$18.07	\$0.00	\$72.30
For apprentice rates see "Apprentice- LABORER"						
LABORER: MASON TENDER (HEAVY & HIGHWAY) <i>LABORERS - ZONE 1 (HEAVY &amp; HIGHWAY)</i>	12/01/2023	\$44.58	\$9.65	\$18.07	\$0.00	\$72.30
	06/01/2024	\$46.06	\$9.65	\$18.07	\$0.00	\$73.78
	12/01/2024	\$47.53	\$9.65	\$18.07	\$0.00	\$75.25
	06/01/2025	\$49.03	\$9.65	\$18.07	\$0.00	\$76.75
	12/01/2025	\$50.53	\$9.65	\$18.07	\$0.00	\$78.25
	06/01/2026	\$52.08	\$9.65	\$18.07	\$0.00	\$79.80
	12/01/2026	\$53.58	\$9.65	\$18.07	\$0.00	\$81.30
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"						
LABORER: MULTI-TRADE TENDER <i>LABORERS - ZONE 1</i>	12/01/2023	\$44.33	\$9.65	\$18.07	\$0.00	\$72.05
For apprentice rates see "Apprentice- LABORER"						
LABORER: TREE REMOVER <i>LABORERS - ZONE 1</i>	12/01/2023	\$44.33	\$9.65	\$18.07	\$0.00	\$72.05
This classification applies to the removal of standing trees, and the trimming and removal of branches and limbs when related to public works construction or site clearance incidental to construction . For apprentice rates see "Apprentice- LABORER"						
LASER BEAM OPERATOR <i>LABORERS - ZONE 1</i>	12/01/2023	\$44.58	\$9.65	\$18.07	\$0.00	\$72.30
For apprentice rates see "Apprentice- LABORER"						
LASER BEAM OPERATOR (HEAVY & HIGHWAY) <i>LABORERS - ZONE 1 (HEAVY &amp; HIGHWAY)</i>	12/01/2023	\$44.58	\$9.65	\$18.07	\$0.00	\$72.30
	06/01/2024	\$46.06	\$9.65	\$18.07	\$0.00	\$73.78
	12/01/2024	\$47.53	\$9.65	\$18.07	\$0.00	\$75.25
	06/01/2025	\$49.03	\$9.65	\$18.07	\$0.00	\$76.75
	12/01/2025	\$50.53	\$9.65	\$18.07	\$0.00	\$78.25
	06/01/2026	\$52.08	\$9.65	\$18.07	\$0.00	\$79.80
	12/01/2026	\$53.58	\$9.65	\$18.07	\$0.00	\$81.30
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"						
MARBLE & TILE FINISHERS <i>BRICKLAYERS LOCAL 3 - MARBLE &amp; TILE</i>	02/01/2024	\$47.89	\$11.49	\$21.37	\$0.00	\$80.75
	08/01/2024	\$49.57	\$11.49	\$21.37	\$0.00	\$82.43
	02/01/2025	\$50.61	\$11.49	\$21.37	\$0.00	\$83.47
	08/01/2025	\$52.33	\$11.49	\$21.37	\$0.00	\$85.19
	02/01/2026	\$53.41	\$11.49	\$21.37	\$0.00	\$86.27
	08/01/2026	\$55.17	\$11.49	\$21.37	\$0.00	\$88.03
	02/01/2027	\$56.29	\$11.49	\$21.37	\$0.00	\$89.15

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

Effective Date - 02/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$23.95	\$11.49	\$21.37	\$0.00	\$56.81
2	60	\$28.73	\$11.49	\$21.37	\$0.00	\$61.59
3	70	\$33.52	\$11.49	\$21.37	\$0.00	\$66.38
4	80	\$38.31	\$11.49	\$21.37	\$0.00	\$71.17
5	90	\$43.10	\$11.49	\$21.37	\$0.00	\$75.96

Effective Date - 08/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$24.79	\$11.49	\$21.37	\$0.00	\$57.65
2	60	\$29.74	\$11.49	\$21.37	\$0.00	\$62.60
3	70	\$34.70	\$11.49	\$21.37	\$0.00	\$67.56
4	80	\$39.66	\$11.49	\$21.37	\$0.00	\$72.52
5	90	\$44.61	\$11.49	\$21.37	\$0.00	\$77.47

Notes:

Apprentice to Journeyworker Ratio:1:3

MARBLE MASONS,TILELAYERS & TERRAZZO MECH	02/01/2024	\$62.42	\$11.49	\$23.56	\$0.00	\$97.47
BRICKLAYERS LOCAL 3 - MARBLE & TILE	08/01/2024	\$64.52	\$11.49	\$23.56	\$0.00	\$99.57
	02/01/2025	\$65.82	\$11.49	\$23.56	\$0.00	\$100.87
	08/01/2025	\$67.97	\$11.49	\$23.56	\$0.00	\$103.02
	02/01/2026	\$69.32	\$11.49	\$23.56	\$0.00	\$104.37
	08/01/2026	\$71.52	\$11.49	\$23.56	\$0.00	\$106.57
	02/01/2027	\$72.92	\$11.49	\$23.56	\$0.00	\$107.97

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

Effective Date - 02/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$31.21	\$11.49	\$23.56	\$0.00	\$66.26
2	60	\$37.45	\$11.49	\$23.56	\$0.00	\$72.50
3	70	\$43.69	\$11.49	\$23.56	\$0.00	\$78.74
4	80	\$49.94	\$11.49	\$23.56	\$0.00	\$84.99
5	90	\$56.18	\$11.49	\$23.56	\$0.00	\$91.23

Effective Date - 08/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$32.26	\$11.49	\$23.56	\$0.00	\$67.31
2	60	\$38.71	\$11.49	\$23.56	\$0.00	\$73.76
3	70	\$45.16	\$11.49	\$23.56	\$0.00	\$80.21
4	80	\$51.62	\$11.49	\$23.56	\$0.00	\$86.67
5	90	\$58.07	\$11.49	\$23.56	\$0.00	\$93.12

Notes:

Apprentice to Journeyworker Ratio:1:5

MECH. SWEEPER OPERATOR (ON CONST. SITES)	12/01/2023	\$54.43	\$15.00	\$16.40	\$0.00	\$85.83
OPERATING ENGINEERS LOCAL 4	06/01/2024	\$55.71	\$15.00	\$16.40	\$0.00	\$87.11
	12/01/2024	\$57.15	\$15.00	\$16.40	\$0.00	\$88.55
	06/01/2025	\$58.43	\$15.00	\$16.40	\$0.00	\$89.83
	12/01/2025	\$59.87	\$15.00	\$16.40	\$0.00	\$91.27
	06/01/2026	\$61.15	\$15.00	\$16.40	\$0.00	\$92.55
	12/01/2026	\$62.59	\$15.00	\$16.40	\$0.00	\$93.99

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

MECHANICS MAINTENANCE	12/01/2023	\$54.43	\$15.00	\$16.40	\$0.00	\$85.83
OPERATING ENGINEERS LOCAL 4	06/01/2024	\$55.71	\$15.00	\$16.40	\$0.00	\$87.11
	12/01/2024	\$57.15	\$15.00	\$16.40	\$0.00	\$88.55
	06/01/2025	\$58.43	\$15.00	\$16.40	\$0.00	\$89.83
	12/01/2025	\$59.87	\$15.00	\$16.40	\$0.00	\$91.27
	06/01/2026	\$61.15	\$15.00	\$16.40	\$0.00	\$92.55
	12/01/2026	\$62.59	\$15.00	\$16.40	\$0.00	\$93.99

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

MILLWRIGHT (Zone 1)	01/02/2023	\$47.27	\$8.58	\$21.57	\$0.00	\$77.42
MILLWRIGHTS LOCAL 1121 - Zone 1						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
<b>Apprentice - MILLWRIGHT - Local 1121 Zone 1</b>						
<b>Effective Date - 01/02/2023</b>						
Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	55	\$26.00	\$8.58	\$5.72	\$0.00	\$40.30
2	65	\$30.73	\$8.58	\$17.93	\$0.00	\$57.24
3	75	\$35.45	\$8.58	\$18.98	\$0.00	\$63.01
4	85	\$40.18	\$8.58	\$20.01	\$0.00	\$68.77
<b>Notes:</b> Step 1&2 Appr. indentured after 1/6/2020 receive no pension, but do receive annuity. (Step 1 \$5.72, Step 2 \$6.66) Steps are 2,000 hours						
<b>Apprentice to Journeyworker Ratio:1:4</b>						
MORTAR MIXER LABORERS - ZONE 1	12/01/2023	\$44.58	\$9.65	\$18.07	\$0.00	\$72.30
For apprentice rates see "Apprentice- LABORER"						
OILER (OTHER THAN TRUCK CRANES,GRADALLS) OPERATING ENGINEERS LOCAL 4	12/01/2023	\$24.41	\$15.00	\$16.40	\$0.00	\$55.81
	06/01/2024	\$25.01	\$15.00	\$16.40	\$0.00	\$56.41
	12/01/2024	\$25.67	\$15.00	\$16.40	\$0.00	\$57.07
	06/01/2025	\$26.27	\$15.00	\$16.40	\$0.00	\$57.67
	12/01/2025	\$26.93	\$15.00	\$16.40	\$0.00	\$58.33
	06/01/2026	\$27.52	\$15.00	\$16.40	\$0.00	\$58.92
	12/01/2026	\$28.19	\$15.00	\$16.40	\$0.00	\$59.59
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
OILER (TRUCK CRANES, GRADALLS) OPERATING ENGINEERS LOCAL 4	12/01/2023	\$29.86	\$15.00	\$16.40	\$0.00	\$61.26
	06/01/2024	\$30.58	\$15.00	\$16.40	\$0.00	\$61.98
	12/01/2024	\$31.38	\$15.00	\$16.40	\$0.00	\$62.78
	06/01/2025	\$32.10	\$15.00	\$16.40	\$0.00	\$63.50
	12/01/2025	\$32.90	\$15.00	\$16.40	\$0.00	\$64.30
	06/01/2026	\$33.62	\$15.00	\$16.40	\$0.00	\$65.02
	12/01/2026	\$34.42	\$15.00	\$16.40	\$0.00	\$65.82
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
OTHER POWER DRIVEN EQUIPMENT - CLASS II OPERATING ENGINEERS LOCAL 4	12/01/2023	\$54.43	\$15.00	\$16.40	\$0.00	\$85.83
	06/01/2024	\$55.71	\$15.00	\$16.40	\$0.00	\$87.11
	12/01/2024	\$57.15	\$15.00	\$16.40	\$0.00	\$88.55
	06/01/2025	\$58.43	\$15.00	\$16.40	\$0.00	\$89.83
	12/01/2025	\$59.87	\$15.00	\$16.40	\$0.00	\$91.27
	06/01/2026	\$61.15	\$15.00	\$16.40	\$0.00	\$92.55
	12/01/2026	\$62.59	\$15.00	\$16.40	\$0.00	\$93.99
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
PAINTER (BRIDGES/TANKS) PAINTERS LOCAL 35 - ZONE 1	01/01/2024	\$56.06	\$9.95	\$23.95	\$0.00	\$89.96
	07/01/2024	\$57.26	\$9.95	\$23.95	\$0.00	\$91.16
	01/01/2025	\$58.46	\$9.95	\$23.95	\$0.00	\$92.36



Apprentice - PAINTER Local 35 - BRIDGES/TANKS

Effective Date - 01/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$28.03	\$9.95	\$0.00	\$0.00	\$37.98
2	55	\$30.83	\$9.95	\$6.66	\$0.00	\$47.44
3	60	\$33.64	\$9.95	\$7.26	\$0.00	\$50.85
4	65	\$36.44	\$9.95	\$7.87	\$0.00	\$54.26
5	70	\$39.24	\$9.95	\$20.32	\$0.00	\$69.51
6	75	\$42.05	\$9.95	\$20.93	\$0.00	\$72.93
7	80	\$44.85	\$9.95	\$21.53	\$0.00	\$76.33
8	90	\$50.45	\$9.95	\$22.74	\$0.00	\$83.14

Effective Date - 07/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$28.63	\$9.95	\$0.00	\$0.00	\$38.58
2	55	\$31.49	\$9.95	\$6.66	\$0.00	\$48.10
3	60	\$34.36	\$9.95	\$7.26	\$0.00	\$51.57
4	65	\$37.22	\$9.95	\$7.87	\$0.00	\$55.04
5	70	\$40.08	\$9.95	\$20.32	\$0.00	\$70.35
6	75	\$42.95	\$9.95	\$20.93	\$0.00	\$73.83
7	80	\$45.81	\$9.95	\$21.53	\$0.00	\$77.29
8	90	\$51.53	\$9.95	\$22.74	\$0.00	\$84.22

Notes:

Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

PAINTER (SPRAY OR SANDBLAST, NEW) *	01/01/2024	\$52.75	\$9.95	\$23.95	\$0.00	\$86.65
* If 30% or more of surfaces to be painted are new construction, NEW paint rate shall be used.PAINTERS LOCAL 35 - ZONE 1	07/01/2024	\$53.95	\$9.95	\$23.95	\$0.00	\$87.85
	01/01/2025	\$55.15	\$9.95	\$23.95	\$0.00	\$89.05

Apprentice - PAINTER Local 35 Zone 1 - Spray/Sandblast - New

Effective Date - 01/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$26.38	\$9.95	\$0.00	\$0.00	\$36.33
2	55	\$29.01	\$9.95	\$6.66	\$0.00	\$45.62
3	60	\$31.65	\$9.95	\$7.26	\$0.00	\$48.86
4	65	\$34.29	\$9.95	\$7.87	\$0.00	\$52.11
5	70	\$36.93	\$9.95	\$20.32	\$0.00	\$67.20
6	75	\$39.56	\$9.95	\$20.93	\$0.00	\$70.44
7	80	\$42.20	\$9.95	\$21.53	\$0.00	\$73.68
8	90	\$47.48	\$9.95	\$22.74	\$0.00	\$80.17

Effective Date - 07/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$26.98	\$9.95	\$0.00	\$0.00	\$36.93
2	55	\$29.67	\$9.95	\$6.66	\$0.00	\$46.28
3	60	\$32.37	\$9.95	\$7.26	\$0.00	\$49.58
4	65	\$35.07	\$9.95	\$7.87	\$0.00	\$52.89
5	70	\$37.77	\$9.95	\$20.32	\$0.00	\$68.04
6	75	\$40.46	\$9.95	\$20.93	\$0.00	\$71.34
7	80	\$43.16	\$9.95	\$21.53	\$0.00	\$74.64
8	90	\$48.56	\$9.95	\$22.74	\$0.00	\$81.25

Notes:

Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

PAINTER (SPRAY OR SANDBLAST, REPAINT)	01/01/2024	\$50.81	\$9.95	\$23.95	\$0.00	\$84.71
PAINTERS LOCAL 35 - ZONE 1	07/01/2024	\$52.01	\$9.95	\$23.95	\$0.00	\$85.91
	01/01/2025	\$53.21	\$9.95	\$23.95	\$0.00	\$87.11

Apprentice - PAINTER Local 35 Zone 1 - Spray/Sandblast - Repaint

Effective Date - 01/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$25.41	\$9.95	\$0.00	\$0.00	\$35.36
2	55	\$27.95	\$9.95	\$6.66	\$0.00	\$44.56
3	60	\$30.49	\$9.95	\$7.26	\$0.00	\$47.70
4	65	\$33.03	\$9.95	\$7.87	\$0.00	\$50.85
5	70	\$35.57	\$9.95	\$20.32	\$0.00	\$65.84
6	75	\$38.11	\$9.95	\$20.93	\$0.00	\$68.99
7	80	\$40.65	\$9.95	\$21.53	\$0.00	\$72.13
8	90	\$45.73	\$9.95	\$22.74	\$0.00	\$78.42

Effective Date - 07/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$26.01	\$9.95	\$0.00	\$0.00	\$35.96
2	55	\$28.61	\$9.95	\$6.66	\$0.00	\$45.22
3	60	\$31.21	\$9.95	\$7.26	\$0.00	\$48.42
4	65	\$33.81	\$9.95	\$7.87	\$0.00	\$51.63
5	70	\$36.41	\$9.95	\$20.32	\$0.00	\$66.68
6	75	\$39.01	\$9.95	\$20.93	\$0.00	\$69.89
7	80	\$41.61	\$9.95	\$21.53	\$0.00	\$73.09
8	90	\$46.81	\$9.95	\$22.74	\$0.00	\$79.50

Notes:

Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

PAINTER / TAPER (BRUSH, NEW) *	01/01/2024	\$51.35	\$9.95	\$23.95	\$0.00	\$85.25
* If 30% or more of surfaces to be painted are new construction, NEW paint rate shall be used.PAINTERS LOCAL 35 - ZONE 1	07/01/2024	\$52.55	\$9.95	\$23.95	\$0.00	\$86.45
	01/01/2025	\$53.75	\$9.95	\$23.95	\$0.00	\$87.65

Apprentice - PAINTER - Local 35 Zone 1 - BRUSH NEW

Effective Date - 01/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$25.68	\$9.95	\$0.00	\$0.00	\$35.63
2	55	\$28.24	\$9.95	\$6.66	\$0.00	\$44.85
3	60	\$30.81	\$9.95	\$7.26	\$0.00	\$48.02
4	65	\$33.38	\$9.95	\$7.87	\$0.00	\$51.20
5	70	\$35.95	\$9.95	\$20.32	\$0.00	\$66.22
6	75	\$38.51	\$9.95	\$20.93	\$0.00	\$69.39
7	80	\$41.08	\$9.95	\$21.53	\$0.00	\$72.56
8	90	\$46.22	\$9.95	\$22.74	\$0.00	\$78.91

Effective Date - 07/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$26.28	\$9.95	\$0.00	\$0.00	\$36.23
2	55	\$28.90	\$9.95	\$6.66	\$0.00	\$45.51
3	60	\$31.53	\$9.95	\$7.26	\$0.00	\$48.74
4	65	\$34.16	\$9.95	\$7.87	\$0.00	\$51.98
5	70	\$36.79	\$9.95	\$20.32	\$0.00	\$67.06
6	75	\$39.41	\$9.95	\$20.93	\$0.00	\$70.29
7	80	\$42.04	\$9.95	\$21.53	\$0.00	\$73.52
8	90	\$47.30	\$9.95	\$22.74	\$0.00	\$79.99

Notes:

Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

PAINTER / TAPER (BRUSH, REPAINT)	01/01/2024	\$49.41	\$9.95	\$23.95	\$0.00	\$83.31
PAINTERS LOCAL 35 - ZONE 1	07/01/2024	\$50.61	\$9.95	\$23.95	\$0.00	\$84.51
	01/01/2025	\$51.81	\$9.95	\$23.95	\$0.00	\$85.71

Apprentice - PAINTER Local 35 Zone 1 - BRUSH REPAINT

Effective Date - 01/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$24.71	\$9.95	\$0.00	\$0.00	\$34.66
2	55	\$27.18	\$9.95	\$6.66	\$0.00	\$43.79
3	60	\$29.65	\$9.95	\$7.26	\$0.00	\$46.86
4	65	\$32.12	\$9.95	\$7.87	\$0.00	\$49.94
5	70	\$34.59	\$9.95	\$20.32	\$0.00	\$64.86
6	75	\$37.06	\$9.95	\$20.93	\$0.00	\$67.94
7	80	\$39.53	\$9.95	\$21.53	\$0.00	\$71.01
8	90	\$44.47	\$9.95	\$22.74	\$0.00	\$77.16

Effective Date - 07/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$25.31	\$9.95	\$0.00	\$0.00	\$35.26
2	55	\$27.84	\$9.95	\$6.66	\$0.00	\$44.45
3	60	\$30.37	\$9.95	\$7.26	\$0.00	\$47.58
4	65	\$32.90	\$9.95	\$7.87	\$0.00	\$50.72
5	70	\$35.43	\$9.95	\$20.32	\$0.00	\$65.70
6	75	\$37.96	\$9.95	\$20.93	\$0.00	\$68.84
7	80	\$40.49	\$9.95	\$21.53	\$0.00	\$71.97
8	90	\$45.55	\$9.95	\$22.74	\$0.00	\$78.24

Notes:

Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

PAINTER TRAFFIC MARKINGS (HEAVY/HIGHWAY) LABORERS - ZONE 1 (HEAVY & HIGHWAY)	12/01/2023	\$44.33	\$9.65	\$18.07	\$0.00	\$72.05
	06/01/2024	\$45.81	\$9.65	\$18.07	\$0.00	\$73.53
	12/01/2024	\$47.28	\$9.65	\$18.07	\$0.00	\$75.00
	06/01/2025	\$48.78	\$9.65	\$18.07	\$0.00	\$76.50
	12/01/2025	\$50.28	\$9.65	\$18.07	\$0.00	\$78.00
	06/01/2026	\$51.83	\$9.65	\$18.07	\$0.00	\$79.55
	12/01/2026	\$53.33	\$9.65	\$18.07	\$0.00	\$81.05

For apprentice rates see "Apprentice- LABORER (Heavy and Highway)

PANEL & PICKUP TRUCKS DRIVER TEAMSTERS JOINT COUNCIL NO. 10 ZONE A	12/01/2023	\$39.88	\$14.41	\$18.67	\$0.00	\$72.96
	06/01/2024	\$40.88	\$14.41	\$18.67	\$0.00	\$73.96
	08/01/2024	\$40.88	\$14.91	\$18.67	\$0.00	\$74.46
	12/01/2024	\$40.88	\$14.91	\$20.17	\$0.00	\$75.96
	06/01/2025	\$41.88	\$14.91	\$20.17	\$0.00	\$76.96
	08/01/2025	\$41.88	\$15.41	\$20.17	\$0.00	\$77.46
	12/01/2025	\$41.88	\$15.41	\$21.78	\$0.00	\$79.07
	06/01/2026	\$42.88	\$15.41	\$21.78	\$0.00	\$80.07
	08/01/2026	\$42.88	\$15.91	\$21.78	\$0.00	\$80.57
	12/01/2026	\$42.88	\$15.91	\$23.52	\$0.00	\$82.31

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
PIER AND DOCK CONSTRUCTOR (UNDERPINNING AND DECK) <i>PILE DRIVER LOCAL 56 (ZONE 1)</i> For apprentice rates see "Apprentice- PILE DRIVER"	08/01/2020	\$49.07	\$9.40	\$23.12	\$0.00	\$81.59
PILE DRIVER <i>PILE DRIVER LOCAL 56 (ZONE 1)</i>	08/01/2020	\$49.07	\$9.40	\$23.12	\$0.00	\$81.59

**Apprentice - PILE DRIVER - Local 56 Zone 1**

**Effective Date -** 08/01/2020

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$24.54	\$9.40	\$23.12	\$0.00	\$57.06
2	60	\$29.44	\$9.40	\$23.12	\$0.00	\$61.96
3	70	\$34.35	\$9.40	\$23.12	\$0.00	\$66.87
4	75	\$36.80	\$9.40	\$23.12	\$0.00	\$69.32
5	80	\$39.26	\$9.40	\$23.12	\$0.00	\$71.78
6	80	\$39.26	\$9.40	\$23.12	\$0.00	\$71.78
7	90	\$44.16	\$9.40	\$23.12	\$0.00	\$76.68
8	90	\$44.16	\$9.40	\$23.12	\$0.00	\$76.68

**Notes:**

% Indentured After 10/1/17; 45/45/55/55/70/70/80/80  
Step 1&2 \$34.01/ 3&4 \$41.46/ 5&6 \$62.80/ 7&8 \$69.25

**Apprentice to Journeyworker Ratio:1:5**

PIPEFITTER & STEAMFITTER <i>PIPEFITTERS LOCAL 537</i>	09/01/2023	\$63.48	\$12.70	\$21.50	\$0.00	\$97.68
	03/01/2024	\$65.28	\$12.70	\$21.50	\$0.00	\$99.48
	09/01/2024	\$67.08	\$12.70	\$21.50	\$0.00	\$101.28
	03/01/2025	\$68.88	\$12.70	\$21.50	\$0.00	\$103.08

**Apprentice - PIPEFITTER - Local 537**

**Effective Date - 09/01/2023**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$25.39	\$12.70	\$9.05	\$0.00	\$47.14
2	45	\$28.57	\$12.70	\$21.50	\$0.00	\$62.77
3	60	\$38.09	\$12.70	\$21.50	\$0.00	\$72.29
4	70	\$44.44	\$12.70	\$21.50	\$0.00	\$78.64
5	80	\$50.78	\$12.70	\$21.50	\$0.00	\$84.98

**Effective Date - 03/01/2024**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$26.11	\$12.70	\$9.05	\$0.00	\$47.86
2	45	\$29.38	\$12.70	\$21.50	\$0.00	\$63.58
3	60	\$39.17	\$12.70	\$21.50	\$0.00	\$73.37
4	70	\$45.70	\$12.70	\$21.50	\$0.00	\$79.90
5	80	\$52.22	\$12.70	\$21.50	\$0.00	\$86.42

**Notes:**

\*\* 1:3; 3:15; 1:10 thereafter / Steps are 1 yr.  
Refrig/AC Mechanic \*\*1:1;1:2;2:4;3:6;4:8;5:10;6:12;7:14;8:17;9:20;10:23(Max)

**Apprentice to Journeyworker Ratio:\*\***

PIPELAYER LABORERS - ZONE 1	12/01/2023	\$44.58	\$9.65	\$18.07	\$0.00	\$72.30
For apprentice rates see "Apprentice- LABORER"						
PIPELAYER (HEAVY & HIGHWAY) LABORERS - ZONE 1 (HEAVY & HIGHWAY)	12/01/2023	\$44.58	\$9.65	\$18.07	\$0.00	\$72.30
	06/01/2024	\$46.06	\$9.65	\$18.07	\$0.00	\$73.78
	12/01/2024	\$47.53	\$9.65	\$18.07	\$0.00	\$75.25
	06/01/2025	\$49.03	\$9.65	\$18.07	\$0.00	\$76.75
	12/01/2025	\$50.53	\$9.65	\$18.07	\$0.00	\$78.25
	06/01/2026	\$52.08	\$9.65	\$18.07	\$0.00	\$79.80
	12/01/2026	\$53.58	\$9.65	\$18.07	\$0.00	\$81.30
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)						
PLUMBERS & GASFITTERS PLUMBERS & GASFITTERS LOCAL 12	09/03/2023	\$66.44	\$14.07	\$18.86	\$0.00	\$99.37
	03/03/2024	\$68.24	\$14.07	\$18.86	\$0.00	\$101.17
	09/01/2024	\$70.04	\$14.07	\$18.86	\$0.00	\$102.97
	03/02/2025	\$71.34	\$14.32	\$19.11	\$0.00	\$104.77

Apprentice - PLUMBER/GASFITTER - Local 12

Effective Date - 09/03/2023

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	35	\$23.25	\$14.07	\$6.80	\$0.00	\$44.12
2	40	\$26.58	\$14.07	\$7.72	\$0.00	\$48.37
3	55	\$36.54	\$14.07	\$10.51	\$0.00	\$61.12
4	65	\$43.19	\$14.07	\$12.36	\$0.00	\$69.62
5	75	\$49.83	\$14.07	\$14.22	\$0.00	\$78.12

Effective Date - 03/03/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	35	\$23.88	\$14.07	\$6.80	\$0.00	\$44.75
2	40	\$27.30	\$14.07	\$7.72	\$0.00	\$49.09
3	55	\$37.53	\$14.07	\$10.51	\$0.00	\$62.11
4	65	\$44.36	\$14.07	\$12.36	\$0.00	\$70.79
5	75	\$51.18	\$14.07	\$14.22	\$0.00	\$79.47

Notes:

\*\* 1:2; 2:6; 3:10; 4:14; 5:19/Steps are 1 yr  
Step4 with lic\$69.00, Step5 with lic\$76.87

Apprentice to Journeyworker Ratio:\*\*

PNEUMATIC CONTROLS (TEMP.)	09/01/2023	\$63.48	\$12.70	\$21.50	\$0.00	\$97.68
PIPEFITTERS LOCAL 537	03/01/2024	\$65.28	\$12.70	\$21.50	\$0.00	\$99.48
	09/01/2024	\$67.08	\$12.70	\$21.50	\$0.00	\$101.28
	03/01/2025	\$68.88	\$12.70	\$21.50	\$0.00	\$103.08

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

PNEUMATIC DRILL/TOOL OPERATOR	12/01/2023	\$44.58	\$9.65	\$18.07	\$0.00	\$72.30
LABORERS - ZONE 1						

For apprentice rates see "Apprentice- LABORER"

PNEUMATIC DRILL/TOOL OPERATOR (HEAVY & HIGHWAY)	12/01/2023	\$44.58	\$9.65	\$18.07	\$0.00	\$72.30
LABORERS - ZONE 1 (HEAVY & HIGHWAY)	06/01/2024	\$46.06	\$9.65	\$18.07	\$0.00	\$73.78
	12/01/2024	\$47.53	\$9.65	\$18.07	\$0.00	\$75.25
	06/01/2025	\$49.03	\$9.65	\$18.07	\$0.00	\$76.75
	12/01/2025	\$50.53	\$9.65	\$18.07	\$0.00	\$78.25
	06/01/2026	\$52.08	\$9.65	\$18.07	\$0.00	\$79.80
	12/01/2026	\$53.58	\$9.65	\$18.07	\$0.00	\$81.30

For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"

POWDERMAN & BLASTER	12/01/2023	\$45.33	\$9.65	\$18.07	\$0.00	\$73.05
LABORERS - ZONE 1						

For apprentice rates see "Apprentice- LABORER"



Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
POWDERMAN & BLASTER (HEAVY & HIGHWAY) <i>LABORERS - ZONE 1 (HEAVY &amp; HIGHWAY)</i>	12/01/2023	\$45.33	\$9.65	\$18.07	\$0.00	\$73.05
	06/01/2024	\$46.81	\$9.65	\$18.07	\$0.00	\$74.53
	12/01/2024	\$48.28	\$9.65	\$18.07	\$0.00	\$76.00
	06/01/2025	\$49.78	\$9.65	\$18.07	\$0.00	\$77.50
	12/01/2025	\$51.28	\$9.65	\$18.07	\$0.00	\$79.00
	06/01/2026	\$52.83	\$9.65	\$18.07	\$0.00	\$80.55
	12/01/2026	\$54.33	\$9.65	\$18.07	\$0.00	\$82.05
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"						
POWER SHOVEL/DERRICK/TRENCHING MACHINE <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2023	\$55.03	\$15.00	\$16.40	\$0.00	\$86.43
	06/01/2024	\$56.33	\$15.00	\$16.40	\$0.00	\$87.73
	12/01/2024	\$57.78	\$15.00	\$16.40	\$0.00	\$89.18
	06/01/2025	\$59.08	\$15.00	\$16.40	\$0.00	\$90.48
	12/01/2025	\$60.53	\$15.00	\$16.40	\$0.00	\$91.93
	06/01/2026	\$61.83	\$15.00	\$16.40	\$0.00	\$93.23
	12/01/2026	\$63.28	\$15.00	\$16.40	\$0.00	\$94.68
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
PUMP OPERATOR (CONCRETE) <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2023	\$54.43	\$15.00	\$16.40	\$0.00	\$85.83
	06/01/2024	\$55.71	\$15.00	\$16.40	\$0.00	\$87.11
	12/01/2024	\$57.15	\$15.00	\$16.40	\$0.00	\$88.55
	06/01/2025	\$58.43	\$15.00	\$16.40	\$0.00	\$89.83
	12/01/2025	\$59.87	\$15.00	\$16.40	\$0.00	\$91.27
	06/01/2026	\$61.15	\$15.00	\$16.40	\$0.00	\$92.55
	12/01/2026	\$62.59	\$15.00	\$16.40	\$0.00	\$93.99
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
PUMP OPERATOR (DEWATERING, OTHER) <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2023	\$35.62	\$15.00	\$16.40	\$0.00	\$67.02
	06/01/2024	\$36.47	\$15.00	\$16.40	\$0.00	\$67.87
	12/01/2024	\$37.42	\$15.00	\$16.40	\$0.00	\$68.82
	06/01/2025	\$38.27	\$15.00	\$16.40	\$0.00	\$69.67
	12/01/2025	\$39.22	\$15.00	\$16.40	\$0.00	\$70.62
	06/01/2026	\$40.08	\$15.00	\$16.40	\$0.00	\$71.48
	12/01/2026	\$41.03	\$15.00	\$16.40	\$0.00	\$72.43
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
READY MIX CONCRETE DRIVERS after 4/30/12 (Drivers Hired After 4/30/2012) <i>TEAMSTERS 25 (Metro) - Aggregate</i>	08/01/2022	\$30.40	\$11.91	\$15.25	\$0.00	\$57.56
READY-MIX CONCRETE DRIVER <i>TEAMSTERS 25 (Metro) - Aggregate</i>	08/01/2022	\$34.41	\$11.91	\$15.25	\$0.00	\$61.57
RECLAIMERS <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2023	\$54.43	\$15.00	\$16.40	\$0.00	\$85.83
	06/01/2024	\$55.71	\$15.00	\$16.40	\$0.00	\$87.11
	12/01/2024	\$57.15	\$15.00	\$16.40	\$0.00	\$88.55
	06/01/2025	\$58.43	\$15.00	\$16.40	\$0.00	\$89.83
	12/01/2025	\$59.87	\$15.00	\$16.40	\$0.00	\$91.27
	06/01/2026	\$61.15	\$15.00	\$16.40	\$0.00	\$92.55
	12/01/2026	\$62.59	\$15.00	\$16.40	\$0.00	\$93.99
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
RIDE-ON MOTORIZED BUGGY OPERATOR <i>LABORERS - ZONE 1</i>	12/01/2023	\$44.58	\$9.65	\$18.07	\$0.00	\$72.30
For apprentice rates see "Apprentice- LABORER"						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
ROLLER/SPREADER/MULCHING MACHINE <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2023	\$54.43	\$15.00	\$16.40	\$0.00	\$85.83
	06/01/2024	\$55.71	\$15.00	\$16.40	\$0.00	\$87.11
	12/01/2024	\$57.15	\$15.00	\$16.40	\$0.00	\$88.55
	06/01/2025	\$58.43	\$15.00	\$16.40	\$0.00	\$89.83
	12/01/2025	\$59.87	\$15.00	\$16.40	\$0.00	\$91.27
	06/01/2026	\$61.15	\$15.00	\$16.40	\$0.00	\$92.55
	12/01/2026	\$62.59	\$15.00	\$16.40	\$0.00	\$93.99

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

ROOFER (Inc.Roofers Waterproofing &Roofers Damproofg) <i>ROOFERS LOCAL 33</i>	02/01/2024	\$50.03	\$12.78	\$21.45	\$0.00	\$84.26
	08/01/2024	\$51.53	\$12.78	\$21.45	\$0.00	\$85.76
	02/01/2025	\$52.78	\$12.78	\$21.45	\$0.00	\$87.01
	08/01/2025	\$54.28	\$12.78	\$21.45	\$0.00	\$88.51
	02/01/2026	\$55.53	\$12.78	\$21.45	\$0.00	\$89.76

#### Apprentice - ROOFER - Local 33

Effective Date - 02/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$25.02	\$12.78	\$6.21	\$0.00	\$44.01
2	60	\$30.02	\$12.78	\$21.45	\$0.00	\$64.25
3	65	\$32.52	\$12.78	\$21.45	\$0.00	\$66.75
4	75	\$37.52	\$12.78	\$21.45	\$0.00	\$71.75
5	85	\$42.53	\$12.78	\$21.45	\$0.00	\$76.76

Effective Date - 08/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$25.77	\$12.78	\$6.21	\$0.00	\$44.76
2	60	\$30.92	\$12.78	\$21.45	\$0.00	\$65.15
3	65	\$33.49	\$12.78	\$21.45	\$0.00	\$67.72
4	75	\$38.65	\$12.78	\$21.45	\$0.00	\$72.88
5	85	\$43.80	\$12.78	\$21.45	\$0.00	\$78.03

Notes: \*\* 1:5, 2:6-10, the 1:10; Reroofing: 1:4, then 1:1  
Step 1 is 2000 hrs.; Steps 2-5 are 1000 hrs.  
(Hot Pitch Mechanics' receive \$1.00 hr. above ROOFER)

Apprentice to Journeyworker Ratio:\*\*

ROOFER SLATE / TILE / PRECAST CONCRETE <i>ROOFERS LOCAL 33</i>	02/01/2024	\$50.28	\$12.78	\$21.45	\$0.00	\$84.51
	08/01/2024	\$51.78	\$12.78	\$21.45	\$0.00	\$86.01
	02/01/2025	\$53.03	\$12.78	\$21.45	\$0.00	\$87.26
	08/01/2025	\$54.53	\$12.78	\$21.45	\$0.00	\$88.76
	02/01/2026	\$55.78	\$12.78	\$21.45	\$0.00	\$90.01

For apprentice rates see "Apprentice- ROOFER"

SHEETMETAL WORKER <i>SHEETMETAL WORKERS LOCAL 17 - A</i>	02/01/2024	\$57.86	\$14.43	\$27.07	\$2.93	\$102.29
	08/01/2024	\$59.61	\$14.43	\$27.07	\$2.93	\$104.04
	02/01/2025	\$61.36	\$14.43	\$27.07	\$2.93	\$105.79
	08/01/2025	\$63.21	\$14.43	\$27.07	\$2.93	\$107.64
	02/01/2026	\$65.16	\$14.43	\$27.07	\$2.93	\$109.59

Apprentice - SHEET METAL WORKER - Local 17-A

Effective Date - 02/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	42	\$24.30	\$14.43	\$6.13	\$0.00	\$44.86
2	42	\$24.30	\$14.43	\$6.13	\$0.00	\$44.86
3	47	\$27.19	\$14.43	\$12.11	\$1.61	\$55.34
4	47	\$27.19	\$14.43	\$12.11	\$1.61	\$55.34
5	52	\$30.09	\$14.43	\$13.09	\$1.73	\$59.34
6	52	\$30.09	\$14.43	\$13.34	\$1.73	\$59.59
7	60	\$34.72	\$14.43	\$14.75	\$1.92	\$65.82
8	65	\$37.61	\$14.43	\$15.73	\$2.03	\$69.80
9	75	\$43.40	\$14.43	\$17.69	\$2.27	\$77.79
10	85	\$49.18	\$14.43	\$19.15	\$2.48	\$85.24

Effective Date - 08/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	42	\$25.04	\$14.43	\$6.13	\$0.00	\$45.60
2	42	\$25.04	\$14.43	\$6.13	\$0.00	\$45.60
3	47	\$28.02	\$14.43	\$12.11	\$1.64	\$56.20
4	47	\$28.02	\$14.43	\$12.11	\$1.64	\$56.20
5	52	\$31.00	\$14.43	\$13.09	\$1.76	\$60.28
6	52	\$31.00	\$14.43	\$13.34	\$1.76	\$60.53
7	60	\$35.77	\$14.43	\$14.75	\$1.95	\$66.90
8	65	\$38.75	\$14.43	\$15.73	\$2.07	\$70.98
9	75	\$44.71	\$14.43	\$17.69	\$2.30	\$79.13
10	85	\$50.67	\$14.43	\$19.15	\$2.53	\$86.78

Notes:

Steps are 6 mos.

Apprentice to Journeyworker Ratio:1:4

SPECIALIZED EARTH MOVING EQUIP < 35 TONS	12/01/2023	\$40.34	\$14.41	\$18.67	\$0.00	\$73.42
TEAMSTERS JOINT COUNCIL NO. 10 ZONE A	06/01/2024	\$41.34	\$14.41	\$18.67	\$0.00	\$74.42
	08/01/2024	\$41.34	\$14.91	\$18.67	\$0.00	\$74.92
	12/01/2024	\$41.34	\$14.91	\$20.17	\$0.00	\$76.42
	06/01/2025	\$42.34	\$14.91	\$20.17	\$0.00	\$77.42
	08/01/2025	\$42.34	\$15.41	\$20.17	\$0.00	\$77.92
	12/01/2025	\$42.34	\$15.41	\$21.78	\$0.00	\$79.53
	06/01/2026	\$43.34	\$15.41	\$21.78	\$0.00	\$80.53
	08/01/2026	\$43.34	\$15.91	\$21.78	\$0.00	\$81.03
	12/01/2026	\$43.34	\$15.91	\$23.52	\$0.00	\$82.77

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
SPECIALIZED EARTH MOVING EQUIP > 35 TONS <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE A</i>	12/01/2023	\$40.63	\$14.41	\$18.67	\$0.00	\$73.71
	06/01/2024	\$41.63	\$14.41	\$18.67	\$0.00	\$74.71
	08/01/2024	\$41.63	\$14.91	\$18.67	\$0.00	\$75.21
	12/01/2024	\$41.63	\$14.91	\$20.17	\$0.00	\$76.71
	06/01/2025	\$42.63	\$14.91	\$20.17	\$0.00	\$77.71
	08/01/2025	\$42.63	\$15.41	\$20.17	\$0.00	\$78.21
	12/01/2025	\$42.63	\$15.41	\$21.78	\$0.00	\$79.82
	06/01/2026	\$43.63	\$15.41	\$21.78	\$0.00	\$80.82
	08/01/2026	\$43.63	\$15.91	\$21.78	\$0.00	\$81.32
	12/01/2026	\$43.63	\$15.91	\$23.52	\$0.00	\$83.06
SPRINKLER FITTER <i>SPRINKLER FITTERS LOCAL 550 - (Section A) Zone 1</i>	10/01/2023	\$67.95	\$10.90	\$23.20	\$0.00	\$102.05
	03/01/2024	\$69.75	\$10.90	\$23.20	\$0.00	\$103.85
	10/01/2024	\$71.55	\$10.90	\$23.20	\$0.00	\$105.65
	03/01/2025	\$73.35	\$10.90	\$23.20	\$0.00	\$107.45

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

Effective Date - 10/01/2023

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	35	\$23.78	\$10.90	\$12.80	\$0.00	\$47.48
2	40	\$27.18	\$10.90	\$13.60	\$0.00	\$51.68
3	45	\$30.58	\$10.90	\$14.40	\$0.00	\$55.88
4	50	\$33.98	\$10.90	\$15.20	\$0.00	\$60.08
5	55	\$37.37	\$10.90	\$16.00	\$0.00	\$64.27
6	60	\$40.77	\$10.90	\$16.80	\$0.00	\$68.47
7	65	\$44.17	\$10.90	\$17.60	\$0.00	\$72.67
8	70	\$47.57	\$10.90	\$18.40	\$0.00	\$76.87
9	75	\$50.96	\$10.90	\$19.20	\$0.00	\$81.06
10	80	\$54.36	\$10.90	\$20.00	\$0.00	\$85.26

Effective Date - 03/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	35	\$24.41	\$10.90	\$12.80	\$0.00	\$48.11
2	40	\$27.90	\$10.90	\$13.60	\$0.00	\$52.40
3	45	\$31.39	\$10.90	\$14.40	\$0.00	\$56.69
4	50	\$34.88	\$10.90	\$15.20	\$0.00	\$60.98
5	55	\$38.36	\$10.90	\$16.00	\$0.00	\$65.26
6	60	\$41.85	\$10.90	\$16.80	\$0.00	\$69.55
7	65	\$45.34	\$10.90	\$17.60	\$0.00	\$73.84
8	70	\$48.83	\$10.90	\$18.40	\$0.00	\$78.13
9	75	\$52.31	\$10.90	\$19.20	\$0.00	\$82.41
10	80	\$55.80	\$10.90	\$20.00	\$0.00	\$86.70

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

Apprentice to Journeyworker Ratio:1:3

STEAM BOILER OPERATOR	12/01/2023	\$54.43	\$15.00	\$16.40	\$0.00	\$85.83
OPERATING ENGINEERS LOCAL 4	06/01/2024	\$55.71	\$15.00	\$16.40	\$0.00	\$87.11
	12/01/2024	\$57.15	\$15.00	\$16.40	\$0.00	\$88.55
	06/01/2025	\$58.43	\$15.00	\$16.40	\$0.00	\$89.83
	12/01/2025	\$59.87	\$15.00	\$16.40	\$0.00	\$91.27
	06/01/2026	\$61.15	\$15.00	\$16.40	\$0.00	\$92.55
	12/01/2026	\$62.59	\$15.00	\$16.40	\$0.00	\$93.99

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
TAMPERS, SELF-PROPELLED OR TRACTOR DRAWN <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2023	\$54.43	\$15.00	\$16.40	\$0.00	\$85.83
	06/01/2024	\$55.71	\$15.00	\$16.40	\$0.00	\$87.11
	12/01/2024	\$57.15	\$15.00	\$16.40	\$0.00	\$88.55
	06/01/2025	\$58.43	\$15.00	\$16.40	\$0.00	\$89.83
	12/01/2025	\$59.87	\$15.00	\$16.40	\$0.00	\$91.27
	06/01/2026	\$61.15	\$15.00	\$16.40	\$0.00	\$92.55
	12/01/2026	\$62.59	\$15.00	\$16.40	\$0.00	\$93.99
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
TELECOMMUNICATION TECHNICIAN <i>ELECTRICIANS LOCAL 103</i>	09/01/2023	\$49.11	\$13.00	\$19.68	\$0.00	\$81.79
	03/01/2024	\$49.49	\$13.00	\$20.19	\$0.00	\$82.68
	09/01/2024	\$51.02	\$13.00	\$20.24	\$0.00	\$84.26
	03/01/2025	\$51.98	\$13.00	\$20.27	\$0.00	\$85.25
	09/01/2025	\$53.51	\$13.00	\$20.32	\$0.00	\$86.83
	03/01/2026	\$54.47	\$13.00	\$20.34	\$0.00	\$87.81
	09/01/2026	\$56.00	\$13.00	\$20.39	\$0.00	\$89.39
	03/01/2027	\$56.95	\$13.00	\$20.42	\$0.00	\$90.37
	09/01/2027	\$58.49	\$13.00	\$20.46	\$0.00	\$91.95
	03/01/2028	\$59.45	\$13.00	\$20.49	\$0.00	\$92.94

Apprentice - TELECOMMUNICATION TECHNICIAN - Local 103

Effective Date - 09/01/2023

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	45	\$22.10	\$13.00	\$0.66	\$0.00	\$35.76
2	45	\$22.10	\$13.00	\$0.66	\$0.00	\$35.76
3	50	\$24.56	\$13.00	\$15.66	\$0.00	\$53.22
4	50	\$24.56	\$13.00	\$15.66	\$0.00	\$53.22
5	55	\$27.01	\$13.00	\$16.06	\$0.00	\$56.07
6	60	\$29.47	\$13.00	\$16.46	\$0.00	\$58.93
7	65	\$31.92	\$13.00	\$16.87	\$0.00	\$61.79
8	70	\$34.38	\$13.00	\$17.27	\$0.00	\$64.65
9	75	\$36.83	\$13.00	\$17.67	\$0.00	\$67.50
10	80	\$39.29	\$13.00	\$18.07	\$0.00	\$70.36

Effective Date - 03/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	45	\$22.27	\$13.00	\$0.67	\$0.00	\$35.94
2	45	\$22.27	\$13.00	\$0.67	\$0.00	\$35.94
3	50	\$24.75	\$13.00	\$16.16	\$0.00	\$53.91
4	50	\$24.75	\$13.00	\$16.16	\$0.00	\$53.91
5	55	\$27.22	\$13.00	\$16.57	\$0.00	\$56.79
6	60	\$29.69	\$13.00	\$16.97	\$0.00	\$59.66
7	65	\$32.17	\$13.00	\$17.38	\$0.00	\$62.55
8	70	\$34.64	\$13.00	\$17.78	\$0.00	\$65.42
9	75	\$37.12	\$13.00	\$18.18	\$0.00	\$68.30
10	80	\$39.59	\$13.00	\$18.58	\$0.00	\$71.17

Notes:

Apprentice to Journeyworker Ratio:1:1

TERRAZZO FINISHERS	02/01/2024	\$61.34	\$11.49	\$23.59	\$0.00	\$96.42
BRICKLAYERS LOCAL 3 - MARBLE & TILE	08/01/2024	\$63.44	\$11.49	\$23.59	\$0.00	\$98.52
	02/01/2025	\$64.74	\$11.49	\$23.59	\$0.00	\$99.82
	08/01/2025	\$66.89	\$11.49	\$23.59	\$0.00	\$101.97
	02/01/2026	\$68.24	\$11.49	\$23.59	\$0.00	\$103.32
	08/01/2026	\$70.44	\$11.49	\$23.59	\$0.00	\$105.52
	02/01/2027	\$71.84	\$11.49	\$23.59	\$0.00	\$106.92

Apprentice - TERRAZZO FINISHER - Local 3 Marble & Tile

Effective Date - 02/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$30.67	\$11.49	\$23.59	\$0.00	\$65.75
2	60	\$36.80	\$11.49	\$23.59	\$0.00	\$71.88
3	70	\$42.94	\$11.49	\$23.59	\$0.00	\$78.02
4	80	\$49.07	\$11.49	\$23.59	\$0.00	\$84.15
5	90	\$55.21	\$11.49	\$23.59	\$0.00	\$90.29

Effective Date - 08/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$31.72	\$11.49	\$23.59	\$0.00	\$66.80
2	60	\$38.06	\$11.49	\$23.59	\$0.00	\$73.14
3	70	\$44.41	\$11.49	\$23.59	\$0.00	\$79.49
4	80	\$50.75	\$11.49	\$23.59	\$0.00	\$85.83
5	90	\$57.10	\$11.49	\$23.59	\$0.00	\$92.18

Notes:

Apprentice to Journeyworker Ratio:1:3

TEST BORING DRILLER	12/01/2023	\$48.33	\$9.65	\$18.22	\$0.00	\$76.20
LABORERS - FOUNDATION AND MARINE	06/01/2024	\$49.81	\$9.65	\$18.22	\$0.00	\$77.68
	12/01/2024	\$51.28	\$9.65	\$18.22	\$0.00	\$79.15
	06/01/2025	\$52.78	\$9.65	\$18.22	\$0.00	\$80.65
	12/01/2025	\$54.28	\$9.65	\$18.22	\$0.00	\$82.15
	06/01/2026	\$55.83	\$9.65	\$18.22	\$0.00	\$83.70
	12/01/2026	\$57.33	\$9.65	\$18.22	\$0.00	\$85.20

For apprentice rates see "Apprentice- LABORER"

TEST BORING DRILLER HELPER	12/01/2023	\$44.45	\$9.65	\$18.22	\$0.00	\$72.32
LABORERS - FOUNDATION AND MARINE	06/01/2024	\$45.93	\$9.65	\$18.22	\$0.00	\$73.80
	12/01/2024	\$47.40	\$9.65	\$18.22	\$0.00	\$75.27
	06/01/2025	\$48.90	\$9.65	\$18.22	\$0.00	\$76.77
	12/01/2025	\$50.40	\$9.65	\$18.22	\$0.00	\$78.27
	06/01/2026	\$51.95	\$9.65	\$18.22	\$0.00	\$79.82
	12/01/2026	\$53.45	\$9.65	\$18.22	\$0.00	\$81.32

For apprentice rates see "Apprentice- LABORER"

TEST BORING LABORER	12/01/2023	\$44.33	\$9.65	\$18.22	\$0.00	\$72.20
LABORERS - FOUNDATION AND MARINE	06/01/2024	\$45.81	\$9.65	\$18.22	\$0.00	\$73.68
	12/01/2024	\$47.28	\$9.65	\$18.22	\$0.00	\$75.15
	06/01/2025	\$48.78	\$9.65	\$18.22	\$0.00	\$76.65
	12/01/2025	\$50.28	\$9.65	\$18.22	\$0.00	\$78.15
	06/01/2026	\$51.83	\$9.65	\$18.22	\$0.00	\$79.70
	12/01/2026	\$53.33	\$9.65	\$18.22	\$0.00	\$81.20

For apprentice rates see "Apprentice- LABORER"



Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
TRACTORS/PORTABLE STEAM GENERATORS <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2023	\$54.43	\$15.00	\$16.40	\$0.00	\$85.83
	06/01/2024	\$55.71	\$15.00	\$16.40	\$0.00	\$87.11
	12/01/2024	\$57.15	\$15.00	\$16.40	\$0.00	\$88.55
	06/01/2025	\$58.43	\$15.00	\$16.40	\$0.00	\$89.83
	12/01/2025	\$59.87	\$15.00	\$16.40	\$0.00	\$91.27
	06/01/2026	\$61.15	\$15.00	\$16.40	\$0.00	\$92.55
	12/01/2026	\$62.59	\$15.00	\$16.40	\$0.00	\$93.99
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
TRAILERS FOR EARTH MOVING EQUIPMENT <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE A</i>	12/01/2023	\$40.92	\$14.41	\$18.67	\$0.00	\$74.00
	06/01/2024	\$41.92	\$14.41	\$18.67	\$0.00	\$75.00
	08/01/2024	\$41.92	\$14.91	\$18.67	\$0.00	\$75.50
	12/01/2024	\$41.92	\$14.91	\$20.17	\$0.00	\$77.00
	06/01/2025	\$42.92	\$14.91	\$20.17	\$0.00	\$78.00
	08/01/2025	\$42.92	\$15.41	\$20.17	\$0.00	\$78.50
	12/01/2025	\$42.92	\$15.41	\$21.78	\$0.00	\$80.11
	06/01/2026	\$43.92	\$15.41	\$21.78	\$0.00	\$81.11
	08/01/2026	\$43.92	\$15.91	\$21.78	\$0.00	\$81.61
	12/01/2026	\$43.92	\$15.91	\$23.52	\$0.00	\$83.35
TUNNEL WORK - COMPRESSED AIR <i>LABORERS (COMPRESSED AIR)</i>	12/01/2023	\$56.56	\$9.65	\$18.67	\$0.00	\$84.88
	06/01/2024	\$58.04	\$9.65	\$18.67	\$0.00	\$86.36
	12/01/2024	\$59.51	\$9.65	\$18.67	\$0.00	\$87.83
	06/01/2025	\$61.01	\$9.65	\$18.67	\$0.00	\$89.33
	12/01/2025	\$62.51	\$9.65	\$18.67	\$0.00	\$90.83
	06/01/2026	\$64.06	\$9.65	\$18.67	\$0.00	\$92.38
	12/01/2026	\$65.56	\$9.65	\$18.67	\$0.00	\$93.88
For apprentice rates see "Apprentice- LABORER"						
TUNNEL WORK - COMPRESSED AIR (HAZ. WASTE) <i>LABORERS (COMPRESSED AIR)</i>	12/01/2023	\$58.56	\$9.65	\$18.67	\$0.00	\$86.88
	06/01/2024	\$60.04	\$9.65	\$18.67	\$0.00	\$88.36
	12/01/2024	\$61.51	\$9.65	\$18.67	\$0.00	\$89.83
	06/01/2025	\$63.01	\$9.65	\$18.67	\$0.00	\$91.33
	12/01/2025	\$64.51	\$9.65	\$18.67	\$0.00	\$92.83
	06/01/2026	\$66.06	\$9.65	\$18.67	\$0.00	\$94.38
	12/01/2026	\$67.56	\$9.65	\$18.67	\$0.00	\$95.88
For apprentice rates see "Apprentice- LABORER"						
TUNNEL WORK - FREE AIR <i>LABORERS (FREE AIR TUNNEL)</i>	12/01/2023	\$48.63	\$9.65	\$18.67	\$0.00	\$76.95
	06/01/2024	\$50.11	\$9.65	\$18.67	\$0.00	\$78.43
	12/01/2024	\$51.58	\$9.65	\$18.67	\$0.00	\$79.90
	06/01/2025	\$53.08	\$9.65	\$18.67	\$0.00	\$81.40
	12/01/2025	\$54.58	\$9.65	\$18.67	\$0.00	\$82.90
	06/01/2026	\$56.13	\$9.65	\$18.67	\$0.00	\$84.45
	12/01/2026	\$57.63	\$9.65	\$18.67	\$0.00	\$85.95
For apprentice rates see "Apprentice- LABORER"						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
TUNNEL WORK - FREE AIR (HAZ. WASTE) <i>LABORERS (FREE AIR TUNNEL)</i>	12/01/2023	\$50.63	\$9.65	\$18.67	\$0.00	\$78.95
	06/01/2024	\$52.11	\$9.65	\$18.67	\$0.00	\$80.43
	12/01/2024	\$53.58	\$9.65	\$18.67	\$0.00	\$81.90
	06/01/2025	\$55.08	\$9.65	\$18.67	\$0.00	\$83.40
	12/01/2025	\$56.58	\$9.65	\$18.67	\$0.00	\$84.90
	06/01/2026	\$58.13	\$9.65	\$18.67	\$0.00	\$86.45
	12/01/2026	\$59.63	\$9.65	\$18.67	\$0.00	\$87.95
For apprentice rates see "Apprentice- LABORER"						
VAC-HAUL <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE A</i>	12/01/2023	\$40.34	\$14.41	\$18.67	\$0.00	\$73.42
	06/01/2024	\$41.34	\$14.41	\$18.67	\$0.00	\$74.42
	08/01/2024	\$41.34	\$14.91	\$18.67	\$0.00	\$74.92
	12/01/2024	\$41.34	\$14.91	\$20.17	\$0.00	\$76.42
	06/01/2025	\$42.34	\$14.91	\$20.17	\$0.00	\$77.42
	08/01/2025	\$42.34	\$15.41	\$20.17	\$0.00	\$77.92
	12/01/2025	\$42.34	\$15.41	\$21.78	\$0.00	\$79.53
	06/01/2026	\$43.34	\$15.41	\$21.78	\$0.00	\$80.53
	08/01/2026	\$43.34	\$15.91	\$21.78	\$0.00	\$81.03
	12/01/2026	\$43.34	\$15.91	\$23.52	\$0.00	\$82.77
WAGON DRILL OPERATOR <i>LABORERS - ZONE 1</i>	12/01/2023	\$44.58	\$9.65	\$18.07	\$0.00	\$72.30
	For apprentice rates see "Apprentice- LABORER"					
WAGON DRILL OPERATOR (HEAVY & HIGHWAY) <i>LABORERS - ZONE 1 (HEAVY &amp; HIGHWAY)</i>	12/01/2023	\$44.58	\$9.65	\$18.07	\$0.00	\$72.30
	06/01/2024	\$46.06	\$9.65	\$18.07	\$0.00	\$73.78
	12/01/2024	\$47.53	\$9.65	\$18.07	\$0.00	\$75.25
	06/01/2025	\$49.03	\$9.65	\$18.07	\$0.00	\$76.75
	12/01/2025	\$50.53	\$9.65	\$18.07	\$0.00	\$78.25
	06/01/2026	\$52.08	\$9.65	\$18.07	\$0.00	\$79.80
	12/01/2026	\$53.58	\$9.65	\$18.07	\$0.00	\$81.30
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"						
WASTE WATER PUMP OPERATOR <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2023	\$55.03	\$15.00	\$16.40	\$0.00	\$86.43
	06/01/2024	\$56.33	\$15.00	\$16.40	\$0.00	\$87.73
	12/01/2024	\$57.78	\$15.00	\$16.40	\$0.00	\$89.18
	06/01/2025	\$59.08	\$15.00	\$16.40	\$0.00	\$90.48
	12/01/2025	\$60.53	\$15.00	\$16.40	\$0.00	\$91.93
	06/01/2026	\$61.83	\$15.00	\$16.40	\$0.00	\$93.23
	12/01/2026	\$63.28	\$15.00	\$16.40	\$0.00	\$94.68
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
WATER METER INSTALLER <i>PLUMBERS &amp; GASFITTERS LOCAL 12</i>	09/03/2023	\$66.44	\$14.07	\$18.86	\$0.00	\$99.37
	03/03/2024	\$68.24	\$14.07	\$18.86	\$0.00	\$101.17
	09/01/2024	\$70.04	\$14.07	\$18.86	\$0.00	\$102.97
	03/02/2025	\$71.34	\$14.32	\$19.11	\$0.00	\$104.77
For apprentice rates see "Apprentice- PLUMBER/PIPEFITTER" or "PLUMBER/GASFITTER"						

Additional Apprentice Information:

Minimum wage rates for apprentices employed on public works projects are listed above as a percentage of the pre-determined hourly wage rate established by the Commissioner under the provisions of the M.G.L. c. 149, ss. 26-27D. Apprentice ratios are established by the Division of Apprenticeship Training pursuant to M.G.L. c. 23, ss. 11E-11L.

All apprentices must be registered with the Division of Apprenticeship Training in accordance with M.G.L. c. 23, ss. 11E-11L.

All steps are six months (1000 hours.)  
Ratios are expressed in allowable number of apprentices to journeymen or fraction thereof, unless otherwise specified.

- \*\* Multiple ratios are listed in the comment field.
- \*\*\* APP to JM; 1:1, 2:2, 2:3, 3:4, 4:4, 4:5, 4:6, 5:7, 6:7, 6:8, 6:9, 7:10, 8:10, 8:11, 8:12, 9:13, 10:13, 10:14, etc.
- \*\*\*\* APP to JM; 1:1, 1:2, 2:3, 2:4, 3:5, 4:6, 4:7, 5:8, 6:9, 6:10, 7:11, 8:12, 8:13, 9:14, 10:15, 10:16, etc.



**WAGE THEFT ORDINANCE CERTIFICATION FORM**  
**CITY OF SOMERVILLE CODE OF ORDINANCES / 2019 / ORDINANCE NO. 2019-24 et seq.\*.**

**Instructions:** Contractors shall complete this form and sign and date where indicated below. This form will be attached to the contract or subcontract and the certifications made herein shall be incorporated as part of such contract or subcontract.

**Purpose:** The purpose of this form is to ensure that such vendors comply with applicable federal and state wage laws, treat their employees fairly and ensure that wage theft does not occur on their projects.

**Definition of “Wage Theft”:** an action by an Employer, their officers, agents or employees causing an Employer not to make a timely and/or complete payment of Wages, not to pay the Minimum Wage or Prevailing Wage, or not to pay Overtime earned and owing to an Employee.

**CERTIFICATIONS**

Whenever the City of Somerville is procuring construction services subject to the provisions of M.G.L. c. 149, c. 149A or c. 30, §39M, the terms of the Somerville Wage Theft Ordinance shall be incorporated into the procurement documents and made part of the specifications and contract. Any person, company or corporation shall acknowledge, in writing, receipt of said requirements with their bid or proposal and/or contract.

The undersigned bidder, proposer, contractor, subcontractor and/or trade contractor hereby acknowledges receipt of the below referenced requirements and verifies under oath that they will comply with the conditions set forth in the Somerville Wage Theft Ordinance 2019-24, which shall be incorporated into any contract entered into between the City and contractor.

The contractor shall not have been found within the past five years by a court or governmental agency in violation of any law relating to providing workers compensation insurance coverage, misclassification of employees as independent contractors, payment of employer payroll taxes, employee income tax withholding, earned sick time, wage and hour laws, prompt payment laws, or prevailing wage laws.

The contractor shall maintain appropriate industrial accident insurance sufficient to provide coverage for all the employees on the project in accordance with M.G.L. c. 152 and provide documentary proof of such coverage included with the contractor's submitted bid to the inspectional services department to be maintained as a public record.

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\*Read entire ordinance online at:

[https://library.municode.com/ma/somerville/ordinances/code\\_of\\_ordinances?nodeId=1001376](https://library.municode.com/ma/somerville/ordinances/code_of_ordinances?nodeId=1001376) or request from the Procurement & Contracting Services Department.

Bid ref.:

Contract Number:

The contractor shall properly classify employees as employees rather than independent contractors and treat them accordingly for purposes of prevailing wages and overtime, workers compensation insurance coverage, social security taxes and state and federal income tax withholding. (M.G.L. c. 149, § 148B on employee classification).

The contractor shall comply with M.G.L. c. 151, § 1A and M.G.L. c. 149, § 148 with respect to the payment of wages.

The city contractor must make arrangements to ensure that each employee of every contractor and subcontractor of any tier entering or leaving the project individually completes the appropriate entries in a daily sign-in/out log. The sign in/out log shall include: the location of the project; current date; printed employee name; signed employee name; name of employee's employer and the time of each entry or exiting. The log shall contain a prominent notice that employees are entitled under state law to receive the prevailing wage rate for their work on the project. Such sign-in/out logs shall be provided to the city on a weekly basis with the certified payrolls and shall be a public record.

Each contractor of any tier, prior to performing any work on the project, shall sign under oath and provide to the city contractor a certification that they are not debarred or otherwise prevented from bidding for or performing work on a public project in the Commonwealth of Massachusetts or in the city.

The contractor must comply with state and, where applicable, federal prevailing wage laws. Contractor shall submit weekly certified payrolls to the City for all employees working on the contract including subcontracted workers at all tiers. Contractor shall use the current standard Massachusetts weekly certified payroll report form. Each contractor shall provide a copy of the OSHA 10 card for every employee attached to the first certified payroll they submit on which the employee appears.

Each payment requisition shall include the following certification:

I certify under oath that each payment requisition is in full compliance with all obligations forth in the Wage Theft Ordinance.

SIGNED UNDER THE PAINS AND PENALTIES OF PERJURY,

**Signature:** \_\_\_\_\_  
(Duly Authorized Representative of Contractor)

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

**Name of Contractor:** \_\_\_\_\_

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

Online at: <https://www.somervillema.gov/procurement>

# MASSACHUSETTS WEEKLY CERTIFIED PAYROLL REPORT FORM



Company's Name:		Address:				Phone No.:				Payroll No.:									
Employer's Signature:		Title:				Contract No:		Tax Payer ID Number		Work Week Ending:									
Awarding Authority's Name:		Public Works Project Name:				Public Works Project Location:				Min. Wage Rate Sheet Number									
General / Prime Contractor's Name:		Subcontractor's Name:						"Employer" Hourly Fringe Benefit Contributions											
												(B+C+D+E)		(A x F)					
Employee Name & Complete Address	Work Classification:	Employee is OSHA 10 certified (?)	Appr. Rate (%)	Hours Worked								Project Hours (A) All Other Hours	Hourly Base Wage (B)	Health & Welfare Insurance (C)	ERISA Pension Plan (D)	Supp. Unemp. (E)	Total Hourly Prev. Wage (F)	Project Gross Wages	Check No. (H)
				Su.	Mo.	Tu.	We.	Th.	Fr.	Sa.	Total Gross Wages								

Are all apprentice employees identified above currently registered with the MA DLS's Division of Apprentices Standards? YES ☐ NO ☐

For all apprentices performing work during the reporting period, attach a copy of the apprentice identification card issued by the Massachusetts Department of Labor Standards / Division of Apprentices Standards. No apprentices are identified above ☐

**NOTE:** Pursuant to MGL c. 149, s. 27B, every contractor and subcontractor is required to submit a true and accurate copy of their certified weekly payroll records to the awarding authority by first-class mail or e-mail. In addition, each weekly payroll must be accompanied by a statement of compliance signed by the employer. Failure to comply may result in the commencement of a criminal action or the issuance of a civil citation.

Form:\_\_\_\_\_  
Contract Number:\_\_\_\_\_

CITY OF SOMERVILLE

Rev. 11/14/2014



## **OSHA GENERAL CONTRACTOR CERTIFICATION FORM**

**Pursuant to Chapter 306 of the Acts of 2004  
An Act Relative to the Health and Safety on Construction Projects**

### **GENERAL CONTRACTOR'S CERTIFICATION – BID FORM**

I, the undersigned, hereby certify under penalties of perjury that I, and all subcontractors who are not filed sub-bidders, shall:

(1) certify that all employees to be employed at the worksite will have successfully completed a course in construction safety and health approved by the United States Occupational Safety and Health Administration that is a least 10 hours in duration at the time the employee begins work and who shall furnish documentation of successful completion of said course with the first certified payroll report for each employee.

As used in this certification, the word "person" shall mean any natural person, business, partnership, corporation, union, committee, club, or other organization, entity, or group of individuals.

**Signature:** \_\_\_\_\_  
**(Individual Submitting Bid)**  
**Duly Authorized**

**Name of Business or Entity:**\_\_\_\_\_

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

**RETURN THIS FORM WITH YOUR BID**



## **SOMERVILLE SUPPLIER DIVERSITY CERTIFICATION FORM**

### **Background**

The City of Somerville is an equal opportunity employer and encourages businesses to apply to work with the City that are representative of the City's diverse community. In an effort to increase the opportunities for disadvantaged and small businesses within Somerville and surrounding communities, the City recognizes Massachusetts' Operational Services Division's Supplier Diversity Office certification program.

### **Application Process**

Applicable parties may learn more about the Commonwealth's supplier diversity certification process and apply here <https://www.mass.gov/supplier-diversity-office>. During the certification process, which takes approximately 30 days, the SDO investigates applicant companies to make sure they meet applicable legal requirements. Under SDO regulations, the applicant firm must prove it is at least 51% owned and dominantly controlled by adult minority, women, Portuguese, or veteran principals who are U.S. citizens or lawful permanent residents. Firms also must be ongoing and independent.

### **Certifications**

Check all those that apply:

- ☐ **Minority Business Enterprises (MBE)**
- ☐ **Women Business Enterprises (WBE)**
- ☐ **Veteran Business Enterprises (VBE)**
- ☐ **Portuguese Business Enterprises (PBE)**
- ☐ **Other** \_\_\_\_\_

The undersigned certifies that the applicant has received certification from the Massachusetts Supplier Diversity Office for the SDO category/categories listed above and has provided the City of Somerville with a copy of the SDO certification letter.

### **CERTIFIED BY:**

**Signature:** \_\_\_\_\_  
(Duly Authorized Representative of Vendor)

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

**Name of Vendor:** \_\_\_\_\_

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





## SOMERVILLE ORDINANCE TO SAFEGUARD

## VULNERABLE ROAD USERS

CITY OF SOMERVILLE CODE OF ORDINANCES ARTICLE VIII, SEC. 12-117 et seq.

Prospective contractors must familiarize themselves with the City of Somerville's Ordinance to Protect Vulnerable Road Users. The full text of this local law can be found [here](#).

1. **Request for Inspection:** Inspections are conducted on Thursdays from 4pm-7pm at the Somerville Department of Public Works, located at 1 Franey Road. Each inspection takes approximately 20 minutes.

a. Any vendor covered by this Ordinance shall complete an inspection request form and email it to [fleetinspections@somervillema.gov](mailto:fleetinspections@somervillema.gov).

b. Please submit request form no later than 3pm on the Tuesday before the requested inspection date.

2. **Fee:** The fee for the initial inspection is \$100. The fee for a renewal inspection (every two years) is \$50.

a. Payment of the fee is due upon scheduling of the inspection. The fee can be paid via check or credit card. Checks should be made out to the City of Somerville and include the vendor's phone number.

3. **Approval:** Vehicles inspected and approved by the Fleet Division will have an inspection approval sticker affixed to the windshield of the vehicle. A copy of the inspection report and certificate of inspection shall be issued to the vendor.

a. Inspection stickers are not transferable.

b. Any major overhaul of safeguard equipment shall be required to be re-inspected.

4. **Rejection:** If a vehicle is rejected for failing to comply with any of the technical specifications outlined in the ordinance, it shall be corrected and henceforth re-inspected within 30 days at no additional fee.

a. If a second inspection results in a rejection, a fee of \$50 will be required for any subsequent inspections.

b. Any vendor who fails to comply within 60 days of their first inspection may be subject to having their contract cancelled.

5. **Questions:** Please direct questions about vehicle inspections to Department of Public Works, at:

[fleetinspections@somervillema.gov](mailto:fleetinspections@somervillema.gov) or call 617-625-6600 ext. 5100

### Acknowledgement

In accordance with Sec. 12-119 "Requirements" in the Ordinance, bidders must sign the following:

Unless certified that the Ordinance is not applicable to this contract or otherwise waived by the City, I acknowledge that my company has installed (or will install prior to commencing work for the contract) side guards, cross-over mirrors or equivalent blind spot countermeasures, convex mirrors or equivalent blind spot countermeasures, side-visible turn signals, and appropriate warning signage, in accordance with SCO Chapter 12, Article VII on all large vehicles it uses or will use within the City of Somerville in connection with any contract.

\_\_\_\_\_  
Authorized Signatory's Name

\_\_\_\_\_  
Date

\_\_\_\_\_  
Company Name

I certify that the Ordinance does not apply to this contract for the following reason:

☐ Vehicles do not meet or exceed Class 3 GVWR

☐ Vehicles do not exceed 15 MPH

☐ No vehicles on project

☐ Other: \_\_\_\_\_

# ORDINANCE REQUIREMENTS

## LATERAL PROTECTIVE DEVICES (SIDE GUARDS)

- Vehicles must have device installed between the front & rear wheels to help prevent injuries to vulnerable road users, particularly from falling underneath the vehicle.



## SIDE-VISIBLE TURN SIGNALS

- Vehicles must have at least one turn signal lamp on each side of the vehicle that is visible from any point to the left and right side along the full length of the vehicle.



## CONVEX MIRRORS

- Vehicles must have mirrors which enable the driver to see anything that is three feet above the road and one foot in feet of or along side of the vehicle.



## CROSS-OVER MIRRORS

- Vehicles must have mirrors that enable the driver to see anything at least three feet tall passing one foot in front of the vehicle and the area in front of the bumper where direct vision is not possible.

## SAFETY DECALS

- Vehicles must have a minimum of three reflective decals on the rear and sides.
- The decals must be “safety yellow” in color and include language or images that warn of blind spots.

# COMMON QUESTIONS

**WHAT TYPES OF VEHICLES DOES THIS ORDINANCE APPLY TO?** This ordinance applies to Class 3 or above vehicles with a gross vehicle weight rating exceeding 10,000 lbs., except for an ambulance, fire apparatus, low-speed vehicle with max speed under 15 mph, or agricultural tractors.

**CAN TOOL BOXES BE USED AS SIDE GUARDS?** Yes, as long as the tool box meets all of the required measurements in the ordinance.

**IF I RENT TRUCKS FOR A JOB, DO THOSE VEHICLES NEED TO BE INSPECTED AND PERMITTED?** Yes.

**DO SUBCONTRACTORS' TRUCKS WORKING ON A CITY CONTRACT NEED TO BE INSPECTED & PERMITTED?** Yes.

**WILL THE CITY DO AN OFF-SITE INSPECTION FOR LARGER FLEETS?** Yes, depending on the availability of inspectors and the distance to the site.

# REGISTER FOR AN INSPECTION

Email inspection forms to: [FleetInspections@SomervilleMA.gov](mailto:FleetInspections@SomervilleMA.gov)

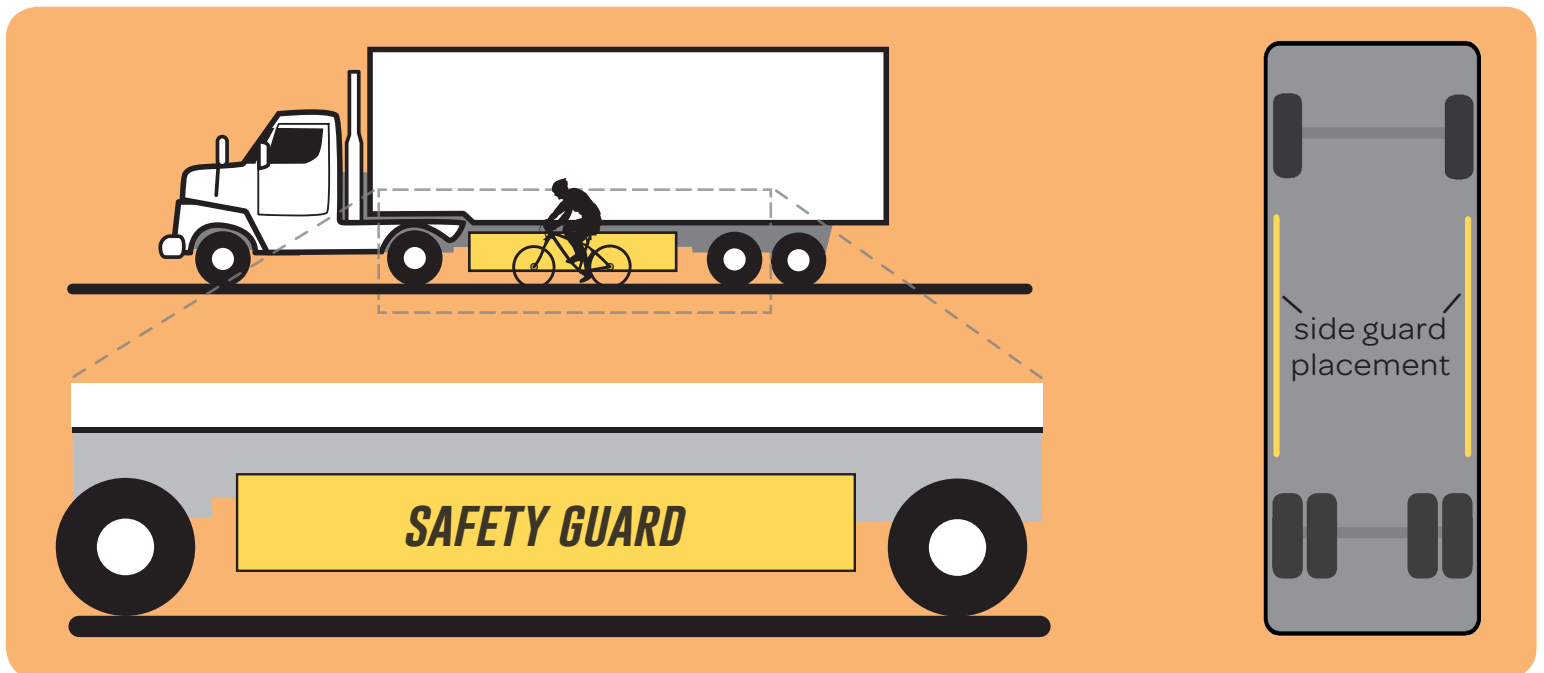


CITY OF SOMERVILLE

# TRUCK SIDE GUARD ORDINANCE

Collisions with large vehicles are disproportionately likely to result in cyclist and pedestrian fatalities. The City of Somerville's Ordinance to Safeguard Vulnerable Road Users aims to prevent cyclists and pedestrians from the risk of being struck by a large vehicle because of limited driver visibility and lack of side-visible turn signals, as well as falling under the sides of large vehicles and being caught under the wheels.

The ordinance applies to large motor vehicles that are Class 3 or above with a gross vehicle weight rating (GVWR) exceeding 10,000 pounds, except for an ambulance, fire apparatus, low-speed vehicle with a maximum speed under 15 mph, or an agricultural tractor.



# Request for Taxpayer Identification Number and Certification

Give Form to the  
requester. Do not  
send to the IRS.

► Go to [www.irs.gov/FormW9](http://www.irs.gov/FormW9) for instructions and the latest information.

Print or type. See Specific Instructions on page 3.	1 Name (as shown on your income tax return). Name is required on this line; do not leave this line blank.	
	2 Business name/disregarded entity name, if different from above	
	3 Check appropriate box for federal tax classification of the person whose name is entered on line 1. Check only <b>one</b> of the following seven boxes.  <input type="checkbox"/> Individual/sole proprietor or single-member LLC <input type="checkbox"/> Limited liability company. Enter the tax classification (C=C corporation, S=S corporation, P=Partnership) ► _____ <b>Note:</b> Check the appropriate box in the line above for the tax classification of the single-member owner. Do not check LLC if the LLC is classified as a single-member LLC that is disregarded from the owner unless the owner of the LLC is another LLC that is <b>not</b> disregarded from the owner for U.S. federal tax purposes. Otherwise, a single-member LLC that is disregarded from the owner should check the appropriate box for the tax classification of its owner. <input type="checkbox"/> Other (see instructions) ► _____	4 Exemptions (codes apply only to certain entities, not individuals; see instructions on page 3):  Exempt payee code (if any) _____  Exemption from FATCA reporting code (if any) _____  <i>(Applies to accounts maintained outside the U.S.)</i>
	5 Address (number, street, and apt. or suite no.) See instructions.	Requester's name and address (optional)
	6 City, state, and ZIP code	
	7 List account number(s) here (optional)	

## Part I Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. The TIN provided must match the name given on line 1 to avoid backup withholding. For individuals, this is generally your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the instructions for Part I, later. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN*, later.

**Note:** If the account is in more than one name, see the instructions for line 1. Also see *What Name and Number To Give the Requester* for guidelines on whose number to enter.

Social security number									
				-				-	
or									
Employer identification number									
				-					

## Part II Certification

Under penalties of perjury, I certify that:

1. The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me); and
2. I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding; and
3. I am a U.S. citizen or other U.S. person (defined below); and
4. The FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct.

**Certification instructions.** You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions for Part II, later.

Sign Here	Signature of U.S. person ►	Date ►
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## General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

**Future developments.** For the latest information about developments related to Form W-9 and its instructions, such as legislation enacted after they were published, go to [www.irs.gov/FormW9](http://www.irs.gov/FormW9).

## Purpose of Form

An individual or entity (Form W-9 requester) who is required to file an information return with the IRS must obtain your correct taxpayer identification number (TIN) which may be your social security number (SSN), individual taxpayer identification number (ITIN), adoption taxpayer identification number (ATIN), or employer identification number (EIN), to report on an information return the amount paid to you, or other amount reportable on an information return. Examples of information returns include, but are not limited to, the following.

- Form 1099-INT (interest earned or paid)

- Form 1099-DIV (dividends, including those from stocks or mutual funds)
- Form 1099-MISC (various types of income, prizes, awards, or gross proceeds)
- Form 1099-B (stock or mutual fund sales and certain other transactions by brokers)
- Form 1099-S (proceeds from real estate transactions)
- Form 1099-K (merchant card and third party network transactions)
- Form 1098 (home mortgage interest), 1098-E (student loan interest), 1098-T (tuition)
- Form 1099-C (canceled debt)
- Form 1099-A (acquisition or abandonment of secured property)

Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN.

*If you do not return Form W-9 to the requester with a TIN, you might be subject to backup withholding. See What is backup withholding, later.*

By signing the filled-out form, you:

1. Certify that the TIN you are giving is correct (or you are waiting for a number to be issued),
2. Certify that you are not subject to backup withholding, or
3. Claim exemption from backup withholding if you are a U.S. exempt payee. If applicable, you are also certifying that as a U.S. person, your allocable share of any partnership income from a U.S. trade or business is not subject to the withholding tax on foreign partners' share of effectively connected income, and
4. Certify that FATCA code(s) entered on this form (if any) indicating that you are exempt from the FATCA reporting, is correct. See *What is FATCA reporting*, later, for further information.

**Note:** If you are a U.S. person and a requester gives you a form other than Form W-9 to request your TIN, you must use the requester's form if it is substantially similar to this Form W-9.

**Definition of a U.S. person.** For federal tax purposes, you are considered a U.S. person if you are:

- An individual who is a U.S. citizen or U.S. resident alien;
- A partnership, corporation, company, or association created or organized in the United States or under the laws of the United States;
- An estate (other than a foreign estate); or
- A domestic trust (as defined in Regulations section 301.7701-7).

**Special rules for partnerships.** Partnerships that conduct a trade or business in the United States are generally required to pay a withholding tax under section 1446 on any foreign partners' share of effectively connected taxable income from such business. Further, in certain cases where a Form W-9 has not been received, the rules under section 1446 require a partnership to presume that a partner is a foreign person, and pay the section 1446 withholding tax. Therefore, if you are a U.S. person that is a partner in a partnership conducting a trade or business in the United States, provide Form W-9 to the partnership to establish your U.S. status and avoid section 1446 withholding on your share of partnership income.

In the cases below, the following person must give Form W-9 to the partnership for purposes of establishing its U.S. status and avoiding withholding on its allocable share of net income from the partnership conducting a trade or business in the United States.

- In the case of a disregarded entity with a U.S. owner, the U.S. owner of the disregarded entity and not the entity;
- In the case of a grantor trust with a U.S. grantor or other U.S. owner, generally, the U.S. grantor or other U.S. owner of the grantor trust and not the trust; and
- In the case of a U.S. trust (other than a grantor trust), the U.S. trust (other than a grantor trust) and not the beneficiaries of the trust.

**Foreign person.** If you are a foreign person or the U.S. branch of a foreign bank that has elected to be treated as a U.S. person, do not use Form W-9. Instead, use the appropriate Form W-8 or Form 8233 (see Pub. 515, *Withholding of Tax on Nonresident Aliens and Foreign Entities*).

**Nonresident alien who becomes a resident alien.** Generally, only a nonresident alien individual may use the terms of a tax treaty to reduce or eliminate U.S. tax on certain types of income. However, most tax treaties contain a provision known as a "saving clause." Exceptions specified in the saving clause may permit an exemption from tax to continue for certain types of income even after the payee has otherwise become a U.S. resident alien for tax purposes.

If you are a U.S. resident alien who is relying on an exception contained in the saving clause of a tax treaty to claim an exemption from U.S. tax on certain types of income, you must attach a statement to Form W-9 that specifies the following five items.

1. The treaty country. Generally, this must be the same treaty under which you claimed exemption from tax as a nonresident alien.
2. The treaty article addressing the income.
3. The article number (or location) in the tax treaty that contains the saving clause and its exceptions.
4. The type and amount of income that qualifies for the exemption from tax.
5. Sufficient facts to justify the exemption from tax under the terms of the treaty article.

**Example.** Article 20 of the U.S.-China income tax treaty allows an exemption from tax for scholarship income received by a Chinese student temporarily present in the United States. Under U.S. law, this student will become a resident alien for tax purposes if his or her stay in the United States exceeds 5 calendar years. However, paragraph 2 of the first Protocol to the U.S.-China treaty (dated April 30, 1984) allows the provisions of Article 20 to continue to apply even after the Chinese student becomes a resident alien of the United States. A Chinese student who qualifies for this exception (under paragraph 2 of the first protocol) and is relying on this exception to claim an exemption from tax on his or her scholarship or fellowship income would attach to Form W-9 a statement that includes the information described above to support that exemption.

If you are a nonresident alien or a foreign entity, give the requester the appropriate completed Form W-8 or Form 8233.

## Backup Withholding

**What is backup withholding?** Persons making certain payments to you must under certain conditions withhold and pay to the IRS 28% of such payments. This is called "backup withholding." Payments that may be subject to backup withholding include interest, tax-exempt interest, dividends, broker and barter exchange transactions, rents, royalties, nonemployee pay, payments made in settlement of payment card and third party network transactions, and certain payments from fishing boat operators. Real estate transactions are not subject to backup withholding.

You will not be subject to backup withholding on payments you receive if you give the requester your correct TIN, make the proper certifications, and report all your taxable interest and dividends on your tax return.

**Payments you receive will be subject to backup withholding if:**

1. You do not furnish your TIN to the requester,
2. You do not certify your TIN when required (see the instructions for Part II for details),
3. The IRS tells the requester that you furnished an incorrect TIN,
4. The IRS tells you that you are subject to backup withholding because you did not report all your interest and dividends on your tax return (for reportable interest and dividends only), or
5. You do not certify to the requester that you are not subject to backup withholding under 4 above (for reportable interest and dividend accounts opened after 1983 only).

Certain payees and payments are exempt from backup withholding. See *Exempt payee code*, later, and the separate Instructions for the Requester of Form W-9 for more information.

Also see *Special rules for partnerships*, earlier.

## What is FATCA Reporting?

The Foreign Account Tax Compliance Act (FATCA) requires a participating foreign financial institution to report all United States account holders that are specified United States persons. Certain payees are exempt from FATCA reporting. See *Exemption from FATCA reporting code*, later, and the Instructions for the Requester of Form W-9 for more information.

## Updating Your Information

You must provide updated information to any person to whom you claimed to be an exempt payee if you are no longer an exempt payee and anticipate receiving reportable payments in the future from this person. For example, you may need to provide updated information if you are a C corporation that elects to be an S corporation, or if you no longer are tax exempt. In addition, you must furnish a new Form W-9 if the name or TIN changes for the account; for example, if the grantor of a grantor trust dies.

## Penalties

**Failure to furnish TIN.** If you fail to furnish your correct TIN to a requester, you are subject to a penalty of \$50 for each such failure unless your failure is due to reasonable cause and not to willful neglect.

**Civil penalty for false information with respect to withholding.** If you make a false statement with no reasonable basis that results in no backup withholding, you are subject to a \$500 penalty.

**Criminal penalty for falsifying information.** Willfully falsifying certifications or affirmations may subject you to criminal penalties including fines and/or imprisonment.

**Misuse of TINs.** If the requester discloses or uses TINs in violation of federal law, the requester may be subject to civil and criminal penalties.

## Specific Instructions

### Line 1

You must enter one of the following on this line; **do not** leave this line blank. The name should match the name on your tax return.

If this Form W-9 is for a joint account (other than an account maintained by a foreign financial institution (FFI)), list first, and then circle, the name of the person or entity whose number you entered in Part I of Form W-9. If you are providing Form W-9 to an FFI to document a joint account, each holder of the account that is a U.S. person must provide a Form W-9.

a. **Individual.** Generally, enter the name shown on your tax return. If you have changed your last name without informing the Social Security Administration (SSA) of the name change, enter your first name, the last name as shown on your social security card, and your new last name.

**Note: ITIN applicant:** Enter your individual name as it was entered on your Form W-7 application, line 1a. This should also be the same as the name you entered on the Form 1040/1040A/1040EZ you filed with your application.

b. **Sole proprietor or single-member LLC.** Enter your individual name as shown on your 1040/1040A/1040EZ on line 1. You may enter your business, trade, or "doing business as" (DBA) name on line 2.

c. **Partnership, LLC that is not a single-member LLC, C corporation, or S corporation.** Enter the entity's name as shown on the entity's tax return on line 1 and any business, trade, or DBA name on line 2.

d. **Other entities.** Enter your name as shown on required U.S. federal tax documents on line 1. This name should match the name shown on the charter or other legal document creating the entity. You may enter any business, trade, or DBA name on line 2.

e. **Disregarded entity.** For U.S. federal tax purposes, an entity that is disregarded as an entity separate from its owner is treated as a "disregarded entity." See Regulations section 301.7701-2(c)(2)(iii). Enter the owner's name on line 1. The name of the entity entered on line 1 should never be a disregarded entity. The name on line 1 should be the name shown on the income tax return on which the income should be reported. For example, if a foreign LLC that is treated as a disregarded entity for U.S. federal tax purposes has a single owner that is a U.S. person, the U.S. owner's name is required to be provided on line 1. If the direct owner of the entity is also a disregarded entity, enter the first owner that is not disregarded for federal tax purposes. Enter the disregarded entity's name on line 2, "Business name/disregarded entity name." If the owner of the disregarded entity is a foreign person, the owner must complete an appropriate Form W-8 instead of a Form W-9. This is the case even if the foreign person has a U.S. TIN.

### Line 2

If you have a business name, trade name, DBA name, or disregarded entity name, you may enter it on line 2.

### Line 3

Check the appropriate box on line 3 for the U.S. federal tax classification of the person whose name is entered on line 1. Check only one box on line 3.

IF the entity/person on line 1 is a(n) . . .	THEN check the box for . . .
• Corporation	Corporation
• Individual • Sole proprietorship, or • Single-member limited liability company (LLC) owned by an individual and disregarded for U.S. federal tax purposes.	Individual/sole proprietor or single-member LLC
• LLC treated as a partnership for U.S. federal tax purposes, • LLC that has filed Form 8832 or 2553 to be taxed as a corporation, or • LLC that is disregarded as an entity separate from its owner but the owner is another LLC that is not disregarded for U.S. federal tax purposes.	Limited liability company and enter the appropriate tax classification. (P= Partnership; C= C corporation; or S= S corporation)
• Partnership	Partnership
• Trust/estate	Trust/estate

### Line 4, Exemptions

If you are exempt from backup withholding and/or FATCA reporting, enter in the appropriate space on line 4 any code(s) that may apply to you.

#### Exempt payee code.

- Generally, individuals (including sole proprietors) are not exempt from backup withholding.
- Except as provided below, corporations are exempt from backup withholding for certain payments, including interest and dividends.
- Corporations are not exempt from backup withholding for payments made in settlement of payment card or third party network transactions.
- Corporations are not exempt from backup withholding with respect to attorneys' fees or gross proceeds paid to attorneys, and corporations that provide medical or health care services are not exempt with respect to payments reportable on Form 1099-MISC.

The following codes identify payees that are exempt from backup withholding. Enter the appropriate code in the space in line 4.

- 1—An organization exempt from tax under section 501(a), any IRA, or a custodial account under section 403(b)(7) if the account satisfies the requirements of section 401(f)(2)
- 2—The United States or any of its agencies or instrumentalities
- 3—A state, the District of Columbia, a U.S. commonwealth or possession, or any of their political subdivisions or instrumentalities
- 4—A foreign government or any of its political subdivisions, agencies, or instrumentalities
- 5—A corporation
- 6—A dealer in securities or commodities required to register in the United States, the District of Columbia, or a U.S. commonwealth or possession
- 7—A futures commission merchant registered with the Commodity Futures Trading Commission
- 8—A real estate investment trust
- 9—An entity registered at all times during the tax year under the Investment Company Act of 1940
- 10—A common trust fund operated by a bank under section 584(a)
- 11—A financial institution
- 12—A middleman known in the investment community as a nominee or custodian
- 13—A trust exempt from tax under section 664 or described in section 4947

The following chart shows types of payments that may be exempt from backup withholding. The chart applies to the exempt payees listed above, 1 through 13.

IF the payment is for . . .	THEN the payment is exempt for . . .
Interest and dividend payments	All exempt payees except for 7
Broker transactions	Exempt payees 1 through 4 and 6 through 11 and all C corporations. S corporations must not enter an exempt payee code because they are exempt only for sales of noncovered securities acquired prior to 2012.
Barter exchange transactions and patronage dividends	Exempt payees 1 through 4
Payments over \$600 required to be reported and direct sales over \$5,000 <sup>1</sup>	Generally, exempt payees 1 through 5 <sup>2</sup>
Payments made in settlement of payment card or third party network transactions	Exempt payees 1 through 4

<sup>1</sup> See Form 1099-MISC, Miscellaneous Income, and its instructions.

<sup>2</sup> However, the following payments made to a corporation and reportable on Form 1099-MISC are not exempt from backup withholding: medical and health care payments, attorneys' fees, gross proceeds paid to an attorney reportable under section 6045(f), and payments for services paid by a federal executive agency.

**Exemption from FATCA reporting code.** The following codes identify payees that are exempt from reporting under FATCA. These codes apply to persons submitting this form for accounts maintained outside of the United States by certain foreign financial institutions. Therefore, if you are only submitting this form for an account you hold in the United States, you may leave this field blank. Consult with the person requesting this form if you are uncertain if the financial institution is subject to these requirements. A requester may indicate that a code is not required by providing you with a Form W-9 with "Not Applicable" (or any similar indication) written or printed on the line for a FATCA exemption code.

A—An organization exempt from tax under section 501(a) or any individual retirement plan as defined in section 7701(a)(37)

B—The United States or any of its agencies or instrumentalities

C—A state, the District of Columbia, a U.S. commonwealth or possession, or any of their political subdivisions or instrumentalities

D—A corporation the stock of which is regularly traded on one or more established securities markets, as described in Regulations section 1.1472-1(c)(1)(i)

E—A corporation that is a member of the same expanded affiliated group as a corporation described in Regulations section 1.1472-1(c)(1)(i)

F—A dealer in securities, commodities, or derivative financial instruments (including notional principal contracts, futures, forwards, and options) that is registered as such under the laws of the United States or any state

G—A real estate investment trust

H—A regulated investment company as defined in section 851 or an entity registered at all times during the tax year under the Investment Company Act of 1940

I—A common trust fund as defined in section 584(a)

J—A bank as defined in section 581

K—A broker

L—A trust exempt from tax under section 664 or described in section 4947(a)(1)

M—A tax exempt trust under a section 403(b) plan or section 457(g) plan

**Note:** You may wish to consult with the financial institution requesting this form to determine whether the FATCA code and/or exempt payee code should be completed.

## Line 5

Enter your address (number, street, and apartment or suite number). This is where the requester of this Form W-9 will mail your information returns. If this address differs from the one the requester already has on file, write NEW at the top. If a new address is provided, there is still a chance the old address will be used until the payor changes your address in their records.

## Line 6

Enter your city, state, and ZIP code.

## Part I. Taxpayer Identification Number (TIN)

**Enter your TIN in the appropriate box.** If you are a resident alien and you do not have and are not eligible to get an SSN, your TIN is your IRS individual taxpayer identification number (ITIN). Enter it in the social security number box. If you do not have an ITIN, see *How to get a TIN* below.

If you are a sole proprietor and you have an EIN, you may enter either your SSN or EIN.

If you are a single-member LLC that is disregarded as an entity separate from its owner, enter the owner's SSN (or EIN, if the owner has one). Do not enter the disregarded entity's EIN. If the LLC is classified as a corporation or partnership, enter the entity's EIN.

**Note:** See *What Name and Number To Give the Requester*, later, for further clarification of name and TIN combinations.

**How to get a TIN.** If you do not have a TIN, apply for one immediately. To apply for an SSN, get Form SS-5, Application for a Social Security Card, from your local SSA office or get this form online at [www.SSA.gov](http://www.SSA.gov). You may also get this form by calling 1-800-772-1213. Use Form W-7, Application for IRS Individual Taxpayer Identification Number, to apply for an ITIN, or Form SS-4, Application for Employer Identification Number, to apply for an EIN. You can apply for an EIN online by accessing the IRS website at [www.irs.gov/Businesses](http://www.irs.gov/Businesses) and clicking on Employer Identification Number (EIN) under Starting a Business. Go to [www.irs.gov/Forms](http://www.irs.gov/Forms) to view, download, or print Form W-7 and/or Form SS-4. Or, you can go to [www.irs.gov/OrderForms](http://www.irs.gov/OrderForms) to place an order and have Form W-7 and/or SS-4 mailed to you within 10 business days.

If you are asked to complete Form W-9 but do not have a TIN, apply for a TIN and write "Applied For" in the space for the TIN, sign and date the form, and give it to the requester. For interest and dividend payments, and certain payments made with respect to readily tradable instruments, generally you will have 60 days to get a TIN and give it to the requester before you are subject to backup withholding on payments. The 60-day rule does not apply to other types of payments. You will be subject to backup withholding on all such payments until you provide your TIN to the requester.

**Note:** Entering "Applied For" means that you have already applied for a TIN or that you intend to apply for one soon.

**Caution:** A disregarded U.S. entity that has a foreign owner must use the appropriate Form W-8.

## Part II. Certification

To establish to the withholding agent that you are a U.S. person, or resident alien, sign Form W-9. You may be requested to sign by the withholding agent even if item 1, 4, or 5 below indicates otherwise.

For a joint account, only the person whose TIN is shown in Part I should sign (when required). In the case of a disregarded entity, the person identified on line 1 must sign. Exempt payees, see *Exempt payee code*, earlier.

**Signature requirements.** Complete the certification as indicated in items 1 through 5 below.

**1. Interest, dividend, and barter exchange accounts opened before 1984 and broker accounts considered active during 1983.**

You must give your correct TIN, but you do not have to sign the certification.

**2. Interest, dividend, broker, and barter exchange accounts opened after 1983 and broker accounts considered inactive during 1983.** You must sign the certification or backup withholding will apply. If you are subject to backup withholding and you are merely providing your correct TIN to the requester, you must cross out item 2 in the certification before signing the form.

**3. Real estate transactions.** You must sign the certification. You may cross out item 2 of the certification.

**4. Other payments.** You must give your correct TIN, but you do not have to sign the certification unless you have been notified that you have previously given an incorrect TIN. "Other payments" include payments made in the course of the requester's trade or business for rents, royalties, goods (other than bills for merchandise), medical and health care services (including payments to corporations), payments to a nonemployee for services, payments made in settlement of payment card and third party network transactions, payments to certain fishing boat crew members and fishermen, and gross proceeds paid to attorneys (including payments to corporations).

**5. Mortgage interest paid by you, acquisition or abandonment of secured property, cancellation of debt, qualified tuition program payments (under section 529), ABLE accounts (under section 529A), IRA, Coverdell ESA, Archer MSA or HSA contributions or distributions, and pension distributions.** You must give your correct TIN, but you do not have to sign the certification.

**What Name and Number To Give the Requester**

For this type of account:	Give name and SSN of:
1. Individual	The individual
2. Two or more individuals (joint account) other than an account maintained by an FFI	The actual owner of the account or, if combined funds, the first individual on the account <sup>1</sup>
3. Two or more U.S. persons (joint account maintained by an FFI)	Each holder of the account
4. Custodial account of a minor (Uniform Gift to Minors Act)	The minor <sup>2</sup>
5. a. The usual revocable savings trust (grantor is also trustee)	The grantor-trustee <sup>1</sup>
b. So-called trust account that is not a legal or valid trust under state law	The actual owner <sup>1</sup>
6. Sole proprietorship or disregarded entity owned by an individual	The owner <sup>3</sup>
7. Grantor trust filing under Optional Form 1099 Filing Method 1 (see Regulations section 1.671-4(b)(2)(i)(A))	The grantor*
For this type of account:	Give name and EIN of:
8. Disregarded entity not owned by an individual	The owner
9. A valid trust, estate, or pension trust	Legal entity <sup>4</sup>
10. Corporation or LLC electing corporate status on Form 8832 or Form 2553	The corporation
11. Association, club, religious, charitable, educational, or other tax-exempt organization	The organization
12. Partnership or multi-member LLC	The partnership
13. A broker or registered nominee	The broker or nominee

For this type of account:	Give name and EIN of:
14. Account with the Department of Agriculture in the name of a public entity (such as a state or local government, school district, or prison) that receives agricultural program payments	The public entity
15. Grantor trust filing under the Form 1041 Filing Method or the Optional Form 1099 Filing Method 2 (see Regulations section 1.671-4(b)(2)(i)(B))	The trust

<sup>1</sup> List first and circle the name of the person whose number you furnish. If only one person on a joint account has an SSN, that person's number must be furnished.

<sup>2</sup> Circle the minor's name and furnish the minor's SSN.

<sup>3</sup> You must show your individual name and you may also enter your business or DBA name on the "Business name/disregarded entity" name line. You may use either your SSN or EIN (if you have one), but the IRS encourages you to use your SSN.

<sup>4</sup> List first and circle the name of the trust, estate, or pension trust. (Do not furnish the TIN of the personal representative or trustee unless the legal entity itself is not designated in the account title.) Also see *Special rules for partnerships*, earlier.

**\*Note:** The grantor also must provide a Form W-9 to trustee of trust.

**Note:** If no name is circled when more than one name is listed, the number will be considered to be that of the first name listed.

**Secure Your Tax Records From Identity Theft**

Identity theft occurs when someone uses your personal information such as your name, SSN, or other identifying information, without your permission, to commit fraud or other crimes. An identity thief may use your SSN to get a job or may file a tax return using your SSN to receive a refund.

To reduce your risk:

- Protect your SSN,
- Ensure your employer is protecting your SSN, and
- Be careful when choosing a tax preparer.

If your tax records are affected by identity theft and you receive a notice from the IRS, respond right away to the name and phone number printed on the IRS notice or letter.

If your tax records are not currently affected by identity theft but you think you are at risk due to a lost or stolen purse or wallet, questionable credit card activity or credit report, contact the IRS Identity Theft Hotline at 1-800-908-4490 or submit Form 14039.

For more information, see Pub. 5027, Identity Theft Information for Taxpayers.

Victims of identity theft who are experiencing economic harm or a systemic problem, or are seeking help in resolving tax problems that have not been resolved through normal channels, may be eligible for Taxpayer Advocate Service (TAS) assistance. You can reach TAS by calling the TAS toll-free case intake line at 1-877-777-4778 or TTY/TDD 1-800-829-4059.

**Protect yourself from suspicious emails or phishing schemes.**

Phishing is the creation and use of email and websites designed to mimic legitimate business emails and websites. The most common act is sending an email to a user falsely claiming to be an established legitimate enterprise in an attempt to scam the user into surrendering private information that will be used for identity theft.



The IRS does not initiate contacts with taxpayers via emails. Also, the IRS does not request personal detailed information through email or ask taxpayers for the PIN numbers, passwords, or similar secret access information for their credit card, bank, or other financial accounts.

If you receive an unsolicited email claiming to be from the IRS, forward this message to [phishing@irs.gov](mailto:phishing@irs.gov). You may also report misuse of the IRS name, logo, or other IRS property to the Treasury Inspector General for Tax Administration (TIGTA) at 1-800-366-4484. You can forward suspicious emails to the Federal Trade Commission at [spam@uce.gov](mailto:spam@uce.gov) or report them at [www.ftc.gov/complaint](http://www.ftc.gov/complaint). You can contact the FTC at [www.ftc.gov/idtheft](http://www.ftc.gov/idtheft) or 877-IDTHEFT (877-438-4338). If you have been the victim of identity theft, see [www.IdentityTheft.gov](http://www.IdentityTheft.gov) and Pub. 5027.

Visit [www.irs.gov/IdentityTheft](http://www.irs.gov/IdentityTheft) to learn more about identity theft and how to reduce your risk.

## Privacy Act Notice

Section 6109 of the Internal Revenue Code requires you to provide your correct TIN to persons (including federal agencies) who are required to file information returns with the IRS to report interest, dividends, or certain other income paid to you; mortgage interest you paid; the acquisition or abandonment of secured property; the cancellation of debt; or contributions you made to an IRA, Archer MSA, or HSA. The person collecting this form uses the information on the form to file information returns with the IRS, reporting the above information. Routine uses of this information include giving it to the Department of Justice for civil and criminal litigation and to cities, states, the District of Columbia, and U.S. commonwealths and possessions for use in administering their laws. The information also may be disclosed to other countries under a treaty, to federal and state agencies to enforce civil and criminal laws, or to federal law enforcement and intelligence agencies to combat terrorism. You must provide your TIN whether or not you are required to file a tax return. Under section 3406, payers must generally withhold a percentage of taxable interest, dividend, and certain other payments to a payee who does not give a TIN to the payer. Certain penalties may also apply for providing false or fraudulent information.



## SECRETARY OF THE COMMONWEALTH'S

### CERTIFICATE OF GOOD STANDING

#### **CERTIFICATE OF GOOD STANDING as provided by the Secretary of the Commonwealth**

The **Awarded Vendor** must comply with our request for a **CURRENT "Certificate of Good Standing" provided by the Secretary of the Commonwealth's Office**

NOTE: A Certificate of Good Standing provided by the Department of Revenue will NOT be accepted. The Certificate *must* be provided by the Secretary of the Commonwealth's Office.

If you require information on how to obtain the "Certificate of Good Standing" or Certificate of Registration (Foreign Corporations) from the Commonwealth of Massachusetts, please call the

Secretary of The Commonwealth's Office at (617) 727-2850 (Press #1) located at One (1) Ashburton Place, 17 Floor, Boston, MA 02133 or you may access their web site at:  
<http://corp.sec.state.ma.us/CorpWeb/Certificates/CertificateOrderForm.aspx>

If your company is incorporated outside of Massachusetts and therefore is a "foreign corporation", but is registered to do business in Massachusetts, please comply with our request for the Certificate of Registration from the Commonwealth of Massachusetts. If your company is a foreign corporation, but is not registered to do business in Massachusetts, please provide the Certificate of Good Standing from your state of incorporation.

Please note that without the above certificate (s), the City of Somerville cannot execute your contract.

#### **IMPORTANT NOTICE**

Requests for Certificates of Good Standing by mail may take a substantial amount of time. A certificate may be obtained immediately in person at the Secretary's Office at the address above. Also, at this time, the Secretary of State's Office may not have your current annual report recorded. If this is the case, and you are therefore unable to obtain the Certificate of Good Standing, please forward a copy of your annual report filing fee check with your signed contracts. Please forward your original Certificate of Good Standing to the Purchasing Department upon receipt.

## INSURANCE SPECIFICATIONS

### INSURANCE REQUIREMENTS FOR AWARDED VENDOR ONLY:

Prior to commencing performance of any work or supplying materials or equipment covered by these specifications, the contractor shall furnish to the Office of the Chief Procurement Officer a Certificate of Insurance evidencing the following:

#### A. GENERAL LIABILITY - Comprehensive Form

Bodily Injury Liability.....\$ One Million

Property Damage Liability.....\$ One Million

#### B. COVERAGE FOR PAYMENT OF WORKER'S COMPENSATION BENEFIT PURSUANT TO CHAPTER 152 OF THE MASSACHUSETTS GENERAL LAWS IN THE AMOUNT AS LISTED BELOW:

WORKER'S COMPENSATION.....\$ Statutory

EMPLOYERS' LIABILITY.....\$ Statutory

#### C. AUTOMOBILE LIABILITY INSURANCE AS LISTED BELOW:

BODILY INJURY LIABILITY.....\$ STATUTORY

1. A contract will not be executed unless a certificate (s) of insurance evidencing above-described coverage is attached.
2. Failure to have the above-described coverage in effect during the entire period of the contract shall be deemed to be a breach of the contract.
3. All applicable insurance policies shall read:  
**"CITY OF SOMERVILLE" as a certificate holder and as an additional insured** for general liability only along with a description of operation in the space provided on the certificate.

#### Certificate Should Be Made Out To:

**City Of Somerville  
c/o Procurement and Contracting Services Department  
93 Highland Avenue  
Somerville, MA 02143**

**Note: If your insurance expires during the life of this contract, you shall be responsible to submit a new certificate(s) covering the period of the contract. No payment will be made on a contract with an expired insurance certificate.**



# CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

**IMPORTANT:** If the certificate holder is an **ADDITIONAL INSURED**, the policy(ies) must be endorsed. If **SUBROGATION IS WAIVED**, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER	CONTACT NAME:		
	PHONE (A/C, No. Ext):	FAX (A/C, No):	
INSURED	E-MAIL ADDRESS:		
	INSURER(S) AFFORDING COVERAGE		NAIC #
	INSURER A:		
	INSURER B:		
	INSURER C:		
	INSURER D:		
INSURER E:			
INSURER F:			

**COVERAGES****CERTIFICATE NUMBER:****REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSR	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
	<b>GENERAL LIABILITY</b> <input type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input type="checkbox"/> OCCUR  GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC						EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) \$ MED EXP (Any one person) \$ PERSONAL & ADV INJURY \$ GENERAL AGGREGATE \$ PRODUCTS - COMP/OP AGG \$ \$
	<b>AUTOMOBILE LIABILITY</b> <input type="checkbox"/> ANY AUTO <input type="checkbox"/> ALL OWNED AUTOS <input type="checkbox"/> HIRED AUTOS <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> NON-OWNED AUTOS						COMBINED SINGLE LIMIT (Ea accident) \$ BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ \$
	<b>UMBRELLA LIAB</b> <input type="checkbox"/> EXCESS LIAB <input type="checkbox"/> OCCUR <input type="checkbox"/> CLAIMS-MADE DED <input type="checkbox"/> RETENTION \$						EACH OCCURRENCE \$ AGGREGATE \$ \$
	<b>WORKERS COMPENSATION AND EMPLOYERS' LIABILITY</b> ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) <input type="checkbox"/> Y / N If yes, describe under DESCRIPTION OF OPERATIONS below		N / A				WC STATUTORY LIMITS <input type="checkbox"/> OTH-ER <input type="checkbox"/> E.L. EACH ACCIDENT \$ E.L. DISEASE - EA EMPLOYEE \$ E.L. DISEASE - POLICY LIMIT \$

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

DESCRIPTION OF PROJECT, SOLICITATION NUMBER AND THAT THE CITY OF SOMERVILLE IS A CERTIFICATE HOLDER AND ADDITIONAL INSURED

**CERTIFICATE HOLDER**

CERTIFICATES SHOULD BE MADE OUT TO:

CITY OF SOMERVILLE  
c/o PURCHASING DEPARTMENT  
93 HIGHLAND AVE  
SOMERVILLE, MA 02143

**CANCELLATION**

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

## **PART 2: SAMPLE CONSTRUCTION CONTRACT / CITY's GENERAL TERMS AND CONDITIONS**

APPENDIX D  
General Conditions

GENERAL TERMS AND CONDITIONS OF THE CONTRACT  
FOR CONSTRUCTION, RECONSTRUCTION, ALTERATIONS,  
REMODELING, OR REPAIR OF ANY PUBLIC BUILDING OR PUBLIC WORKS  
IN THE CITY OF SOMERVILLE

TABLE OF CONTENTS

Article 1: DEFINITIONS
Article 2: ABOUT THE CONTRACT DOCUMENTS
Article 3: THE CITY
Article 4: THE DESIGN PROFESSIONAL
Article 5: THE CONTRACTOR
Article 6: SUBCONTRACTORS
Article 7: PERFORMANCE AND PAYMENT BONDS
Article 8: INSURANCE REQUIREMENTS
Article 9: TESTS AND INSPECTIONS
Article 10: UNCOVERING AND CORRECTING WORK
Article 11: CHANGES IN THE WORK
Article 12: CHANGE IN THE CONTRACT TIME
Article 13: PAYMENTS
Article 14: SUBSTANTIAL COMPLETION
Article 15: GUARANTEES AND WARRANTIES
Article 16: CLAIMS
Article 17: EMERGENCIES
Article 18: TERMINATION OR SUSPENSION OF THE CONTRACT
Article 19: AMERICANS WITH DISABILITIES ACT
Article 20: WRITTEN NOTICE TO THE PARTIES
Article 21: MISCELLANEOUS PROVISIONS

ARTICLE 1  
DEFINITIONS

**1.1. In General.**

**1.1.1. Well-known meanings.** When words or phrases that have a well-known technical, or construction industry, or trade meaning are used in the Contract Documents, such words or phrases shall be interpreted in accordance with that meaning, unless otherwise stated.

**1.1.2. Capitalization.** The words and terms defined in this Article are capitalized in these General Terms and Conditions of the Contract. Other capitalized words may refer to a specific document found in the Contract Documents.

**1.1.3. Persons.** Whenever the word person or persons is used, it includes, unless otherwise stated, entity or entities, respectively, including, but not limited to, corporations, partnerships, and joint venturers.

**1.1.4. Singular and Plural.** The following terms have the meanings indicated which are applicable to both the singular and the plural thereof.

**1.2. Definitions.**

**1.2.1. Agreement.** The Agreement is the written document between the **City** and the **Contractor** which is titled: Owner-Contractor Public Construction Agreement, which is the executed portion of the Contract, and which forms a part of the Contract. The Agreement also includes all documents required to be attached thereto, including, but not limited to, these general conditions, the performance bond, the labor and materials or payment bonds, certificates of insurance, and all Modifications of the Agreement.

**1.2.2. Change Order.** A Change Order is a document which is signed by the **Contractor**, the **Design Professional**, and the **City**; which is directed to the **Contractor**; which authorizes the **Contractor** to make an addition to, a deletion from or a revision in the Work, or an adjustment in the Contract Sum or in the Contract Time; and which is issued on or after the date of the Agreement between the **Contractor** and the **City**.

**1.2.3. City.** The **City** refers to the City of Somerville, which is the owner of the Project and is the public awarding authority with whom the **Contractor** has entered into the Contract and for whom the Work is to be provided.

**1.2.4. Claim.** A Claim is a dispute, demand, or assertion by one of the parties arising out of or relating to the Contract for which such party is seeking relief.

**1.2.5. Contract.** The Contract consists of all the Contract Documents. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations, or agreements, either written or oral. The Contract may be amended or modified only by a Modification to the Contract signed by both parties.

**1.2.6. Contract Documents.** The Contract Documents consist of the Agreement; the notice of award of the Contract; the Notice to Proceed; the entire Project Manual; Change Orders; Construction Change Directives; the **Contractor's** Bid and all accompanying documents; and the **Design Professional's** written interpretations and clarifications issued on or after the issuance of the Notice to Proceed. Shop Drawing submittals and reports or drawings utilized by the **Design Professional** in preparing the Contract Documents are not Contract Documents.

**1.2.7. Contractor.** The **Contractor** is the person who is awarded the Contract for the Project herein pursuant to M.G.L. c. 149, §44A or M.G.L. c. 39, §39M; and is identified in the Agreement as such. The term "**Contractor**" is intended to include the **Contractor** as well as its authorized representative(s).

**1.2.8. Contract Sum.** The Contract Sum is the total amount stated in the Agreement payable by the **City** to the **Contractor** for the completion of the Work in accordance with the Contract Documents.

**1.2.9. Contract Time.** Unless otherwise provided, the Contract Time is the number of days allotted in the Contract Documents or the dates stated in the Agreement, including authorized adjustments, for Substantial Completion.

**1.2.10. Coordination Drawings.** Coordination Drawings are those drawings, which are prepared by the **Contractor** or a Subcontractor that show the exact alignment, physical locations, and configuration of the mechanical, electrical, and fire protection installations.

**1.2.11. Day.** The term "day" shall mean calendar day unless otherwise stated.

**1.2.12. Design Professional.** The **Design Professional** is the person lawfully licensed to practice architecture, engineering, or landscape architecture and has been selected by the **City** to administer the Contract. The term "**Design Professional**," while referred to in the singular, means the **Design Professional** and/or the **Design Professional's** representative.

**1.2.13. Field Order.** A Field Order is a written order issued by the **Design Professional** which orders minor changes in the Work, but which does not involve a change in the Contract Sum or the Contract Time.

**1.2.14. Final Completion.** Final Completion is the point in time when the Design Professional finds that the Work has been fully completed in accordance with the Contract Documents. Final Completion shall be no later than thirty (30) days after Substantial Completion.

**1.2.15. General Requirements.** General Requirements refer to Sections of Division 1 of the Specifications.

**1.2.16. Modification.** A Modification is a written instrument that amends the Contract after execution of the Agreement.

**1.2.17. Notice to Proceed.** A Notice to Proceed is a written notice given by the **City**, or the **Design Professional**, to the **Contractor** fixing the date on which the Contract Time will begin to run and on which the **Contractor** shall start to perform its obligations under the Contract Documents.

**1.2.18. Plans.** The Plans are the drawings which are the graphic and pictorial portions of the Contract Documents, wherever located and whenever issued, showing the design, location, dimensions, scope, extent, and character of the Work to be furnished and performed by the **Contractor** and which have been prepared or approved by the **Design Professional**.

**1.2.19. Product Data.** Product Data are illustrations, standard schedules, performance charts, instructions, brochures, diagrams, and other information furnished by the **Contractor** to illustrate materials or equipment for some portion of the Work. Product Data are not considered part of the Contract Documents.

**1.2.20. Project.** The Project is the total Work to be provided under the Contract Documents and may be the whole or a part as indicated elsewhere in the Contract Documents and may include construction by the **City** or by separate contractors. The Project is the Work described in the invitation to bid (advertisement) and Specifications and illustrated by the Plans, including any Modifications.

**1.2.21. Project Manual.** The Project Manual is the entire set of bidding documents which includes, but is not limited to, the invitation to bid (advertisement), the instructions to bidders, all of the forms, the wage rates, all City and state requirements, the General Terms and Conditions of the Contract, any supplementary conditions thereto, the Plans, the Specifications, and all addenda.

**1.2.22. Proposed Change Order.** A Proposed Change Order is a Change Order that has been submitted by the **Contractor** to the **Design Professional**, is under review, and has not been approved by the **City**.

**1.2.23. Samples.** Samples are physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and which establish the standards by which such portion of the Work will be judged. Samples are not considered part of the Contract Documents.

**1.2.24. Shop Drawings.** Shop Drawings are all drawings, diagrams, illustrations, schedules, and other information that are specifically prepared or assembled by or for the **Contractor** and submitted by the **Contractor** to illustrate some portion of the Work. Shop Drawings are not considered part of the Contract Documents.

**1.2.25. Site.** The Site is the location of the Project and of the Work.

**1.2.26. Specifications.** Specifications are those portions of the Contract Documents consisting of written technical descriptions of materials, equipment, construction systems, standards, and workmanship as applied to the Work and certain administrative details applicable thereto.

**1.2.27. Subcontractor.** A Subcontractor is a person who contracts directly with the **Contractor**, unless otherwise stated.

**1.2.28. Submittals.** Submittals are those Shop Drawings, Product Data, Samples, or any other required document that are provided to the Design Professional for review and approval.

**1.2.29. Substantial Completion.** Substantial Completion means that the Work has been completed and the Site or the facility is opened for full and intended public use, except for minor incomplete or unsatisfactory items that do not materially impair the usefulness of the Work. The **Design Professional** shall decide what constitutes “minor,” “incomplete,” “unsatisfactory,” and “materially” and the **Design Professional's** decision shall be final.

**1.2.30. Sub-subcontractor.** A Sub-subcontractor is a person who has contracted directly with a Subcontractor.

**1.2.31. Supplier.** A Supplier is a manufacturer, fabricator, distributor, material person, or vendor having a direct contract with the Contractor or with any Subcontractor to furnish materials or equipment to be incorporated into the Work by the Contractor or any Subcontractor.

**1.2.32. Work.** Work refers to the services and the entire completed construction or the various separately identifiable parts thereof required by the Contract Documents, including all labor, materials, and equipment furnished, furnished and incorporated into the Project, or to be provided by the **Contractor** to fulfill the **Contractor's** obligations. The Work may constitute the whole or a part of the Project.

**1.2.33. Construction Change Directive.** A Construction Change Directive is a written directive to the **Contractor** ordering an addition to, a deletion from, or a revision to the Work issued on or after the date of the Agreement, signed by the **City**, and recommended by the **Design Professional**.

## ARTICLE 2

## ABOUT THE CONTRACT DOCUMENTS

### 2.1. Priority/Conflict.

**2.1.1. Priority Among Contract Documents.** In the event of conflict among the Contract Documents, the Contract Documents shall be construed according to the following priorities:

- Highest Priority: Modifications
- Second Priority: Agreement
- Third Priority: Addenda-later date to take precedence
- Fourth Priority: Supplementary General Conditions
- Fifth Priority: General Conditions
- Sixth Priority: Plans and Specifications

**2.1.1.1.** If there is a conflict between the Plans and Specifications, the figured dimensions shall govern over the scaled dimensions. Detailed Plans shall govern over the general Plans. Larger scale Plans shall take precedence over smaller scale Plans. Plans shall govern over Shop Drawings. Whenever notes, specifications, dimensions, details, or schedules in the Specifications or in the Plans, or between the Specifications and the Plans, or in all other instances not specifically noted above, the **Contractor** shall provide, unless otherwise directed by a Modification of the Contract, the better quality or greater quantity of Work at no increase in the Contract Sum or in the Contract Time.

**2.1.1.2.** Compliance with these priority conditions shall not justify any changes in the Work or any increase in the Contract Sum or Contract Time, unless any such compliance results in Work that may not be reasonably inferred from the Contract Documents as being required to produce the intended result as determined by the **Design Professional**.

**2.1.2. Review of the Contract Documents and Field Conditions and Discovery of Conflict, Error, Ambiguity, or Discrepancy.** Before starting the Work, and during the progress thereof, the **Contractor** shall carefully study and compare the Contract Documents with each other and with the information furnished by the **City** pursuant to Article 3 and shall at once report to the **Design Professional** any error, inconsistency, or omission the **Contractor** may discover. Any necessary change shall be ordered as provided in Article 11, subject to the requirements of any other provisions of the Contract Documents. The **Contractor** shall not proceed with the Work affected thereby (except in an emergency) until a Modification has been issued. If the **Contractor** proceeds with the Work having discovered such errors, inconsistencies, or omissions contrary to the provisions contained herein, or if by reasonable study of the Contract Documents the **Contractor** could have discovered such, the **Contractor** shall bear all costs arising therefrom. The **Contractor** shall be liable to the **City** for failure to report any conflict, error, ambiguity, or discrepancy of which it knew or should have known.

**2.1.3. Field Measurements.** The **Contractor** shall take field measurements and verify field conditions and shall carefully compare such field measurements and conditions and other information known to the **Contractor** with the Contract Documents before commencing activities. Errors, inconsistencies, or omissions discovered shall be reported to the **Design Professional** at once.

**2.1.4. Statutory Provisions.** The **City** and the **Contractor** recognize that other rights duties and obligations with respect to public construction contracts are provided for by statute, notwithstanding the fact that they may not be provided for in the Contract Documents. In case of conflict between the statutory provisions and other provisions of the Contract Documents and the provisions of any applicable statute, the statutory provisions shall govern.

**2.1.5. Voided or Unlawful Provisions.** In the event any provision in the Contract is voided or deemed unlawful, such provision shall be deleted without affecting the remainder of the Contract.

### 2.2. Execution.

**2.2.1.** Execution of the Agreement by the **Contractor** is a representation that the **Contractor** has visited the Site, become familiar with local conditions under which the Work is to be performed, and correlated personal observations with requirements of the Contract Documents.

### 2.3. Intent.

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

**2.3.2. Statutory Provisions.** Each and every provision of law, code, and regulation, required by law to be inserted



in these Contract Documents shall be deemed to be inserted herein, and they shall be read and enforced as though it were included herein, and if through mistake or otherwise, any such provision is not inserted, or if not correctly inserted, then upon the application of either party, the Contract Documents shall forthwith be physically amended to make such insertion.

**2.3.3. Functionally Complete Project.** It is the intent of the Contract Documents to describe a functionally complete Project. The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work by the **Contractor**. Any Work, materials, or equipment that may be reasonably inferred from the Contract Documents or from prevailing custom or trade usage as being required to produce the intended result will be furnished and performed by the **Contractor** whether or not specifically called for in the Contract Documents.

**2.3.4. Indications or Notations.** 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.

**2.3.5. Standards or Quality of Materials or Workmanship.** 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.

**2.3.6. Manufactured Products.** 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.

**2.3.7. Mechanical, Electrical, and Fire Protection Plans.** The mechanical, electrical, and fire protection Plans are diagrammatic only and are not intended to show the alignment, physical locations, or configurations of such Work. Such Work shall be installed without additional cost to the **City** to clear all obstructions, permit proper clearances for the Work of other trades, and present an orderly appearance where exposed. Prior to beginning such Work, the **Contractor** shall prepare Coordination Drawings and demonstrate to the **Design Professional's** satisfaction that the installations will comply with the preceding sentence. The **Contractor** shall be solely liable and responsible for any costs and/or delays resulting from the **Contractor's** failure to prepare such Coordination Drawings.

**2.3.8. Locations of Fixtures and Outlets.** Exact locations of fixtures and outlets shall be obtained from the **Design Professional** as provided in Article 5 before the Work is roughed in. Work installed without such information from the **Design Professional** shall be relocated at the **Contractor's** expense.

**2.3.9. Tests.** When test boring or soil test information are included with the Contract Documents or otherwise made available to the **Contractor** and such test boring or soil test information was obtained by the **City** for use by the **Design Professional** in the design of the Project or Work, the **City** does not hold out such information to the **Contractor** as an accurate or approximate indication of subsurface conditions, and no claim for extra cost of extension of time resulting from a reliance by the **Contractor** on such information shall be allowed except as otherwise provided herein. Any such reports are not part of the Contract Documents.

**2.3.10. Joining Work.** 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.

**2.4. Organization.**

**2.4.1.** Except as provided in M.G.L. c. 149, §44F, the organization of the Specifications into divisions, sections, and articles, and the arrangement of Plans shall not control the **Contractor** in dividing the Work among Subcontractors or in establishing the extent of Work to be performed by any trade.

**2.5. References.**

**2.5.1.** Where codes, manuals, specifications, standards, requirements and publications of public and private bodies are referred to in the Contract Documents whether specifically or by implication, references shall be understood to be to the latest revision prior to the date of receiving bids, except where otherwise indicated. Where statutes are referred to in the Contract Documents whether specifically or by implication, references shall be understood to be to the latest revision.

**2.5.2.** References herein to particular paragraphs or Articles are solely to facilitate finding additional information with regard to the specific matters and are not to be construed in any way as limiting the possible paragraphs and Articles in which such matters may be found elsewhere in this document.

**2.6. Reuse of Design Professional's Written Instruments.**

**2.6.1.** Neither the **Contractor** nor any Subcontractor or Supplier shall have or acquire any title to or ownership rights in any of the Plans, Specifications, or other documents prepared by the **Design Professional** and shall not reuse any of such Plans, Specifications, or other documents without prior written consent of the **City** and the **Design Professional**.

**2.7. Written Material of the Contractor.**

**2.7.1.** All written material prepared or collected by the **Contractor** in the course of completing the Work shall be the exclusive property of the **City** and shall not be used by the **Contractor** for any purpose other than the purpose of this Contract.

**2.8. Modifying Words.**

**2.8.1.** In the interest of simplicity, modifying words such as “all” and “any” may be omitted, but the fact that such words may be absent from one sentence and appear in another is not intended to affect the interpretation of either statement.

**2.9. Use of Certain Words and Terms.**

**2.9.1.** Whenever in the Contract Documents the terms “as ordered,” “as directed,” “as required,” “as allowed,” “as approved,” or terms of like effect or import are used, or the adjectives “reasonable,” “suitable,” “acceptable,” “proper,” “satisfactory,” or adjectives of like effect or import are used to describe a requirement, direction, review, or judgment of the **City** or of the **Design Professional** as to the Work, it is intended that such requirement, direction, review, or judgment will be solely to evaluate, in general, the completed Work for compliance with the requirements of and information in the Contract Documents and conformance with the design concept of the completed Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise).

**2.9.2.** The use of any such term or adjective shall not be effective to change the duties and responsibilities of the **City** or the **Design Professional** from those assigned in the Contract Documents or to assign any duty or authority to supervise or direct the furnishing or performance of the Work or any duty or authority to undertake responsibility contrary to the provisions of the Contract Documents.

**2.9.3.** When the words “Contractor,” “Subcontractor,” Sub-subcontractor,” and “Supplier” are used, they are intended to include their employees and agents, unless otherwise specified.

**2.10. Modification of the Contract Documents.**

**2.10.1. Major Modifications.** Major Modifications may affect the Contract Sum or the Contract Time. The Contract Documents may be amended to provide for additions, deletions, and revisions in the Work or to modify the terms and conditions thereof in one or more of the following ways, all of which must contain a written endorsement by the **City**:

- 2.10.1.1.** a formal written amendment;
- 2.10.1.2.** a Change Order;
- 2.10.1.3.** a **Construction Change** Directive; or
- 2.10.1.4.** the **Design Professional's** written interpretation, clarification, or decision.

**2.10.2. Minor Modifications.** Minor modifications do not affect the Contract Sum or the Contract Time. The requirements of the Contract Documents may be supplemented and minor variations and deviations of the Work may be authorized in one or more of the following ways:

- 2.10.2.1.** a Field Order; or
- 2.10.2.2.** the **Design Professional's** approval of a Shop Drawing or Sample.

**ARTICLE 3  
THE CITY**

**3.1. Signatory.**

**3.1.1.** All documents which require a signature or an endorsement by the **City** must be signed by the Mayor in order to be deemed ratified by the **City**.

**3.2. Requirements to Provide Documents.**

**3.2.1.** To the extent they are available, the **City** shall furnish surveys describing physical characteristics, legal limitations, and utility locations for the site of the Project, and a legal description of the Site.



3.2.2. The **City** shall obtain and pay for necessary approvals, easements, assessments, and charges that are customarily secured prior to the execution of the Contract.

3.2.3. The **City** shall furnish information or services required of the **City** hereunder with reasonable promptness after receipt from the **Contractor** of a written request for such information or services.

3.2.4. The **City** shall provide the **Contractor**, at no charge, such copies of the Project Manual as are reasonably necessary for the execution of the Work.

### 3.3. Clerk of the Works.

3.3.1. The **City** may engage a Clerk of the Works for this Project, in which case the **City** shall, upon request of the **Contractor**, provide the **Contractor** with a written statement of the duties, responsibilities, and limitations of authority of such Clerk of the Works. Except as expressly set forth in such written statement, the Clerk of the Works shall have no authority to approve Work, to approve Change Orders, or to exercise any of the power and authority of the **City** or the **Design Professional**. The Clerk of the Works shall observe the **Contractor's** operations and construction activities for compliance with the Plans and Specifications. The Clerk of the Works shall have access to all areas of the Project at all times. The **Contractor** shall fully cooperate with the Clerk of the Works in the performance of the Clerk's duties.

### 3.4. City's Right to Perform Construction and to Award Separate Contracts.

3.4.1. The **City** reserves the right to perform construction or operations at the Site with its own forces or others. If the **Contractor** claims that a delay or additional cost is involved because of such action by the **City**, the **Contractor** shall make such Claim as provided elsewhere in the Contract Documents.

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

3.4.3. The **City** shall provide for coordination of the activities of the **City's** own forces and of each separate contractor with the Work of the **Contractor**, who shall cooperate with them. The **Contractor** shall afford each other person access to the Site and shall properly coordinate its Work with that of the persons performing other work. The **Contractor** shall participate with other separate contractors and the **City** in reviewing their construction schedules when directed to do so. The **Contractor** shall make any revisions to the construction schedules deemed necessary after a joint review and mutual agreement. The construction schedules shall then constitute the schedules to be used by the **Contractor**, separate contractors, and the **City** until subsequently revised.

### 3.5. Limitations on the City's Responsibilities.

3.5.1. The **City** shall not supervise, direct, or have control or authority over, nor be responsible for the **Contractor's** means, methods, techniques, sequences, or procedures of construction or the safety precautions and programs incident thereto, or for any failure of the **Contractor** to comply with laws, codes and regulations applicable to the furnishing or performance of the Work. The **City** will not be responsible for the **Contractor's** failure to perform or furnish the Work in accordance with the Contract Documents. The **City** is not responsible for the acts or omissions of the **Contractor**, any Subcontractor, Supplier, or anyone for whose acts the **Contractor**, any Subcontractor or Suppliers may be liable.

3.5.2. The **City's** authority to review any of the **Contractor's** progress schedules, or its decision to raise or not to raise any objections about such schedules shall not impose on the **City** any responsibility for the timing, planning, scheduling, or execution of the Work, nor in any way give rise to any duty or responsibility on the part of the **City** to exercise this authority for the benefit of the **Contractor**, any Subcontractor or Supplier or any other party.

3.5.3. The **City's** decision to raise or not to raise objections with regard to any aspects of the **Contractor's** insurance shall in no way give rise to any duty or responsibility on the part of the **City** to or for the benefit of the **Contractor**, any Subcontractor, any Supplier, or any other party.

### 3.6. Reservation of Rights.

3.6.1. The **City** reserves the right to correct at any time any error in any progress payment that may have been made.

3.6.2. Should defective Work be discovered subsequent to final payment, the **City** reserves the right to make a claim and recover all costs and professional fees associated therewith, including the cost of removing and/or replacing the defective Work.

### 3.7. Waivers.

3.7.1. All waivers by the **City** are valid only to the extent that they are signed by the **City**. Any such waivers pertain only to the specific matter contained in the waiver and not to any similar, subsequent matters.

## ARTICLE 4 THE DESIGN PROFESSIONAL

### 4.1. City's Representative.

4.1.1. The **Design Professional** is the **City's** representative (1) during construction, (2) until final payment is due, and (3) with the **City's** concurrence, from time to time during the correction period described in Article 10. The **Design Professional** will advise and consult with the **City**. The **Design Professional** will have authority to act on behalf of the **City** only to the extent provided in the Contract Documents, unless otherwise modified by a written instrument in accordance with other provisions of the Contract.

4.1.2. The duties, responsibilities, and the limitations of authority of the **Design Professional** as the **City's** representative during construction are set forth in the Contract Documents and shall not be extended without the written consent of the **City** and the **Design Professional**.

### 4.2. Administration of the Contract.

4.2.1. The **Design Professional** will provide administration of the Contract as described in the Contract Documents, unless the **City** has engaged a construction manager.

### 4.3. Visits to the Site.

4.3.1. The **Design Professional** will visit the site at intervals appropriate to the stage of construction to become generally familiar with the progress and quality of the completed Work and to determine in general if the Work is being performed in a manner indicating that the Work, when completed, will be in accordance with the Contract Documents. However, the **Design Professional** will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. On the basis of on-site observations as an architect, engineer, or landscape architect, the **Design Professional** will keep the **City** informed of progress of the Work in writing and will endeavor to guard the **City** against defects and deficiencies in the Work.

### 4.4. Communications Facilitating Contract Administration.

4.4.1. Except as otherwise provided in the Contract Documents or when direct communications have been specially authorized, the **City** and the **Contractor** shall endeavor to communicate through the **Design Professional**. Communications by and with the **Design Professional's** consultants shall be through the **Design Professional**. Communications by and with Subcontractors and Suppliers shall be through the **Contractor**. Communications by and with **City** employees and separate contractors shall be through the **City**.

4.4.2. When it deems it necessary or expedient, the **City** may communicate directly with the **Contractor**, any Subcontractors, Suppliers, or consultants.

### 4.5. Certification of Applications for Payment.

4.5.1. Based on the **Design Professional's** observations and evaluations of the **Contractor's** applications for payment, the **Design Professional** will review and certify the amounts due the **Contractor** and will issue certificates for payment in such amounts.

### 4.6. Rejection of Work.

4.6.1. The **Design Professional** will have authority to reject or disapprove Work (1) that does not conform to the Contract Documents; (2) that the **Design Professional** believes to be defective; and (3) that the **Design Professional** believes will not produce a completed Project conforming to the Contract Documents or that will prejudice the integrity of the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Whenever the **Design Professional** considers it necessary or advisable for implementation of the intent of the Contract Documents, the **Design Professional** will have authority to require additional inspection or testing of the Work in accordance with Article 9, whether or not such Work is fabricated, installed, or completed. However, neither this authority of the **Design Professional** nor a decision made in good faith either to exercise or not to exercise such authority shall give rise to a duty or responsibility of the **Design Professional** to the **Contractor**, Subcontractors, Suppliers, or other persons performing portions of the Work.

### 4.7. Review of Submittals.

4.7.1. The **Design Professional** will review or take other appropriate action upon the **Contractor's** submittals such as Shop Drawings, Product Data, and Samples, but only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents and only to the extent that the **Design Professional** believes desirable to protect the **City's** interest. The **Design Professional's** action will be taken with reasonable promptness, while allowing sufficient time in the **Design Professional's** professional judgment to permit adequate review, taking into account the

time periods set forth in the latest schedule prepared by the **Contractor** and approved by the **Design Professional**. Review of such submittals is not conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, all of which remain the responsibility of the **Contractor** as required by the Contract Documents. The **Design Professional's** review of the **Contractor's** submittals shall not relieve the **Contractor** of the obligations under Article 5. The **Design Professional's** review shall not constitute approval of safety precautions or of any construction means, methods, techniques, sequences, or procedures. The **Design Professional's** approval of a specific item shall not indicate approval of an assembly of which the item is a component. After the rejection of the second resubmittal of any one Submittal, the **Contractor** shall bear the cost of the review of each subsequent resubmittal.

**4.8. Preparation of Change Orders and Construction Change Directives.**

**4.8.1.** The **Design Professional** will prepare Change Orders and **Construction Change** Directives and may authorize minor Modifications in the Work as provided in Article 11.

**4.9. Inspections.**

**4.9.1.** The **Design Professional** will conduct inspections to determine the date or dates of Substantial Completion and the date of final completion; will receive and forward to the **City** for the **City's** review and records written warranties and related documents required by the Contract and assembled by the **Contractor**; and will issue a final certificate for payment upon the **Contractor's** compliance with all of the requirements of the Contract Documents.

**4.10. Interpretations, Clarifications, and Decisions.**

**4.10.1.** The **Design Professional** will interpret and decide matters concerning performance under and requirements of the Contract Documents on written request of either the **City** or the **Contractor**. The **Design Professional's** response to such requests will be made with reasonable promptness and within the time set forth in the Agreement between the **City** and the **Design Professional**. Any such written interpretations, clarifications, and decisions shall be binding on the **Contractor**.

**4.10.2.** Interpretations, clarifications, and decisions of the **Design Professional** will be consistent with the intent of and reasonably inferable from the Contract Documents and will be in writing or in the form of drawings. The **Design Professional** will not be liable to the **Contractor**, any Subcontractor, or Supplier for results of interpretations, clarifications, or decisions so rendered in good faith.

**4.10.3.** The **Design Professional** may, as the **Design Professional** judges desirable, issue additional drawings or instructions indicating in greater detail the construction or design of the various parts of the Work; such drawings or instructions may be effected by a Field Order or other notice to the **Contractor**, and provided such drawings or instructions are reasonably consistent with the previously existing Contract Documents, the Work shall be executed in accordance with such additional drawings or instructions without any additional cost or an extension of the Contract Time.

**4.10.4.** The **Design Professional's** decisions on matters relating to aesthetic effect must be consistent with the **City's** and will be final.

**4.11. Limitation on the Design Professional's Responsibilities.**

**4.11.1.** Neither the **Design Professional's** authority to act under the provisions of the Contract Documents nor any decision made by the **Design Professional** in good faith to exercise or not to exercise such authority shall give rise to any duty or responsibility of the **Design Professional** to the **Contractor**, any Subcontractor, any Supplier, any surety for any of them or any other person.

**4.11.2.** The **Design Professional** will not have control over or charge of and will not be responsible for construction means, methods, techniques, sequences, or procedures, or for safety precautions and programs in connection with the Work, since these are solely the **Contractor's** responsibility as provided in Article 5. The **Design Professional** will not be responsible for the **Contractor's** failure to carry out the Work in accordance with the Contract Documents. The **Design Professional** will not have control over or charge of and will not be responsible for acts or omissions of the **Contractor**, Subcontractors, Suppliers, or of any other persons performing portions of the Work.

**ARTICLE 5  
THE CONTRACTOR**

**5.1. Relationship with the City.**

**5.1.1.** The **Contractor** is an independent contractor and not an employee of the **City**. The **Contractor** is engaged by virtue of the Contract to perform only those services contained therein. The **Contractor** is not authorized to contract on behalf of the **City** or to incur any liability on the part of the **City**.

**5.2. Code of Conduct.**

**5.2.1.** M.G.L. c. 268A establishes standards of conduct for officials and employees of the **City**. The **Contractor** shall familiarize itself with the statute and act accordingly.

**5.3. Quality Assurance.**

**5.3.1.** The **Contractor** shall be responsible for ensuring that it, all Subcontractors, Suppliers, and all persons employed to do the Work under the Contract Documents perform in a professional manner, provide a high quality of service and Work, and perform in accordance with the Contract Documents.

**5.4. Supervision.**

**5.4.1. Competence and Efficiency.** The **Contractor** shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills, attention and expertise as may be necessary to perform the Work in accordance with the Contract Documents.

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

**5.4.3. Variance between the Contract Documents and Statutes, Ordinances, Codes, Rules, and Regulations.** The **Contractor** shall promptly notify the **Design Professional** and the **City** in writing of any variances between the Contract Documents and statutes, ordinances, codes, rules, and regulations. If the **Contractor**, without written notice to the **Design Professional** and the **City**, performs Work knowing that it is contrary to statutes, ordinances, codes, rules, and regulations, the **Contractor** shall assume full responsibility for such Work and shall bear the costs associated therewith, i.e., replacement, repairs, removal, and fines.

**5.4.4. Acts and Omissions.** The **Contractor** shall be responsible to the **City** for the acts and omissions of all persons performing or supplying the Work.

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

**5.5. Personnel.**

**5.5.1. Suitability.** The **Contractor** shall provide competent, properly licensed and/or certified, suitably qualified, and reliable personnel to perform the Work required by the Contract Documents. The **Contractor** shall enforce strict discipline and maintain good order at the site at all times. The **Contractor** shall not employ any Subcontractor, Supplier, or other person, whether initially or as a substitute, against whom the **City** may have reasonable objection. Acceptance of any Subcontractor or other person by the **City** shall not constitute a waiver of any right of the **City** to reject defective Work.

**5.5.2. Sexual Harassment.** Sexual harassment is an unlawful practice under M.G.L. c. 151B. The **Contractor**, Subcontractors, and all other persons responsible for any portion of the Work shall refrain from engaging in sexual harassment. The **Contractor** shall be responsible for any acts of sexual harassment committed by any persons responsible for any portion of the Work. The **Contractor** shall take appropriate action against any such individuals.

**5.5.3. Weapons and Illegal Drugs.** No weapons or illegal drugs are permitted on the Site. It is the responsibility of the **Contractor** to ensure that no weapons or illegal drugs are brought to the Site.

**5.5.4. Maximum Work Day and Work Week.** (*Reference:* M.G.L. c. 149, §§30 and 34;). No laborer, worker, mechanic, foreperson or inspector working within this Commonwealth in the employ of the **Contractor**, Subcontractor or other person doing or contracting to do the whole or part of the work contemplated by the Contract, shall be required or permitted to work more than eight (8) hours in any one day or more than forty-eight (48) hours in any one week, or more than six (6) days in any one week, except in cases of emergency.

**5.5.5. Lodging.** (*Reference:* M.G.L. c. 149, §25;). Every employee under this Contract shall lodge, board and trade where and with whom he or she elects, and neither the **Contractor** nor its agents or employees shall, either directly or indirectly, require as a condition of the employment of any person that the employee shall lodge, board or trade at a particular place or with a particular person.

**5.5.6. Wage Rates.** (*Reference:* M.G.L. c. 149, §27). Mechanics and apprentices, teamsters, chauffeurs and laborers performing Work shall be paid no less than the minimum rate of wages included in the bid documents and the Project Manual and which are made part of the Contract. They shall continue to be the minimum rate of wages for said employees during the life of the Contract. The **Contractor** shall keep a legible copy of the wage rates posted in a conspicuous place at the site during the life of the Contract. These rates of wages shall include payments by employers to health and welfare plans, pension plans and supplementary unemployment benefit plans as provided in M.G.L. c. 149, §26; and such payments shall be considered as payments to persons under M.G.L. c. 149, §27 performing work as therein provided. If the **Contractor** does not make payments to a health and welfare plan, a pension plan and a supplementary unemployment benefit plan, where such payments are included in the rates of wages, the **Contractor** shall pay the amount of said payments directly to each employee engaged in the Work. If the **Contractor** pays less than the rate of wages, including payments to health and welfare funds and pension funds, or the equivalent payments in wages to any person performing Work within the classifications as determined by the Commissioner of Labor and Industries, and if the **Contractor** takes or receives for its own use or the use of any other person, as a rebate, refund or gratuity, or in any other guise, any part or portion of the wages, including payments to health and welfare funds and pension funds, or the equivalent payment in wages, paid to such person for Work done or service rendered on the Project, the **Contractor** will be subject to the penalties set forth in M.G.L. c. 149, §27. Notwithstanding the foregoing and the requirements of 5.5.7.1 and 5.5.7.2 below, if the Contract is federally funded, federal labor standards apply, including Davis Bacon minimum wage rates and payroll reporting requirements. See the "Federal Requirements" section at the end of these contract documents.

**5.5.7. Payroll Records of Employees.** (*Reference:* M.G.L. c. 149, §27B;). The **Contractor** and all Subcontractors who are subject to M.G.L. c. 149, §27 and 27A shall keep a true and accurate record of all mechanics and apprentices, teamsters, chauffeurs, and laborers performing Work showing the name, address and occupational classification of each such employee, the hours worked by and the wages paid to all such employees. The **Contractor** and the Subcontractors shall submit a copy of said record to the **City** on a weekly basis.

**5.5.7.1.** (*Reference:* M.G.L. c. 149, §27B;). The **Contractor** and all Subcontractors who are subject to M.G.L. c. 149, §27 and 27A shall preserve their payroll records for a period of three (3) years from the date of completion of the Contract.

**5.5.7.2.** (*Reference:* M.G.L. c. 149, §27B). The **Contractor** and all Subcontractors who are subject to M.G.L. c. 149, §27 and 27A shall furnish to the Commissioner of Labor and Industries and the **City** within fifteen (15) days after completion of their portion of the Work a statement executed by the **Contractor** or Subcontractor or by any authorized officer or employee of the **Contractor** or Subcontractor who supervises the payment of wages in the form found in M.G.L. c.149, §27B.

## **5.6. Superintendence.**

**5.6.1. Employment of a Superintendent.** The **Contractor** shall employ a competent, properly licensed superintendent, reasonably acceptable to the **City**, and necessary assistants who shall be in attendance at the Site full time during the progress of the Work until the date of Substantial Completion and for such additional time thereafter as the **Design Professional** or the **City** may determine to be necessary for the expeditious completion of the Work, including final completion. If continually in the employ of the Contractor, the same Superintendent shall be assigned to this project.

**5.6.2. Removal/Replacement of a Superintendent.** The **Contractor** shall remove the superintendent if requested to do so in writing by the **City** and shall promptly replace such superintendent with a competent person reasonably acceptable to the **City**. The superintendent shall represent the **Contractor**, and communications given to the superintendent shall be as binding as if given to the **Contractor**. The **Contractor** shall not replace the superintendent without written notice to the **City** and the **Design Professional**.

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

**5.6.4. Building Grades, Lines, Etc.;** The **Contractor** shall establish the building grades; lines; levels; and column, wall and partition lines required by the various Subcontractors in laying out their Work.

**5.6.5. Coordination and Supervision.** 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 **City**, every reasonable opportunity for the installation of Work and the storage of materials.

**5.6.6. Job Meetings.** There shall be job meetings held on a weekly basis, or more often if required by the **City**. The **Contractor** shall arrange for and attend weekly job meetings with the **Design Professional** and such other persons as the **Design Professional** 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 **Design Professional**. 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 workforce power. Any notices required under the Contract may be served on such representatives.

## **5.7. Materials, Labor, Equipment, Etc.**

**5.7.1. Provision of.** Unless otherwise provided in the Contract Documents, the **Contractor** shall furnish and assume full responsibility for all materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the furnishing, performance, testing, start-up, and completion of the Work. The Contractor shall and will, in good workmanlike manner, do and perform all work and furnish all supplies and materials, machinery, equipment, facilities and means, except as herein otherwise expressly specified, necessary or proper to perform and complete all the work required by this contract, within the time herein specified, in accordance with the provisions of this contract and said specifications and in accordance with the plans and drawings, and in accordance with the directions of the Design Professional or CONTRACTING DEPARTMENT (AS STATED ON THE FIRST PAGE OF THE AGREEMENT) as given from time to time during the progress of the work. He shall furnish, erect, maintain and remove such construction plant and such temporary works as may be required. The Contractor shall observe, comply with and be subject to all terms, conditions, requirements and limitations of the contract and specifications, and shall do, carry on and complete the entire work to the satisfaction of the Design Professional and CONTRACTING DEPARTMENT (AS STATED ON THE FIRST PAGE OF THE AGREEMENT).

**5.7.1.1.** The Contractor shall furnish, install and/or maintain ample sanitary facilities for the workmen. As the needs arise, a sufficient number of enclosed temporary toilets shall be conveniently placed as required by the sanitary codes of the State and Local Government. Drinking water shall be provided from an approved source, so piped or transported as to keep it safe and fresh and served from single service containers or satisfactory types of sanitary drinking stands or fountains. All such facilities and services shall be furnished in strict accordance with existing and governing health regulations. Nothing in this Section shall be construed as forbidding the use of facilities available in existing buildings on the job site if they meet the above requirements and the use of them will not interfere with the progress of the work.

**5.7.2. Quality and Use of.** All materials and equipment shall be of good quality and new, except as otherwise provided in the Contract Documents. If required by the **Design Professional**, the **Contractor** shall furnish satisfactory evidence (including reports of required tests) as to the kind and quality of materials and equipment. All materials and equipment shall be applied, installed, connected, erected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise provided in the Contract Documents.

**5.7.3. Discrepancies or Defects.** If the **Contractor** is unable to perform its Work because of discrepancies or defects in the work of the **City's** own forces or of a separate contractor, the **Contractor** shall immediately notify the **Design Professional** and the **City** in writing of the conditions that render unable to so perform. Failure to notify the **Design Professional** constitutes an acknowledgment and acceptance of the other work as being fit and proper for integration with the **Contractor's** Work except for latent or non-apparent defects and deficiencies in the other work.

## **5.8. Contractor's Management and Financial Statement Requirements. (Reference: M.G.L. c. 30, §39R)**

**5.8.1.** The words defined herein shall have the meaning stated below whenever they appear in this Paragraph:

**5.8.1.1.** "Contractor" means any person, corporation, partnership, joint venture, sole proprietorship, or other entity awarded a contract pursuant to M.G.L. c.149, §44A-H or M.G.L. c. 30, §39M, inclusive.

**5.8.1.2.** "Contract" means any contract awarded or executed pursuant to M.G.L. c. 149, §44A-H or M.G.L. c. 30, §39M, which is for an amount or estimate amount that exceed the dollar amount set forth in M.G.L. c. 30, §39R.

**5.8.1.3.** "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.

**5.8.1.4.** "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 and who is

in fact independent. In determining whether an accountant is independent with respect to a particular person, appropriate consideration should be given to all relationships between the accountant and that person or any affiliate thereof. Determination of an accountant's independence shall not be confined to the relationships existing in connection with the filing of reports with the City.

**5.8.1.5.** "Audit," when used in regard to financial statement, means an examination of records by an independent certified public accountant in accordance with generally accepted accounting principles and auditing standards for the purpose of expressing a certified opinion thereon, or, in the alternative, a qualified opinion or a declination to express an opinion for stated reasons.

**5.8.1.6.** "Accountant's Report," when used in regard to financial statements, means a document in which an independent certified accountant indicates the scope of the audit which s/he has made and sets forth his/her opinion regarding the financial statements taken as a whole with listing of noted exceptions and qualifications, or an assertion to the effect that an overall opinion cannot be expressed. When an overall opinion cannot be expressed the reason therefor shall be stated. An accountant's report shall include as part thereof 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.

**5.8.1.7.** "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.

**5.8.1.8.** Accounting terms, unless otherwise defined herein shall have a meaning in accordance with generally accepted accounting principles and auditing standards.

**5.8.2.** 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.

**5.8.2.1 Federal Requirements:** The Contractor shall permit the City, HUD and/or any other administering agency named herein, the Comptroller General of the United States, or any of their duly authorized representatives, to have access to any books, documents, papers, and records of the Contractor which are directly pertinent to a specific HUD program for the purpose of making audits, examinations, excerpts, and transcriptions.

**5.8.3.** Until the expiration of six (6) years after final payment, the Office of the Inspector General, and the Deputy Commissioner of the Division of Capital Asset Management shall have the right to examine any books, documents, papers or Records of the Contractor or of its Subcontractors that directly pertain to, and involve transactions relating to, the Contractor or its Subcontractors.

**5.8.4.** The Contractor shall describe any change in the method of maintaining Records or recording transactions which materially affect any statements filed with the City, including in its description the date of the change and reasons therefor, and shall accompany said description with a letter from the Contractor's Independent Certified Public Accountant approving or otherwise commenting on the changes.

**5.8.5.** The Contractor shall file a Statement of Management on internal accounting controls as set forth below prior to the execution of the Contract.

**5.8.6.** The Contractor shall file prior to the execution of the contract and shall continue to file annually, an Audited Financial Statement for the most recent completed fiscal year as set forth below.

**5.8.7.** The Contractor shall file with the City a Statement of Management as to whether the system of internal accounting controls of the Contractor and its subsidiaries reasonably assures that:

**5.8.7.1.** transactions are executed in accordance with Management's general and specific authorization;

**5.8.7.2.** transactions are recorded as necessary to permit preparation of financial statements in conformity with generally accepted accounting principles, and to maintain accountability for assets;

**5.8.7.3.** access to assets is permitted only in accordance with Management's general or specific authorization; and

**5.8.7.4.** the recorded accountability for assets is compared with the existing assets at reasonable intervals and appropriate action is taken with respect to any difference.

**5.8.7.5.** The Contractor shall also file with the City a statement prepared and signed by an Independent Certified Public Accountant stating that s/he has examined the Statement of Management on internal accounting controls, and expressing an opinion as to:

**5.8.7.5.1.** whether the representation of Management in response to this paragraph and paragraphs

5.8.2. through 5.8.6 above are consistent with the result of Management's evaluation of the system of internal accounting controls; and

**5.8.7.5.2.** whether such representations of Management are, in addition, reasonable with respect to transactions and assets in amounts which would be material when measured in relation to the applicant's financial statements.

**5.8.8.** The Contractor shall annually file with the Commissioner of the Division of Capital Asset Management during the term of the contract a financial statement prepared by an Independent Certified Public Accountant on the basis of an Audit by such accountant. The final statement filed shall include the date of final payment. All statements shall be accompanied by an accountant's report. Such statements shall be made available to the City upon request.

**5.8.9.** The City's Contracting Department, its authorized representative and agents and the HUD Representative for the Secretary shall, at all times have access to and be permitted to observe and review all work materials, equipment, payrolls, personnel records, employment conditions, material invoices, and other relevant data and records pertaining to this Contract, provided, however, that all instructions and approval with respect to the work will be given to the Contractor only by CONTRACTING DEPARTMENT (AS STATED ON THE FIRST PAGE OF THE AGREEMENT) through its authorized representatives or agents. Records and statements required to be made, kept or filed under the provisions of this section shall not be public records as defined in G.L. 4, §7 or equivalent federal legislation. They shall not be made available to the public, but shall be available only to the governmental authorities named herein.

## **5.9. Taxes.**

**5.9.1** The Contractor shall pay all sales, consumer, use, and other similar taxes for the Work or portions thereof which are provided by the Contractor which are legally enacted when bids are received, whether or not yet effective or merely scheduled to go into effect. However, the Contractor shall not pay, and the City shall not reimburse or pay the Contractor for, any sales taxes for building supplies or materials for which an exemption is provided in M.G.L. c. 64H, §6(f). The City's tax exemption number to be used by the Contractor in this regard is E04-600-1414.

## **5.10. Permits, Licenses, and Fees.**

**5.10.1** Unless otherwise provided, the Contractor shall obtain and pay the fees for all permits, licenses, and inspections that are necessary for the proper execution and completion of the Work and which are customarily secured after execution of the Contract and which are legally required. All fees for permits, licenses, and inspections required by any City department shall be waived. Unless otherwise agreed by the Awarding Authority in writing, the Contractor shall, prior to commencement of the work, (i) meet with the City of Somerville Inspectional Services Department to determine what permits are needed for the work; (ii) obtain all such permits; and (iii) provide copies of such permits to the Awarding Authority. Permits shall include, without limitation, demolition, foundation, digsafe, and building permits; permits for removal, sealing up, or installation of utilities, including gas, electrical, water and sewer; and permits for obstructing public streets and sidewalks.

## **5.11. Notices Required By Statutes, Ordinances, Codes, Rules, Regulations, and Orders of the City.**

**5.11.1** The Contractor shall give notices required by statutes, ordinances, codes, rules, regulations, and orders of the City bearing on performance of the Work.

## **5.12. Additional Information from Design Professional.**

**5.12.1.** The Contractor shall perform the Work in accordance with the Contract Documents and submittals approved pursuant to Article 4.

**5.12.2.** The Contractor shall give the Design Professional timely notice of any additional Plans, Specifications, or instructions required to define the Work in greater detail, or to permit the proper progress of the Work.

**5.12.3.** The Contractor shall not proceed with any Work not clearly and consistently defined in detail in the Contract Documents, but shall request additional drawings or instructions from the Design Professional as provided in the previous Paragraph. If the Contractor proceeds with such Work without obtaining further drawings, Specifications, or instructions, the Contractor shall correct Work incorrectly done at the Contractor's own expense.

## **5.13. "Or equal."**

**5.13.1. Requirements for Substitutions.** (Reference: M.G.L. c. 30, §39M(b).) Where products or materials are prescribed by manufacturer name, trade name, or catalog reference, the words "or approved equal" shall be understood to follow. An item shall be considered equal to the item so named or described if, in the opinion of the Design Professional:

**5.13.1.1.** it is at least equal in quality, durability, appearance, strength, and design;

**5.13.1.2.** it performs at least equally the function imposed by the general design for the Work;

**5.13.1.3.** it conforms substantially, even with deviations, to the detailed requirements for the items as indicated by the Specifications.

**5.13.2. Net Savings.** No proposed substitution will be permitted unless the Contractor certifies that the proposed substitution will yield a net savings to the City and will not extend the Contract Time.

**5.13.3. Contractor's Expense.** Any structural or mechanical changes made necessary to accommodate substituted



equipment under this paragraph (including but not limited to engineering fees) shall be at the expense of the **Contractor** or **Subcontractor** responsible for the Work item.

**5.13.3.1.** 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 **City** or the **Design Professional**, unless such substitution was made at the written request or direction of the **City** or the **Design Professional**.

**5.13.3.2.** All data to be provided by the **Contractor** in support of any proposed “or equal” or substitute item will be at the **Contractor's** expense.

**5.13.4. Meeting Requirements.** The **Contractor** shall be responsible for determining that all materials furnished for the Work meet all requirements of the Contract Documents. The **Design Professional** 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 **Design Professional**, 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.

**5.13.5. Named Manufacturer's Product.** In all cases in which a manufacturer's name, trade name, or other proprietary designation is used in connection with materials or articles to be furnished under this Contract, whether or not the phrase “or equal” is used after such name, the **Contractor** shall furnish the product of the name manufacturer(s) without substitution, unless a written request for a substitute has been submitted by the **Contractor** and approved in writing by the **Design Professional** as provided in the following paragraph.

**5.13.6. Deviations.** 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 **Design Professional** in writing of the nature of such deviations at the time the material is submitted for approval and shall request written approval of the deviation from the requirements of the Contract Documents.

**5.13.7. Rejection of Deviations.** In requesting approval of deviations or substitutions, the **Contractor** shall provide, upon request, evidence leading to a reasonable certainty that the proposed substitution or deviation will provide a quality of result at least equal to that otherwise attainable. If, in the opinion of the **Design Professional**, the evidence presented by the **Contractor** does not provide a sufficient basis for such reasonable certainty, the **Design Professional** may reject such substitution or deviation without further investigation.

**5.13.8. Consistent Character and Quality of Design.** The Contract Documents are intended to produce a building of consistent character and quality of design. All components of the building including visible items of mechanical and electrical equipment have been selected to have a coordinated design in relation to the overall appearance of the Project. The **Design Professional** shall judge the design and appearance of proposed substitutes on the basis of their suitability in relation to the overall design of the Project, as well as for their intrinsic merits. The **Design Professional** will not approve as equal to materials specified proposed substitutes that, in the **Design Professional's** opinion, would be out of character, obtrusive, or otherwise inconsistent with the character or quality of design of the Project. In order to permit coordinated design of color and finishes the **Contractor** shall, if required by the **Design Professional**, furnish the substituted material in any color, finish, texture, or pattern which would have been available from the manufacturer originally specified, at no additional cost to the **City**.

**5.13.9. Warranty.** The warranties provided herein shall be in addition to and not in limitation of any other warranty required by the Contract Documents or otherwise prescribed by law.

**5.13.10. Design Professional's Approval.** The **Design Professional** will be the sole judge of acceptability. No “or equal” or substitute will be ordered, installed, or utilized without the **Design Professional's** prior written acceptance which will be evidenced by either a Change Order or an approved Shop Drawing. The **City** may require the **Contractor** to furnish at the **Contractor's** expense a special performance guarantee or other surety with respect to any “or equal” or substitute. The **Design Professional** will record the time required by the **Design Professional** and its consultants in evaluating substitutes proposed or submitted by the **Contractor** and in making changes in the Contract Documents (or in the provisions of any other direct contract with the **City** for work on the Project) occasioned thereby. Whether or not the **Design Professional** accepts a substitute item so proposed or submitted by the **Contractor**, the **Contractor** shall reimburse the **City** for the charges of the **Design Professional** and its consultants for evaluating each such proposed substitute item.

**5.14. Substitute Construction Methods or Procedures.**

**5.14.1** If a specific means, method, technique, sequence, or procedure of construction is shown or indicated in and expressly required by the Contract Documents, the **Contractor** may furnish or utilize a substitute means, method, technique, sequence or procedure of construction acceptable to the **Design Professional**. The **Contractor** shall submit sufficient information to allow the **Design Professional**, in the **Design Professional's** sole discretion, to determine whether the substitute

proposed is equivalent to that expressly called for by the Contract Documents.

**5.15. Contractor's Progress Schedule.**

**5.15.1. Before Starting Construction.** Within ten (10) days after the date of the Notice to Proceed, the **Contractor** shall submit to the **Design Professional** for review:

**5.15.1.1.** a preliminary progress schedule indicating the times (number of days or dates) for starting and completing the various stages of the Work;

**5.15.1.2.** a preliminary schedule of Shop Drawing and Sample submittals which will list each required submittal and the times for submitting, reviewing, and processing such submittal; and

**5.15.1.3.** a refined schedule of values for all of the Work which will include quantities and prices of items aggregating the Contract Sum and will subdivide the Work into component parts in sufficient detail to serve as the basis for progress payments during construction. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.

**5.15.2. Review of Progress Schedule.** At least ten (10) days prior to the commencement of construction, the **Design Professional**, the **Contractor**, and any other appropriate persons will meet to review and discuss the acceptability to the **Design Professional** of the progress schedule. The **Contractor** will have an additional ten (10) days to make corrections and adjustments and to complete and resubmit the schedule. No progress payment shall be made to the **Contractor** until the schedule is submitted to and found acceptable by the **Design Professional** as provided below.

**5.15.3. Acceptability of Progress Schedule.** The progress schedule will be acceptable to the **Design Professional** if, according to the **Design Professional**, it provides an orderly progression of the Work to completion within any specified time frame, but such acceptance will neither impose on the **Design Professional** responsibility for the sequencing, scheduling, or progress of the Work nor interfere with or relieve the **Contractor** from the **Contractor's** full responsibility therefore. The **Contractor's** schedule of Submittals must be acceptable to the **Design Professional** in providing a workable arrangement for reviewing and processing the required Submittals. The **Contractor's** schedule of values must be acceptable to the **Design Professional** as to form and substance.

**5.15.4. Sepia and Copies.** After the **Design Professional** has approved the schedule, the **Contractor** shall submit to the **Design Professional** one (1) sepia and four (4) copies bearing the **Contractor's** stamp of approval as a representation to the **City** that the **Contractor** has determined or verified all data on that progress schedule and that the **Contractor**, the Subcontractors and Suppliers have reviewed and coordinated the sequences in that progress schedule with the requirements of the Work.

**5.15.5. Adjustment of Schedule.** The **Contractor** shall adhere to the established progress schedule which may be adjusted from time to time as follows: the **Contractor** shall submit to the **Design Professional** for acceptance proposed adjustments in the progress schedule that will not change the Contract Time. Such adjustments will conform generally to the progress schedule then in effect and will comply with any provisions of the requirements applicable thereto.

**5.15.6. During Construction.** The **Contractor** shall submit monthly progress schedules to the **Design Professional**. The schedules shall stay current with the **Contractor's** approach to the Work remaining.

**5.15.7. Schedule of Submittals.** The **Contractor** shall prepare and keep current, for the **Design Professional's** approval, a schedule of Submittals that is coordinated with the **Contractor's** construction schedule and allows the **Design Professional** reasonable time to review Submittals.

**5.16. Project Coordination.**

**5.16.1. In General.** The **Contractor** shall be responsible for the proper coordination of the Work of all of the trades.

**5.16.2. Coordination with Subcontractors.** The **Contractor** shall coordinate the work of each Subcontractor with the Work of every other Subcontractor whose Work affects the other.

**5.16.3. Coordination with the City's Own Forces or Separate Contractors.** The **Contractor** shall coordinate its operations with those of the **City's** own forces or separate contractors. The **Contractor** shall provide the **City's** own forces and separate contractors a reasonable opportunity for the handling, unloading and storage of their materials and equipment and execution of their work. The **Contractor** shall connect and coordinate its Work with theirs.

**5.16.4. Coordination with Utility Companies.** The **Contractor** shall coordinate its operations with all the appropriate utility companies to assure that the utilities required on the Project are available and functioning properly pursuant to the requirements of the Contract Documents.

**5.17. Project Photographs.**

**5.17.1. In General.** The **Contractor** shall take, at its own expense, interior and exterior photographs at the site, from different vantages as directed by the **Design Professional** or the **City**, before beginning any Work and thereafter, at a minimum, on the first work day of each month until final completion of the Work, including final Site photos. Photos shall be taken of any

Work that will be buried or concealed while the Work is still exposed. The photographs shall be taken by a skilled commercial photographer. The number of photographs required shall be at the discretion of the **City** or the **Design Professional**. One aerial photo shall be required a) prior to commencement of the work and b) at the completion of the work. See Section 01320 – Construction Progress Documentation.

**5.17.2. Prints and Digital Media.** Within fourteen (14) days after the photographs have been taken, the **Contractor** shall cause prints to be made and delivered to the **City** and the **Design Professional**. All photographs shall be 8” x 10”. Each print shall state the date of the photograph, the name of the Project, the description of the view and the name and address of the photographer. The **City** shall receive one glossy print of each photo as well as all prints in digital form on compact disc. The **Design Professional** shall receive one glossy print.

**5.17.3. Failure to Comply.** Should the **Contractor** fail to adhere to any requirement set forth in the previous two paragraphs, the **City** may have the photographs taken at the **Contractor's** expense or receive a set-off against the **Contractor's** next application for payment.

#### **5.18. Record Documents and Samples at the Site.**

**5.18.1** The **Contractor** shall maintain in a safe place at the site one record copy of all Plans, Specifications, Modifications, Change Orders, **Construction Change** Directives, Field Orders and written interpretations and clarifications in good order and annotated to show all changes made during construction. These record documents together with all approved Samples and a counterpart of all approved Shop Drawings will be available to the **Design Professional** for reference. Upon completion of the Work, these record documents, Samples and Shop Drawings will be delivered by the **Contractor** to the **Design Professional** for the **City**.

#### **5.19. Submittals.**

**5.19.1. Purpose.** The purpose of Submittals is to demonstrate for those portions of the Work for which Submittals are required the way the **Contractor** proposes to conform to the information given and the design concept expressed in the Contract Documents.

**5.19.2. Submittal Procedure.** Within ten (10) days from the Notice to Proceed, the **Contractor** shall submit to the **Design Professional** a completed Submittals schedule. The **Contractor** shall review, approve, and submit to the **Design Professional** Submittals required by the Contract Documents with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of the **City** or of separate contractors. Submittals made by the **Contractor** that are not required by the Contract Documents may be returned without action. The schedules shall be updated and resubmitted each month. All Submittals will be identified as the **Design Professional** may require and in the number specified in the General Requirements. The data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show the **Design Professional** the materials and equipment that the **Contractor** proposes to provide and to enable the **Design Professional** to review the information for the limited purposes stated below.

**5.19.3. Samples.** The **Contractor** shall also submit Samples to the **Design Professional** for review and approval in accordance with said accepted schedule of Submittals. Each Sample will be identified clearly as to material, Supplier, pertinent data such as catalog numbers and the use for which it is intended and otherwise as the **Design Professional** may require to enable the **Design Professional** to review the Submittal for the limited purposed stated below. The numbers of each Sample to be submitted will be as specified in the Specifications. Unless otherwise specified in the Specifications, three (3) specimens of each Sample shall be submitted.

**5.19.3.1.** The Samples shall be of sufficient size to permit proper evaluation of material. Where variations in color or other characteristics are to be expected, samples showing the minimum range of variation shall be submitted. Materials exceeding the range of variation of the approved Samples will not be approved on the Work.

**5.19.3.2.** All costs associated with delivery of Samples will be paid by the **Contractor**.

**5.19.4. Contractor's Verifications.** Before submitting each Submittal, the **Contractor** shall have determined and verified:

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

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

**5.19.4.3.** all information relative to the **Contractor's** sole responsibilities in respect of means, methods, techniques, sequences, and procedures of construction and safety precautions and programs incident thereto.

**5.19.5. Contractor's Representations.** By approving and providing 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 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 Submittals, the **Design Professional** shall be entitled to rely upon the **Contractor's** representation that such information is correct and accurate.

**5.19.6. Coordination.** The **Contractor** shall also have reviewed and coordinated each Submittal with other Submittals and with the requirements of the Work and the Contract Documents.

**5.19.7. Stamp or Specific Written Indication.** Each Submittal will bear a stamp or specific written indication that the **Contractor** has satisfied the **Contractor's** obligations under the Contract Documents with respect to the **Contractor's** review and approval of that Submittal.

**5.19.8. Written Notice of Variations.** At the time of each Submittal, the **Contractor** shall give the **Design Professional** specific written notice of such variations, if any, that the Submittal may have from the requirements of the Contract Documents. Such notice is to be in a written communication separate from the Submittal. Moreover, the **Contractor** shall make a specific notation on each Submittal to the **Design Professional** for review and approval of each such variation.

**5.19.9. Review and Approval by the Design Professional.** The **Contractor** shall perform no portion of the Work requiring a Submittal until the respective Submittal has been approved by the **Design Professional**. Such Work shall be in accordance with approved Submittals.

**5.19.9.1.** The **Design Professional** will review and approve Submittals in accordance with the schedule of Submittals accepted by the **Design Professional** as required above. The **Design Professional's** review and approval will be only to determine if the items covered by the Submittals will, after installation or incorporation in the Work, conform to the information given in the Contract Documents and be compatible with the design concept of the completed Project as a functioning whole as indicated in the Contract Documents. The **Design Professional's** review and approval will not extend to means, method, technique, sequences, or procedures of construction (except where a particular means, method, technique, sequences or procedures of construction is specifically and expressly called for by the Contract Documents) or to safety precautions or programs incident thereto. The review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.

**5.19.10.Deviations.** The **Contractor** shall not be relieved of responsibility for deviations from requirements of the Contract Documents by the **Design Professional's** approval of Submittals unless the **Contractor** has specifically informed the **Design Professional** in writing of such deviation at the time of Submittal and the **Design Professional** has given written approval to the specific deviation. The **Contractor** shall not be relieved of responsibility for errors or omissions in Submittals by the **Design Professional's** approval thereof.

**5.19.11.Revisions.** The **Contractor** shall make corrections required by the **Design Professional** and shall return the required number of corrected copies of Submittals and submit as required new Submittals for review and approval. The **Contractor** shall direct specific attention, in writing or on resubmitted Submittals, to revisions other than those requested by the **Design Professional** on previous Submittals. Unless such written notice has been given, the **Design Professional's** approval of a resubmitted Submittal shall not constitute approval of any changes not requested on the prior Submittal.

**5.19.12.Related Work.** Where a Submittal is required by the Contract Documents or the schedule of Submittals accepted by the **Design Professional**, any related Work performed prior to the **Design Professional's** review and approval of the pertinent Submittal will be at the sole expense and responsibility of the **Contractor**.

**5.19.13.Informational Submittals.** Informational Submittals upon which the **Design Professional** is not expected to take responsive action may be so identified in the Contract Documents.

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

#### **5.20. Continuing the Work.**

**5.20.1.** The **Contractor** shall carry on the Work and adhere to the progress schedule during all disputes or disagreements with the **City**. No Work shall be delayed or postponed pending resolution of any disputes or disagreements, except as otherwise provided herein or as the **City** and the **Contractor** may agree in writing.

#### **5.21. Use of Site; Access to Work.**

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

5.21.2. At all times, the City and the Design Professional shall have access to the Work.

**5.22. Protection of Persons and Property.**

**5.22.1. In General.** The Contractor shall be responsible for initiating, maintaining, and supervising all health and safety precautions and programs in connection with the performance of the Contract. The Contractor is responsible for the implementation of all Federal, State, and local health and safety requirements. The Contractor shall be responsible for all damages to persons or property that occur as a result of the Contractor's fault or negligence in connection with the prosecution of the work and shall be responsible for the proper care and protection of all materials delivered and work performed until completion and final acceptance by CONTRACTING DEPARTMENT (AS STATED ON THE FIRST PAGE OF THE AGREEMENT).

The Contractor shall provide sufficient competent watchmen, both day and night, including Saturdays, Sundays and holidays, as necessary, from the time the work is commenced until final completion and acceptance. Sufficient lighting shall be provided to aid in the prevention of injury to passersby or vandalism to the property or other illegal activities.

The Contractor shall avoid damage as a result of its operations to existing sidewalks, streets, curbs, pavements, utilities (except those which are to be replaced or removed), adjoining property, etc. and the Contractor shall at its own expense completely repair any damage thereto caused by its operations.

The Contractor shall shore up, brace, underpin, secure, and protect as may be necessary, all foundations and other parts of existing structure adjacent to, adjoining, and in the vicinity of the site, which may be in any way affected by the excavations or other operations connected with the construction of the improvements embraced in this Contract. The Contractor shall be responsible for the giving of any and all required notices to any adjoining or adjacent property owner or other party before the commencement of work. The Contractor shall indemnify and save harmless the City of Somerville and CONTRACTING DEPARTMENT (AS STATED ON THE FIRST PAGE OF THE AGREEMENT) from any liability for damages on account of settlement or the loss of lateral support of adjoining property resulting from the Contractor's failure to comply with this section.

**5.22.1.1.** If this contract is in excess of \$100,000 and is federally funded, the Contractor shall comply with all applicable standards, orders, or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401 et seq.) and the Federal Water Pollution Control Act as amended (33 U.S.C. 1251 et seq.)

**5.22.1.2.** If this contract is in excess of \$2,000 and is federally funded, the Contractor shall comply with Sections 103 and 107 of the Contract Work Hours Safety Standards Acts (40 U.S.C. 327-333), as supplemented by Department of Labor regulations at 29 CFR part 5. To that end, the Contractor shall compute the wages of every mechanic and laborer on the basis of a standard workweek of 40 hours. Work in excess of the standard workweek is permissible, provided that the worker is compensated at a rate of not less than 1-1/2 times the basic rate of pay for all hours worked in excess of 40 hours in the workweek. The Contractor shall ensure that no laborer or mechanic is required to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous.

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

**5.22.2.1.** employees on the site and other persons who may be affected thereby;

**5.22.2.2.** the Work, materials, and equipment to be incorporated therein, whether in storage on or off the site, under the care, custody or control of the Contractor, Subcontractors, or Sub-subcontractors;

**5.22.2.3.** other property at the site or adjacent or in close proximity thereto, such as trees, shrubs, lawns, walks, pavements, roadways, structures, and utilities not designated for removal, relocation, or replacement in the course of construction; and

**5.22.2.4.** any other property of the City, whether or not forming part of the Work, located at the site or adjacent thereto in areas to which the Contractor has access.

**5.22.3. Notices and Compliance.** The Contractor shall give notices and comply in all other respects with applicable laws, ordinances, rules, regulations, codes, and lawful orders of public authorities bearing on the safety of persons or property or their protection from damage, injury, or loss. The Contractor shall notify owners of adjacent and nearby properties of underground facilities and utility owners when prosecution of the Work may affect them and shall cooperate with them in the protection, removal, relocation, and replacement of their property.

**5.22.3.1.** Should the Contractor in the execution of his work uncover or discover utility service lines not indicated on the relevant drawings, or that do not show signs of singular service to any existing structures being demolished, the Contractor shall cease work in that area immediately and promptly notify the Public Works Department. Within forty-eight hours, the Public Works Department will inspect the site and issue written instructions to the Contractor. The Contractor shall proceed

with only after such written instructions have been received and shall proceed in full compliance with such instructions. The above mentioned situation or similar circumstances and/or modification if any, shall not relieve the Contractor from his responsibilities in this Contract and also it is without prejudice to any and all rights of CONTRACTING DEPARTMENT (AS STATED ON THE FIRST PAGE OF THE AGREEMENT) covering this said contract and surety or bonds.

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

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

**5.22.6. Damage to Property.** The Contractor shall promptly remedy damage and loss to property referred to above. If the damage or loss is due in whole or in part to the Contractor's failure to take the precautions required herein, the Contractor shall bear the cost, subject to any reimbursement to which the Contractor is entitled under property insurance required by the Contract Documents. The Contractor shall be fully and solely responsible for all Work and other operations carried out on adjacent properties. The insurance required under Article 8 shall cover such Work or operations, and the Contractor shall indemnify and defend the City, the Design Professional, and the owners of such adjacent or nearby properties from and against all claims, suits, losses, or costs arising out of such Work or operations.

**5.22.7. Fire Protection Equipment and Services.** 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.

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

**5.22.9. Snow and Ice Removal.** The Contractor shall remove snow and ice that might result in damage or delay.

**5.22.10. Safety Representative.** The Contractor shall designate a qualified and experienced safety representative at the site whose duties and responsibilities shall be the prevention of accidents and the maintaining and supervising of safety precautions and programs.

**5.22.11. Weather Protection.** (Reference: M.G.L. c. 149, §44F(1).) The Contractor shall install weather protection and furnish adequate heat in the protected area from November 1 through March 31. In the event of temporary suspension of work, during inclement weather, the Contractor will carefully protect and will cause his subcontractors to carefully protect all work and materials against damage or injury from the weather. If, in the opinion of the Design Professional or CONTRACTING DEPARTMENT (AS STATED ON THE FIRST PAGE OF THE AGREEMENT), any work or materials shall have been damaged or injured by reason of failure on the part of the Contractor or any of his Subcontractors so to protect the work, such work or materials shall be removed and replaced at the expense of the Contractor. These Specifications are not to be construed as requiring enclosures or heat for operations that are not economically feasible to protect in the judgment of CONTRACTING DEPARTMENT (AS STATED ON THE FIRST PAGE OF THE AGREEMENT). Included in the preceding category, without limitation, are such items as site work, excavation, pile driving, steel erection, erection of certain "exterior" wall panels, roofing, and similar operation:

(1) "WEATHER PROTECTION" shall mean the temporary protection of that work adversely affected by moisture, wind and cold, by covering, enclosing and/or heating.

This protection shall provide adequate working areas during the months of November through March as determined by the Design Professional and consistent with the approved construction schedule to permit the continuous progress of all work necessary to maintain an orderly and efficient sequence of construction operations. The General Contractor shall furnish and install all "Weather Protection" material and be responsible for all costs, including heating required to maintain a minimum temperature of 40 degrees F, at the working surface. This provision does not supersede any specific requirements for methods of construction, curing of materials or the applicable General Conditions set forth in the Contract Articles with added regard to performance obligations of the Contractor.

(2) Within 30 calendar days after his award of contract, the General Contractor shall submit in writing to CONTRACTING DEPARTMENT (AS STATED ON THE FIRST PAGE OF THE AGREEMENT) for approval, three copies of his proposed methods for "Weather Protection".

(3) Installation of weather protection and heating devices shall comply with all safety regulations including provisions for



adequate ventilation and fire protection devices. Heating devices which may cause damage to finish surfaces shall not be used.

(4) The General Contractor shall furnish and install one accurate Fahrenheit thermometer at each work area as designated by the Designer. However, one additional accurate Fahrenheit thermometer shall be provided for every 2,000 square feet of floor space where the work areas exceed 2,000 square feet.

**5.22.12. Security.** The **Contractor** shall provide, within the Contract Sum, a sufficient number of security personnel at the Site at all times when the **Contractor's** personnel are not present, from commencement of the Work until Substantial Completion to assure that the Site, the facility, and the Work, and all materials and equipment stored at the Site are fully and completely protected against loss or damage due to vandalism, theft, or malicious mischief. If the **Contractor** elects, in addition, to use guard dogs for this purpose, each dog shall at all times be accompanied by an adult handler. If the **Contractor** fails to comply with the requirements of this paragraph, then the **City** may provide appropriate security and charge the cost thereof to the **Contractor**. The **City's** provision of such security, or failure to do so, shall not relieve the **Contractor** of its responsibility to pay for loss or damage due to vandalism, theft, or malicious mischief at the Site.

**5.22.13. Hazard Communication Programs.** The **Contractor** shall be responsible for coordinating any exchange of material safety data sheets or other hazard communications information required to be made available to or exchanged between or among employers at the site in accordance with laws, codes and regulations.

**5.22.14. Noise Pollution Control.** The **Contractor** shall comply with all applicable provisions of Somerville Municipal Code §9-109.

**5.23. Cutting and Patching.**

**5.23.1. In General.** Unless otherwise provided in the Contract Documents, the **Contractor** shall be responsible for cutting, fitting, or patching required to complete the Work or to make its parts fit together properly, including the work of the **City** or of separate contractors.

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

**5.23.3. Damage Caused by Contractor.** Should the **Contractor** cause damage to the work or property of any separate contractor at the Site, or should any claim arising out of the **Contractor's** performance of Work at the Site be made by any separate contractor against the **Contractor**, the **City**, the **Design Professional**, or any of the **Design Professional's** consultants, the **Contractor** shall promptly attempt to settle with such other contractor by agreement, or to otherwise resolve the dispute by arbitration or at law. The **Contractor** shall, to the fullest extent permitted by laws and regulations, indemnify and hold harmless the **City**, the **Design Professional**, and the **Design Professional's** consultants from and against all claims, damages, losses and expenses (including, but not limited to, fees of the Design Professional, the Design Professional's consultants, attorneys, and other professionals, and court and arbitration or mediation costs) arising directly, indirectly or consequentially out of any action, legal or equitable, brought by any separate contractor against the **City**, the **Design Professional**, or any of the **Design Professional's** consultants, to the extent based on a claim arising out of the **Contractor's** performance of the Work. Should a separate contractor cause damage to the Work or property of the **Contractor** or should the performance of work by any separate contractor at the site give rise to any other claim, the **Contractor** shall not institute any action, legal or equitable, against the **City**, the **Design Professional**, or any of the **Design Professional's** consultants, or permit any action against any of them to be maintained and continued in its name or for its benefit in any court or before any arbiter which seeks to impose liability on or to recover damages from the **City**, the **Design Professional**, or any of the **Design Professional's** consultants, on account of any such damage or claim. If the **Contractor** delays at any time in performing or furnishing Work by any act or neglect of a separate contractor and the **City** and the **Contractor** are unable to agree as to the extent of any adjustment in the Contract Time attributable thereto, the **Contractor** may make a claim for an extension of time in accordance with Article 16. An extension of the Contract Time shall be the **Contractor's** exclusive remedy with respect to the **City**, the **Design Professional**, and the **Design Professional's** consultants, for any delay, disruption, interference, or hindrance caused by any separate contractor.

**5.24. Cleaning Up.**

**5.24.1.** During the progress of the Work, the **Contractor** shall keep the premises and surrounding area free from accumulation of waste materials and rubbish caused by operations under the Contract or other debris. At the completion of the Work, the **Contractor** shall remove from and about the Project all waste materials, rubbish, and debris, and the **Contractor's** tools, construction equipment, machinery, and surplus materials. Surplus materials to be provided to the **City** by specifications shall be stored in a clean, safe and secure area as directed by the **City**. The **Contractor** shall leave the site clean and ready for

occupancy by the **City** at Substantial Completion of the Work. Immediately prior to the **Design Professional's** inspection for Substantial Completion, the **Contractor** shall completely clean the premises. Concrete and ceramic surfaces shall be cleaned and washed. Resilient coverings shall be cleaned, waxed and buffed. Woodwork shall be dusted and cleaned. Sash, fixtures and equipment shall be thoroughly cleaned. Stains, spots, dust, marks and smears shall be removed from all surfaces. Hardware and all metal surfaces shall be cleaned and polished. Glass and plastic surfaces shall be thoroughly cleaned by professional window cleaners. All damaged, broken or scratched glass or plastic shall be replaced by the **Contractor** at the **Contractor's** expense. The **Contractor** shall restore to original condition all property not designated for alteration by the Contract Documents.

**5.24.2.** If the **Contractor** fails to clean up as provided herein, the **City** may do so and charge the cost thereof to the **Contractor**.

**5.25. Royalties and Patents.**

**5.25.1** The **Contractor** shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. To the fullest extent permitted by law, the **Contractor** shall indemnify and hold harmless the **City** and the **Design Professional** from and against all claims, costs, losses, and damages arising out of or resulting from any infringement of patent rights or copyrights incident to the use in the performance of the work or resulting from the incorporation in the work of any invention, design, process, product, or device not specified in the Contract Documents.

**5.26. Contractor's Obligation to Perform.**

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

- |                  |  |
|------------------|--|
| <b>5.26.1.1.</b> | observations by the <b>Design Professional</b> ;   |
| <b>5.26.1.2.</b> | recommendation of any progress or final payment by the <b>Design Professional</b> ;  |
| <b>5.26.1.3.</b> | the issuance of a certificate of Substantial Completion or any payment by the <b>City</b> to the <b>Contractor</b> under the Contract Documents; |
| <b>5.26.1.4.</b> | use or occupancy of the Work, Project, or Site, or any part thereof, by the <b>City</b> ;  |
| <b>5.26.1.5.</b> | any acceptance by the <b>City</b> or any failure to do so;   |
| <b>5.26.1.6.</b> | any review and approval of a Shop Drawing or Sample submittal or the issuance of a notice of acceptance by the <b>Design Professional</b> ;      |
| <b>5.26.1.7.</b> | any inspection, test, or approval by others; or  |
| <b>5.26.1.8.</b> | any correction of defective Work by the <b>City</b> .  |

**5.27. Indemnification; and Covenant Not To Sue.**

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

**5.27.2.** In claims against any person or entity indemnified under the foregoing paragraph by an employee of the **Contractor**, a Subcontractor, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, the indemnification obligation under the foregoing paragraph shall not be limited by a limitation on the amount or type of damages, compensation or benefits payable by or for the **Contractor** or a Subcontractor under Workers' Compensation laws, disability benefit acts or other employee benefit acts.

**5.27.3.** The obligations of the **Contractor** in this Article shall not extend to the liability of the **Design Professional**, the **Design Professional's** consultants, and agents or employees of any of them arising out of (1) the preparation of maps, Plans, opinions, reports, surveys, Change Orders, designs, or Specifications, or (2) directions or instructions given by the **Design Professional**, the **Design Professional's** consultants and agents or employees of any of them, provided such instructions or directions are the primary cause of the injury or damage.

**5.27.4.** The **Contractor**, or any successor, assign, or subrogee of the **Contractor** agrees not to bring any civil suit,



action, or other proceeding in law, equity or arbitration against the **Design Professional**, or the officers, employees, agents, or consultants of the **Design Professional**, for the enforcement of any action which the **Contractor** may have arising out of or in any manner connected with the Work. The **Contractor** shall assure that this covenant not to sue is contained in all subcontracts and sub-subcontracts of every tier and shall assure its enforcement. The **Design Professional**, its officers, employees, agents, and consultants are intended third-party beneficiaries of this covenant not to sue, and are entitled to enforce this covenant in law or equity.

**5.28. Survival of Obligations.**

**5.28.1** All representations, indemnifications, warranties, and guarantees made in, required by or given in accordance with the Contract Documents, as well as all continuing obligations indicated in the Contract Documents, will survive final payment, completion and acceptance of the Work and termination or completion of the Contract.

**ARTICLE 6  
SUBCONTRACTORS**

**6.1 Use of Subcontractors.**

The **Contractor** shall use the Subcontractors named in the **Contractor's** Bid. The Contractor shall not award any work to any Subcontractor without prior written approval of the CONTRACTING DEPARTMENT (AS STATED ON THE FIRST PAGE OF THE AGREEMENT). The Contractor shall not award any work to any subcontractor without prior written approval of CONTRACTING DEPARTMENT (AS STATED ON THE FIRST PAGE OF THE AGREEMENT), which approval will not be given until the Contractor submits a written approval statement concerning the proposed award to the subcontractor, which statement shall contain such information as CONTRACTING DEPARTMENT (AS STATED ON THE FIRST PAGE OF THE AGREEMENT) may require. All subcontracts subject to Mass. General laws, Chapter 149, Sections 44A-J, shall comply with the filed sub-bid requirements of that statute. The Contractor shall be as fully responsible for the acts and omissions of his subcontractors, and of persons either directly or indirectly employed by them, as he is for the acts and omissions of persons directly employed by him. The Contractor shall cause appropriate provisions to be inserted in all subcontracts relative to the work to bind subcontractors to the Contractor by the Terms of the General Conditions and other contract documents insofar as applicable to the work of subcontractors and to give the Contractor the same power as regards terminating any subcontract that CONTRACTING DEPARTMENT (AS STATED ON THE FIRST PAGE OF THE AGREEMENT) may exercise over the Contractor under any provision of the contract documents. Nothing contained in this contract shall create any contractual relation between any subcontractor and CONTRACTING DEPARTMENT (AS STATED ON THE FIRST PAGE OF THE AGREEMENT).

**6.2 Substitution of Subcontractors.**

**6.2.1** The **Contractor** shall not substitute another Subcontractor therefor without notice to the **City** and the **City's** prior written consent of such substitution.

**6.3 Names of Subcontractors.**

**6.3.1** Upon execution of the Contract with the **City**, the **Contractor** shall provide in writing to the **City**, through the **Design Professional**, the names, addresses, telephone numbers, and fax numbers of all persons proposed for each principal portion of the Work.

**6.4. Objections to Subcontractors.**

**6.4.1** The **Contractor** shall not use any Subcontractor against whom the **City** has a reasonable objection. The **Contractor** shall not be required to contract with any person or entity against whom it has a reasonable objection.

**6.5. Form of the Subcontract.**

**6.5.1** All Work performed by a Subcontractor shall be through an appropriate subcontract. The form of subcontract shall be submitted to the **City for its** approval, which shall not be unreasonably withheld or delayed.

**6.6. Content of the Subcontract.**

**6.6.1.** In addition to all statutorily mandated provisions and provisions required elsewhere in the Contract Documents, each subcontract shall expressly provide that:

**6.6.1.1.** Each subcontract agreement for a portion of the Work is assigned by the **Contractor** to the **City** provided that:

**6.6.1.1.1.** the assignment is effective only after termination of the Contract by the **City** or the

**Contractor** and only for those subcontract agreements which the **City** accepts by notifying the Subcontractor in writing; and

**6.6.1.1.2.** the assignment is subject to the prior rights of the surety, if any, obligated under bond relating to the Contract.

**6.6.1.2.** Each Subcontractor is bound by the requirements of the Contract Documents for the express benefit of the **City**.

**6.6.1.3.** Each Subcontractor shall assume toward the **Contractor** all the obligations that the **Contractor** assumes toward the **City** and the **Design Professional**, unless otherwise provided by law.

**ARTICLE 7  
PERFORMANCE AND PAYMENT BONDS**

**7.1. Form of Bonds.**

**7.1.1** The performance and labor and material or payment bonds shall be in the form required by the **City**, copies of which are included in the Project Manual. The **City** reserves the right to reject any bond that does not conform to the **City's** requirements.

**7.2. Furnished by the Contractor.** (Reference: M.G.L. c. 30, §39M(c); M.G.L. c. 149, §29).

**7.2.1** The **Contractor** shall furnish a performance bond and a labor and materials or payment bond, each with a surety company qualified to do business under the laws of the Commonwealth and satisfactory to the **City** and each in the sum of the Contract Sum, the premiums for which are to be paid by the **Contractor** and are included in the Contract Sum. The bonds shall remain in effect until final payment is made. The sum of the performance bond shall increase each time the Contract Sum is increased as a result of a Change Order.

**7.3. Submission to the City.**

**7.3.1** The **Contractor** must submit the performance and a labor and materials or payment bonds to the **City** upon the **Contractor's** execution of the Agreement.

**ARTICLE 8  
INSURANCE REQUIREMENTS**

**8.1 Insurance Certificates.**

**8.1.1** Prior to starting work on this project, the contractor shall deposit with the **City**, certificates from insurers clearly stating that the required insurance policies have been issued to the **Contractor** and will remain in effect during the time period required to complete this contract. ACCORD forms will not be accepted. The certificates must be in a form satisfactory to the **City**. The insurance shall include all major divisions of coverage, and shall be on a comprehensive general basis including: Premises and Operations (including X-C-U), Owners and Contractors Protective, Products and Completed Operations, Owned, Non-owned or Hired and/or Leased Motor Vehicles. Such insurance shall be written for not less than any limits of liability, required by law or the following limits, whichever are greater.

**8.2 Minimum Coverages.** The **Contractor** shall possess and maintain throughout the contract period/project, insurance in the kinds and amounts as stated in the Specification included in Appendix C of this Agreement. The **Contractor** may purchase and maintain excess liability insurance in the in the umbrella form in order to satisfy the limits of liability required for the insurance to be purchased and maintained in accordance with the required requirements set forth above (in addition to the umbrella limits required). Evidence of such excess liability shall be delivered to the **City** in the form of a certificate and the certificate indicating the policy numbers and limits of liability of all underlying insurance.

**8.3 Additional Insured.** The **City** shall be named as an additional insured on each certificate, and the certificate must have the endorsement of the insurance agency.

**8.4 Notice.** Each certificate shall contain a notation that the insurer will give 30 days notice to the **City** prior to cancellation, change or non-renewal of policy.

**8.5 Carrier Rating.** Insurance carriers MUST have an A.M. Best rating of "A" or better.

**8.6 Material Breach.** Failure of the contractor to provide and continue in force such insurance shall be deemed a material breach of contract and shall operate as immediate termination thereof.

**ARTICLE 9  
TESTS AND INSPECTIONS**

**9.1. Access.**

**9.1.1** The City, the **Design Professional**, and all other persons designated by the City shall have access to the Work at reasonable times for observing, inspecting, and testing. The **Contractor** shall provide them with proper and safe conditions for such access and advise them of the **Contractor's** site safety procedures and programs so that they may comply therewith as applicable.

**9.2. Tests and Inspections.**

**9.2.1.** The **Contractor** shall give the **Design Professional** timely notice of readiness of the Work for all required inspections, tests, or approvals and shall cooperate with inspection and testing personnel to facilitate required inspections or tests.

**9.2.2.** Unless otherwise provided, the **Contractor** shall make arrangements for such tests, inspections, and approvals with an independent testing laboratory or entity acceptable to the City, or with the appropriate public authority and shall bear all related costs of tests, inspections, and approvals. If the laws or regulations of any public body having jurisdiction require any Work or part thereof specifically to be inspected, tested, or approved by an employee or other representative of such public body, the **Contractor** shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith and furnish the **Design Professional** with the required certificates of inspection, testing, or approval.

**9.2.3.** The **Contractor** shall be responsible for arranging and obtaining and shall pay all costs in connection with any inspections, tests, or approvals required for the **Design Professional's** acceptance of materials or equipment to be incorporated into the Work, or of materials, mix designs, or equipment submitted for approval prior to the **Contractor's** purchase thereof for incorporation into the Work.

**9.2.4.** If any Work that is to be inspected, tested, or approved is covered by the **Contractor**, Subcontractor, or Sub-subcontractor without the prior written consent of the **Design Professional**, it must be uncovered for observation, inspection, testing, or approval, if requested by the **Design Professional**. The **Contractor** must recover the Work at its own expense.

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

**ARTICLE 10  
UNCOVERING AND CORRECTING WORK**

**10.1. Uncovering Work.**

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

**10.1.2.** If a portion of the Work has been covered which the **Design Professional** has not specifically requested to observe prior to its being covered, the **Design Professional** may request to see such Work, and it shall be uncovered by the **Contractor**. If it is found that such Work is in accordance with the Contract Documents, costs of uncovering and replacing shall, by appropriate Change Order, be charged to the City. If it is found that such Work is defective or not in accordance with the Contract Documents, the **Contractor** shall pay all claims, costs, losses, and damages caused by, arising out of or resulting from such uncovering, exposure, observation, inspection, and testing and of satisfactory replacement of reconstruction (including, but not limited to, all costs of repair or replacement of work of others); and the City shall be entitled to an appropriate decrease in the Contract Sum. The City may take such decrease by reducing the then current application for payment accordingly or subsequent applications, if necessary, until the decrease is paid in full.

**10.2. Correcting Work.**

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

**10.2.2.** If, within one (1) year after the date of Substantial Completion of the Work or designated portion thereof, or after the date for commencement of warranties established in Article 15, or by terms of an applicable special warranty required by the Contract Documents, any of the Work is found to be not in accordance with the requirements of the Contract Documents, the Contractor shall correct it promptly after receipt of written notice from the City to do so, unless the City has previously given the **Contractor** a written acceptance of such condition. This period of one (1) year shall be extended with respect to portions of Work first performed after Substantial Completion by the period of time between Substantial Completion and the actual performance of the Work. This obligation to correct under this paragraph shall survive acceptance of the Work under the Contract and termination of the Contract. The City shall give such notice promptly after discovery of the condition.

**10.2.3.** The **Contractor** shall correct, remove, or replace portions of the Work that are not in accordance with the requirements of the Contract Documents and are neither corrected by the **Contractor** nor accepted by the City.

**10.2.4.** If the **Contractor** fails within a reasonable time to correct nonconforming Work, or to remove and replace rejected Work, or fails to perform the Work in accordance with the Contract Documents, the **City** may correct it in accordance with the provisions herein. If the **Contractor** does not proceed with correction, removal, or replacement of such nonconforming Work within seven (7) days from the date of written notice from the **Design Professional**, the **City** may correct it and store any salvageable materials or equipment at the **Contractor's** expense. If the **Contractor** does not pay costs of any such removal and storage within ten (10) days after written notice, the **City** may upon ten (10) additional days' written notice sell such materials and equipment at auction or at private sale and shall account for the proceeds thereof, after deducting costs and damages that should have been borne by the **Contractor**, including compensation for the **Design Professional's** services and expenses made necessary thereby. If such proceeds of sale do not cover all the costs that the **Contractor** should have born, the Contract Sum shall be reduced by the deficiency. If payments then or thereafter due the **Contractor** are not sufficient to cover such amount, the **Contractor** shall pay the difference to the **City**.

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

**10.2.6.** Nothing contained in this paragraph shall be construed to establish a period of limitation with respect to other obligations that the **Contractor** might have under the Contract Documents. Establishment of the time period of one (1) year as described in the above paragraph related only to the specific obligation of the **Contractor** to correct the Work and has no relationship to the time within which the obligation to comply with the Contract Documents may be sought to be enforced nor to the time within which proceedings may be commenced to establish the **Contractor's** liability with respect to the **Contractor's** obligations other than specifically to correct the Work.

### **10.3. Acceptance of Nonconforming Work.**

**10.3.1** If, instead of requiring correction or removal and replacement of defective or nonconforming Work, the **City** prefers to accept Work which is not in accordance with the requirements of the Contract Documents, the **City** may do so instead of requiring its removal and correction, in which case the **Contractor** shall pay all claims, costs, losses, and damages attributable to the **City's** evaluation of and determination to accept such defective or non-conforming Work. The Contract Sum will be reduced as appropriate. Such adjustment shall be effected whether or not final payment has been made.

## **ARTICLE 11 CHANGES IN THE WORK**

### **11.1. In General.**

**11.1.1.** The Contract Sum constitutes the total compensation (subject to authorized adjustments) payable to the **Contractor** for performing the Work. All duties, responsibilities and obligations assigned to or undertaken by the **Contractor** shall be at the **Contractor's** expense without any change in the Contract Sum.

**11.1.2.** Without invalidating the Contract and without notice to any surety, the **City** may, at any time or from time to time, order additions to, deletions from, or revisions in the Work. Such additions, deletions, or revisions will be authorized by a Change Order, a Modification or a **Construction Change Directive**. Upon receipt of any such document, the **Contractor** shall promptly proceed with the Work involved that will be performed under the applicable conditions of the Contract Documents (except as otherwise specifically provided).

**11.1.3.** The **Contractor** shall not be entitled to an increase in the Contract Sum or an extension of the Contract Time with respect to any Work performed that is not required by the Contract Documents as amended, modified, or supplemented, except as otherwise provided herein.

### **11.2. Change Orders.**

**11.2.1.** (*Reference: M.G.L. c. 30, §39I*). The **Contractor** shall perform all the Work required by this Contract in conformity with the Plans and Specifications contained herein. No willful and substantial deviation from said Plans and Specifications shall be made unless authorized in writing by the **City** and the **Design Professional** in charge of the Work who is duly authorized by the **City** to approve such deviations. In order to avoid delays in the prosecution of the Work required by such Contract, such deviation from the Plans or Specifications may be authorized by a written order of the **City** or the **Design Professional** so authorized to approve such deviation. Within thirty (30) days thereafter, such written order shall be confirmed by a certificate of the **City**, using AIA Document G701 (or its equivalent), stating: (1) If such deviation involves any substitution or elimination of materials, fixtures or equipment, the reasons why such materials, fixtures, or equipment were included in the first instance and the reasons for substitution or elimination, and, if the deviation is of any other nature, the reasons for such deviation, giving justification therefor; (2) that the specified deviation does not materially injure the Project as a whole; (3) that either the work substituted for the Work specified is of the same cost and quality, or that an equitable adjustment has been agreed upon between the **City** and the **Contractor** and the amount in dollars of said adjustment; and (4) that the

deviation is in the best interest of the **City**. The Change Order shall also indicate whether or not the date of substantial completion has been extended. The equitable adjustment in price shall be determined by the unit prices, if any, in the General Contractor's bid; otherwise, it shall be a number which is agreed to by both parties as a fair adjustment and which can be itemized and substantiated to the reasonable satisfaction of the Contracting Authority. Where increases and decreases to the Contract Sum are included in one Change Order, the negotiated allowance for overhead and profit shall be calculated on the basis of the net increase, if any.

### **11.3. Construction Change Directive.**

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

**11.3.2.** Upon request of the **City** or the **Design Professional**, the **Contractor** shall without cost to the **City** submit to the **Design Professional** in such form as the **Design Professional** may require, an accurate written estimate of the cost of any proposed extra work or change. The estimate shall indicate the quantity and unit cost of each item of materials, and the number of hours of work and hourly rate for each class of labor, as well as the description and amounts of all other costs chargeable under the terms of this Article. Unit labor costs for the installation of each item of materials shall be shown if required by the **Design Professional**. If required by the **Design Professional**, in order to establish the exact cost of new Work added or of previously required Work omitted, the **Contractor** shall obtain and furnish to the **Design Professional** bona fide proposals from recognized Suppliers for furnishing any material included in such Work. Such estimates shall be furnished promptly so as to occasion no delay in the Work, and shall be furnished at the **Contractor's** expense.

**11.3.3.** The **Contractor** shall state in the estimate any extension of time required for the completion of the Work if the change or extra Work is ordered. The **Contractor** shall document, through a critical path analysis, or some other clearly delineated explanation, how the proposed change affects other aspects of the Work, and why it would require an extension of time. The **Contractor** shall promptly revise and resubmit such estimate if the **Design Professional** determines that it is not in compliance with the requirements of this Article, or that it contains errors of fact or mathematical errors.

**11.3.4.** If the **Construction Change Directive** provides for an adjustment to the Contract Sum, the adjustment shall be based on one of the following methods, as selected by the **City**, selection of which does not require the consent of the **Contractor**:

**11.3.4.1.** by unit prices stated in the Contract Documents or otherwise mutually agreed upon; or

**11.3.4.2.** by Cost and Percentages estimated by the **Contractor** as provided herein and accepted by the **City**, whereupon the **Contractor's** estimate shall become a fixed price which shall not be changed by any variation in the actual cost of executing the Work covered by the change; or

**11.3.4.3.** by actual Cost determined after the Work covered by the change is completed, plus Percentage; or

**11.3.4.4.** by submission to arbitration or a court, which shall determine the fair value of the Work covered by the change.

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

**11.3.6.** "Percentage" shall mean an allowance to be added to or subtracted from the Cost in lieu of overhead and profit and of any other expense that is not included in the Cost of the Work covered by the change, as defined above. Percentage for a Sub-subcontractor shall be 8% of any net increase or decrease of Cost of any Work performed by the Sub-subcontractor's own forces plus 4% of any net increase or decrease in Cost of any Work performed for the Sub-subcontractor by lower tier Sub-subcontractors. Percentage for a Subcontractor shall be 12% of any net increase or decrease of Cost of any Work performed by the Subcontractor's own forces plus 4% of the Cost of Work performed by Sub-subcontractors. Percentage for the **Contractor** shall be 15% of any net increase or decrease of Cost of any Work performed by the **Contractor's** own forces plus 5% of any net increase or decrease in the Cost for all other Work covered by the change. When the **Contractor** is also performing Work as a Subcontractor or Sub-subcontractor, the **Contractor** shall only be entitled to a total of no more than 15% of any net increase or decrease of Cost of any Work.

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

**11.3.8.** If unit prices are stated in the Contract Documents or are subsequently agreed upon, and if quantities originally contemplated are so changed in a Proposed Change Order or **Construction Change Directive** that the application of such unit prices to quantities of Work proposed will cause substantial inequity to the **City** or the **Contractor**, the applicable unit prices shall be equitably adjusted. Wherever the estimated quantities of work to be done and materials to be furnished under this

contract are shown in any of the documents including the proposal, they are given for use in comparing bids and the right is especially reserved herein otherwise specifically limited, to increase or diminish them as may be deemed reasonably necessary or desirable by CONTRACTING DEPARTMENT (AS STATED ON THE FIRST PAGE OF THE AGREEMENT) to complete the work contemplated by the contract, nor shall any such increases or diminution shall in no way violate this contract, nor shall any such increase or diminution give cause for claims or liability for damages.

**11.3.9.** If the **City** elects to determine the Cost of the Work as provided in method (11.3.4.1) using unit prices stated in the Contract Documents or subsequently agreed upon, the unit prices shall be subject to the prior paragraph. Notwithstanding the inclusion of unit prices in the Contract Documents, it shall be the **City's** option to require the Cost of any given change to be determined by one of the other methods stated in 11.3.4. If the **City** elected to determine the Cost of the change by unit prices and the nature of the work is such that its extent cannot readily be measured after the completion of such work or any subsequent Work, the **Contractor** shall keep daily records, available at all times to the **Design Professional** for inspection, of the actual quantities of such Work put in place, and delivery receipts or other adequate evidence, acceptable to the **Design Professional**, indicating the quantities of materials delivered to the Site for use in such unit price Work, and distinguishing such from other similar material delivered for use in Work include in the base Contract Sum. If so required by the **Design Professional**, materials for use in unit price Work shall be stored apart from all other materials on the Project.

**11.3.10.** If the **City** elects to determine the Cost of the Work as provided in methods 11.3.4.3. or 11.3.4.4. 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.

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

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

**11.3.13.** If the **Design Professional** and the **Contractor** do not agree with the adjustment in the Contract Time or the method for determining it, the adjustment or the method shall be referred to the **Design Professional** for determination.

**11.4. Minor Changes in the Work.**

**11.4.1.** The **Design Professional** has the authority to order minor changes in the Work. "Minor changes" as used in this paragraph mean changes which are so insignificant as to not affect the Contract Sum or the Contract Time and which are not inconsistent with the intent of the Contract Documents. Any minor change shall be committed to a written order which shall be binding on both the **City** and the **Contractor** and which shall be promptly carried out by the **Contractor**.

**11.5. Certificate of Appropriations.** (*Reference:* M.G.L. c. 44, §31C;). This Contract shall not be deemed to have been made until the **City's** auditor has certified thereon that an appropriation in the amount of this Contract is available therefor and that an officer or agent of the **City** has been authorized to execute said Contract and approve all requisitions and change orders. No order to the **Contractor** for a change in or addition to the Work, whether in the form of a drawing, plan, detail or any other written instruction, unless it is an order which the **Contractor** is willing to perform without any increase to the Contract price, shall be deemed to be given until the auditor has certified thereon that an appropriation in the amount of such order is available therefore; but such certificate shall not be construed as an admission by the **City** of its liability to pay for such work. The certificate of the auditor that an appropriation in the amount of this Contract or in the amount of such order is available shall bar any defense by the **City** on the grounds of insufficient appropriation.

**ARTICLE 12  
CHANGE IN THE CONTRACT TIME**

**12.1. Date of Commencement.**

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

**12.2. Progress and Completion.**

**12.2.1.** Time is of the essence; all time limits stated in the Contract Documents are of the essence of the Contract. By executing the Agreement, the **Contractor** confirms that the Contract Time is a reasonable period for performing the Work.

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

**12.2.3.** At least ten (10) working days after the Notice to Proceed or twenty (20) working days before the first application for payment, the **Contractor** shall submit to the **Design Professional** a progress schedule showing for each class of

Work included in the schedule of values, the percentage of completion to be obtained and the total dollar value of Work to be completed as of the first of each month until Substantial Completion. All calculations shall be on the basis of Work in place, but may include, at the **Design Professional's** discretion, the value of materials delivered but not in place.

**12.2.4.** The progress schedule shall be based on an orderly progression of the Work, allowing adequate time for each operation (including adequate time for submission and review of submittals), and leading to a reasonable certainty of Substantial Completion by the date established in the Agreement. The progress schedule will be reviewed by the **Design Professional** for compliance with the requirements of this Article and will be accepted by the **Design Professional** or returned to the **Contractor** for revision and resubmittal. Unless specifically required by law, no payment under this Contract shall be due until the progress schedule has been approved by the **Design Professional**. The **Design Professional's** review of the progress schedule shall not impose any duty on the **Design Professional** or the **City** with respect to the timing, planning, scheduling, or execution of the Work. In particular, if the **Contractor** proposes a progress schedule indicating a date of Substantial Completion which is earlier than the Contract Time, the **Contractor** shall not be entitled to additional payment or compensation of any kind if, for any reason, the full Contract Time is required to achieve Substantial Completion of the Work.

**12.2.5.** If in any Application for Payment, the total value of the completed Work in place, as certified by the **Design Professional**, is less than 90% of the total value of the Work in place estimated in the progress schedule, the **City** may, at the **City's** option, require the **Contractor** to accelerate the progress of the Work without cost to the **City** by increasing the workforce or hours of Work or by other reasonable means approved by the **Design Professional**.

**12.2.6.** If each of three successive applications, as certified by the **Design Professional**, indicate that the actual Work completed is less than 90% of the values estimated in the progress schedule to be completed by the respective dates, the **City** may at the **City's** option, treat the **Contractor's** delinquency as a default justifying the action permitted under Article 18.

**12.2.7.** If the **Design Professional** has determined that the **Contractor** should be permitted to extend the time for completion as provided below, the calendar dates in the progress schedule shall be adjusted accordingly to retain their same relationship to the adjusted date of Substantial Completion, and the dollar value of the Work to be completed as of the first of each month shall be adjusted pro rata.

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

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

**12.3. Delays and Extensions of Time.**

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

**12.3.2.** Claims relating to time shall be made in accordance with applicable provisions of Article 16.

**12.3.3.** No claim for extension of time shall be allowed on account of failure of the **Design Professional** to furnish Plans, Specifications or instructions or to return Shop Drawings or Samples until fifteen (15) days after receipt by the **Design Professional** by registered or certified mail of written demand for such instructions, Plans, Specifications, or Samples, and then not unless such claim is reasonable.

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

**12.3.5.** The **Contractor** hereby agrees that the **Contractor** shall have no claim for damages of any kind against the **City** or the **Design Professional** on account of any delay in the commencement of the Work and/or any hindrance, delay, or suspension of any portion of the Work, whether such delay is caused by the **City**, the **Design Professional**, or otherwise, except as and to the extent expressly provided under M.G.L. c. 30, §390, in the case of written orders by the **City**. The **Contractor** acknowledges that the **Contractor's** sole remedy for any such delay and/or suspension will be an extension of time as provided in this Article.

**12.3.6.** (*Reference:* M.G.L. c. 30, §390;). (a) The **City** may order the **Contractor** in writing to suspend, delay, or interrupt all or any part of the Work for such period of time as it may determine to be appropriate for the convenience of the **City**, provided however that if there is a suspension, delay, or interruption for fifteen (15) days or more due to a failure of the **City** to act within the time specified in this Contract, the **City** shall make an adjustment in the



Contract prices for any increase in the cost of performance of this Contract under this provision for any suspension, delay, interruption, or failure to act to the extent that such is due to any cause for which this Contract provides for an equitable adjustment of the Contract price under any other Contract provisions.

(b) The **Contractor** must submit the amount of a claim under provision (a) to the **City** in writing as soon as practicable after the end of the suspension, delay, interruption, or failure to act and, in any event, not later than the date of final payment under this Contract and, except for costs due to a suspension order, the **City** shall not approve any costs in the claim incurred more than twenty (20) days before the **Contractor** notified the **City** in writing of the act or a failure to act involved in the Claim.

In the event a suspension, delay, interruption, or failure to act of the **City** increases the cost of performance to any Subcontractor, that Subcontractor shall have the same rights against the **Contractor** for payment for an increase in the cost of its performance as provisions (a) and (b) give the **Contractor** against the **City**, but nothing in provisions (a) and (b) shall in any way change, modify, or alter any other rights which the **Contractor** or the Subcontractor may have against each other.

**12.4. Liquidated Damages.**

**12.4.1.** If the **Contractor** shall fail to achieve Substantial Completion within the Contract Time, it shall be liable to pay the **City** the daily amount specified in the Agreement, not as a penalty, but as a fixed and agreed upon damages for breach of contract. The said amount is fixed and agreed upon because of the difficulty of ascertaining the **City's** actual damages. It is mutually understood that the said amount is a reasonable approximation or estimate thereof as of the date of the Agreement. The **City** may elect to withhold said amount from periodic or final payments due to the **Contractor**, in addition to retainage and other back charges.

**12.5. Changes in the Contract Time.**

**12.5.1. In Writing.** The Contract Time may only be changed by a Change Order or a Modification. Any claim for an adjustment of the Contract Time shall be based on a written notice delivered to the party making the claim to the other party and to the **Design Professional** promptly (but in no event later than seven (7) days) after the occurrence of the event giving rise to the claim and stating the general nature of the claim. Notice of the extent of the claim with supporting data shall be delivered within thirty (30) days after such occurrence and shall be accompanied by the claimant's written statement that the adjustment claimed is the entire adjustment to which the claimant has reason to believe it is entitled as a result of the occurrence of said event. All claims for adjustment in the Contract Time shall be determined by the **Design Professional** in accordance with Article 16. No claim for an adjustment in the Contract Time will be valid if not submitted in accordance with the requirements of this paragraph.

**12.5.2. Early Completion.** The Contract Time shall not be changed due to a delay in the **Contractor's** early completion date.

**ARTICLE 13  
PAYMENTS**

**13.1. Schedule of Values.**

**13.1.1.** The **Contractor** shall submit to the **Design Professional** a schedule of values which shall subdivide the Work into its component parts and shall include quantities, direct craft labor worker hours, labor cost and material/equipment cost. Labor cost shall include an appropriate amount of construction equipment costs, supplemental costs, administrative expenses, contingencies, and profit. The **Contractor** shall prepare the schedule of values in such form and supported by such data to substantiate its accuracy as the **Design Professional** may require and shall be revised if later found by the **Design Professional** to be inaccurate. This schedule, unless objected to by the **Design Professional**, shall be used as a basis for reviewing the **Contractor's** applications for payment.

**13.2. Content and Submission of Applications for Payment.**

**13.2.1.** At least ten (10) days before the date established for each progress payment, the **Contractor** shall submit to the **Design Professional** six (6) copies of an itemized application for payment for Work completed in accordance with the schedule of values. Such application shall be in a form or format established or approved by the **Design Professional** and shall be supported by documentation substantiating the **Contractor's** right to payment.

**13.2.2.** When **Construction Change** Directives have set forth an adjustment to the Contract Sum but have not yet been included in Change Orders, the value established by the **City** may be included in the application.

**13.2.3.** Applications covering Work of Subcontractors or Suppliers shall not include requests for payments of amounts the **Contractor** does not intend to pay to a Subcontractor or Supplier because of a dispute or other reason. The **Contractor** shall not be paid for any Work performed by a Subcontractor unless and until the **City** receives for that Subcontractor a certificate of insurance that conforms to the requirements of the Contract Documents .

**13.2.4.** Unless otherwise provided in the Contract Documents, payments shall be made on account of materials and

equipment delivered and suitably stored at the Site for subsequent incorporation in the Work. If approved in advance by the **City**, payment may similarly be made for materials and equipment suitably stored off the Site at a location agreed upon in writing. Payment for materials and equipment stored on or off the Site shall be conditioned upon the application for payment being accompanied by a bill of sale, an invoice, or other documentation warranting that the **City** has received the materials and equipment free and clear of all liens, claims, security interests, or encumbrances, hereinafter collectively referred to as "liens," and evidence that the materials and equipment are covered by appropriate insurance and other arrangements to protect the **City's** interest therein.

**13.2.5.** Each application for payment or periodic estimate requesting payment shall be accompanied by, at the **City's** option, a certificate from each Subcontractor stating that the Subcontractor has been paid all amounts due the Subcontractor on the basis of the previous periodic payment to the **Contractor**, or else stating the amount not so paid and the reason for the discrepancy. In the event of any such discrepancy, the **Contractor** shall furnish the **Contractor's** own written explanation to the **City** through the **Design Professional**. Such waiver or certificate shall be in a form acceptable to the **City**.

**13.3. False Applications for Payment.**

**13.3.1. (Reference: M.G.L. c. 266, §§67B).** Any person who makes or presents to any claim upon or against any employee or department of the **City**, knowing such claim to be false, fictitious, or fraudulent shall be punished by a fine or not more than ten thousand dollars (\$10,000) or by imprisonment in the state prison for not more than five (5) years, or in the house of correction for not more than two and one-half years, or both.

**13.4. Review of Applications for Payment.**

**13.4.1.** The **Design Professional** shall review each application for payment and will reject any application that (1) is not accompanied by the required documentation or (2) contains errors, mathematical or otherwise.

**13.4.2.** Within five (5) business days after receipt of an application for payment, the **Design Professional** will either (1) return the application to the **Contractor** with a written explanation as to why it was rejected or (2) issue to the **City** a certificate for payment, with a copy to the **Contractor**, for such amount as the **Design Professional** determines is properly due. In the event an application is returned to the **Contractor**, the date of receipt of the application shall be the date of receipt of the corrected application.

**13.4.3.** The **Design Professional** or the **City** may make changes to any application submitted by the **Contractor**.

**13.4.4.** By recommending any payment, the **Design Professional** will not thereby be deemed to have represented that: (1) exhaustive or continuous on-site inspections have been made to check the quality or the quantity of the Work beyond the responsibilities specifically assigned to the **Design Professional** in the Contract Documents or (2) that there may not be other matters or issues between the parties that might entitle the **Contractor** to be paid additionally by the **City** or entitle the **City** to withhold payment to the **Contractor**. The **Design Professional's** approval of the application for payment and the accompanying documentation shall indicate that to the best of the **Design Professional's** knowledge, information, and belief, the Work has progressed to the point indicated by the **Contractor**, and that the quality of the Work is in accordance with the Contract Documents, subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, the results of any subsequent tests specified in the Contract Documents, final determination of quantities and classifications for unit price work and any other qualifications so stated.

**13.4.5.** The **Design Professional's** recommendation of any payment shall not mean that the **Design Professional** is responsible for the **Contractor's** means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of the **Contractor** to comply with laws and regulations applicable to the furnishing or performance of Work, or for any failure of the **Contractor** to perform or furnish Work in accordance with the Contract Documents.

**13.4.6.** No certificate given or payment made shall be evidence of the performance of this Contract, either wholly or in part or no payment, whether made upon the final certificate or otherwise, shall be construed as an acceptance of defective work or materials.

**13.5. Decisions to Withhold Certification.**

**13.5.1.** The **Design Professional** may refuse to recommend the whole or any part of any payment if, in the **Design Professional's** opinion, it would be incorrect to make the representations to the **City** referred to above.

**13.5.2.** If the **Contractor** and the **Design Professional** cannot agree on a revised amount, the **Design Professional** will promptly approve a certificate for payment for the amount for which the **Design Professional** is able to make such representations to the **City**. The **Design Professional** may also decide not to certify payment or, because of subsequently discovered evidence or subsequent observations, may nullify the whole or a part of a certificate for payment previously issued, to such extent as may be necessary in the **Design Professional's** opinion to protect the **City** from loss because of:

**13.5.2.1.** defective Work not remedied;

13.5.2.2. third party claims filed or reasonable evidence indicating probable filing of such claims;  
 13.5.2.3. failure of the **Contractor** to make payments properly to Subcontractors or for labor, materials or equipment;  
 13.5.2.4. reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Sum;  
 13.5.2.5. damage to the **City** or another contractor;  
 13.5.2.6. reasonable evidence that the Work will not be completed within the Contract Time, and that retainage currently held by the **City** would not be adequate to cover actual or liquidated damage for the anticipated delay;  
 13.5.2.7. persistent failure to carry out the Work in accordance with the Contract Documents; or  
 13.5.2.8. failure of mechanical trade or electrical trade subcontractors to comply with mandatory requirements for maintaining record drawings. The **Contractor** shall check record drawings each month. Written confirmation that the record drawings are current will be required by the **Design Professional** before approval of the **Contractor's** monthly payment requisition.  
 13.5.3. When the above reasons for withholding certification are removed, certification will be made for amounts previously withheld.

### 13.6. Progress Payments.

13.6.1. After the **Design Professional** has issued a certificate for payment, the **City** shall make payment in the manner and within the time provided in the Contract Documents.

13.6.2. (*Reference:* M.G.L. c. 30, §39G, 39K;). In the case of Contracts for the construction, reconstruction, alteration, remodeling, repair or demolition of any public building when the amount is more than two thousand dollars, the following paragraph applies: Within fifteen days (30 days in the case of the commonwealth, including local housing authorities) after receipt from the contractor, at the place designated by the awarding authority if such a place is so designated, of a periodic estimate requesting payment of the amount due for the preceding month, the awarding authority will make a periodic payment to the contractor for the work performed during the preceding month and for the materials not incorporated in the work but delivered and suitably stored at the site (or at some location agreed upon in writing) to which the contractor has title or to which a subcontractor has title and has authorized the contractor to transfer title to the awarding authority, upon certification by the contractor that he is the lawful owner and that the materials are free from all encumbrances, but less (1) a retention based on its estimate of the fair value of its claims against the contractor and less (2) a retention for direct payments to subcontractors based on demands for same in accordance with the provisions of section thirty-nine F, and less (3) a retention not exceeding five per cent of the approved amount of the periodic payment. After the receipt of a periodic estimate requesting final payment and within sixty-five days after (a) the contractor fully completes the work or substantially completes the work so that the value of the work remaining to be done is, in the estimate of the awarding authority, less than one per cent of the original contract price, or (b) the contractor substantially completes the work and the awarding authority takes possession for occupancy, whichever occurs first, the awarding authority shall pay the contractor the entire balance due on the contract less (1) a retention based on its estimate of the fair value of its claims against the contractor and of the cost of completing the incomplete and unsatisfactory items of work and less (2) a retention for direct payments to subcontractors based on demands for same in accordance with the provisions of section thirty-nine F, or based on the record of payments by the contractor to the subcontractors under this contract if such record of payment indicates that the contractor has not paid subcontractors as provided in section thirty-nine F. If the awarding authority fails to make payment as herein provided, there shall be added to each such payment daily interest at the rate of three percentage points above the rediscount rate than charged by the Federal Reserve Bank of Boston commencing on the first day after said payment is due and continuing until the payment is delivered or mailed to the contractor; provided, that no interest shall be due, in any event, on the amount due on a periodic estimate for final payment until fifteen days (twenty-four days in the case of the commonwealth) after receipt of such a periodic estimate from the contractor, at the place designated by the awarding authority if such a place is so designated. The contractor agrees to pay to each subcontractor a portion of any such interest paid in accordance with the amount due each subcontractor.

For all other construction contracts, progress payments are governed by chapter 30, §39G, and as follows: The **City** shall pay the amount due pursuant to any periodic, Substantial Completion or final estimate within thirty-five (35) days after receipt of written acceptance for such estimate from the **Contractor**. In the case of periodic payments, the **City** may deduct from its payment a retention based on its estimate of the fair value of its claims against the **Contractor**, a retention for direct payments to Subcontractors based on demands for same in accordance with M.G.L. c. 30, §39F; and a retention to secure satisfactory performance of the contractual work, not exceeding five percent (5%) of the approved amount of any periodic payment, and the same right to retention shall apply to bonded Subcontractors entitled to direct payment under M.G.L. c. 30, §39F; provided, that a five percent (5%) value of all items that are planted in the ground shall be deducted from the periodic payments until final acceptance.

Retainage prior to Substantial Completion. In all construction contracts, the **City** may hold back a retainage of up to five percent of each progress payment to ensure satisfactory completion of the work. In addition, the **City** may withhold any amounts in dispute, including disputed change orders and direct payments owed to subcontractors pursuant to Chapter 30, §39F of the General Laws.

Payment upon Substantial Completion. In the case of contracts for construction, reconstruction, alteration, repair, remodeling, or demolition of a public building, where the amount is more than \$2,000, Chapter 30, Section 39K, of the General Laws governs payment upon substantial completion. For all other contracts, Chapter 30, Section 39F of the General Laws governs payment upon substantial completion.

13.6.3. No periodic, Substantial Completion or final estimate or acceptance or payment thereof shall bar the **Contractor** from reserving all rights to dispute the quantity and amount of, or the failure of the **City** to approve a quantity and amount of, all or part of any Work item or extra Work item.

### 13.7. Final Payment.

13.7.1. After final inspection and after the **Contractor** has completed all the required corrections to the satisfaction of the **Design Professional** and the **City** and delivered in accordance with the Contract Documents all maintenance and operating instructions, schedules, guarantees, bonds, certificates, or other evidence of insurance, certificates of inspection, marked-up record documents, and all other documents called for in the Contract Documents, as well as any surplus materials requested by the **City**, the **Contractor** may make an application for final payment as provided below.

13.7.2. (*Reference:* M.G.L. c. 30, §39G;). Within thirty (30) days after receipt by the **City** of a notice from the **Contractor** stating that all of the Work required by the Contract has been completed, the **City** shall prepare and forthwith send to the **Contractor** for acceptance a final estimate for the quantity and price of the Work done and all retainage on the Work less all payments made to date, unless the **City's** inspection shows that Work required by the Contract remains incomplete or unsatisfactory, or that documentation required by the Contract has not been completed.

13.7.3. The making and acceptance of final payment will constitute a waiver of all claims by the **Contractor** against the **City** other than those previously made in writing and still unsettled.

13.7.4. Interest. If the **City** fails to pay the **Contractor** within the time periods mandated by statute, the **City** shall pay interest to the **Contractor** in accordance with Chapter 30, Sections 39G and 39K, whichever is applicable.

### 13.8. Payments to Subcontractors.

13.8.1. Neither the **City** nor the **Design Professional** shall have an obligation to pay or see to the payment of money to a Subcontractor, Sub-subcontractor, or Supplier except as may otherwise be required by law.

13.8.2. (*Reference:* M.G.L. c. 30, §39F;). (1) Every contract awarded pursuant to sections forty-four A to L, inclusive, of chapter one hundred and forty-nine shall contain the following subparagraphs (a) through (i) and every contract awarded pursuant to section thirty-nine M of chapter thirty shall contain the following subparagraphs (a) through (h) and in each case those subparagraphs shall be binding between the general contractor and each subcontractor.

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

(b) Not later than the sixty-fifth day after each Subcontractor substantially completes its Work in accordance with the Plans and Specifications, the entire balance due under the subcontract, less amounts retained by the **City** as the estimated cost of completing the incomplete and unsatisfactory items of Work, shall be due the Subcontractor; and the **City** shall pay that amount to the **Contractor**. The **Contractor** shall forthwith pay to the Subcontractor the full amount received from the **City** less any amount specified in any court proceeding barring such payment and also less any amount claimed due from the Subcontractor by the **Contractor**.

(c) Each payment made by the **City** to the **Contractor** pursuant to paragraphs (a) and (b) of M.G.L. c. 30, §39F(1); for the labor performed and the materials furnished by a Subcontractor shall be made to the **Contractor** for the account of that Subcontractor; and the **City** shall take reasonable steps to compel the **Contractor** to make each such payment to each such Subcontractor. If the **City** has received a demand for direct payment from a Subcontractor for any amount which has already been included in a payment to the **Contractor** or which is to be include in a payment to the **Contractor** for payment to the Subcontractor as provided in paragraphs (a) and (b) of M.G.L. c. 30, §39F(1), the **City** shall act upon the demand as provided in M.G.L. c. 30, §39F.

(d) 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 **City** as the estimated cost of completing the incomplete and unsatisfactory items of Work, the Subcontractor may demand direct payment of that

balance from the **City**. The demand shall be by a sworn statement delivered to or sent by certified mail to the **City**, and a copy shall be delivered to or sent by certified mail to the **Contractor** at the same time. The demand shall contain a detailed breakdown of the balance due under the subcontract and also a statement of the status of completion of the subcontract Work. [The demand letter shall indicate the certified mail number assigned by the postal service or the date of delivery to the **Contractor**.] Any demand made after substantial completion of the subcontract Work shall be valid even if delivered or mailed prior to the seventieth day after the Subcontractor has substantially completed the subcontract Work. Within ten (10) days after the Subcontractor has delivered or so mailed the demand to the **City** 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 **City**, and a copy shall be delivered to or sent by certified mail to the Subcontractor at the same time. The reply shall contain a detailed breakdown of the balance due under the subcontract, including any amount due for extra labor and materials furnished to the **Contractor** and of the amount due for each claim made by the **Contractor** against the Subcontractor.

(e) Within fifteen (15) days after receipt of the demand by the **City**, but in no event prior to the seventieth day after substantial completion of the subcontract Work, the **City** shall make direct payment to the Subcontractor of the balance due under the subcontract, including any amount due for extra labor and materials furnished to the **Contractor**, less any amount (i) retained by the **City** as the estimated cost of completing the incomplete or unsatisfactory items of Work, (ii) specified in any court proceedings barring such payment, or (iii) disputed by the **Contractor** in the sworn reply; provided that the **City** shall not deduct from a direct payment any amount as provided in part (iii) if the reply is not sworn to or for which the sworn reply does not contain the detailed breakdown required by the previous paragraph. The **City** shall make further direct payments to the Subcontractor forthwith after the removal of the basis for deductions from direct payments made as provided in parts (i) and (ii) of this paragraph.

(f) The **City** shall forthwith deposit the amount deducted from a direct payment as provided in part (iii) of the previous paragraph in an interest-bearing joint account in the names of the **Contractor** and the Subcontractor in a bank in Massachusetts selected by the **City** 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.

(g) All direct payments and all deductions from demands for direct payments deposited in an interest-bearing account or accounts in a bank pursuant to the previous paragraph 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 which later become payable to the **Contractor** and in the order of receipt of such demands from Subcontractors. All direct payments shall discharge the obligation of the **City** to the **Contractor** to the extent of such payment.

(h) The **City** shall deduct from payments to a **Contractor** amounts that, together with the deposits in interest-bearing accounts pursuant to paragraph (f), are sufficient to satisfy all unpaid balances of demands for direct payment received from Subcontractors. All such amounts shall be earmarked for such direct payments, and the Subcontractors shall have a right in such deductions prior to any claims against such amounts by creditors of the **Contractor**.

(i) If the Subcontractor does not receive payment as provided in paragraph (a) or if the **Contractor** does not submit a periodic estimate for the value of the labor or materials performed or furnished by the Subcontractor and the Subcontractor does not receive payment for same when due less the deductions provided for in paragraph (a), the Subcontractor may demand direct payment by following the procedure in paragraph (d) and the **Contractor** may file a sworn reply as provided in that same paragraph. A demand made after the first day of the month following that for which the Subcontractor performed or furnished the labor and materials for which the Subcontractor seeks payment shall be valid even if delivered or mailed prior to the time payment was due on a periodic estimate from the **Contractor**. Thereafter the **City** shall proceed as provided in paragraphs (e), (f), (g), and (h). "Subcontractor" as used in this paragraph (1)(i) shall mean a person approved by the **City** in writing as a person performing labor or both performing labor and furnishing materials pursuant to a contract with the **Contractor**.

(2) Any assignment by a Subcontractor of the rights under this section to a surety company furnishing a bond under the provisions of M.G.L. c. 149, §29; shall be invalid. The assignment and subrogation rights of the surety to amounts included in a demand for direct payment which are in the possession of the **City** or which are on deposit pursuant to paragraph (g) shall be subordinate to the rights of all Subcontractors who are entitled to be paid under this section and who have not been paid in full.

(3) A **Contractor** or a Subcontractor shall enforce a claim to any portion of the amount of a demand for direct payment deposited as provided in herein by a petition in equity in the superior court against the other and the bank shall not be a necessary party. A Subcontractor shall enforce a claim for direct payment or a right to require a deposit as provided in paragraph (f) by a petition in equity in the superior court against the **City** and the **Contractor** shall not be a

necessary party. Upon motion of any party the court shall advance for speedy trial any petition filed as provided in this paragraph. M.G.L. c. 231, §§59 and 59B shall apply to such petitions. The court shall enter an interlocutory decree upon which execution shall issue for any part of a claim found due pursuant to §§59 and 59B and, upon motion of any party, shall advance for speedy trial the petition to collect the remainder of the claim. Any party aggrieved by such interlocutory decree shall have the right to appeal therefrom as from a final decree. The court shall not consolidate for trial the petition of any Subcontractor with the petition of one or more Subcontractors or the same general contract unless the court finds that a substantial portion of the evidence of the same events during the course of construction (other than the fact that the claims sought to be consolidated arise under the same general contract) is applicable to the petitions sought to be consolidated and that such consolidation will present unnecessary duplication of evidence. A decree in any such proceeding shall not include interest on the disputed amount deposited in excess of the interest earned for the period of any such deposit. No person except a Subcontractor filing a demand for direct payment for which no funds due the **Contractor** are available for direct payment shall have a right to file a petition in court of equity against the **City** claiming a demand for direct payment is premature, and such Subcontractor must file the petition before the **City** has made a direct payment to the Subcontractor and has made a deposit of the disputed portion as provided in part (iii) of paragraph (e) and in paragraph (f).

(4) In any petition to collect any claim for which a Subcontractor has filed a demand for direct payment the court shall, upon motion of the **Contractor**, reduce by the amount of any deposit of a disputed amount by the **City** as provided in part (iii) of paragraph (e) and in paragraph (f) any amount held under a trustee writ or pursuant to a restraining order or injunction.

#### ARTICLE 14 SUBSTANTIAL COMPLETION

##### 14.1. Substantial Completion.

14.1.1. Upon Substantial Completion of the Work, the **Contractor** shall present in writing to the **City** its certification that the Work has been substantially completed and include in its certification (1) a list of items to be completed or corrected, (2) all special warranties required by the Contract Documents, endorsed by the **Contractor** and in a form reasonably acceptable to the **Design Professional** and (3) the permits and certificates referred to in 13.7.1., or elsewhere. The failure to include any item on the list mentioned in the preceding sentence does not alter the responsibility of the **Contractor** to complete all Work in accordance with the Contract Documents. When the **Design Professional** on the basis of an inspection determines that the Work or designed portion thereof is substantially complete and the other conditions have been met, the **Design Professional** will then prepare a certificate of Substantial Completion which shall establish the date of Substantial Completion, shall state the responsibilities of the **City** and the **Contractor** for security, maintenance, heat, utilities, damage to the Work, and insurance, and shall fix the time within which the **Contractor** shall complete the items listed therein. The certificate of Substantial Completion shall be submitted to the **City** and the **Contractor** for their written acceptance of the responsibilities assigned to them in such certificate.

14.1.2. Within twenty-one (21) days after receipt of the certification from the **Contractor**, the **City** shall present to the **Contractor** either a written declaration that the Work has been substantially completed or an itemized list of incomplete or unsatisfactory work items required by the Contract sufficient to demonstrate that the Work has not been substantially completed. The **City** may include with such list a notice setting forth a reasonable time within which the **Contractor** must achieve Substantial Completion of the Work. If the **City** fails to respond, by presentation of a written declaration or itemized list as aforesaid, to the **Contractor's** certification within the twenty-one (21) day period, the **Contractor's** certification shall take effect as the **City's** declaration that the Work has been substantially completed.

##### 14.2. Partial Use or Occupancy of the Premises.

14.2.1. The **City** may occupy or use any completed or partially completed portion of the Work at any stage. Such partial occupancy or use may begin whether or not the portion is substantially complete, provided that the respective responsibilities of the **City** and the **Contractor** with respect to payments, retainage, if any, security, maintenance, heat, utilities, damage to the Work, insurance, correction of the Work, and warranties shall be established by agreement of the **City** and the **Contractor** or, absent such agreement, shall be determined by the **Design Professional** subject to the right of either party to contest such determination as provided in Article 16.

14.2.2. Immediately prior to such partial occupancy or use, the **City**, the **Contractor** and the **Design Professional** shall jointly inspect the area to be occupied or portion of the Work to be used in order to determine and record the condition of the Work.

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

14.2.4. (Reference: M.G.L. c. 30, §39G;). Within sixty-five (65) days after the effective date of a declaration of

Substantial Completion, the **City** shall prepare and send to the **Contractor** for acceptance a Substantial Completion estimate for the quantity and price of the Work done and all but one percent (1%) retainage on that Work, including the quantity, price and all but one percent (1%) retainage for the undisputed part of each item and extra work item in dispute, but excluding the disputed part thereof, less the estimated cost of completing all incomplete and unsatisfactory items and less the total periodic payments made to date for the Work. The **City** shall also deduct from the Substantial Completion estimate an amount equal to the sum of all demands for direct payment filed by Subcontractors and not yet paid to Subcontractors or deposited in joint accounts pursuant to M.G.L. c. 30, §39F.

**14.2.5. (Reference: M.G.L. c. 30, §39G).** If the **City** fails to prepare and send to the **Contractor** any Substantial Completion estimate required by the provisions herein on or before the date specified, the **City** shall pay to the **Contractor** interest on the amount which would have been due to the **Contractor** pursuant to such Substantial Completion estimate at the rate of three (3) percentage points above the rediscount rate then charged by the Federal Reserve Bank of Boston from such date to the date on which the **City** sends that Substantial Completion estimate to the **Contractor** for acceptance or to the date of payment therefor, whichever occurs first. The **City** shall include the amount of such interest in the Substantial Completion estimate.

**14.2.6. (Reference: M.G.L. c. 30, §39G).** Within fifteen (15) days after the effective date of the declaration of Substantial Completion, the **City** shall send to the **Contractor** by certified mail, return receipt requested, a complete list of all incomplete or unsatisfactory items, and unless delayed by causes beyond its control, the **Contractor** shall complete all such items within forty-five (45) days after the receipt of such list or before the date for final payment and acceptance, whichever is later. If the **Contractor** fails to complete such Work within such time, the **City** may, subsequent to seven (7) days' written notice to the **Contractor** by certified mail, return receipt requested, terminate the Contract and complete the incomplete or unsatisfactory items and charge the cost of same to the **Contractor**.

**14.3. Final Inspection.**

**14.3.1.** Upon written notice from the **Contractor** that the entire Work or an agreed portion thereof is complete, the **Design Professional** will make a final inspection with the **City** and the **Contractor** and will notify the **Contractor** in writing of all particulars which this inspection reveals that the Work is incomplete or defective. The **Contractor** shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

**ARTICLE 15  
GUARANTEES AND WARRANTIES**

**15.1. In General.**

**15.1.1.** All guarantees and warranties specifically called for by the Specifications shall expressly run to the benefit of the **City**. Neither the final certificate of payment nor any provision in the Contract Documents, nor partial or entire occupancy of the premises by the **City** shall constitute any acceptance of work not done in accordance with the Contract Documents or relieve the Contractor of liability in respect to any express warranties or responsibility for faulty materials or workmanship. The Contractor shall remedy any defects in the work and pay for any damage to other work resulting therefrom, which shall appear within a period of one year from the date of final acceptance of the work unless a longer period is specified. CONTRACTING DEPARTMENT (AS STATED ON THE FIRST PAGE OF THE AGREEMENT) will give notice of observed defects with reasonable promptness.

**15.2. Warranties.**

**15.2.1.** Warranties required by the Contract Documents shall commence on the date of Substantial Completion of the Work or designated portion thereof, unless otherwise provided in the certificate of Substantial Completion.

**15.2.2.** The **Contractor** warrants that the materials and equipment furnished under the Contract will be new and of recent manufacture unless otherwise specified, and that all Work will be of good quality, free from faults and defects, and in conformance with the Contract Documents. Work not conforming to these requirements, including substitutions not properly approved and authorized, may be considered defective. The **Contractor's** warranty excludes remedy for damage or defect caused by abuse, Modifications not executed by the **Contractor**, improper or insufficient maintenance, improper operation, or normal wear and tear under normal usage. If required by the **Design Professional**, the **Contractor** shall furnish satisfactory evidence as to the kind and quality of material and equipment.

**15.2.3.** The **Contractor** warrants that title to all Work covered by an application for payment will pass to the **City** either by incorporation in the construction or upon the receipt of payment by the **Contractor**, whichever occurs first, free and clear of all liens. The **Contractor** further agrees that the submission of any application for payment shall conclusively be deemed to waive all liens with respect to said Work to which the **Contractor** may then be entitled, provided that such waiver of the lien rights shall not waive the **Contractor's** right to payment for such Work.

**15.2.4.** The **Contractor** warrants and guarantees that title to all Work, materials, and equipment covered by any

application for payment, whether incorporated in the Project or not, will pass to the **City** no later than the time of payment free and clear of all liens.

**15.2.5.** No materials or supplies for the Work shall be purchased by the **Contractor** or Subcontractor subject to any chattel mortgage or under a conditional sale contract or other agreement by which an interest is retained by the seller. The **Contractor** warrants that it has good title to all materials and supplies used by it in the Work, free from all liens.

**15.2.6.** The **Contractor** shall indemnify and hold the **City** harmless from all claims growing out of the lawful demands of Subcontractors, laborers, workers, mechanics, material persons, and furnishers of machinery and parts thereof, equipment, power tools, and all supplies, including commissary, incurred in the furtherance of the performance of this Contract. The **Contractor** shall at the **City's** request, furnish satisfactory evidence that all obligations of the nature hereinabove designated have been paid, discharged, or waived. If the **Contractor** fails to do so, then the **City** may, after having served written notice on the **Contractor** either pay unpaid bills, of which the **City** has written notice, direct, or withhold from the **Contractor's** unpaid compensation a sum of money deemed reasonably sufficient to pay any and all such lawful claims until satisfactory evidence is furnished that all liabilities have been fully discharged whereupon payment to the **Contractor** shall be resumed, in accordance with the terms of this Contract, but in no event shall the provisions of this sentence be construed to impose any obligations on the **City** to either the **Contractor** or its surety. In paying any unpaid bills of the **Contractor**, the **City** shall be deemed the agent of the **Contractor** and any payment so made by the **City** shall be considered as payment made under the Contract by the **City** to the **Contractor** and the **City** shall not be liable to the **Contractor** for any such payment made in good faith.

**15.3. Extended Warranties and Guarantees.**

**15.3.1.** Any defective Work that is either corrected or replaced will be warranted and guaranteed for a period of three (3) years from the date of such correction or replacement.

**ARTICLE 16  
CLAIMS**

**16.1. In General.**

**16.1.1. Written Notice.** A Claim must be made by written notice to the other party.

**16.1.2. Content of Notice.** The notice must include all written supporting data.

**16.1.3. Burden of Proof.** The party making the Claim must substantiate the Claim.

**16.2. Time Limits on Claims.**

**16.2.1.** Unless otherwise provided, all Claims must be made within twenty-one (21) days after the occurrence of the event giving rise to such Claim or within twenty-one (21) days after the claimant first recognizes the condition giving rise to the Claim, whichever is later. Any change or addition to a previously made Claim shall be made by a written notice within the twenty-one-day period in order to be valid.

**16.3. Continuing Contract Performance.**

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

**16.4. Types of Claims.**

**16.4.1. Claims for Differing Subsurface or Latent Physical Conditions.** (Reference: M.G.L. c. 30, §39N;). If, during the progress of the Work, the **Contractor** or the **City** discovers that the actual subsurface or latent physical conditions encountered at the Site differ substantially or materially from those shown on the Plans or indicated in the Contract Documents, either the **Contractor** or the **City** may request an equitable adjustment in the Contract Sum of the Contract applying to Work affected by the differing Site conditions. A request for such an adjustment shall be in writing and shall be delivered by the party making such claim to the other party as soon as possible after such conditions are discovered. Upon receipt of such a claim from a **Contractor**, or upon its own initiative, the **City** shall make an investigation of such physical conditions, and if they differ substantially or materially from those shown on the Plans or indicated in the Contract Documents or from those ordinarily encountered and generally recognized as inherent in Work of the character provided for in the Plans and Contract Documents and are of such a nature as to cause an increase or decrease in the cost of performance of the Work or a change in the construction methods required for the performance of the Work which results in an increase or decrease in the cost of the Work, the **City** shall make an equitable adjustment in the Contract Sum and the Contract shall be modified in writing accordingly.

**16.4.2. Claims for Additional Cost.** If the **Contractor** claims that any acts or omissions of the **City** or the **Design Professional**, including any instructions or orders, whether oral, written, by drawings, or otherwise, involve extra cost or time, and the **Contractor** has not received a written acknowledgment by the **City** or the **Design Professional** that extra payment will



be made or time extended on account thereof, the **Contractor** shall promptly so notify the **Design Professional** in writing of such Claim and shall proceed with the Work relating to such Claim and all rights of both parties with respect to such Claim shall be deemed to have been reserved. No Claim by the **Contractor** on account of such acts, omissions, instructions, or orders shall be valid unless the **Contractor** has so notified the **Design Professional** before proceeding.

**16.4.2.1.** Under no circumstances shall a Claim be made for additional cost where adverse weather conditions are the basis for the Claim.

**16.4.3. Claims for Additional Time.** If the **Contractor** wishes to make a Claim for an increase in the Contract Time, written notice as provided herein shall be given. The **Contractor** shall have the burden of demonstrating the effect of the claimed delay on the Contract Time and shall furnish the **Design Professional** with such documentation relating thereto as the **Design Professional** may reasonably require. Under no circumstances shall the **Contractor** make a Claim for an increase in the Contract Time due to a change in the **Contractor's** early completion date. If the increase in the Contract Time extends beyond the Contract Time established by the **City**, only the time that so extends beyond the Contract Time shall be reviewed and considered. In the case of a continuing delay, only one Claim is necessary.

**16.4.3.1.** Under no circumstances shall a Claim be made for additional time where adverse weather conditions are the basis for the Claim.

**16.4.4. Claims for Injury to Person or Damage to Property.** Should either party to the Contract suffer injury to person or damage to property because of any error, omission, or act of the other party or of any of the other party's employees or agents or others for whose acts the other party is legally liable, a Claim will be made in writing to the other party within twenty-one (21) days of the occurrence of the act giving rise to the injury or damage.

#### **16.5. Review of Claims.**

**16.5.1. Initial Referral.** All Claims, the bases of which arise prior to final payment or the earlier termination of the Contract, shall be referred initially to the **Design Professional** for action as provided herein.

**16.5.2. Time Period and Action.** The **Design Professional** shall review Claims and shall do one of the following within fourteen (14) days of receipt of the Claim:

**16.5.2.1.** defer any action with respect to all or any part of a Claim for the purpose of requesting and receiving additional information from either party;

**16.5.2.2.** decline in writing to render a decision for any reason which it deems appropriate (including, but not limited to, the fact that the Claim involves allegations of fault on the part of the **Design Professional**); or

**16.5.2.3.** render a decision on all or a part of the Claim.

**16.5.3.** If the **Design Professional** requests additional information, the **Design Professional** shall take action with respect to the Claim no later than fourteen (14) days after receipt of the additional information. The **Design Professional** shall notify the parties in writing of its disposition of such Claim. If the **Design Professional** renders a decision or declines to render a decision, either party may proceed in accordance with paragraph 16.7.

#### **16.6. Decisions.**

**16.6.1. Decisions by the City or the Design Professional.** (*Reference:* M.G.L. c. 30, §39P;). In every case in which this Contract requires the **City**, any official, or its **Design Professional** to make a decision on interpretation of the Specifications, approval of equipment, material or any other approval, or progress of the Work, the decision shall be made promptly and, in any event, no later than fourteen (14) days after the written submission for decision; but if such decision requires extended investigation and study, the **City**, the official, or the **Design Professional** shall, within fourteen (14) days after the receipt of the submission, give the party making the submission written notice of the reasons why the decision cannot be made within the thirty-day period and the date by which the decision will be made.

**16.6.2. When Decision of the Design Professional is Final and Binding.** The decision of the **Design Professional** shall be final and binding on the parties, unless a party files suit or a demand for arbitration within thirty (30) days after the date of the decision.

**16.6.3. When Decision of the Design Professional is Not Final and Binding.** (*Reference:* M.G.L. c. 30, §39J). Notwithstanding any contrary provision of this Contract, no decision by the **City** or by the **Design Professional** on a dispute, whether of fact or of law, arising under said Contract shall be final or conclusive if such decision is made in bad faith, fraudulently, capriciously, arbitrarily, is unsupported by substantial evidence, or is based upon error of law.

**16.6.4. Resolved Claims.** If a Claim is resolved, the **Design Professional** shall obtain or prepare the appropriate documentation and provide the **City** and the **Contractor** with a copy of same.

#### **16.7. Arbitration.**

**16.7.1. Controversies and Claims Subject to Arbitration.** Any controversy or Claim arising out of or related to the

Contract, or the breach thereof, shall be settled by arbitration in accordance with the Construction Industry Arbitration Rules of the American Arbitration Association, and judgment upon the award rendered by the arbitrator or arbitrators may be entered in any court having jurisdiction thereof, except controversies or Claims relating to aesthetic effect, subject to the provisions of paragraph 16.7.7. In any such arbitration in which the amount stated in the demand is \$100,000 or less, the American Arbitration Association shall appoint a single arbitrator in accordance with such Rules, who shall be a lawyer. In any such arbitration in which the amount stated in the demand is in excess of \$100,000, the demand shall include the name of an arbitrator appointed by the claimant. The respondent shall appoint a second arbitrator and shall notify the claimant in writing of such appointment within thirty (30) days of receipt of the demand, failing which the matter shall be decided by the arbitrator named in the claimant's demand. Within thirty (30) days after the claimant's receipt of notice of the appointment of the second arbitrator, the two arbitrators shall appoint a neutral arbitrator and shall notify the parties in writing of such appointment, failing which either party may apply to the American Arbitration Association to appoint such neutral arbitrator. If such neutral arbitrator is appointed by the American Arbitration Association, he or she shall be a lawyer.

**16.7.2. Rules for Arbitration.** If the neutral arbitrator is appointed by the American Arbitration Association, the said Association shall administer the arbitration and its Construction Industry Arbitration Rules shall govern all aspects of the proceeding including the enforcement of any award. If the neutral arbitrator is not appointed by the American Arbitration Association, then the panel of arbitrators shall act as the administrator of the arbitration but the Construction Industry Arbitration Rules of the Association shall nonetheless govern all aspects of the proceeding, including the enforcement of any award, provided however that the arbitration panel shall have all of the powers and duties conferred on the Association pursuant to said rules. In addition, the following rules shall govern the selection of arbitrators and the proceedings:

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

**16.7.2.2.** After the neutral arbitrator has been appointed, neither party may engage in *ex parte* communication with any arbitrator.

**16.7.3. When Arbitration May Be Demanded.** Demand for arbitration of any Claim, the basis of which arises prior to final payment or the earlier termination of the Contract may not be made before the earlier of (1) the date on which the **Design Professional** has rendered a written decision on the Claim or has notified the parties in writing that such decision will not be rendered or (2) forty-five (45) days following receipt by the **Design Professional** of a written request for a decision sent by registered or certified mail to both the **Design Professional** and the other party to this Contract.

**16.7.3.1.** In no event shall a demand for arbitration be made after the date when the institution of legal or equitable proceedings based on such Claim would be barred by the applicable statute of limitations.

**16.7.4. Limitation on Consolidation or Joinder.** No arbitration arising out of or relating to the Contract Documents shall include, by consolidation or joinder or in any other manner, the **Design Professional**, the **Design Professional's** employees or consultants, except by written consent containing specific reference to the Contract and signed by the **Design Professional**, the **City**, the **Contractor**, and any other person or entity sought to be joined. No arbitration shall include, by consolidation or joinder or in any other manner, parties other than the **City**, the **Contractor**, a separate contractor, and other persons substantially involved in a common question of fact or law whose presence is required if complete relief is to be accorded in arbitration. No person or entity other than the **City**, the **Contractor**, or a separate contractor shall be included as an original third party or additional third party to an arbitration whose interest or responsibility is insubstantial. Consent to arbitration involving an additional person or entity shall not constitute consent to arbitration of a dispute not described therein or with a person or entity so named or described herein. The foregoing agreement to arbitrate and other agreements to arbitrate with an additional person or entity duly consented to by parties to the Contract shall be specifically enforceable under applicable law in any court having jurisdiction thereof.

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

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

**16.7.7. The City's Reservation of Rights.** Notwithstanding any provision contained in this Article 16 or elsewhere in the Contract Documents, the **City** reserves the following rights in connection with Claims between the **City** and the **Contractor**, which rights may be exercised by the **City** unilaterally, in the **City's** sole discretion, and without the consent of the **Contractor**:

**16.7.7.1.** the right to institute legal action against the **Contractor** in any court of competent jurisdiction in lieu of demanding arbitration, in which case the dispute or disputes which are the subject of such action shall be decided by such court, and not by arbitration;

**16.7.7.2.** the right to obtain from any court of competent jurisdiction a stay of any arbitration instituted by the **Contractor**, provided that the application for such stay is made before the appointment of the neutral arbitrator in

such arbitration, in which case the dispute or disputes which are the subject of such arbitration shall be decided by such court and not by arbitration;

16.7.7.3. the right to require the **Contractor** to join as a party in any arbitration between the **City** and the **Design Professional** relating to the Project, in which case the **Contractor** agrees to be bound by the decision of the arbitrator or arbitrators in such arbitration.

16.7.8. In case the **City** elects to proceed in accordance with 16.7.7.1. or 16.7.7.2. above, the word "litigation" shall be deemed to replace the word "arbitration" wherever the latter word appears in the Contract Documents.

#### ARTICLE 17 EMERGENCIES

17.1. In an emergency affecting the health and safety of persons or property, the **Contractor** shall act to prevent threatened damage, injury, or loss.

17.2. In emergencies affecting the health, safety, or protection of persons, the Work or property at the Site or adjacent thereto, the **Contractor**, without special instruction or authorization from the **City** or the **Design Professional**, is obligated to act to prevent threatened damage, injury, or loss. The **Contractor** shall give the **Design Professional** prompt written notice if the **Contractor** believes that any significant changes in the Work or variations from the Contract Documents have been caused thereby. If the **Design Professional** determines that a change in the Contract Documents is required because of the action taken by the **Contractor** in response to such an emergency, a **Construction Change** Directive or Change Order will be issued to document the consequences of such action.

#### ARTICLE 18 TERMINATION OR SUSPENSION OF THE CONTRACT

##### 18.1. Suspension by the City.

18.1.1. At any time and without cause, the **City** may suspend the Work or any portion thereof for a period of not more than ninety (90) days by notice in writing to the **Contractor** and the **Design Professional** that will fix the date on which Work will be resumed. The **Contractor** shall resume Work on the date so fixed. The **Contractor** shall be allowed an adjustment in the Contract Sum or an extension of the Contract Time, or both, directly attributable to any such suspension if the **Contractor** makes an approved Claim therefor, provided, however, that if there is a suspension, delay or interruption for fifteen days or more or due to a failure of the Awarding Authority to act within the time specified in this contract, the Awarding Authority shall make an adjustment in the contract price for any increase in the cost of performance of this contract but shall not include any profit to the General Contractor on such increase; and provided further, that the Awarding Authority shall not make any adjustment in the contract price under this provision for any suspension, delay, interruption, or failure to act to the extent that such is due to any cause for which this contract provides for an equitable adjustment of the contract price under any other contract provisions. The General Contractor must submit the amount of a claim under provision (1) to the Awarding Authority in writing as soon as practicable after the end of the suspension, delay, interruption or failure to act and, in any event, not later than the date of final payment under this contract and, except for costs due to a suspension order, the Awarding Authority shall not approve any costs in the claim incurred more than twenty days before the General Contractor notified the Awarding Authority in writing of the act or failure to act involved in the claim. The General Contractor must submit the amount of a claim under provision (1) to the Awarding Authority in writing as soon as practicable after the end of the suspension, delay, interruption or failure to act and, in any event, not later than the date of final payment under this contract and, except for costs due to a suspension order, the Awarding Authority shall not approve any costs in the claim incurred more than twenty days before the General Contractor notified the Awarding Authority in writing of the act or failure to act involved in the claim.

18.1.1.1 Notwithstanding the above, if the City is required to suspend the work as a result of a request from the Office of the Attorney General in connection with a bid protest or an injunction, the Contractor shall not have a claim for damages, but the City shall extend the date of substantial completion for a period of time commensurate with the period of the suspension, and the liquidated damages clause shall not take effect until the extended date of substantial completion. If any of the following occurrences causes a delay in the work, the Contractor shall immediately notify CONTRACTING DEPARTMENT (AS STATED ON THE FIRST PAGE OF THE AGREEMENT) in writing. If, upon investigation, the City finds that the delay is excusable, the City shall extend the date of substantial completion for a period of time commensurate with the period of the excusable delay, and the liquidated damages clause shall not take effect until the extended date of substantial completion: (1) any acts of the Government, including controls or restrictions upon or requisitioning of materials, equipment, tools, or labor by reason of war, National Defense, or any other national emergency; (2) delays which are caused by the City and which are not occasioned by the Contractor's failure to supply CONTRACTING DEPARTMENT (AS STATED ON THE FIRST PAGE OF THE AGREEMENT) or its design professional with progress schedules, documents, samples, and the like, in a timely manner; (3) causes not reasonably foreseeable by the parties to this Contract, which are beyond the reasonable

control of the Contractor, such as blizzards, floods, hurricanes, tornadoes, and strikes; (4) any delay of any subcontractor resulting from paragraphs (1), (2), or (3).

18.1.2. If the Work is defective, if the **Contractor** fails to provide a sufficient number of skilled workers or suitable materials or equipment, or if the **Contractor** defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within a seven-day period after receipt of written notice from the **City** to begin and prosecute correction of such default or neglect with diligence and promptness, the **City** may correct such deficiencies, without prejudice to other remedies the **City** may have. In such case, an appropriate **Construction Change** Directive shall be issued deducting from payments then or thereafter due to the **Contractor** the cost of correcting such deficiencies including compensation for the **Design Professional's** additional services and expenses made necessary by such default, neglect, or failure and any and all direct, indirect, or consequential costs associated with the order to stop the Work. If such payments then or thereafter due the **Contractor** are not sufficient to cover such amounts, the **Contractor** shall immediately pay the difference to the **City**. The **Contractor** shall remain responsible for maintaining progress and shall not be entitled to any increase in the Contract Time or the Contract Sum.

##### 18.2. Termination by the Contractor.

18.2.1. If, through no act or fault of the **Contractor**, a Subcontractor, or a Sub-subcontractor, the Work is suspended for a period of more than ninety (90) days by the **City**, or under an order of court or other public authority, or the **Design Professional** fails to act on any application for payment within thirty (30) days after it is submitted in proper form and content or the **City** fails for thirty (30) days to pay the **Contractor** any sum finally determined to be due, then the **Contractor** may terminate the Contract upon seven (7) days' written notice to the **City**, provided that the **City** does not remedy such suspension or failure within that time.

##### 18.3. Termination by the City.

18.3.1. If the **Contractor** is adjudged a bankrupt, or if the **Contractor** makes a general assignment for the benefit of the **Contractor's** creditors, or if a receiver is appointed on account of the **Contractor's** insolvency, or if the Contractor makes a written admission of the Contractor's inability to pay debts, or if the Contractor becomes a debtor or defendant in (i) a voluntary or involuntary petition in bankruptcy, (ii) a petition for appointment of a receiver, (iii) a levy of an attachment or execution, (iv) a winding up or dissolution of a partnership or corporation, (v) or any other proceeding under which a court of competent jurisdiction assumes custody or control over the Contractor, or if the **Contractor** persistently or repeatedly refuses or fails, except in cases for which extension of time is provided, to supply enough properly skilled workers or proper materials, or fails to prosecute the work with such diligence as will, in the reasonable estimation of the City, ensure substantial completion within the time specified in the Contract Documents, or if the **Contractor** fails to make prompt payment to Subcontractors or for materials or labor, or persistently disregards laws, ordinances, rules, regulations, or orders of any public authority having jurisdiction or disregards an instruction, order, or decision of the **Design Professional**, or otherwise is in breach of any provision of the Contract and has failed to cure such breach after written notice from the City specifying 1) the breach, 2) what must be done to cure the breach, and 3) the time within which the breach must be cured, or otherwise is guilty of substantial violation of any provision of the Contract, then the **Contractor** shall be in default, and the **City** may, without prejudice to any other right or remedy and upon written notice to the **Contractor**, temporarily withhold cash payments pending correction of the deficiency, hold the Contractor and its sureties liable in damages, require the Contractor's sureties to complete the Contract, take possession of all materials, tools, appliances, equipment, construction equipment and machinery and vehicles, offices and other facilities on the Project Site, and all materials intended for the Work, wherever stored, without liability for loss or damage, following which use, the Contractor shall be liable for their removal from the site; and, seven (7) days after such notice, may terminate the employment of the **Contractor**, accept assignment of any or all subcontracts pursuant to Paragraph 6.6.1.1, and finish the Work by whatever method the **City** may deem expedient (including but not limited to using the services of another contractor (in which case the City shall have no obligation to use a competitive process to obtain the lowest contract prices) and look to the Contractor and the Contractor's sureties for the difference between the cost to complete the work and the contract sum hereunder.

The **City** shall be entitled to collect from the **Contractor** all direct, indirect, and consequential damages suffered by the **City** on account of the **Contractor's** default, including without limitation additional services and expenses of the **Design Professional** made necessary thereby. The **City** shall be entitled to hold all amounts due to the **Contractor** at the date of termination until all of the **City's** damages have been established, and to apply such amounts to such damages.

18.3.1.1. HUD Action. If the Contractor is in default, HUD and/or any other administering agency named herein may, with or without the consent of the City, cancel, suspend, or terminate this Contract in whole or in part; require the withholding or disallowance all or part of the funding for the project; declare the contractor ineligible for further Government contracts or avail itself of any other remedies available under the law.

18.3.2. (Reference: Somerville Municipal Code Chapter 2.117, Section 2.117.110C). In the event the **Contractor** or any of its agents or employees violates any provision of Somerville Municipal Code Chapter 2.117 that is applicable to **City**

contractors in connection with the awarding, administration, or performance of the Contract, the **City** may terminate the sat Contract.

**18.3.3.** (a) The City may terminate this Contract without cause, at any time, effective upon the date of termination specified by written notice to the Contractor, in which case, the Contractor shall be compensated for: (1) sums due under this Contract incurred up to the date of termination for all Work performed and accepted by the City up to the termination date, calculated on a percentage completion basis covering the period of time between the last approved application for payment and the date of termination using the progress schedule and schedule of values. The Contractor shall use its best efforts to mitigate any expenses and shall in no event incur any new obligations after the date of termination.

(1) Payment by the City as provided in this section shall be deemed to fully compensate the Contractor for all expenses and those of any consultants, subcontractors and suppliers, directly or indirectly attributable to the termination. Lost profits shall not be payable. Any such termination shall not give rise to any cause of action for damages against the City.

(b) Contractor's Duties Upon Termination For Convenience. Upon termination of this Contract without cause, the Contractor shall: (1) immediately stop the Work; (2) stop placing orders and Subcontracts in connection with this Contract; (3) cancel all existing orders and Subcontracts (subject to the City providing notice that it accepts assignment of any or all subcontracts pursuant to Paragraph 6.6.1.1); (4) surrender the site to City in a safe condition; and (5) promptly transfer to City all materials, supplies, work in process, appliances, facilities, equipment and machinery of this Contract, and all work product, plans, drawings, specifications and other information and documents used in connection with Services performed under this Contract. Failure by the Contractor to comply with said duties shall relieve the City of its obligation to compensate the Contractor, as provided for under this section.

**ARTICLE 19**

**AMERICANS WITH DISABILITIES ACT (42 U.S. 12131)**

**19.1.** On July 26, 1994, the Americans with Disabilities Act ("the Act") became effective for employers of fifteen or more employees.

**19.2.** The Act protects against discrimination on the basis of "disability," which is defined as a physical or mental impairment that substantially limits at least one "major life activity;" or discrimination against an individual who has a record of such impairment; or discrimination against an individual being regarded - even if inaccurately - as having such impairment. The Act also expressly prohibits job discrimination that is based on any individual's relationship or association with a disabled person.

**19.3.** If the **Contractor** is subject to the Act, it must comply with its provisions.

**ARTICLE 20**

**WRITTEN NOTICE TO THE PARTIES**

**20.1. In General.**

**20.1.1.** All written communications from the **Design Professional** to the **Contractor** shall be copied to the **City**. All written communications from the **Contractor** to the **Design Professional** shall be copied to the **City**. All written communications from the **Contractor** to the **City** shall be copied to the **Design Professional**.

**20.2. Addresses.**

**20.2.1. To the City.** Written notice to the **City** shall be sent or hand-delivered to:

**Mayor**  
City of Somerville  
93 Highland Avenue  
Somerville, MA 02143

**City Solicitor**  
Law Department  
93 Highland Avenue  
Somerville, MA 02143

**Director of Contracting Department** (as stated on first page of this Agreement)  
City Hall  
93 Highland Avenue  
Somerville, MA 02143

**20.2.2. To the Contractor.** Both the address given on the bid form upon which the Agreement is founded and the **Contractor's** office at or near the Site of the Work are hereby designated as places to either of which notices, letters, and other communications to the **Contractor** shall be certified, mailed, or delivered. Delivery of any notice, letter, or other communication to the **Contractor** at or depositing same in a postpaid wrapper directed to either place shall be deemed sufficient service thereof upon the **Contractor**. Written notice shall be deemed to have been duly served on the **Contractor** if it is sent or hand-delivered to any member or officer of the **Contractor**. The date of said service shall be the date of such delivery or mailing. The address may be changed at any time by an instrument in writing, executed and acknowledged by the **Contractor** and delivered to the **City** and to the **Design Professional**. Nothing herein contained shall be deemed to preclude or render inoperative the service of any notice, letter, or other communication upon the **Contractor** personally. Moreover, any notice, letter, or other communication required under the Contract may be served on the **Contractor's** representative at job meetings. The **Contractor** shall provide the **City** with its change of address seven (7) days prior to its effective date.

**20.2.3. To the Design Professional.** Written notice to the **Design Professional** shall be sent or hand-delivered to the address appearing on the Project Manual. Written notice shall be deemed to have been duly served on the **Design Professional** if it is sent or hand-delivered to any member or officer of the **Design Professional**.

**ARTICLE 21**

**MISCELLANEOUS PROVISIONS**

**21.1. Governing Law.**

**21.1.1.** This Contract shall be governed by the laws of the Commonwealth of Massachusetts and the United States of America.

**21.2. Venue.**

**21.2.1.** Venue for any court action or proceeding shall be Middlesex County in the Commonwealth of Massachusetts only. The **Contractor**, all Subcontractors, and Suppliers waive any and all jurisdictional and venue defenses.

**21.3. Successors and Assigns.**

**21.3.1.** The **Contractor** shall not assign, in whole or in part, its rights and obligations under the Contract Documents without prior written consent of the **City**. An assignment without the prior written consent of the **City** shall not relieve the **Contractor** of its obligations thereunder.

**21.3.2.** The **City** and the **Contractor** respectively bind themselves, their partners, successors, assigns, and legal representatives to the other party hereto and to partners, successors, assigns, and legal representatives of such other party in respect to covenants, agreements, and obligations contained in the Contract Documents.

**21.4. Statutory Limitation Period.**

**21.4.1.** It is expressly agreed that the obligations of the **Contractor** hereunder arise out of contractual duties, and that the failure of the **Contractor** to comply with the requirements of the Contract Documents shall constitute a breach of contract, not a tort, for the purpose of applicable statutes of limitations and repose. Any cause of action which the **City** may have on account of such failure shall be deemed to accrue only when the **City** has obtained actual knowledge of such failure, not before.

**21.5. Rights and Remedies.**

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

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

**21.6 Severability.** In the event that any provision of this Agreement is found to be legally unenforceable, the remainder of the Agreement shall remain in full force and effect.

**21.7 Conflict of Interest Laws.** The City and the Contractor shall comply with all applicable conflict of interest statutes and regulations.

**21.8** If this contract is in excess of \$2,000 and is federally funded, the Contractor shall comply with the Copeland "Anti-Kickback Act" (18 U.S.C. 874 and 29 CFR Part 3), and shall not induce any person employed in the construction, completion, or repair of a public building or public work, to give up any part of the compensation to which he would otherwise be entitled.

**21.9. EQUAL EMPLOYMENT OPPORTUNITY/NONDISCRIMINATION**

a) the Contractor shall not discriminate against any employee or applicant for employment because of race, color, religion, sex, marital status, sexual orientation, national origin, age, disability, Vietnam Era veteran status or because an employee or applicant is a recipient of federal, state, or local public assistance or housing subsidies; and

b) the Contractor shall not discriminate, in any stage of the contract from award to completion, in the selection or retention of subcontractors, suppliers, and materialmen, or in the procurement of materials or supplies, or the rental of equipment, on the basis of race, religion, sex, marital status, sexual orientation, national origin, age, disability, Vietnam Era veteran status, or because an individual is a recipient of federal, state, or local public assistance or housing subsidies; and

c) the Contractor shall post an equal employment opportunity notice in conspicuous places at the worksite, shall make copies of such notice available to employees and job applicants, and shall send such notice to each labor union or representative of workers with which the Contractor has a collective bargaining agreement or other contract or understanding; and

d) the Contractor shall, to the greatest extent feasible, give employment and on-site training opportunities, to lower-income, minority, women, and disabled members of the local community and shall award subcontracts, when possible, to Minority Business Enterprises (MBE) and Women Business Enterprises (WBE).

e) the contractor shall include language similar to the above in all subcontracts.

END

## **PART 3: TECHNICAL SPECIFICATIONS**

### **TABLE OF CONTENTS**

- Portland Loo Installation Instructions
- Installation Specs
- Site Design Plan
- Structural Drawings
- Structural Calculations

# **Portland Loo Installation Instructions**

## **Supplied:**

- (1) Jig
- (11) Titan anchors

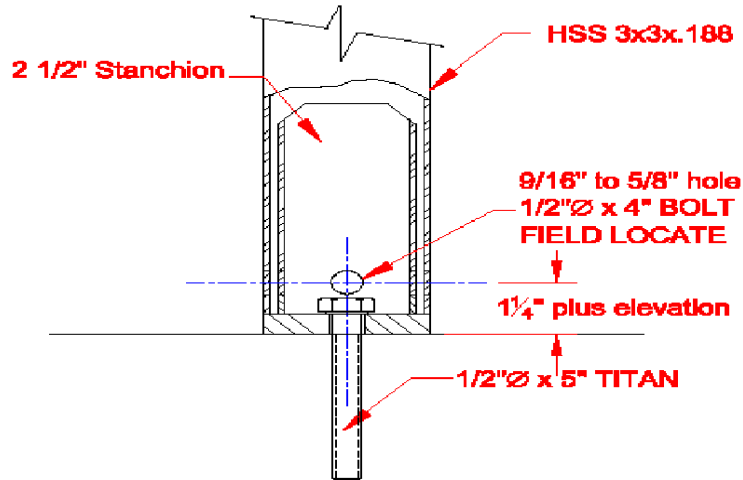
## **Miscellaneous hand/power tools necessary:**

- Impact with  $\frac{3}{4}$ " socket
- Two  $\frac{3}{4}$ " wrenches
- Alignment pin
- Crane rigging
- Masonry drill with  $\frac{1}{2}$ " Masonry bit minimum length
- Drill with  $\frac{1}{2}$ ",  $\frac{9}{16}$ " and  $\frac{5}{8}$ " bit
- Rotary laser
- Step ladder
- Air Compressor & blow nozzle (or bottle brush)

## **Installation Procedure:**

1. Layout stanchion template per drawing T-1.00 and bolt together using supplied  $\frac{3}{8}$ " bolts
2. Locate template on footing pad using main sewer line as an indexing point.-NOTE  
IMPORTANT- Square or parallel template to control joints in concrete
3. Place stanchions in rectangular notches in template(careful not to move template)
4. Drill  $\frac{1}{2}$ " hole through each stanchion to required 5" depth in locations specified on diagram T-1.00 \*do not tighten anchors in stanchions\*
5. Drill  $\frac{1}{2}$ " hole in one of the front door stanchions
  - (1) Drive Titan anchor in 1"
  - (2) Move to electrical side of LOO and repeat the above
6. Using a laser level or long beam level, mark elevations at each stanchion point
7. Drilling  $\frac{9}{16}$ " holes through stanchions.- foundation should be poured flat and level but some adjustment for sloped foundation is possible with laser leveling and drilling bolt holes in stanchions.-

- (1) High point elevation the hole will be drilled  $1\frac{1}{4}$ " up from the bottom of the stanchion baseplate. Remainder will be  $1\frac{1}{4}$ " plus the elevation difference.
- (2) Holes go through "ear" sides of stanchions



8. Install Stanchions PLUMB AND LEVEL in designated locations
  - (1) Use  $\frac{3}{4}$ " impact wrench to install Titan masonry anchors.
  - (2) Note direction of  $\frac{9}{16}$ " thru bolt holes all run lengthwise with LOO
  - (3) Stanchions themselves must be installed as plumb as possible. Use washers if necessary.
9. Make sure  $4\frac{1}{2}$ " sewer line does not exceed more than 1" above the foundation and water line is no more than 12" above foundation
10. Rig eye bolts on top of LOO to one central picking point.
  - (1) \*Note\* In the width of the LOO, optimum angle between slings/chains is 60 degrees.
  - (2) Make sure sewer line has boot before lowering the LOO
11. Pick Loo and set on stanchions as follows in order
  - (1) Align toilet carrier boot with main sewer line
  - (2) As columns slide onto stanchions, install bolts in holes as they align
  - (3) Once the majority of the bolts are in, it may be necessary to jack certain columns to align holes. DO NOT LIFT AT LOUVERS THEY WILL BEND.
  - (4) The LOO must sit level for the front door to operate properly.
12. Tighten all bolts and sewer line boot
13. Hook up water main
14. Hook up main electrical
15. Adjust front door closer if necessary. Follow provided instructions.
16. Silicone seal between water closet chase and concrete. Use backing rod for large gaps

**Technical assistance is available by calling (877)-902-6424**

# **SPECIFICATIONS FOR PUBLIC LOO INSTALLATION AND SITE WORK**

## **SCOPE OF WORK**

The work to be performed under this contract shall consist of the installation of three prefabricated public bathrooms, supporting utility connections (sewer, water, electric), and related site work including sidewalk, curbing and street repair in Somerville, Massachusetts.

1. The installation of a Public Loo in the area of Davis Square, specifically in the public parking lot located in between Elm Street, Summer Street, and Russell Street. See Attachments A and B for site and utility work.
2. The installation of a Public Loo in the area of Union Square, specifically in the sidewalk area adjacent to Washington Street and the 90 Union Square building. See Attachments C and D for site and utility work
3. The installation of a Public Loo in the area of 165 Broadway, specifically adjacent to Cross Street East. See Attachments E and F for site and utility work.

The work includes excavation, gravel borrow, grading, manhole adjustments, curb removal and resetting, installation of MAAB/ADA compliant curb cuts, painted stop lines, and all other incidental work listed in the proposal. The contractor is responsible for direct coordination with the electric provider for permitting, installing, and providing power to the structure. Design plans are shown in Attachments A-F.

Attachments:

- A. Davis Square Layout Plan
- B. Davis Square Utility Plan
- C. Union Square Layout Plan
- D. Union Square Utility Plan
- E. 165 Broadway Layout Plan
- F. 165 Broadway Utility Plan
- G. Portland Loo Structural Drawings
- H. Portland Loo Installation Instructions

## **PROVISION FOR TRAVEL AND PROSECUTION OF THE WORK**

The street and adjacent side streets shall remain open to travel throughout the period required for the completion of the improvement except as permitted by the City of Somerville Traffic Commission. Reasonable facilities shall be provided by the Contractor for the convenient and safe passage of pedestrians through the project and also to and from properties abutting the improvement. Reasonable facilities shall also be provided by the Contractor to ensure that all businesses remain accessible during business hours. Particular care shall be taken at all times to establish and maintain such methods of procedure as will not create hazards of an unusual nature.

## **LIMITATIONS OF OPERATIONS**

The Contractor shall conduct the work at all times in such a manner and in such sequence as will assure the least interference with traffic and abutters. The Contractor shall have due regard to



the location of detours and to the provisions for handling traffic. The Contractor shall not open up work to the prejudice or detriment of work already started. The Contractor shall have due regard to the potential conflict between existing features (e.g., pavement markings, signs, curb, etc.) and interim/proposed features (e.g., pavement markings, signs, curb, etc.) and shall provide temporary transitions between those features that results in reasonably safe and convenient travel in accordance with Subsection 7.09: Public Safety and Convenience of the Standard Specifications.

## **WORK SCHEDULE**

Work on this project is mainly restricted to a ten-hour day, five-day week with the Prime Contractor and all subcontractors working on the same shift from 7am to 5pm. Peak hour work restrictions may apply as specified in the Street Permit or as directed by the Engineer.

Project includes a preconstruction project meeting and a site meeting for each of the three sites between the Contractor, subcontractor, project engineer, and City Engineer.

## **LIQUIDATED DAMAGES**

Delays to due to the cancellation of work, not including of inclement weather, will be subject to the assessment of liquidated damages as outlined below. A verbal warning will be given to the Contractor's supervisor and a written warning will be sent to the Contractor for the first offense. Every offense thereafter will be penalized as follows:

1. If the Contractor hasn't completed the installation of the three Public Loo's after 90 days from the receipt of the Public Loo's, then damages may be assessed at a weekly rate of \$4,000.00.

If the Contractor has an outstanding invoice with the City of Somerville, the corresponding sums from liquidated damages mentioned above will be deducted from that invoice, otherwise the Contractor shall remit this payment within fourteen calendar days.

## **DISPOSAL OF SURPLUS MATERIAL**

Surplus material resulting from the various kinds of excavation and not required for use on the project shall be disposed of by the Contractor, outside the project limits, at their own responsibility and without additional compensation thereof.

## **REMOVAL AND DISPOSAL OF STRUCTURES AND OBSTRUCTIONS**

The Contractor shall accept and hold entire responsibility for the stacking and protection of materials that have been removed from the site and that are to be reused in the work. Any materials lost or damaged through lack of protection or carelessness by the Contractor shall be replaced at their expense.

## **SEQUENCE OF WORK**

Provide a monthly work schedule for the entire project at the beginning of the project. Provide a weekly schedule for the next two months of work. Update schedule biweekly. Site construction may commence after the Winter Moratorium is lifted on April 1, 2024. This may precede the receipt of the Public Loo's.

After a street is cold planed/milled, it shall remain open for a maximum of five (5) working days prior to repaving. After removal of sidewalk, it shall remain open for a maximum of ten (10) working days prior to replacement. However, due to special circumstances, this requirement may be waived by the City Engineer.

Construction sequence for sidewalk and accessible ramp construction shall be set to provide an accessible path consistent with the existing pedestrian facility that is disrupted or closed with the following expectations:

1. Sidewalk construction within a block shall be limited to one side of the road at a time.
2. Accessible pedestrian ramp construction shall be limited to one corner of an intersection at a time.
3. At the end of every working day, the Contractor shall ensure an accessible route is present.
4. A Pedestrian Management Plan shall be submitted for review two weeks prior to first scheduled sidewalk removal/obstruction. The Pedestrian Management plan shall be both narrative and graphical and shall be specific to the streets and intersections of the Project. The Pedestrian Management Plan shall provide requirements to meet (e.g. continuous accessible route through Project at all times, etc.).

Per MassDOT Standard Details for the Development of Temporary Traffic Control Plans, when existing pedestrian facilities are disrupted, closed, or relocated in a temporary traffic control zone, temporary facilities shall be provided and they shall be detectable and include accessibility features consistent with the features present in the existing pedestrian facility.

### **COOPERATION OF THE CONTRACTOR**

Attention is directed to the fact that the Public Service Corporations and Municipal Departments may enter the site of the improvement and alter, replace, and/or install facilities at some time when the Contractor will be prosecuting other work contiguous thereto.

### **PROTECTION AND RESTORATION OF PROPERTY**

Special care shall be exercised by the Contractor during the prosecution of the work, to save from harm and injury any structure, public or private, water system situated above or below the surface, and adjacent properties lying within the scope of the project, not specifically designated to be removed or otherwise altered.

Any damage to private property due to the construction activities of the Contractor shall be repaired to the property owner's satisfaction within thirty (30) working days.

### **STREET TREES**

Existing trees shall be retained, and their roots protected at all times during construction.

### **SIDEWALKS, DRIVEWAYS AND ACCESSIBLE CURB CUTS**

The Contractor shall be responsible for protection of newly placed cement concrete sidewalks, driveways, and accessible curb cuts (pedestrian curb ramps) from vandalism. The Contractor shall not be reimbursed for repairing or replacing concrete walks as a result of vandalism.

## **BACKFILLING FOR STRUCTURES AND PIPES**

All backfilling for structures and pipes shall conform to the Commonwealth of Massachusetts Department of Transportation Standard Specification for Highways and Bridges, 2021 Edition, Section 150.64.

## **RETAINAGE**

A Retainage of 5% shall be held by the City. This sum shall be held by the City for a period of sixty (60) days after final estimate is made and the work is accepted by the City.

All unit prices quoted herein shall be firm for the duration of the Contract, regardless of any changes in the cost of materials or labor.

## **CONTRACTOR'S EQUIPMENT STORAGE**

Contractor's equipment is not to be parked or stored at the Public Works Yard at any time.

The Public Loo is to be received and stored at the Contractor's Yard, not at the Public Work's Yard. They will each arrive on a pallet that can be moved with a forklift. Each weighs just over 6,000 lbs. and are completely covered in a thick vinyl wrap that will protect it during shipping and storage.

## **NOTICE TO OWNERS OR UTILITIES**

Written notice shall be given by the Contractor to all public service corporations or officials owning or having charge of publicly or privately owned utilities of the Contractor's intention to commence operations affecting such utilities at least one week in advance of the commencement of such operations, and the Contractor shall, at the same time, file a copy of such notice with the City Engineer.

Bidders are hereby notified that information is available regarding the existing utility structures which may be encountered within and adjacent to the limits of the work and the corporations owning controlling same. The completeness of this list is not guaranteed by the Department.

City of Somerville  
Department of Public Works  
Superintendent of Operations

Attn.: Eric Weisman

One Franey Road  
Somerville, MA 02145  
617-625-6600

City of Somerville  
Water & Sewer Department  
Water Division

Attn.: Neil G Viner Water Division

Attn.: Jay Hayden Sewer Division

One Franey Road  
Somerville, MA 02145  
617-625-6600

City of Somerville  
Parking Department  
133 Holland St.  
Somerville, MA 02144  
617-625-660

Comcast Communications  
Attn.: Dave Flewelling  
617-279-7864

9 Forbes Ave.  
Woburn, MA 01801

Eversource Gas  
Attn.: Roger Carson  
781-346-7651

Eversource Electric  
Attn.: Brian Lozier  
339-987-8378  
101 Linwood Street  
Somerville, MA 02143

National Grid Gas  
Attn.: Matthew Carmody  
781-790-6062  
170 Medford St.  
Malden, MA 02148

Verizon Communications  
Attn.: Paul Diamantopoulos  
978-323-0282  
185 Franklin St.  
Boston, MA 02210

RCN Communications  
Attn.: Kenny Bates  
617-293-0201  
115 West First St.  
Boston, MA 02127

MWRA Water & Sewer Division  
Charlestown Navy Yard  
100 First Ave.  
Boston, MA 02129  
617-242-6000

The Contractor shall notify Massachusetts "DIG SAFE" 72 hours prior to start of construction.

"DIG SAFE" call center: 1-888-DIGSAFE or 1-888-344-7233.

### **BOND REQUIREMENTS**

A Performance Bond and a Labor and Materials Bond in the amount of 100% each of the contract price will be required from the successful bidder.

### **PREVAILING WAGE REQUIREMENTS**

Bidders will be required to comply with the Prevailing Wage Laws, M.G.L., C.149. The selected Contractor will be required to submit a certified payroll to the City every week. The City will take an active role in reviewing and monitoring this payroll weekly. If the City suspects any violations, the City will report them to the Attorney General's Fair Labor and Business Practices Division. The Attorney General's Office, after conducting an investigation and a hearing can order the bidder to halt work, if it finds prevailing wage violations. Within fifteen days after completion of its portion of the work the bidder must submit a Statement of Compliance with the prevailing wage law. The City reserves the right to conduct hearings on bids that are significantly below the average bid price submitted on a project, to make findings of fact and determinations. Weekly payrolls are public records, and the bidder shall make them available upon request. The Bidder is required to keep these records for a period of three years from the date of the completion of this contract.

### **INSURANCE REQUIREMENTS**

(See attached)

## **PARTICULAR SPECIFICATIONS**

### **ITEMS**

The items below shall conform to the Commonwealth of Massachusetts, Department of Transportation Standard Specifications for Highway and Bridges, 2021 Edition including the latest amendments and addendum thereto, except brick work as described in Item 706. and Traffic Police as described in Item 999.001.

The quantity of items listed, are approximate only. They are given as a basis for comparison of bids. The City does not expressly or by implication agree that the actual amount of work will correspond therewith. The City reserves the right to increase or decrease the quantity of any bid item.

An increase or decrease in the quantity of any items shall not be regarded as cause for an increase or decrease in the contract unit price. Contractor waives their right to renegotiate bid unit pricing based on quantity changes.

#### **ITEM 1.1 RECEIVE AND STORE PREFABRICATED PUBLIC TOILET** **PER WEEK**

The work to be done hereunder consists of receiving and storing the Portland Loo. The storage must not be on City of Somerville property or Right of Ways. The Loo must be stored as required by Portland Loo specifications. This item will be paid by week on a Sunday to Saturday basis. Compensation shall be made at the contract unit price per each prefabricated public toilet received.

The Public Loo is to be received and stored at the Contractor's Yard, not at the Public Work's Yard. They will each arrive on a pallet that can be moved with a forklift. Each weigh just over 6,000 lbs., and completely covered in a thick vinyl wrap that will protect it during shipping and storage.

#### **ITEM 1.2 INSTALL CONCRETE FOUNDATION** **EACH**

See the Portland Loo Drawing Set attachment. The video at the following link also shows the installation process: <https://vimeo.com/141186536>

Concrete shall be constructed in accordance with the relevant provisions of Section 701 of the Standard Specifications and the following:

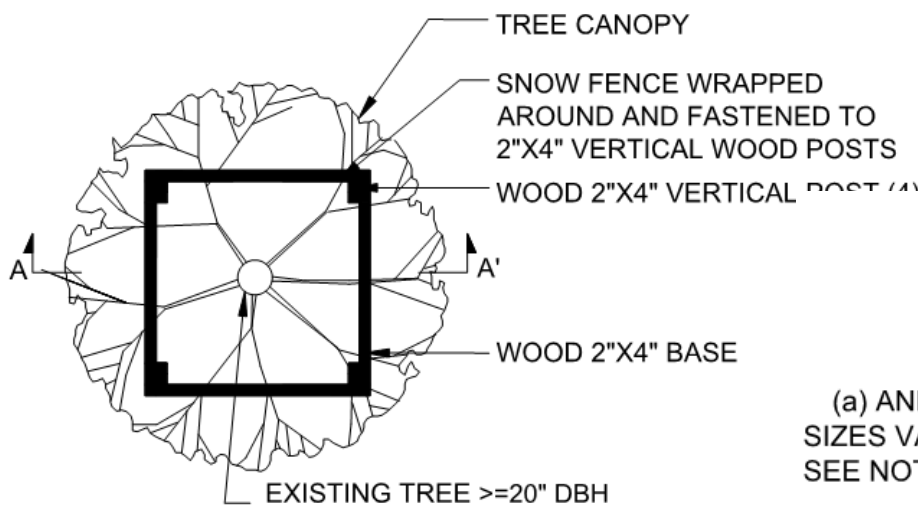
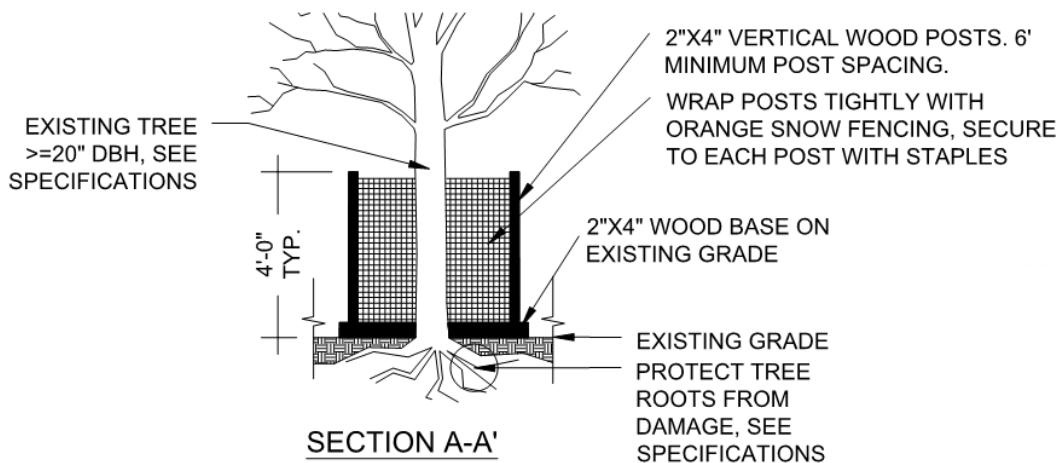
The concrete shall be laid to a thickness of 18" and installed to the satisfaction of the Engineer. All joints shall be sawcut.

Compensation shall be made at the contract unit price per each foundation.

**ITEM 1.3 INSTALL PREFABRICATED PUBLIC TOILET****EACH**

See the Portland Loo Drawing Set attachment and installation instructions. The video at the following link also shows the installation process: <https://vimeo.com/141186536>

Compensation shall be made at the contract unit price per each installation. The contractor is responsible for applying for and receiving an approved building permit using the attached drawings.

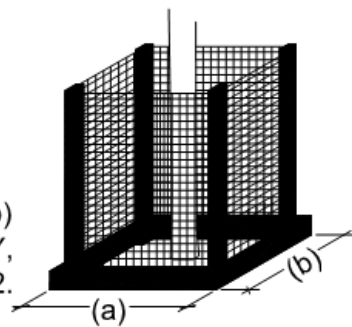
**ITEM 102.521****TREE AND PLANT PROTECTION FENCE****FOOT**

**PLAN**

**NOTES:**

1. TREE BOX RESTS ON EXISTING GRADE AND IS NOT ANCHORED TO THE GROUND.

(a) AND (b)  
SIZES VARY,  
SEE NOTE 2.



**AXON**

2. SIZE OF TREE PROTECTION BOX VARIES BASED UPON TRUNK SIZE AND LIMITS OF SURFACE ROOTS. FINAL SIZE TO BE DETERMINED BY CITY URBAN FORESTER IN FIELD DURING PRE-CONSTRUCTION SITE WALK.
3. TREE PROTECTION SHALL BE INSTALLED PRIOR TO ANY CONSTRUCTION ACTIVITIES AND MAINTAINED IN GOOD CONDITION THROUGHOUT THE CONSTRUCTION PERIOD.
4. SUBMIT SHOP DRAWINGS SHOWING ALL MATERIALS AND ATTACHMENTS.
5. TREES HAVING A CALIPER UNDER 20" DIAMETER AT BREAST HEIGHT (DBH) SHALL BE WRAPPED WITH TREE PROTECTION LUMBER. "SPECIAL MATURE TREES", THOSE TREES WITH A CALIPER OVER 20" DBH, SHALL BE WRAPPED WITH TREE PROTECTION LUMBER AND PROTECTED WITH A TREE BOX. TREE BOX SHALL BE OMITTED WHEN IT IMPEDES ADJACENT SIDEWALK CONSTRUCTION OR WHEN AN ADA ACCESSIBLE PATH CANNOT BE PROVIDED AROUND IT.
6. CONTRACTOR SHALL PROTECT PRIVATE TREES, PORCHES, AND PRIVATE SIDEWALKS DURING WORK AND RESTORATION.

The work to be done hereunder consists of protecting trees in accordance with the relevant provisions of Section 100 and the following.

#### PART 1 – GENERAL SUMMARY

##### 1.1 This section includes the following:

1. Provide labor, material, tools and equipment to prepare site as indicated and specified.
2. Protection of existing trees and vegetation within the limit of work. Tree Protection should be assumed for existing trees within the project limit of work where proposed construction activity is to occur beneath the canopy and within the drip lines of existing trees. Tree protection shall remain in place throughout the duration of the construction project but may be temporarily relocated to allow for work in select areas in close proximity to the trees to occur as approved by the Owner's Representative. Tree protection shall be promptly restored following these select work operations. The measures described herein are anticipated to be required and will be verified based on actual field conditions. Provisions under this item include: tree protection measures to minimize disturbance to existing trees and their root systems; canopy system review and evaluation; canopy pruning in areas of proposed disturbance; and post-pruning care including mulching and watering of root zones.



## PART 2 – PRODUCTS

### 2.1 TREE BOX

Tree Box shall be constructed from 2 in. x 4 in. lumber creating a box around the the tree pit with 2 in. x 4 in. lumber standing straight up at the corners and wrapped with orange snow fence. Fasteners as per detail.

### 2.2 TREE TRUNK WRAPPING PROTECTION LUMBER

Tree Trunk Wrapping Protection Lumber shall consist of 2 in. x 4 in. and 8 ft. height lumber wired together in close spacing with 16-gauge galvanized steel wire to form a protective enclosure around tree trunks. See photo examples of tree wrap protection in Section 3.6.

### 2.4 WATER

Water shall be furnished by Contractor, suitable for irrigation and free from ingredients harmful to plant life. Hose and other watering equipment required for work shall be furnished by Contractor.

## PART 3 - EXECUTION

### 3.1 EXISTING TREES AND VEGETATION

- A. Contractor shall be responsible for the health of the existing trees in the immediate vicinity of construction. Trees damaged by construction operations which, as determined by the Owner's Representative, can be remedied by corrective pruning measures shall be addressed immediately.
- B. Public trees are protected by Massachusetts State Law, Chapter 87. Section 12 states that a fine of up to five hundred dollars, (\$500.00) per incident of damage to public shade trees can be levied. Each branch broken or improperly pruned, each improper wounding of the trunks of the trees, and each root improperly pruned shall constitute an infraction. Section 12 further provides that anyone who negligently or willfully damages a tree will be liable to the City for all damages.
- C. If the City's Urban Forester determines that a private or public property tree cannot be repaired and restored to full-growth status, the Contractor shall replace the damaged tree(s) and pay liquidated damages as noted below.
  - a. The size of the replacement tree shall equal ½" caliper for every 1" caliper inch of the damaged tree (size of the damaged tree shall be measured, the new tree shall be based on nursery measurements). In the case that a replacement tree of that size cannot be found or cannot be planted, a number of trees with the combined DBH of the required replacement tree may be substituted, upon

approval of the City Urban Forester. The species of the replacement tree(s) shall be determined by the Engineer and the City Urban Forester.

- b. In addition to providing a new tree replacement, Contractor shall pay City \$250.00 for every caliper inch of a damaged tree within limits of public property.
  - c. An example of the conditions stated above: A 20" caliper public tree was damaged and determined to need replacement. To remedy this situation, the Contractor would purchase and install a 10" caliper tree (or multiple trees with combined caliper inches of 10") and pay the Owner \$5,000. Type of tree and installation specifications to be determined and signed off by the City Urban Forester.
  - d. The total cost of tree replacement, including the cost of the tree and stump removal, shall be borne by the Contractor.
- D. The Contractor shall prune City and private trees within the limit of work under the direction of a Massachusetts Certified Arborist and only as required by the Engineer and with the supervision of the City's Urban Forester.
- a. If a condition is observed requiring attention, the condition should be reported to the City within 24 hours. Such conditions may include structural weakness, rot or decay that cannot be corrected by cleaning, and dead trees.
  - b. Equipment and work practices that damage living tissue and bark beyond the scope of work shall be avoided. Climbing spurs shall not be used when climbing and pruning trees. Spurs may be used to reach an injured climber or when removing a tree.
  - c. Pruning tools (e.g. chain saws, pole saws, hand saws, pole pruners, etc.) shall be sharp and regularly sharpened and maintained throughout the Contract Term.
  - d. Not more than 25% of the foliage of an individual tree should be removed within an annual growing season. The percentage and distribution of foliage to be removed shall vary according to the tree species, age, health and site, in accordance with the types of pruning identified above.
  - e. Not more than 25% of the foliage of a branch or limb shall be removed when it is cut back to a lateral. The lateral shall be large enough to assume apical dominance.
  - f. Heading shall be permitted only by the expressed permission of the City, when needed to reach a defined objective.
  - g. Topping and lion tailing shall be considered unacceptable pruning practices.

- h. All pruning cuts shall be made in accordance with the American National Standard for Tree Care Operations—Standard Practices (ANSI A300 Part 1), as approved by the American National Standards Institute, and published by the National Arborists Association (revised 2001). All terminology included in these Technical Specifications shall be defined by ANSI A300 Part 1.
  - i. When tracing wounds, only loose, damaged tissue should be removed. No other wound treatments shall be used.
- E. Roots that cannot be avoided during construction for all other trees to remain shall be carefully and cleanly cut. Only hand methods for grubbing roots will be accepted inside drip lines of trees to be left standing. All pruning of any roots greater than 2" must be completed under the supervision of the City Urban Forester. Root pruning shall include application of root treatment or fertilizer as required. In order to minimize impacts to roots, Contractor shall uncover roots with an air spade as required by the City's Urban Forester.
- F. Trucks and heavy equipment shall not pass over or park on roots of trees; nor shall construction materials, debris, or excavated material be stored within drip line of trees or within tree pits. For occasional or one time access over roots, ½-inch plywood overlapped may be used. Permeable materials such as gravel or wood chips shall be placed over root systems of trees which are not covered by hardscape and over which trucks and heavy equipment must travel during construction operations, when such travel is unavoidable, to prevent soil compaction and root damage. Material shall be replaced as needed. Contractor must have prior approval for access from the Owner's Representative or City Urban Forester.
- G. During sidewalk construction adjacent to trees, suitable soil shall be maintained within tree wells. Moist soil or mulch shall also be maintained around surface roots outside of tree wells which may become exposed during construction. Such covering shall be placed as soon as possible after roots are exposed. If roots are going to be exposed for more than one hour, cover roots with damp burlap. Burlap shall be kept moist until most soil and mulch can be used for permanent cover.
- H. Tunneling shall be the preferred method of excavation adjacent to tree roots to avoid root pruning. If root pruning is unavoidable, a certified arborist shall be onsite to execute or oversee the operation with sufficiently sharpened hand tools and in such a fashion as to have minimum negative impact on tree health and safety.
- I. All tree protection fencing must be installed and approved by the Owner's Representative and the City Tree Warden or City Urban Forester before site preparation or other construction activity commences. Any modifications to tree protection fencing during construction can only take place with advanced written approval from the Owner's Representative and the City Tree Warden or City Urban Forester.

- J. Provide protection necessary to prevent damage to existing trees and improvements indicated to remain in place inside or outside of the limit of work. Existing trees and shrubbery to remain shall be protected from injury. Except as otherwise approved, cutting and trimming of existing tree limbs and roots will not be permitted. Existing trees to remain which can potentially be damaged by construction operations shall be protected. Trees having a caliper under 20" diameter at breast height (dbh) shall be wrapped with tree protection lumber. "Special Mature Trees", those trees with a caliper over 20" dbh, shall be wrapped with tree protection lumber and protected with a tree box. Protection shall be maintained until completion of the work of the Contractor.
- K. Protect trees on adjoining properties and within City right-of-way. Restore trees damaged by Contractor's clearing and construction activities to their original condition or better, at no additional expense to the City.
- L. Protect existing trees and other vegetation as directed by the City Urban Forester to remain in place or outside of the clearing/grading limit lines.

### 3.6 TREE WRAP PROTECTION EXAMPLES



**ITEM 120.1**  
**UNCLASSIFIED EXCAVATION**

**CUBIC YARD**

The work to be done hereunder consists of removing and disposing in accordance with the relevant provisions of Section 120, all the materials obstructing the execution of required work as shown in the plans and as directed, except those materials for which payment is made inclusive with complete work specified to be performed under items of this contract. Concrete gutters are included under this item and any concrete bases encountered in the roadway excavation. The Contractor's attention is directed to the fact that the materials shall be disposed of in accordance with the provisions written herein before under the heading "Disposal of Surplus Materials" at no additional compensation.

**ITEM 141.1**  
**TEST PIT FOR EXPLORATION**

**CUBIC YARD**

The work under this item shall conform to the relevant provisions of Section 140 of the Standard Specifications and the following:

All test pits shall be as directed or approved by the City Engineer.

All test pits must be coordinated with the City of Somerville's Department of Public Works. A representative of the City of Somerville's Department of Public Works shall specify the location and size of the test pit and shall be present during the excavation.

The test pit shall be backfilled with City of Somerville approved gravel borrow, placed in six (6") lifts and compacted to 95% of the maximum density.

Bypass pumping, sheeting/shoring, dewatering, excavation, cutting existing pavement, bedding, backfilling, dust control, appurtenances, and the removal and disposal of the existing VC sewer piping to be replaced shall be considered incidental to the work with no additional compensation provided.

Shoring shall be utilized as necessary to prevent caving of adjacent pavement. Where required proposed shoring shall be designed and stamped by a Massachusetts Registered Professional Engineer at the expense and direction of the Contractor and submitted to the Engineer for approval. Shoring submittal shall include design computations and all proposed shoring and bracing plans and details addressing all necessary construction requirements.

The hot mix asphalt used to repair and patch the road shall be considered incidental this Item. The depth of pavement repair will be determined by the City of Somerville's Department of Public Works.

The compacted Gravel Borrow used to backfill the Test Pit shall be paid under Item 151. Gravel Borrow.

**ITEM 142.**

**CLASS B TRENCH EXCAVATION****CUBIC YARD**

The work under this item shall conform to the relevant provisions of Section 140 of the Standard Specifications.

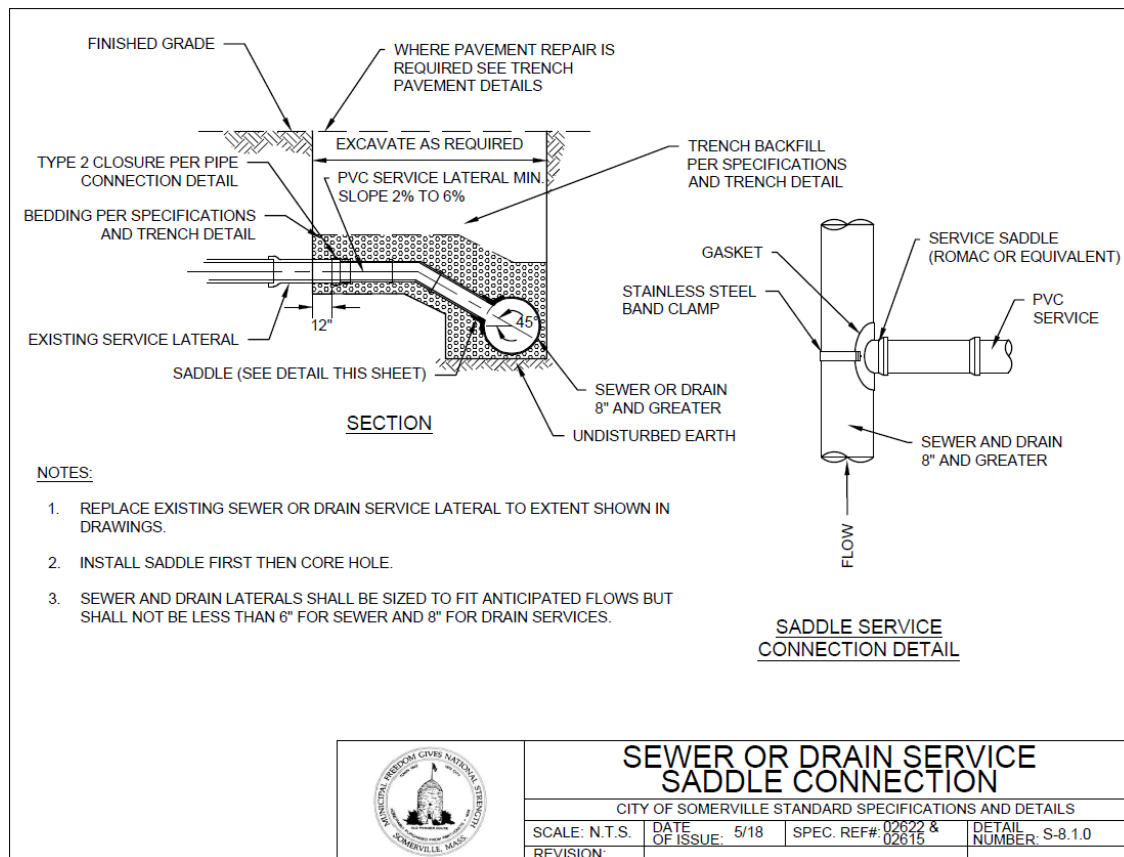
**ITEM 151.**  
**GRAVEL BORROW****CUBIC YARD**

The work to be done hereunder consists of finishing and placing gravel as required and in accordance with the plans and the relevant provisions of Section 150.

Compensation for this work shall be determined only as provided in Section 150, measurement shall be made in place and 20% added to the quantity so found.

**ITEM 201**  
**PLASTIC (PVC) PIPE****LINEAR FOOT**

Plastic (PVC) Pipe shall meet ASTM D1785 Standard Specification for Poly Vinyl Chloride (PVC) and Chlorinated Poly Vinyl Chloride (CPVC) Plastic Pipe, Schedule 40, 80, and 120. The pipe shall be PVC, Type I Schedule 80. Fittings, such as adapters, couplings, etc. shall be the same material as the pipe. Joints shall be made in accordance with ASTM D2855 Recommended Practice for Making Solvent-cemented Joints with Poly (Vinyl Chloride) (PVC) Pipe and Fittings. Cements shall meet ASTM D2564.



**ITEM 201.5**  
**CATCH BASIN – MUNICIPAL STANDARD**

**EACH**

The work to be done under this Item shall consist of the furnishing and installation, including excavation and backfill of trenches for catch basins, at the locations established by the Engineer, all in accordance with Section 201 of the Standard Specifications and the following:

Catch Basins shall conform to City of Somerville Construction Standards.

Catch basin may have a cover instead of a grate if receiving flow from a drop inlet, as directed by Engineer.





The work to be done under these Items consists of adjusting gate boxes in streets and on sidewalks and installing new gates with gate boxes and new roadway gate boxes as directed by the Engineer to the grades as required in accordance with the relevant provisions of Section 301. This work shall include all fittings, restraints, and dresser couplings. Compensation shall be at the contract unit price each.

### **ITEM 360**

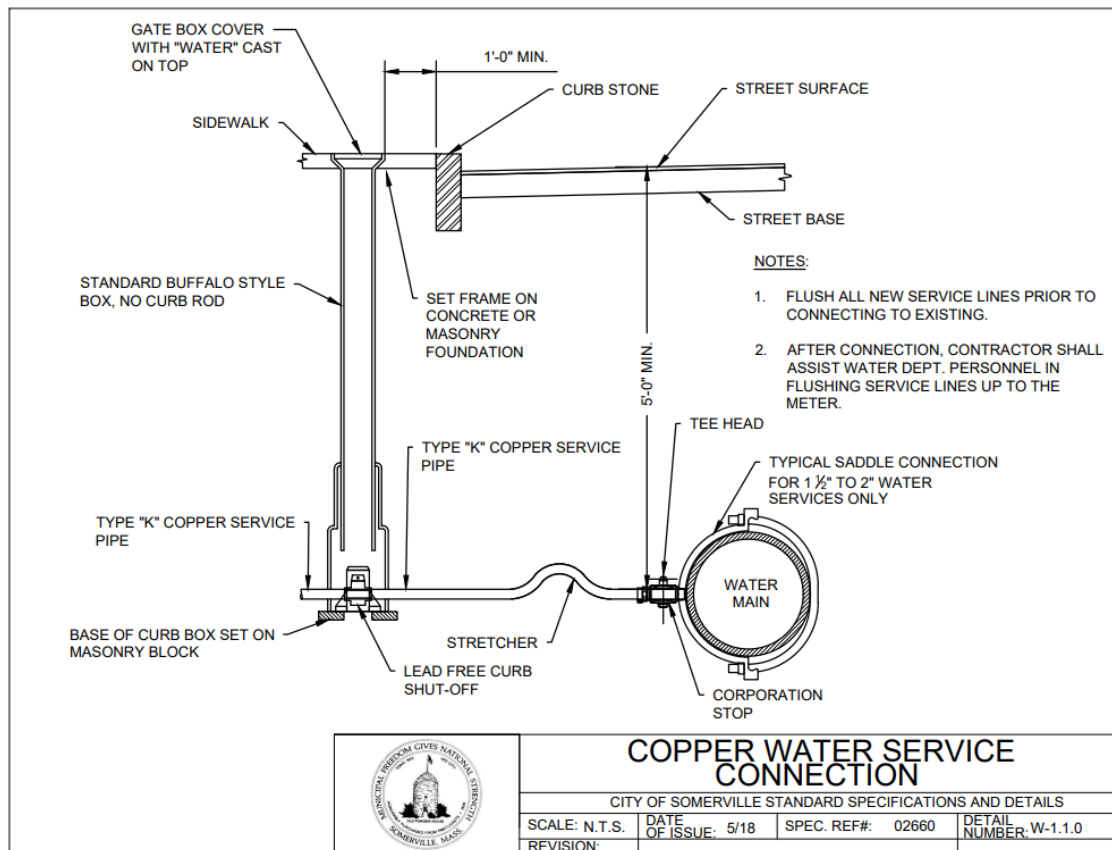
### **COPPER TUBING FOR WATER SERVICE**

### **LINEAR FOOT**

Provide water services from the new water main to the existing services, including corporation stops, curb stops and boxes, as shown on the Contract Drawings or as directed by the Engineer.

#### **SERVICES**

- A. Where indicated on the Drawings, all pipe for services 2-inches or smaller shall be Copper, Type K tubing and shall conform to the provisions of AWWA C901.



### **ITEM 402.**

### **DENSE GRADED CRUSHED STONE FOR SUB-BASE**

### **CUBIC YARD**

The work to be done hereunder consists of finishing and placing gravel as required and in accordance with the plans and the relevant provisions of Section 402.

Specifications for Public Loo Installation Project

Dense graded crushed stone for sub-base shall be compacted to not less than 95% of the maximum dry density of the material as determined by the Standard AASHTO Test Designation T99 compaction test Method C at optimum moisture content as determined by the Engineer.

Compensation for this work shall be determined only as provided in Section 402, measurement shall be made in place.

**ITEM 415.1**

**PAVEMENT STANDARD MILLING**

**SQUARE YARD**

The work to be done under this item shall conform to the relevant provisions of Section 415 for pavement milling. A 3-inch cut to the predetermined grade or any specified lesser depth may be required in one pass. The minimum width of pavement planed in each pass shall be 6.5 feet, except in areas to be trimmed and edged.

**ITEM 431.1**

**HIGH EARLY STRENGTH CEMENT CONCRETE BASE COURSE**

**CUBIC YARD**

High early cement concrete, where required, shall be constructed in accordance with the relevant provisions of Section 430. The work to be done under this item shall consist of excavation of the existing material, disposal of material, grading and compacting sub-base, and the placing of High Early Concrete. Compensation shall be made at the contract unit price per cubic yard.

**ITEM 452**

**ASPHALT EMULSION FOR TACK COAT**

**GALLON**

The work to be done under this item shall conform to the relevant provisions of section 450 for HMA.

**ITEM 460. HOT MIX ASPHALT PAVEMENT FOR LOCAL STREETS**

**TON**

Work under this Item shall conform to the relevant provisions of Section 400 of the MassDOT Standard Specifications for Highways and Bridges, 2021 Edition and the following:

**DESCRIPTION**

**460.10          General**

This work shall consist of producing and placing Hot Mix Asphalt (HMA) pavement. All HMA mixtures shall meet the requirements of the SUPERPAVE volumetric design system. The HMA pavement shall be constructed in courses on the prepared or existing base in accordance with these specifications and in conformance with the lines, grades, compacted thickness and typical

cross section as shown on the plans. Each SUPERPAVE HMA pavement course placed shall be comprised of one of the mixture types listed in Table 460.1.

For routes that have heavy truck traffic greater than 5%, a polymer modified surface course should be considered by the City Engineer.

**Table 460.1 - HMA Pavement Courses & Mixture Types**

<b>Pavement Course</b>	<b>Mixture Type</b>	<b>Mixture Designation</b>
Surface Course	SUPERPAVE Surface Course – 9.5	SSC – 9.5
	SUPERPAVE Surface Course – 9.5 – Polymer	SSC – 9.5 – P
	SUPERPAVE Surface Course – 12.5	SSC – 12.5
	SUPERPAVE Surface Course – 12.5 - Polymer	SSC – 12.5 – P
Intermediate Course	SUPERPAVE Intermediate Course – 12.5	SIC – 12.5
	SUPERPAVE Intermediate Course – 19.0	SIC – 19.0
Base Course	SUPERPAVE Base Course - 37.5	SBC – 37.5
Leveling Course	SUPERPAVE Leveling Course – 4.75	SLC – 4.75
	SUPERPAVE Leveling Course – 9.5	SLC – 9.5
	SUPERPAVE Leveling Course – 12.5	SLC – 12.5

**ITEM 472.**

**TEMPORARY ASPHALT PATCHING**

**TON**

Bituminous Concrete for patching, where required, shall be constructed in accordance with the relevant provisions of Section 472. The bituminous concrete shall be laid to the thickness directed and compacted to the satisfaction of the Engineer. Compensation shall be made at the contract unit price per ton.

**ITEM 482.3 SAWCUTTING ASPHALT PAVEMENT**

**FOOT**

The work to be done under this item shall conform to the relevant provisions of Section 482 for Sawcutting Asphalt Pavement of the Standard Specifications.

Sawcutting will be paid separately when made in areas of full depth box widening.

Sawcuts made in existing pavement in areas of trenching for new conduit, in areas of new or reset curb, or trench limits for drainage/water work, will be included in the unit price under the respective items and will not be paid for separately under this item.

**ITEM 504. GRANITE CURB TYPE VA4 - STRAIGHT**

**FOOT**

**ITEM 504.1 GRANITE CURB TYPE VA4 - CURVED**

**FOOT**

The work to be done under these Items shall conform to the relevant provisions of Section 501 for Curb and Edging of the Standard Specifications.

**ITEM 580. CURB REMOVED AND RESET**

**FOOT**

The Contractor shall remove and reset granite curb as designated by the Engineer and as specified under Subsection 501.62 and 501.67 of the Standard Specifications.

Item 580 Curb Removed and Reset shall also include existing curb used as transition curb for accessible curb cut.

Measurement for Item 580 shall be on the linear foot basis for curb removed and reset.

The unit price per linear foot for Item 580 shall constitute full compensation for furnishing all labor, materials, tools and equipment necessary and shall include excavation, removing, and resetting existing curbstones, pointing and gravel filling as directed.

**ITEM 701.**  
**CEMENT CONCRETE SIDEWALK**

**SQUARE YARD**

Concrete where required, shall be constructed in accordance with the relevant provisions of Section 701 of the Standard Specifications and the following:

The concrete shall be laid to the thickness directed and installed to the satisfaction of the Engineer. Minimum thickness for item 701. is four inches. All joints shall be sawcut.

**Windowpane/picture frame finishing shall not be allowed.**

Compensation shall be made at the contract unit price per square yard.

**ITEM 701.2**  
**CEMENT CONCRETE PEDESTRIAN CURB RAMP**

**SQUARE YARD**

The work to be done under this item shall conform to the relevant provisions of Section 701 of the Standard Specifications for Cement Concrete Sidewalks, pedestrian curb ramps and driveways and the following:

Ramps shall be built to the latest specifications of the MassDOT Construction Standard Details and Standard Specifications. Ramps shall include the installation of Detectable Warning Panel in accordance with MassDOT Construction Standard Detail E 107.6.5. **All tactile panels shall be cast iron.**

All joints shall be sawcut.

**Minimum thickness for Item 701.2 shall be six inches. Windowpane/picture frame finishing shall not be allowed.**

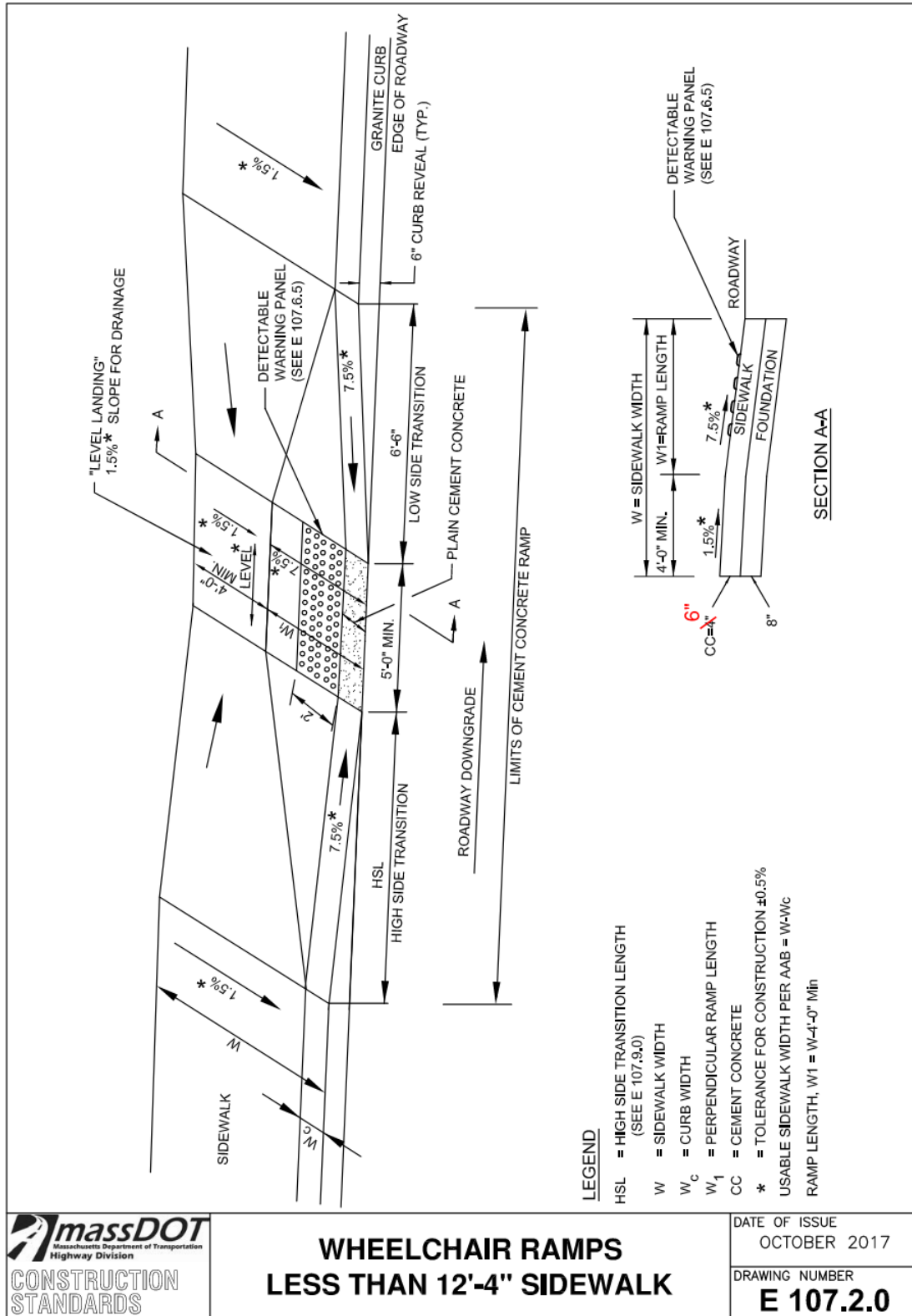
MAAB/ADA compliance is the sole responsibility of the Contractor. Any work found to be non-compliant with the regulations of the MAAB/ADA regulations shall be replaced at the Contractor's expense with no additional compensation from the City.

Locations of ramps shall be marked by City of Somerville prior to construction and will be located on all streets to be resurfaced.

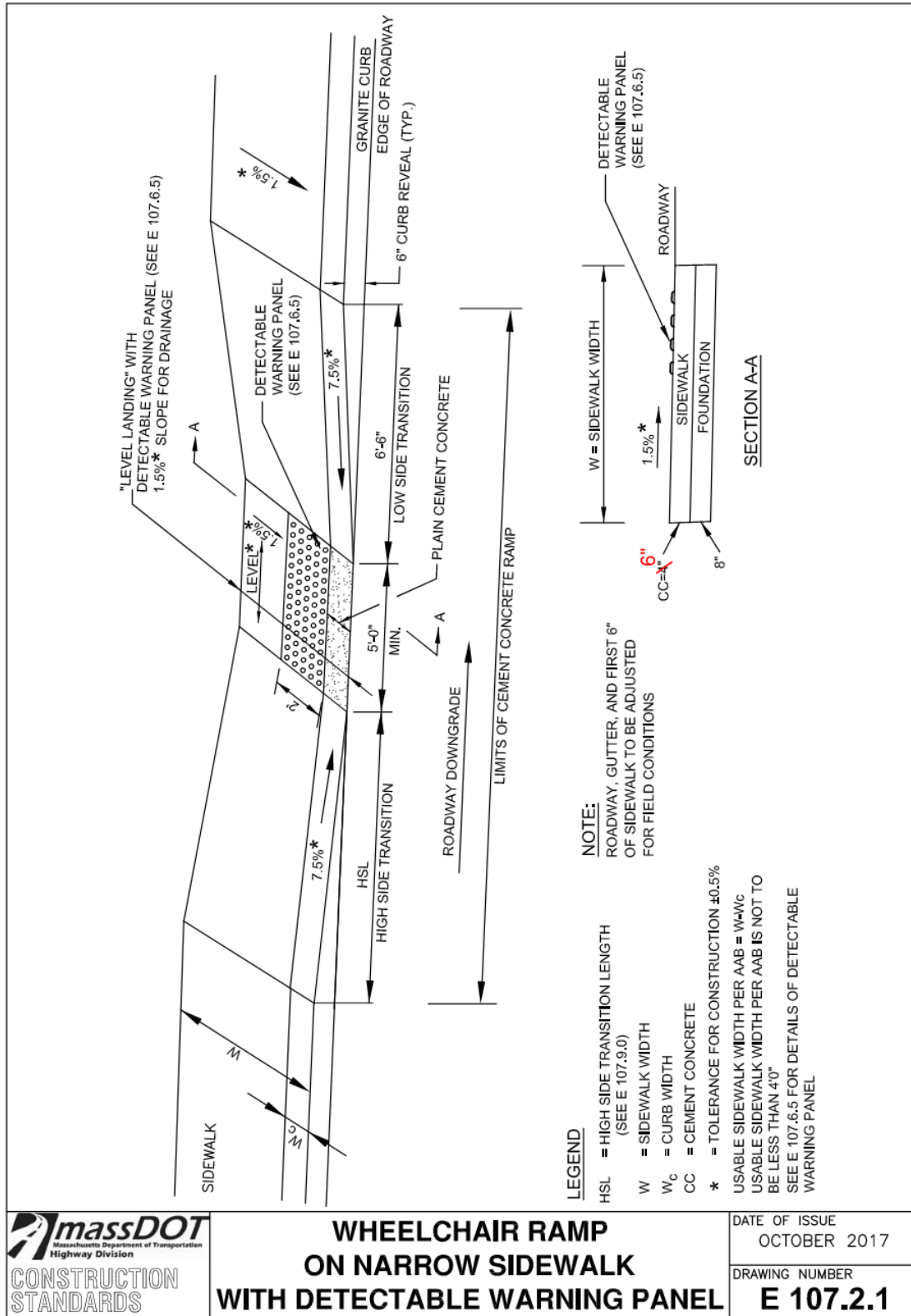
Gravel, excavation beyond existing pedestrian curb ramp, fine grading, remove and reset curb shall all be paid under their respective items. The concrete shall be laid to the thickness directed and installed to the satisfaction of the Engineer. Minimum thickness for item 701.2 is six inches. Payment shall be per square yard for pedestrian curb ramp.

Concrete Pedestrian Curb Ramps shall be constructed according to the MassDOT 2017 Construction Standard Details provided.

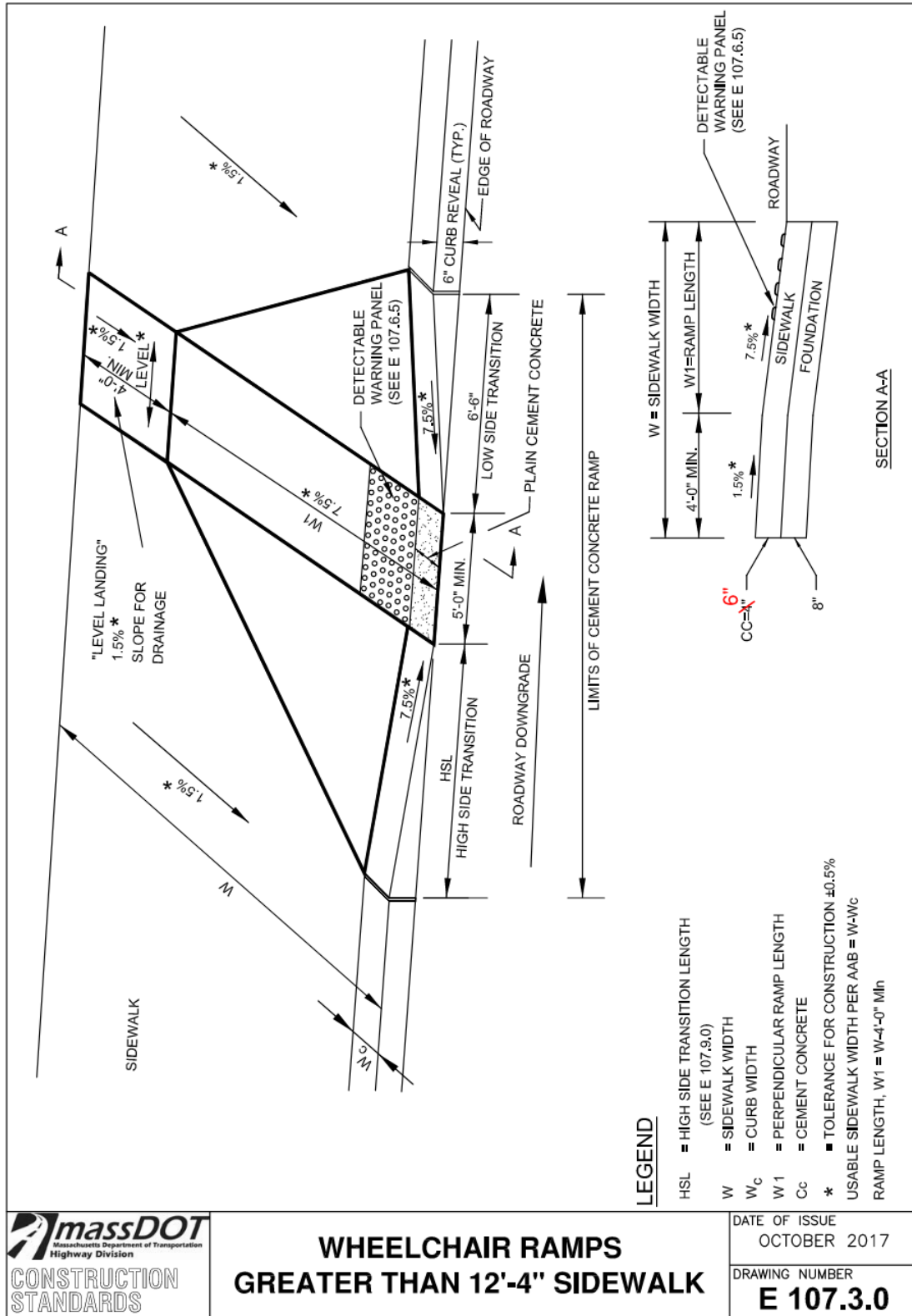
At the direction of the City Engineer, designated concrete pedestrian curb ramps (E107.2.1 & E107.3.0) shall be widened to approximately 25-foot width to provide on-street accessible parking spaces. These ramps may or may not have adjacent crosswalks. The accessible parking space will include an accessible parking pavement marking symbol (Item 864.04).

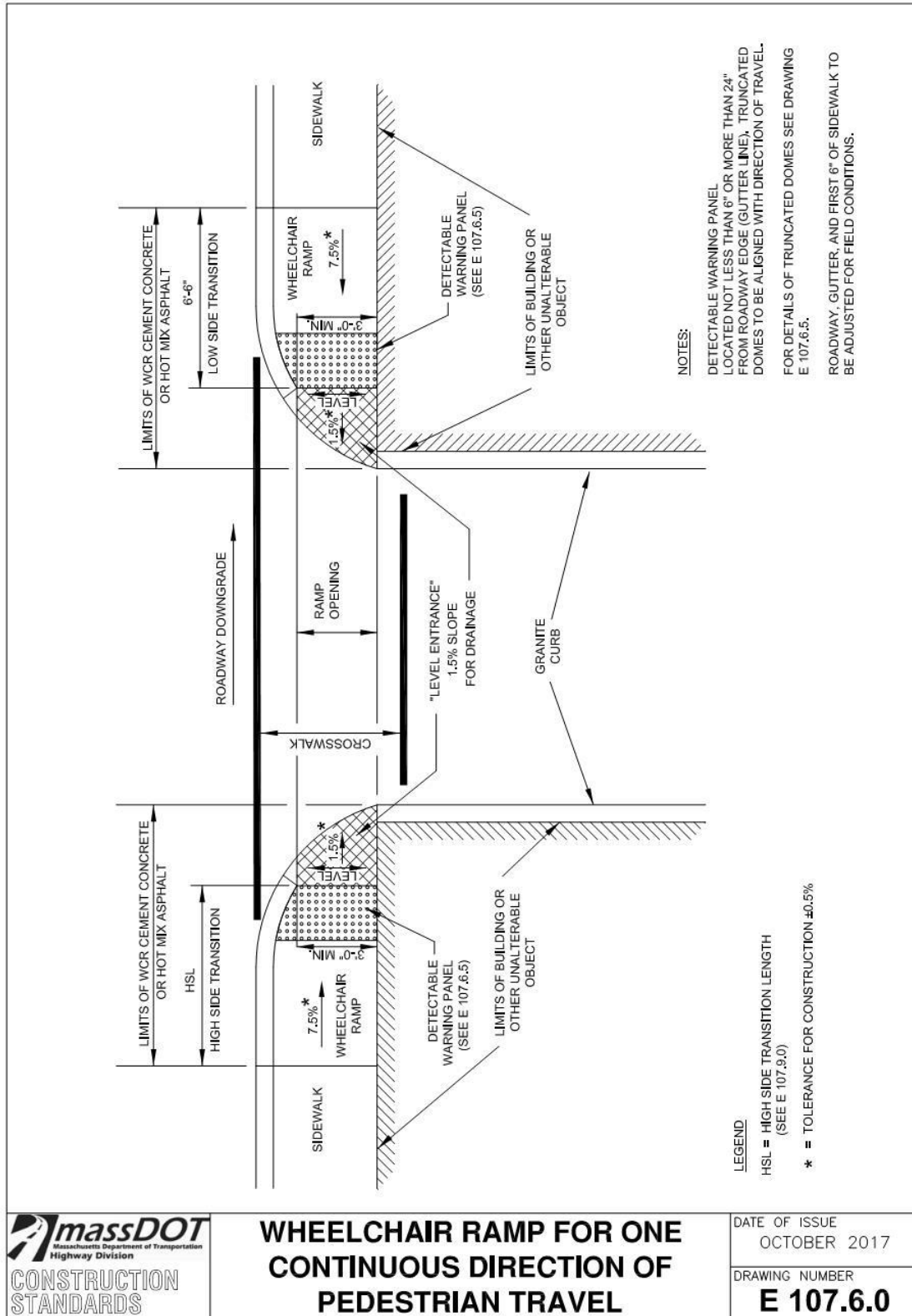


## WHEELCHAIR RAMPS LESS THAN 12'-4" SIDEWALK

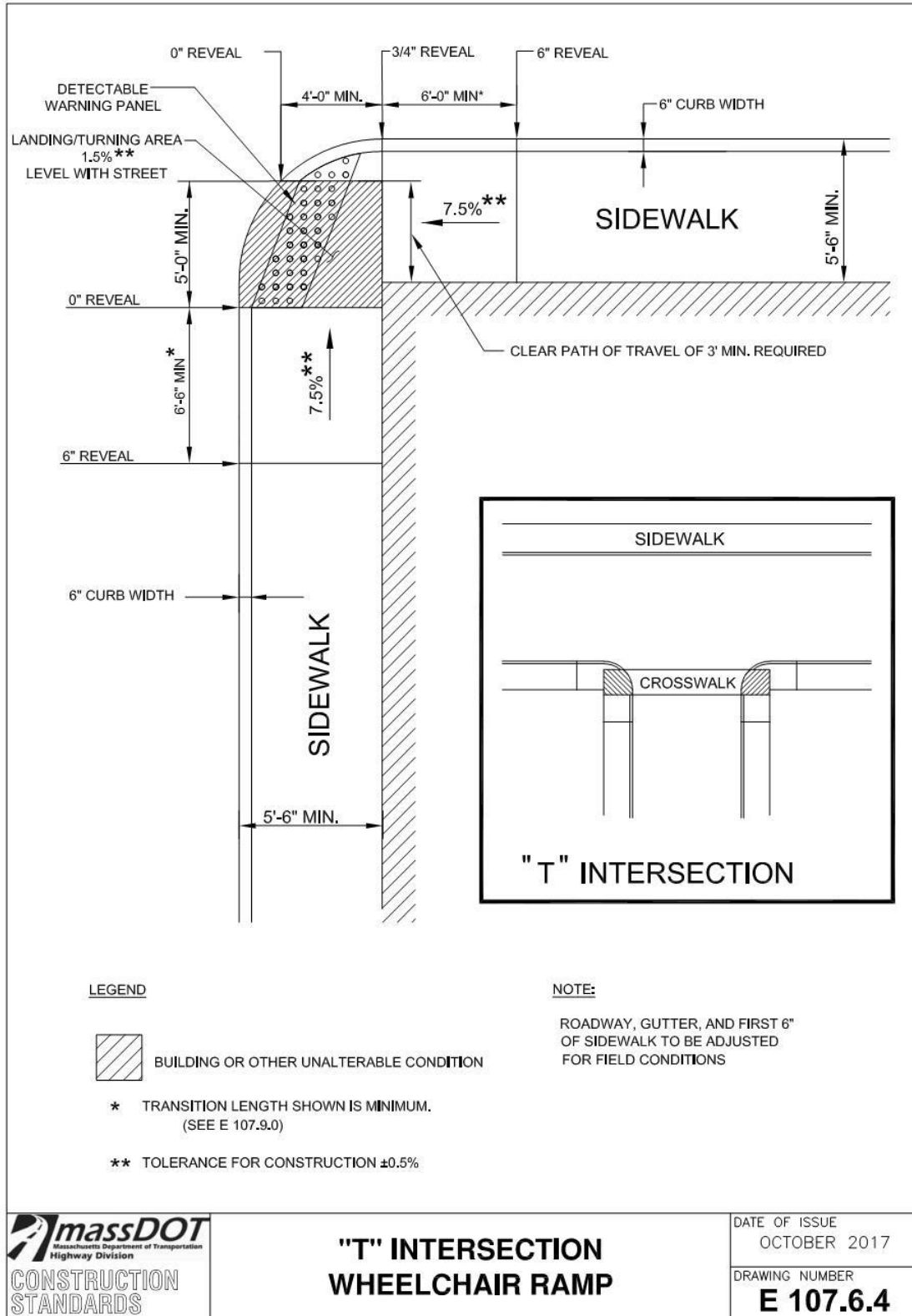


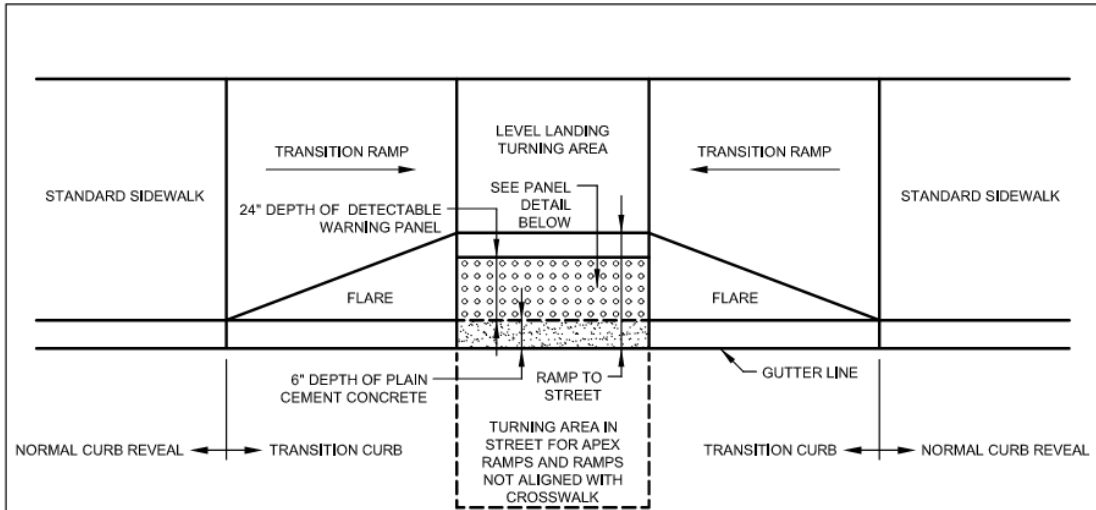




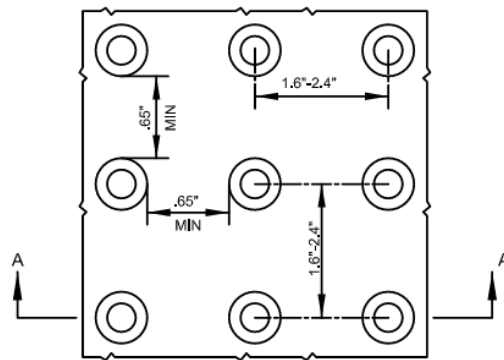




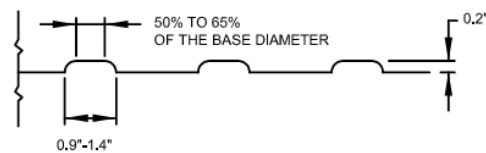




**TYPICAL INSTALLATION**



**DETAIL OF DETECTABLE WARNING PANEL**



**SECTION A-A**

**NOTE:**

**SHALL BE CAST IRON**

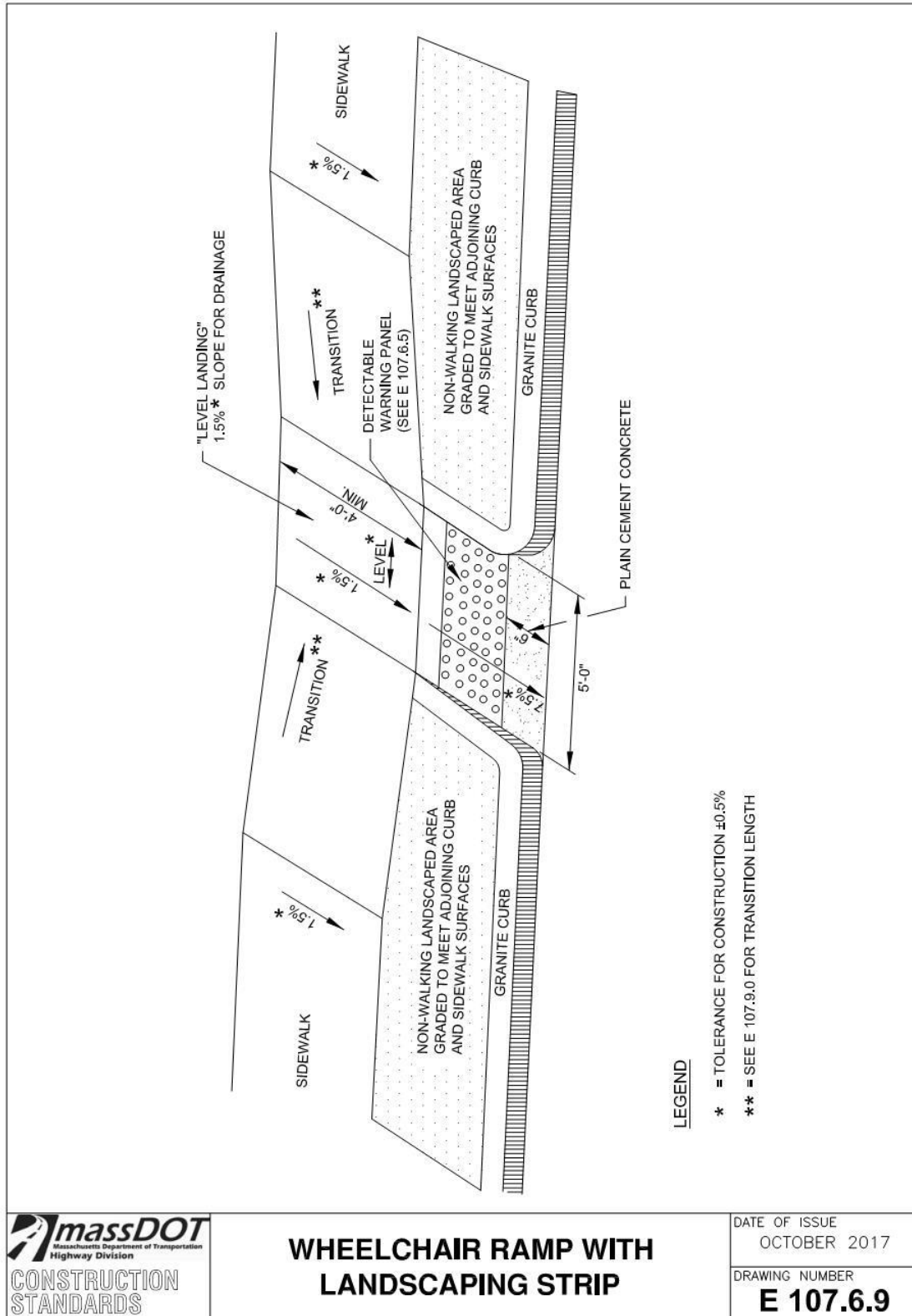
~~PANELS MAY BE CONCRETE PRECAST OR CAST IN PLACE OR OTHER SUITABLE MATERIAL~~  
 PERMANENTLY APPLIED TO THE RAMP. DETECTABLE WARNING SURFACES SHALL CONTRAST VISUALLY WITH ADJACENT WALKING SURFACES EITHER LIGHT-ON-DARK, OR DARK-ON-LIGHT.

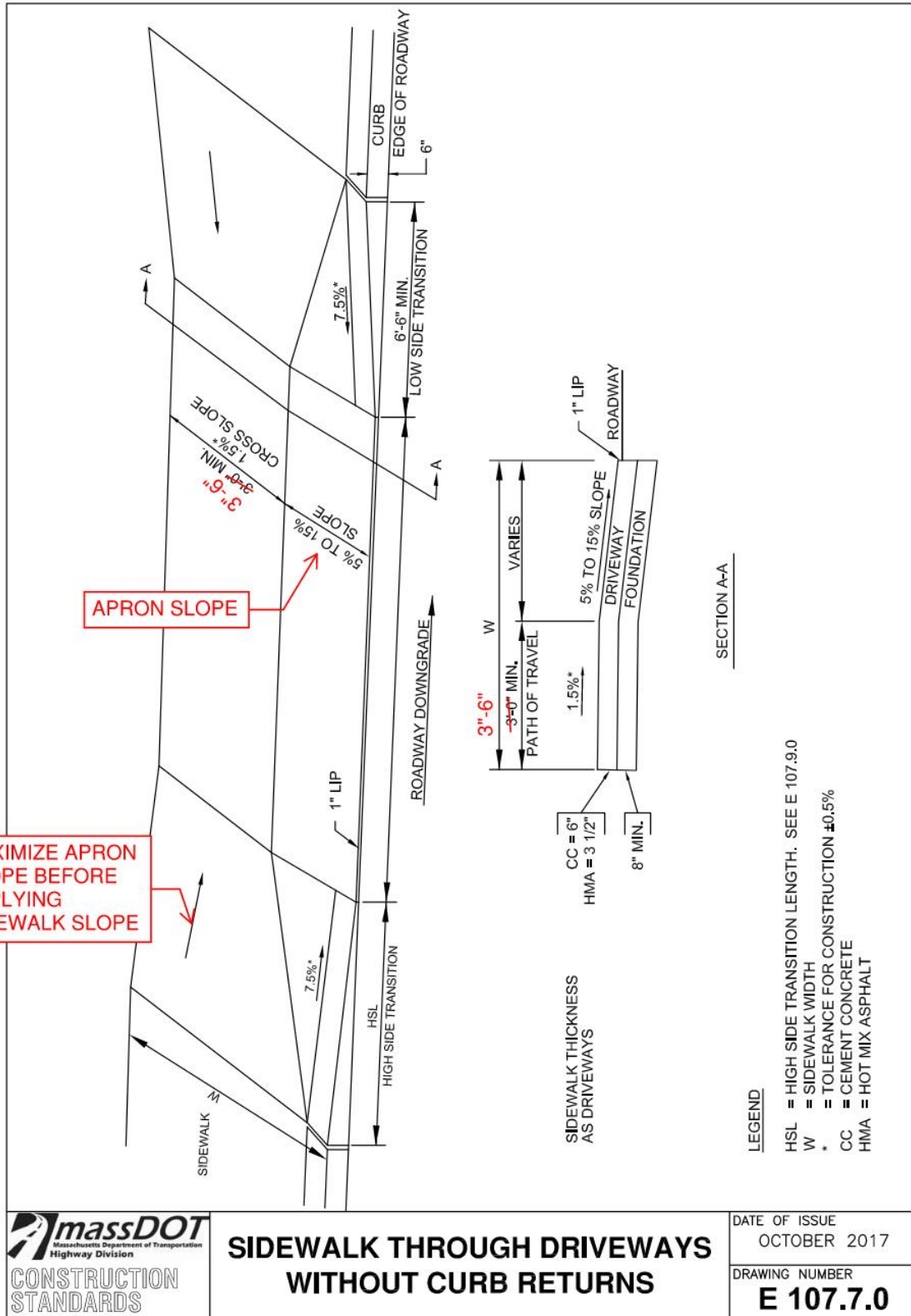


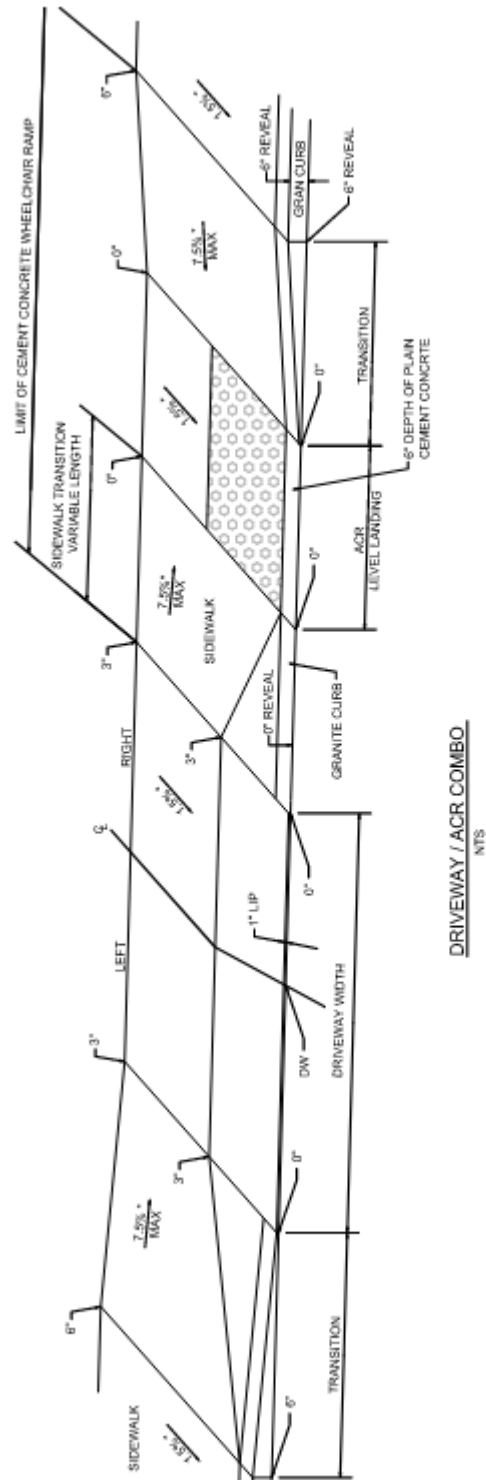
**DETECTABLE WARNING PANEL  
 FOR WHEELCHAIR RAMPS AND  
 STANDARD RAMP TERMINOLOGY**

DATE OF ISSUE  
 OCTOBER 2017

DRAWING NUMBER  
**E 107.6.5**








- NOTES:
- CONSTRUCTION TOLERANCE  $\pm 0.5\%$
  - THE SIDEWALK GRADES ARE ONLY TO DEMONSTRATE APPROXIMATE RELATIVE GRADES IN RELATION TO BOTTOM OF CURB.



ROADWAY PROFILE GRADE	* HIGH SIDE TRANSITION LENGTH
%	ENGLISH UNITS
=0%	6'-6"
>0% TO 1%	7'-8"
>1% TO 2%	9'-0"
>2% TO 3%	11'-0"
>3% TO 4%	14'-0"
>4% TO 5%	15'-0" Max

NOTE:

\* BASED ON A DESIGN SLOPE OF  
7.5% AND A REVEAL OF 6".



CONSTRUCTION  
STANDARDS

**CURB TRANSITION LENGTH  
FOR WHEELCHAIR RAMPS**

DATE OF ISSUE  
OCTOBER 2017

DRAWING NUMBER  
**E 107.9.0**

**ITEM 701.5**  
**DETECTABLE WARNING PANEL**

**EACH**

The work to be done under this item shall conform to the relevant provisions of Section 701 for pedestrian ramps and shall include placement of a surface mounted panel, meeting the dimensional requirements of MassDOT Standard Construction Detail E 107.6.5, on existing pavement or concrete. Detectable Warning Panels shall be cast iron and placed on existing curb ramps that are otherwise deemed ADA compliant, but with missing detectable warning panel or as directed by the City Engineer.

**Measurement and Payment**

Detectable Warning Panel will be measured and paid at the Contract unit price per each, complete in place, which price shall include all labor, materials, equipment and incidental costs required to complete the work.

**ITEM 707.15**  
**REMOVE AND RESET PARK BENCH**

**EACH**

The work under this item shall conform to the relevant provisions of Section 700 of the Standard Specifications and the following:

The work shall include removing benches to facilitate construction, temporary storage and resetting park benches, as directed and approved by the City Engineer.

**Measurement and Payment**

This work will be paid for at the contract unit price each complete in place which price will be full compensation for removing, storing, and installing park benches, concrete footing, gravel borrow and all incidental labor and materials necessary to complete the work.

**ITEM 707.96**  
**INSTALL PREFABRICATED STEEL SIGN**

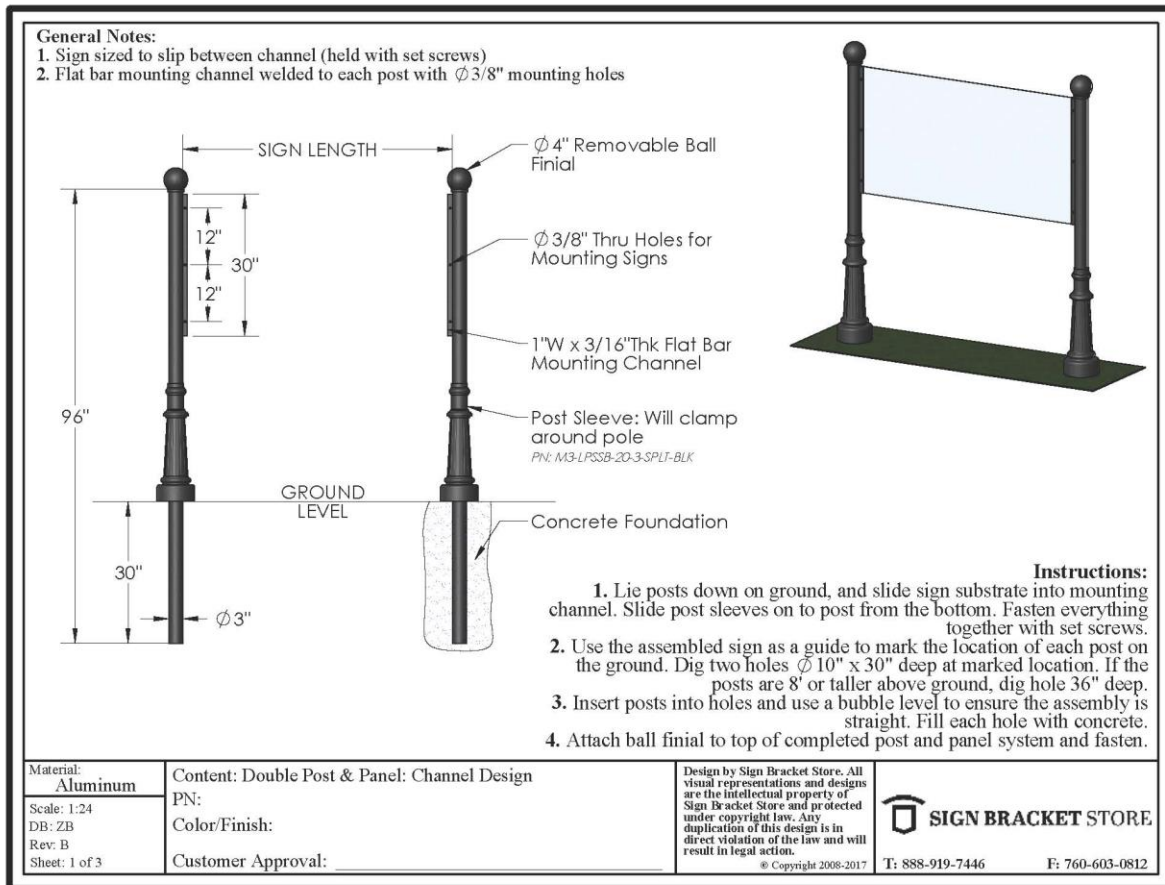
**EACH**

The work under this item shall conform to the relevant provisions of Section 700 of the Standard Specifications and the following:

The work shall include furnishing and installing prefabricated steel signs, as directed and approved by the City Engineer.

**Measurement and Payment**

This work will be paid for at the contract unit price each complete in place which price will be full compensation for furnishing and installing prefabricated steel sign, concrete footing, gravel borrow, and all incidental labor and materials necessary to complete the work.



**ITEM 734**  
**SIGN REMOVED AND RESET**

**EACH**

Work under this section shall be in accordance with the relevant provisions of Sections 700 and 840 of the Standard Specifications and the following:

Work shall include setting sign and/or posts furnished by City. Concrete foundation and sign post anchors shall be installed to the depth directed by the Engineer and shall vary based on sign panel size. Concrete foundation and sign post anchors shall be installed prior to or accompanying construction of final sidewalk cement concrete. Sign posts shall not be installed within tree pits.

**ITEM 751**  
**LOAM BORROW**

**CUBIC YARD**

The work to be done under this item shall conform to the relevant provisions of Section 751 of the Standard Specifications for loam borrow and the following:

Areas left for future plantings shall be excavated to a depth of 18 inches and backfilled with loam borrow. Payment for excavation of future planting areas shall be under Item 120.1 Unclassified Excavation.

**ITEM 765**  
**SEEDING**

**SQUARE YARD**

The work to be done under this Item includes hydroseeding and shall be in accordance with the relevant provisions of Section 765.

**ITEM 854.034**  
**4 INCH TEMPORARY PAVEMENT MARKINGS (REMOVABLE TAPE)**

**FOOT**

Temporary Pavement Markings consist of furnishing, applying, maintaining and removing temporary yellow and white reflectorized pavement markings during construction and shall include temporary crosswalks. Apply Temporary Pavement Markings within 8 hours of paving operations; remove no more than 8 hours prior to permanent striping operations.

**ITEM 999.001**  
**TRAFFIC POLICE**

**ALLOWANCE**

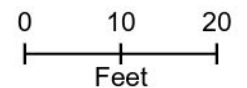
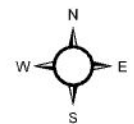
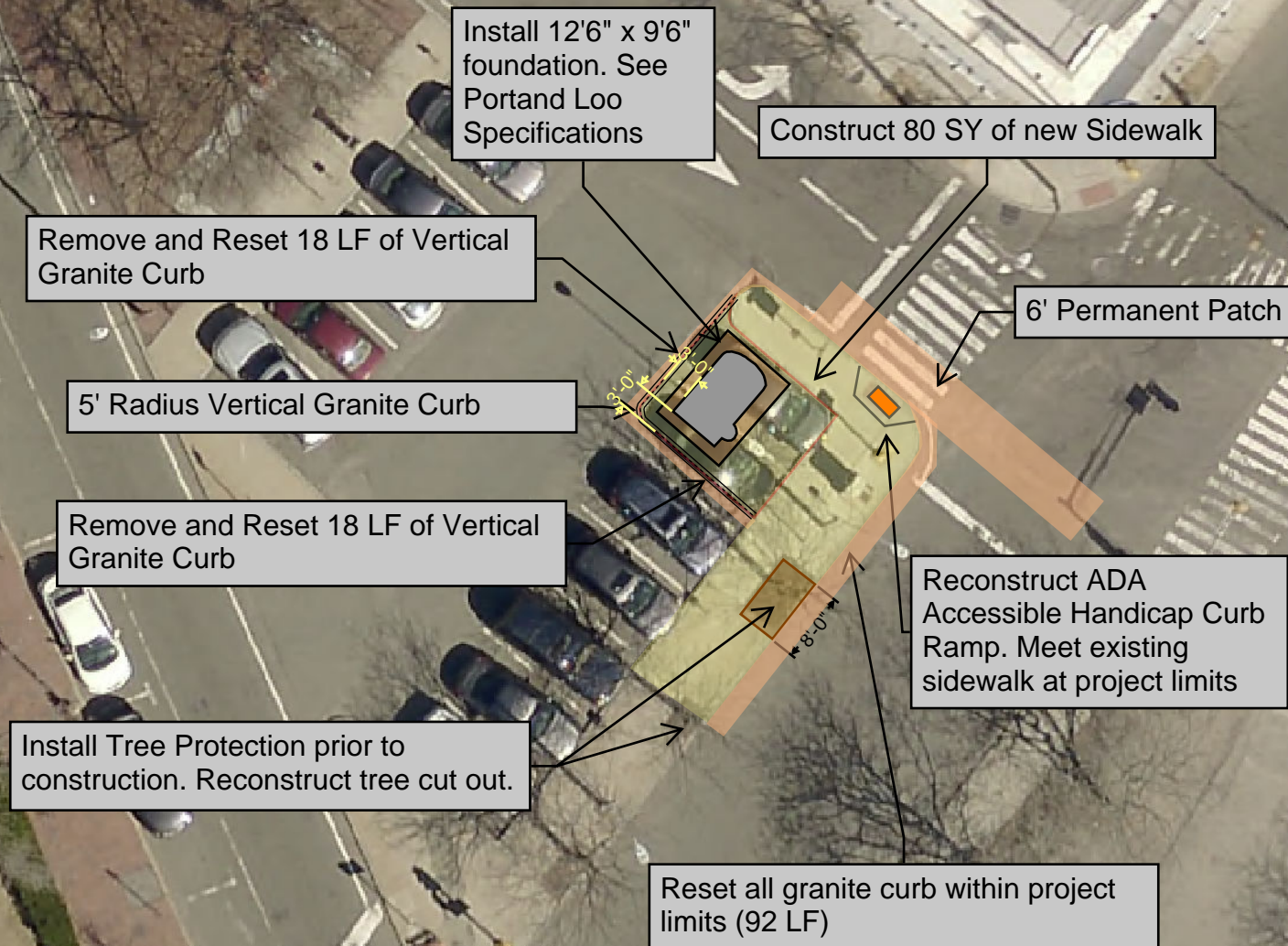
The Contractor shall provide such police officers as the Engineer deems necessary for the direction and control of traffic within the site of the improvement. Such officers shall wear regulation policemen's uniforms. Compensation for the services of said police officers to be paid by the Contractor to a designated municipal official, at a patrolman's rate of pay, subject to all rules and regulations, ordinances or by-laws in effect in the City of Somerville.

The Contractor is required to submit weekly certified copies of payroll, covering such police officers, containing complete payroll information and payment receipts.

The City of Somerville will reimburse the Contractor for payments made for the services of all required traffic officers upon receipt of payment vouchers.

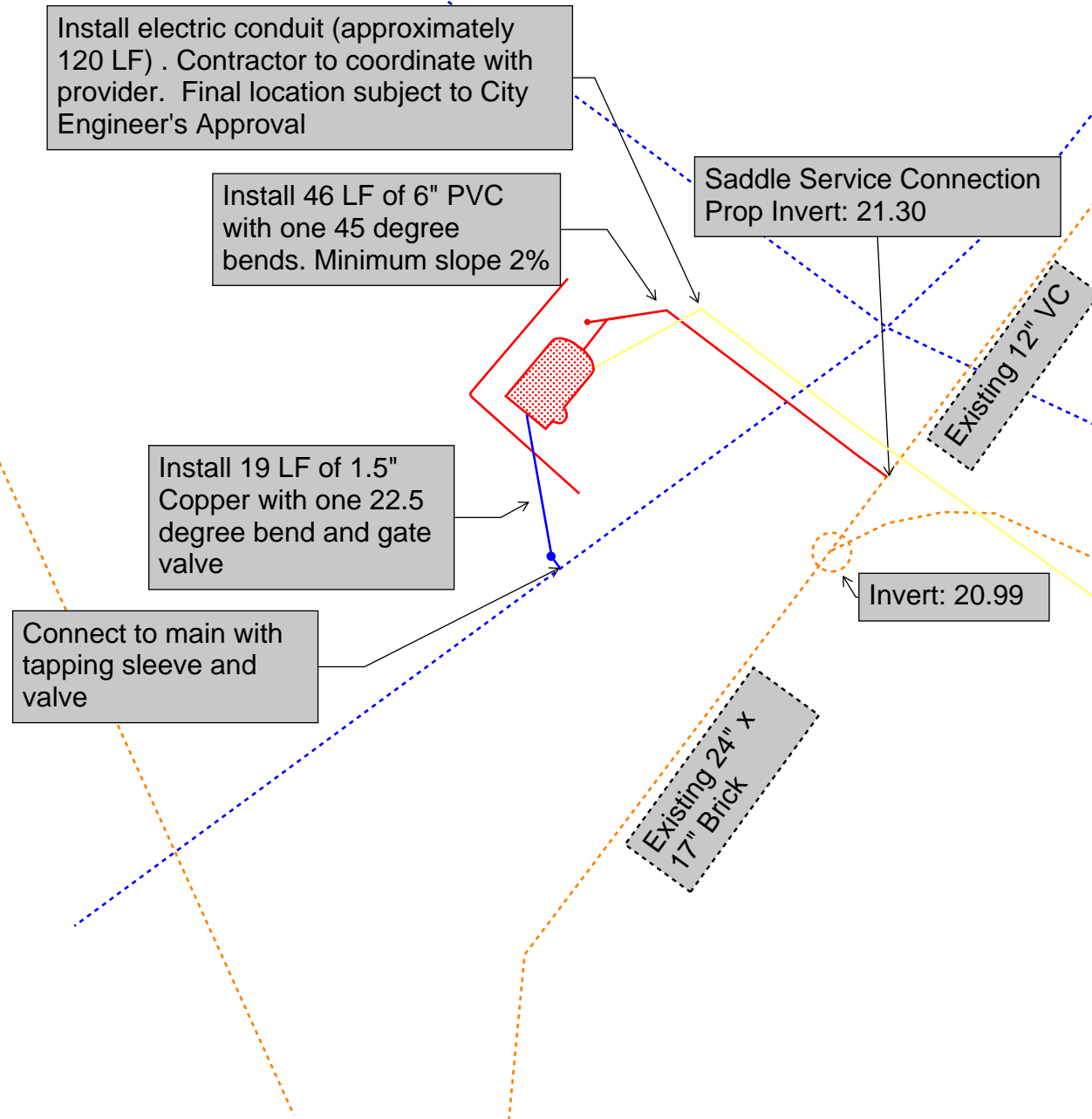
**Parking Lot Opposite  
377 Summer St**

Attachment A:  
Davis Square Layout



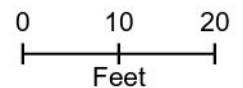
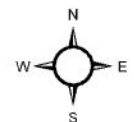
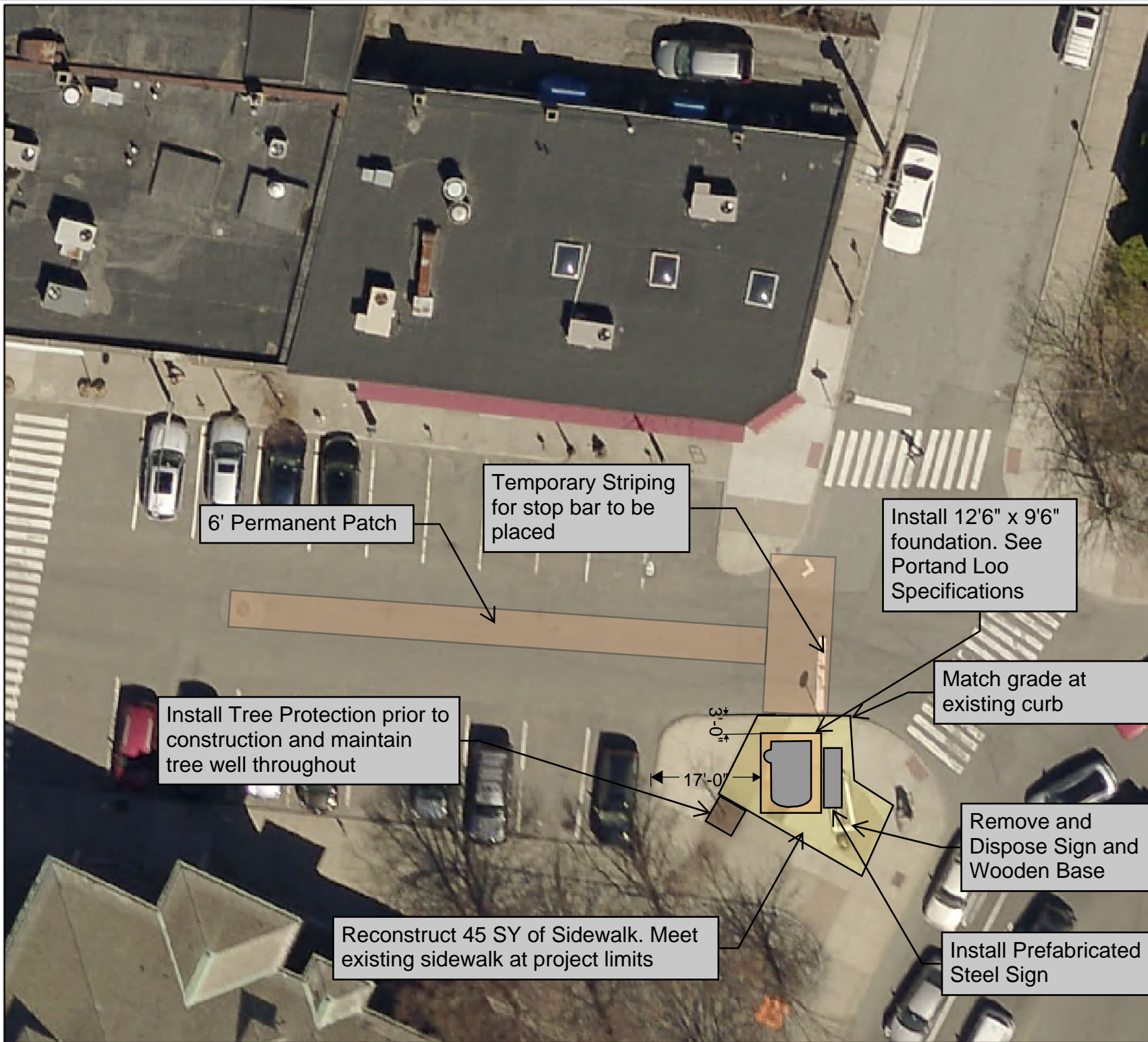
Date: July 6, 2023





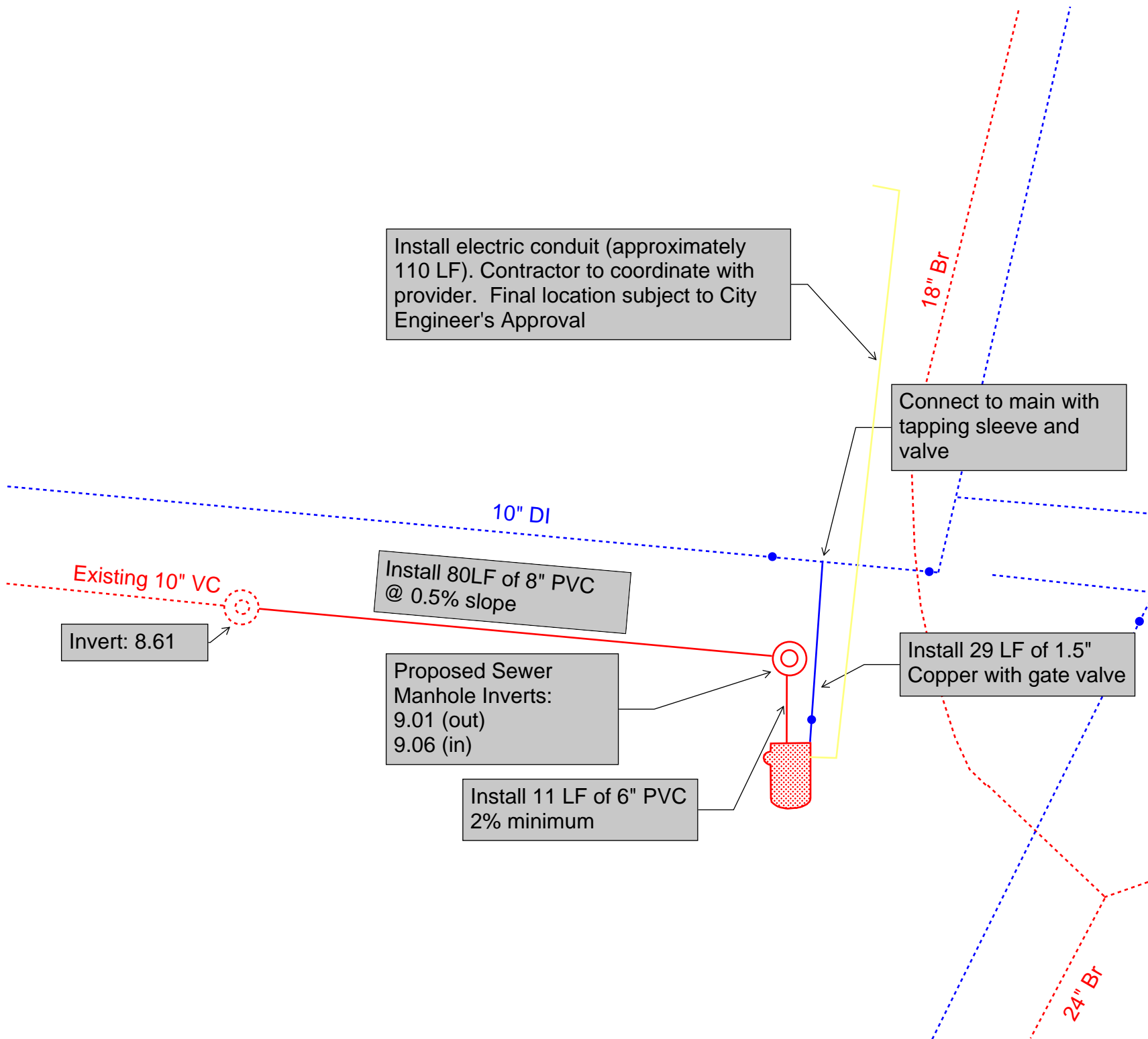
**Sidewalk Area  
Near 92 Union Square**

Attachment C:  
Union Square Layout



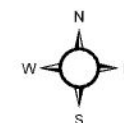
Date: July 6, 2023





**Area Adjacent to  
165 Broadway**

Attachment E:  
165 Broadway Layout



A horizontal number line with tick marks at 0, 10, and 20. The word "Feet" is written below the line.



Date: July 6, 2023

Install Tree Protection prior to construction and maintain tree well throughout

10' Permanent Patch

Install 12'6" x 9'6"  
foundation. See  
Portand Loo  
Specifications

Construct 40 SY of new Sidewalk.  
Meet existing sidewalk at project  
limits

Relocate two benches on site to accommodate Portland Loo

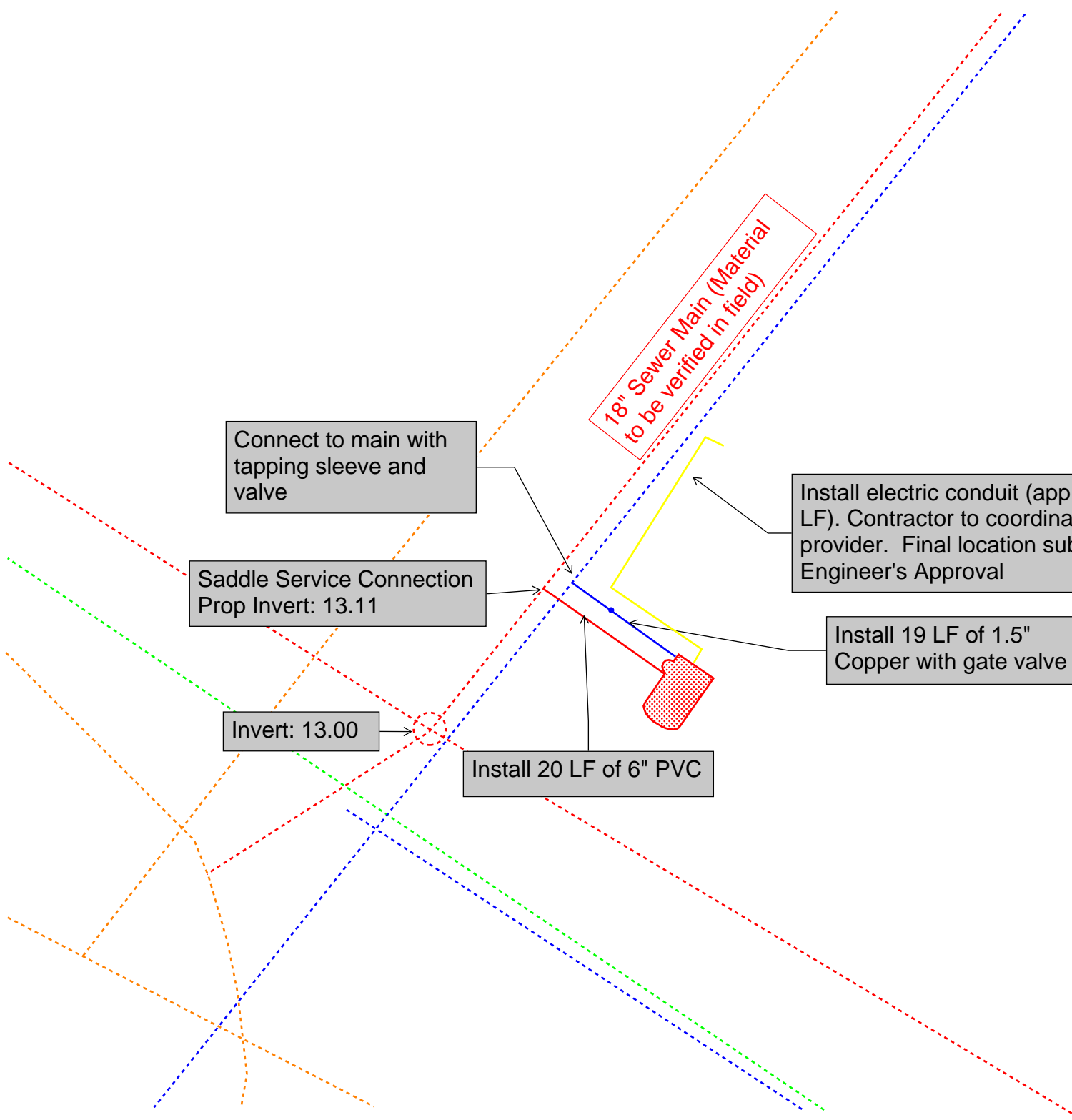
Install Infiltrating Basin at low point of sidewalk installation

Grade sidewalk to basin:  
Min slope: 0.5%  
Max slope: 1.5%

Infiltration Requirements:  
475 SF of new impervious  
30 CF of storage required

Basin (static storage):  
2' radius x 4' deep = 50 CF

$$50 \text{ CF} > 30 \text{ CF}$$



# THE PORTLAND LOO

377 SUMMER ST. SOMMERVILLE, MA 02144  
90 UNION SQUARE SOMMERVILLE, MA 02143  
165 BTOADWAY SOMMERVILLE, MA 02145

## DESIGN INFORMATION

- 9th ED MASSACHUSETTS STATE BUILDING CODE
- LIVE LOAD = 20 PSF
- WIND LOAD:  
Vult = 127 MPH  
Vasd = 98.4 MPH  
Iw = 1.0  
Exposure = C  
Risk Category = II  
Internal Pressure = +/- 0.18
- SEISMIC LOAD:  
Ie = 1.0  
Ss = 0.28  
S1 = 0.07  
Sds = 0.294  
Sd1 = 0.112  
Site Class D  
SDC = D  
Seismic Base Shear = 0.19 kip  
Light Frame (Cold Formed Steel) Wall w/ steel sheets  
Analysis = Equivalent Lateral Force  
R = 7.0  
Cs = 0.042
- SNOW LOAD:  
Pg = 40 psf  
Is = 1.0  
Ct = 1.0  
Ce = 1.0  
Pf = 30 psf
- NET ALLOWABLE SOIL BEARING PRESSURE: 1500 PSF  
FC=4000 PSI
- CONTRACTOR TO VERIFY DESIGN PARAMETERS SHOWN WITH  
ACTUAL SITE CONDITIONS AND ENSURE ACTUAL SITE  
PARAMETERS DO NOT EXCEED DESIGN

## GENERAL NOTES

- WEIGHT : 6,013 lbs
- SQUARE FOOTAGE : 51.5
- ALL STRUCTURAL STEEL TO BE FABRICATED AND ERECTED IN ACCORDANCE WITH AISC MANUAL  
14TH EDITION & A.W.S. ALL PANELS, LOUVERS, AND ROOF TO BE 304 STAINLESS STEEL Fy = 30 ksi
- STRUCTURAL TUBING ASTM 500 GR. B
- ANCHOR BOLTS 1/2" X 5" SIMPSON TITEN HD ANCHORS
- ALL WELDING TO BE DONE BY CERTIFIED WELDERS. WELD FILLER ELECTRODE MATERIAL TO BE 70  
ksi LOW HYDROGEN
- ALL EXPOSED BOLTS AND SCREWS TO BE TAMPER RESISTANT FOR HEX PIN BITS.
- RIVET NUTS TO BE C.F.T. SERIES AND STAINLESS STEEL 302.
- ALL MATERIALS TO BE SAND BLASTED AND POWDER COATED
- ALL STRUCTURES TO BE FABRICATED OFF SITE SHALL BE DONE IN SHOPS OR FABRICATORS  
LICENSED OR APPROVED BY THE BUILDING AND ENGINEERING DIVISION OF THE CITY FOR WHICH  
THE INSTALLATION WILL OCCUR
- NO SPECIAL INSPECTION NEEDED

## SHEET INDEX:

A0.0	COVER SHEET
A1.0	FLOOR PLAN
A2.0	EXTERIOR ELEVATIONS FRONT & RIGHT SIDE
A3.0	EXTERIOR ELEVATIONS FRONT & RIGHT SIDE
A4.0	ROOF LAYOUT
A5.0	INTERIOR SECTION VIEW
A6.0	INTERIOR SECTION VIEWS
S1.0	COLUMN AND BEAM LAYOUT
S2.0	FRONT DOOR
S3.0	FOUNDATION & ANCHOR BOLT LOCATIONS
P1.0	PLUMBING FLOOR PLAN
P2.0	PLUMBING DETAIL
E1.0	ELECTRICAL SCHEMATIC

Digitally signed by Trevor G.  
Wickie  
Date: 2023.12.20 11:07:23-06'00'



**Larson**  
Engineering Inc  
1488 Bond Street, Suite 100 12/20/2023  
Naperville, Illinois 60563-6503  
(P) 630.357.0540 (F) 630.357.0164  
LEI Proj. # 21230893.000

1.	11/14/23	INITIAL ISSUE	AYK	<div>MADDEN FABRICATION</div>	SOMMERVILLE, MA			
2.	12/19/23	REVISED PER REDLINE	AYK		COVER SHEET			
REV	DATE	DESCRIPTION	DRN	APPD	2550 NW 25th Place Portland, OR. 97210 Phone: (503) 226-3968 Fax: (503) 242-2446			
					NAME	DATE	SERIAL NO.	DRW. NO.
					EVAN	08/08/2022		A0.0

BABY CHANGE TABLE  
KOALA KARE KB101

LATERAL SUPPORTS  
SEE S1.0  
TYPICAL COLUMNS

FRONT DOOR COMPLIES  
WITH 2016 CBC 11B  
5# MAXIMUM FORCE

HSS 2 1/2 x 2 1/2  
x 3/16" (BEVEL EDGES 45°)

TYP 3/16"

F.F.E

FB 1/2" SS

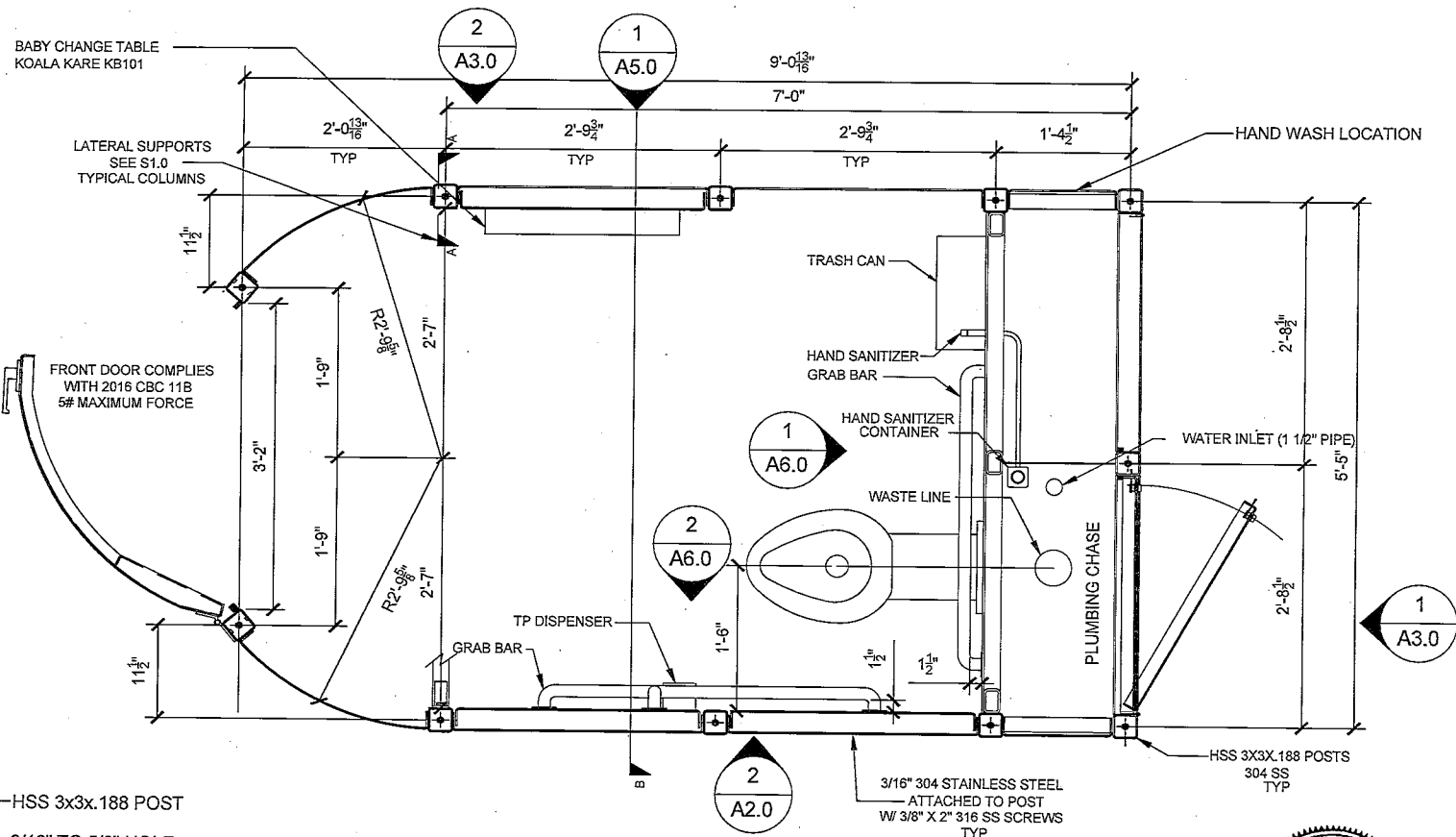
HSS 3x3x.188 POST

9/16" TO 5/8" HOLE  
1/2" x 4" BOLT  
FIELD LOCATE  
1 1/4" PLUS ELEVATION

5/8" HOLE FOR  
1/2" x 5" TITAN  
4" EMBED MIN

### SECTION A-A

Typ anchoring system  
(11) REQ'D



### INTERNAL TOP VIEW AND ANCHOR BOLT LOCATIONS



**Larson**  
Engineering Inc

1488 Bond Street, Suite 100 12/20/2023  
Noperville, Illinois 60563-8503  
(P) 630.357.0540 (F) 630.357.0164  
LEI Proj. # 21230893.000

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2	12/19/23	REVISED PER REDLINE	AYK	
REV	DATE	DESCRIPTION	DRN	APPD

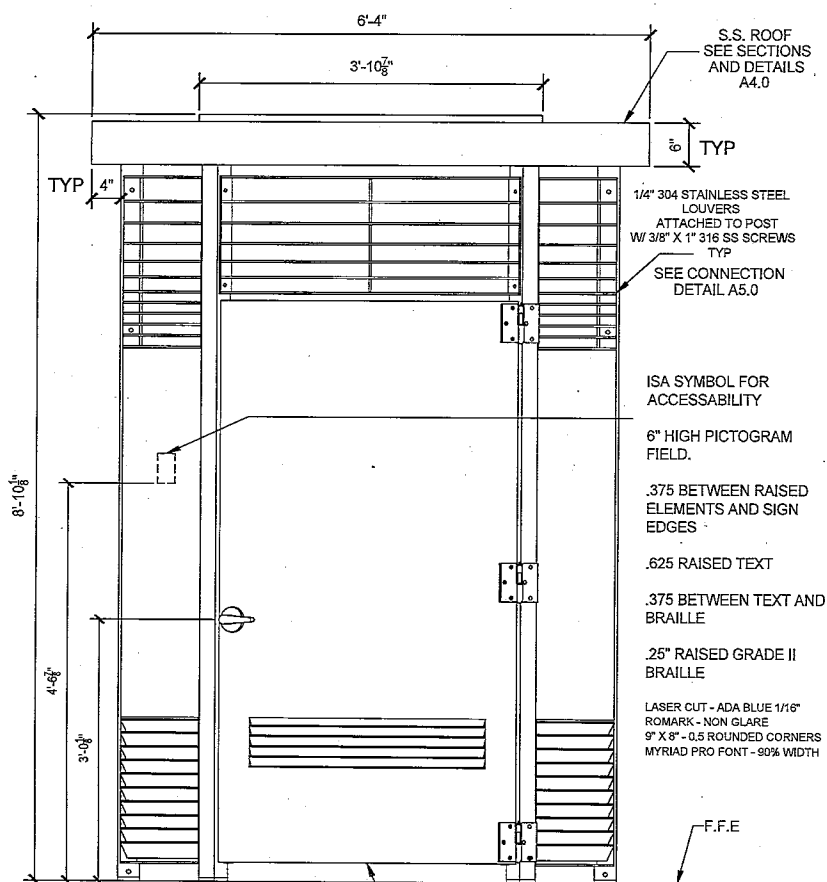
**MADDEN**  
**FABRICATION**

2550 NW 25th Place Portland, OR. 97210  
Phone: (503) 226-3968 Fax: (503) 242-2446

SOMMERVILLE, MA

FLOOR PLAN

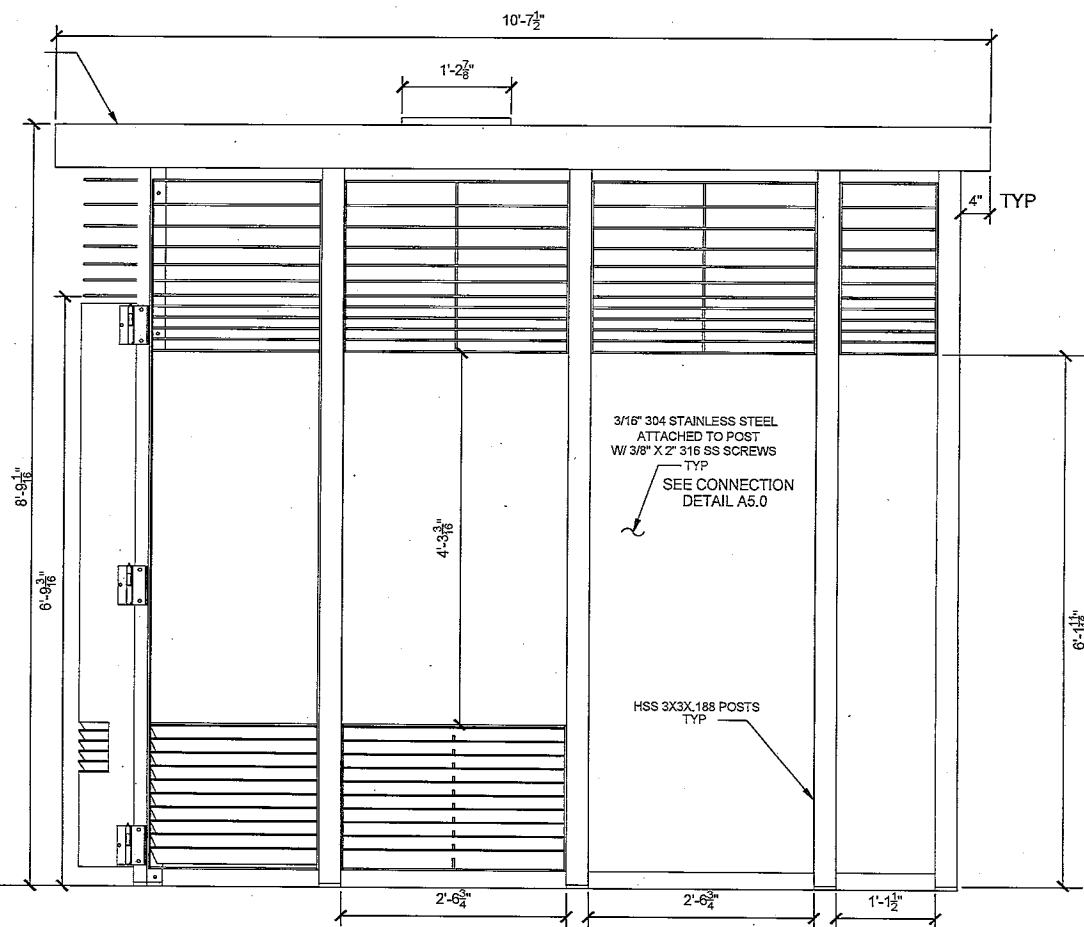
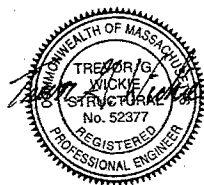
NAME	DATE	SERIAL NO.	DRW. NO.
EVAN	08/08/2022		A1.0



1 FRONT ELEVATION VIEW  
A2.0

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Naperville, Illinois 60563-5503  
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LEI Proj. # 21230893.000



2 RIGHT ELEVATION VIEW  
A2.0

1.	11/14/23	INITIAL ISSUE	AYK
2.	12/19/23	REVISED PER REDLINE	AYK
REV	DATE	DESCRIPTION	DRN

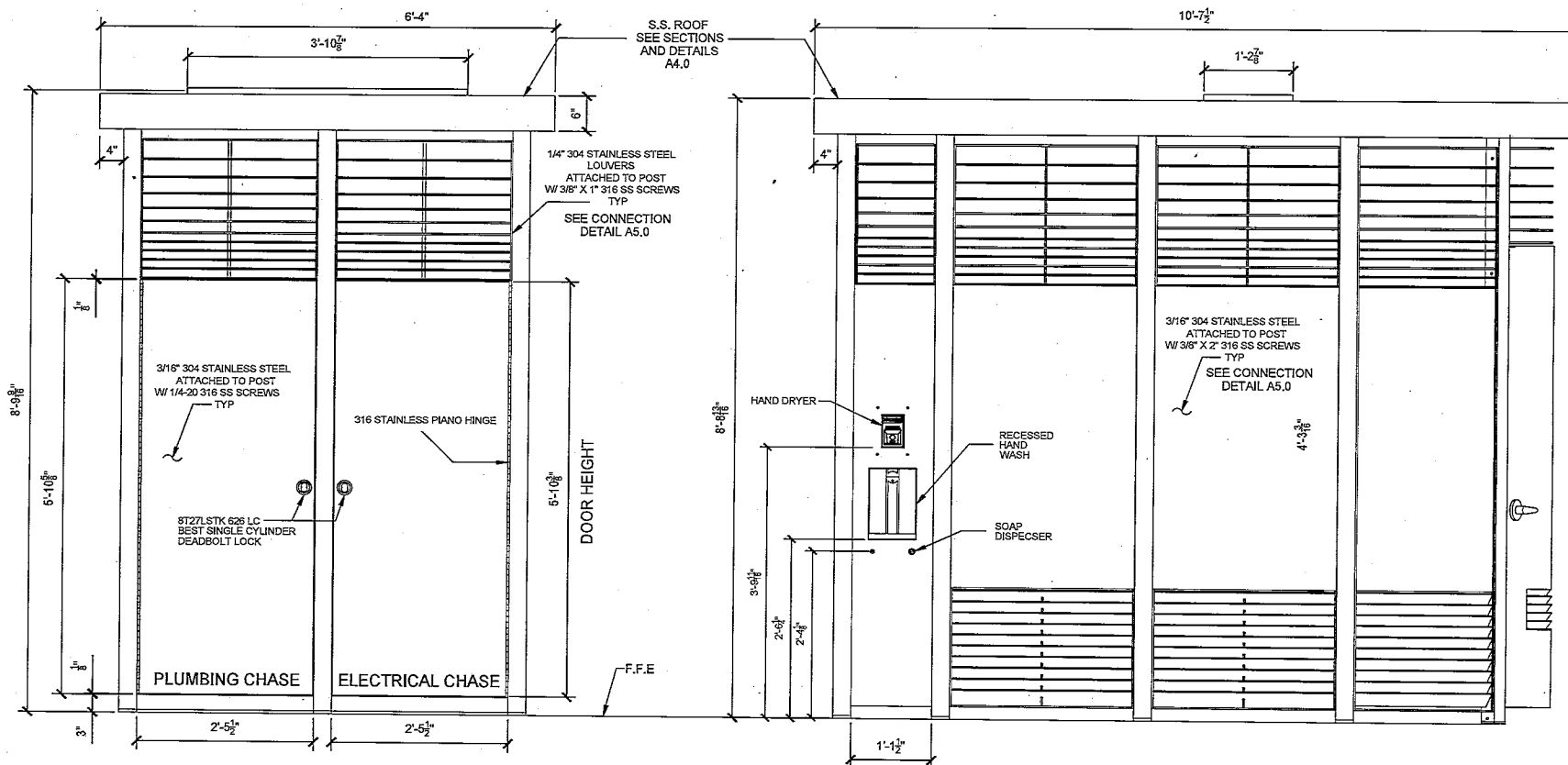
**MADDEN**  
**FABRICATION**

2550 NW 25th Place Portland, OR. 97210  
Phone: (503) 226-3968 Fax: (503) 242-2446

SOMMERVILLE, MA

EXTERIOR ELEVATIONS FRONT & RIGHT SIDES

NAME	DATE	SERIAL NO.	DRW. NO.
EVAN	08/08/2022		A2.0



1 BACK ELEVATION VIEW  
A3.0

2 LEFT ELEVATION VIEW  
A3.0

\*\*\*PLUMBING CHASE GIVES ACCESS TO WATERSEWER CONNECTIONS, PLUMBING MANIFOLD, AND HAND SANITIZER

\*\*\*ELECTRICAL CHASE GIVES ACCESS TO SHARPS DISPOSAL, SOAP DISPENSER AND HAND WASH COMPONENTS



**Larson Engineering Inc.**  
1488 Bond Street, Suite 100 12/20/2023  
Naperville, Illinois 60563-6503  
(P) 630.357.0540 (F) 630.357.0164  
LEI Proj. # 21230893.000



1.	11/14/23	INITIAL ISSUE	AYK	
2.	12/19/23	REVISED PER REDLINE	AYK	
REV	DATE	DESCRIPTION	DRN	APPD

**MADDEN FABRICATION**

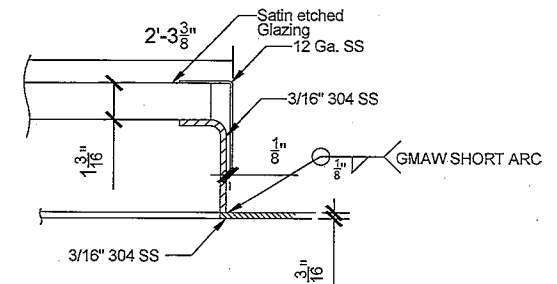
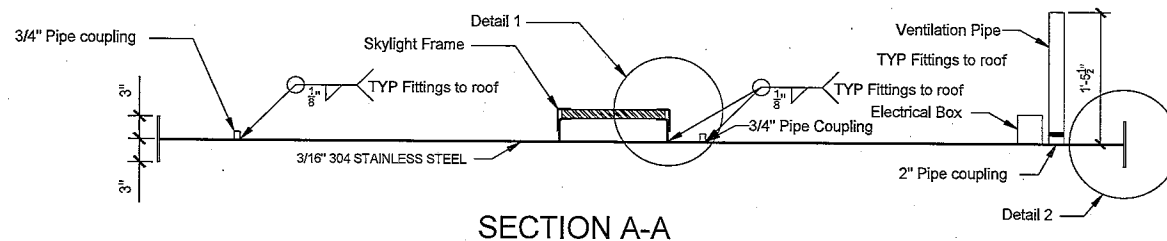
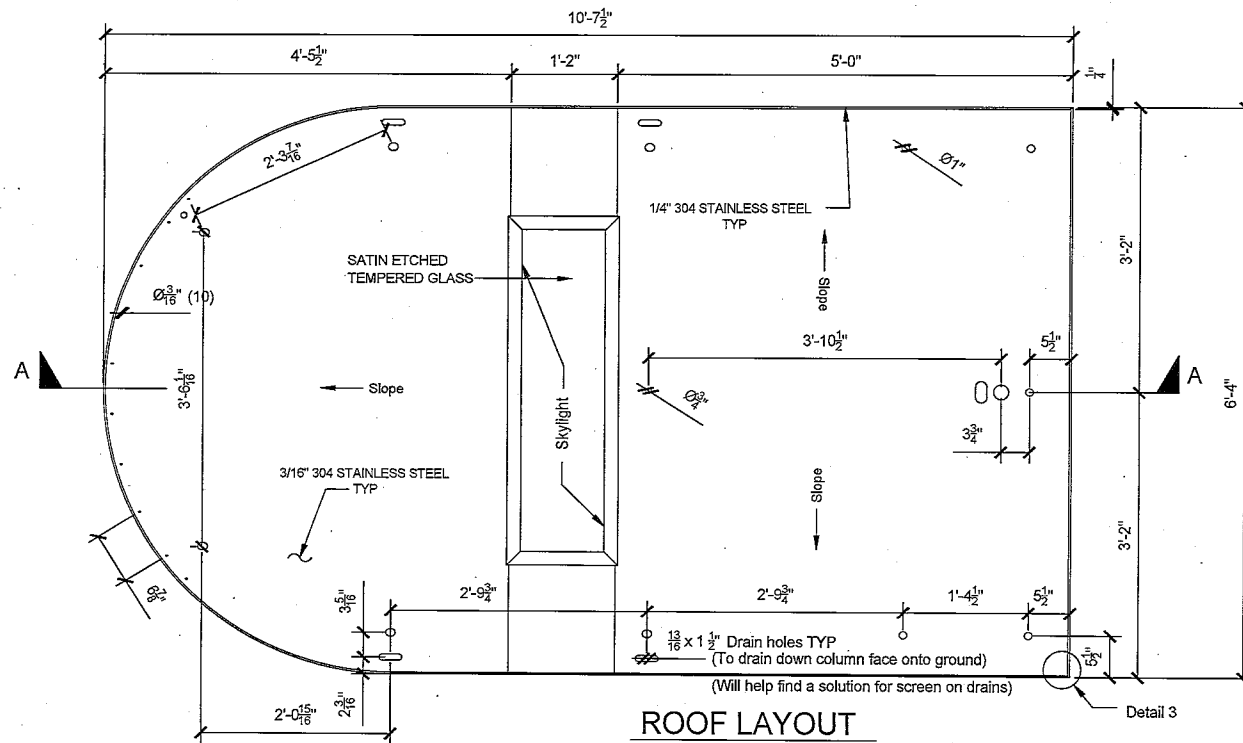
2550 NW 25th Place Portland, OR 97210  
Phone: (503) 226-3968 Fax: (503) 242-2446

SOMMERVILLE, MA

EXTERIOR ELEVATIONS FRONT & RIGHT SIDES

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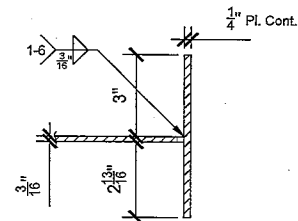




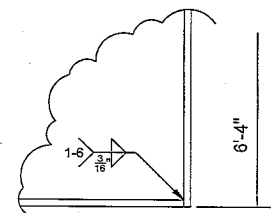
DETAIL 1

**Larson**  
Engineering Inc

1488 Bond Street, Suite 100  
Naperville, Illinois 60563-8503  
(708) 630.357/6540 (708) 630.357/0164  
LEI Proj. # 21230893.000



DETAIL 2



DETAIL 3

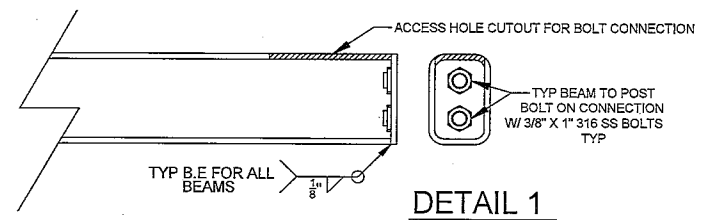
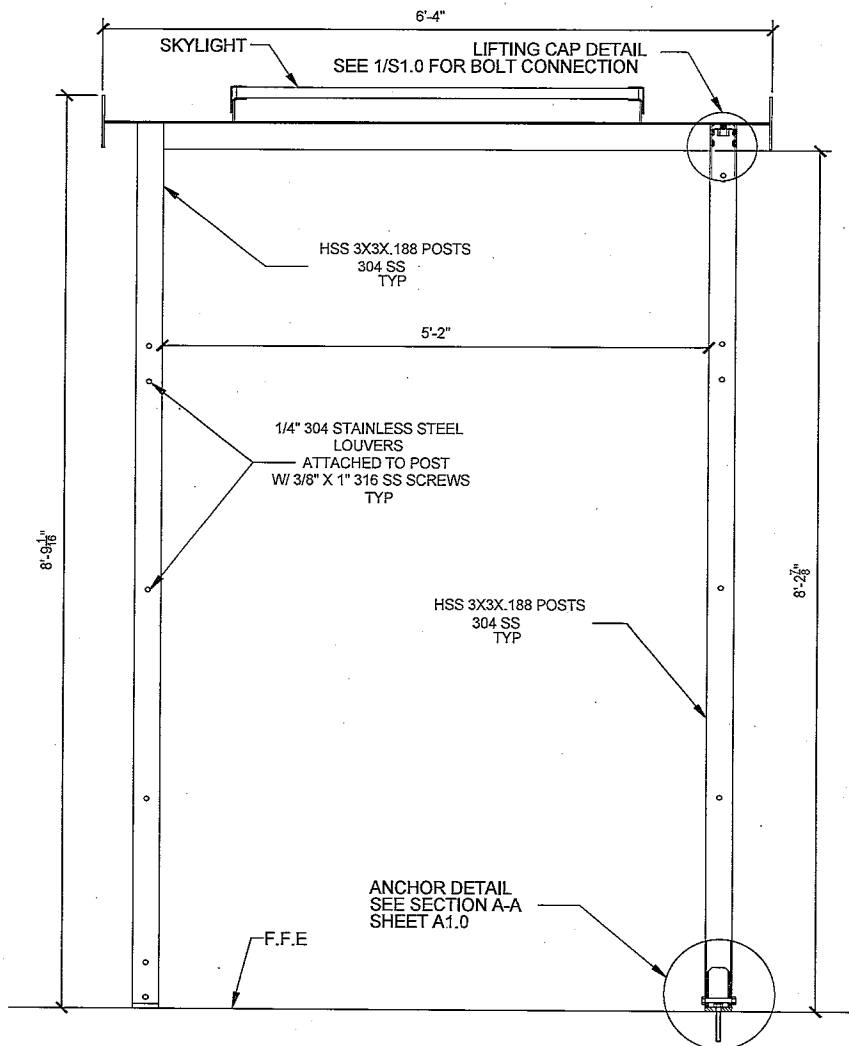
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REV	DATE	DESCRIPTION	DRN	APPD			

**MADDEN FABRICATION**  
2550 NW 25th Place Portland, OR. 97210  
Phone: (503) 226-3968 Fax: (503) 242-2446

**SOMMERVILLE, MA**  
  
**ROOF LAYOUT**  

NAME	DATE	SERIAL NO.	DRW. NO.
EVAN	06/08/2022		A4.0



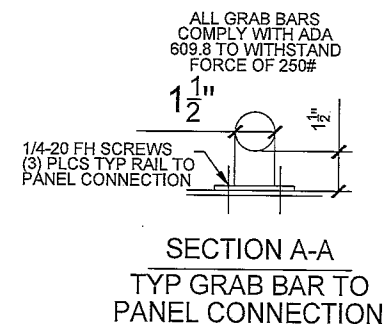
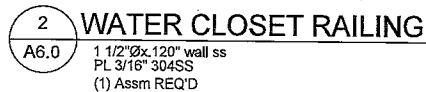
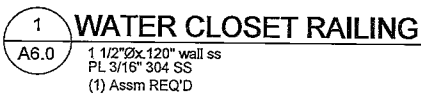


**Larson Engineering Inc**  
 1488 Bond Street, Suite 100 · 12/20/2023  
 Naperville, Illinois 60563-6503  
 (P) 630.557.0540 (F) 630.557.0164  
 LEI Proj. # 21230893.000

1	11/14/23	INITIAL ISSUE	AYK		<b>MADDEN FABRICATION</b>	SOMMERVILLE, MA
2	12/19/23	REVISED PER REDLINE	AYK			
REV	DATE	DESCRIPTION	DRN	APPD	NAME	DATE
					EVAN	08/08/2022
					SERIAL NO.	DRW. NO.
						A5.0

2550 NW 25th Place Portland, OR. 97210  
 Phone: (503) 226-3968 Fax: (503) 242-2446

INTERIOR SECTION VIEW



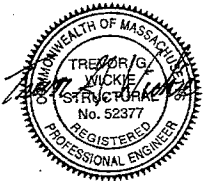
**Larson**  
Engineering Inc  
1488 Bond Street, Suite 100 12/20/2023  
Naperville, Illinois 60563-6503  
(P) 630.357.0540 (F) 630.357.0164  
LEI Proj. # 21230893.000

1.	11/14/23	INITIAL ISSUE	AYK	<div><div>MADDEN</div><div>FABRICATION</div></div>	SOMMERVILLE, MA								
2.	12/19/23	REVISED PER REDLINE	AYK										
REV	DATE	DESCRIPTION	DRN	APPO	INTERIOR SECTION VIEWS								
					<div>2550 NW 25th Place Portland, OR. 97210 Phone: (503) 226-3968 Fax: (503) 242-2466</div> <table><tr><td>NAME</td><td>DATE</td><td>SERIAL NO.</td><td>DRW. NO.</td></tr><tr><td>EVAN</td><td>08/08/2022</td><td></td><td>A6.0</td></tr></table>	NAME	DATE	SERIAL NO.	DRW. NO.	EVAN	08/08/2022		A6.0
NAME	DATE	SERIAL NO.	DRW. NO.										
EVAN	08/08/2022		A6.0										



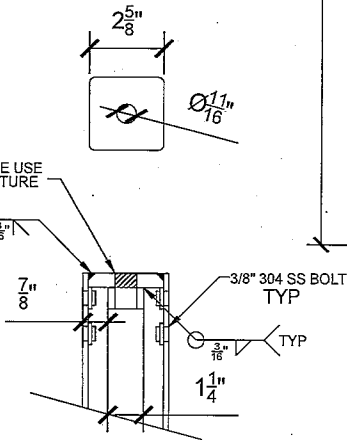
**Larson**  
Engineering Inc.

1488 Bond Street, Suite 100 12/20/2023  
Naperville, Illinois 60563-8503  
(P) 630.357.0540 (F) 630.357.0164  
LEI Proj. # 21230893.000



FOR LIFTING EYE USE  
AND BOLTING OF ROOF TO STRUCTURE  
TYP

SMAW E309L

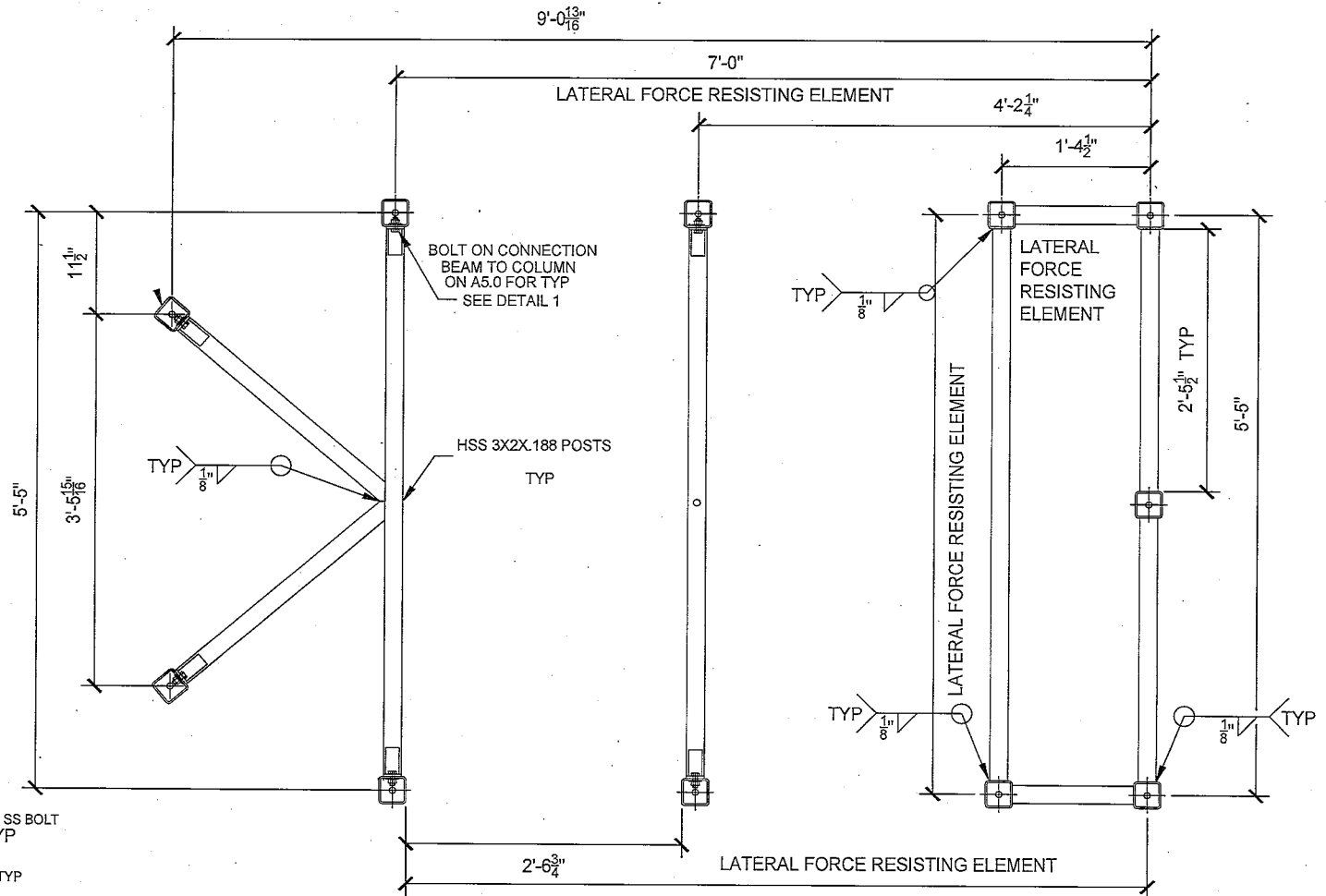


1

S1.0

COLUMN LIFTING CAP

1/2" 304 SS  
TAP FOR 3/4-10 Bolt  
(11) REQ'D

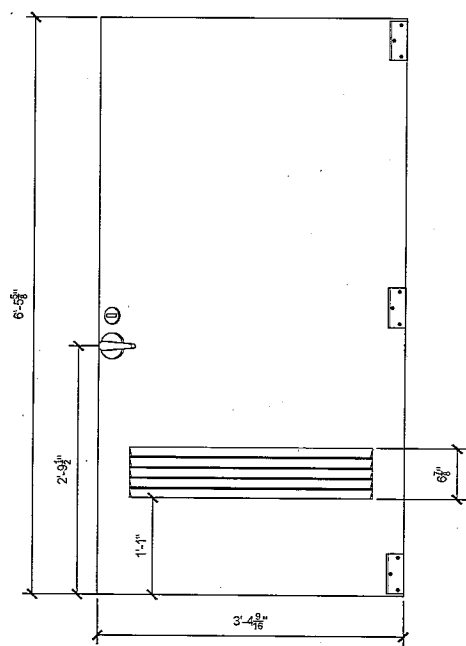
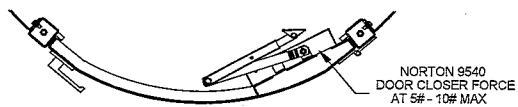


## COLUMN AND BEAM LAYOUT

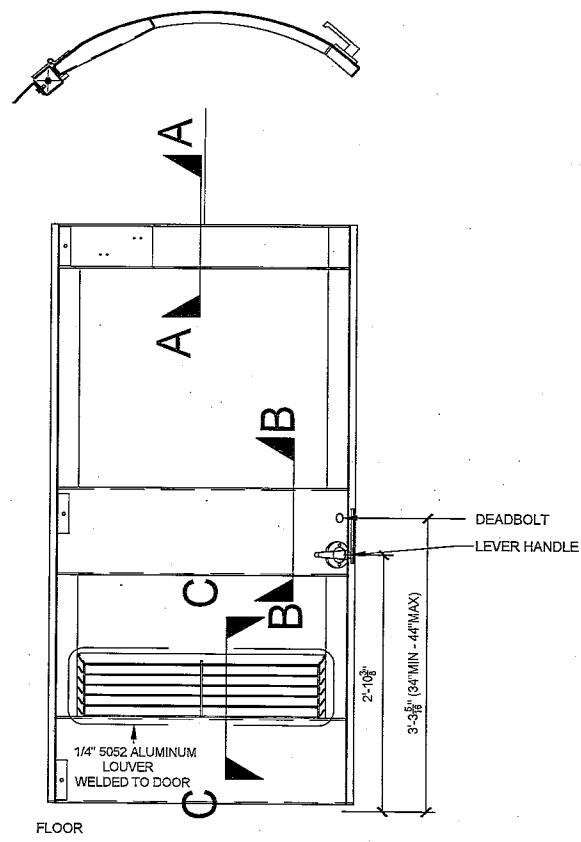
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2	12/19/23	REVISED PER REDLINE	AYK				
REV	DATE	DESCRIPTION	DRN	APPD			

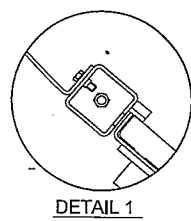
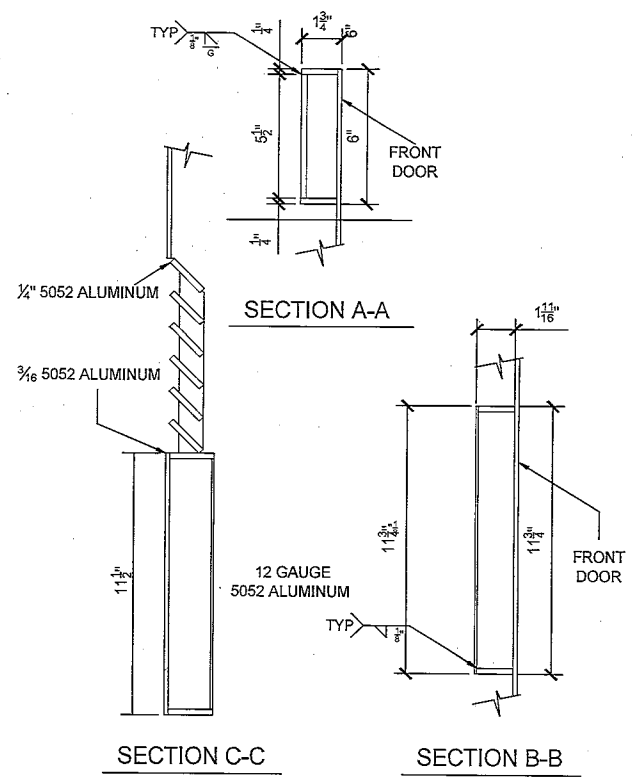
<b>MADDEN FABRICATION</b>				SOMMERVILLE, MA			
2550 NW 25th Place Portland, OR 97210 Phone: (503) 226-3968 Fax: (503) 242-2446				COLUMN & BEAM LAYOUT			
NAME	DATE	SERIAL NO.	DRW. NO.				
EVAN	08/08/2022			S1.0			



**1** LEFT ENTRY DOOR (STANDARD)  
 PL 3/16" 5052 ALUMINUM  
 (1) REQ'D



BACKSIDE (INTERIOR)



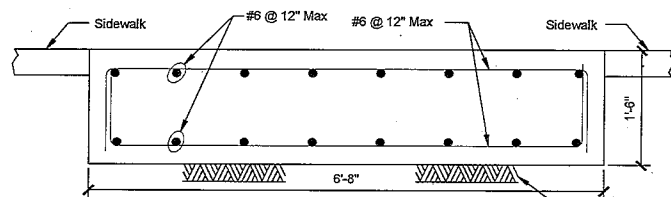
DETAIL 1

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 Engineering Inc

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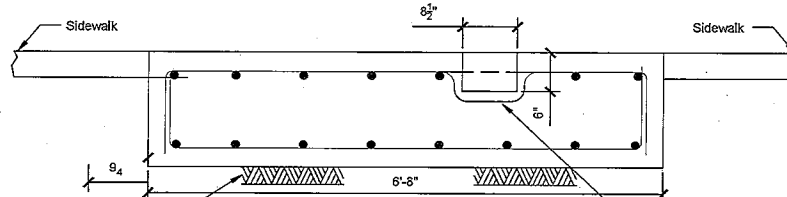


1.	11/14/23	INITIAL ISSUE	AYK		<b>MADDEN FABRICATION</b>	SOMMERVILLE, MA			
2.	12/19/23	REVISED PER REDLINE	AYK			FRONT DOOR			
REV	DATE	DESCRIPTION	DRN	APPD	2550 NW 25th Place Portland, OR 97210 Phone: (503) 236-3968 Fax (503) 242-2446	NAME	DATE	SERIAL NO.	DRW. NO.
						EVAN	08/08/2022		S2.0

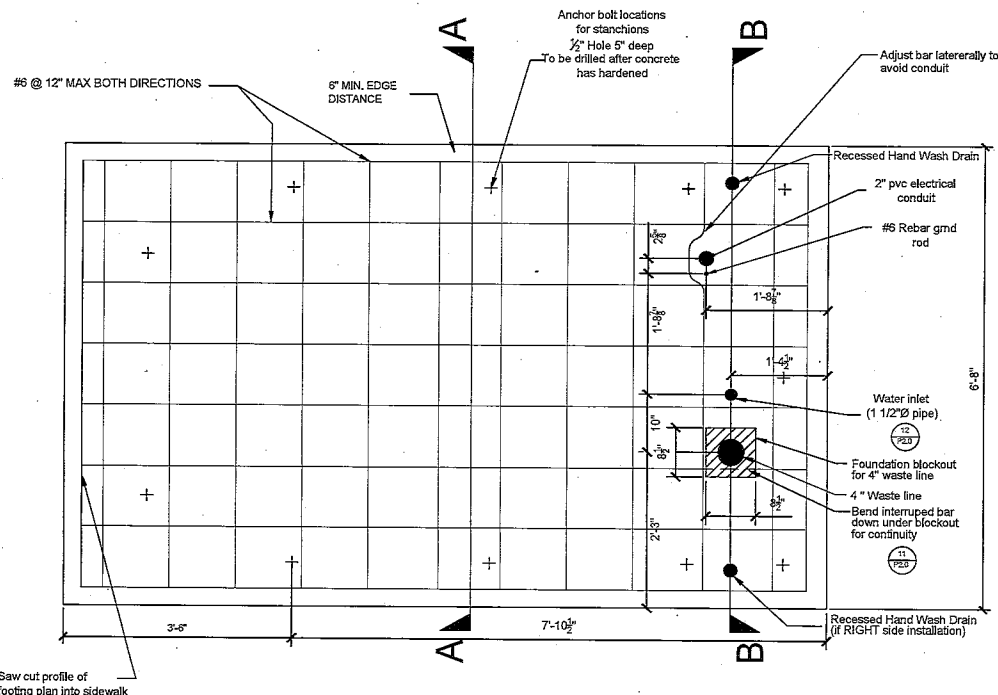


SECTION A-A

EXISTING UNDISTURBED SOIL W/  
NET ALLOWABLE BRG PRESSURE =  
1500 PSI MIN.



SECTION B-B



#### GENERAL NOTES:

1. Provide all materials and perform all work according to the current edition of the Specifications of the Authority Having Jurisdiction.
2. All concrete shall be Structural Class 4000. FC = 4000. F'c = 4000psi
3. All reinforcing steel shall conform to ASTM A706 or A615 Grade 60.
4. Place bars 3 inches clear of the nearest face of concrete unless shown otherwise.
5. Concrete footing may be poured integrally with 4' sidewalk, providing a deep cut tool joint is located around perimeter of footing.
6. Stanchions section "A-A" / A1.0 to be fastened to the concrete using 1/2" dia. Titan HD (4" Embed) The Loos columns to be fastened to stanchions.
7. Location of anchor bolts to be located and drilled using template provided before installation by Madden Fabrication.
8. Refer to civil plans for Grade/Slope and location of floor drains.

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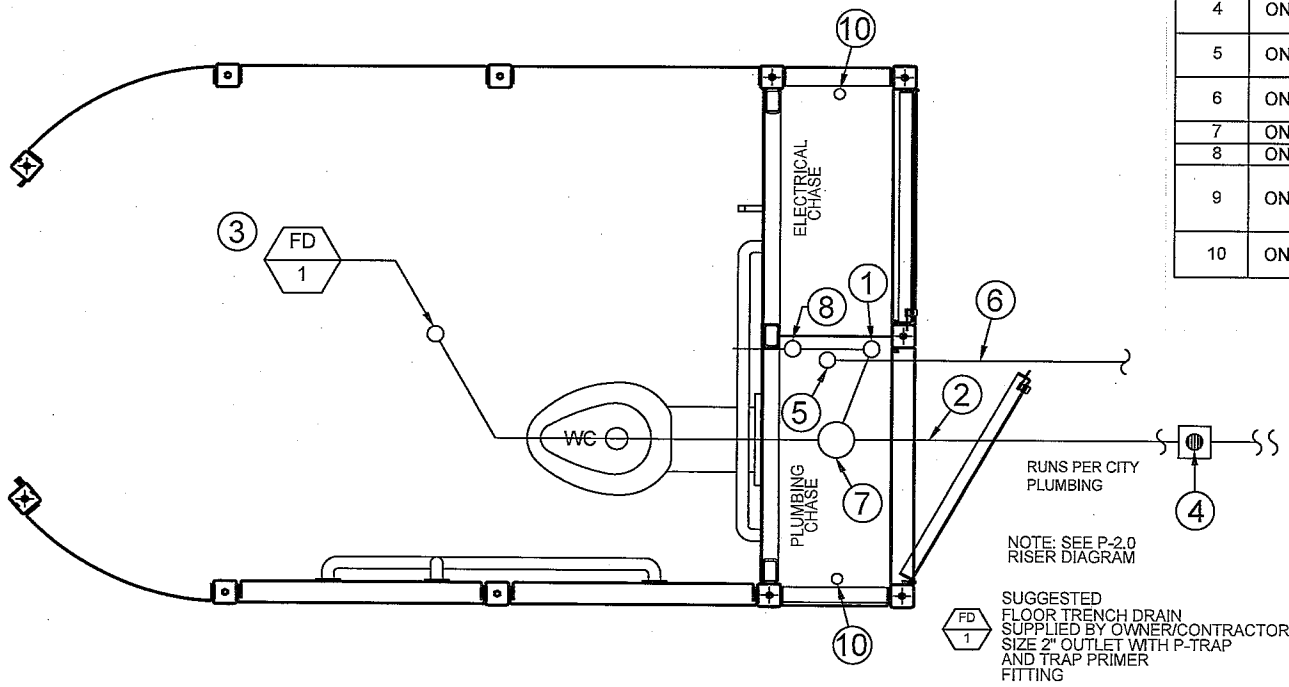
**MADDEN**  
**FABRICATION**

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Phone: (503) 226-3968 Fax (503) 242-2446

SOMMERVILLE, MA

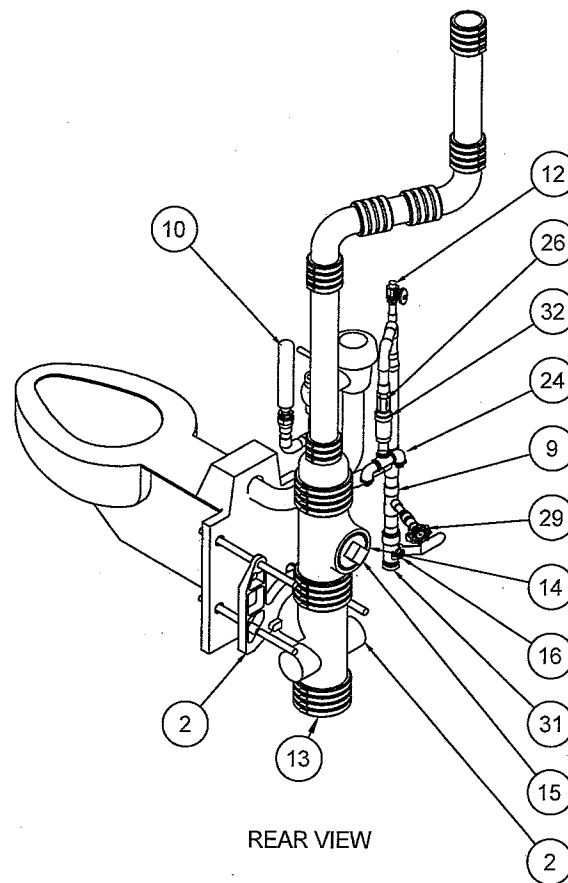
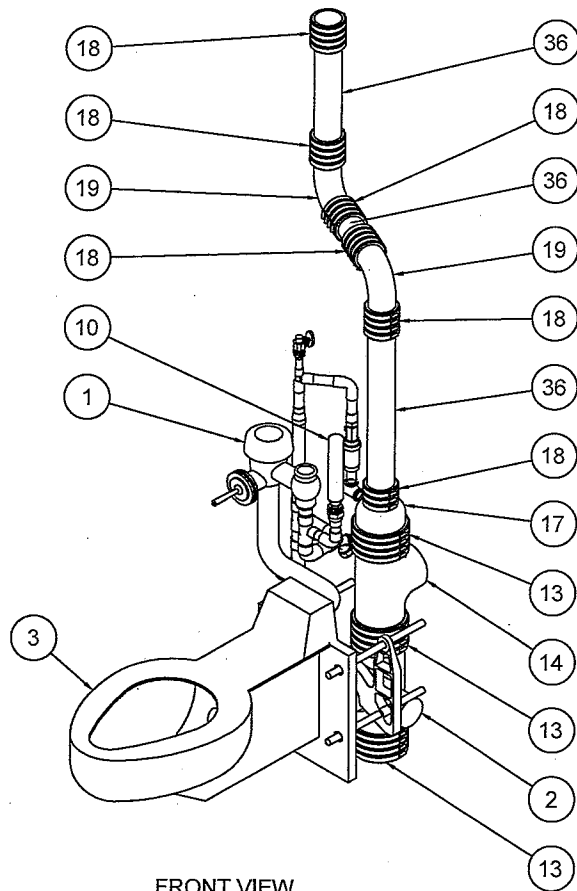
FOUNDATION & ANCHOR BOLT LOCATIONS

NAME	DATE	SERIAL NO.	DRW. NO.
EVAN	08/08/2022		S3.0



BILL OF MATERIAL			
ITEM	QTY	DESCRIPTION	MFG.
1	ONE	2" VENT PIPE TUBE TO ROOF	VARIOUS
2	ONE	LINE TO P.O.C.	VARIOUS
3	ONE	ROUTE CW SUPPLY TO FLOOR DRAIN P-TRAP FROM TRAP PRIMING LOCATED IN PLUMBING CHASE	JAY R. SMITH
4	ONE	4" GRADE CLEAN-OUT (QTY & LOCATION PER LOCAL CODE)	VARIOUS
5	ONE	WATER INLET 1-1/2" C.W. SUPPLY SHOWN ON SHEET 7	VARIOUS
6	ONE	1-1/2" C.W. SUPPLY TO SOV SHOWN ON SHEET 7	VARIOUS
7	ONE	4" SEWER LINE CARRIER SHOWN ON P2.0	VARIOUS
8	ONE	TRAP PRIMER VALVE (PER LOCAL CODE)	PRIME-RIGHT
9	ONE	WASH BASIN FLOOR DRAIN P-TRAP FROM TRAP PRIMING LOCATED IN PLUMBING CHASE	VARIOUS
10	ONE	2" SEWER DRAWIN FOR RECESSED HAND WASH	VARIOUS

1.	11/14/23	INITIAL ISSUE	AYK	<div>MADDEN FABRICATION</div> <div>2550 NW 25th Place Portland, OR. 97210 Phone: (503) 226-3968 Fax (503) 242-2446</div>	SOMMERVILLE, MA			
2.	12/19/23	REVISED PER REDLINE	AYK		PLUMBING DETAIL			
REV	DATE	DESCRIPTION	DRN	APP'D	NAME	DATE	SERIAL NO.	DRW. NO.
					EVAN	08/08/2022		P1.0



## BILL OF MATERIAL

ITEM NO.	QTY.	MANUFACTURER NO	DESCRIPTION
1	1	ROYAL 143-1.28	SLOAN - ROYAL 143 FLUSHOMETER, 1.28 GPF, 3-3/4 L, BRASS FINISH
2	1	JR SMITH 0440Y	440 Y W 8" NIPPLE CARRIER - JR SMITH
3	1	2105-W-1-CN-HS	DURA-WARE TOILET W SEAT, 1 1/2" SS 304 CL.
4	2	VIEGA 77022	3/4" ELBOW 90 DEG
5	2	VIEGA 79245	1" MALE ADAPTER
6	2	VIEGA 77027	1" ELBOW 90 DEG
7	1	VIEGA 79315	3/4 FEMALE ADAPTER
8	1	VIEGA 77412	1" TEE
9	1	VIEGA 77432	1" X 1/2" TEE
10	1	PPP SC-750B	WATER HAMMER ARRESTOR 3/4 NPT MALE
11	1	VIEGA 77437	1" X 3/4" TEE
12	1	BRASSCRAFT OR12X-C	1/2" X 3/8" STRAIGHT STOP VALVE
13	3	ANACO 2010	4" NO-HUB RUBBER COUPLING
14	1	AB&I 00190	4" CAST IRON TEE LOW-PRESSURE
15	1	PASCO 1851	4" BRASS PLUG
16	1	UPBA475B-1	1" BALL VALVE
17	1	AB&I 02142	4" X 2" NO-HUB REDUCER
18	6	ANACO 2006	2" NO-HUB RUBBER COUPLING
19	2	AB&I 00190	2" NO-HUB 90 ELBOW CAST IRON
20	2	VIEGA 79215	1/2" MALE ADAPTER
21	1	VIEGA 77417	COPPER TEE 3/4" X 3/4" X 1/2"
22	1	VIEGA 78152	1" X 3/4" REDUCER
23	1	LEGEND 310-103NL	1/2" THREADED BRASS TEE
24	2	LEGEND 310-043 NL	1/2" THREADED BRASS STREET 90 ELBOW
25	1	4568K175 OR EQUIVALENT	1/2" X 3" THREADED BRASS PIPE NIPPLE
26	1	BRASSCRAFT DR583X-R	1/2" SCREWDRIVER STOP
27	1	VIEGA 79310	3/4 X 1/2 FPT" FEMALE FITTING
28	1	PASCO 2152	3/4" PLASTIC CAPS
29	1	LEGEND 107-154NL	1/2" BOILER DRAIN
30	2	LEGEND 310-183 NL	1/2" BRASS PLUG
31	1	LASCO 450-010	1" PVC PLUG
32	1	PPP P2-500	TRAP PRIMER
33	7	5175K126 OR EQUIVALENT	TUBING, TYPE L, 1 TUBE SIZE, COPPER
34	5	5175K125 OR EQUIVALENT	TUBING, TYPE L, 3/4 TUBE SIZE, COPPER
35	2	5175K122 OR EQUIVALENT	TUBING, TYPE K, 1/2 TUBE SIZE, COPPER
36	3	1910N12 OR EQUIVALENT	2" SCH-40 NO-HUB PIPE CAST IRON

1	11/14/23	INITIAL ISSUE	AYK	
2	12/19/23	REVISED PER REDLINE	AYK	
REV	DATE	DESCRIPTION	DRN	APPD

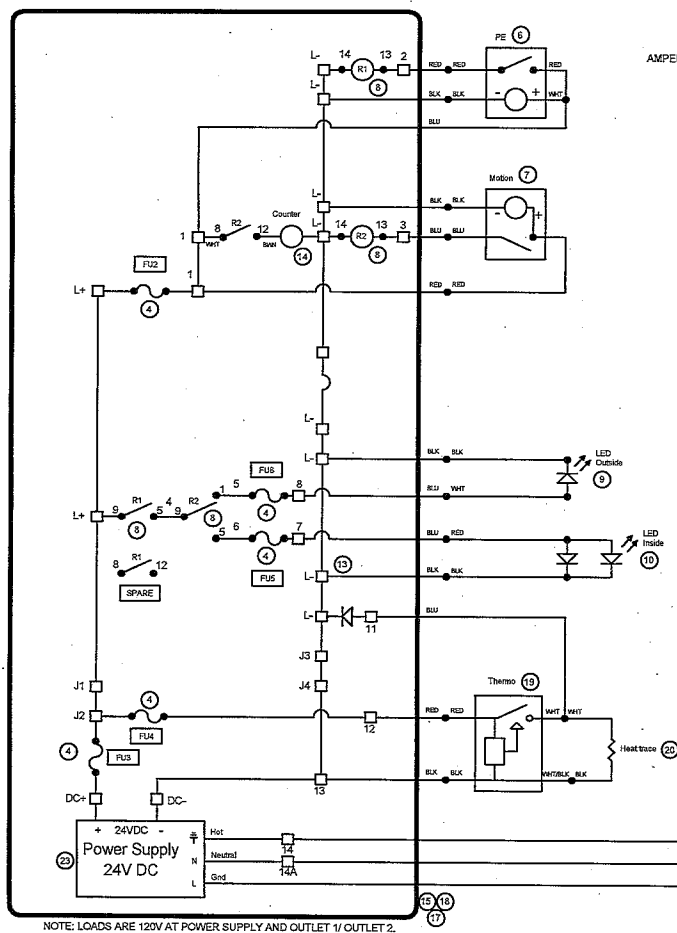
**MADDEN  
FABRICATION**

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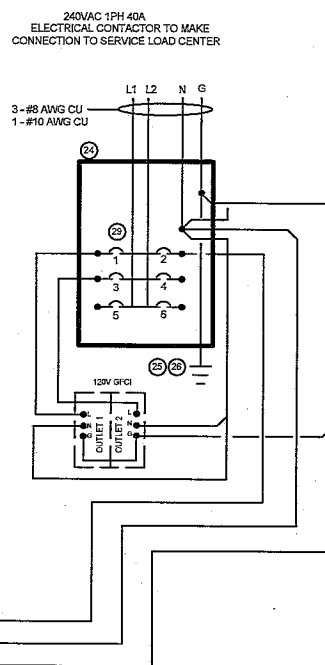
SOMMERVILLE, MA

PLUMBING DETAIL

NAME	DATE	SERIAL NO.	DRW. NO.
EVAN	08/08/2022		P2.0



PANEL CAN BE SUPPLIED WITH 240V 1PH OR 208V 1PH  
AMPERAGE OF SUPPLY DEPENDS ON CONNECTED OPTIONS/LOADS



NAME	DATE	SERIAL NO.	DRW. NO.
EVAN	08/08/2022		E10



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**Larson**

**Sommerville Loo**  
Sommerville, MA

**Structural Calculations**

Book 1 of 1  
Calculation Release #1

Prepared for  
Madden Fabrication  
Portland, Oregon

Digitally signed by Trevor G. Wickie  
Date: 2023.12.20 11:10:16-06'00'



Larson Engineering, Inc.  
Naperville, Illinois  
Project Number 21230893.000

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## **Portland Loo - Seatac** **Seatac, WA**

	<b>Sheet No.</b>
Design Criteria	101 – 102
Load Determination	201 – 209
Calculations	301 – 339

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**Larson**

## **Design Criteria**



**Larson**

## **Design Criteria**

### **Project Information:**

**Project:** Sommerville Loo

**Project Location:** Sommerville, MA

**Project Number:** 21230893.000

### **Load Criteria**

1. Structural calculations for Madden Fabrication prototype drawings dated 11/14/2023.
2. Structural Loads per 9th Ed Massachusetts State Building Code

### **Structural Steel**

1. Square and rectangular steel tubes shall meet the requirements of ASTM A-500, Grade B, ( $F_y = 46$  ksi,  $F_u = 58$  ksi)
2. Steel members are designed per the “Manual of Steel Construction, Allowable Stress Design”, Fifteenth Edition

### **Stainless Steel**

1. Stainless steel alloy designation for plates, all shapes and bars shall be 304 or 316 as shown in drawings and shall meet the requirements of ASTM A-276 ( $F_y = 30$  ksi,  $F_u = 75$  ksi).
2. Structural stainless steel members are designed per AISC Design Guide 27, “Structural Stainless Steel.”

### **Concrete**

1. Cast-in-place concrete strength is assumed to be  $f'_c = 4,000$  psi, normal weight.



# Larson

## **Fasteners, Welds & Anchors**

1. Fasteners exposed to weather shall be stainless steel, alloy groups 1, 2, OR 3 (300 Series Only,  $F_y = 30$  ksi,  $F_u = 75$  ksi).
2. Stainless Steel welding electrode to be minimum E70XX low hydrogen for Grade 50 steel and E308-XX for A304 & A316 stainless steel.
3. All welding shall be by certified welders and shall conform to the latest “Structural Welding Code”, AWS D1.1 and meet AISC minimum requirements for weld size.
4. Threaded concrete bolts shall be Simpson Titen HD anchors having diameter and embedment as called for in the calculations. Install per manufacturer’s recommendations.
5. Substitution requests for alternate products must be approved in writing by the engineer prior to use. Contractor shall provide product/technical information demonstrating that the substituted product is capable of achieving the performance values of the specified product including an icc-es report showing compliance with the relevant building code, seismic use, load resistance, installation category, in-service temperature, installation temperature, etc.

## **Disclaimers**

1. This calculation package is for the final design and installed structural performance of the prefabricated building system. Larson Engineering is not responsible for manufacturing, the installation process, plumbing, electrical, or mechanical design or performance.
2. The following calculation package represents Larson Engineering’s interpretation of the design intent of the shop drawings. Larson Engineering is not responsible for verification of dimensions, material take-offs, installation and coordination with other building trades. If as built conditions differ from the conditions shown in this calculation package, Madden Fabrication must bring these differences to the attention of Larson Engineering so that the as built conditions can be structurally verified.

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# **Load Determination**



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phone: 630-357-0504

JOB TITLE Portland Loo -Somerville

JOB NO. 21230893.000

SHEET NO. \_\_\_\_\_

CALCULATED BY SRS

DATE 11/29/23

CHECKED BY \_\_\_\_\_

DATE \_\_\_\_\_

CS15 Ver 2016.01.10

[www.struware.com](http://www.struware.com)

## STRUCTURAL CALCULATIONS

FOR

**Portland Loo -Somerville**

Sommerville, MA

**Larson Engineering, Inc.**

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Naperville, IL 60563

phone: 630-357-0504

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www.struware.com

**Code Search****Code:** International Building Code 2015**Occupancy:**

Occupancy Group = B Business

**Risk Category & Importance Factors:**

Risk Category = I

Wind factor = 1.00

Snow factor = 1.00

Seismic factor = 1.00

**Type of Construction:**

Fire Rating:

Roof = 0.0 hr

Floor = 0.0 hr

**Building Geometry:**Roof angle ( $\theta$ ) 0.00 / 12 0.0 deg

Building length (L) 10.6 ft

Least width (B) 6.3 ft

Mean Roof Ht (h) 8.8 ft

Parapet ht above grd 8.8 ft

Minimum parapet ht 0.0 ft

**Live Loads:****Roof** 0 to 200 sf: 20 psf

200 to 600 sf: 24 - 0.02Area, but not less than 12 psf

over 600 sf: 12 psf

**Floor:**

Typical Floor 0 psf

Partitions N/A



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DATE

**Wind Loads :**

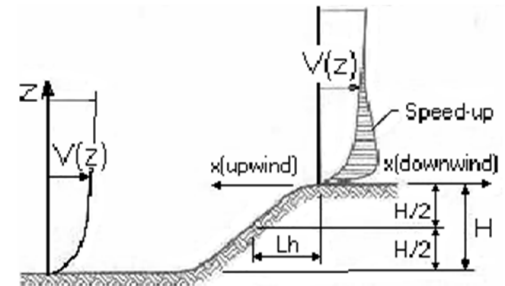
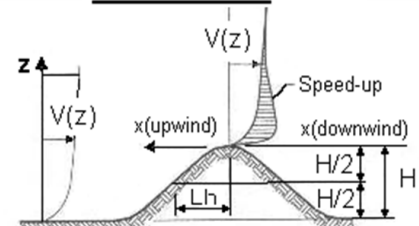
ASCE 7- 10

Ultimate Wind Speed	127 mph
Nominal Wind Speed	98.4 mph
Risk Category	I
Exposure Category	C
Enclosure Classif.	Enclosed Building
Internal pressure	+/-0.18
Directionality (Kd)	0.85
Kh case 1	0.849
Kh case 2	0.849
Type of roof	Monoslope

**Topographic Factor (Kzt)**

Topography	Flat
Hill Height (H)	0.0 ft
Half Hill Length (Lh)	0.0 ft
Actual H/Lh =	0.00
Use H/Lh =	0.00
Modified Lh =	0.0 ft
From top of crest: x =	0.0 ft
Bldg up/down wind?	downwind
H/Lh= 0.00	K <sub>1</sub> = 0.000
x/Lh = 0.00	K <sub>2</sub> = 0.000
z/Lh = 0.00	K <sub>3</sub> = 1.000
At Mean Roof Ht:	
$K_{zt} = (1 + K_1 K_2 K_3)^2 = 1.00$	

H < 15ft; exp C  
 $\therefore K_{zt} = 1.0$

**ESCARPMENT****2D RIDGE or 3D AXISYMMETRICAL HILL****Gust Effect Factor**

h =	8.8 ft
B =	6.3 ft
/z (0.6h) =	15.0 ft

Flexible structure if natural frequency &lt; 1 Hz (T &gt; 1 second).

However, if building h/B &lt; 4 then probably rigid structure (rule of thumb).

h/B = 1.39 Therefore, probably rigid structure

**G = 0.85** Using rigid structure default**Rigid Structure**

$\bar{e}$ =	0.20
$l$ =	500 ft
$Z_{min}$ =	15 ft
c =	0.20
$g_Q, g_v$ =	3.4
$L_z$ =	427.1 ft
Q =	0.96
$I_z$ =	0.23
G =	0.91 use G = 0.85

**Flexible or Dynamically Sensitive Structure**

Natural Frequency ( $\eta_1$ ) =	0.0 Hz		
Damping ratio ( $\beta$ ) =	0		
/b =	0.65		
/α =	0.15		
Vz =	107.2		
N <sub>1</sub> =	0.00		
R <sub>n</sub> =	0.000		
R <sub>n</sub> =	28.282	$\eta$ =	0.000
R <sub>B</sub> =	28.282	$\eta$ =	0.000
R <sub>L</sub> =	28.282	$\eta$ =	0.000
g <sub>R</sub> =	0.000		
R =	0.000		
G =	0.000		
		h =	8.8 ft

**Enclosure Classification**

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phone: 630-357-0504

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JOB NO. 21230893.000

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CALCULATED BY SRS

DATE 11/29/23

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DATE

**Test for Enclosed Building:** A building that does not qualify as open or partially enclosed.**Test for Open Building:** All walls are at least 80% open.  
 $A_o \geq 0.8A_g$ **Test for Partially Enclosed Building:**

Input		Test	
Ao	100000.0 sf	$A_o \geq 1.1A_{oi}$	YES
Ag	0.0 sf	$A_o > 4' \text{ or } 0.01A_g$	YES
Aoi	0.0 sf	$A_{oi} / A_{gi} \leq 0.20$	NO
Agi	0.0 sf		

Building is NOT  
Partially Enclosed

ERROR: Ag must be greater than Ao

Conditions to qualify as Partially Enclosed Building. Must satisfy all of the following:

 $A_o \geq 1.1A_{oi}$  $A_o > \text{smaller of } 4' \text{ or } 0.01 A_g$  $A_{oi} / A_{gi} \leq 0.20$ 

Where:

Ao = the total area of openings in a wall that receives positive external pressure.

Ag = the gross area of that wall in which Ao is identified.

Aoi = the sum of the areas of openings in the building envelope (walls and roof) not including Ao.

Agi = the sum of the gross surface areas of the building envelope (walls and roof) not including Ag.

**Reduction Factor for large volume partially enclosed buildings (Ri) :**

If the partially enclosed building contains a single room that is unpartitioned , the internal pressure coefficient may be multiplied by the reduction factor Ri.

Total area of all wall & roof openings (Aog): 0 sf  
 Unpartitioned internal volume (Vi) : 0 cf  
 Ri = 1.00

**Altitude adjustment to constant 0.00256 (caution - see code) :**

Altitude = 0 feet  
 Constant = 0.00256

Average Air Density = 0.0765 lbm/ft<sup>3</sup>

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**Seismic Loads:**

IBC 2015

Strength Level Forces

Risk Category : I  
 Importance Factor (I) : 1.00  
 Site Class : D

Ss (0.2 sec) = 28.00 %g  
 S1 (1.0 sec) = 7.00 %g

Fa = 1.576	Sms = 0.441	S <sub>DS</sub> = 0.294	Design Category = B
Fv = 2.400	Sm1 = 0.168	S <sub>D1</sub> = 0.112	Design Category = B

Seismic Design Category = D

Number of Stories 1

Structure Type: Light Frame

Horizontal Struct Irregularities: No plan Irregularity

Vertical Structural Irregularities: No vertical Irregularity

Flexible Diaphragms: Yes

Building System: **Building Frame Systems**Seismic resisting system: **Light frame (cold-formed steel) walls with wood panels or steel sheets**System Structural Height Limit: **65 ft**

Actual Structural Height (hn) = 8.8 ft

See ASCE7 Section 12.2.5 for exceptions and other system limitation

**DESIGN COEFFICIENTS AND FACTORS**

Response Modification Coefficient (R) : 7  
 Over-Strength Factor (Ωo) : 2  
 Deflection Amplification Factor (Cd) : 4.5  
 S<sub>DS</sub> = 0.294  
 S<sub>D1</sub> = 0.112

Seismic Load Effect (E) =  $\rho Q_E \pm 0.2 S_{DS} D$  =  $\rho Q_E \pm 0.059 D$   
 Special Seismic Load Effect (Em) =  $\Omega_o Q_E \pm 0.2 S_{DS} D$  =  $2.0 Q_E \pm 0.059 D$

$\rho$  = redundancy coefficient  
 $Q_E$  = horizontal seismic force  
 D = dead load

**PERMITTED ANALYTICAL PROCEDURES****Simplified Analysis** - Use Equivalent Lateral Force Analysis**Equivalent Lateral-Force Analysis** - Permitted

Building period coef. ( $C_T$ ) = 0.020  $C_u = 1.68$   
 Approx fundamental period ( $T_a$ ) =  $C_T h_n^x = 0.102 \text{ sec}$   $x = 0.75$   $T_{max} = C_u T_a = 0.171$   
 User calculated fundamental period (T) = 0 sec Use T = 0.102  
 Long Period Transition Period (TL) : ASCE7 map = 6  
 Seismic response coef. ( $C_s$ ) :  $S_{DS}/R = 0.042$   
 need not exceed  $C_s = S_{D1}/R_T = 0.157$   
 but not less than  $C_s = 0.044 S_{D1} = 0.013$   
 USE  $C_s = 0.042$   
 Design Base Shear  $V = 0.042 W$

**Model & Seismic Response Analysis** - Permitted (see code for procedure)**ALLOWABLE STORY DRIFT**

Structure Type: All other structures

Allowable story drift =  $0.020 h_{sx}$  where  $h_{sx}$  is the story height below level

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**Larson**

# Calculations

## **DESIGN CRITERIA**

Code: 9th Ed Massachusetts State Building Code

Roof Minimum Load:  $LL := 30 \text{ psf}$

Snow Load:

Ground Snow Load:  $p_g := 40 \text{ psf}$

Importance Factor:  $I_S := 1.00$

Wind Loads:

Ultimate Wind Speed:  $V := 127 \text{ mph}$

Exposure Category: Exposure := "C"

Earthquake Load:

$S_S := 0.28$        $S_1 := 0.07$

Occupancy Category: Occupancy := "I"

Seismic Design Category: SDC := "D"

Site Class: SiteClass := "D"

Structural System: Light frame walls sheathed with wood structural panels rated for shear resistance or steel sheets

$R_{eq} := 7.0$

Analysis Procedure: Equivalent Lateral Force Analysis

Importance Factor:  $I_e := 1.00$

Redundancy Factor:  $\rho := 1.3$

Allowable Soil Bearing Pressure:  $Q_{allow} := 1500 \text{ psf}$

### **Material Reference Design Standards**

Steel: AISC Steel Construction Manual - 13th Edition

Concrete: ACI 318-14 Building Code Requirements for Structural Concrete

## GRAVITY LOADS

### Building Geometry

Greater Building Length:

$$L := 10\text{-ft} + 7.5\text{in}$$

Least Building Width:

$$W := 6\text{-ft} + 4\text{in}$$

Mean Roof Height:

$$H := 8\text{ft} + 8.8125\text{in}$$

### Loading

#### Roof Loads

3/16" Steel Plate:

$$rdl_1 := 11\text{psf}$$

Steel Framing:

$$rdl_2 := 6\text{psf}$$

MEP Components:

$$rdl_3 := 4\text{psf}$$

Miscellaneous:

$$rdl_4 := 2\text{psf}$$

Roof Dead Load:

$$RDL := \sum rdl = 23\text{psf}$$

Roof Live Load:

$$RLL := 20\text{psf}$$

\*Minimum Roof Load

#### Snow Load

Exposure Factor (Table 7-2):

$$C_e := 1.0$$

Thermal Factor (Table 7-3):

$$C_t := 1.0$$

Sloped Factor (Figure 7-2):

$$C_s := 1.0$$

Flat Roof Snow Load (Eq. 7.3-1):

$$RSL := \begin{cases} \max(0.7 \cdot C_e \cdot C_t \cdot I_s \cdot p_g, I_s \cdot p_g) & \text{if } p_g \leq 20\text{psf} \\ \max(30\text{psf}) & \text{if } p_g > 20\text{psf} \end{cases} = 30\text{psf}$$

$$RSL := RSL = 30\text{psf}$$

#### Exterior Wall Load

3/16" Steel Plate:

$$wdl_1 := 11\text{psf}$$

Louvers:

$$wdl_2 := 2\text{psf} \quad \text{*in addition to steel plate}$$

Steel Framing:

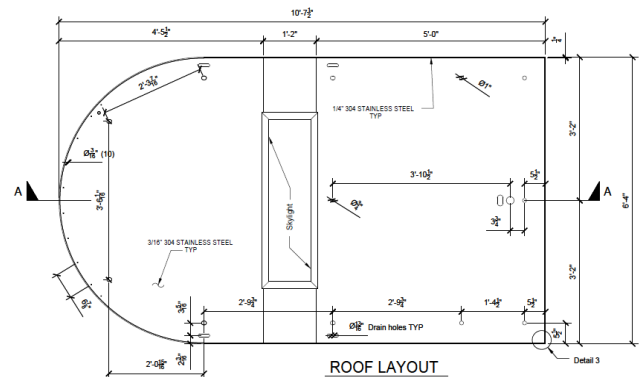
$$wdl_3 := 6\text{psf}$$

MEP Components:

$$wdl_4 := 4\text{psf}$$

Wall Dead Load:

$$WDL := \sum wdl = 23\text{psf}$$



## **LATERAL LOADS**

### **Wind Loads**

End Zone Wall Loading:	$p_{wallend} := 0.6 \cdot 19.5 \text{psf} = 11.7 \cdot \text{psf}$
Interior Zone Wall Loading:	$p_{wallint} := 0.6 \cdot 17.6 \text{psf} = 10.56 \cdot \text{psf}$
Positive Wall Loading:	$p_{wallpos} := 0.6 \cdot 16 \text{psf} = 9.6 \cdot \text{psf}$
End Zone Roof Loading:	$p_{roofend} := 0.6 \cdot 26.8 \text{psf} = 16.08 \cdot \text{psf}$
Interior Zone Roof Loading:	$p_{roofint} := 0.6 \cdot 24.1 \text{psf} = 14.46 \cdot \text{psf}$
Positive Roof Loading:	$p_{roofpos} := 0.6 \cdot 16 \text{psf} = 9.6 \cdot \text{psf}$
End Zone Wall Loading (10ft <sup>2</sup> ):	$p_{cwallend} := 0.6 \cdot 25 \text{psf} = 15 \cdot \text{psf}$
End Zone Roof Loading (16ft <sup>2</sup> ):	$p_{croofend} := 0.6 \cdot 20.3 \text{psf} = 12.18 \cdot \text{psf}$
Positive Roof Loading (16ft <sup>2</sup> ):	$p_{croofpos} := 0.6 \cdot 16 \text{psf} = 9.6 \cdot \text{psf}$

USE C&C LOADING @ 100SF  
FOR WALLS & 70SF FOR ROOF

\*multiply values by 0.6 to convert to service level loads

Edge Strip Dimemnsion:	$a := 3 \text{ft}$
End Zone Dimemnsion:	$2 \cdot a = 6 \cdot \text{ft}$

\*Note: Use Components & Cladding wind loading for Main Wind Force Resisting System checks due to small size of structure - C&C loads are higher than MWFRS loads and therefore will be conservative.

### **Total Wind Load Base Shear**

Area of elevation of building:	$A_{max} := L \cdot H = 92.8 \text{ft}^2$
Wind Design Base Shear:	$VW := A_{max} \cdot p_{wallend} = 1.09 \cdot \text{kip}$

### **Wind Load Parallel to Long Walls**

Area of elevation of building:	$A_{wall} := W \cdot \left(\frac{H}{2}\right) = 27.66 \text{ft}^2$
Area of end zone of wall:	$A_{wallend} := (2 \cdot a) \cdot \left(\frac{H}{2}\right) = 26.2 \text{ft}^2$
Area of body of wall:	$A_{wallint} := A_{wall} - A_{wallend} = 1.46 \text{ft}^2$
Load to roof from wind load parallel to long walls:	$VWS := A_{wallend} \cdot p_{wallend} + A_{wallint} \cdot p_{wallint} = 0.32 \cdot \text{kip}$

### **Wind Load Parallel to Short Walls**

Area of wall of building:	$A_{wall} := L \cdot \left(\frac{H}{2}\right) = 46.4 \text{ft}^2$
Area of end zone of walls:	$A_{wallend} := (2 \cdot a) \cdot \left(\frac{H}{2}\right) = 26.2 \text{ft}^2$
Area of body of wall:	$A_{wallint} := A_{wall} - A_{wallend} = 20.2 \text{ft}^2$
Load to roof from wind load parallel to short walls:	$VWL := A_{wallend} \cdot p_{wallend} + A_{wallint} \cdot p_{wallint} = 0.52 \cdot \text{kip}$

**Seismic Loads**

Seismic Response Coefficient:  $C_S := 0.042$   $C_{SASD} := 0.7 \cdot C_S = 0.029$

Area of Roof:  $A_{roofE} := L \cdot W = 67 \text{ ft}^2$

Weight of Structure:  $Weight := RDL \cdot A_{roofE} + (WDL) \cdot [(2 \cdot L + 2 \cdot W) \cdot H] = 8.36 \cdot \text{kip}$

Seismic Design Base Shear:  $V_E := C_{SASD} \cdot Weight \cdot \rho = 0.32 \cdot \text{kip}$

Seismic Loading to Roof:  $V_{roof} := C_{SASD} \cdot [RDL \cdot A_{roofE} + (WDL) \cdot [(2 \cdot L + 2 \cdot W) \cdot \frac{H}{2}]] \cdot \rho = 0.19 \cdot \text{kip}$

**\*Reference Load Determination section for seismic, wind, and snow loading calculations**



**Lateral Loading on Structure**

	<b>Loads Parallel to Long Wall</b>	<b>Loads Parallel to Short Wall</b>
<b>Seismic Loads</b>	$V_{\text{roof}} = 0.19 \cdot \text{kip}$	$V_{\text{roof}} = 0.19 \cdot \text{kip}$
<b>Wind Loads</b>	$V_{\text{WS}} = 0.32 \cdot \text{kip}$	$V_{\text{WL}} = 0.52 \cdot \text{kip}$

**Governing Lateral Design Loads (maximum of wind or seismic loading):**

Parallel to Long Walls:	$V_{\text{long}} := \max(V_{\text{WS}}, V_{\text{roof}}) = 0.32 \cdot \text{kip}$
Parallel to Short Walls:	$V_{\text{short}} := \max(V_{\text{WL}}, V_{\text{roof}}) = 0.52 \cdot \text{kip}$

**Wind Controls****Wind Controls**

## **GRAVITY DESIGN: STEEL ROOF PLATE**

### **Material Properties - 304 Stainless Steel**

Yield Strength:  $F_y := 30\text{ksi}$

Modulus of Elasticity:  $E := 23800\text{ksi}$

Thickness of Plate:  $t := 0.1875\text{in}$

### **Loading**

Maximum Load on Plate:

$$TL_{pos} := \max(RDL + RLL, RDL + RSL, RDL + p_{\text{croofpos}}, RDL + 0.75 \cdot p_{\text{croofpos}} + 0.75 \cdot RLL, RDL + 0.75 \cdot p_{\text{croofpos}} + 0.75 \cdot RSL)$$

$$TL_{pos} = 53\text{psf}$$

$$TL_{neg} := \max(0.6 \cdot RDL + p_{\text{croofend}}) = 26\text{psf}$$

$$TL_{max} := \max(TL_{pos}, TL_{neg}) = 53\text{psf}$$

Maximum Load on Plate for Deflection Calculation:

$$TL_{pos\Delta} := \max(RDL + RLL, RDL + RSL, RDL + 0.7 \cdot p_{\text{croofpos}}, RDL + 0.75 \cdot 0.7 \cdot p_{\text{croofpos}} + 0.75 \cdot RLL)$$

$$TL_{pos\Delta} = 53\text{psf}$$

$$TL_{neg\Delta} := \max(0.6 \cdot RDL + 0.7 \cdot p_{\text{croofend}}) = 22\text{psf}$$

$$TL_{max\Delta} := \max(TL_{pos\Delta}, TL_{neg\Delta}) = 53\text{psf}$$

### **Geometry**

Plate Width:  $a := 6\text{ft} + 4\text{in}$

Plate Span Length:  $b := 30.75\text{in}$

Tabulated Values:

(relations among load, stress and deflection are expressed by dimensionless coefficients shown below)

See Roark's Formulas for Stress & Strain, Sixth Edition - Plate support on 2 sides and pinned

$$\text{coef}_q = \frac{TL_{max} \cdot b^4}{E \cdot t^4} \quad \text{coef}_\sigma = \frac{\sigma \cdot b^2}{E \cdot t^2} \quad \text{coef}_y = \frac{y}{t}$$

$$\text{coef}_q := (0 \ 12.5 \ 25 \ 50 \ 75 \ 100 \ 125 \ 150 \ 175 \ 200 \ 250)^T$$

$$\text{coef}_{\sigma 1} := (0 \ 3.8 \ 5.8 \ 8.7 \ 10.9 \ 12.8 \ 14.3 \ 15.6 \ 17.0 \ 18.2 \ 20.5)^T$$

$$\text{coef}_{y1} := (0 \ 0.430 \ 0.650 \ 0.93 \ 1.13 \ 1.26 \ 1.37 \ 1.47 \ 1.56 \ 1.63 \ 1.77)^T$$

$$\text{coef}_{\sigma 15} := (0 \ 4.48 \ 6.81 \ 9.92 \ 12.25 \ 14.22 \ 16 \ 17.50 \ 18.9 \ 20.3 \ 22.8)^T$$

$$\text{coef}_{y15} := (0 \ 0.625 \ 0.879 \ 1.18 \ 1.37 \ 1.53 \ 1.68 \ 1.77 \ 1.88 \ 1.96 \ 2.12)^T$$

$$\text{coef}_{\sigma 2} := (0 \ 4.87 \ 7.16 \ 10.3 \ 12.6 \ 14.6 \ 16.4 \ 18 \ 19.4 \ 20.9 \ 23.6)^T$$

$$\text{coef}_{y2} := (0 \ 0.696 \ 0.946 \ 1.24 \ 1.44 \ 1.6 \ 1.72 \ 1.84 \ 1.94 \ 2.03 \ 2.2)^T$$

$$\text{coef}_\sigma := \begin{cases} \text{coef}_{\sigma 1} & \text{if } \frac{a}{b} \leq 1.25 \\ \text{coef}_{\sigma 15} & \text{if } 1.25 < \frac{a}{b} \leq 1.75 \\ \text{coef}_{\sigma 2} & \text{otherwise} \end{cases} \quad \text{coef}_y := \begin{cases} \text{coef}_{y1} & \text{if } \frac{a}{b} \leq 1.25 \\ \text{coef}_{y15} & \text{if } 1.25 < \frac{a}{b} \leq 1.75 \\ \text{coef}_{y2} & \text{otherwise} \end{cases}$$

### Check Stress

$$\sigma := \text{linterp} \left[ (\text{coef}_q), \text{coef}_\sigma, \frac{TL_{\max} \cdot b^4}{E \cdot t^4} \right] \cdot \left( \frac{E \cdot t^2}{b^2} \right) = 3.86 \cdot \text{ksi}$$

$$\sigma := \text{if} \left( \frac{TL_{\max} \cdot b^4}{E \cdot t^4} < 250, "OK", "OUT OF RANGE" \right) = "Ok"$$

$$\frac{(4.2 \text{ ksi}) \cdot 1.67}{F_y} = 0.23 < 1.00 \text{ OK}$$

### Check Deflection

$$y_{\text{allow}} := \frac{b}{200} = 0.15 \cdot \text{in}$$

$$y := \text{linterp} \left[ (\text{coef}_q), \text{coef}_y, \frac{TL_{\max} \Delta \cdot (b)^4}{E \cdot t^4} \right] \cdot t = 0.12 \cdot \text{in}$$

$$\frac{y}{y_{\text{allow}}} = 0.76 < 1.00 \text{ OK}$$

**3/16" stainless steel plate is adequate for roof**

## **GRAVITY DESIGN: STEEL ROOF PLATE CONNECTIONS**

Maximum Uplift on Plate:  $T_{Lneg} = 25.98 \text{ psf}$

Plate Width:  $a = 6.33 \text{ ft}$

Plate Span Length:  $b = 2.56 \text{ ft}$

Number of Fasteners:  $n := 2$

Maximum Tension on Fastener:  $T_{fast} := T_{Lneg} \cdot b \cdot \frac{a}{n} = 210.82 \text{ lbf}$

Allowable Tension 3/8"  $\phi$  304  
Stainless Bolt :

$T_{allow} := 1612 \text{ lbf}$

Minimum Material Thickness  
for Allowable Tension:

$t_{min} := 0.2319 \text{ in}$

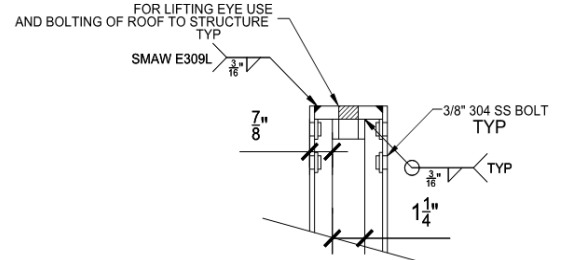
Beam Wall Thickness:

$t_{wall} := 0.174 \text{ in} \quad (\text{HSS}3 \times 2 \times 3/16)$

Allowable Pullout:

$T_{pullout} := \min \left[ T_{allow}, T_{allow} \cdot \left( \frac{t_{wall}}{t_{min}} \right) \right] = 1210 \text{ lbf}$

$\frac{T_{fast}}{T_{pullout}} = 0.17 < 1.00 \text{ OK}$



**(2) 3/8" diameter bolts are adequate for roof plate to roof beam connection. Hold-down bolts at columns shall also be used. Bolts to be 304 stainless steel, condition "A" ( $F_u = 73 \text{ ksi}$  minimum).**

## GRAVITY DESIGN: STEEL ROOF BEAMS

### HSS3x2x3/16 Section Properties

$$\begin{aligned} I_x &:= 1.77 \text{ in}^4 & S_x &:= 1.18 \text{ in}^3 & r_x &:= 1.07 \text{ in} & Z_x &:= 1.48 \text{ in}^3 & F_y &:= 30 \text{ ksi} & \Omega_b &:= 1.67 \\ I_y &:= 0.932 \text{ in}^4 & S_y &:= 0.932 \text{ in}^3 & r_y &:= 0.778 \text{ in} & Z_y &:= 1.12 \text{ in}^3 \\ t &:= 0.174 \text{ in} & b &:= 8.49 \text{ in} & h &:= 14.2 \text{ in} & B_f &:= 2 \text{ in} & H_w &:= 3 \text{ in} \end{aligned}$$

### Determine Nominal Moment Capacity

$$\text{Slenderness} := \begin{cases} \text{"compact"} & \text{if } \frac{b}{t} < 1.12 \cdot \sqrt{\frac{E}{F_y}} \\ \text{"slender"} & \text{if } \frac{b}{t} > 1.40 \cdot \sqrt{\frac{E}{F_y}} \\ \text{"noncompact"} & \text{if } 1.12 \cdot \sqrt{\frac{E}{F_y}} \leq \frac{b}{t} \leq 1.40 \cdot \sqrt{\frac{E}{F_y}} \end{cases} = \text{"compact"}$$

### Yielding

$$M_p := F_y \cdot Z_x = 3.7 \cdot \text{kip} \cdot \text{ft}$$

$$M_n := M_p = 3.7 \cdot \text{kip} \cdot \text{ft}$$

### Flange Local Buckling

$$b_e := \min \left[ 1.92 \cdot t \cdot \sqrt{\frac{E}{F_y}} \cdot \left( 1 - \frac{0.38}{\frac{b}{t}} \cdot \sqrt{\frac{E}{F_y}} \right), b \right] = -2.45 \text{ in}$$

$$I_{\text{eff}} := I_x - 2 \cdot \left[ (b - b_e) \cdot t \cdot (B_f - t)^2 + \frac{(b - b_e) \cdot t^3}{12} \right] = -2.79 \text{ in}^4$$

$$S_e := \frac{I_{\text{eff}}}{\frac{H_w}{2}} = -1.86 \text{ in}^3$$

$$M_{n\_flb} := \begin{cases} \min \left[ M_p - (M_p - F_y \cdot S_x) \cdot \left( 3.57 \cdot \frac{b}{t} \cdot \sqrt{\frac{F_y}{E}} - 4.0 \right), M_p \right] & \text{if Slenderness} = \text{"noncompact"} \\ F_y \cdot S_e & \text{if Slenderness} = \text{"slender"} \\ M_n & \text{if Slenderness} = \text{"compact"} \end{cases} = 3.7 \cdot \text{kip} \cdot \text{ft}$$

### Web Local Buckling

$$M_{n\_wlb} := \begin{cases} \min \left[ M_p - (M_p - F_y \cdot S_x) \cdot \left( 0.305 \cdot \frac{h}{t} \cdot \sqrt{\frac{F_y}{E}} - 0.738 \right), M_p \right] & \text{if Slenderness} = \text{"noncompact"} \\ M_n & \text{if Slenderness} = \text{"compact"} \end{cases} = 3.7 \cdot \text{kip} \cdot \text{ft}$$

$$M_n := \min(M_n, M_{n\_flb}, M_{n\_wlb}) = 3.7 \cdot \text{kip} \cdot \text{ft}$$

Applied Load:  $TL_{max} = 53 \cdot \text{psf}$

Maximum Beam Span:  $\text{span} := 5\text{ft} + 5\text{in}$

Worst Case Tributary Width:  $TW := 2\text{ft} + 10\text{in}$

\*Check center beam - worst case loading

Distributed Load to Beam:  $w := TL_{max} \cdot TW = 150 \cdot \text{plf}$

Distributed Load to Beam:  
(for deflection calculation)  $w_{\Delta} := TL_{max} \Delta \cdot TW = 150 \cdot \text{plf}$

Maximum Beam End Reaction:  $R_{max} := \frac{w \cdot \text{span}}{2} = 0.41 \cdot \text{kip}$

### Check Stress

Moment:  $M_{beam} := \frac{w \cdot \text{span}^2}{12} = 0.37 \cdot \text{kip} \cdot \text{ft}$

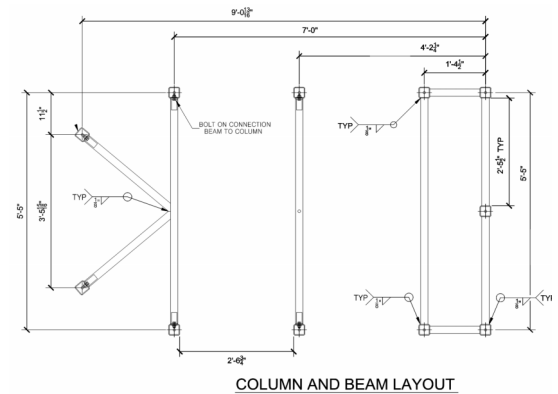
$$\frac{M_{beam} \cdot \Omega_b}{M_n} = 0.17 < 1.00 \text{ OK}$$

### Check Deflection

Allowable Deflection:  $\Delta_{allow} := \frac{\text{span}}{240} = 0.27 \cdot \text{in}$

Deflection:  $\Delta_{beam} := \frac{5 \cdot w_{\Delta} \cdot \text{span}^4}{384 \cdot E \cdot I_x} = 0.07 \cdot \text{in}$

$$\frac{\Delta_{beam}}{\Delta_{allow}} = 0.25 < 1.00 \text{ OK}$$



**HSS3x2x3/16" tubes are adequate for roof beams**

## GRAVITY DESIGN: STEEL ROOF BEAM CONNECTIONS

Maximum Beam End Reaction:  $R_{max} = 0.41 \text{ kip}$

Allowable Shear Stress (316SS):  $F_v := 12.99 \text{ ksi}$

Allowable tensile Stress (316SS):  $F_t := 56.25 \text{ ksi}$

Nominal Bolt Diameter:  $d := 0.375 \text{ in}$

Thread Root Area:  $A_R := 0.0699 \text{ in}^2$

Tensile Strength of HSS:  $F_{uHSS} := 58 \text{ ksi}$

Tensile Strength of Cap Plate:  $F_{uCAP} := 58 \text{ ksi}$

$$F_u := \min(F_{uHSS}, F_{uCAP}) = 58 \text{ ksi}$$

HSS Wall Thickness:  $t = 0.174 \text{ in}$

Cap Plate Thickness:  $t_{cap} := 0.1875 \text{ in}$

$$t := \min(t, t_{cap}) = 0.174 \text{ in}$$

### Check Bolted Condition

Maximum Bolt Loads:  $V_{max} := \frac{R_{max}}{2} = 203 \text{ lbf}$   $T_{max} := \frac{M_{beam}}{2.5 \text{ in}} = 1.76 \text{ kip}$

Clear Distance to Plate Edge:  $l_c := 0.75 \text{ in} - \frac{(d + 0.0625 \text{ in})}{2} = 0.53 \text{ in}$

Safety Factor:  $\Omega_{brg} := 2.0$

Bearing Strength:  $V_{brg} := \min\left(\frac{1.2 \cdot l_c \cdot t \cdot F_u}{\Omega_{brg}}, \frac{2.4 \cdot d \cdot t \cdot F_u}{\Omega_{brg}}\right) = 3217 \text{ lbf}$

Bolt Strength:  $V_{bolt} := F_v \cdot A_R = 908 \text{ lbf}$

$$V_{allow} := \min(V_{brg}, V_{bolt}) = 908 \text{ lbf}$$

$$T_{bolt} := F_t \cdot A_R = 3.93 \text{ kip}$$

$$\left(\frac{T_{max}}{T_{bolt}}\right)^2 + \left(\frac{V_{max}}{V_{allow}}\right)^2 = 0.25 < 1.00 \text{ OK}$$

**(2) 3/8" diameter bolts are adequate for roof beam connection to posts.**  
**Bolts to be 316 stainless steel, condition "A" ( $F_u = 75 \text{ ksi min}$ ).**

### Check Welded Condition

Weld Thickness:  $t_w := 0.125 \text{ in}$

Filler Metal Strength:  $F_{EXX} := 70 \text{ ksi}$

Safety Factor:  $\Omega_w := 2.0$

Weld Width:  $b_w := 2 \text{ in}$

Weld Height:  $d_w := 3 \text{ in}$

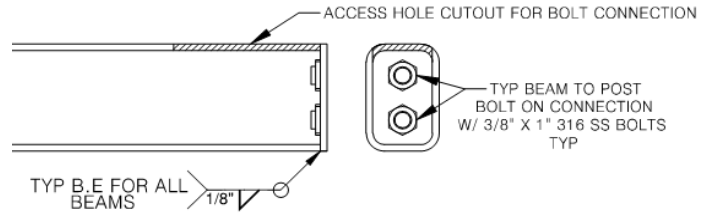
Total Weld Length:  $A_w := 2 \cdot b_w + 2 \cdot d_w = 10 \text{ in}$

Actual Weld Loads:  $V_{weld} := \sqrt{\left(\frac{R_{max}}{A_w}\right)^2 + \left(\frac{M_{beam}}{9 \text{ in}^2}\right)^2} = 0.49 \frac{\text{kip}}{\text{in}}$

Allowable Weld Strength:  $V_{allow} := \frac{0.6 \cdot F_{EXX} \cdot 0.707 \cdot t_w}{\Omega_w} = 1.86 \frac{\text{kip}}{\text{in}}$

$$\frac{V_{weld}}{V_{allow}} = 0.26 < 1.00 \text{ OK}$$

**1/8" fillet weld all-around is adequate for roof beam connection to posts.**



## GRAVITY DESIGN: STEEL POSTS

### HSS3x3x3/16 Section Properties

$$\begin{aligned}
 I_x &:= 2.46 \text{ in}^4 & S_x &:= 1.64 \text{ in}^3 & r_x &:= 1.14 \text{ in} & Z_x &:= 1.97 \text{ in}^3 & F_y &:= 30 \text{ ksi} & \Omega_c &:= 1.67 \\
 I_y &:= 2.46 \text{ in}^4 & S_y &:= 1.64 \text{ in}^3 & r_y &:= 1.14 \text{ in} & Z_y &:= 1.97 \text{ in}^3 & A &:= 1.89 \text{ in}^2 & \Omega_b &:= 1.67 \\
 t &:= 0.174 \text{ in} & b &:= 14.2 \cdot t = 2.47 \text{ in} & h &:= 14.2 \cdot t = 2.47 \text{ in} & B_f &:= 3 \text{ in} & H_w &:= 3 \text{ in} \\
 K &:= 1.0 & H &:= 8.73 \text{ ft}
 \end{aligned}$$

### Determine Nominal Axial Capacity

$$\text{Slenderness} := \begin{cases} \text{"nonslender"} & \text{if } \frac{b}{t} < 1.40 \cdot \sqrt{\frac{E}{F_y}} = \text{"nonslender"} \\ \text{"slender"} & \text{if } \frac{b}{t} \geq 1.40 \cdot \sqrt{\frac{E}{F_y}} \end{cases}$$

### Flexural Buckling

$$F_e := \frac{\pi^2 \cdot E}{\left(\frac{K \cdot L}{r_x}\right)^2} = 18.78 \text{ ksi}$$

$$F_{cr} := \begin{cases} 0.658 \cdot \frac{F_y}{F_e} & \text{if } \frac{K \cdot H}{r_x} \leq 4.71 \cdot \sqrt{\frac{E}{F_y}} = 15.37 \text{ ksi} \\ 0.877 \cdot F_e & \text{if } \frac{K \cdot H}{r_x} > 4.71 \cdot \sqrt{\frac{E}{F_y}} \end{cases}$$

$$P_n := \begin{cases} F_{cr} \cdot A & \text{if Slenderness} = \text{"nonslender"} = 29.05 \text{ kip} \\ \text{"further analysis required"} & \text{if Slenderness} = \text{"slender"} \end{cases}$$



### Determine Nominal Moment Capacity

$$\text{Slenderness} := \begin{cases} \text{"compact"} & \text{if } \frac{b}{t} < 1.12 \cdot \sqrt{\frac{E}{F_y}} \\ \text{"slender"} & \text{if } \frac{b}{t} > 1.40 \cdot \sqrt{\frac{E}{F_y}} \\ \text{"noncompact"} & \text{if } 1.12 \cdot \sqrt{\frac{E}{F_y}} \leq \frac{b}{t} \leq 1.40 \cdot \sqrt{\frac{E}{F_y}} \end{cases} = \text{"compact"}$$

### Yielding

$$M_p := F_y \cdot Z_x = 4.92 \cdot \text{kip} \cdot \text{ft}$$

$$M_n := M_p = 4.92 \cdot \text{kip} \cdot \text{ft}$$

### Flange Local Buckling

$$b_e := \min \left[ 1.92 \cdot t \cdot \sqrt{\frac{E}{F_y}} \cdot \left( 1 - \frac{0.38}{\frac{b}{t}} \cdot \sqrt{\frac{E}{F_y}} \right), b \right] = 2.32 \cdot \text{in}$$

$$I_{eff} := I_x - 2 \cdot \left[ (b - b_e) \cdot t \cdot (B_f - t)^2 + \frac{(b - b_e) \cdot t^3}{12} \right] = 2.03 \cdot \text{in}^4$$

$$S_e := \frac{I_{eff}}{\frac{H_w}{2}} = 1.36 \cdot \text{in}^3$$

$$M_{n\_flb} := \begin{cases} \min \left[ M_p - (M_p - F_y \cdot S_x) \cdot \left( 3.57 \cdot \frac{b}{t} \cdot \sqrt{\frac{F_y}{E}} - 4.0 \right), M_p \right] & \text{if Slenderness = "noncompact"} = 4.92 \cdot \text{kip} \cdot \text{ft} \\ F_y \cdot S_e & \text{if Slenderness = "slender"} \\ M_n & \text{if Slenderness = "compact"} \end{cases}$$

### Web Local Buckling

$$M_{n\_wlb} := \begin{cases} \min \left[ M_p - (M_p - F_y \cdot S_x) \cdot \left( 0.305 \cdot \frac{h}{t} \cdot \sqrt{\frac{F_y}{E}} - 0.738 \right), M_p \right] & \text{if Slenderness = "noncompact"} = 4.92 \cdot \text{kip} \cdot \text{ft} \\ M_n & \text{if Slenderness = "compact"} \end{cases}$$

$$M_n := \min(M_n, M_{n\_flb}, M_{n\_wlb}) = 4.92 \cdot \text{kip} \cdot \text{ft}$$

Roof Load:  $TL_{max} = 53 \cdot \text{psf}$  \*conservatively use  $TL_{max}$  - may be negative load

Wall Load:  $P_{wallend} = 11.7 \cdot \text{psf}$

Worst Case Tributary Width:  $TW := 2\text{ft} + 10\text{in}$

Distributed Load to Column:  $w := P_{wallend} \cdot TW = 33 \cdot \text{plf}$

Beam Reaction to Column:  $R_{max} = 0.41 \cdot \text{kip}$  \*conservatively use  $TL_{max}$  - may be negative load

Maximum Column Span:  $H = 8.73\text{ft}$

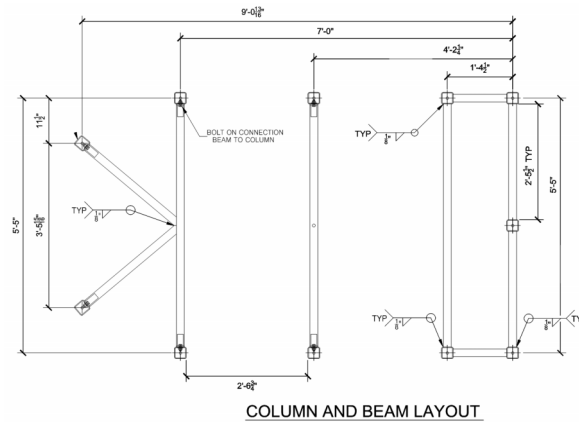
### Check Stress

Axial Load:  $P_{max} := R_{max} = 0.41 \cdot \text{kip}$

$$\frac{P_{max} \cdot \Omega_c}{P_n} = 0.02 < 1.00 \text{ OK}$$

Moment Due to Wind Load:  $M_{dist} := \frac{w \cdot H^2}{8} = 0.32 \cdot \text{kip} \cdot \text{ft}$

$$\frac{M_{dist} \cdot \Omega_b}{M_n} = 0.11 < 1.00 \text{ OK}$$



Combined Stress:

$$\text{UNITY} := \begin{cases} \frac{P_{max} \cdot \Omega_c}{P_n} + \frac{8}{9} \cdot \frac{M_{dist} \cdot \Omega_b}{M_n} & \text{if } \frac{P_{max} \cdot \Omega_c}{P_n} \geq 0.2 \\ \frac{P_{max} \cdot \Omega_c}{2 \cdot P_n} + \frac{M_{dist} \cdot \Omega_b}{M_n} & \text{if } \frac{P_{max} \cdot \Omega_c}{P_n} < 0.2 \end{cases} = 0.12 < 1.00 \text{ OK}$$

**HSS3x3x3/16" LSV tubes are adequate for posts**

## **GRAVITY DESIGN: STEEL POST LIFTING CAP**

Total Unit Weight: Weight = 8.36-kip

Load to Lifting Plate:  $P_{\text{lift}} := \frac{\text{Weight}}{4} = 2.09\text{-kip}$  \*conservatively analyze lift from (4) columns only

### **Check Plate**

Plate Thickness:  $t_{\text{plate}} := 0.5\text{in}$

Plate Width:  $w_{\text{plate}} := 3\text{in} - 2 \cdot (0.174\text{in}) = 2.65\text{-in}$

Plate Yield Strength:  $F_{y_{\text{plate}}} := 30\text{ksi}$

Plastic Modulus of Plate:  $Z_{\text{plate}} := \frac{t_{\text{plate}}^2 \cdot w_{\text{plate}}}{4} = 0.17\text{-in}^3$

Safety Factor:  $\Omega_b := 1.67$

Maximum Moment on Plate:  $M_{\text{plate}} := \frac{P_{\text{lift}} \cdot w_{\text{plate}}}{4} = 1.39\text{-kip}\cdot\text{in}$

Allowable Moment on Plate:  $M_{\text{allow}} := \frac{F_{y_{\text{plate}}} \cdot Z_{\text{plate}}}{\Omega_b} = 2.98\text{-kip}\cdot\text{in}$

$\frac{M_{\text{plate}}}{M_{\text{allow}}} = 0.47 < 1.00$  OK

### **Check Weld**

Weld Thickness:  $t_w := 0.1875\text{in}$

Filler Metal Strength:  $F_{EXX} := 70\text{ksi}$

Safety Factor:  $\Omega_w := 2.70$

Weld Width:  $b_w := w_{\text{plate}} = 2.65\text{-in}$

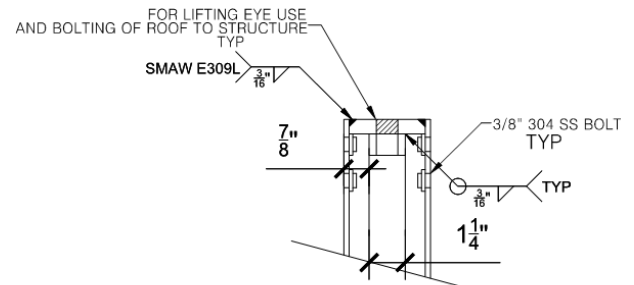
Weld Height:  $d_w := w_{\text{plate}} = 2.65\text{-in}$

Total Weld Length:  $A_w := 2 \cdot b_w + 2 \cdot d_w = 10.61\text{-in}$

Shear Load on Weld:  $V_{\text{weld}} := \frac{P_{\text{lift}}}{A_w} = 0.2 \frac{\text{kip}}{\text{in}}$

Allowable Weld Strength:  $V_{\text{allow}} := \frac{0.6 \cdot F_{EXX} \cdot 0.707 \cdot t_w}{\Omega_w} = 2.06 \frac{\text{kip}}{\text{in}}$

$\frac{V_{\text{weld}}}{V_{\text{allow}}} = 0.1 < 1.00$  OK



1  
S1.0  
**COLUMN LIFTING CAP**  
1/2" 304 SS  
TAP FOR 3/4-10 Bolt  
(11) REQ'D

**1/2" thick stainless steel lifting plate is adequate.**  
**Use 3/16" fillet weld all-around for lifting cap connection to posts.**

## LATERAL DESIGN: STEEL WALL PANELS (OUT OF PLANE)

### Material Properties - 304 Stainless Steel

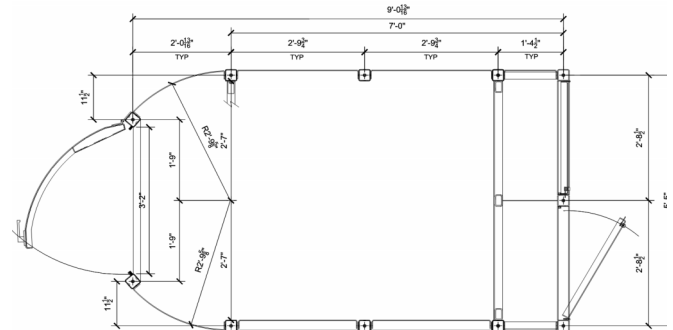
Yield Strength:  $F_y := 30\text{ksi}$   
Modulus of Elasticity:  $E := 23800\text{ksi}$   
Thickness of Plate:  $t := 0.1875\text{in}$

### Loading

Maximum Load on Plate:  $p_{cwallend} = 15\text{psf}$

### Geometry

Plate Width:  $a := H = 8.73\text{-ft}$   
Plate Span Length:  $b := 36\text{in}$  \*conservative



Tabulated Values:  
(relations among load, stress and deflection are expressed by dimensionless coefficients shown below)

See Roark's Formulas for Stress & Strain, Sixth Edition - Plate support on 2 sides and pinned

$$\text{coef}_q = \frac{T_{L_{\max}} \cdot b^4}{E \cdot t^4} \quad \text{coef}_\sigma = \frac{\sigma \cdot b^2}{E \cdot t^2} \quad \text{coef}_y = \frac{y}{t}$$

$$\text{coef}_q := (0 \ 12.5 \ 25 \ 50 \ 75 \ 100 \ 125 \ 150 \ 175 \ 200 \ 250)^T$$

$$\text{coef}_{\sigma 1} := (0 \ 3.8 \ 5.8 \ 8.7 \ 10.9 \ 12.8 \ 14.3 \ 15.6 \ 17.0 \ 18.2 \ 20.5)^T$$

$$\text{coef}_{y1} := (0 \ 0.430 \ 0.650 \ 0.93 \ 1.13 \ 1.26 \ 1.37 \ 1.47 \ 1.56 \ 1.63 \ 1.77)^T$$

$$\text{coef}_{\sigma 15} := (0 \ 4.48 \ 6.81 \ 9.92 \ 12.25 \ 14.22 \ 16 \ 17.50 \ 18.9 \ 20.3 \ 22.8)^T$$

$$\text{coef}_{y15} := (0 \ 0.625 \ 0.879 \ 1.18 \ 1.37 \ 1.53 \ 1.68 \ 1.77 \ 1.88 \ 1.96 \ 2.12)^T$$

$$\text{coef}_{\sigma 2} := (0 \ 4.87 \ 7.16 \ 10.3 \ 12.6 \ 14.6 \ 16.4 \ 18 \ 19.4 \ 20.9 \ 23.6)^T$$

$$\text{coef}_{y2} := (0 \ 0.696 \ 0.946 \ 1.24 \ 1.44 \ 1.6 \ 1.72 \ 1.84 \ 1.94 \ 2.03 \ 2.2)^T$$

$$\text{coef}_\sigma := \begin{cases} \text{coef}_{\sigma 1} & \text{if } \frac{a}{b} \leq 1.25 \\ \text{coef}_{\sigma 15} & \text{if } 1.25 < \frac{a}{b} \leq 1.75 \\ \text{coef}_{\sigma 2} & \text{otherwise} \end{cases} \quad \text{coef}_y := \begin{cases} \text{coef}_{y1} & \text{if } \frac{a}{b} \leq 1.25 \\ \text{coef}_{y15} & \text{if } 1.25 < \frac{a}{b} \leq 1.75 \\ \text{coef}_{y2} & \text{otherwise} \end{cases}$$

### Check Stress

$$\sigma := \text{linterp} \left[ (\text{coef}_q), \text{coef}_\sigma, \frac{p_{\text{cwallend}} \cdot b^4}{E \cdot t^4} \right] \cdot \left( \frac{E \cdot t^2}{b^2} \right) = 1.5 \cdot \text{ksi}$$

$$\sigma := \text{if} \left( \frac{p_{\text{cwallend}} \cdot b^4}{E \cdot t^4} < 250, "Ok", "OUT OF RANGE" \right) = "Ok" \cdot \text{ksi}$$

$$\frac{1.67 \cdot (2.29 \text{ksi})}{F_y} = 0.13 < 1.00 \text{ OK}$$

### Check Deflection

$$y_{\text{allow}} := \frac{b}{200} = 0.18 \cdot \text{in}$$

$$y := \text{linterp} \left[ (\text{coef}_q), \text{coef}_y, \frac{0.7 \cdot p_{\text{cwallend}} \cdot (b)^4}{E \cdot t^4} \right] \cdot t = 0.04 \cdot \text{in}$$

$$\frac{y}{y_{\text{allow}}} = 0.24 < 1.00 \text{ OK}$$

**3/16" stainless steel plate is adequate for wall panels for out of plane loading**

### Check Connection

Maximum Wall Panel Reaction:  $R_{\text{panel}} := p_{\text{cwallend}} \cdot b = 45 \cdot \text{plf}$

Fastener Spacing:  $sp := 24 \cdot \text{in}$

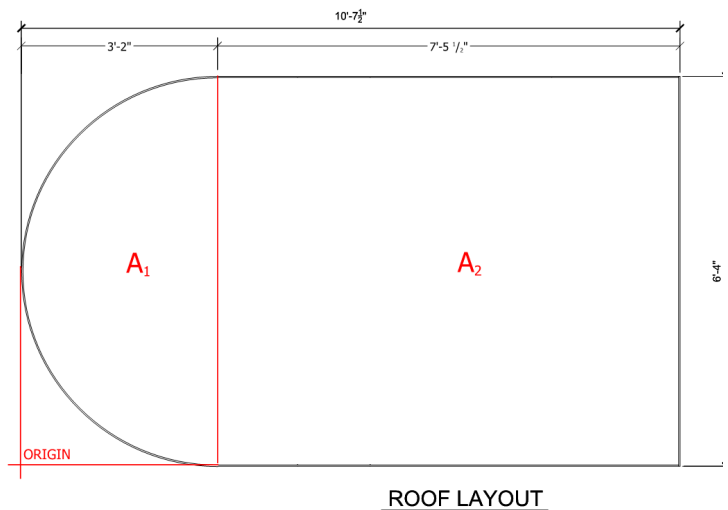
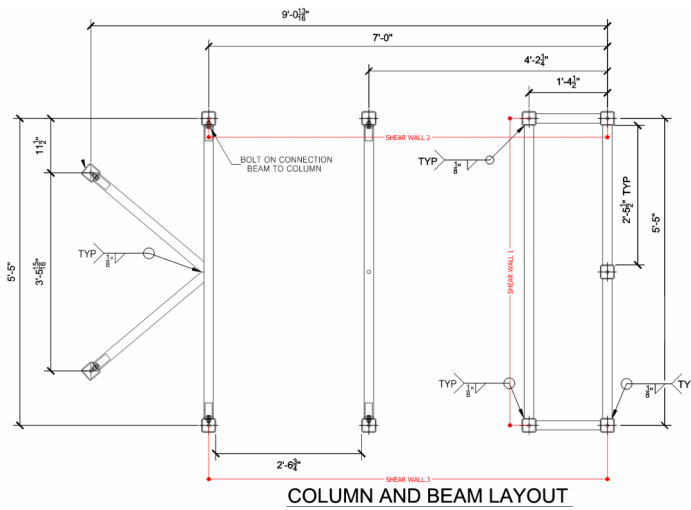
Maximum Screw Shear:  $V_{\text{max}} := R_{\text{panel}} \cdot sp = 90 \cdot \text{lbf}$

Fastener Allowable:  $V_{\text{allow}} := 912 \cdot \text{lbf}$

$$\frac{V_{\text{max}}}{V_{\text{allow}}} = 0.1 < 1.00 \text{ OK}$$

**3/8" diameter fasteners at 24" o.c. maximum are adequate for wall panel connection to posts.**  
**Fasteners to be 316 stainless steel, condition "A" ( $F_u = 75 \text{ksi}$  minimum).**

## **LATERAL DESIGN: LOAD DISTRIBUTION**



### **Geometry**

Width:  $W = 6.33\text{ft}$

Length:  $L = 10.63\text{ft}$

Rectangular Area Length:  $L_r := L - \frac{W}{2} = 7.46\text{ft}$

### **Center of Mass**

Area of Front Radius:  $A_1 := \frac{\pi \cdot \left(\frac{W}{2}\right)^2}{2} = 15.8\text{ft}^2$

Area of Rectangle:  $A_2 := L_r \cdot W = 47.2\text{ft}^2$

Total Area:  $A_{\text{tot}} := A_1 + A_2 = 63\text{ft}^2$

Centroid of Front Radius:  $\text{Cent}_{A1} := \frac{W}{2} \cdot \left(1 - \frac{4}{3 \cdot \pi}\right) = 1.82\text{ft}$

Centroid of Rectangle:  $\text{Cent}_{A2} := \frac{W}{2} + \frac{L_r}{2} = 6.9\text{ft}$

Overall Centroid:  $\text{Cent}_x := \frac{A_1 \cdot \text{Cent}_{A1} + A_2 \cdot \text{Cent}_{A2}}{A_{\text{tot}}} = 5.63\text{ft}$

$\text{Cent}_y := \frac{W}{2} = 3.17\text{ft}$

Location of Shear Wall 1:  $\text{SW}_{1x} := L - 22\text{in} = 8.79\text{ft}$

### **Direct Lateral Loads**

Parallel to Long Walls:  $V_{\text{long}} = 0.32\text{-kip}$

Parallel to Short Walls:  $V_{\text{short}} = 0.52\text{-kip}$

### **Load Distribution**

Shear Wall 1:  $V_{\text{SW1}} := V_{\text{short}} = 0.52\text{-kip}$

Shear Walls 2 & 3:  $V_{\text{SW2}} := \max\left[\frac{V_{\text{long}}}{2}, \frac{V_{\text{short}} \cdot (\text{SW}_{1x} - \text{Cent}_x)}{W}\right] = 0.26\text{-kip}$

## **LATERAL DESIGN: STEEL POST DESIGN**

### **Geometry**

Height of Shear Wall:  $H = 8.73\text{ft}$   
 Height of Steel Sheet Portion:  $H_{\text{steel}} := 6\text{ft}$   
 Height of Cantilever:  $H_{\text{cant}} := H - H_{\text{steel}} = 2.73\text{ft}$   
 Width of Shear Wall 1:  $W_{\text{SW1}} := 5.5\text{ft}$   
 Width of Shear Walls 2 & 3:  $W_{\text{SW2}} := 7\text{ft}$

### **Check Posts**

#### **HSS3x3x3/16 Section Properties**

$I_x := 2.46\text{in}^4$     $S_x := 1.64\text{in}^3$     $r_x := 1.14\text{in}$     $Z_x := 1.97\text{in}^3$     $F_y = 30\text{ksi}$     $\Omega_c := 1.67$   
 $I_y := 2.46\text{in}^4$     $S_y := 1.64\text{in}^3$     $r_y := 1.14\text{in}$     $Z_y := 1.97\text{in}^3$     $A := 1.89\text{in}^2$     $\Omega_b := 1.67$   
 $t := 0.174\text{in}$     $b := 14.2 \cdot t = 2.47\text{in}$     $h := 14.2 \cdot t = 2.47\text{in}$     $B_f := 3\text{in}$     $H_w := 3\text{in}$   
 $K := 1.0$     $H = 8.73\text{ft}$

### **Determine Nominal Axial Capacity**

Slenderness :=  $\begin{cases} \text{"nonslender"} & \text{if } \frac{b}{t} < 1.40 \cdot \sqrt{\frac{E}{F_y}} \\ \text{"slender"} & \text{if } \frac{b}{t} \geq 1.40 \cdot \sqrt{\frac{E}{F_y}} \end{cases} = \text{"nonslender"}$

### **Flexural Buckling**

$$F_e := \frac{\pi^2 \cdot E}{\left(\frac{K \cdot L}{r_x}\right)^2} = 18.78 \cdot \text{ksi}$$

$$F_{cr} := \begin{cases} 0.658 \cdot \frac{F_y}{F_e} \cdot F_y & \text{if } \frac{K \cdot H}{r_x} \leq 4.71 \cdot \sqrt{\frac{E}{F_y}} \\ 0.877 \cdot F_e & \text{if } \frac{K \cdot H}{r_x} > 4.71 \cdot \sqrt{\frac{E}{F_y}} \end{cases} = 15.37 \cdot \text{ksi}$$

$$P_n := \begin{cases} F_{cr} \cdot A & \text{if Slenderness} = \text{"nonslender"} \\ \text{"further analysis required"} & \text{if Slenderness} = \text{"slender"} \end{cases} = 29.05 \cdot \text{kip}$$

### Determine Nominal Moment Capacity

$$\text{Slenderness} := \begin{cases} \text{"compact"} & \text{if } \frac{b}{t} < 1.12 \cdot \sqrt{\frac{E}{F_y}} \\ \text{"slender"} & \text{if } \frac{b}{t} > 1.40 \cdot \sqrt{\frac{E}{F_y}} \\ \text{"noncompact"} & \text{if } 1.12 \cdot \sqrt{\frac{E}{F_y}} \leq \frac{b}{t} \leq 1.40 \cdot \sqrt{\frac{E}{F_y}} \end{cases} = \text{"compact"}$$

### Yielding

$$M_p := F_y \cdot Z_x = 4.92 \cdot \text{kip} \cdot \text{ft}$$

$$M_n := M_p = 4.92 \cdot \text{kip} \cdot \text{ft}$$

### Flange Local Buckling

$$b_e := \min \left[ 1.92 \cdot t \cdot \sqrt{\frac{E}{F_y}} \cdot \left( 1 - \frac{0.38}{\frac{b}{t}} \cdot \sqrt{\frac{E}{F_y}} \right), b \right] = 2.32 \cdot \text{in}$$

$$I_{eff} := I_x - 2 \cdot \left[ (b - b_e) \cdot t \cdot (B_f - t)^2 + \frac{(b - b_e) \cdot t^3}{12} \right] = 2.03 \cdot \text{in}^4$$

$$S_e := \frac{I_{eff}}{\frac{H_w}{2}} = 1.36 \cdot \text{in}^3$$

$$M_{n\_flb} := \begin{cases} \min \left[ M_p - (M_p - F_y \cdot S_x) \cdot \left( 3.57 \cdot \frac{b}{t} \cdot \sqrt{\frac{F_y}{E}} - 4.0 \right), M_p \right] & \text{if Slenderness} = \text{"noncompact"} = 4.92 \cdot \text{kip} \cdot \text{ft} \\ F_y \cdot S_e & \text{if Slenderness} = \text{"slender"} \\ M_n & \text{if Slenderness} = \text{"compact"} \end{cases}$$

### Web Local Buckling

$$M_{n\_wlb} := \begin{cases} \min \left[ M_p - (M_p - F_y \cdot S_x) \cdot \left( 0.305 \cdot \frac{h}{t} \cdot \sqrt{\frac{F_y}{E}} - 0.738 \right), M_p \right] & \text{if Slenderness} = \text{"noncompact"} = 4.92 \cdot \text{kip} \cdot \text{ft} \\ M_n & \text{if Slenderness} = \text{"compact"} \end{cases}$$

$$M_n := \min(M_n, M_{n\_flb}, M_{n\_wlb}) = 4.92 \cdot \text{kip} \cdot \text{ft}$$



### Check Shear Wall 1

Roof Load:  $TL_{max} = 53 \cdot \text{psf}$  \*conservatively use  $TL_{max}$  - may be negative load  
 Beam Reaction to Column:  $R_{max} = 0.41 \cdot \text{kip}$  \*conservatively use  $R_{max}$  - may be negative load  
 Shear Load to Shear Wall 1:  $V_{SW1} = 0.52 \cdot \text{kip}$   
 Width of Shear Wall 1:  $W_{SW1} = 5.5 \text{ ft}$   
 Reaction due to Shear Couple:  $R_{shear} := \frac{V_{SW1} \cdot H}{W_{SW1}} = 0.83 \cdot \text{kip}$

### Check Stress

Axial Load:  $P_{max} := R_{max} + R_{shear} = 1.23 \cdot \text{kip}$

$$\frac{P_{max} \cdot \Omega_c}{P_n} = 0.07 < 1.00 \text{ OK}$$

Moment Due to Cantilever:  $M_{cant} := \frac{V_{SW1} \cdot H_{cant}}{2} = 0.71 \cdot \text{kip} \cdot \text{ft}$

$$\frac{M_{cant} \cdot \Omega_b}{M_n} = 0.24 < 1.00 \text{ OK}$$

Combined Stress:

$$\text{UNITY} := \begin{cases} \frac{P_{max} \cdot \Omega_c}{P_n} + \frac{8}{9} \cdot \frac{M_{cant} \cdot \Omega_b}{M_n} & \text{if } \frac{P_{max} \cdot \Omega_c}{P_n} \geq 0.2 \\ \frac{P_{max} \cdot \Omega_c}{2 \cdot P_n} + \frac{M_{cant} \cdot \Omega_b}{M_n} & \text{if } \frac{P_{max} \cdot \Omega_c}{P_n} < 0.2 \end{cases} = 0.28 < 1.00 \text{ OK}$$

**HSS3x3x3/16" tubes are adequate for Lateral force resisting system posts**

### Check Shear Walls 2 & 3

Roof Load:  $TL_{max} = 53 \cdot \text{psf}$  \*conservatively use  $TL_{max}$  - may be negative load  
 Beam Reaction to Column:  $R_{max} = 0.41 \cdot \text{kip}$  \*conservatively use  $R_{max}$  - may be negative load  
 Shear Load to Shear Wall 2:  $V_{SW2} = 0.26 \cdot \text{kip}$   
 Width of Shear Wall 2:  $W_{SW2} = 7 \text{ ft}$   
 Reaction due to Shear Couple:  $R_{shear} := \frac{V_{SW2} \cdot H}{W_{SW2}} = 0.32 \cdot \text{kip}$

### Check Stress

Axial Load:  $P_{max} := R_{max} + R_{shear} = 0.73 \cdot \text{kip}$

$$\frac{P_{max} \cdot \Omega_c}{P_n} = 0.04 < 1.00 \text{ OK}$$

Moment Due to Cantilever:  $M_{cant} := \frac{V_{SW1} \cdot H_{cant}}{2} = 0.71 \cdot \text{kip} \cdot \text{ft}$

$$\frac{M_{cant} \cdot \Omega_b}{M_n} = 0.24 < 1.00 \text{ OK}$$

Combined Stress:

$$\text{UNITY} := \begin{cases} \frac{P_{max} \cdot \Omega_c}{P_n} + \frac{8}{9} \cdot \frac{M_{cant} \cdot \Omega_b}{M_n} & \text{if } \frac{P_{max} \cdot \Omega_c}{P_n} \geq 0.2 \\ \frac{P_{max} \cdot \Omega_c}{2 \cdot P_n} + \frac{M_{cant} \cdot \Omega_b}{M_n} & \text{if } \frac{P_{max} \cdot \Omega_c}{P_n} < 0.2 \end{cases} = 0.26 < 1.00 \text{ OK}$$

**HSS3x3x3/16" tubes are adequate for Lateral force resisting system posts**

## LATERAL DESIGN: STEEL POST ANCHORAGE

Seismic Overstrength Factor:  $\Omega_0 := 2.5$

\*total base shear over 2 posts (conservative)

Maximum Post Shear:  $V_{\text{post}} := \max\left(\frac{V_W}{2}, \frac{\Omega_0 \cdot V_E}{2}\right) = 0.5 \cdot \text{kip}$

Maximum Uplift Force:  $P_{\text{uplift}} := \max\left[\frac{\Omega_0 \cdot V_{\text{roof}} \cdot H}{W_{\text{SW1}}}, \frac{\Omega_0 \cdot V_{\text{roof}} \cdot H}{W_{\text{SW2}}}, \frac{(V_{\text{WS}}) \cdot H}{W_{\text{SW1}}} + \frac{\text{Proofend} \cdot L \cdot W}{11}, \frac{(V_{\text{WL}}) \cdot H}{W_{\text{SW2}}} + \frac{\text{Proofend} \cdot L \cdot W}{11}\right] = 0.75 \cdot \text{kip}$

Resisting Force:  $P_{\text{resist}} := \frac{\text{Weight}}{11} = 0.76 \cdot \text{kip}$  \*total unit weight over 11 posts

Resultant Load:  $P_{\text{net}} := |0.6 \cdot P_{\text{resist}} - P_{\text{uplift}}| = 0.3 \cdot \text{kip}$

### Check Plate

Plate Thickness:  $t_{\text{plate}} := 0.5 \text{ in}$

Plate Width:  $w_{\text{plate}} := 3 \text{ in}$

Plate Yield Strength:  $F_{y_{\text{plate}}} := 30 \text{ ksi}$

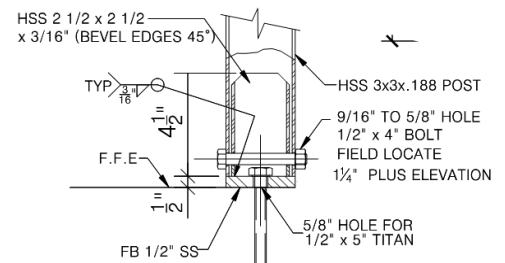
Plastic Modulus of Plate:  $Z_{\text{plate}} := \frac{t_{\text{plate}}^2 \cdot w_{\text{plate}}}{4} = 0.19 \cdot \text{in}^3$

Safety Factor:  $\Omega_b := 1.67$

Maximum Moment on Plate:  $M_{\text{plate}} := \frac{P_{\text{net}} \cdot w_{\text{plate}}}{4} = 0.22 \cdot \text{kip} \cdot \text{in}$

Allowable Moment on Plate:  $M_{\text{allow}} := \frac{F_{y_{\text{plate}}} \cdot Z_{\text{plate}}}{\Omega_b} = 3.37 \cdot \text{kip} \cdot \text{in}$

$\frac{M_{\text{plate}}}{M_{\text{allow}}} = 0.07 < 1.00 \text{ OK}$



**SECTION A-A**  
Typ anchoring system  
(11) REQ'D

### Check Weld

Weld Thickness:  $t_w := 0.1875 \text{ in}$

Filler Metal Strength:  $F_{EXX} := 70 \text{ ksi}$

Safety Factor:  $\Omega_w := 2.70$

Weld Width:  $b_w := w_{\text{plate}} = 3 \cdot \text{in}$

Weld Height:  $d_w := w_{\text{plate}} = 3 \cdot \text{in}$

Total Weld Length:  $A_w := 2 \cdot b_w + 2 \cdot d_w = 12 \cdot \text{in}$

Vertical Load on Weld:  $V_{\text{vert}} := \frac{P_{\text{lift}}}{A_w} = 0.17 \cdot \frac{\text{kip}}{\text{in}}$

Horizontal Load on Weld:  $V_{\text{hor}} := \frac{V_{\text{post}}}{A_w} = 0.05 \cdot \frac{\text{kip}}{\text{in}}$

Resultant Load on Weld:  $V_{\text{weld}} := \sqrt{V_{\text{vert}}^2 + V_{\text{hor}}^2} = 0.18 \cdot \frac{\text{kip}}{\text{in}}$

Allowable Weld Strength:  $V_{\text{allow}} := \frac{0.6 \cdot F_{EXX} \cdot 0.707 \cdot t_w}{\Omega_w} = 2.06 \cdot \frac{\text{kip}}{\text{in}}$

$\frac{V_{\text{weld}}}{V_{\text{allow}}} = 0.09 < 1.00 \text{ OK}$

### Check Bolt

Allowable Shear Stress (316SS):  $F_v := 12.99 \text{ ksi}$

Nominal Bolt Diameter:  $d := 0.5 \text{ in}$

Thread Root Area:  $A_R := 0.1292 \text{ in}^2$

Tensile Strength of HSS:  $F_{uHSS} := 58 \text{ ksi}$   
 $F_u := F_{uHSS} = 58 \text{ ksi}$

HSS Wall Thickness:  $t = 0.174 \text{ in}$

Maximum Bolt Shear:  $V_{max} := \frac{P_{net}}{2} = 148 \text{ lbf}$  \*two shear planes

Clear Distance to Plate Edge:  $l_c := 0.75 \text{ in} - \frac{(d + 0.0625 \text{ in})}{2} = 0.47 \text{ in}$

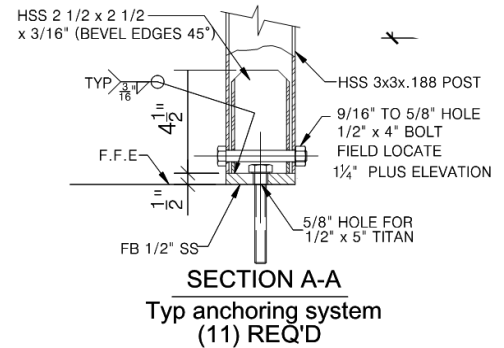
Safety Factor:  $\Omega_{brg} := 2.0$

Bearing Strength:  $V_{brg} := \min\left(\frac{1.2 \cdot l_c \cdot t \cdot F_u}{\Omega_{brg}}, \frac{2.4 \cdot d \cdot t \cdot F_u}{\Omega_{brg}}\right) = 2838 \text{ lbf}$

Bolt Strength:  $V_{bolt} := F_v \cdot A_R = 1678.31 \text{ lbf}$

$V_{allow} := \min(V_{brg}, V_{bolt}) = 1678.31 \text{ lbf}$

$\frac{V_{max}}{V_{allow}} = 0.09 < 1.00 \text{ OK}$



### Check Anchorage to Foundation

Base Shear per Post:  $V_{post} = 0.54 \text{ kip}$

$V_{anchor} := 1.428 \cdot V_{post} = 0.78 \text{ kip}$  \*convert to LRFD load

Net Uplift per Post:  $P_{net} = 0.3 \text{ kip}$

$T_{anchor} := 1.6 \cdot P_{net} = 0.47 \text{ kip}$  \*convert to LRFD load

**1/2" thick stainless steel plate with HSS 2 1/2 x 2 1/2 x 3/16 is adequate.**  
**Use 3/16" fillet weld all-around for HSS connection to plate.**  
**Use 1/2" diameter bolt for post connection to hold downs.**  
**Bolts to be 316 stainless steel, condition "A" ( $F_u = 75 \text{ ksi}$  minimum).**  
**Use 1/2" Titen HD (4" embedment) to slab. See Simpson Anchor Designer output for analysis.**

## **LATERAL DESIGN: STEEL PLATE SHEAR WALL**

### **Geometry**

Height of Shear Wall:  $H = 8.73\text{ft}$   
Height of Steel Sheet Portion:  $H_{\text{steel}} = 6\text{ft}$   
Width of Shear Wall 1:  $W_{\text{SW1}} = 5.5\text{ft}$   
Width of Shear Walls 2 & 3:  $W_{\text{SW2}} = 7\text{ft}$

### **Load Distribution**

Shear Wall 1:  $V_{\text{SW1}} = 0.52\text{-kip}$   
Shear Walls 2 & 3:  $V_{\text{SW2}} = 0.26\text{-kip}$   
Angles of Inclination of Load(s):  
 $\theta_{\text{SW1}} := \text{atan}\left(\frac{H}{W_{\text{SW1}}}\right) = 57.8\text{-deg}$   
 $\theta_{\text{SW2}} := \text{atan}\left(\frac{H_{\text{steel}}}{1.33\text{ft}}\right) = 77.5\text{-deg}$  \*narrowest panel, SW2/3  
 $\theta_{\text{SW3}} := \text{atan}\left(\frac{H_{\text{steel}}}{2.92\text{ft}}\right) = 64.05\text{-deg}$  \*widest panel, SW2/3  
Resultant Tension in Tension Field:  
 $T_{\text{strap}} := \max\left[\frac{V_{\text{SW1}}}{\cos(\theta_{\text{SW1}})}, \frac{V_{\text{SW2}} \cdot \left(\frac{1.33\text{ft}}{W_{\text{SW2}}}\right)}{\cos(\theta_{\text{SW2}})}, \frac{V_{\text{SW2}} \cdot \left(\frac{2.92\text{ft}}{W_{\text{SW2}}}\right)}{\cos(\theta_{\text{SW3}})}\right] = 0.98\text{-kip}$   
Plate Thickness:  $t_{\text{pl}} := 0.1875\text{in}$   
Plate Yield Stress:  $F_y = 30\text{-ksi}$   
Minimum Tension Field Width:  
 $w_{\text{strap}} := \frac{T_{\text{strap}}}{\left(\frac{t_{\text{pl}} \cdot F_y}{1.67}\right)} = 0.29\text{-in}$   
Section Modulus of Plate at Bend:  
 $S_{\text{plate}} := \frac{t_{\text{pl}}^2 \cdot 11\text{in}}{6} = 0.06\text{-in}^3$   
Allowable Moment at Plate Connection to Post:  
 $M_{\text{all\_plate}} := \frac{F_y \cdot S_{\text{plate}}}{1.67} = 1.16\text{-kip-in}$   
Weak Axis Moment at Plate Connection to Post:  
 $M_{\text{pl\_w}} := \max(V_{\text{SW1}}, V_{\text{SW2}}) \cdot 1\text{in} = 0.52\text{-kip-in}$   
 $\frac{M_{\text{pl\_w}}}{M_{\text{all\_plate}}} = 0.45 < 1.00 \text{ OK}$

**3/16" stainless steel plate is adequate for wall panels for in plane loading**

## **LATERAL DESIGN: STEEL PLATE SHEAR WALL (continued)**

Shear Wall 1 Horizontal Load:  $V_{SW1} = 0.52 \cdot \text{kip}$

Shear Wall 1 Vertical Shear at Plate to Post:  $V_{SW1V} := \frac{V_{SW1} \cdot H_{\text{steel}}}{W_{SW1} - 2 \cdot (3 \text{ in})} = 0.62 \cdot \text{kip}$

Shear Wall 2 & 3 Horizontal Load:  $V_{SW2} = 0.26 \cdot \text{kip}$

Shear Wall 2 & 3 Vertical Shear at Plate to Post:  $V_{SW2V} := \frac{V_{SW2} \cdot H_{\text{steel}}}{W_{SW2} - 2 \cdot (3 \text{ in})} = 0.24 \cdot \text{kip}$

### **Check Fasteners to Post ((3) 3/8" Dia. 316 SS Screws)**

Allowable Shear Stress (316SS):  $F_v := 12.99 \text{ ksi}$

Allowable Tensile Stress (316SS):  $F_T := 22.5 \text{ ksi}$

Nominal Bolt Diameter:  $d := 0.375 \text{ in}$

Thread Root Area:  $A_R := 0.0699 \text{ in}^2$

Tensile Stress Area:  $A_S := 0.0775 \text{ in}^2$

Threads Per Inch:  $n := 16$

External Thread Stripping Area:  $A_{TSE} := 0.0360 \text{ in}^2$

Tensile Strength of HSS:  $F_{uHSS} := 58 \text{ ksi}$

Tensile Strength of Plate:  $F_{uPL} := 58 \text{ ksi}$

$F_u := \min(F_{uHSS}, F_{uPL}) = 58 \cdot \text{ksi}$

HSS Wall Thickness:  $t = 0.174 \cdot \text{in}$

$t := \min(t, t_{pl}) = 0.174 \cdot \text{in}$

Maximum Fastener Shear:  $V_{\max} := \frac{\max(V_{SW1V}, V_{SW2V})}{3} = 208 \cdot \text{lbf}$  \*conservatively assume 3 fasteners

Clear Distance to Plate Edge:  $l_c := 0.75 \text{ in} - \frac{(d + 0.0625 \text{ in})}{2} = 0.53 \cdot \text{in}$  \*conservative

Safety Factor:  $\Omega_{brg} := 2.0$

Bearing Strength:  $V_{brg} := \min\left(\frac{1.2 \cdot l_c \cdot t \cdot F_u}{\Omega_{brg}}, \frac{2.4 \cdot d \cdot t \cdot F_u}{\Omega_{brg}}\right) = 3217 \cdot \text{lbf}$  (Eq. J3-6A & J3-6C AISC)

Fastener Strength:  $V_{\text{fast}} := F_v \cdot A_R = 908 \cdot \text{lbf}$

$V_{\text{allow}} := \min(V_{brg}, V_{\text{fast}}) = 908 \cdot \text{lbf}$

Maximum Fastener Tension:  $T_{\max} := \frac{\max(V_{SW1}, V_{SW2}) \cdot (1 \text{ in} + 1 \text{ in})}{2.25 \text{ in}} = 462.11 \cdot \text{lbf}$

Pullout Strength:  $T_{po} := t \cdot \left(\frac{n}{\text{in}}\right) \cdot A_{TSE} \cdot \frac{(0.75 \cdot F_y)}{\sqrt{3}} = 1301.95 \cdot \text{lbf}$

Fastener Strength:  $T_{\text{fast}} := F_T \cdot A_S = 1743.75 \cdot \text{lbf}$

$T_{\text{allow}} := \min(T_{po}, T_{\text{fast}}) = 1301.95 \cdot \text{lbf}$

$\left(\frac{T_{\max}}{T_{\text{allow}}}\right)^2 + \left(\frac{V_{\max}}{V_{\text{allow}}}\right)^2 = 0.18 < 1.00 \text{ OK}$

**((3) 3/8" diameter fasteners are adequate for shear wall connection to posts. Fasteners to be 316 stainless steel, condition "A" (F<sub>y</sub> = 75ksi minimum).**

## **FOUNDATION DESIGN:**

### **Geometry**

Width of Foundation:	$W_{\text{found}} := 6\text{ft} + 8\text{in}$
Length of Foundation:	$L_{\text{found}} := 11\text{ft}$
Depth of Foundation:	$d_{\text{found}} := 18\text{in}$
Density of Concrete:	$\gamma_{\text{conc}} := 150\text{pcf}$
Total Area of Foundation:	$A_{\text{found}} := W_{\text{found}} \cdot L_{\text{found}} = 73.33\text{-ft}^2$
Volume of Foundation:	$V_{\text{found}} := A_{\text{found}} \cdot d_{\text{found}} = 110\text{-ft}^3$
Total Weight of Foundation:	$W_{\text{found}} := V_{\text{found}} \cdot \gamma_{\text{conc}} = 16.5\text{-kip}$
Allowable Soil Bearing:	$Q_{\text{allow}} = 1500\text{-psf}$

### **Check Bearing**

Bearing Pressure on Soil:  $w_{\text{brg}} := \frac{TL_{\text{pos}} \cdot L \cdot W + \text{Weight} + W_{\text{found}}}{A_{\text{found}}} = 387.65\text{-psf}$

$\frac{w_{\text{brg}}}{Q_{\text{allow}}} = 0.26 < 1.00 \text{ OK}$

\*conservatively combine load on roof plate with structure weight and foundation weight

### **Check Uplift**

Maximum Net Uplift:  $w_{\text{uplift}} := 0.6 \cdot \text{Weight} - TL_{\text{neg}} \cdot L \cdot W = 3268.51\text{-lbf}$

### **Check Overturning**

Maximum Shear Wall Net Uplift:  $P_{\text{net}} = 0.3\text{-kip}$

$M_{\text{over}} := P_{\text{net}} \cdot \max(L_{\text{found}}, W_{\text{found}}) = 3.25\text{-kip}\cdot\text{ft}$  \*apply uplift at edge

$M_{\text{resist}} := .6W_{\text{found}} \cdot \frac{W_{\text{found}}}{2} = 33\text{-kip}\cdot\text{ft}$  \*apply resisting load at 1/2 distance of overturning load

$\frac{M_{\text{over}}}{M_{\text{resist}}} = 0.1 < 1.00 \text{ OK}$

**1'-6" concrete foundation is adequate to support the structure.**

**Per IBC 2015 Sec. 1809.5 no frost protection required.**



**Anchor Designer™**  
**Software**  
Version 3.0.7947.0

Company:		Date:	8/1/2022
Engineer:		Page:	1/5
Project:			
Address:			
Phone:			
E-mail:			

### **1. Project information**

Customer company:  
Customer contact name:  
Customer e-mail:  
Comment:

Project description:  
Location:  
Fastening description:

### **2. Input Data & Anchor Parameters**

#### **General**

Design method: ACI 318-14  
Units: Imperial units

#### **Anchor Information:**

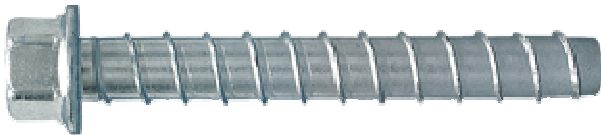
Anchor type: Concrete screw  
Material: Carbon Steel  
Diameter (inch): 0.500  
Nominal Embedment depth (inch): 4.000  
Effective Embedment depth,  $h_{ef}$  (inch): 2.990  
Code report: ICC-ES ESR-2713  
Anchor category: 1  
Anchor ductility: No  
 $h_{min}$  (inch): 6.25  
 $c_{ac}$  (inch): 4.50  
 $C_{min}$  (inch): 1.75  
 $S_{min}$  (inch): 3.00

#### **Base Material**

Concrete: Normal-weight  
Concrete thickness,  $h$  (inch): 30.00  
State: Cracked  
Compressive strength,  $f'_c$  (psi): 4000  
 $\Psi_{c,v}$ : 1.0  
Reinforcement condition: B tension, B shear  
Supplemental reinforcement: Not applicable  
Reinforcement provided at corners: No  
Ignore concrete breakout in tension: No  
Ignore concrete breakout in shear: No  
Ignore 6do requirement: Not applicable  
Build-up grout pad: No

#### **Recommended Anchor**

Anchor Name: Titen HD® - 1/2"Ø Titen HD,  $h_{nom}$ : 4" (102mm)  
Code Report: ICC-ES ESR-2713







Company:		Date:	8/1/2022
Engineer:		Page:	2/5
Project:			
Address:			
Phone:			
E-mail:			

#### Load and Geometry

Load factor source: ACI 318 Section 5.3

Load combination: not set

Seismic design: Yes

Anchors subjected to sustained tension: Not applicable

Ductility section for tension: 17.2.3.4.3 (d) is satisfied

Ductility section for shear: 17.2.3.5.3 (c) is satisfied

$\Omega_0$  factor: not set

Apply entire shear load at front row: No

Anchors only resisting wind and/or seismic loads: No

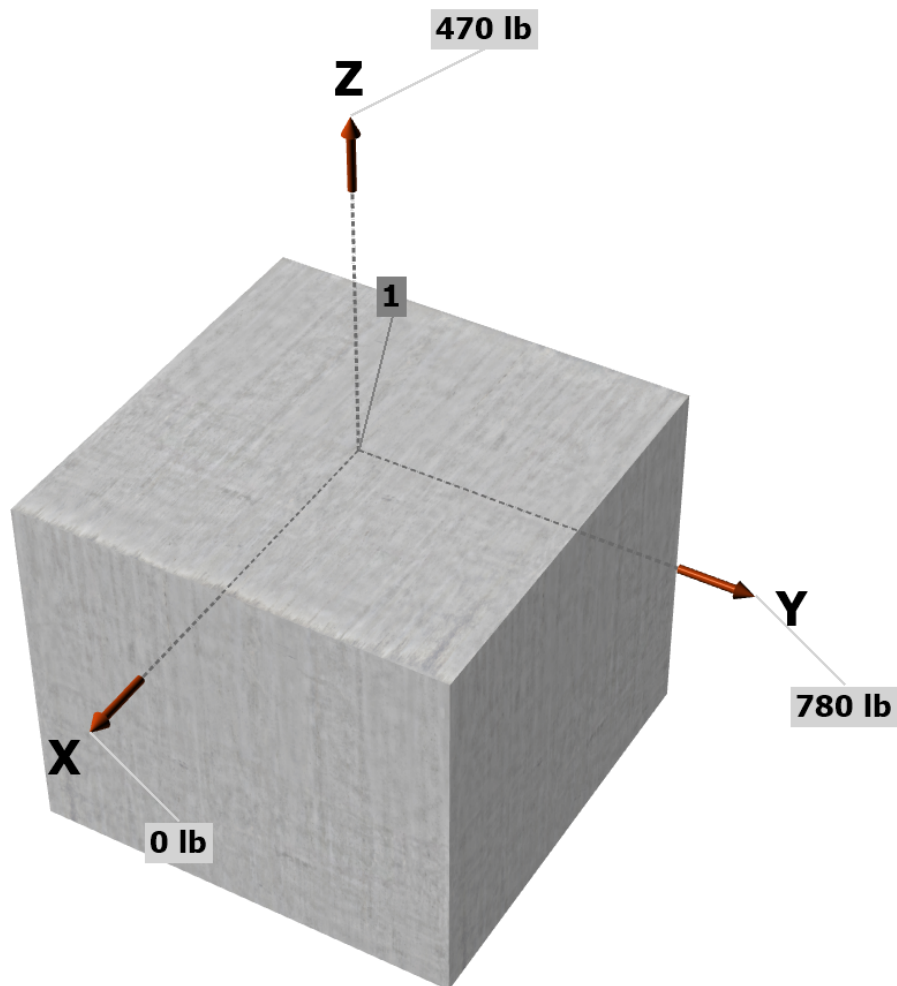
Strength level loads:

$N_{ua}$  [lb]: 470

$V_{uax}$  [lb]: 0

$V_{uay}$  [lb]: 780

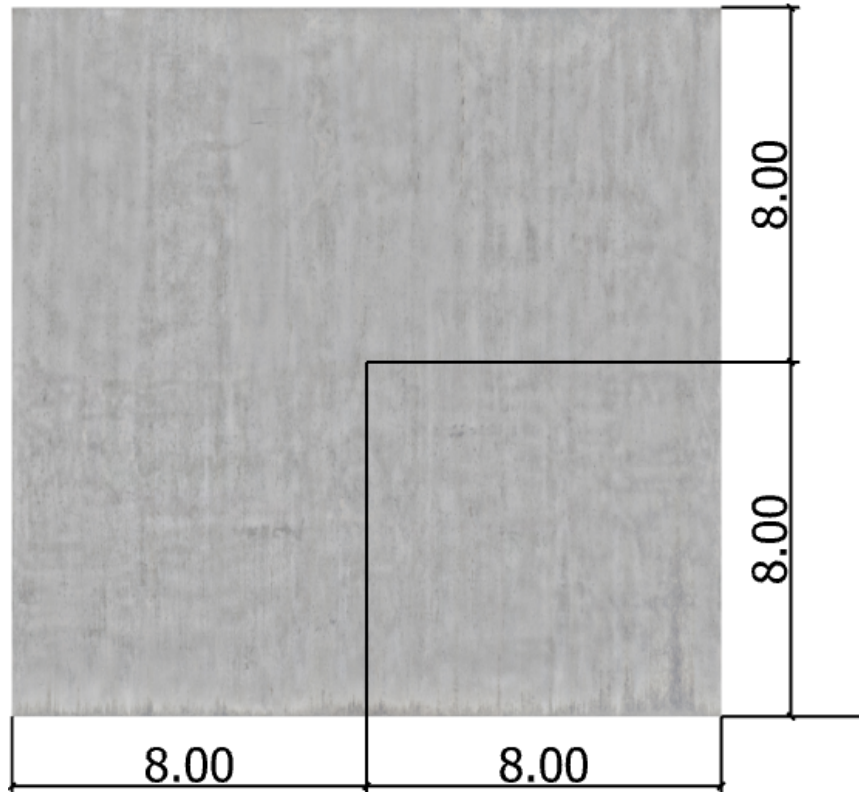
<Figure 1>





Company:		Date:	8/1/2022
Engineer:		Page:	3/5
Project:			
Address:			
Phone:			
E-mail:			

<Figure 2>





Anchor Designer™  
Software  
Version 3.0.7947.0

Company:		Date:	8/1/2022
Engineer:		Page:	4/5
Project:			
Address:			
Phone:			
E-mail:			

### 3. Resulting Anchor Forces

Anchor	Tension load, $N_{ua}$ (lb)	Shear load x, $V_{uax}$ (lb)	Shear load y, $V_{uay}$ (lb)	Shear load combined, $\sqrt{(V_{uax})^2 + (V_{uay})^2}$ (lb)
1	470.0	0.0	780.0	780.0
Sum	470.0	0.0	780.0	780.0

Maximum concrete compression strain (%): 0.00  
Maximum concrete compression stress (psi): 0  
Resultant tension force (lb): 470  
Resultant compression force (lb): 0  
Eccentricity of resultant tension forces in x-axis,  $e'_{Nx}$  (inch): 0.00  
Eccentricity of resultant tension forces in y-axis,  $e'_{Ny}$  (inch): 0.00  
Eccentricity of resultant shear forces in x-axis,  $e'_{Vx}$  (inch): 0.00  
Eccentricity of resultant shear forces in y-axis,  $e'_{Vy}$  (inch): 0.00

### 4. Steel Strength of Anchor in Tension (Sec. 17.4.1)

$N_{sa}$ (lb)	$\phi$	$\phi N_{sa}$ (lb)
20130	0.65	13085

### 5. Concrete Breakout Strength of Anchor in Tension (Sec. 17.4.2)

$$N_b = k_c \lambda_a \sqrt{f'_c} h_{ef}^{1.5} \text{ (Eq. 17.4.2.2a)}$$

$k_c$	$\lambda_a$	$f'_c$ (psi)	$h_{ef}$ (in)	$N_b$ (lb)
17.0	1.00	4000	2.990	5559

$$0.75 \phi N_{cb} = 0.75 \phi (A_{Nc} / A_{Nco}) \psi_{ed,N} \psi_{c,N} \psi_{cp,N} N_b \text{ (Sec. 17.3.1 & Eq. 17.4.2.1a)}$$

$A_{Nc}$ (in <sup>2</sup> )	$A_{Nco}$ (in <sup>2</sup> )	$c_{a,min}$ (in)	$\psi_{ed,N}$	$\psi_{c,N}$	$\psi_{cp,N}$	$N_b$ (lb)	$\phi$	$0.75 \phi N_{cb}$ (lb)
80.46	80.46	8.00	1.000	1.00	1.000	5559	0.65	2710

### 8. Steel Strength of Anchor in Shear (Sec. 17.5.1)

$V_{sa}$ (lb)	$\phi_{grout}$	$\phi$	$\phi_{grout} \phi V_{sa}$ (lb)
4790	1.0	0.60	2874

### 9. Concrete Breakout Strength of Anchor in Shear (Sec. 17.5.2)

Shear perpendicular to edge in y-direction:

$$V_{by} = \min[7(l_e / d_a)^{0.2} \sqrt{d_a} \lambda_a \sqrt{f'_c} c_{a1}^{1.5}; 9 \lambda_a \sqrt{f'_c} c_{a1}^{1.5}] \text{ (Eq. 17.5.2.2a & Eq. 17.5.2.2b)}$$

$l_e$ (in)	$d_a$ (in)	$\lambda_a$	$f'_c$ (psi)	$c_{a1}$ (in)	$V_{by}$ (lb)
2.99	0.500	1.00	4000	8.00	10130

$$\phi V_{cb,y} = \phi (A_{Vc} / A_{Vco}) \psi_{ed,V} \psi_{c,V} \psi_{h,V} V_{by} \text{ (Sec. 17.3.1 & Eq. 17.5.2.1a)}$$

$A_{Vc}$ (in <sup>2</sup> )	$A_{Vco}$ (in <sup>2</sup> )	$\psi_{ed,V}$	$\psi_{c,V}$	$\psi_{h,V}$	$V_{by}$ (lb)	$\phi$	$\phi V_{cb,y}$ (lb)
192.00	288.00	0.900	1.000	1.000	10130	0.70	4254

Shear parallel to edge in x-direction:

$$V_{by} = \min[7(l_e / d_a)^{0.2} \sqrt{d_a} \lambda_a \sqrt{f'_c} c_{a1}^{1.5}; 9 \lambda_a \sqrt{f'_c} c_{a1}^{1.5}] \text{ (Eq. 17.5.2.2a & Eq. 17.5.2.2b)}$$

$l_e$ (in)	$d_a$ (in)	$\lambda_a$	$f'_c$ (psi)	$c_{a1}$ (in)	$V_{by}$ (lb)
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Input data and results must be checked for agreement with the existing circumstances, the standards and guidelines must be checked for plausibility.



Anchor Designer™  
Software  
Version 3.0.7947.0

Company:		Date:	8/1/2022
Engineer:		Page:	5/5
Project:			
Address:			
Phone:			
E-mail:			

2.99	0.500	1.00	4000	8.00	10130		
$\phi V_{cbx} = \phi (2)(A_{Vc} / A_{Vco}) \Psi_{ed,V} \Psi_{c,V} \Psi_{h,V} V_{by}$ (Sec. 17.3.1, 17.5.2.1(c) & Eq. 17.5.2.1a)							
$A_{Vc}$ (in <sup>2</sup> )	$A_{Vco}$ (in <sup>2</sup> )	$\Psi_{ed,V}$	$\Psi_{c,V}$	$\Psi_{h,V}$	$V_{by}$ (lb)	$\phi$	$\phi V_{cbx}$ (lb)
192.00	288.00	1.000	1.000	1.000	10130	0.70	9454

#### 10. Concrete Pryout Strength of Anchor in Shear (Sec. 17.5.3)

$$\phi V_{cp} = \phi k_{cp} N_{cb} = \phi k_{cp} (A_{Nc} / A_{Nco}) \Psi_{ed,N} \Psi_{c,N} \Psi_{cp,N} N_b \quad (\text{Sec. 17.3.1 \& Eq. 17.5.3.1a})$$

$k_{cp}$	$A_{Nc}$ (in <sup>2</sup> )	$A_{Nco}$ (in <sup>2</sup> )	$\Psi_{ed,N}$	$\Psi_{c,N}$	$\Psi_{cp,N}$	$N_b$ (lb)	$\phi$	$\phi V_{cp}$ (lb)
2.0	80.46	80.46	1.000	1.000	1.000	5559	0.70	7782

#### 11. Results

##### Interaction of Tensile and Shear Forces (Sec. 17.6.)

Tension	Factored Load, $N_{ua}$ (lb)	Design Strength, $\phi N_n$ (lb)	Ratio	Status	
Steel	470	13085	0.04	Pass	
Concrete breakout	470	2710	0.17	Pass (Governs)	
Shear	Factored Load, $V_{ua}$ (lb)	Design Strength, $\phi V_n$ (lb)	Ratio	Status	
Steel	780	2874	0.27	Pass (Governs)	
T Concrete breakout y+	780	4254	0.18	Pass	
Concrete breakout x-	780	9454	0.08	Pass	
Pryout	780	7782	0.10	Pass	
Interaction check	$N_{ua}/\phi N_n$	$V_{ua}/\phi V_n$	Combined Ratio	Permissible	Status
Sec. 17.6..2	0.00	0.27	27.1%	1.0	Pass

1/2"Ø Titen HD, hnom:4" (102mm) meets the selected design criteria.

#### 12. Warnings

- Per designer input, ductility requirements for tension have been determined to be satisfied – designer to verify.
- Per designer input, ductility requirements for shear have been determined to be satisfied – designer to verify.
- Designer must exercise own judgement to determine if this design is suitable.
- Refer to manufacturer's product literature for hole cleaning and installation instructions.