Town of Dedham

Rana Mana-Doerfer Director of Procurement



Town of Dedham

Department of Facilities & Maintenance
Denise Moroney, Director of Facilities & Maintenance
Web site: www.dedham-ma.gov

<u>Dedham Capen Dance Studio Renovations 2023</u>
<u>Invitation for Bid</u>
20230010

Procurement Overview

Primary Contact (bid questions)	Rana Mana-Doerfer, Director of Procurement		
Contract Manager	Denise Moroney, Director of Facilities & Maintenance		
Bid Package Available	March 2, 2023-Information and details of bidding		
	requirements may be obtained at the Town Manager's		
	Office, 450 Washington St, Dedham, MA 02026, 3rd floor		
	for a \$50 non-refundable fee, or online at the Town's		
	Website for FREE		
Optional Pre-Bid Meeting	Wednesday March 8th, 2023 @ 10:00 AM (322 Sprague		
	Street)		
Bid Deposit	5% bid deposit is required as part of bid		
Deadline for Written Questions	Friday March 10th, 2023 @ 4:00 PM. Questions can be		
	submitted via mail, or email using the information		
	below.		
	By mail: Attn: Procurement Office, 450 Washington		
	Street, Dedham, MA 02026		
	By Email: <u>procurement@dedham-ma.gov</u>		
	All Question Will be Answered in a formal addendum		
Addenda	If any changes are made to this bid, an addendum will		
	be issued. Addenda will be posted on the Town's		
	Webpage and emailed to all bidders on our recorded		
	bidders list.		
When and Where Bids are Due	Friday March 24th, 2023 @ 10:00 AM. Attn: Director of		
	Procurement, Town Hall, 450 Washington St, Dedham,		
	MA 02026.		
Bid Opening	Friday March 24th, 2023 at 10:00 AM		
	Dedham Town Hall, Room 305, 3 rd Floor		
Number of Required Copies	ONE (1) Original, 2 Copies, AND 1 Digital USB Copy. 4		
	total.		
Contract Award	Award will be made within 90 business days upon Town		
	Manager and Town Counsel Approval and Signature		
Upon Award of Contract			
Payment Bond	100% of the bid value		
Performance Bond	100% of the bid value		
Insurance Refer to Contract Terms	Insurance Refer to Contract Terms (See page 00800-		
	2)		

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SECTION 00020

INVITATION FOR BIDS

Sealed bids for furnishing the following item will be received at the Office of the Town Manager, Third Floor, Suite 322, Dedham Town Hall, Dedham, MA 02026 until the time specified below at which time the bids will be publicly opened and read.

Specifications and bid forms may be obtained at the Office of the Town Manager's Office, 450 Washington St, Dedham, MA 02026, 3rd floor for a \$50 non-refundable fee, or online at the Town's Website for **FREE**

Bids will be opened in the Dedham Town Hall, room 305 on _Friday March 24th, 2023 @ 10:00 AM. Each Bid must be accompanied by a bid security consisting of a <u>BID BOND, CASH</u>, or, <u>CERTIFIED CHECK</u> issued by a responsible bank or trust company in the amount of 5% of the bid price.

Pre-Bid Conference and Site Visit will be held at the _Old Capen Building_ located at 322 Sprague Street, Dedham, MA 02026_, on Wednesday March 8th, 2023 at 10:00 a.m. It is imperative that all prospective bidders have a representative in attendance.

A performance bond in an amount equal to 100 percent of the total amount of the contract price with a surety company qualified to do business in the Commonwealth of Massachusetts will be required for the faithful performance of the contract, as well as a labor and materials bond in an amount equal to 100 percent of the total contract price.

All bids for this project are subject to applicable public bidding laws of Massachusetts, including, but not limited to G.L. c.149, §§44A-44H, as amended.

Attention is directed to the minimum wage rates to be paid as determined by the Commissioner of Labor and Workforce Development and the weekly payroll record submittal requirements under the provisions of Massachusetts General Laws, Chapter 149, Section 26 through 27D inclusive.

Selection of the contractor will be based upon bidder qualifications, including evidence of past performance in similar projects, and bid price. The contract will be awarded to the bidder deemed by the awarding authority to be the lowest responsible and eligible bidder.

The bidder agrees that its bid shall be good and may not be withdrawn for a period of 30 days, Saturdays, Sundays and legal holidays excluded, after the opening of the bids.

The Town reserves the right to waive any informalities, to accept or reject, in whole or in part any or all bids, or take whatever other action may be deemed to be in the best interest of the Town.

The Town of Dedham

By: Leon I. Goodwin, III, Town Manager

SECTION 00100

INSTRUCTIONS TO BIDDERS

1. Receipt and Opening of Bids

The Town of Dedham, Massachusetts, herein called the Owner, acting by and through its Town Manager, will receive sealed Bids for the project known as the DEDHAM CAPEN DANCE STUDIO 2023 Project.

General bids shall be addressed to the Town of Dedham, Attn: Procurement Department___, ___Dedham Town Hall, Third Floor, suite 322, Dedham, MA _02026_ and endorsed "Bid for DEDHAM CAPEN DANCE STUDIO 2023 Project" (Project) will be received at the Office of the Town Manager until 10:00 a.m. prevailing time, on Friday March 24th, 2023 @ 10:00 am at which time and place said bids will be publicly opened and read aloud.

Any bid may be withdrawn prior to the above scheduled time for the opening of bids or authorized postponement thereof. Any bid received after the time and date specified will not be considered. The bidder agrees that its bid shall be good and may not be withdrawn for a period of 30 days, Saturdays, Sundays, and legal holidays excluded, after the opening of bids.

2. Location and Work to be Done

The Work consists of renovation of an existing classroom for a new dance studio, including new flooring, mirror, barre and all work incidental thereto, in accordance with the Specifications and conceptual plans attached hereto.

Additional drawings showing details in accordance with which the Work is to be done may be furnished by addendum from time to time during the bidding period by the Owner or its Architect/Engineer, and shall then become a part of the Contract Documents.

The Contractor shall furnish all labor, services, materials, equipment, plant, machinery, apparatus, appliances, tools, supplies, and all other things necessary to do all work required for the completion of each item of the Work and as herein specified.

The Work to be done and paid for under any item shall not be limited to the exact extent mentioned or described but shall include all incidental work necessary or customarily done for the completion of that item.

3. Preparation of Bid

Each bid must be submitted on the prescribed form. All blank spaces for bid prices must filled in, in ink or typewritten, in both words and figures.

Each bid must be submitted in a sealed envelope bearing on the outside the name of the bidder, his address, and endorsed with the name of the project as specified in <u>Receipt and Opening of Bids</u>, above. If forwarded by mail, the sealed envelope containing the bid must be enclosed in another envelope addressed as specified in <u>Receipt and Opening of Bids</u>, above.

4. <u>Bid Opening Procedure</u>

The following list of requirements shall apply to each filed bid. Bids not meeting all the requirements for timeliness and security will be rejected; bids not meeting signature and addenda requirements will be rejected prior to checking of bid amounts.

Bids shall be filed at the place and before the time specified in <u>Receipt and Opening of</u> Bids, above.

Properly executed bid security shall be placed in a sealed envelope and <u>shall be attached</u> to the outside of the envelope containing the bid.

Bid signatures will be checked.

All addenda will be sent certified mail, with return receipt requested, and/or facsimile or e-mail to all prospective bidders. All bidders shall include with their bids the written acknowledgment form provided in Section 00300, FORM OF GENERAL BID.

The total dollar amount of each bid will be read, and the three apparent lowest bids will be selected for further consideration. These three apparent low bids will be read aloud for the benefit of the other bidders and the bid opening procedure will be closed. All those present at the bid opening may examine all bids after the bid opening and after the reading of the three apparent low bids.

5. Modification

Any bidder may modify his bid by written communication at any time prior to the scheduled closing time for receipt of bids. Any telegraphic communication must be received by the Owner prior to the closing time, and, provided further, the Owner must be satisfied that a written confirmation of the telegraphic modification over the signature of the bidder was mailed prior to the closing time. If written confirmation is not received within two days from the closing time, no consideration will be given to a telegraphic communication.

The communication shall not reveal the bid price but shall provide the addition or subtraction or other modification so that the final prices or terms will not be known by the Owner until the sealed bid is opened.

6. Ability and Experience of Bidder

No award will be made to any bidder who cannot satisfy the Owner that he has sufficient ability and experience in this class of work and sufficient capital and plant to enable him

to prosecute and complete the work successfully within the time named. The Owner's decision or judgment on these matters will be final, conclusive, and binding.

The Owner may make such investigations as it deems necessary, and the bidder shall furnish to the Owner, under oath if so required, all such information and data for this purpose as the Owner may request.

7. Conditions of Work

Each bidder must familiarize himself fully with the conditions relating to the construction of the project and the employment of labor thereon. Failure to do so will not relieve a successful bidder of his obligation to furnish all material and labor necessary to carry out the provisions of his contract. Insofar as possible the Contractor, in carrying out his work, must employ such methods or means as will not cause any interruption of or interference with the work of any other Contractor.

8. Addenda and Interpretations

No interpretation of the meaning of the plans, specifications or other prebid documents will be made to any bidder orally. All information given to bidders other than by means of the plans, specifications, or by addenda, as described below, is given informally and shall not be used as the basis of a claim against the Owner.

Questions concerning this IFB must ONLY be submitted in writing to the Procurement Office before **4:00 PM Friday March 10th**, **2023** Questions may be emailed to procurement@dedham-ma.gov

Or mailed to 450 Washington St, Dedham, MA, 02026. Attn: Rana Mana-Doerfer Written responses will be emailed to all bidders on record as having received the IFB package.

The Town of Dedham has identified a sole point of contact with bidders for the purpose of this IFB. Any attempt to contact any other Town of Dedham employee or to circumvent these procedures in any manner may be grounds for disqualification of the bidder from the procurement process.

Bidders shall promptly raise the issue of any ambiguity, inconsistency, or error, which they may discover upon examination of the bid documents, the work site or any other conditions which apply to the work. Inquiries concerning any part of this Bid shall be directed to the individual(s) listed under the **Procurement Overview**. Bidders should note that **oral communications are not binding on the Town and only written responses by the Town will be considered**. All requests/questions must be <u>submitted in writing</u>. Questions may be delivered by hand, or email as referenced under the **Procurement Overview** by the deadline. Questions that may be asked during any prebid conference should also be sent in writing in order to receive an

official response. Requests properly presented that in the opinion of the Town require interpretation, correction, or change in the Bid Documents will result in an issuance of an Addendum to the Bid Documents. Such Addendum shall subsequently become part of the contract. The Town will forward responses to all persons who are on record as receiving the bid package. Questions received after the due date will not be responded to unless the Town determines it is necessary. Bidders, please allow enough time for hand delivery or facsimile transmissions.

All addenda so issued shall become part of the Contract Documents.

9. Security for Faithful Performance

Simultaneously with his delivery of the executed Contract, the Contractor shall furnish a surety bond or bonds as security for faithful performance of this contract and for the payment of all persons performing labor and materials under this contract. The surety on such bond or bonds shall be a surety company qualified to do business under the laws of the Commonwealth and satisfactory to the Owner. The bonds shall remain in force for one year after final acceptance of the work by the Owner, unless the Owner, in writing, releases the Contractor from the obligation sooner.

10. <u>Power of Attorney</u>

Attorneys-in-fact who sign Contract bonds must file with each bond a certified and effectively dated copy of their power of attorney.

11. <u>Laws and Regulations</u>

The bidder's attention is directed to the fact that all applicable State laws, municipal ordinances or bylaws, and the rules and regulations of all authorities having jurisdiction over construction of the project shall apply to the contract throughout, and they will be deemed to be included in the Contract the same as though written out in full.

12. Liquidated Damages for Failure to Enter into Contract

The successful bidder, upon his failure or refusal to execute and deliver the Contract and bonds required within 10 days after presentation thereof by the Owner, shall forfeit to the Owner, as liquidated damages for such failure or refusal, the security deposited with his/her bid, but the amount forfeited shall not exceed the difference between his/her bid price and the bid price of the next lowest responsible and eligible bidder. In case of death, disability, bona fide clerical or mechanical error of a substantial nature, or other similar unforeseen circumstances affecting the bidder, his/her bid deposit will be returned.

13. Obligation of Bidder

At the time of the opening of bids, each bidder will be presumed to have inspected the site and to have read and to be thoroughly familiar with the Contract Documents (including all addenda). The failure or omission of any bidder to examine any form, instrument, or document shall in no way relieve any bidder from any obligation in respect of his bid.

14. Information Not Guaranteed

All information given in the Contract Documents relating to subsurface and other conditions, natural phenomena, existing pipes, and other structures is from the best sources at present available to the Owner. All such information is furnished only for the information and convenience of bidders and is not guaranteed.

It is agreed and understood that the Owner does not warrant or guarantee that the subsurface or other conditions, natural phenomena, existing pipes, or other structures encountered during construction will be the same as those indicated in the Contract Documents. It is further agreed and understood that no bidder or Contractor shall use or be entitled to use any of the information made available to him or obtained in any examination made by him in any manner as a basis of or ground for any claim or demand against the Owner or the Architect/Engineer, arising from or by reason of any variance which may exist between the information made available and the actual subsurface or other structures actually encountered during the construction work, except as may otherwise be expressly provided for in the Contract Documents.

15. Bid Security

Each bid and sub-bid must be accompanied by bid security in the form of a certified check, a bid bond, cash, or a treasurer's or cashier's check, payable to the Owner, in the amount of five (5) percent of the value of the bid. Such security of general bidders will

be returned to all except the three lowest responsible and eligible bidders within five days, Saturdays, Sundays, and legal holidays excluded, after the opening of bids, and the remaining securities will be returned promptly after the Owner and the accepted bidder have executed the Contract, or if no notice of intent to award has been presented to the selected contractor within 30 days, Saturdays, Sundays and holidays excluded, after the date of the opening of bids, upon demand of the bidder at any time thereafter.

16. Right to Reject Bid

The Owner reserves the right to waive any informalities in bids and to reject any and all bids, should the Owner deem it to be in the public interest to do so.

The Owner may also reject bids which in its sole judgment are either incomplete, conditional, obscure or not responsive or which contain additions not called for, erasures not properly initialed, alterations, or similar irregularities.

17. <u>Time for Completion</u>

The successful general bidder must agree to commence work within ten (10) days of the date of the Notice to Proceed and to fully complete the project within the time limit stated in Section 00300, FORM OF GENERAL BID.

18. <u>Comparison of Bids</u>

Bids will be compared on the basis of prices set forth in the bid forms. In the event that there is a discrepancy between the lump sum or unit prices written in words and figures, the prices written in words will govern.

19. Award of Contract

The Contract will be awarded to "the lowest responsible and eligible bidder" pursuant to General Laws Chapter 149, Section 44A (2), as amended. Such a bidder shall possess the skill, ability and integrity necessary for the faithful performance of the work, shall be able to furnish labor that can work in harmony with all other elements of labor employed, or to be employed, in the work, and shall otherwise comply with all applicable provisions of law. Contract award shall be subject to availability of an appropriation for funding.

20. Statutes Regulating Competitive Bidding

Any bid which does not comply with the provisions of Massachusetts General Laws Chapter 149, Sections 44A through 44H, as amended, need not be accepted and the Owner may reject every such bid.

21. Wage Rates

Prevailing Wage Rates as determined by the Commissioner of Department of Labor and Workforce Development under the provision of the Massachusetts General Laws, Chapter 149, Section 26 to 27G, as amended, apply to this project. It is the responsibility

of the bidder, before bid opening, to request any additional information on Prevailing Wage Rates for those tradespeople who may be employed for the proposed work under this contract.

22. Contractor Records

The Contractor shall comply with the provisions of Massachusetts General Laws, Chapter 30, Section 39R concerning Contractor records.

23. INSURANCE

The Contractor shall carry and continuously maintain until completion of the Contract, insurance as specified in Agreement and in such form as shall protect him performing work covered by this Contract, and the Town of Dedham and its employees, agents and officials, from all claims an liability for damages for bodily injury, including accidental death, and for property damage, which may arise from operations under this Contract. The Town shall be named as an additional insured. The Contractor covenants and agrees to hold the Town and its employees, agents and officials harmless from loss or damage due to claims for bodily injury or death and/or property damage arising from, or in connection with, operations under this Contract.

25. PROJECT MANAGER

The Owner may utilize the services of a project manager, whose duties shall be as set forth in an Agreement for Project Manager Services.

26. <u>ALTERNATES</u>

- a) Each Bidder shall acknowledge all alternates listed.
- b) Each Bidder shall bid on all Alternates by listing a dollar amount and indicating whether the amount shall be added or subtracted from the base bid. If an Alternate does not involve a change in dollar value, the Bidder shall so indicate by listing a "0" dollar value for that Alternate.
- c) Alternates will be accepted in the order that they are listed.

NOTE: All alternates are to include all DIVISION 01 GENERAL REQUIREMENTS sections.

Alternate #1: Ballet Barre(s).

Include all work to construct, deliver, install, and coordinate work on two ballet barres, as specified and shown hereunder:

SECTION 00300

FORM OF GENERAL BID

(hereinafter called "Bidder")*

Bid of

210 01	(10101111111111111111111111111111111111
()	a corporation, organized and existing under the laws of the state of
()	a partnership
()	a joint venture
()	an individual doing business as
To the City/T	own of, Massachusetts (hereinafter called "Owner").
Gentlemen:	
known as DE and related do	ndersigned Bidder, in compliance with your invitation for bids for the project DHAM CAPEN DANCE STUDIO 2023 having examined the plans and specification ocuments and the site of the proposed work, and being familiar with all of the trounding the construction of the proposed project including the availability of

known as DEDHAM CAPEN DANCE STUDIO 2023 having examined the plans and specifications and related documents and the site of the proposed work, and being familiar with all of the conditions surrounding the construction of the proposed project including the availability of materials and labor, hereby proposes to furnish all labor, materials, and supplies, and to construct the project in accordance with the contract documents and the plans and specifications within the time set forth below, and at the prices stated below. These prices are to cover all expenses incurred in performing the work required under the contract documents, of which this bid is a part.

The Bidder hereby agrees to commence work on or before the date to be specified in written "Notice to Proceed" of the Owner, and to fully complete the project within 120 consecutive calendar days thereafter. The Bidder further agrees to pay as liquidated damages the sum of five hundred (\$500) Dollars for each consecutive calendar day thereafter that the work is not complete as provided in the contract.

^{*}Specify corporation, partnership or individual as applicable.

B)	Bidder acknowle	edges receipt of and	d this bid includes the following addenda:	
No.	Σ	Dated:		
No.	Σ	Dated:		
No.	Σ	Dated:		
No.	Г	Dated:		
C) the pl	•	-	oid work described in the specifications and shown \$	on
D)	Alternates:			
For al	Iternate No. 1	Add \$	· Subtract \$	

The above lump sum shall include all labor, materials, bailing, shoring, removal, overhead, profit, insurance, etc., to cover the finished work of the several kinds called for.

The Bidder understands that all bids for this project are subject to the applicable bidding laws of the Commonwealth of Massachusetts, including General Laws Chapter 149 and Chapter 30, Section 39M, as amended.

The Bidder understands that the Owner reserves the right to reject any or all bids and to waive any informalities in the bidding.

The Bidder agrees that this bid shall be good and may not be withdrawn for a period of 30 days, Saturdays, Sundays and legal holidays excluded, after the opening of bids.

Within 10 days of receipt of the written notice of acceptance of this bid, the Bidder will execute the formal Agreement set forth in Section 00500 CONTRACT.

Bid security is attached in the sum of five percent (5%) of the total bid in accordance with the conditions of Section 00100 INSTRUCTIONS TO BIDDERS. The bid security may become the property of the Owner in the event the contract and bond are not executed within the time set forth above.

The selected Contractor shall furnish a performance bond and a payment bond in an amount at least equal to one hundred percent (100%) of the contract price in accordance with Section 00610 PERFORMANCE BOND, Section 00620 PAYMENT BOND, and as stipulated in the contract.

The undersigned offers the following information as evidence of his qualifications to perform the work as bid upon according to all the requirements of the plans and specifications.

vears.

а

Have been in business under present name for

1.

The names and addresses of all narrows interested in the hid (if made
The names and addresses of all persons interested in the bid (if made partnership or corporation) as principals, are as follows:

3. The bidder is requested to state below what work of a similar character to that included in the proposed contract he has done, and give references that will enable the Owner to judge his experience, skill and business standing (add supplementary page if necessary).

Completion	Project	Contract	Design	Reference	Telephone
<u>Date</u>	<u>Name</u>	<u>Amount</u>	<u>Engineer</u>	<u>Name</u>	<u>No.</u>
a					
b					
c					
					
d					
e					
f					

Bank refe	erence	
	(Name)	
	(Bank)	
	(Address)	
	(Telephone No.)	

Pursuant to M.G.L. CH. 62C, Sec. 49A, I certify hereby in writing, under penalties of perjury, that the within named Bidder/Contractor has complied with all laws of the commonwealth relating to taxes, reporting of employees and contractors, and withholding and remitting of child support.

The undersigned Bidder hereby certifies under penalties of perjury, as follows: (1) that he/she is able to furnish labor that can work in harmony with all other elements of labor employed or to be employed in the work; (2) 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 (3) that all employees to be employed in the work subject to this bid 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.

The undersigned certifies under 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 paragraph the word "person" shall mean any natural person, joint venture, partnership, corporation or other business or legal entity.

The undersigned bidder hereby certifies, under pains and penalties of perjury, that the foregoing bid is based upon the payment to laborers to be employed on the project of wages in an amount no less that the applicable prevailing wage rates established for the project by the Massachusetts Department of Labor and Workforce Development. The undersigned bidder agrees to indemnify the awarding authority for, from and against any loss, expense, damages, actions or claims, including any expense incurred in connection with any delay or stoppage of the project work arising out of or as a result of (1) the failure of the said bid to be based upon the payment of the said applicable prevailing wage rates or (2) the failure of the bidder, if selected as the contractor, to pay laborers employed on the project the said applicable prevailing wage rates.

Respectfully submitted:
(Signature)
(Type Name of Bidder)
(Title)
(Business Address)
(City and State)
(Telephone Number)

SECTION 00500

AGREEMENT

THI	S AGREEMENT made this day of	
in th	e year Two Thousand and, between	, with a
usua	l place of business at	_, hereinafter
calle	ed the CONTRACTOR, and the Town of, acting by its	, with a
usua	l place of business at, MA, hereinafter of	called the
OWI	NER.	
follo 1.	The CONTRACTOR and the OWNER, for the consideration hereinafte ows: Scope of Work	r named, agree as
requi Proje Spec	Contractor shall furnish all labor, materials, equipment and insurance to period for the project known as theect, in strict accordance with the Contract Documents and all related Drawing infications. The said Documents, Specifications, Drawings and any supplementations are incorporated herein by reference and are made a part of this Agree Contract Price	ings and nental general
The	Owner shall pay the Contractor for the performance of this Agreement, subdeductions provided herein, in current funds, the sum of	oject to additions
3.	Commencement and Completion of Work and Liquidated Damages	
prose	agreed that time is of the essence of this Agreement. The Contractor shall ecute the work under this Agreement upon execution hereof and shall competore	
A.	Definition of Term: The Term "Substantial completion" shall mean the the Owner when construction is sufficiently complete, in accordance wi Documents, so the Owner may occupy the project, or designated portion the use for which it is intended.	th the Contract
B.	Time as Essential Condition: It is understood and agreed that the commsubstantial completion of the work are essential conditions of this Agree	

further agreed that time is of the essence for each and every portion of the Contract Documents wherein a definite and certain length of time is fixed for the performance of any act whatsoever; and where under the Contract Documents any additional time is allowed for the completion of any work, the new time fixed by such extension shall be of the essence of this Agreement. It is understood and agreed that the times for the completion of the work are reasonable, taking into consideration the average climatic range and usual industrial conditions prevailing in this locality.

- C. Progress and Completion: Contractor shall commence work promptly upon execution of this Agreement and shall prosecute and complete the work regularly, diligently and uninterruptedly at such a rate of progress as will insure Substantial Completion within the stipulated number of calendar days.
- D. Liquidated Damages: It is expressly agreed between the Contractor and the Owner that the Contractor will be responsible for all damages which may arise due to the Contractor's failure to substantially complete the work within the above specified time. If the Contractor shall neglect, fail or refuse to complete the work within the specified number of days, or any extension thereof authorized by the Owner, Contractor agrees, as a part of the consideration for the execution of this Contract by the Owner, to pay the Owner the amount specified herein, not as a penalty, but as liquidated damages for such breach of contract as hereinafter set forth, for each and every calendar day, excluding Saturdays, Sundays and legal Holidays, that the Contractor shall be in default of Substantial completion after the date specified in the Agreement. Due to the impracticability and extreme difficulty of fixing and ascertaining the actual damages the Owner would in such event sustain, said amount is agreed to be the amount of damages which the Owner would sustain, and said amount shall be retained from time to time by the Owner from current periodic estimates. The amount of liquidated damages shall be \$500 per day.

4. Performance of the Work

- A. Direction of the Work: The Contractor shall supervise and direct the Work, using his best skills and attention which shall not be less than such state of skill and attention generally rendered by the contracting profession for projects similar to the Project in scope, difficulty and location. The Contractor shall maintain adequate supervisory personnel at the project site during the performance of the Work. He shall be solely responsible for all construction means, methods, techniques, sequences and procedures and for coordinating all portions of the Work under the Agreement.
- B. Responsibility for the Work: (1) The Contractor shall be responsible to the Owner for the acts and omissions of his employees, Subcontractors and their agents and employees, and other persons performing any of the Work under a contract with the Contractor. This obligation shall also extend to the presence on the Site of suppliers of materials or equipment, their employees, contractors, and agents engaged in the work.
 - (2) The Contractor shall not be relieved from his obligations to perform the Work in accordance with the Contract Documents either by the activities or duties of the Owner in its administration of the Agreement, or by inspections, tests or approvals required or performed by persons other than the Contractor.

- C. Permits and Fees: Unless otherwise expressly provided, the Contractor shall secure and pay for all permits and fees, licenses and inspections necessary for the proper execution and completion of the Work which are customarily secured after execution of the Agreement and which are legally required at the time the bids are received, and the same shall at all times be the property of the Owner and shall be delivered to the Owner upon completion of the Project.
- D. Notices, Compliance With Laws: (1) The Contractor shall give all notices and comply with all federal, state and local laws, ordinances, rules, regulations and lawful orders of any public authority bearing on the performance of the Work. The Contractor shall provide the Owner with reproductions of all permits, licenses and receipts for any fees paid. The Owner represents that it has disclosed to the Contractor all orders and requirements known to the Owner of any public authority particular to this Agreement.
 - (2) If the Contractor observes that any of the Contract Documents are at variance with applicable laws, statutes, codes and regulations in any respect, he shall promptly notify the Owner in writing, and any necessary changes shall be accomplished by appropriate modification.
 - (3) If the Contractor performs any Work which he knows or should know is contrary to such laws, ordinances, rules and regulations, and without such notice to the Owner, he shall assume full responsibility therefor and shall bear all costs attributable thereto.
 - (4) In the performance of the Work, the Contractor shall comply with all applicable federal, state and local laws and regulations including those relating to workplace and employee safety. The Contractor shall notify the Owner immediately of any conditions at the place of the work which violate said laws and regulations and shall take prompt action to correct and eliminate any such violations.
- E. Project Superintendent: The Contractor shall employ a competent superintendent and necessary assistants who shall be in attendance at the Project site at all times during the progress of the Work. The superintendent shall represent the Contractor and all communications given to the superintendent shall be as binding as if given to the Contractor. Important communications shall be confirmed in writing. Other communications shall be so confirmed on written request in each case.
- F. Progress Schedule: The Contractor, immediately after being awarded the Contract, shall prepare and submit for the Owner's information an estimated progress schedule for the Work. The progress schedule shall be related to the entire Project to the extent required by the Contract Documents, and shall provide for expeditious and practicable execution of the Work.
- G. Drawings, Specifications and Submittals:
 - (1) The Contractor shall maintain at the site for the Owner one record copy of all Drawings, Specifications, Addenda, Change Orders and other Modifications, and "As-Built" Drawings and Specifications in good order and marked currently to record all changes made during construction, and approved Shop Drawings,

Product Data and Samples. These shall be delivered to the Owner upon completion of the Work.

- (2) By approving and submitting Shop Drawings, Product Data and Samples, the Contractor represents that he has determined and verified all materials, field measurements, and field construction criteria related thereto, or will do so, and that he has checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents.
- (3) The Contractor shall not be relieved of responsibility for any deviation from the requirements of the Contract Documents by the Owner's approval of Shop Drawings, Product Data or Samples unless the Contractor has specifically informed the Owner in writing of such deviation at the time of submission and the Owner has given written approval to the specific deviation. The Contractor shall not be relieved from responsibility for errors or omissions in the Shop Drawings, Product Data or Samples by the Owner's approval thereof.
- (4) The Contractor shall direct specific attention, in writing or on resubmitted Shop Drawings, Product Data or Samples, to revisions other than those requested by the Owner on previous submittals.
- (5) No portion of the Work requiring submission of a Shop Drawing, Product Data or Sample shall be commenced until the submittal has been approved by the Owner. All such portions of the Work shall be in accordance with approved submittals.
- H. Protection of the Work and Owner's Property: The Contractor shall at all times safely guard the Owner's property from injury or loss in connection with this Agreement. He shall at all times safely guard and protect his own work, and that of adjacent property from damage. The Contractor shall replace or make good any such damage, loss or injury. The Contractor shall clean the work area and restore it to its original condition upon completion of the work.
- I. Quality of the Work: The Contractor shall perform the work in a good, workmanlike manner. The Contractor hereby guarantees that the entire work constructed by him under the Agreement will meet fully all requirements thereof as to quality of workmanship and materials. The Contractor hereby agrees to make at his own expense any repairs or replacements made necessary by defects in materials or workmanship supplied to him that become evident within one (1) year after the date of the final payment, and to restore to full compliance with the requirements set forth herein any part of the work constructed hereunder, which during said one (1) year period is found to be deficient with respect to any provisions of the Contract Documents. The Contractor also agrees to hold the Owner harmless from claims of any kind arising from damage due to said defects. The Contractor shall make all repairs and replacements promptly upon receipt of written orders for same from the Owner. If the Contractor fails to make the repairs and replacements promptly, the Owner may do the work and the Contractor shall be liable to the Owner for the cost thereof.

J. Warranty: The Contractor guarantees to Owner that all materials incorporated into the work will be new unless otherwise specified or agreed. Prior to final payment, the Contractor shall deliver to the Owner all manufacturers' warranties, together with such endorsements or assignments as are necessary to ensure to the Owner the full rights and benefits of such warranties.

5. <u>Affirmative Action/Equal Employment Opportunity</u>

The Contractor is directed to comply with all applicable State Laws, Ordinances, Bylaws, and rules and regulations regarding affirmative action/equal employment opportunity requirements. Failure of the Contractor to comply with any such law, rule or regulation shall constitute grounds for the Owner to terminate the Agreement.

6. Site Information Not Guaranteed; Contractor's Investigation

All information given in the Contract Documents relating to subsurface and other conditions, natural phenomena, existing pipes, and other structures is from the best sources at present available to the Owner. All such information is furnished only for the information and convenience of the Contractor and is not guaranteed.

It is agreed and understood that the Owner does not warrant or guarantee that the subsurface or other conditions, natural phenomena, existing pipes, or other structures encountered during construction will be the same as those indicated in the Contract Documents.

Contractor has familiarized himself with the nature and extent of the Contract Documents, work, locality, and with all local conditions and federal, state, and local laws, rules, ordinances, and regulations that in any manner may affect costs, progress, or performance of the work. Contractor has made, or has caused to be made, examinations, investigations, and tests and studies of such reports and related data in addition to those referred to in the paragraph above as he deems necessary for the performance of the work at the Contract Price, within the Contract Time, and in accordance with the other Terms and Conditions of the Contract Documents; and no additional examinations, tests, investigations, reports, and similar data are or will be required by the Contractor for such purposes.

Contractor has correlated the results of all such observations, examinations, investigations, tests, reports, and data with the Contract Documents. Contractor has given the Owner written notice of all conflicts, errors, or discrepancies that he has discovered in the Contract Documents, and the resolution thereof by the Owner is acceptable to the Contractor.

It is further agreed and understood that the Contractor shall not use or be entitled to use any of the information made available to him or obtained in any examination made by him in any manner as a basis of or ground for any claim or demand against the Owner, arising from or by reason of any variance which may exist between the information made available and the actual subsurface conditions or other conditions or structures actually encountered during the construction work, except as may otherwise be expressly provided for in the Contract Documents.

7. <u>Project Architect or Engineer</u>

There is a project architect for this project who is James Carr architecture + design, 366 Boylston St., Brookline, MA. Except as otherwise indicated in the Contract Documents, the Architect/Engineer shall be a representative of the Owner and the Contractor shall direct all communications, questions and comments on the work and the performance thereof to the Architect/Engineer. Except as otherwise provided, the Architect/Engineer shall have all the authority of the Owner set forth in the Contract Documents. In general, the Architect/Engineer shall have the authority to review the performance of the work, reject work which is defective or otherwise does not comply with the Contract Documents and to order the Contractor to remedy defective work and take such actions which are necessary to make the work conform to the Contract Documents.

8. Wage Rates

Prevailing Wage Rates as determined by the Commissioner of the Department of Labor and Workforce Development under the provisions of Massachusetts General Laws, Chapter 149, Section 26 to 27G, as amended, apply to this project. It is the responsibility of the Contractor to provide the Town with certified payrolls and to comply with all requirements of the above-cited statutes.

The schedules of prevailing wage rates are included in the Contract Documents.

9. Payments to the Contractor

Within fifteen (15) days after receipt from the Contractor of a proper and satisfactory periodic estimate requesting payment of the amount due for the preceding month, the Owner shall have fifteen (15) days to make payment for:

- A. The work performed during the preceding month.
- B. The materials not incorporated in the Work but delivered and suitably stored at the site (or at some location agreed upon in writing) to which the Contractor has title, or to which a Subcontractor has title and has authorized the Contractor to transfer title to the Owner.
- C. Less the following retention items:
 - 1. A retention based on an estimate of the fair value of the Owner's claims against the Contractor.
 - 2. A retention for direct payments to Subcontractors, if any, based on demands for same in accordance with the provisions of Section 39F of Chapter 30 of the General Laws.
 - 3. A retention not exceeding five percent (5%) of the approved amount of the periodic payment.

- D. After the receipt of a periodic estimate requesting final payment and within sixty-five (65) days after the Contractor fully completes the Work, or substantially completes the Work so that the value of the Work remaining to be done is, on the estimate of the Owner, less than 1% of the original Contract Price, or substantially completes the Work and the Owner takes possession or occupancy, whichever occurs first, the Owner shall pay the Contractor the entire balance due on the Contract less:
 - 1. A retention based on an estimate of the fair value of the Owner's claims against the Contractor and of the cost of completing the incomplete and unsatisfactory items of work.
 - 2. A retention for direct payments to Subcontractors, if any, based on demands of same in accordance with the provisions of Section 39F of Chapter 30 of the General Laws, 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 39F of Chapter 30 of the General Laws.

If the Owner fails to make payment as herein provided, there shall be added to each such payment, daily interest at the rate of 3 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 of a periodic estimate for final payment until fifteen (15) days after receipt of such a periodic estimate by the Owner as provided in the first paragraph of this Article. The Contractor agrees to pay to each subcontractor a portion of any such interest paid in accordance with the amount due each subcontractor.

The Owner may make changes in any periodic estimate submitted by the Contractor and the payment due on said periodic estimate shall be computed in accordance with the changes so made, and such changes and any requirements for a corrected periodic estimate shall not affect the due date for the periodic payment or the date for the commencement of interest charges on the amount of the periodic payment computed in accordance with the changes made, as provided herein; provided further, that the Owner may, within seven (7) days after receipt, return to the Contractor for correction, any periodic estimate which is not in acceptable form or which contains computations not arithmetically correct, and in that event, the date of receipt of such periodic estimate shall be the date of receipt of the corrected periodic estimate in proper form and with arithmetically correct computations. The date of receipt of a periodic estimate received on a Saturday shall be the first working day thereafter.

- E. Changes in the Work: No changes in the work covered by the approved Contract Documents shall be made without prior written approval of the Owner. Charges or credits for the work covered by the approved change shall be determined by one or more, or a combination of the following methods:
 - (a) Unit bid prices previously approved.
 - (b) An agreed lump sum.

- (c) The actual cost of:
- (1) Labor.
- (2) Materials entering permanently into the work.
- (3) The ownership or rental cost of construction equipment during the time of use on the extra work.
- (4) Power and consumable supplies for the operation of power equipment.
- (5) Wages to be paid.

To the cost under (c) there shall be added a fixed fee to be agreed upon but not to exceed fifteen percent (15%) of the actual cost of work. The fee shall be compensation to cover the cost of supervision, overhead, bond, profit and any other general expenses.

F. Claims for Additional Costs: If the Contractor wishes to make a claim for an increase in the Contract Sum, he shall give the Owner written notice thereof within twenty days after the occurrence of the event giving rise to such claim. This notice shall be given by the Contractor before proceeding to execute the Work, except in an emergency endangering life or property. No such claim shall be valid unless so made. Any change in the Contract Sum resulting from such claim shall be authorized by Change Order.

The Contractor hereby agrees that the Contractor shall have no claim for damages of any kind against the Town on account of any delay in the commencement or performance of the work and/or any hindrance, delay or suspension of any portion of the work including, but not limited to, any claims or damages on account of having to perform out of sequence work, claims for damages on account of loss of production or other interference with the work whether such delay is caused by the Town or otherwise, except as and to the extent expressly provided under G.L. c.30, §390 in the case of written orders by the Town. The Contractor acknowledges that the Contractor's sole remedy for any such claim will be an extension of time as provided herein.

10. Final Payment, Effect

The acceptance of final payment by the Contractor shall constitute a waiver of all claims by the Contractor arising under the Agreement.

11. <u>Contract Documents</u>

The Contract Documents consist of the following, together with this Agreement:

Invitation to Bid Instructions to Bidders This Contract Form Bid Form Performance Bond
Labor & Materials Payment Bond
Non-Collusion Certificate
Tax Compliance Certificate
Clerk's Certificate of Corporate Vote
Certificate of Insurance
General Conditions
Supplementary General Conditions
General Requirements
Specifications and Addenda
Contract Drawings
Schedule of Prevailing Wages

12. Terms Required By Law

This Agreement shall be considered to include all terms required to be included in it by the Massachusetts General Laws, and all other laws, as though such terms were set forth in full herein.

13. Indemnification

The Contractor shall indemnify and hold harmless the Owner from and against any and all claims, damages, losses, and expenses, including attorney's fees, arising out of the performance of this Agreement when such claims, damages, losses, and expenses are caused, in whole or in part, by the acts, errors, or omissions of the Contractor or his employees, agents, subcontractors or representatives.

14. Insurance

The Contractor shall purchase and maintain such insurance as will protect both the Owner and the Contractor from claims which may arise under the Agreement, including operations performed for the named insured by independent contractors and general inspection thereof by the named insured. In addition, the Contractor shall require its subcontractors to maintain such insurance. Coverage shall be provided for:

- .1 claims under workers' or workmen's compensation, disability benefit and other applicable employee benefit acts;
- .2 claims for damages because of bodily injury, occupational sickness or disease, or death of Contractor's employees;
- .3 claims for damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees;
- .4 claims for damages insured by usual personal injury liability coverage which are sustained (1) by any person as a result of an offense directly or indirectly related to the employment of such person by the Contractor, or (2) by any other person;

- .5 claims for damages, including damages to the Work itself, because of injury to or destruction of tangible property, including loss of use resulting therefrom; and
- .6 claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance or use of any motor vehicle.
- .7 claims involving contractual liability applicable to the Contractor's obligations under Article 13.

The limits of liability for coverage required under the preceding paragraph shall be as Specified in the Supplemental Conditions.

Except for Workmen's Compensation, all liability coverage shall name the Town as an additional insured and shall provide for 30 days prior written notice to the Town of any modification or termination of coverage provided thereby. The Contractor shall provide the Owner with appropriate certificate(s) of insurance evidencing compliance with this provision prior to the commencement of any work under this Agreement.

15. Notice

All notices required to be given hereunder shall be in writing and delivered to, or mailed first class to, the parties' respective addresses stated above. In the event that immediate notice is required, it may be given by telephone or facsimile, but shall, to the extent possible, be followed by notice in writing in the manner set forth above.

16. Termination

- A. Each party shall have the right to terminate this Agreement in the event of a failure of the other party to comply with the terms of the Agreement. Such termination shall be effective upon seven days' notice to the party in default and the failure within that time of said party to cure its default.
- B. The Owner shall have the right to terminate the Agreement without cause, upon ten (10) days' written notice to the Contractor. In the event that the Agreement is terminated pursuant to this subparagraph, the Contractor shall be reimbursed in accordance with the Contract Documents for all Work performed up to the termination date, and for all materials or equipment not incorporated in the Work, but delivered and suitably stored at the site. Payment for material or equipment stored at the site shall be conditioned upon submission by the Contractor of bills of sale or such other evidence as is satisfactory to Owner to establish the Owner's title to such material or equipment or otherwise protect the Owner's interests.

17. Miscellaneous

A. Royalties and Patents: The Contractor shall pay all royalties and license fees. He shall defend all suits or claims for infringement of any patent rights and shall save the Owner

harmless from loss on account thereof, except that the Owner shall be responsible for all such loss when a particular design, process or the product of a particular manufacturer or manufacturers is specified; but if the Contractor believes or has reason to believe that the design, process or product specified is an infringement of a patent, he shall be responsible for such loss unless he promptly gives such information to the Owner, and thereafter the Owner insists on the use of the design, process or products specified.

- B. Assignment: The Contractor shall not assign or transfer any of its rights, duties or obligations under this Agreement without the written approval of the Owner.
- C. Governing Law: This Agreement shall be governed by and construed in accordance with the law of the Commonwealth of Massachusetts.
- D. By its signature hereon, the Contractor certifies, under the pains and penalties of perjury, that it has complied with all laws of the Commonwealth of Massachusetts relating to taxes, reporting of employees and contractors, and withholding and remitting child support.

[Remainder of page intentionally blank.]

AGREED:	TOWN OF	, MASSACHUSET	TS
		(Owner)	
	By its		
			-
	CONTRACTOR	:	_
	Ву		
		(Name)	-
		(Title)	-
		(Address)	-
		(City and State)	-
Approved as	to Form:		
By(Own	ner's Counsel)		
of this contra	act is available theref	etion 31C, this is to certify that for and that thesitions and change orders.	an appropriation in the amount has been authorized to execute
By(Own	ner's Accountant)		
	(Name)		

CERTIFICATE OF VOTE (to be filed if Contractor is a Corporation)

I,	hereby certify that I am the duly qualified
(Secretary of the Corporation)	hereby certify that I am the duly qualified
and acting Secretary of	and I further certify that a meeting of the
(Name of Corporation) Directors of said Company, duly called and held	on, at which (Date of Meeting)
all Directors were present and voting, the following	ng vote was unanimously passed:
VOTED: To authorize and empower	•
Anyone acting singly, to execute Forms of the Corporation.	of General Bid, Contracts or Bonds on behalf of
•	in effect and has not been changed or modified
By:_	
A True Copy:	(Secretary of Corporation)
Attest:(Notary Public)	
My Commission Expires:(Date)	

CERTIFICATIONS REQUIRED BY LAW FOR PUBLIC CONSTRUCTION CONTRACTS

You must COMPLETE and SIGN the following certifications. You must also print, at the bottom of this page, the name of the contractor for whom these certifications are submitted.

TAX COMPLIANCE

Pursuant to Chapter 62C of the Massachusetts General Laws, Section 49A(b), I, the undersigned, authorized signatory for the below named contractor, do hereby certify under the pains and penalties of perjury that said contractor has complied with all laws of the Commonwealth of Massachusetts relating to taxes, reporting of employees and contractors, and withholding and remitting child support.

NON-COLLUSION

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

PUBLIC CONTRACTOR DEBARMENT

The undersigned certifies under penalty of perjury that the below named contractor 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.

OSHA TRAINING

Pursuant to G.L. c. 30, §39S, the Contractor hereby certifies under penalties of perjury as follows:

- (1) Contractor is able to furnish labor that can work in harmony with all other elements of labor employed or to be employed in the work;
- (2) 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 they shall furnish documentation of successful completion of said course with the first certified payroll report for each employee; and
- (3) All employees to be employed in the work subject to this contract 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.

COMPLETE AND SIGN BELOW:

Authorized Person's Signature	Date	
Print Name & Title of Signatory		
Name of Contractor		

SECTION 00610

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESE	ENTS: That we
	(Name of Contractor)
a	hereinafter called "Principal" and
(Corporation, Partnership, Joint Venture or In	ndividual)
of	, State of
(Surety)	(City & State)
Division of Insurance to do business under the	led the "Surety" and licensed by the State laws of the Commonwealth of Massachusetts, are, Massachusetts, hereinafter called
	Dollars
(\$) in lawful money sum well and truly to be made, we bind ourselv successors, jointly and severally, firmly by the	
THE CONDITION OF THIS OBLIGA into a certain contract with the Owner, dated the 20 (the "Construction Contract"), for the co	

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

PROVIDED, FURTHER, that the Surety's obligation under this Bond shall arise after (1) the Owner has declared the Principal in default of the Construction Contract or any provision thereof or (2) has declared that the Principal has failed, or is otherwise unable or unwilling, to execute the work consistent with, and in conformance to, the Construction Contract (collectively referred to as a "Contractor Default"). The determination of a Contractor Default shall be made solely by the Owner. The Owner need not terminate the Construction Contract to declare a Contractor Default or to invoke its rights under this Bond.

When the Surety's obligation under this Bond arises, the Surety, at its sole expense and at the consent and election of the Owner, shall promptly take one of the following steps: (1) arrange for the Principal to perform and complete the work of the Construction Contract: (2) arrange for a contractor other than the Principal to perform and complete the work of the Construction Contract; (3) reimburse the Owner, in a manner and at such time as the Owner shall decide, for all costs and expenses incurred by the Owner in performing and completing the work of the Construction Contract. Surety will keep Owner reasonably informed of the progress, status and results of any investigation of any claim of the Owner.

If the Surety does not proceed as provided in this Bond with due diligence and all deliberate speed, the Surety shall be deemed to be in default of this Bond, and the Owner shall be entitled to enforce any remedy available to the Owner.

After the Surety's obligation under this Bond arises, the Surety is obligated, to the limit of the amounts of this Bond, for (1) the correction of defective work and completion of the Construction Contract; (2) additional design, professional services, and legal costs, including attorneys' fees, resulting from the Contractor Default or from the default of the Surety under this Bond; (3) any additional work beyond the Construction Contract made necessary by the Contractor Default or default of the Surety under this Bond; (4) indemnification obligation of the Principal, if any, as provided in the Construction Contract; and (5) liquidated damages as provided in the Construction Contract, or if none are so specified, actual and foreseeable consequential damages resulting from the Contractor Default or default of the Surety under this Bond.

Any proceeding, legal or equitable, under this Bond shall be instituted in any court of competent jurisdiction in the Commonwealth of Massachusetts.

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

one of which shall be deemed an ori	ginal, this the	executed in () counterparts, each day of
20	<u></u>	
ATTEST:		
	_	Principal
	By _	
(Principal Secretary)	_ 2, _	
	_	
	_	(Address-Zip Code)
	_ (SEAL)	
Witness as to Principal	_ (3 _ 3 _ 7	
(Address-Zip Code)	_	
ATTEST:		
	_	Surety
	By	
		(Attorney-in-Fact)
	_	(A.11 7' C. 1)
	_ (SEAL)	(Address-Zip Code)
Witness as to Surety	_	
(Address-Zip Code)	_	
NOTE: Date of Bond must no Partnership, all partnership.		

00610-3

SECTION 00620

PAYMENT BOND

KNOW ALL MEN BY THESE PR	RESENTS: That we	
a		
(Name of Contractor) Individual)	(Corporation, Partnership, Joint Venture or	
hereinafter called "Principal" and	of,	
	(Surety)	
State of her (City and State)	einafter called the "Surety" and licensed by the State	
held and firmly bound to the City/Town of	r the laws of the Commonwealth of Massachusetts, are f, Massachusetts, hereinafter	
(\$) in lawful mone	by of the United States, for the payment of which sum ves, our heirs, executors, administrators and successors, ents.	
	AIGATION is such that Whereas, the Principal entered ed the day of, bllows:	

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

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

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

IN WITNESS WHEREOF, this instrument is executed in _____ () counterparts, each one of which shall be deemed an original, this the ______ day of ______, 20___.

ATTEST:

By

(Attorney-in-Fact)

(Address-Zip Code)

Witness as to Surety

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

(Address-Zip Code)

SECTION 00800

SUPPLEMENTAL CONDITIONS

		Page
1.	Introduction	2
2.	Prevailing Wage Rates	2
3.	Insurance Requirements	2
SE	CTION 00850 - Incorporation of Applicable Provisions of the Massachusetts General Laws	
Atı	tachment A - Wage Rates and Certificate of Compliance	

§ SC 1.1 INTRODUCTION

The following provisions modify, change, delete from or add to Section 00500 Agreement. Where any Subsection of the Agreement is modified or any Article Paragraph, Subparagraph or Clause thereof is modified or deleted by these Supplemental Conditions, the unaltered provisions of that Article, Paragraph, Subparagraph or Clause shall remain in effect.

§ SC 2.1 PREVAILING WAGE

In accordance with General Laws Chapter 149, Section 26 through 27D, the Contractor is obligated to comply with the prevailing wage rates established by the Commissioner of the Department of Labor and Workforce Development for mechanics, apprentices, chauffeurs, teamsters and laborers employed on the Project. The schedule of applicable prevailing wage rates for the Project, together with a Certificate of Compliance therewith, are set forth in Attachment A herein.

§ SC 3.1 CONTRACTOR'S LIABILITY INSURANCE

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

Type of Insurance	Limit Requirements & Notes
General Liability	\$1,000,000 Per Occurrence
-	\$2,000,000 General Aggregate
	\$2,000,000 Products/Completed Operations Aggregate
	General Liability coverage must be maintained on an Occurrence basis, and must be amended to state that the Aggregate Limit applies on a Per Project basis. Explosion, collapse and underground property damage (XCU) hazards must be included. Town of Dedham shall be included as
	Additional Insured with respect to ongoing and completed operations via endorsements CG 2010 10/01 and CG 2037 10/01 or equivalent, and this policy shall be Primary and Non-Contributory with respect to any other insurance available to Additional Insureds. A Waiver of Subrogation shall be provided in favor of Town of Dedham.
Auto Liability	\$1,000,000 Combined Single Limit - Bodily Injury & Property Damage
	Auto Liability coverage shall be afforded for all owned, non-owned and hired vehicles used in the performance of the work. Town of Dedham shall be included as Additional Insured, and this policy shall be Primary and Non-Contributory with respect to any other insurance available to Additional Insureds. A Waiver of Subrogation shall be provided in favor of Town of Dedham.
Workers' Compensation &	Part I: Statutory Limits
Employers' Liability	Part II: \$500,000 Each Accident
	\$500,000 Disease Per Employee
	\$500,000 Disease Policy Aggregate
	A Waiver of Subrogation shall be provided in favor of Town of Dedham.
Umbrella/Excess Liability	\$5,000,000 Per Occurrence \$5,000,000 Aggregate
	The Contractor shall provide Umbrella Liability coverage in a form at least
	as broad as primary coverages required in this Exhibit with respect to General Liability, Auto Liability and Employers' Liability. Additional Insured status shall be provided to Town of Dedham as provided by
	primary coverages. Waivers of Subrogation shall be provided in favor of Town of Dedham as provided by primary coverages. This policy shall be primary/non-contributory with respect to any other insurance available to Additional Insured(s).
Pollution/Environmental	\$1,000,000 Each Claim
Liability	\$1,000,000 Each Claim \$1,000,000 Aggregate
	Additional Insured status shall be provided to Town of Dedham, and this policy shall be Primary and Non-Contributory with respect to any other

	insurance available to Additional Insured(s). A Waiver of Subrogation shall be provided in favor of Town of Dedham.
Riggers' Liability	Contractor and/or its subcontractor(s) shall carry Riggers Liability Insurance with limits no less than \$1,000,000 per occurrence if Contractor's Work involves moving, lifting, lowering, rigging or hoisting of property or equipment belonging to others. Such insurance shall insure against physical loss or damage to the property or equipment. Owner and Contractor shall be listed as additional insured on such policies.
Additional Types of Insurance	The Contractor shall provide such other types of insurance as may be required at Town of Dedham's discretion.

SECTION 00850

<u>Incorporation of Applicable Provisions of the</u> Massachusetts General Laws

Certain provisions of the Massachusetts General Laws are applicable to Construction contracts including, but not limited to, those contained in Chapter 30 and Chapter 149. All applicable provisions of the Massachusetts General Laws are incorporated into the Contract as if fully set forth herein, and shall prevail over any conflicting provisions of the General or Supplemental General Conditions.

SECTION 00900

SPECIFICATIONS

322 Sprague St, Dedham MA 02026

PROJECT MANUAL

March ^{2nd}, 2023

Architect

James Carr architecture + design James Carr, AIA, NCARB, LEED AP 366 Boylston St. Brookline, MA 02445 o. 617.879.0725 c. 617.595.6351 jcarr@alum.mit.edu

MEP Engineer

BLW Engineers, Inc. Mike Denommee, P.E. 311 Great Rd. Littleton MA 01460 978.486.4301 mdenommee@blwengineers.com

Owner

Town of Dedham
Denise Moroney, Director of Facilities
450 Washington St., Dedham, MA 02026
o. 781.310.1141
c. 781.751.9172
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SECTION 01 01 00 PROJECT PROCEDURES

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

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

1.2 SECTION INCLUDES

- A. Permits and Fees.
- B. Sales and Use Tax Exemption.
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- M. Worker Conduct, Appearance, and Rules.
- N. Maintain Owner Occupancy Requirements.

1.3 RELATED SECTIONS

- A. Section 01 60 00 PRODUCT REQUIREMENTS
- B. Section 02 07 00 SELECTIVE DEMOLITION

1.4 PERMITS AND FEES

- A. Contractor shall obtain all permits required, by the municipality and state, for the Work.
- B. Owner will pay for the building permit. All other permit fees required by the municipality, including but not limited to Board of Health, Electricity, Plumbing shall be the responsibility of the contractor.
- C. Contractor shall pay for all other governmental fees and licenses for the Work.

1.5 SALES AND USE TAX EXEMPTION

A. Owner is exempt from payment of sales and use taxes levied by the Commonwealth of Massachusetts. All contract costs shall reflect this exemption.

- B. Owner will furnish tax exemption certificate and number to General Contractor for use by all trades in purchasing materials for the Work.
- C. The General Contractor shall:
 - 1. Place exemption certificate number on invoices for materials incorporated in the Work.
 - 2. Furnish copies of invoices to Owner. Upon completion of the Work file with the Owner-notarized statement that all purchases made under exemption certificate were entitled to be exempt.
 - 3. Pay legally assessed penalties for improper use of exemption certificate number.

1.6 CONTRACTOR'S USE OF PREMISES

- A. The Contract Site shall be as shown on the Drawings, for each area of work and shall include the entire area bound by the "Contract Limit" or "Limit of Work" lines as well as all areas outside of the Limit of Work Lines when required for performance of work under this Contract. Note Phasing requirements specified.
- B. The right of Possession of the premises, and the improvements made thereon, shall remain with the owner at all times. The contractor's Right of Entry and the use thereof arises solely from the permission granted by the owner under the contract documents.
- C. Damage to existing work to remain caused by operations under this Contract shall be repaired at Contractor's expense.
- D. Any street, paving, curb and/or sidewalk damaged as the result of work under this Contract, whether within or outside the limits of the Work, shall be repaired and/or replaced under this Contract, in a timely fashion, with new matching construction.
- E. Provide continuous, lawful, safe, adequate and convenient access to the site. Contractor shall maintain temporary access and egress to and from the site, as may be required.
- F. The General Contractor and all subcontractors shall confine operations at the site to areas permitted by the contract schedule work areas as herein specified, law and ordinances, permits, and Contract limit lines.
- G. General Contractor shall be solely and entirely responsible for the design and construction of any and all temporary facilities to be used by the public during the course of work under this Contract.
- H. Do not unreasonably encumber site with materials or equipment.
- I. Assume full responsibility for protection and safekeeping of products stored on premises. Obtain and pay for use of additional storage or work areas needed for operations. Limit use of site to work and storage. Move any stored products which interfere with operations of Owner or other contractors.

1.7 CONTRACT CONDITIONS

- A. This Contract is subject to applicable Federal, State and local laws and regulations. Where any requirements contained herein do not conform to statutes governing the Work of this Contract, the statutes shall govern.
- B. This project is subject to compliance with Public Law 91-596, "Occupational Safety and Health Act of 1970" (OSHA), with respect to all rules and regulations pertaining to construction, including Volume 36, numbers 75 and 105, of the Federal Register, as amended, and as published by the U.S. Department of Labor.
- C. Each and every provision of law and clause required by law to be inserted in this Contract shall be deemed to be inserted herein and the Contract shall be read and enforced as though it were included herein, and if, through mistake or otherwise, any such provision is not inserted, or is not correctly inserted, then upon application of either party the Contract shall forthwith be physically amended to make such insertion or correction.
- D. Attention is directed to recent amendments to MGL C.149, Section 27B requiring submission of certified weekly payrolls to the Awarding Authority by every contractor and subcontractor doing public work.

1.8 USE AND OCCUPANCY PRIOR TO ACCEPTANCE

- A. The Owner reserves the right to occupy and to place and install equipment in completed areas of the Work prior to the date of Substantial Completion as stipulated in the Agreement, provided such occupancy does not interfere with completion of the Work. Such occupancy or placement of equipment shall not constitute acceptance of the Work.
- B. If the Project has not been substantially completed by the specified date, the Owner at his election may from time to time occupy the site or any portion of the site as the Work in connection therewith is completed to such a degree as will, in the opinion of the Owner, permit the use of the site for construction of the building. Such occupancy shall not constitute acceptance of the Work.
- C. Occupancy of the site or any portion thereof by the Owner shall not relieve General Contractor of the responsibility to perform all work required by Contract Documents but not completed at the time of occupancy.

1.9 PROJECT COORDINATION AND COORDINATION DRAWINGS

- A. Coordination: General Contractor shall be fully responsible for coordinating all trades, construction sequences and schedules, and actual installed location and interface of all work.
- B. Sequence and Scheduling of Work: Schedule, deliver, and install items of work in the optimum sequence to ensure the complete and correct interface of all work, to avoid cutting and patching, and to avoid damage to finished work.
- C. Coordinate Modifications to the Work: Fully coordinate all modifications to the work including, without limitation: 1) changes which affect Contract Price, 2) changes which do not affect Contract Price, 3) substitutions, 4) Contractor's selection when given optional choices, and 5) other modifications and changes. Coordinate and provide all other work required to implement the modification at no additional cost to Owner.

1.10 PROJECT ENVIRONMENTAL CONTROLS

- A. Regular clean-up: Clean up all waste daily, remove from site regularly, and legally dispose off-site. Keep premises clean, neat, orderly, and safe with proper working conditions at all times. Frequency of waste removal shall be as approved by the Owner and authorities having jurisdiction.
 - 1. Adjacent Areas: Keep adjacent areas, neighboring properties, streets, public ways, and all areas clean, safe, and free of construction debris and dirt, including windblown debris. Comply with local ordinances and requirements of authorities having jurisdiction.
 - 2. Transport of Materials: Do not overload wheeled bins, trucks, or dumpsters. Cover open trucks and dumpsters to control windblown dust and debris.
 - 3. Dust Control: Make effective efforts to control dust. Wet travel areas, debris stockpiles, and other work to control dust. Do not create ice hazards in cold weather. Cover stockpiles with weighted tarpaulins. Stop operations which cause objectionable dust until effective dust control procedures are established. Provide daily street sweeping during any periods of materials removal.

1.11 CONSTRUCTION DOCUMENTS

- A. The Contractor shall be entitled to receive, without additional charge, THREE (3) complete sets of the Contract Documents, including Drawings and Specifications, for use during the construction period. These copies shall be in addition to those furnished for bidding purposes.
- B. The two (2) sets required for Record Drawings are not included in the above sets, to be furnished by the Owner.
- C. Extra sets returned by bidders and not required for other purposes, as determined by the Architect, will be made available to Contractor for the Work.
- D. All other copies of the Contract Documents required by the Contractor for use during the construction period shall be purchased and paid for by the party requiring same. Architect will furnish approximate costs of such additional copies and will transmit originals to local printing companies with whom he regularly does business, but will not receive bills for such printing through his account. All negotiations for such printing shall be between Contractor and Printer.

1.12 PROJECT SUPERINTENDENT

- A. The Contractor shall employ an experienced, full time, licensed Project Superintendent to provide supervision and management on site whenever work is in progress, except for reasonable absences such as personal vacation and illness.
- B. Owner Approval: Employ a Project Superintendent approved by the Owner's Project Representative. Do not reassign or replace the superintendent during the project without the Owner's consent. Reassignment or replacement of the superintendent without the

- Owner's consent shall be a breach of the contract. The Owner's consent shall not be unreasonably withheld.
- C. Reassignment and/or Replacement: If requested by the Owner, the Contractor shall remove and replace the Project Superintendent with no change to the Contract.
- D. Limitations: The Project Superintendent shall not have dual responsibilities and shall not work with tools. The Project Superintendent's sole job shall be on-site supervision and management.

1.13 MUNICIPAL POLICE/FIRE SERVICES

- A. Make all necessary arrangements with the municipal police department in advance of times when regular, off-duty, or reserve police officers will be needed for traffic control or protection due to operations performed under this Contract, or as required by the local municipality.
- B. Pay police officers at the prevailing wage rates in the municipality for such services.
- C. Pay fire personnel at the prevailing wage rates in the municipality for such services required in the city ordinances.

1.14 WORKER CONDUCT, APPEARANCE, AND RULES

- A. Worker Conduct, Appearance, and Rules: Because this project is in close proximity to the existing occupied function hall, the conduct of each worker at the job site is of paramount importance. The Owner reserves the right to require any worker to be banished from the Owner's property.
- B. Privacy: Conduct all work of the Contract shall be accomplished with the maximum effort to maintain the privacy of the Owner's operations, staff, and students. Do not permit workers to peer into areas of the existing building visible from the work area. Invasion of privacy is a major infraction of the work rules
- C. General Conduct and Demeanor: All construction workers shall treat the Owner's staff, students, and the public professionally with respect and courtesy. Appropriate work attire is required. Foul language and loud conduct are prohibited.
- D. The use of entertainment devices including personal devices with headphones or earphones is strictly prohibited at all times. Control the volume of communication radios and loudspeakers to avoid creating a nuisance.
- E. Smoking: Smoking is strictly prohibited on the property.
- F. Sexual Harassment: All forms of physical and verbal sexual harassment including, without limitation: touching, whistling, sexually explicit stories, jokes, drawings, photos, and representations; exhibitionism; and all other sexually oriented offensive behavior is strictly prohibited and is a major infraction of the work rules.

- G. Student Contact: Except for necessary warnings and safety related instructions, construction personnel are strictly prohibited from having any direct or indirect contact with students including, without limitation, verbal or written communication, touching, staring, whistling, howling, and any other action or behavior which makes a student uncomfortable or which could be interpreted by the student as harassment. A violation of this type may be considered, on a case-by-case basis, as a major infraction of the work rules.
- H. Warnings and Dismissal: For minor infractions of the rules, the Owner may issue a warning. Only one warning will be allowed per worker from the Owner's property. For major infractions of the work rules, the worker shall be dismissed immediately without prior warning and possibly subject to criminal prosecution.
- I. Recommendation: The Owner recommends that the Contractor notify each worker of the work rules in writing and obtain signed acknowledgment of the worker's understanding of the work rules as a condition of employment on this project.

1.15 MAINTAIN OWNER OCCUPANCY REQUIREMENTS

- A. Maintain Owner Occupancy: Maintain the Owner's occupancy throughout the Contract.
 - 1. Perform work of the Contract with the least disturbance to the Owner's normal operations.
 - 2. Do not interfere with the Owner's normal business.
 - 3. Perform work of the Contract without damage to or loss of the Owner's property.
 - 4. Avoid creating a nuisance.
 - 5. Minimize disturbance to building occupants.
- B. Conflicts: Coordinate Contract operations with the Owner to avoid conflicts. In all cases of conflict, the Owner's operations and business shall have priority.
- C. Temporary Suspension or Relocation of Work to Accommodate Owner: The Owner will direct its personnel to communicate with the Contractor through the Construction Manager. Because of emergency or other urgent need, the Owner's personnel may communicate with the Contractor directly.
 - 1. If any of the Owner's personnel request the work to stop in any area for any reason, immediately contact the Construction manager and request direction.
 - 2. If the Construction Manager cannot be reached immediately, stop the offending work in that area and continue with non-offending work or relocate work to other areas to avoid project delays.
 - 3. Since this accommodation of the Owner's needs and operations is inherently part of the Contract and inherently required to avoid conflict with the Owner's operations, no additional payments or change in the Contract Amount will be paid for this type of accommodation of the Owner's needs.
- D. Work Limits: Restrict Contract related materials, debris, equipment, personnel, temporary facilities, and operations to within "work limits" indicated or approved by the Owner. The "work limits" approved by the Owner define the demarcation between Contractor

- operations and Owner operations. The "work limits" do not change the requirements of the Contract that may include work outside the "work limits."
- E. Utilities, Services, and Interruptions: Do not interrupt any services, utilities, or facilities serving Owner occupied areas in the existing building adjacent to the construction site. Protect and maintain all utilities and services serving Owner occupied areas including, without limitation, heat, power, water, fire protection, alarms, and communications.
 - 1. Interruptions: Where service interruption is unavoidable, provide at least five days advance request to the Owner and obtain the Owner's written permission. In the request, provide information on the intended date and times of service interruption. Provide information on date and time when service will be restored. Provide information on temporary services to be provided.
 - 2. Scheduling and Costs: Schedule all utility and service interruptions during weekends, at nights, or at other periods of low load and low use as approved by the Owner. Include all costs for premium time and "overtime" related to utility and service interruptions.
 - 3. Public Utilities: Give all notices and obtain all permits requires by law. Prior to any temporary or permanent interruption of utilities, services, or facilities, notify the utility company and obtain written approval from the utility company and authorities having jurisdiction.
 - 4. Switches, Breakers, Valves: Do not turn any switches, breakers, valves or equipment "on" or "off" without fully understanding the consequences and without first obtaining the Owner's written approval.
 - 5. Contract Document Limitations: Utilities and services are shown at approximate locations and these locations may not be accurate. All utilities and services are not shown on the Contract Documents. Determine exact utility and service locations in the field before beginning work near utilities.
 - 6. Uncharted Utilities and Inaccurately Indicated Utilities: If uncharted utilities or inaccurately located utilities are discovered, protect and maintain such utilities, and notify the utility owner, project Owner, and Architect immediately. If utilities are inadvertently damaged, take reasonable action to minimize the damage and restore the system to original condition and operation. Provide temporary utilities to maintain occupancy and continuous support of areas served by the utilities.
 - 7. Coordination Required: Fully and completely coordinate all construction operations, installation of equipment, utilities, services, and other work to avoid all interference with existing utilities not indicated to be removed. Provide proper disposition, in a manner acceptable to Owner and Architect, of all existing utilities and services that in any way interfere with the work, whether or not they are indicated in the contract documents.
 - 8. Contractor's Responsibility: Be responsible for all damage and injury resulting from work on or near utilities and services, and all costs to restore and repair utilities, and all costs for temporary replacement utilities.

- 10. Abandoned Utilities: If not otherwise indicated, remove abandoned utilities in their entirety, except earth buried and concrete encased utilities may be abandoned in place. For all utilities abandoned in place, cut, cap, and make the utilities safe.
- F. Contractor Circulation Routes: Restrict Contract related traffic and circulation only to site entrances, building entrances, and circulation paths pre-approved by the Owner.
- G. Owner's Equipment: Do not use any equipment belonging to the Owner. If the Contractor or any subcontractor uses the Owner's ladders or any other equipment with or without the Owner's permission, the Contractor shall indemnify and hold the Owner harmless for damages or losses which the Owner may suffer due to any damage or injury, including death, to any person or to any property, sustained or alleged to have been sustained. The term "damages or losses" shall include all costs and expenses of whatever nature or type, including without limitation, judgements, arbitration awards, court costs, litigation expenses, attorney's fees, and other costs in connection with the damage or losses. The agreement to indemnify the Owner shall survive termination of the Owner-Contractor Agreement for Construction.
- H. Noise and Exhaust Fumes from Vehicles, Engines, Machines, and Equipment: Do not operate any vehicle, machinery, equipment, or engine less than 50 feet from the nearest Owner occupied area, except where specific prior written permission has been obtained from the Owner, Construction Manager or Architect.
 - 1. To the greatest extent possible, position vehicles, machines, equipment, and engines so the engine exhaust is directed away from Owner occupied areas.
 - 2. Use only vehicles, machines, equipment, and engines with acoustically insulated metal covers over noise producing components.
 - 3. For stationary vehicles, machinery, equipment, or engines, provide a temporary sound barrier at least 8 feet high and extending at least 3 feet beyond the horizontal limits of the noise producing source (minimum 8 feet horizontal width) to help direct sound away from Owner occupied areas. Make the sound barrier larger as needed. Effectively interrupt all direct lines of sight from the noise source to the Owner occupied areas.

1.16 PROJECT MEETINGS

- A. The Facilities Manager will schedule pre-construction organizational meetings, periodic project meetings, specially called meetings throughout the progress of the Work, and post-construction meetings.
- B. All meetings shall be attended by the representatives of the General Contractor, Facitlites Manager, and the Architect. Consultants and subcontractors shall attend only if requested by the Facilities Manager or Architect.

1.17 PRE-CONSTRUCTION ORGANIZATIONAL MEETINGS

A. Immediately following award of Contract, the Facilities Manager or the Architect will call one or more preliminary organizational meetings during which detailed procedures will be worked out for submission and review of Shop Drawings and samples, format and extent of the construction schedule and schedule of values, format and methods for progress payment

requisitions, channels of communication between the Facilities Manager, Architect and the General Contractor's personnel, and other routines to be followed during construction.

1.18 PROGRESS MEETINGS

- A. The Facilities Manager will call together, not more often than once each week and at other reasonable times as designated by the Architect, representatives of the General Contractor who shall meet at the site, to report on the condition of the work under their charge, or on any other matters pertinent to the conduct of the Work. Subcontractors shall attend such meetings at the request of the Architect.
- B. The Architect will take the minutes of such meetings and distribute copies to the Facilities Manager and the General Contractor. The General Contractor shall distribute the meeting notes to all subcontractors.
- C. The Contractor shall be represented by a principal, project manager, general superintendent or other authorized representative, as well as the Contractor's own superintendent. Such representatives shall be empowered to make binding commitments on all matters to be discussed at such meetings including costs, payments, Change Orders, time schedules and manpower. Any notices required under the Contract may be served on such representatives at these meetings.
- D. The General Contractor shall furnish the Facilities Manager and the Architect, in writing, the names, addresses, and telephone numbers of General Contractor's and principal subcontractor's personnel to be contacted in the event of an after hours emergency at the site. The General Contractor shall also maintain a similar list readily visible from the outside of the field office.

PART 2 – PRODUCTS – NOT USED

PART 3 – EXECUTION – NOT USED

END OF SECTION 01 01 00

SECTION 01 04 50 CUTTING AND PATCHING

PART 1 – GENERAL

1.0 GENERAL REQUIREMENTS

- A. Include GENERAL CONDITIONS and applicable parts of Division 1 as part of this Section.
- B. Examine all other Sections of the Specifications for requirements that affect work of this Section whether or not such work is specifically mentioned in this Section.
- C. Coordinate work with that of all other trades affecting, or affected by work of this Section. Cooperate with such trades to assure the steady progress of all work under the Contract.
- D. The General Contractor will provide inspection, testing, x-ray photography and drafting work required by this section.

1.1 WORK INCLUDED

- A. Cutting and patching existing elements to effect neat edges at localized demolition, including at Spray Fire Protection that may be disturbed by the work.
- B. Patching and filling of all openings and penetrations in the structure after removal. See all Mechanical/Electrical Sections to determine removed elements.

1.2 RELATED SECTIONS

- A. Section 01 01 00 PROJECT PROCEDURES
- B. Section 01 60 00 PRODUCT REQUIREMENTS

1.3 CLOSEOUT SUBMITTALS, RECORD DOCUMENTS AND GUARANTEES

- A. Submit written request in advance of cutting or alteration, which affects:
 - 1. Structural integrity of any element of Project. Including Fire Protection.
 - 2. Integrity of weather-exposed or moisture-resistant element.
 - 3. Efficiency, maintenance, or safety of any operational element.
 - 4. Visual qualities of sight-exposed elements.
 - 5. Work of Owner or separate Contractor.

B. Include in request:

- 1. Identification of Project.
- 2. Location and description of affected work.
- 3. Necessity for cuttingn or alteration.
- 4. Description of proposed work and products to be used.
- 5. Alternatives to cutting and patching.
- 6. Effect on work of Owner or separate Contractor.
- 7. Written permission of affected separate Contractor.

- 8. Date and time work will be executed.
- 9. Verification that materials used and methods of installation meet NFPA and Massachusetts Building Code requirements.

<u>PART 2 – PRODUCTS</u>

2.0 MATERIAL REQUIREMENTS

- A. Materials used for patching shall generally match those of the element being patched or filled.
- B. For any proposed change in materials, submit request for substitution under provisions of Section 01 60 00 PRODUCT REQUIREMENTS.

PART 3 – EXECUTION

3.0 CUTTING AND PATCHING REQUIREMENTS

- A. Except as otherwise specified in any particular Section of the specifications, the General Contractor shall do all cutting, fitting and patching of the Work that may be required to make its several parts come together properly and fit it to receive and be received by work of other Contractors shown upon, or reasonably implied by, Drawings and specifications for completed structure, and he shall make good after them as Architect may direct.
- B. Do all the cutting, fitting, and patching to complete the Work and to:
 - 1. Fit the several parts together, to integrate with other work.
 - 2. Uncover work to install ill-timed work.
 - 3. Remove and replace defective and nonconforming work.
 - 4. Remove samples of installed work for testing.
 - 5. Provide openings in nonstructural elements for penetrations of mechanical and electrical work.
 - 6. Provide openings in structural elements for penetrations of mechanical and electrical work upon approval of the Structural Engineer.

3.1 INSPECTION

- A. Inspect existing conditions, including elements subject to damage or movement during cutting and patching.
- B. After uncovering, inspect conditions affecting performance of work.
- C. Do not proceed with cutting and patching until unsatisfactory conditions have been corrected.
- D. Beginning of cutting or patching shall constitute acceptance of the conditions.

3.2 PREPARATION

- A. The General Contractor shall provide supports to assure structural integrity of surroundings; devices and methods to protect other portions of Project from damage.
- B. The General Contractor shall provide protection from the elements for areas that may be exposed to the elements by uncovering work.

3.3 PERFORMANCE OF WORK

- A. Execute work by methods to avoid damage to other work, and which will provide proper surfaces to receive patching and finishing.
- B. Employ original installer to perform cutting and patching for weather-exposed and moisture-resistant elements, and sight-exposed surfaces.
- C. Cut rigid materials using masonry saw or core-drill. Pneumatic tools shall not be used without prior approval. Cut only as much material as is required for the installation of new work.
- D. Restore work with new products in accordance with requirements of Contract Documents.
- E. Fit work airtight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.
- F. At penetrations of fire-rated wall, ceiling, and floor construction, completely seal voids with fire-rated or fire-resistant material, as applicable, full thickness of the construction element, in accordance with UL underwriters tested assemblies.
- G. Refinish surfaces to match adjacent finishes. For continuous surfaces, refinish to nearest intersection; for an assembly, refinish entire unit.

3.4 WELDING AND CUTTING

- A. Where electric or gas welding or cutting work is done above or within ten (10) feet of combustible material or above space that may be occupied by persons, use interposed shields of incombustible material to protect against fire damage or injury due to sparks and hot metal.
- B. Place tanks supplying gases for gas welding or cutting at no greater distance from the Work than is necessary for safety, securely fastened and maintained in an upright position where practicable. Such tanks, when stored for use, shall be remote from any combustible material and free from exposure to the rays of the sun or high temperatures.
- C. Maintain suitable fire extinguishing equipment near all welding and cutting operations. When operations cease for the noon hour or at the end of the day, thoroughly wet down the surroundings adjacent to welding and cutting operations.
- D. Station a worker equipped with suitable fire extinguishing equipment near welding and cutting operations to see that sparks do not lodge in floor cracks or pass through floor or wall openings or lodge in any combustible material. Keep the worker at the source of work

- which offers special hazards for thirty (30) minutes after the job is completed to make sure that smoldering fires have not been started.
- E. Place a qualified electrician in charge of installing and repairing electric and arc welding equipment.

END OF SECTION 01 04 50

SECTION 01 33 00 SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

- A. Include GENERAL CONDITIONS as part of this Section.
- B. Examine all other Sections of the Specifications for requirements that affect work of this Section whether or not such work is specifically mentioned in this Section.
- C. Coordinate work with trades affecting, or affected by work of this Section. Cooperate with such trades to assure the steady progress of all work under the Contract.
- D. All reproduction costs, distribution cost for all associated trade Contractors, Architects, Construction Manager and Owner required documentation associated with this section shall be borne by the Contractor.
- E. Action Submittals: Written and graphic information and physical samples that require Architect's responsive action. All submittals are to be considered as "action submittals.", unless specifically indicated in individual Specification Sections as "for information only, not an action submittal."

1.2 SECTION INCLUDES

- A. Submission Requirements and Quantities.
- B. Submittal Schedule
- C. Substitutions
- D. Shop Drawings, Product Data, and Samples.
- E. Schedule of Values.

1.3 SUBMISSION REQUIREMENTS AND QUANTITIES

- A. To receive consideration by the Architect, Submittals, including but not limited to Shop Drawings, samples and product data, shall be accompanied by a letter of transmittal and each shall contain the following information:
 - 1. Project identification.
 - 2. Architect's name.
 - 3. Date of preparation of submission, and of revision if applicable.
 - 4. Shop Drawing number and title of item the drawing refers to.
 - 5. Architect's drawing numbers and specifications paragraph number used as a reference in preparing shop drawings.
 - 6. Contractor's and subcontractor's name.
 - 7. Names of person or firm preparing drawings.
 - 8. Statement or stamp of approval by the General Contractor, which shall signify that he has seen, and examined the drawing and that requirements of the General Conditions have been complied with.
- B. Furnish Architect with electronic files through the Adobe Acrobat Portable Document Format (PDF) files for all submittal types except samples.

- 1. Subcontractors and suppliers may provide electronic (PDF) documents to General Contractor.
- 2. Subcontractors and suppliers may provide paper documents to General Contractor who electronically scans and converts to PDF format.
- C. General Contractor shall review and apply an electronic stamp certifying that submittals comply with requirements of the Contract Documents including verification of manufacturer/product, dimensions and coordination with other parts of the work.
- D. Contractor shall transmit each submittal or document to Architect by email, or by an approved Online Submittal Management service to be paid for by the Contractor.
- E. Architect review comments will be made available by email or on the web-based service for downloading. General Contractor will receive email notice of completed review.
- F. Distribution of reviewed submittals to subcontractors and suppliers is the responsibility of the General Contractor. Subcontractors and suppliers will not be given access to Architect's web-based document service.
- G. Submit paper and electronic copies of reviewed submittals or documents at project closeout for record purposes in accordance with Section 017700 CLOSEOUT PROCEDURES.
- H. Internet Service and Equipment Requirements:
 - 1. Email address and internet access at General Contractor's main office.
 - 2. Adobe Acrobat (<u>www.adobe.com</u>), or other similar PDF review software for applying electronic stamps and comments.
- I. Furnish Architect with the following quantities of the following physical submittals:
 - 1. Samples: Sets of 3 identical samples of each submission required.
- J. General submission of physical submittals: Due to circumstances beyond the Architect's control, there may not be any person available to sign for packages at the time of delivery. Do not use UPS, FedEx, Certified Mail or any other service requiring signature upon delivery. Deliver by hand or U.S. Mail Regular First Class Mail to the following address:

James Carr, architecture + design 366 Boylston Street Brookline, MA 02445

If delivering by hand, call ahead to 617-879-0725 to coordinate delivery. Architect can take no responsibility for delays due to unsuccessful delivery attempts.

- K. Transmit submittals to Architect at the above address, with individual transmittal forms for each submission.
 - 1. On transmittal form, identify Project, Contractor, subcontractor, installer, or supplier, pertinent Drawing sheet and detail number(s), and specification Section number, as appropriate. Transmittals received by the Architect from sources other than the Contractor will be returned without any action taken.

- 2. Contractor shall number submittals sequentially by Specifications Section prior to submittal. Resubmitted items shall retain number and be noted as resubmitted (example 260000-1 R1).
- L. The Architect will annotate the submittals and indicate one of the following as applicable:

REJECTED REVISE - RESUBMIT ACCEPTED AS NOTED ACCEPTED

- M. Samples, Shop Drawings or Cut Sheets shall be provided for all fabricated items. Submit for approval to Architect prior to ordering, for the following items at minimum:
 - 1. WOOD FLOORING SAMPLE PANEL FOR DANCE FLOOR.
 - a. SEE SECTION 09 64 00. WOOD FLOORING.
 - b. Sample panel shall be no less than 12" x 12" and shall include subfloor.
 - 2. Vinyl Composite Tile samples in full range of manufacturer colors. SEE SECTION 09 65 00 RESILIANT TILE.
 - 3. Mirror glass for mirrors. See Section 08 83 00 MIRROR GLAZING.
 - 4. Ballet barre. SEE SECTION 06 20 23 FINISH CARPENTRY.
 - 5. Preservative treated wood and cut end preservative to be field applied (cut sheet).
 - 6. All sealants, epoxy flooring, other finish materials, and paint (cut sheet required).
- N. Certificates of Compliance: The General Contractor shall submit certificates of compliance along with the associated Shop Drawings, product data and samples required for each product. Submit one copy of each certificate. The Architect will retain the certificates of compliance; no approval reply is intended.
- O. Deficient Submittals and Appeal Submittals. Rejected submittals shall be resubmitted in the same manner with comments addressed up to a maximum of three times. Should further resubmittals be required due to deficiencies of submittal, as so deemed by the Architect, these shall be identified on the cover sheet as "Appeal Submittals" and the cost of the Architect's additional reviews shall be borne by the Contractor. All Owner-required documentation associated with this section shall be borne by the Contractor.

1.4 SUBMITTAL SCHEDULE

- A. Schedule: The schedule shall indicate by trade the date by which final approval of each item must be obtained for each phase, and shall be revised as required by conditions of the Work, subject to Architect's approval. The schedule shall allow a minimum of fourteen (14) days after Architect's receipt of documents for the Architect's review of each submission or resubmission, including consultant review, plus an allowance for receipt of submittals by the Architect and subsequent distribution by the General Contractor. The General Contractor is required to adhere strictly to the established schedule dates.
- B. Construction Schedule: Contractor must submit a detailed construction schedule for review with the bid proposal. Long lead time items or critical path sequences should be identified in the schedule. Schedule shall include start and end dates, significant milestones, and lead time item dates, including date of ordering and expected delivery. The schedule shall also include dates for submittals and dates by which submittals are required to be approved by the Owner and/or Architect in order to stay on schedule. In no case may the time period between submittal and approval be less than two weeks.

C. Notes or other information on the Shop Drawings, labels, transmittals or other items submitted which are contrary to provisions of the Contract Documents shall be deemed to be addressed to the General Contractor, applicable subcontractor, material men or other parties involved, and shall have no force or effect with respect to this Contract, even though the Shop Drawing or sample involved is approved by the Architect. In particular the terms "By Others", "N.I.C.", or words of similar meaning and import on submissions shall not be deemed to imply that the referenced items are to be omitted from this Contract.

1.5 SUBSTITUTIONS

- A. Substitutions: Refer to Section 016000 PRODUCT REQUIREMENTS for additional requirements pertaining to substitutions. All proposed substitutions shall be accompanied by a formal "Substitution Request Letter" on which the Contractor shall state the following:
 - 1. The proposed substitution does not affect dimensions indicated on Drawings.
 - 2. The Contractor making the request for the substitution shall pay the costs of changes to the building design, including engineering design, detailing and all additional construction costs, and submittal review costs, caused by the requested substitution.
 - 3. The proposed substitution will have no adverse affect on other trades, the construction schedule, or specified warranty requirements.
 - 4. Maintenance and service parts are locally available for the proposed substitution.
 - 5. The function, appearance and the quality of the proposed substitution are equal or superior to the specified item.
 - 6. Once the substitution is accepted by the Architect, a formal submittal must be forwarded as outlined in this Section.

1.6 SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

- A. Shop Drawings and product data relating to various units comprising a proposed assembly shall be submitted simultaneously so that said units may be checked individually and as an assembly.
- B. Shop Drawings and product data shall be submitted to the Architect through the General Contractor. Drawings or product data submitted directly from subcontractors, manufacturers or vendors, or directly to the Architect's consultants, will be returned to the Contractor without action.

C SHOP DRAWINGS

- 1. Submit all Shop Drawings, including wiring and control diagrams, for review by Architect.
- 2. Drawings marked "Accepted as Noted", shall be treated as approved Drawings. Architect's comments shall be considered part of the original Drawings. Should the Contractor disagree with such comments, he shall so notify the Architect in writing within fourteen (14) days of receiving such Drawings and before commencing work on the items in question. Failing this, the Contractor shall be deemed to have accepted responsibility for implementing such comments at no additional cost to the Owner.
- 3. Shop Drawings shall clearly indicate all details; sectional views; arrangements; working and erection dimensions; kinds, quality, and finishes of materials; and other information

necessary for proper checking, fabrication, and installation of the items; and shall include all information required for making connections to other work.

- 4. If any information on previously submitted Shop Drawings, aside from notations made by the Architect, is revised in any way, such revision shall be circled or otherwise graphically brought to the Architect's attention. If approved Drawings are subsequently revised, they shall be resubmitted to the Architect with all revisions clearly marked for the Architect's attention. Whenever Drawings are revised, the latest revision shall be circled or otherwise indicated to distinguish it clearly from all previous revisions (and from the information on the original Drawing).
- 5. Should the Architect, in checking Shop Drawings, make changes which the Contractor deems will increase Contract Price, the General Contractor shall so inform the Architect in writing within fourteen (14) days following receipt of checked shop drawings and prior to starting fabrication of the item(s). Failing this, the Contractor shall be deemed to have waived all claims for extra compensation for work involved.
- 6. The General Contractor shall be responsible for obtaining and distributing copies of approved Shop Drawings to his subcontractors and material suppliers needing such information, at no additional cost to the Owner.
- 7. The General Contractor shall keep on the site, in good order, a complete up-to-date set of all approved Shop Drawings.

D PRODUCT DATA

- 1. Submit standard manufactured items in the form of manufacturer's product data (catalog sheets), showing illustrated cuts of the items to be furnished, scale details, sizes, dimensions, performance characteristics, capacities, and other pertinent information, accompanied by an appropriate transmittal form with specific reference to the applicable paragraph in the Specifications. Such sheets will be marked either "Accepted" or "Rejected", and returned to the General Contractor. Rejected submittals shall be resubmitted in the same manner until acceptance is obtained.
- 2. Indicate clearly which of several items is being submitted for approval.
- 3. If catalog cuts of standard manufactured items show different types, options, finishes, performance requirements, and other variations, those features that the Contractor proposes to furnish shall be clearly circled or otherwise indicated, and all irrelevant diagrams, notes, or other information deleted or canceled. If any variations from the catalog description are proposed or required, such variations shall be clearly noted on the cut by the Contractor. Catalog cuts of wiring diagrams will not be acceptable.
- 4. Patterns and Colors: The General Contractor shall submit accurate color charts and pattern charts to the Architect for his review and selection whenever a choice of color or pattern of a product is indicated in the Contract Documents.

E SAMPLES

1. Before submitting samples, consult with Architect to verify that samples will be required and determine whether samples are to be submitted to Architect's office or other location.

- 2. Samples shall be submitted in triplicate, unless otherwise specified or directed by the Architect.
- 3. Samples may be submitted to Architect directly from manufacturers, vendors, suppliers, subcontractors, or others, but a separate transmittal letter shall be submitted through the General Contractor in each such case.
- 4. Approved samples of major or expensive items or assemblies, if in good condition and meeting all Contract requirements, may be marked for identification and used in the Work, provided that all shipping and handling charges are paid by the Contractor.
- 5. Each sample shall have a label indicating the material represented, its place of origin, and the names of the producer, the Architect, the General Contractor, the subcontractor, and the building or Work for which the material is intended. Samples shall be marked to indicate the Drawing numbers or specification paragraph requiring the materials represented.
- 6. Approval of samples for color, texture, and other aesthetic qualities shall not be construed as approval of other characteristics.
- 7. Field Samples: Provide field samples of finishes at site as required by individual specification Sections. Install sample complete and finished. Acceptable samples in place may be retained in completed Work.

1.7 SCHEDULE OF VALUES

A. Information Required:

- 1. Submit Schedule of Values in accordance with requirements of the General Conditions and as further specified herein.
- 2. The value of each line item shall represent the value of work associated with such item.
- 3. In preparing the Schedule, each subdivision or classification of the Work shall be identified by code number referring to each individual Section (or Sub-Section where applicable) of the Specifications.
- 4. Attached to the Schedule of Values shall be a list of the names, addresses (and whether individual, partnership or corporation) of each Subcontractor or Sub-Subcontractor who is to perform all or any part of each subdivision. In the event any Subcontractors are not known at the time said schedule is prepared, an amended or supplementary list containing the names of the Subcontractors and Sub-Subcontractors involved and indicating their division of the Work shall be furnished to the architect as soon as the information is available. A code number for identification on requisitions shall be used to identify the Contractor, each of the Subcontractors and subordinate Subcontractors, and shall be shown in each requisition where any part of the Work performed by the Contractor, such Subcontractor, Sub-Subcontractors or material men is incorporated in the amount of the requisition for which payment is requested.
- 5. The Schedule of Values shall be arranged in vertical columns identified with titles, including Names of Items; Original Amounts; Percent Completed to Date; Previous Payments; Current Requests; Balance Not yet Requested, and Retained Amounts. A summary of the total amount due to date and the amount of the five percent retained shall be included in the statement which shall be signed by the General Contractor. A separate sheet shall be included with each requisition showing status of work covered by approved Change Orders. The schedule shall be revised if later found by the Architect to be inaccurate.

6. Submit to the Owner such schedules of quantities and costs, progress schedules, payrolls, reports, estimates, records, and other data as the Owner may request concerning work performed or to be performed under this Contract.

B. Schedule Requirements. The General Contractor shall:

- 1. Submit to the Architect the Schedule of Values within 10 days of receipt of Notice to Proceed.
- 2. Upon request by the Architect, support values given with data that will substantiate their correctness.
- 3. Submit quantities of designated materials for materials stored on which payment is expected to be made.
- 4. Use Schedule of Values only as basis for Contractor's Application for Payment.

C. Form of Submittal:

1. Use Table of Contents of the Project Manual as basis for format for listing costs of work and identify each line with number and title of Section.

D. Preparing Schedules of Values:

- 1. Itemize separate line item cost for each of the following general cost items:
 - a. Performance and Payment Bonds.
 - b. Field supervision and layout.
 - c. Construction facilities and temporary controls.
 - d. Alternates.
 - e. Temporary Improvements and Continuity of Services.
- 2. Itemize separate line item cost for work required by each Section of the Specifications. Sections shall be further subdivided into separate line items under each section as required by the Architect.
- 3. Break down installed costs into:
 - a. Delivered cost of product.
 - b. Total installed cost, with overhead and profit.

 Note: Owner is tax exempt for all materials incorporated into the construction.
- 4. For each line item which has installed value of more than \$10,000.00, break down costs to list major products or operations under each item.
- 5. Make sum of total costs of all items listed in schedule equal to total Contract Sum.
- E. Review and Resubmittal: After review by Architect, revise and resubmit schedules as required. Resubmit revised schedules in same manner.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 33 00

SECTION 01 50 00 TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

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

1.2 REQUIREMENTS INCLUDED

- A. Temporary facilities and services.
- B. Temporary electricity and lighting.
- C. Temporary sanitary facilities.
- D. Temporary Fire protection.
- E. Temporary Stairs and Ladders.
- F. Maintenance of access.
- G. Protection of work, property and the public.
- H. Noise control.
- I. Dust control.
- J. Cleaning during construction.
- K. Pollution control.
- L. Temporary offices.
- M. Removal.

1.3 RELATED REQUIREMENTS

- A. Section 01 01 00 PROJECT PROCEDURES
- C. Section 01 77 00 CLOSEOUT PROCEDURES

1.4 TEMPORARY FACILITIES AND SERVICES

- A. General Contractor shall be responsible for arranging and providing temporary facilities and general services as specified herein and as otherwise required for proper and expeditious prosecution of work. Except as otherwise specified, the General Contractor shall pay costs for all temporary facilities and general services until Date of Substantial Completion of the Work established by the Architect and shall remove same at completion of the Work.
- B. All such services and facilities shall comply with applicable Federal, State and Local regulations.
- C. General Contractor shall make all connections to existing services and sources of supply, shall provide all necessary installations, labor, materials, and equipment, in a manner subject to the approval of the Architect and the Owner, shall remove temporary installations and

- conditions when no longer required, and shall restore the services and sources of supply to proper operating condition as approved by the Architect.
- D. Discontinuance of any temporary service prior to the completion of any portions of the Work shall not render the Owner liable for any additional cost resulting therefrom.
- E. Should a change in location of any temporary equipment be necessary in order for the Work to progress properly, General Contractor shall remove and relocate such equipment as required without additional cost to the Owner.

1.5 TEMPORARY ELECTRICITY AND LIGHTING

- A. The General Contractor shall make arrangements as required with the local electric company for temporary electric service with an account in the name of the General Contractor, pay expenses in connection with the installation, operations, and removal thereof, and pay cost of energy consumed by all trades.
- B. The General Contractor shall be responsible for the cost of energy for the existing building during renovation work.
- C. The General Contractor shall be responsible for the temporary electricity and lighting work.
- D. Temporary lighting system shall be furnished, installed and maintained by General Contractor as required to satisfy minimum requirements of safety and security. Provide adequate outdoor lighting to illuminate staging, stockpiles, trenches, projections, etc., to the satisfaction of the Architect, and general illumination throughout adequate for watchmen and emergency personnel.
- E. Temporary equipment and wiring for power and lighting shall be in accordance with applicable provisions of governing codes. Temporary wiring shall be maintained in safe manner and utilized so as not to constitute hazard to persons or property.
- F. At completion of construction work, temporary wiring, lighting and other temporary electrical equipment and devices shall be removed by General Contractor.

1.6 TEMPORARY SANITARY FACILITIES

- A. The General Contractor shall provide adequate temporary sanitary facilities, with chemical type toilets and temporary lighting, rented from and serviced by an approved company, as necessary for all persons engaged on the Work. Provide the quantity and types of toilet fixtures and facilities required by the State Building Code and the State Plumbing Code.
- B. Existing school toilet facilities shall not be used by any construction workers.
- C. Temporary toilets shall be erected in location approved by the Construction Manager, shall be maintained by the General Contractor in a clean and orderly condition in compliance with all local and State health requirements, and shall be removed at Substantial Completion of the Work

1.7 TEMPORARY FIRE PROTECTION

- A. The General Contractor shall provide and maintain adequate temporary fire protection in the form of barrels of water with buckets, fire bucket tanks, fire extinguishers, or other effective means of extinguishing fire, ready for instant use, distributed around the project and in and about temporary inflammable structures during construction of the Work.
- B. Gasoline and other flammable liquids shall be stored in and dispensed from UL listed safety containers in conformance with National Board of Fire Underwriter's recommendations.
- C. Make arrangements for periodic inspection by local fire protection authorities and insurance underwriter's inspectors. Cooperate with said authorities and promptly carry out their recommendations.
- D. Tarpaulins used during construction work shall be made of material resistant to fire, water and weather. Tarpaulins shall have UL approval and comply with S-CCC-D-746.
- E. Do not light fires in or about the site.

1.8 TEMPORARY STAIRS AND LADDERS

- A. The General Contractor shall furnish and maintain all temporary stairs, ladders, ramps, scaffolds, runways, chutes, etc. as required for the proper execution of the Work, unless specifically indicated to be provided under other Sections.
- B. All such apparatus, equipment and construction shall meet all requirements of Federal, State and local laws applicable thereto.

1.9 MAINTENANCE OF ACCESS

- A. The General Contractor shall provide and maintain for the duration of the Contract, a means of access to, around and within the site, as shown on the Contract Drawings, for vehicular traffic and authorized personnel. This means of access shall be constructed to sustain the weight of equipment customarily engaged for use in construction projects of this type and magnitude.
- B. The General Contractor shall, without additional compensation from the Owner, furnish labor and materials as may be required from time to time to maintain this means of access in an acceptable condition as determined by the Architect.

1.10 PROTECTION OF WORK, PROPERTY, AND THE PUBLIC

- A. The General Contractor shall construct barricades and protective facilities required for the protection of the public in accordance with local and State regulations. Furnish and install all signs, lights, reflectors, and all such protection facilities as may be required.
- B. The General Contractor shall hold the Owner harmless from all claims arising from the use of public streets, sidewalks, and adjoining premises for construction purposes.
- C. The General Contractor shall keep all access roads and walks clear of debris, materials, construction plant and equipment during construction operations. Repair streets, drives,

curbs, sidewalks, fences, poles and the like where disturbed during construction and leave them in as good condition after completion of the Work as before operations started.

- 1. Provide ways and means to control the flow of water from every source that may cause delay or damage during construction operations.
- 2. Protect all planting, landscaping, trees and site improvements in the areas of site work and construction work.
- D. The General Contractor shall be responsible for the maintenance of construction barriers and traffic barriers in order to maintain traffic, over, through or around the Work with the maximum of safety and practical convenience to such traffic during the life of the Contract, and whether or not work has been suspended temporarily. The General Contractor shall take all precautions for preventing injuries to persons or damage to property to or about the Work.
 - 1. Work shall be carried on and barriers erected in such a manner as to provide safe passage at all times for public travel and with least obstruction to traffic. The General Contractor shall provide and maintain at his own expense in a safe and passable condition such temporary bypasses as created by the barriers as may be necessary to accommodate both pedestrian and vehicular traffic.
 - 2. Maintain all legally required means of egress, and do not erect barriers which interfere with, or obstruct such means of egress.
 - 3. Where new construction, alteration, or repair work coincides with the present traveled way, the General Contractor shall carry on his work so that travel will not be obstructed.
- E. Whenever gale or high winds are forecast, the General Contractor shall take proper measures to secure all loose material, equipment other items which could blow about and be damaged or cause damage to other work. No such loose items shall be left unsecured at end of the working day. Particular attention shall be taken with scaffolding and items placed or stored on roofs or within the structure prior to being enclosed.
- F. Take all required measures to protect the Work at all times against fire, storm, theft, vandalism and other losses.
- G. The General Contractor shall be wholly responsible for patrolling and protecting the Work under construction and the materials stored on the site; and shall reimburse the Owner for any losses, damages or injury not compensated by insurance, except those directly caused by the Owner, his agents or his employees.

1.11 NOISE CONTROL

- A. General Contractor shall develop and maintain a noise-abatement program and enforce strict discipline over all personnel to keep noise to a minimum.
- B. Execute construction work by methods and by use of equipment that will reduce excess noise.
 - 1. Employ construction methods and equipment that will produce the minimum amount of noise.
 - 2. Equip air compressors with silencers, and power equipment with mufflers.

1.12 DUST CONTROL

A. The General Contractor shall maintain the construction site, stockpiles, access, detour, and haul roads, staging and parking area used for the Work free of dust which would cause a hazard or a nuisance to those in the building, at the site or adjacent sites.

- B. Reference Section 01 01 00 Project Procedures and Coordination, and Section 01 81 19-Indoor Air Quality Management Plan.
- C. The General Contractor shall erect negatively pressurized temporary dust enclosures built of wood and drywall or heavy plastic sheeting securely and completely fastened to existing surfaces. Contractor shall be responsible for entirely repairing all fastening holes and painting to an as-new condtion wherever such fastening occurred to the satisfaction of building Owner and Architect. Temporary enclosures shall be ventilated to the exterior to prevent cross contamination of occupied areas and HVAC equipment with dust.
- D. Walk-off mats, adhesive type, shall be installed at every entrance to the construction area and shall be maintained and replaced on a regular basis (2 days maximum) to ensure effectiveness in preventing dust from tracking into occupied areas.
- E. Logs and photos of continued dust control measures shall be maintained on a twice weekly basis throughout the construction period to ensure compliance with Dust Control measures.

1.13 CLEANING DURING CONSTRUCTION

A. General Requirements:

- 1. Execute cleaning during progress of the Work, as required by General Conditions and as herein specified. Refer to 01 01 00 PROJECT PROCEDURES.
- 2. Maintain premises and public properties free from accumulations of waste, debris, and rubbish caused by operations. At completion of work, remove waste materials, rubbish, tools, equipment, machinery and surplus materials, and clean all sight-exposed surfaces. Leave project clean and ready for occupancy.
- 3. Prohibit overloading of trucks to prevent spillage on access and haul routes.
- 4. Refer to Sections of the Specifications for cleaning of specific products or work.

B. Safety and Disposal Requirements:

- 1. Standards: Maintain project in accordance with State Building Code and local ordinances.
- 2. Hazards Control:
 - a. Store volatile wastes in covered metal containers, and remove from premises.
 - b. Prevent accumulation of wastes that create hazardous conditions.
 - c. Provide adequate ventilation during use of volatile or noxious substances.
- 3. Conduct cleaning and disposal operations to comply with local ordinances and antipollution laws.
 - a. Do not burn or bury rubbish and waste materials on project site.
 - b. Do not dispose of volatile wastes such as mineral spirits, oil, or paint thinner in storm or sanitary drains.
 - c. Do not dispose of wastes into streams or waterways.

C. During construction the General Contractor shall:

- 1. Execute cleaning to ensure that the site and adjacent properties are maintained free from accumulations of waste materials and rubbish and windblown debris resulting from construction operations.
- 2. Provide on-site containers for collection of waste materials, debris and rubbish.
- 3. Remove waste materials, debris and rubbish from the site periodically and dispose of at legal disposal areas. Provide documentation that waste materials, debris and rubbish was legally disposed of.

1.14 POLLUTION CONTROL

- A. Provide methods, means and facilities required to prevent contamination of soil, water or atmosphere by the discharge of noxious substances from construction operations.
- B. Provide equipment and personnel, perform emergency measures required to contain any spillage, and to remove contaminated soils or liquids. Excavate and legally dispose of any contaminated earth off-site, and replace with suitable compacted fill and topsoil.
- C. Take special measures to prevent harmful substances from entering public waters. Prevent disposal of wastes, effluents, chemicals, and other such substances adjacent to streams, or in sanitary or storm sewers.
- D. Provide systems for control of atmosphere pollutants.
 - 1. Prevent toxic concentrations of chemicals.
 - 2. Prevent harmful dispersal of pollutants into the atmosphere.

1.15 TEMPORARY OFFICES

- A. Contractors Field Offices: Provide Contractor's field offices as needed for the duration of the project as determined by the Architect.
- B. Location: Locate field offices where acceptable to Owner, Architect, and authorities having jurisdiction.
- C. Contract Documents at Site: Keep copies of all Contract Documents and project paperwork neatly on file at job site. Maintain all sets of Contract Documents at the site current and upto-date. In addition to maintaining a separate chronological file of addenda and Contract modifications, clearly note and paste-in all addenda and Contract modifications on the sheets and pages which are changed by addenda and modification. Bind, tape edge band, reinforce, and prepare job site copies of Contract Documents for the heavy use they will receive.

1.16 REMOVAL

A. The General Contractor shall remove, prior to Substantial Completion of the Work, temporary materials and equipment, but shall not remove the construction fence or gates or other items noted on the Contract Documents, nor remove any utility services.

PART 2 – PRODUCTS Not used

PART 3 – EXECUTION Not used

END OF SECTION 01 50 00

SECTION 01 60 00 PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

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

1.2 REQUIREMENTS INCLUDED

- A. Material and equipment incorporated into the Work.
- B. Manufacturer's instructions.
- C. Transportation and handling.
- D. Storage and protection.
- E. Product standards.
- F. Substitutions.

1.3 MATERIAL AND EQUIPMENT INCORPORATED INTO THE WORK

- A. Comply with specifications and referenced standards as minimum requirements.
- B. Comply with size, make, type and quality specified, as shown on the Drawings, or as specifically approved in writing by the Architect.
- C. Manufactured and Fabricated Products:
 - 1. Design, fabricate and assemble in accordance with the best engineering and shop practices.
 - 2. Manufacture like parts of duplicate units to standard size and gauges to be interchangeable.
 - 3. Two or more items of the same kind shall be identical and by the same manufacturer.
 - 4. Products shall be suitable for service conditions.
 - 5. Equipment capacities, sizes and dimensions shown or specified shall be adhered to unless variations are specifically approved in writing.
- D. Do not use material or equipment for any purpose other than that for which it is designed or is specified.

1.4 MANUFACTURER'S INSTRUCTIONS

A. When Contract Documents require that installation of work shall comply with manufacturer's printed instructions, obtain and distribute copies of such instructions to parties involved in the installation, including two (2) copies to the Architect. Maintain one (1) set of complete instruction at the job site during installation and until completion.

- B. Handle, install, connect, clean, condition and adjust products in strict accordance with such instructions and in conformity with specified requirements.
- C. Should job conditions or specified requirements conflict with manufacturer's instructions, consult with Architect for further instructions. Do not proceed with work without clear instructions.
- D. Perform work in accordance with manufacturer's instructions. Do not omit any preparatory step or installation procedure unless specifically modified or exempted by Contract Documents.

1.5 TRANSPORTATION AND HANDLING

- A. Arrange deliveries of products in accordance with construction schedules, coordinated to avoid conflict with work and conditions at the site.
- B. Deliver products in undamaged condition, in manufacturer's original containers or packaging, with identifying labels intact and legible.
- C. Immediately on delivery, inspect shipment to assure compliance with requirements of Contract Documents and approved submittals, and to verify that products are properly protected and undamaged.
- D. Provide equipment and personnel necessary to handle products by methods that will prevent soiling or damage to products or packaging.

1.6 STORAGE AND PROTECTION

- A. Store products in accordance with manufacturer's instructions, with seals and labels intact and legible:
 - 1. Store products subject to damage by the elements in weathertight enclosures.
 - 2. Maintain temperature and humidity within the ranges required by manufacturer's instructions.

1.7 PRODUCT STANDARDS

- A. Products include material, equipment and systems.
- B. Any product specified by reference to the number, symbol or title of a standard, such as Commercial Standard, Federal Specification, ASTM Standard, ANSI Standard, trade association standard, or other similar standard, shall comply with the requirements of the latest issue of such standard or revision thereof, including any amendment or supplement thereto, as listed in the latest official index in effect and issued not later than thirty (30) days prior to date of Invitation To Bid.
- C. Standards referred to, except as modified by the Contract Documents, shall have full force and effect as though printed in the specifications. The Architect will furnish, upon request, information as to how copies of the standards referred to may be obtained.

D. All manufactured articles, materials and equipment shall be applied, installed, connected, erected, used, cleaned and conditioned, in accordance with the manufacturer's printed instructions, unless otherwise specified.

1.8 SUBSTITUTIONS

- A. Substitutions of products shall comply with requirements of Chapter 30, Section 39M of the General Laws, and the additional requirements and procedures specified herein. Submit all proposed substitutions within 45 Calendar days after execution of Owner-Contractor Agreement and prior to the submission of submittals related to the materials or products proposed for substitution.
- B. Specific reference in the specifications to any product, material or process by name, make or catalogue number shall be interpreted as establishing a standard of quality. An item will be considered "equal" to the item so named or described if (1) it is at least equal in quality, durability, appearance, strength and design; (2) it will perform at least equally the function imposed by the general design for the Work; and (3) it conforms substantially, even with deviations, to the detailed requirements for the item in the specifications.
- C. If the General 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, he shall inform the Architect in writing of the nature of such deviations at the time the material is submitted for approval, and shall request written approval of the deviation from the requirements of the Contract Documents.
- D. In requesting approval of deviations or substitutions, the General Contractor shall provide, upon request, evidence leading to a reasonable certainty that the proposed substitution or deviation will provide a quality or result at least equal to that otherwise attainable. If, in the opinion of the Architect, the evidence presented by the General Contractor does not provide a sufficient basis for such reasonable certainty, the Architect may reject such substitution or deviation without further investigation.
- E. Any additional cost, loss or damage arising from the substitution of any material or any method for those originally specified shall be borne by the General Contractor, notwithstanding approval or acceptance of such substitution by the Owner or the Architect, unless such substitution was made at the written request or direction of the Owner or the Architect.

PART 2 – PRODUCTS – NOT USED

PART 3 – EXECUTION – NOT USED

END OF SECTION 01 60 00

SECTION 01 74 19 CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

PART 1 – GENERAL

1.1 GENERAL REQUIREMENTS

- A. Include GENERAL CONDITIONS as part of this Section.
- B. Examine all other Sections of the Specifications for requirements that affect work of this Section, whether or not such work is specifically mentioned in this Section.
- C. Coordinate work with trades affecting, or affected by work of this Section. Cooperate with such trades to assure the steady progress of all work under the Contract.
- D. All reproduction costs, distribution cost for all associated trade Contractors, Architects, Construction Manager and Owner required documentation associated with this section shall be borne by the Contractor.
- E. Submittals are a firm requirement of the project. No materials or assemblies will be accepted without approved submittals. The General Contractor shall be responsible to replace any materials that do not meet specification requirements at no additional cost to the Owner. Notwithstanding the above, approval of submittals by the Architect does not realease the Contractor in any way of their responsibility to provide materials, assemblies, and a complete project meeting contract requirements, performance, design intent, and quality standards.

1.2 DESCRIPTION OF WORK

- A. This Section includes administrative and procedural requirements for recycling and disposing of construction waste.
- B. Record keeping and documentation of Construction Waste Management is a requirement of this Section, as detailed below and in related Sections. Contractor to execute all required record keeping and documentation, including, but not limited to:
 - 1. Bills of Lading and other paperwork associated with transportation, disposal or recycling facilities.

1.3 RELATED WORK IN OTHER SECTIONS

- A. The following related work is to be performed under the designated SECTIONS:
 - 1. Submittals, processing of reviews SECTION 01 33 00 SUBMITTAL PROCEDURES.
 - 2. Selective Demolition SECTION 02 07 00 SELECTIVE DEMOLITION.

1.4 PERFORMANCE REQUIREMENTS

- A. Waste Management Plan: Develop and implement a construction and demolition waste management plan, and include the following:
 - 1. Waste diversion goals targeting at least two (2) specific materials. Approximate the percentage of overall project waste that these materials represent.
 - 2. Specify whether material will be separated or commingled and describe the diversion strategies planned for the project.

- 3. Describe where the material will be taken and how the recycling facility will process the material.
- B. Material to be included in Plan:
 - 1. Demolition materials
 - 2. Acoustical ceiling panels.
 - 3. Wire and cable.
 - 4. Electrical conduit.
 - 5. Electrical Lights and appurtenances.
 - 6. Packaging: 100% of the following uncontaminated materials: Paper, cardboard, boxes, plastic sheet and film, polystyrene packaging, wood crates, plastic pails.
- C. Provide "Blue Box" recycling bins for recycling waste generated by site workers and visitors. The contractor shall be responsible for coordinating with the local authorities to schedule curbside pickup, or shall remove this waste to a recycling facility. Waste deposited in these bins shall include the following, or adhere to the local recycling program:
 - 1. Aluminum food or beverage cans
 - 2. Glass bottles and jars for food or beverage
 - 3. PET bottles for food or beverages
 - 4. Steel food or beverage cans
 - 5. Cardboard and paper products

1.7 SUBMITTALS

- A. Refer to SECTION 01 33 00 SUBMITTAL PROCEDURES for submittal procedures.
- B. Waste Management Progress Reports: Concurrent with each Application for Payment, submit a PDF copy of report. The following information shall be included:
 - 1. Material category.
 - 2. Receiving facility.
 - 3. Total quantity of waste in tons.
 - 4. Quantity of waste recycled, both estimated and actual, in tons.
 - a Amount of waste removed that was separated on-site, by category.
 - b Amount of waste removed as "coming led" waste.
 - c Amount of waste removed from site that was removed as "simple-stream" recycling (refer to 1.05.K for definition).
 - 5. Total quantity of waste recovered (recycled) as a percentage of total waste.
- C. Facility Permitting Information: For landfill and/or incinerator facilities, provide a copy of the facility's current solid waste management permit in accordance with 310 CMR 19.000.
- D. Record Keeping for Recycling and Landfill and/or Incinerator Disposal: Documentation to be submitted by the General Contractor shall include the following:
 - 1. Recycling and Processing Facility Records: Indicate receipt and acceptance of recyclable waste by recycling and processing facilities licensed to accept them. Include manifests, weight tickets, and/or receipts.
 - 2. Landfill and Incinerator Disposal Records: Indicate receipt and acceptance of waste by landfills and incinerator facilities licensed to accept them. Include manifests, weight tickets, and/or receipts.
- E. Facility Permitting Information: For ABC rubble crushing and/or recycling facilities, provide a statement from the facility that references its specific exemption from the solid waste

- regulations (per 310 CMR 16.05 (3) (e)) or provide a copy of the facility's current solid waste management facility permit in accordance with 310 CMR 19.000.
- F. Records of Donations: Indicate receipt and acceptance of salvageable waste donated to individuals and organizations. Indicate whether organization is tax exempt.
- G. Records of Sales: Indicate receipt and acceptance of salvageable waste sold to individuals and organizations. Indicate whether organization is tax exempt.

1.8 QUALITY ASSURANCE

A. Regulatory Requirements: Contractor to follow all local, state and federal regulations.

1.9 WASTE MANAGEMENT PLAN

- A. General: Develop plan consisting of waste identification, and waste reduction, handling, transportation, and recycling/disposal procedures. Include separate sections in plan for recycling and disposal of construction waste. Indicate quantities by weight throughout waste management plan.
- B. Diversion from Landfill goal must be stated.
- C. Waste Identification: Indicate anticipated types and quantities of site-clearing and construction waste generated by the Work. Include estimated quantities and assumptions for estimates.
- D. Waste Reduction Program: List each type of waste and whether it will be recycled or disposed in a landfill or incinerator. Include points of waste generation, total quantity by weight of each type of waste, quantity for each means of recovery, and handling and transportation procedures.
 - 1. Recycled Materials: Include list of local receivers and processors and type of recycled materials each will accept. Include names, addresses, and telephone numbers.
 - 2. Disposed Materials: Indicate how and where materials will be disposed of. Include name, address, and telephone number of each landfill and incinerator facility.
 - 3. Donated Materials: Indicate receipt and acceptance of salvageable waste donated to individuals and organizations. Indicate whether organization is tax exempt. Include names, addresses, and telephone numbers.
 - 4. Sold Materials: Indicate receipt and acceptance of salvageable waste sold to individuals and organizations. Indicate whether organization is tax exempt. Include names, addresses, and telephone numbers.
- E. Handling and Transportation Procedures: Include methods that will be used for separating recyclable waste including sizes of containers, container labeling, and designated location(s) on Project site where separated materials will be stockpiled.
- F. Waste Management Coordinator: Identify General Contractor employee who will be the Waste Management Coordinator for the project. The Waste Management Coordinator will be responsible for implementing, monitoring, and reporting status of waste management activities.

ARTZ-TRODUC	CTS (Not Used)			
PART 3 – EXECUT	TON			
[IN:	SERT DETAIL FOR C&D WASTE (Submit to the Architect within 1-		=	
Project Name:		Completed By:		
Project Location:		Company:		
At a minimum, the p Management Plan.	proposed facilities must recycle/reus	e the waste materials id	lentified in Waste	
Material Type	Proposed Receiving Facility Name Material End Use Phone			
	Wood Recycling Inc. (Waterloo,	✓ Recycled/Reused	Phone Number 519-743-8697	
Wood Formwork	Ontario)			
		☐ Recycled/Reused		
		☐ Sent to Landfill		
		☐ Recycled/Reused		
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		☐ Recycled/Reused		
		☐ Sent to Landfill		

(Submit most recent copy to the Consultant on a monthly basis)

Project Name: Project Location:			Completed By: Company:		sy:	
110	cet Location.		Company.			
Mat	erial Type Lege	end				
Stee Card	l Clearing Debri l and Other Meta lboard ed Waste	als Wood Plastic			Concrete / Masonry Gypsum "Blue Box" Waste	y / Stone
_и Shipment			Amount of I		Receiving	Waybill
#	Date	Material Type	Reused or Recycled	Landfill	Facility Name	Number
Ex.	2021-09-12	Gypsum	4.0	0.0	Acme Recycling Inc.	05-1234
here	by certify that th	e information provid	led is complete	and correct:		•
Sign	ature of Author	rized Official	Po	osition		Date

END OF SECTION 01 74 19

SECTION 01 77 00 CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

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

1.2 SECTION INCLUDES

- A. Maintenance of Owner's Record Documents and Samples
- B. Maintenance of Record Drawings
- C. Recording
- D. Closeout Procedures
- E. Final Cleaning
- F. Submittals of Maintenance Manuals and Instructions
- G. Warranties and Bonds
- H. Closeout Requirements

1.3 RELATED SECTIONS

- A. Section 010100 Project Procedures and Coordination
- B. Section 013300 SUBMITTAL PROCEDURES
- C. Section 015000 TEMPORARY FACILITIES AND CONTROLS
- D. Section 016000 PRODUCT REQUIREMENTS

1.4 MAINTENANCE OF OWNERS RECORD DOCUMENTS AND SAMPLES

- A. Maintain at the site for Owner one record copy of:
 - 1. Contract Drawings.
 - 2. Specifications.
 - 3. Addenda.
 - 4. Change Orders and other modifications to the Contract.
 - 5. Reviewed Shop Drawings, product data, and samples.
 - 6. Field test records.
 - 7. Inspection certificates.
 - 8. Manufacturer's certificates.
- B. Store record documents and samples in Field Office apart from documents used for construction.
- C. Label and file Record Documents and samples in accordance with Section number listings in Table of Contents of this Project Manual. Label each document "PROJECT RECORD" in neat, large, printed letters.
- D. Maintain Record Documents in a clean, dry and legible condition. Do not use Record Documents for construction purposes.

E. Keep Record Documents and samples available for inspection by Architect.

1.5 MAINTENANCE OF RECORD DRAWINGS

- A. Reproducibles: Before work begins the General Contractor shall obtain from the Owner a complete set of Contract Drawings approved as the Construction Set by the Architect in PDF format. The General Contractor shall furnish to the Plumbing, Heating and Ventilating, and Electrical subcontractors, PDFs which correspond to their respective portions of the Work.
- B. Daily Records: During construction, the General Contractor and the Plumbing, Heating and Ventilating, and Electrical subcontractors shall keep accurate daily records of all major deviations from the works as shown on the Contract Drawings, and shall indicate actual installation conditions with colored inks on a complete set of prints obtained and maintained at the job site for that specific purpose. Such sets shall be kept available at all times for use and inspection by the Architect and the Project Representative. The sets must be reviewed and accepted by the project representative each pay period for payment certification.
- C. Records shall be made and kept on separate prints for work shown on the site, structural, architectural, heating and ventilating, plumbing, and electrical Drawings. Particular attention shall be given to noting location, elevations, sizes, inverts, etc. of all concealed and buried utilities, ducts, and services, including exterior utility and storm drainage lines.
- D. At completion of the work the Contractor shall submit to the Architect a set of prints showing all changes. Upon acceptance of the prints the Contractor shall deliver to the Architect complete record drawings in print (3 complete and final sets of archival quality, bond plots, edge bound) and PDF format. Plots shall be signed by the General Contractor and each applicable subcontractor. Acceptance by the Architect of the completed, prints and disks for all trades shall be a prerequisite for final payment.

1.6 RECORDING

- A. Record information on a set of bond copy drawings, and in a copy of a Project Manual provided by Owner.
- B. Record information concurrently with construction progress. Do not conceal any work until required information is recorded.
- C. Contract Drawings and Shop Drawings: Legibly mark each item to record construction:
 - 1. Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of construction.
 - 2. Field changes of dimension and detail.
 - 3. Changes made by Modifications.
 - 4. Details not on original Contract Drawings.
 - 5. References to related Shop Drawings and modification

1.7 CLOSEOUT PROCEDURES

- A. Comply with procedures stated in the GENERAL CONDITIONS for issuance of Certificate of Substantial Completion.
- B. When Contractor considers the Work has reached Final Completion, submit written certification that Contract Documents have been reviewed, all work has been inspected, and that Work is complete in accordance with Contract Documents and ready for Architect's inspection.

- C. In addition to submittals required by the General Conditions, provide submittals required by governing authorities, and submit a final statement of accounting giving total adjusted Contract Sum, previous payments, and sum remaining due.
- D. Architect will issue a final Change Order reflecting approved adjustments to Contract Sum not previously made by Change Order.

1.8 FINAL CLEANING

- A. Execute final cleaning prior to final inspection or Owner occupancy, whichever is first.
- B. Clean interior and exterior surfaces exposed to view. Remove temporary labels, stains and foreign substances. Polish transparent and glossy surfaces. Vacuum carpeted and soft surfaces. Clean equipment and fixtures to a sanitary condition. Clean drainage systems.
- C. Glass and aluminum work shall be cleaned and washed by professional window cleaners. Polish all glass, mirrors and shiny surfaces.
- D. Ventilating Systems
 - 1. Clean permanent filters and replace disposable filters if units were operated during construction.
 - 2. Clean ducts, blowers and coils if units were operated without filters during construction.
 - 3. Clean length of existing ducts as specified under Section 150000.
- E. Clean site. Sweep paved areas. Rake clean other surfaces.
- F. Remove waste and surplus materials, rubbish, and construction facilities.
- G. Owner will assume responsibility for cleaning as of time designated on Certificate of Substantial Completion or Owner's acceptance of Project or portion thereof.
- H. Shop Drawings will not be acceptable as project Record Drawings.
- I. All Record Drawing work shall be performed by competent draftspersons. The Architect shall be the sole judge of the acceptability of project Record Drawings.
- J. Record Drawings for exterior utilities and other items below grade shall accurately locate the points where such items enter the building and property; all turns, offsets, and other changes in direction below grade; and all valves and other appurtenances. Such locations shall be made by dimensions to adjacent permanent bench marks or structures as approved by the Architect. Reliance on scale only or reference to any temporary or concealed construction will not be acceptable.

1.9 SUBMITALS OF MAINTENANCE MANUALS AND INSTRUCTIONS

- A. The General Contractor shall, upon Substantial Completion of the Work, submit rough drafts of maintenance schedules, maintenance manuals, and all approved Shop Drawings, presenting full details for care and maintenance of visible surfaces and all equipment furnished and installed under the Contract.
- B. Maintenance manuals shall consist of manufacturers' catalog cuts with descriptive information, lubricating and maintenance instructions, parts lists, usage instructions, names,

- addresses and phone numbers where replacement parts and service can be obtained, and all other information required for the Owner to use, maintain, and service the items properly.
- C. Upon Architect's approval of drafts, submit three (3) corrected copies properly bound in a logical and well arranged order, with index, for Owner's use.
- D. The General Contractor shall arrange for a reasonable amount of instruction and training for the Owner's employees, to insure proper operation of the equipment furnished. The Contractor and, in particular, the Plumbing, Heating and Ventilating, and Electrical subcontractors shall not assume that the Owner's employees possess special expertise or have had any previous experience whatsoever in the operation and maintenance of sophisticated mechanical and electrical equipment.
 - 1. It is the intent of this paragraph to require the General Contractor and the applicable subcontractors to furnish as much detailed instruction as necessary to educate Owner's personnel in the proper use of the equipment. This instruction shall be provided by the manufacturer's representative for each item of equipment. In some cases, this may require more than one visit to the Project by those responsible for the instruction. All instruction sessions shall be documented by digital methods. The media utilized shall be submitted to the owner with a sign-in sheet of all present at the session.
 - 2. For major items of mechanical and electrical equipment, instructions and demonstrations shall be performed during the initial start-up period and, if necessary, during two or more return visits shall be required.

1.10 WARRANTIES AND BONDS

- A. Compile specified warranties and bonds, review to verify compliance with Contract Documents, and submit to Architect for his review and transmittal to the Owner.
- B. Submittal Requirements:
 - 1. Assemble two original signed copies of warranties, bonds and service and maintenance contracts, executed by officers of each of the respective manufacturers, suppliers, and subcontractors.
 - 2. Table of Contents: Shall be neatly typed, in orderly sequence.
 - 3. Provide complete information for each item. Include:
 - a. Product or work item.
 - b. Firm, with name of principal, address and telephone number.
 - c. Scope.
 - d. Date of beginning of warranty, bond or service and maintenance contract. These shall commence upon date of Substantial Completion as established by the Architect.
 - e. Duration of warranty, bond or service maintenance contract.
 - f. Contractor, name of responsible principal, address and telephone number.
 - 4. Provide information for Owner's personnel:
 - a. Proper procedure in case of failure.
 - b. Instances which might affect validity of warranty or bond.
- C. Form of Submittals: Prepare in duplicate packets and in the following format:
 - 1. Size 8-1/2 inch by 11 inch. Punch sheets for 3-ring binder. Fold larger sheets to fit.
 - 2. Cover: Identify each packet with typed or printed title "WARRANTIES AND BONDS". List Title of Project and Name of Contractor.
 - 3. Binders: Commercial quality, three-ring, with durable and cleanable plastic covers.

D. Time of Submittals:

- 1. For equipment or component parts thereof put into service during construction, submit documents within ten (10) days after inspection and acceptance. Otherwise, make submittals within ten (10) days after Date of Substantial Completion, prior to final request for payment.
- 2. For items of work where acceptance is delayed materially beyond the Date of Substantial Completion, provide updated submittal within ten (10) days after acceptance, listing the date of acceptance as the start of the warranty period.
- E. Submittals Required: Submit warranties, bonds, service and maintenance contracts as specified in the respective Sections of the specifications.

1.11 CLOSEOUT REQUIREMENTS

- A. Punch List: When the Architect inspects the Work for Substantial Completion, he will prepare and issue to the General Contractor a "punch list" of items to be corrected before final payment will be made. Such punch list shall not be construed as all-inclusive of the work which the General Contractor will be required to perform before final payment.
- B. Substantial Completion: Architect will prepare and issue a Certificate of Substantial Completion, AIA G704, complete with signatures of Owner and the General Contractor, accompanied by list of items to be completed or corrected, as verified and amended by the Architect.

C. Final Inspection:

- 1. The General Contractor shall submit written certification that:
 - a. Contract Documents have been reviewed.
 - b. Project has been inspected for compliance with Contract Documents.
 - c. Work has been completed in accordance with Contract Documents.
 - d. Equipment and systems have been tested in presence of Owner's Representative and are operational.
 - e. Project is completed, and ready for final inspection.
- 2. Architect will begin final inspection within seven (7) days after receipt of certification.
- 3. Should the Architect consider the work is finally complete in accordance with requirements of Contract Documents, he will request the General Contractor to make Project Closeout submittals.
- 4. Should the Architect consider that work is not finally complete:
 - a. He will notify General Contractor, in writing, stating reasons.
 - b. General Contractor shall take immediate steps to remedy the stated deficiencies, and send second written notice to the Architect certifying the work is complete.
 - c. Architect will re-inspect the work.
- D. Closeout Submittals and log: A project closeout log shall be submitted to the Architect for review prior to the first application for payment. A sample log is included in attachment "A." The project closeout log as a minimum shall include the following:
 - 1. Project Record Documents.
 - 2. Operating and Maintenance Data.
 - 3. Extended Guarantees and Warranties.
 - 4. Keys and Keying Schedule.
 - 5. Spare Parts and Maintenance Materials.
 - 6. Roof Guarantee and Flashing Endorsement.
 - 7. Evidence of compliance with requirements of governing authorities:
 - a. Certificates of compliance for flame and smoke, and fire rating.
 - b. Certificates of Inspection:

- 1) Mechanical.
- 2) Electrical.
- . Certificate of Occupancy. (NOT USED)
- 8. Certificate of Insurance for Products and Completed Operations.
- 9. Asbestos-free construction guarantee.
- E. Provide evidence of training and instructions as specified herein. All training sessions shall be logged with a sign-in sheet. All sign-in sheets to be issued to the Owner.
- F. The General Contractor shall arrange for the turnover of all applicable manuals, drawings, keys, etc. to be delivered at training sessions. All record documents, manuals, keys, training sessions etc. shall be completed and accepted within 60 days after substantial completion.
- G. Testing and Balancing. The General Contractor shall provide complete testing and balancing of HVAC equipment, as specified under Division 15 Heating, Ventilating and Air Conditioning. All Testing and Balancing Reports shall be submitted for approval.
- H. Commissioning. The General Contractor shall fully co-operate with the Owner's Commissioning Agent and fulfil their obligations under the Commissioning Plan. Substantial Completion shall not be considered reached until the completion of the work identified in the Commissioning Report.
- I. Evidence of Payments, and Release of Liens:
 - 1. Contractor's Affidavit of Payment of Debts and Claims, AIA G706, with: Consent of Surety to Final Payment: AIA G707
 - 2. Certifications from each filed subcontractor that payment has been received on the basis of the previous periodic payment to the Contractor.
 - 3. All submittals shall be duly executed before delivery to the Architect.
- J. Final Application and Certificate for Payment:
 - 1. The General Contractor shall submit final application in accordance with requirements of General and Supplementary Conditions.
 - 2. Architect will issue final certificate in accordance with provisions of Conditions of the Contract.
 - 3. Prior to issuance of the Certificate for Final Payment by the Architect, all requirements contained in this Paragraph entitled "Closeout Requirements" and other requirements of the Conditions of the Contract shall be executed, received and approved by the Architect.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 77 00

SECTION 01 81 19 INDOOR AIR QUALITY MANAGEMENT

PART 1 – GENERAL

1.1 GENERAL REQUIREMENTS

- A. Include GENERAL CONDITIONS and applicable parts of Division 1 as part of this Section.
- B. Examine all conditions as they exist at the project prior to submitting a bid for the work of this SECTION.
- C. The contractor shall be responsible for providing and maintaining very high air quality for the duration of construction and upon Substantial Completion, when the project is turned over to the Owner.
- D. Contractor to prepare an IAQ Management Plan consistent with the requirements of LEED version 4 Indoor Environmental Quality (EQ) Credit "Construction Indoor Air Quality Management Plan".

1.2 REFERENCED STANDARDS

- A. LEED version 4 Rating System, Reference Guide, USGBC, with all addenda.
- B. ASHRAE 52.2-2010: ashrae.org
- C. CEN Standard EN 779-2002: cen.edu
- D. Sheet Metal and Air Conditioning National Contractors Association (SMACNA) IAQ Guidelines for Occupied Buildings Under Construction, 2nd edition, 2007, ANSI/SMACNA 008-2008 (Chapter 3): smacna.org

1.3 RELATED WORK IN OTHER SECTIONS

- A. The following related work is to be performed under the designated SECTIONS:
 - 1. Submittals Section 013300 SUBMITTAL PROCEDURES
 - 2. Temporary Barriers SECTION 015000 TEMPORARY FACILITIES AND CONTROLS
 - 3. Final Cleaning SECTION 017700 PROJECT CLOSEOUT

1.4 DEFINITIONS

A. "Volatile Organic Compounds" (VOCs) are chemical compounds based on carbon and hydrogen structures that are vaporized at room temperatures.

1.5 SUBMITTALS

- A. Indoor Air Quality Management Plan documentation submit the following in accordance with SECTION 013300 SUBMITTAL PROCEDURES:
 - 1. Submit for approval on a monthly basis or more frequently, as appropriate to sequence of operations, digital photographs of construction indoor air quality management measures, such as protection of dust and on-site stored or installed absorptive materials. Refer to list of required photos, at the end of this SECTION.

2. Submit cut sheets of filtration media used during construction and installed immediately prior to occupancy with Minimum Efficiency Reporting Value (MERV) values highlighted. MERV-13 filters must be installed at all supply air (return or outdoor air) locations.

1.6 PROJECT CONDITIONS

A. No smoking will be permitted in indoor or outdoor Project site locations during construction.

B. Construction Ventilation and Preconditioning:

- 1. Temporary Construction Ventilation: Maintain sufficient temporary ventilation of areas where materials are being used that emit VOCs. Maintain ventilation continuously during installation, and until emissions dissipate after installation. If continuous ventilation is not possible via building's HVAC system(s), ventilation shall be supplied via open windows and temporary fans, sufficient to provide no less than three air changes per hour.
 - a Period after installation shall be sufficient to dissipate odors and elevated concentrations of VOCs. Where no specific period is stated in these Specifications, a time period of 72 hours shall be used.
 - b Ventilate directly to outside; ventilation to other enclosed areas is not acceptable.
- 2. During dust producing activities (e.g. drywall installation and finishing) turn ventilation system off, and openings in supply and return HVAC system shall be protected from dust infiltration. Provide temporary ventilation as required.
- 3. Preconditioning: Prior to installation, allow products which have odors and significant VOC emissions to off-gas in dry, well-ventilated space for 14 calendar days to allow for reasonable dissipation of odors and emissions prior to delivery to Project site.
 - a Condition products without containers and packaging to maximize off-gassing of VOCs.
 - b Condition products in ventilated warehouse or other building. Comply with substitution requirements for consideration of other locations.
 - c "Bake-out" or "super-heating" of spaces to accelerate the release of gaseous emissions is not permitted.

C. Protection:

- 1. The General Contractor shall be responsible for protecting the Work from moisture, in order to prevent growth of fungus, bacteria and other biological contaminants.
- 2. Install weatherproof enclosures to protect the work from exterior sources of moisture, in accordance with Division I specifications for materials and installation of weatherproof enclosures.
- 3. Store construction materials in clean, dry area to prevent porous materials such as gypsum board, insulation, ceiling tile, wood and similar products from becoming wet.
- 4. Moisture Stains: Materials with evidence of moisture damage, including stains, are not acceptable, including both stored and installed materials; immediately remove from site and properly dispose. Take special care to prevent accumulation of moisture on installed materials and within packaging during delivery, storage, and handling to prevent development of molds and mildew on packaging and on products.
 - a Immediately remove from site and properly dispose of materials showing signs of mold and signs of mildew, including materials with moisture stains.
 - b Replace moldy materials with new, undamaged materials.

5. Duct Protection:

- a Seal ducts during transportation, delivery, and construction to prevent accumulation of construction dust and construction debris inside ducts.
- b Store ductwork in clean, dry conditions and keep ductwork sealed while it is stored.

- c Wipe down internal surfaces of ductwork immediately prior to installation to remove dust.
- d Seal open ends uncompleted ductwork and overnight for work in progress.
- e During installation, protect ductwork waiting to be installed with surface wrapping, etc.

1.7 SEQUENCING

A. Environmental Issues:

- 1. On-Site Application: Where odorous and/or high VOC emitting products are applied onsite, apply prior to installation of porous and fibrous materials (such as ACT). Where this is not possible, protect porous materials with polyethylene vapor retarders.
- 2. Complete interior finish material installation no less than fourteen (14) days prior to Substantial Completion.

PART 2 – PRODUCTS – NOT USED

PART 3 – EXECUTION

3.1 FIELD QUALITY CONTROL

- A. Temporary Construction Ventilation: Provide continuous ventilation during installation of construction materials that emit Volatile Organic Compounds (VOC). Continue ventilation until emissions dissipate. Ventilate for 72 hours. Ventilate areas directly to outside areas; do not ventilate to other enclosed spaces. If continuous ventilation is not possible via the building's HVAC system(s), then ventilate via open windows and temporary fans that sufficiently provide no less than three air changes per hour.
- B. Dust Protection: Turn the ventilation system off, and protect HVAC supply and return openings from dust infiltration during dust producing activities (i.e. drywall installation and finishing). Provide temporary ventilation as required.
- C. Preconditioning: Allow products that have odors and significant VOC emissions to off-gas in dry, well-ventilated space for a sufficient period to dissipate odors and emissions prior to delivery to the construction site. Condition products without containers and packaging to maximize off-gassing VOC's. Condition products in a ventilated warehouse or other building. Comply with substitution requirements for consideration of other locations.
- D. Sequencing: Where odorous and/ or high VOC emitting products are applied on site, apply them prior to installation of porous and fibrous materials. Where this is not possible, protect porous materials with polyethylene vapor retarders.
- E. HEPA Vacuuming and Duct Cleaning: Vacuum carpeted and soft surfaces with a high-efficiency particulate arrestor (HEPA) vacuum. If ducts contain dust and dirt, clean them using a HEPA vacuum immediately prior to substantial completion and prior to using the ducts to circulate air. Oil film on sheet metal should be removed before shipment to site. However, ducts will be inspected to confirm that no oil film is present. Remove any oil.
- F. During construction, meet or exceed all of the following requirements:

- 1. Mold protection: Building materials, especially those like wood, porous insulation, paper, and fabric, should be kept dry to prevent the growth of mold and bacteria. Cover these materials with plastic to prevent rain damage, and if resting on the ground, use spacers to allow air to circulate between the ground and the materials. Water damaged materials should be dried within 24 hours. Due to the possibility of mold and bacteria growth, materials that are dam or wet for more than 72 hours may need to be discarded. Immediately remove materials showing signs of mold and mildew, including any with moisture stains, from the site and properly dispose of them. Replace moldy materials with new, undamaged materials.
- 2. Filters: Replace all filtration media immediately prior to occupancy. Filtration media shall have a Minimum Efficiency Reporting Value (MERV) of 13 as determined by ASHRAE 52.2-2017.

3.2 CLEANING

A. Final Cleaning Environmental Issues:

- 1. Clean interior and exterior surfaces exposed to view; remove temporary labels, stains, and foreign substances; polish transparent and glossy surfaces using cleaning and maintenance products as described in Part 1 of this Section.
- 2. Clean equipment and fixtures to sanitary condition using cleaning and maintenance products as described in Part 1 of this Section.
- 3. Vacuum carpeted and soft surfaces with high efficiency particulate arrestor (HEPA) vacuum
- 4. If ducts were not sealed during construction, and contain dust or dirt, clean ducts using HEPA vacuum immediately prior to Substantial Completion and prior to using ducts to circulate air. Oil film on sheet metal shall be removed before shipment to site. However, ducts shall be inspected to confirm that no oil film is present. Remove oil.
- 5. Replace all air filters (i.e., pre and final filters) just prior to Substantial Completion.

3.3 PROTECTION

A. Environmental Issues:

- 1. Protect interior materials from water intrusion or penetration; where interior products not intended for wet applications are exposed to moisture, immediately remove from site and dispose of properly.
- 2. Protect installed products using methods that do not support growth of molds and mildews.
 - a Immediately remove from site materials with mold and materials with mildew.

END OF SECTION 01 81 19

SECTION 02 07 00 SELECTIVE DEMOLITION

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

- A. Include GENERAL CONDITIONS and applicable parts of Division 1 as part of this Section.
- B. Examine all other Sections of the Specifications for additional requirements which affect this Section whether or not specifically mentioned in this Section.
- C. Coordinate work with that of all other trades affecting, or affected by work of this Section. Cooperate with such trades to assure the steady progress of all work under the Contract.

1.2 SECTION INCLUDES

- A. Removal of existing finish flooring including carpet and tile beneath carpet, and adhesive residue. Existing concrete shall be cleaned in preparation for new flooring. See Sections 09 64 00 WOOD FLOORING, and 09 65 00 RESILIANT TILE FLOORING.
- B. Removal of all existing wall-mounted appurtenances such as framed blackboards and chalk trays to prepare walls for attachment of mirrors. SEE SECTION 08 83 00 MIRRORED GLAZING.
- C. Existing Conditions.
- D. Special Requirements.
- E. Schedule.
- F. Permits and Codes.
- G. Public and Property Protection.
- H. Execution Requirements and Conditions.
- I. Utilities.
- J. Demolition Work.
- K. Demolition.
- L. Disposal of Removed Materials.
- M. Cleanup.

1.3 RELATED WORK UNDER OTHER SECTIONS

- A. Related work in other sections may include, but may not be limited, to the following:
 - 1. Utilities: Disconnecting, capping, and otherwise making inactive existing heating, ventilating, plumbing, and electrical services in areas where demolition and removal work is required. Mechanical and electrical trades will disconnect cap, and inactivate such items where required to be removed.
 - 2. Surfaces: Sanding and surface preparation of existing surfaces and other surface preparation required for new paints and finishes.
 - 3. Coring: Cutting, drilling and coring for all items to be installed by mechanical and electrical trades, except as otherwise indicated.
 - 4. Hazardous materials abatement including asbestos and lead.

1.4 EXISTING CONDITIONS

- A. Examine Drawings indicating selective demolition and removal requirements and provisions for new work. Verify all existing conditions and dimensions before commencing work.
- B. The Drawings and this Section set forth the general extent of selective demolition and removal work only. The Contractor shall visit the site and examine the existing conditions and shall become familiar with the character, extent and type of demolition and removal work to be performed hereunder.
- C. Submit any questions regarding the extent and character of demolition and removal work in the manner and within the time period established for receipt of such questions during the bidding period.
- D. Original construction documents for the existing school building are available at the Town of Dedham School Department for inspection. These drawings are for information only and the owner does not warrant that they accurately depict the existing condition.
- E. <u>Lead Paint.</u> Lead-based paint might exist on existing painted surfaces within the work area, such as the existing steel storefront at the exterior wall of the lobby. The contractor must comply with all applicable federal and state regulations including but not limited to worker safety, waste disposal, and job-site conditions. This shall include but not be limited to protecting existing paint so as to prevent incidental or accidental damage thereto, and taking required worker protection and site protection measures when drilling or fastening new work to existing painted surfaces. The Contractor shall be solely responsible for the costs associated with any and all such preventative measures.
- F. <u>Asbestos-containing Material</u>. Existing conditions may include asbestos-containing "transite" panels or other materials. Contractor is responsible for identification and removal of all potentially hazardous materials.

1.5 SPECIAL REQUIREMENTS

- A. Maintain adequate passage to and from all exits at all times. Before any work is done which will significantly alter access or egress patterns, consult the Owner and obtain its approval. Under no circumstances block or interfere with the free flow of people at legally required exits, or in any way alter the required conditions of such exits.
- B. Maintain Owner's existing mechanical, electrical and alarm systems in continuous operation during demolition and removal work to the greatest extent possible, and in accordance with other provisions of the Contract Documents. Notify Owner well in advance of necessary shut-down as required in Division 1.
- C. Hazardous Materials: If unanticipated hazardous materials are discovered at any time during the course of work, cease work in the affected area only and continue work in other areas, at the same time notifying Architect and the Owner of such discovery. Do not proceed with work in such affected areas until written instructions are received.

1.6 SCHEDULE

A. Prior to commencing any work under this Section, prepare a complete schedule of demolition, salvage and removals to be performed, indicating the sequence of work in each area and the commencement dates for each activity and submit such schedule to the Architect for review.

B. No work shall be started in existing buildings without prior approval of the Owner. The Contractor shall give the Owner adequate advance notice of readiness to start such work in accordance with the approved schedule in order that the Owner may properly arrange its activities or evacuate the spaces to be affected.

1.7 PERMITS AND CODES

- A. Work shall conform to Drawings and Specifications and shall comply with applicable codes and regulations.
- B. Comply with all rules, regulations, laws and ordinances of the City of Dedham the Commonwealth of Massachusetts and all other authorities having jurisdiction.
- C. Procure and pay for all permits and licenses required for work specified herein.

1.8 PUBLIC AND PROPERTY PROTECTION

- A. Provide all measures required by federal, municipal and state ordinances, law, and regulations for the protection of surrounding property, sidewalks, curbs, the public, workers, students and Owner's employees during demolition operations. Measures taken, including sidewalk shed as required, barricades, fences, warning lights and signs, rubbish chutes, etc., shall be in strict accordance also with the American National Standard Code for Building Construction ANSI A10.6 as well as all applicable federal, local, and state ordinances and laws.
- B. Protect all walks, drives, buildings, curbs, pavements, site furnishings, trees and plantings, on the school property or adjacent public ways, as well as interior finishes, appurtenances, furnishings and fixtures in the building, as may be used for transportation, parking, delivery of materials, storage of materials, waste receptacles and hauling, and entry to the building and passage within the building to the job-site, or otherwise used by the Contractor, subcontractors or employees. Repair, replace or otherwise make good all damage as directed by the Owner's Representative.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 REQUIREMENTS AND CONDITIONS

- A. Weather Protection: Protect items to be salvaged and reused from weather-caused damage.
- B. Shoring and Bracing: Furnish, install, maintain in proper condition and remove when no longer needed, all shoring, bracing, header beams, support members, and reinforcing items, required to ensure the structural integrity of existing remaining walls, decks, and other structural components. Provide lintels at cuts in existing walls wherever required to maintain the structural soundness of the wall. Provide suitable other temporary supports as required. Do not allow anyone above or below areas where underpinning, bracing or shoring work is in progress. Post warning notices and provide barricades.
- C. Precautions: Removal of portions of structure shall be done with care using tools and methods that will not transfer heavy shocks to existing and adjacent buildings. Care shall be taken to minimize vibration and other disturbances. Do not use explosives in performing demolition.

- D. Do not burn trash or debris on site.
- E. Dust Barriers: Furnish and install suitable fire-resistive dust barriers around areas where interior demolition and removal work is being performed to prevent dust damage to existing work to remain and to items to be salvaged. Remove dust barriers upon completion of demolition and removal in each area.

3.2 UTILITIES

- A. Before demolishing and removing any parts of buildings having electrical wiring, gas or water pipes, conduit or similar items embedded in them, notify the Owner, City departments having jurisdiction, and utility company and make sure that these items are out of service so that they can be removed without danger. All mechanical and electrical items shall be removed by workmen qualified in each trade who shall be responsible for deactivating circuits and piping service.
- B. Mechanical and Electrical Services: Prior to commencing cutting work in existing surfaces, take all precautionary measures to assure that mechanical and electrical services to the particular area have been disconnected or otherwise made inactive. Plumbing, Heating and Ventilating, and Electrical subcontractors or journeymen licensed in each trade shall disconnect and cap, where necessary, existing mechanical and electrical items which are to be removed, or abandoned or relocated.
- C. Hidden Utilities: If, in the process of demolition or cutting of work, existing utility lines are encountered which have not been indicated on the Drawings, and whether or not such items are damaged, report such items to the Architect immediately requesting instructions. Do not proceed with work in such areas until such instruction has been obtained. Should the Architect direct in writing that such items be repaired, removed, or relocated, the work shall be performed by the appropriate mechanical or electrical subcontractor and the Contract Price adjusted accordingly.

3.3 DEMOLITION WORK

- A. Demolish and remove completely in accordance with approved schedule portions of the existing structure and salvage items indicated. Coordinate all work with hazardous materials sub contractors.
- B. Control: Take all reasonable precautions to limit the amount of dust and dirt rising in the air, and noise produced.
 - 1. Spray down plaster, drywall, concrete, masonry, and similar dust-producing materials before and during placing in trucks or in open storage containers.
 - 2. Use only trucks, dollies or rolling baskets equipped with approved tarpaulins for transporting of dust-producing materials and materials that could be dislodged in transit.
 - 3. Minimize noise-producing activities and perform them during normal working hours unless otherwise approved by the Architect.
- C. Items for Reuse: Verify which existing items are to be removed and salvaged under this Contract. Use special care in removing, handling, and storing such items in order to minimize additional work required to be performed thereon, and to prevent damage. Transport, unload, and store existing items to be re-used, as specified herein or as directed.

- D. Cutting: Perform all cutting of existing surfaces in a manner which will ensure a minimal difference between the cut area and new materials when patched. Use extreme care in cutting existing surfaces containing concealed piping which is to remain and bear full responsibility for repairing or replacement of all such work which is accidently damaged
- E. Except where special surface preparation is specified under other Sections, leave existing surfaces which are to remain in a condition suitable to receive new materials and finishes.
- F. Rubbish: Remove all rubbish and debris resulting from demolition work daily, legally disposing of same at an off-site location. Routes of equipment handling demolition debris shall be approved by the Town and strictly adhered to.

3.4 DEMOLITION

- A. The Drawings indicate the general extent of demolition and removal work. Include removal of all existing materials which would otherwise interfere with the proper installation or function of new work, whether or not such existing materials or conditions have been indicated. Do all demolition and removal work indicated under this Section except where specifically indicated to be done under other Sections.
- B. Wherever a building or portion of the existing building is indicated to be demolished or removed, completely remove all components contained in such portion except these specifically indicated to remain.
- C. Generally, include removal of the following existing work:
 - 1. All existing work as indicated to be demolished or removed on the drawings.
 - 2. Remove all other items indicated as to be removed or as necessary (with Architect's prior approval) to provide the finished work.
- D. Restore to original condition all existing items to remain that are damaged as a result of work under this Section.
- E. Maintain Owner's vandal alarm and other systems in operation during work under this Section.

3.5 DISPOSAL OF REMOVED MATERIALS

- A. Except for items specifically designated to be relocated, re-used or turned over to the Owner, all existing removed materials and items shall become the property of the Contractor and shall be completely removed from the site and legally disposed of at his expense.
- B. Existing items which are not fixed in place and which will remain the property of the Owner will be removed by the Owner prior to commencement of demolition work in existing buildings, unless otherwise indicated.
- C. All items to be reused shall be carefully removed, disassembled if required; adequately supported and protected during removal operations. Items to be relocated shall be carefully transported to new locations and properly protected.
- D. Contractor shall inspect closely each item prior to its removal and report damage and defects to the Architect. Contractor shall be responsible for any subsequent damage to same other than latent defects not readily apparent from a close inspection, and shall repair or replace same as directed to the satisfaction of the Architect.

3.6 CLEANUP

- A. Refuse and debris resulting from work under this Section shall be removed from the site at daily intervals. Make all required arrangements for legal disposal of such material.
- B. Materials shall be thoroughly wetted down during demolition and removal as specified to prevent nuisance of dirt and dust. Trucks used in hauling debris shall be equipped with tarpaulins to cover the loads and shall not be loaded so excessively as to spill debris on streets.
- C. Combustible material and rubbish shall not be allowed to accumulate on the site but shall be hauled away daily as directed. No debris shall be burned at job site.
- D. At completion of removal work, all rubbish, debris, waste, materials and salvaged materials from and about the building and structures, including all tools, scaffolds, apparatus and appliances used in connection with work under this Section shall be removed and the premises shall be left in clean condition ready for alteration work and new construction to be provided under other Sections.

END OF SECTION 02 07 00

SECTION 05 50 00 METAL FABRICATIONS

PART 1 – GENERAL

1.0 GENERAL REQUIREMENTS

- A. Include GENERAL CONDITIONS and applicable parts of Division 1 as part of this Section.
- B. Examine all other Sections of the Specifications for requirements that affect work of this Section whether or not such work is specifically mentioned in this Section.
- C. Coordinate work with that of all other trades affecting, or affected by work of this Section. Cooperate with such trades to assure the steady progress of all work under the Contract.

1.1 WORK INCLUDED

- A. Furnish all materials, equipment, labor and services required to complete all miscellaneous metal work as specified herein, as indicated on Drawings, or both.
- B. It is not the intent herein to describe all the items of light iron and miscellaneous metals required for the Work. All light iron and miscellaneous metals not specified under another Section but required for the Work shall be provided under this Section.
- C. See Drawings for locations and details.
- D. Provide all staging and scaffolding required for work of this Section.

1.2 RELATED WORK UNDER OTHER SECTIONS

- A. Related work in other sections may include, but may not be limited to, the following:
 - 1. Finish Carpentry.
 - 2. Sealants and Caulking.
 - 4. Mirror mounting hardware.

1.3 REFERENCE STANDARDS

- A. Work shall conform to codes and standards of the following agencies as further cited herein:
 - 1. ASTM: American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428
 - 2. AISC: American Institute for Steel Construction, 130 East Randolph, Suite 2000, Chicago IL, 60601 including "Code of Standard Practice for Steel Buildings and Bridges"; "Specifications for the design, Fabrication and Erection of Structural Steel for Buildings".

- 3. AISI: American Iron and Steel Institute, 25 Massachusetts Avenue, NW Suite 800, Washington DC, 20001 including "Specifications for the Design of Light Gauge Cold Formed Structural Members".
- 4. AWS: American Welding Society, Inc., 8669 NW 36th Street #130, Miami, FL 33166, "Standard D1.1M:2015, Structural Welding Code".
- 5. AAMA: American Architectural Manufacturers Association, 1900 E Golf Rd. Suite 1250, Schaumburg, IL 60173.
- 6. SSPC: The Society for Protective Coatings, 800 Trumbull Dr. Pittsburgh, PA 15205, as published in Volumes 1 and 2 of "SSPC Manual".
- 7. FS: Federal Specifications available form General Services Administration, Specification and Consumer Information Distribution Service, Washington Navy Yard Building 197, Washington, DC.
- B. Gauges of sheet iron and steel as specified are U.S. Standard for sheet and plate. Gauges of non-ferrous metals are Browne and Sharpe.

1.4 SHOP DRAWINGS AND SAMPLES

- A. Prepare and submit Shop Drawings in accordance with requirements of Division 1 and obtain the Architect's approval before proceeding with fabrication.
- B. Take measurements in the field and verify all dimensions before submitting Shop Drawings.
- C. Shop Drawings shall show all items in large-scale detail with kind of materials, size of members and methods of securing same together and to work of other trades. Shop Drawings shall be fully dimensioned and show relationship to adjacent materials. Each field piece shall be marked and markings indicated on Shop Drawings.
- D. Where provisions must be made for attaching other materials to work included under this Section and for assembly and installation of steel and miscellaneous iron in the field, the required holes shall be provided in the shop, either drilled or punched and reamed, unless such connections are to be welded. The sizes and locations of all such holes shall be shown on the Shop Drawings.
- E. Samples: Submit samples as requested by the Architect of all materials specified herein in accordance with requirements of Division 1, and before ordering materials, obtain written approval from the Architect.
- F. Data: Provide manufacturer's data on manufactured products and mill reports on structural steel items.
- G. Certification: Submit written certification of conformance to requirements for galvanizing and shop priming.

1.5 DELIVERY, STORAGE AND HANDLING

A. Deliver and store work under this Section in a manner to prevent wracking or stress of components, and to prevent mechanical damage or damage by the elements.

- B. Items which become rusted or damaged because of non-compliance with these conditions shall be rejected and replaced without additional cost to the Owner.
- C. Deliver work to the site in sufficient time to avoid delay in job progress and at such times as to permit proper coordination of the various parts.
- D. Deliver anchor bolts, washers and other anchorage in time for building-in by Contractor. Deliver bolts, and other small items required for erection of work under this Section bundled with their respective items.
- E. Hot-dip galvanized steel shall be marked with a stamp indicating ASTM number and weight of coating and shall be inspected for compliance with applicable ASTM requirements.

1.6 COORDINATION

- A. The work of this Section shall be coordinated with the work of other Sections. Verify dimensions and work of other trades, which adjoin materials of this Section before installing items, specified.
- B. Obtain all necessary templates and patterns required from other trades for proper execution of work of this Section. Furnish to other trades items to be built into work of other Sections. Supervise installation of such built-in work.

1.7 CLOSEOUT SUBMITTALS, RECORD DOCUMENTS AND GUARANTEES

- A. Provide the following in accordance with specification section 017700:
 - 1. Guarantee: shall be in writing and warrant all materials and workmanship of this section for a period of not less than one (1) year from the date of final acceptance of the work of this section.
 - 2. Record Drawings: shall record all as-built conditions on the General Contractor's record set.

PART 2 – PRODUCTS

2.0 MATERIAL REQUIREMENTS

- A. Provide only new materials, free from defects impairing strength, durability, and appearance, and of the quality specified.
- B. The Architect will consider standard products meeting the detailed requirements specified herein for approval.
- C. Furnish all supplemental parts necessary to complete each item whether or not such parts are shown and specified. Furnish all fastenings for securing the work required hereunder.
- D. Provide fastenings of the same material, color, and finish as the metal to which applied unless otherwise indicated.

2.1 BARRE BRACKETS – ADD/ALTERNATE #1

- A. **Floor-mounted double ballet barre** at location where indicated on plans. System shall include min. 2" outer diameter, ¼" steel brackets and matching base plates. System shall be fully shop finished upon delivery to site and be one of the following, or approved equal:
 - 1. **Custom Barres "Classix Duo"** CUSTOM BARRES, LLC 5437, 436 W Commodore Blvd #28, Jackson, NJ 08527. www.custombarres.com, 888-772-9479.
 - 2. **Harlequin Floor Mounted Ballet Barres**, AMERICAN HARLEQUIN CORPORATION, 1531 Glen Avenue, Moorestown, NJ 08057 us.harlequinfloors.com, 856-234-5505
 - 3. **Vita Barre "Giselle"** VITA, INC. 40 Ellwood Court, Greenville, SC 29607. www.vitabarre.com, 864-288-8934.
- B. Ballet Barre Wood Rail: See SECTION 062023 INTERIOR FINISH CARPENTRY.
- C. Contractor shall be responsible to verify and ensure compatibility and neat, tight fit between wood barre and brackets if not of the same manufacturer or system.

2.2 METALS

- A. **Steel shapes, steel plates and steel bars**: shall conform to the requirements of Standard Specification for Steel for Bridges and Buildings, ASTM A36.
- B. **Sheet steel**: Prime grade cold-rolled steel properly annealed and process leveled and having smooth, clean surfaces, ASTM A611, Class 1, G90 coated where not otherwise indicated.
- C. **Steel tubular members**: Conforming to the requirements of ASTM A501 sizes as indicated on the Drawings.
- D. **Steel pipe**: Schedule 80 extra-strong and Schedule 40 strong seamless steel, of the sizes indicated on the Drawings, galvanized when used on exterior, ASTM A53 or A120.
- E. **Steel pipe**: Hot-dipped galvanized steel having inside dimension 1/4" greater than outside diameter of post to be inserted therein.
- F. **Hydraulic cement** for installing bolts and fastenings into masonry and concrete and for setting pipe posts into sleeves and cements: Quick setting, non-staining, non-shrinking type, as approved.
- G. **Filler Metal for Welding**: Welding electrodes for manual shielded metal arc welding shall conform to ASTM A233, E60 or E70 Series. Bare electrodes and granular flux used in the submerged-arc Process shall conform to AISC Specifications.
- H. **Stainless steel** shall be AISI Series 300 austenitic alloys: Type 304 where exposed, Type 305 for bolts, nuts, screws and fasteners. All other stainless steel shall be Type 302 of shapes as required. Provide standard dull mill finish except as otherwise indicated.

I. Mirror mounting hardware: See SECTION 088300 – Mirrored Glazing.

2.3 FASTENERS

- A. All fasteners for exterior use or for use in wet areas shall be hot dip galvanized after fabrication as specified below.
 - 1. Bolts and Nuts: Regular hexagon head type, ASTM A207, Grade A.
 - 2. Lag Bolts: Square head type, Federal Specifications FF-B-561.
 - 3. Machine Screws: Cadmium plated steel, Federal Specifications FF-S-92.
 - 4. Wood Screws: Flat head carbon steel Federal Specifications FF-S-111.
 - 5. Plain Washers: Round, carbon steel Federal Specifications FF-W-92.
 - 6. Masonry Anchorage Devices: Expansion shields, Federal Specifications FF-S-325.
 - 7. Toggle Bolts: Tumble-Wing types, Federal Specifications FF-B-588, type, class and style as required.
 - 8. Lock Washers: Helical spring type carbon steel Federal Specifications FF-W-84.

2.4 PAINTING AND PROTECTION

- A. Shop priming: All ferrous metal surfaces, except prefinished items, galvanized items and those obviously not to be painted, shall, before leaving the shop or manufacturing plant, be cleaned of all scale, rust, grease and other foreign matter and shall be given one thorough shop coat on all surfaces.
- B. Thoroughly protect all non-ferrous items in contact with dissimilar metals, concrete, masonry and mortar with approved bituminous coating on contact surfaces.

2.5 GALVANIZING

- A. All ferrous metal exposed to the weather, all ferrous metals attached to or embedded less than two inches in exterior concrete or masonry, including loose lintels, shall be hot-dip galvanized after fabrication. Galvanizing bath shall be a combination nickel-zinc mixture "Delta-Galv" or equal. Galvanize all ferrous fasteners, clips, sleeves, anchors and accessories in contact with galvanized items. Prime all galvanized work in the shop with high performance primer equal to Duncan "PrimerGalv."
- B. Galvanizing: Shall comply with ASTM A123 except steel sheets shall comply with ASTM A653.
- C. All galvanized materials shall be inspected for compliance with these specifications and marked with a stamp indicating the name of the galvanizer, the ASTM Specification and the weight of the zinc coating in ounces per square foot.
- D. A notarized statement of compliance with specifications shall be furnished to the Architect by the galvanizer with the initial shipment.
- E. Items to be galvanized shall be galvanized after fabrication. Where size of assembly is too large for complete unit galvanizing, these assemblies shall be galvanized prior to fabrication; in as large sections as practical and then only with the written approval of the Architect.

F. Where galvanizing prior to completing fabrication cannot be avoided, joints shall be welded after fabrication, ground smooth and finished with four (4) full coats of California Products Corp. WW Totrust, Sealube ZRC, Zirp by Duncan or equal.

2.6 PERFORMANCE REQUIREMENTS

A. Design, engineer, fabricate, and install miscellaneous metal work to withstand required structural loads without exceeding the allowable design working stress of the materials involved, including anchors and connections. Apply each load to produce the maximum stress in each component of each metal fabrication.

PART 3 – EXECUTION

3.0 WORKMANSHIP

- A. All work shall be executed by experienced mechanics and shall conform to details, be clean and straight with sharply defined profiles. Unless otherwise particularly noted, finished surfaces shall have smooth finish.
- B. Curved work shall be formed to true radii. Shearing and punching shall be done cleanly so as not to deform or mar adjacent surfaces.
- C. Shop connections shall be welded or riveted, and field connections bolted unless otherwise indicated. Use flathead countersunk rivets finished flush where riveted connections are exposed to view in finished work. Bolts shall be turned up tight and threads deformed to prevent loosening.
- D. Castings shall be sound and free from warp, holes and other defects that impair strength and appearance. Exposed surface shall have a smooth finish with sharp well-defined lines and arrises. Machined joints shall be milled to a close fit. Provide all necessary lugs, brackets and similar items so that work can be assembled and installed in a neat substantial manner.
- E. Provide holes and connections as required to accommodate the work of other trades and for site assembly of metal work. Holes shall be drilled or punched and reamed in the shop. Show sizes and locations of all such holes on the Shop Drawings.
- F. Joints and connections exposed to weather shall be formed to exclude water.
- G. All materials and workmanship under this Section shall be subject to inspection in the mill, shop or field by the Architect, or by qualified inspectors retained by the Owner. However, such inspection, wherever conducted, shall not relieve Miscellaneous Metal Work Subcontractor of his responsibility to furnish materials and workmanship in accordance with the Contract Documents.
- H. Shop fabricate items wherever practicable, accurately fitting all parts and making all joints tight.
- I. Grind all edges of bars and plates completely free from nicks and machine marks, prior to galvanizing and/or shop priming.

- J. Draw up all threaded connections tightly, after buttering same with pipe joint compound to exclude water.
- K. Countersink all screw heads and bolt heads as far as practicable. Use not less than two screws, bolts, or other anchorage items, at each connection point.
- L. Use only screws and bolts of sufficient size to assure against loosening from normal usage of miscellaneous metal items furnished hereunder.
- M. Attach handrails in a manner that will ensure the rails will be capable of withstanding 300 pound concentrated load applied at any point downward or horizontally.

3.1 WELDING

- A. The AWS Standard Code of Arc and Gas Welding shall govern all welding under this Section.
- B. Welding shall be continuous except where tack-welding is specifically permitted. Tack welding will not be permitted on exposed surfaces. All exposed welds shall be ground smooth.
- C. Where structural joints are made by welding, the details of all joints, the techniques of welding employed, the appearance and quality of welds make, and the methods used to correct defective work shall conform to the requirements of the AISC and AWS Codes.
- D. Welds shall be made only by certified welders who have previously been qualified by tests as prescribed in AWS "Standard Qualification Procedure" for the type of work required.

3.2 MISCELLANEOUS FRAMING

- A. Provide miscellaneous steel framing and supports shown on Drawings and which are not a part of structural framing.
- B. Fabricate miscellaneous units to sizes, shapes and profiles indicated or, if not indicated, of required dimensions to receive adjacent other work to be retained by framing. Fabricate from structural steel shapes, plates and steel bars of welded construction using mitered joints for field connection. Cut, drill and tap units to receive hardware and similar items.
- C. Equip units with integrally welded anchors for casting into concrete or building into masonry. Furnish inserts if units must be installed after concrete is placed. Space anchors 24 inches on center and provide minimum anchor units of 1-1/4 inches by 1/4 inch by 8 inch steel straps. Hot dip galvanize exterior miscellaneous frames and supports.
- D. Miscellaneous supports: Provide miscellaneous light metal shapes, including hot dip galvanized girts, support angles, channels, plates, tubes and miscellaneous steel items at curtain wall construction and elsewhere as indicated.

3.3 MISCELLANEOUS ITEMS

A. **Items included**: Carefully review all Drawings for miscellaneous metal items. Furnish and install miscellaneous metal items required by the various trades, whether or not

specifically listed herein, such as miscellaneous clip angles, miscellaneous steel brackets, miscellaneous steel trim and other miscellaneous metal items as indicated on the Drawings, reasonably implied therefrom, or reasonably necessary for the thorough completion of the Work. Include the following miscellaneous metal items as well as all other items required.

- B. **Shelf angles** and **lintels**: Provide shelf angles and lintels as required for recessed cabinets, access panels, recessed accessories, interior louver openings, door frames, rolling shutters, counter supports, counters, and cabinetwork.
- C. **Sleeves** and **inserts**: Include steel sleeves and miscellaneous steel anchor bolts as required, clip angles, anchors, fasteners, sockets and accessories required to complete the proper installation of all items of this Section, whether indicated or not.
- D. Rough Hardware: Furnish bent or otherwise custom fabricated bolts, plates, anchors, hangers, dowels and other miscellaneous steel and iron shapes as required for framing and supporting woodwork, and for anchoring or securing woodwork to concrete or other structures. Straight bolts and other stock rough hardware items are specified in Division 6 Sections. Fabricate items to sizes, shapes and dimensions required. Furnish malleable-iron washers for heads and nuts which bear on wood structural connections; elsewhere, furnish steel washers.
- E. **Plates**: Provide loose bearing and leveling plates for steel items bearing on masonry or concrete construction, made flat, free from warps and twists, and of required thickness and bearing area. Drill plates to receive anchor bolts and for grouting as required. Hot-dip galvanize after fabrication.
- F. **Miscellaneous Steel Trim**: Provide shapes and sizes indicated for profiles shown. fabricate units from structural steel shapes, plates and steel bars, with continuously welded joints and smooth exposed edges. Use concealed field splices wherever possible. Provide cutouts, fittings and anchorages as required for coordination of assembly and installation with other work.

3.4 SHOP PAINTING

- A. Preparation: Prepare surfaces prior to galvanizing and priming. Thoroughly clean steel of all loose mill scale by power wire brushing (SSPC-SP3) or sandblasting (SSPC-SP6). Remove all rust, dirt, weld flux, weld spatter, and other foreign matter by wire brushing or scraping (power wire brushing, if necessary). Grind smooth any sharp projections. Remove oil and grease deposits with solvent.
- B. Shop Painting: Prime paint all steel members, (including exterior galvanized hand rails) except prefinished and other galvanized items, before shipping. All surfaces shall be painted except surfaces which are to be welded, and surfaces to be encased in concrete. Apply paint thoroughly and evenly on the surfaces and work into joints and other open areas on the surfaces. Surfaces inaccessible after assembly shall be given two coats. Dry mil thickness per coat of prime paint shall not be less than 2.4 mils. All exterior handrails and guardrails shall be shop coated qual to Duncan "Primer-Galv".
- C. Touch Up: After erection, touch up all paint abrasions and field welds with same primer and paint used on shop coat.

D. Certification: Prior to commencing installation of materials required hereunder, furnish the Architect with written and signed certification that the specified requirements pertaining to galvanizing and shop painting have been performed in the manner specified.

3.5 INSTALLATION

- A. Take all measurements required at the building. Check measurements, compare dimension and other data with various trades installing adjoining work to assure proper coordination.
- B. Do all drilling and fitting, cutting, welding, bolting and riveting required to erect, install and fit metal work to adjoining work. Conform to AISC Code. Furnish all screws, bolts, anchors, etc., required to attach metalwork securely to adjoining work.
- C. Do not cut or alter members in the field without Architect's approval. Do not enlarge unfair holes by burning and forcing, but correct by reaming.
- D. Be responsible for the correct location of miscellaneous metal work, including anchor bolts and base plates, lintels and angles. Take particular care to maintain steel shapes plumb and level during the pouring of concrete.
- E. All work shall be accurately set to established lines and elevations and rigidly fastened in place with suitable attachments to the construction of the building.
- F. Furnish, fabricate, install and anchor all light iron, miscellaneous and ornamental metal work as indicated on the Drawings and as specified herein. Install all supports and anchors for miscellaneous metal work, except those to be cast into concrete or built into masonry.
- G. Furnish all required metal inserts, anchor slots, anchors, anchor bolts, fastenings, etc., for attachment of work of all trades to concrete and masonry, except where otherwise specified or obviously included under other Sections of the Specifications.

3.6 ADJUSTMENT AND CLEANUP

- A. Touch-up Painting: Immediately after erection, clean field welds, bolted connections, and abraded areas of shop paint, and paint exposed areas with same material as used for shop painting. Apply by brush or spray to provide a minimum dry film thickness of 2.0 mils.
- B. For Galvanized Surfaces: Clean field welds, bolted connections and abraded areas and apply galvanizing repair paint to comply with ASTM A780.

END OF SECTION 05 50 00

SECTION 061000 ROUGH CARPENTRY

PART 1 – GENERAL

1.1 GENERAL REQUIREMENTS

- A. Include GENERAL CONDITIONS and applicable parts of Division 1 as part of this Section.
- B. Examine all other sections of the Specifications for requirements that affect work of this Section whether or not such work is specifically mentioned in this Section.
- C. Coordinate work with that of all other trades affecting or affected by work of this Section. Cooperate with such trades to assure the steady progress of all work under the Contract.

1.2 WORK INCLUDED

- A. Furnish and install all rough carpentry work required for the Work as indicated on Drawings, as specified herein, or both, including all labor, materials, equipment, and transportation.
- B. Provide all staging and scaffolding required for work of this Section.
- C. See Drawings for locations and details.
- D. Do all Rough Carpentry work required for the Project and not specified under another Section.
- E. Furnish and install all solid blocking for wood flooring at unsupported edges, under ballet barre brackets, and any other locations where blocking is required for a complete installation. Pressure treated lumber shall be used at any direct contact with concrete unless over moisture/vapor barrier.

1.3 RELATED WORK UNDER OTHER SECTIONS

- A. Related work in other sections may include, but may not be limited, to the following:
 - 1. Finish carpentry and millwork
 - 2. Wood Flooring installation.
 - 3. Concrete formwork.
 - 4. Site improvements.
 - 5. Miscellaneous metal work.

1.4 SUBMITTALS

A. Submit the following, in accordance with the requirements of Division 1.

- B. Certifications: Submit written certification from the treating plant stating the materials, net preservative retention, and types of treatment used for pressure-treated lumber delivered to this project. For water-borne materials, include moisture content of shipped materials. Include certification that fire-retardant treatment meets UL requirements.
- C. Submit bills of lading from the suppliers of lumber and plywood, clearly indicating the total lineal feet for each size and type lumber and plywood supplied, the species, and the grade, all conforming to the requirements specified herein.
- D. Submit samples of fastening devices and other accessory materials requested by Architect.

1.5 DELIVERY, STORAGE AND HANDLING

- A. Keep materials under cover and dry. Protect against exposure to weather and contact with damp or wet surfaces.
- B. Stack lumber as well as plywood and other panels. Provide for air circulation within and around stacks and under temporary coverings including polyethylene and similar materials.
- C. For lumber and plywood pressure treated with waterborne chemicals, place sticker between each course to provide air circulation.
- D. Do not store wood materials within the building until plastering, concrete, and other such wet work has been completed and allowed to dry.

1.6 CLOSEOUT SUBMITTALS, RECORD DOCUMENTS AND GUARANTEES

- A. Provide the following in accordance with section 017700:
 - 1. Guarantee for workmanship for one (1) year.
 - 2. Warranty for materials for one (1) year
 - 3. Product data on each type of wood indicating finish and chemical treatment
 - 4. Record drawings record all as-built changes on the general contractor's record set.

PART 2 – PRODUCTS

2.1 GRADING STANDARDS AND QUALITY

A. Lumber shall:

- 1. Be new, dressed four sides (S4S), clear and free from warping, splits, wane, twist and other defects.
- 2. Conform to U.S. Department of Commerce Simplified Practice Recommendation R-16 for sizes and use classifications.
- 3. Have moisture content not exceeding fifteen percent (15%) when delivered to the site.
- B. Grade Stamps: Factory-mark each piece of lumber with grade stamp of inspection agency evidencing compliance with grading rule requirements and identifying grading agency,

grade, species, moisture content at time of surfacing, and mill. For exposed lumber apply grade stamps to ends or back of each piece, or issue certificate of grade compliance from inspection agency in lieu of grade stamps.

C. **Plywood** shall conform to PS 1-93.

2.2 WOOD PRESERVATIVE TREATMENT

- A. **Preservative Treated Wood**: All wood on roofs, including nailers, sleepers, blocking and curbs, and all wood which will be concealed by roofing, sheet metal or flashing work shall be pressure-treated. All wood nailers, furring and other concealed lumber in direct contact with masonry or concrete shall also be pressure treated.
- B. Pressure Preservative Treatment: Alkaline copper, co-biocide preservative system. The minimum retention shall be per the manufacturer's recommendation for the intended use. Standard pressure process shall conform to the American Wood Preservers' Association's standard u1-13. Provide one of the following or approved equal:
 - 1. Chemical Specialties, Inc.: ACQ Preserve or Preserve Plus
 - 2. Osmose, Inc.: Nature Wood
 - 3. Arch Wood Protection, Inc.: Wolmanized Natural Select
- C. Preserve fire treated wood exposed to the weather shall also have a water repellent.
- D. Pressure Preservative Treatment for wood in contact with the ground: shall be the same as specified above except the maximum retention available from the manufacturer shall be utilized.
- E. All treated wood shall be accompanied upon delivery with a Certificate of Treatment from the Society of American Wood Preservers, certifying the kind of preservative and the net retention of the preservative in pounds per cubic foot.
- F. Brush-coat surfaces of lumber sawed or cut after treatment with same preservative used at plant.
- G. Creosote and pentachlorphenol products are not considered suitable for this Project.

2.3 WOOD MATERIALS

- A. Framing **Lumber:** 1-1/2" or greater actual thickness, except studs in non-bearing walls and partitions: No. 2 Hem/Fir having Fb equal 1150 psi, and E equal 1,400,000 or better.
- B. Studs of actual 1-1/2" or greater thickness, in non-bearing walls and partitions: No. 2 Eastern Hemlock, Hem/Fir, or Eastern Spruce, Grade-stamped S-DRY.
- C. Lumber for **Furring** and other uses, of less than 1-1/2" actual thickness: No. 2 Eastern Spruce or Pine, Grade-stamped S-DRY.
- D. **Plywood** for interior use: Except as otherwise indicated shall be CD INT-APA, with exterior glue, not less than 3/4" thick. Subflooring shall have tongue and groove on all

- edges and ends. Underlayment shall be 3/8" thick, unless otherwise indicated. Electrical panel boards shall be 3/4" thick.
- E. **Plywood** sheathing: CD EXT-APA with exterior glue, not less than 1/2" thick at walls nor less than 5/8" thick at roofs. All plywood roof sheathing shall be pressure-preservative treated and shall have 40/20 span rating.
- F. **Building Felt** shall conform to ASTM D226 for Class 15 and Class 30 non-perforated asphalt-saturated felt.

2.4 BOLTS AND FASTENINGS

- A. For non-specified nailers and blocking in excess of 7/8" thick: 3/8" diameter, unless otherwise indicated on the Drawings or specified herein, galvanized steel anchor bolts or expansion bolts, as applicable, of sufficient length to penetrate masonry or concrete a minimum of 6". Space bolts not more than 12" on centers and stagger lines of bolts as far as practicable.
- B. Bolts for lumber and furring 7/8" actual thickness or less: Galvanized steel bolts at least 1/4" diameter of the most appropriate types and lengths for the particular application, and provided with all required galvanized washers and nuts. Space and stagger bolts as specified above.
- C. Nails and Spikes:
 - 1. For plywood subflooring: 10d deformed shank nails, used in combination with construction adhesive meeting the requirements of APA Specifications AFG-01.
 - 2. For plywood roof and wall sheathing: 8d deformed shank nails, or 10d deformed shank nails, as appropriate for the specific thickness of plywood, hot dip galvanized.
 - 3. For framing members: 8d or longer to penetrate receiving member at least 1".
 - 4. For miscellaneous exterior trim: 6d or 8d galvanized nails or galvanized box or finish nails as approved.
 - 5. For non-specified nailing, spiking, and bolting of rough lumber: According to Massachusetts State Building Code Nailing Schedule.
 - 6. For plywood sheathing on metal studs: large head galvanized bugle-head screws, ASTM C954.
- D. Glue for exterior work: Waterproof type. Glue for interior work: Water-resistant type.
- E. **Joist Hangers:** and framing connectors: Standard galvanized Type A, as manufactured by Heckmann Building Products, Gang-Nail Specialties Corporation, Teco, or equal.
- F. Where rough carpentry work is exposed to weather, in ground contact, or in area of high relative humidity, provide fasteners and anchorages with a hot-dip zinc coating (ASTM A153).

PART 3 - EXECUTION

3.1 PROTECTION AND TEMPORARY ENCLOSURES

- A. Cover and protect all finishes and other work from damage during construction. Provide and maintain temporary substantial wood handrails around all openings through floors such as stairways and shaft openings.
- B. Refer to Division 1 for specific requirements of temporary enclosures, protection and other temporary items, and perform all such work under this Section.

3.2 INSTALLATION OF ROUGH CARPENTRY ITEMS

- A. Refer to Drawings for various conditions and specific details. Installation procedures specified herein are the minimum acceptable. Wherever more stringent requirements are indicated on the Drawings, such requirements shall govern.
- B. Coordinate work of this Section with the work of trades responsible for applying finish work and other items to rough carpentry work. Furnish and install furring, blocking and shims as required to make rough carpentry surfaces acceptable to these trades.
- C. Fit framing members closely, set accurately to required lines and levels, and rigidly secure in place. Do all nailing and spiking in a thorough manner, using nails and spikes of adequate sizes.

3.3 FRAMING

- A. Provide framing members of sizes and on spacings shown, and frame openings as shown, or if not shown, comply with recommendations of "Manual for House Framing" of National Forest Products Association (NFPA). Do not splice structural members between supports.
- B. Anchor and nail as shown, and to comply with "Recommended Nailing Schedule" of "Manual for House Framing" and "National Design Specifications for Wood Construction" published by NFPA.
- C. Double studs at sides of all openings. Build up wood lintels as required. Use 2" x 4" studs where not otherwise indicated, sills and plates shall be same size as studs where not shown.

3.4 JOISTS

- A. Provide framing of sizes and spacings shown. Install with crown edge up and support ends of each member with not less than 3-1/2" of bearing on wood or metal. Attach to wood bearing members by toe nailing or metal connectors. Frame to wood supporting members with wood ledgers as shown or if not shown, with metal connectors.
- B. Joists shall be doubled under all partitions parallel to joists and under headers and trimmers at stairs. Headers and joists shall be connected by approved metal fittings or securely spiked together.

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- C. Joists bearing on wood plates shall be toe-nailed to the plates with one 10d nail on each side or fastened with suitable zinc-coated anchors made especially with such purpose.
- D. Joists lapped over girders or bearing partitions shall be nailed together with two 10d nails and toe-nailed to girder or plate with one 10d nail on each side of the pair.
- E. Provide bridging between joists where nominal depth-to-thickness ratio exceeds 4, at intervals of eight feet (8'). Use bevel cut 1" x 3" or 2" x 3" wood bracing, double-crossed and nailed both ends to joists, or use solid wood bridging 2" thick by depth of joist, and nailed to joist.

3.5 BLOCKING AND NAILERS

- A. **Blocking, nailers,** and framing not otherwise specified: Fasten **lumber** to concrete, masonry and wood with bolts of sufficient length to extend at least 6" into concrete or masonry, where practicable. Space bolts not over 18" on centers. Stagger lines of bolts or nails wider than nominal 3-1/2" width. Use not less than two bolts per piece of nailer length. Counterbore nailers so that nuts and ends of bolts are recessed below top surface. Install wood shims behind nailers and blocking against concrete and masonry, as required, to assure completely true surfaces.
- B. Install all wood **blocking** required to provide anchorage for other materials, Form to shape and sizes as indicated or as may be required to accomplish a particular installation. Form blocking of minimum 2" thick material.
- C. Where **blocking** is required in conjunction with structural steel work, bolt blocking to steel with countersunk bolts, washers and nuts.
- D. Form **blocking** in conjunction with roofing to shapes as detailed. Anchor with countersunk bolts, washers and nuts. At metal deck, countersink holes in roof sleepers and bolt through deck flute, applying galvanized washer and hex nut from below.
- E. Wedge, anchor and align blocking to provide a rigid and secure installation of both blocking and other work related thereto.
- F. Fasten **blocking** and **nailers** to metal deck at ridges only, not troughs. Build cants as indicated or as required.

3.6 PLYWOOD INSTALLATION

- A. Plywood roof sheathing where indicated: Install treated plywood with face grain running perpendicular to joists or ribs using fasteners specified spaced 6" on centers along panel edges, and 12" on centers in the field, or as otherwise approved. Leave 1/16" spacing at ends, and 1/8" at long edges.
- B. Provide 5/8" moisture treated plywood at all vertical locations for steel attachment of roof membrane whether or not indicated.

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3.7 WOOD STRAPPING AND FURRING

- A. Double nail strapping and furring at all bearing points. Space nailing not more than 12" on centers. Use masonry nails or concrete nails as applicable for securing strapping to masonry and concrete, respectively.
- B. Provide all free-standing, suspended, solid-anchored, and other types of wood furring required for receipt, alignment and complete installation of finishing materials.
- C. Space furring members as required. Provide headers and other nailing members within furring framework. Install with faces true to line and plumb, using wood shims as necessary.
- D. Install furring into position by whatever means necessary to provide a secure, rigid, and correct installation. As necessary, use nailing plugs, power-actuated anchors, toggle bolts, washers and nuts, and similar fastenings.
- E. Execute furring with kiln-dried, unwarped materials.

3.8 WOOD GROUNDS

- A. Install permanent and temporary wood grounds as indicated for proper execution of work of all trades. Remove temporary grounds when they are no longer required.
- B. Except as otherwise required for special locations, form grounds of kiln-dried softwood, 1-1/2" wide and of thickness to properly align related items of work. Securely fasten grounds into position by means of power-actuated fasteners, annealed wire, nails, brads, bolts or other methods that will provide maximum results.
- C. Coordinate locations, sizes and fastenings of grounds with work of other trades. When grounds are to provide backing for fastening of grilles, registers, fixtures, louvers, and similar items of work, exercise care in installation of grounds to provide for correct installation of such other items of work.

END OF SECTION 061000

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SECTION 06 20 23 INTERIOR FINISH CARPENTRY

PART 1 – GENERAL

1.1 GENERAL REQUIREMENTS

- A. Include GENERAL CONDITIONS and applicable parts of Division 1 as part of this Section.
- B. Examine all other sections of the Specifications for requirements that affect work of this Section whether or not such work is specifically mentioned in this Section.
- C. Coordinate work with that of all other trades affecting, or affected by work of this Section. Cooperation with such trades to assure the steady progress of all work under the Contract.

1.2 WORK INCLUDED

- A. Furnish and install all finish carpentry work as indicated on Drawings, as specified herein, or both.
- B. Furnish all staging and scaffolding required for finish carpentry work under this Section.
- C. Do all Finish Carpentry work required for the project and not specified to be done under another Section.
- D. See Drawings for locations and details.

1.3 RELATED WORK UNDER OTHER SECTIONS

- A. Related work in other sections may include, but may not be limited, to the following:
 - 1. Painting and finishing of finish carpentry and millwork.
 - 2. Furnishing of wood doors and finish hardware.
 - 3. Gypsum wallboard construction.
 - 6. Custom casework, except millwork specified herein.
 - 7. Manufactured casework and equipment.
 - 8. Wood flooring.
 - 9. Metal Fabrications Ballet barre brackets.

1.4 SUBMITTALS

- A. Submit the following, in accordance with requirements of Division 1.
- B. Shop Drawings: Submit Shop Drawings of wood flooring, wood paneling, wood trim, and all other millwork items. Shop Drawings shall indicate materials and species, arrangement, full size profiles of mouldings, thickness, size of parts, construction, fastenings, blocking, clearances, assembly and installation details, applied finishes and surfacing, built-in hardware, and necessary connections to work of other trades.
- C. Samples: Submit the following samples.

- 1. Solid Wood: 6" x 6" x 3/4" of each species and cut. Special millwork shapes and mouldings –includeing Ballet Barre: 12" length of each type.
- 2. Plywood: 6" x 6" of each specified type and veneer.
- 3. Particleboard: 8" x 10" of specified type.
- 4. Plastic Laminate: Manufacturer's standard sample chain, in complete range of solid colors and in specified texture, for selection by the Architect.
- 5. Cement fiber panel: 6" x 6" x 2" thick.
- 6. Composition window stool: 3/4" x 6" x 12" long in selected color.
- 7. All other materials and products as requested by Architect.

1.5 QUALITY STANDARDS

- A. The quality standards of the Architectural Woodwork Institute are hereby made a part of this Section. All materials and workmanship shall conform to these standards, except as otherwise indicated.
 - 1. Section 300 Materials, AWI Custom Grade, where not otherwise indicated.
 - 2. Section 0643-2021 Wood Stair, Handrail, and Guard Systems, AWI Custom Grade where not otherwise indicated.
 - 3. Section 0620-2018 Finish Carpentry/Installation, AWI Custom Grade where not otherwise indicated.
- B. All lumber shall conform to the following standards:
 - 1. New, dressed four- (4) sides (S4S), clear and free from warping, twist, wane, splits and other defects.
 - 2. Conform to U.S. Department of Commerce Simplified Practice Recommendations R-16 for sizes and use classifications.
 - 3. Kiln-dried, with a moisture content not exceeding 15 % when delivered to the site.
 - 4. Be in accordance with the grading rules of the lumber manufacturers' association under whose jurisdiction the species of lumber is produced.
 - 5. Conform to National Bureau of Standards PS-1 (plywood) or PS-20 (softwood lumber) and HPMA HP-1983 (hardwood plywood).
- C. All veneer plywood shall be as graded by the American Plywood Association.
- D. Finish hardwood shall be as graded by the Architectural Woodwork Institute.
- E. Maple trim, strip treads and risers and its installation shall conform to requirements of the Maple Flooring Manufacturers' Association (MFMA).
- F. Plastic Laminate: Shall conform to NEMA Standard LD-1 Type I, General Purpose.
- G. It is not the intent of this Specification to define the types, sizes, or installation methods for each item of architectural millwork. Methods of installation, joinery, sizes, types of finish, and other information pertaining to the trim, millwork and other items of required finish shall be in accordance with the details on the Drawings for the specific areas involved, and as specified herein. Grades and types of finish shall be as specified under this Section.

1.6 DELIVERY, STORAGE AND HANDLING

A. Protect woodwork during transit, delivery, storage, and handling to prevent damage, soiling, and deterioration.

B. Do not deliver woodwork until masonry, concrete work, cement board finish and similar wet operations which could damage, soil, or deteriorate woodwork have been completed in installation areas. If, due to unforeseen circumstances, woodwork must be stored in other than installation areas, store only in areas meeting requirements specified below.

1.7 JOB CONDITIONS

- A. Conditioning Advise General Contractor of temperature and humidity requirements for interior woodwork installation. Do not install woodwork until required temperature and relative humidity have been stabilized and will be maintained in installation area.
- B. Verify that General Contractor is maintaining temperature and humidity in installation area as required to maintain moisture content of installed woodwork within a 1% tolerance of optimum moisture content, from date of installation through remainder of construction period. The millwork fabricator shall determine optimum moisture content and required temperature and humidity conditions.

1.8 CLOSEOUT SUBMITTALS, RECORD DOCUMENTS AND GUARANTEES

- A. Submit the following in accordance with section 017700:
 - 1. Guarantee for workmanship for one (1) year
 - 2. Warranty for materials for one (1) year
 - 3. Product data on each component of floor system
 - 4. Record drawings indicating as built conditions.

PART 2 – PRODUCTS

2.1 FINISH CARPENTRY AND MILLWORK MATERIALS

- A. **Hardwood Trim**: For interior standing and running trim and all other hardwood, shall be AWI Custom Grade (I) select Maple. Provide solid Maple wherever "hardwood" is used on the Drawings and Schedules and natural finish is required.
- B. **Ballet Barre:** shall be AWI Custom Grade (I) select Maple. 1 ½" diameter barre.
 - 1. **Custom Barres "Classix Duo"** CUSTOM BARRES, LLC 5437, 436 W Commodore Blvd #28, Jackson, NJ 08527. <u>www.custombarres.com</u>, 888-772-9479.
 - 2. **Harlequin Floor Mounted Ballet Barres**, AMERICAN HARLEQUIN CORPORATION, 1531 Glen Avenue, Moorestown, NJ 08057 us.harlequinfloors.com, 856-234-5505
 - 3. **Vita Barre "Giselle"** VITA, INC. 40 Ellwood Court, Greenville, SC 29607. www.vitabarre.com, 864-288-8934.
 - 4. Ballet Barre shall be fully shop-finished. Contractor to provide touch up in the field using matching finish as recommended by manufacturer.
- C. Ballet Barre Brackets: See SECTION 055000 METAL FABRICATIONS.
 - 1. Contractor shall be responsible to verify and ensure compatibility and neat, tight fit between wood barre and brackets if not of the same manufacturer or system.

- D. **Paint Grade Wood Trim:** to receive opaque finish shall be Sugar Pine, Northern White Pine or Yellow Poplar; AWI Grade II.
- E. **Veneer Plywood (Not used)**: Use plain sliced veneer with plywood core, AWI Custom Grade (for natural finish) and solid edging on exposed edges. Plywood paneling shall be sequence matched in pre-manufactured sets for each area. Comply with AWI Section 500A. Both faces shall have Maple veneer.
- F. **Paint Grade Veneers (Not used)**: Shall be rotary cut birch veneer plywood, AWI Custom Grade, with birch veneer on both faces.
- G. **Particleboard (Not used)**: Industrial Grade, Class A fire-retardant treated water-resistant conforming to CS236, Table 1, Classifications 1-B-2; with a minimum density of 40 pcf; internal bond of 80psi; screw holding capability of 280 pounds for faces, and 225 pounds for edges; and machine-sanded smooth on all faces. Particleboard shall conform to HUD standard 24 CFR 3280 for formaldehyde emissions less than .3 parts per million when tested under FTM 2-1983.
- H. **MDO Plywood (Not used)**: shall be 3/4" Medium Density overlaid plywood siding, exterior type with one face of medium density overlay as described in voluntary product standard PS-1. Each panel shall be 4x8 sheets indentified with the trademark of the APA the engineered Wood Associates and shall have a B grade face veneer and C grade back veneers. Panels are to be factory primed with an oil base primer. Primer shall be white, 1.5 to 2 mils minimum dry film thickness. Provide factory applied fire retardant treatment where class I and II fire ratings are required.
- I. **Plastic Laminate (Not used)**: High pressure laminate, conforming to NEMA LD-1, Type I, GP-50 for horizontal surfaces and GP-28 for other surfaces, in solid color and low gloss non-directional texture as selected by the Architect, and provided with .020" thick plastic laminate backer sheet in accordance with AWI standards. As manufactured by: Formica, Nevamar, Pionite, or approved equal.

2.2 INSTALLATION ACCESSORIES

- A. Adhesive for Plastic Laminate: Urea-resin or polyvinyl acetate type.
- B. Glue: For lamination and fabrication of wood and plywood items: Exterior Grade phenolic resin glue.
- C. Nails for Trim Items: 6d or 8d coated or galvanized finish nails, except as otherwise specified herein.
- D. Screws: Flat head plated steel wood screws of appropriate sizes.
- E. Bolts, and other Non-Specified Fastenings: Of appropriate sizes for intended uses. Provide compatibly-sized steel washers for all bolts. Indicate sizes and types of all bolts and fastenings on Shop Drawings.

PART 3 – EXECUTION

3.1 WORKMANSHIP

A. See Drawings for details of wood trim, wood steps, paneling and other finish carpentry and millwork items.

- B. Running trim shall have a minimum of splices and joints. Where such splices and joints occur, they shall be fastened securely and all exposed surfaces shall be smooth, continuous planes.
- C. Solid wood and plywood surfaces shall be finished smooth and free from all machine and tool marks that might show through the finish.
- D. Set all finishing nails with nail punch to properly receive wood filler. Countersink all screw heads.
- E. All joints shall be tight and formed to conceal shrinkage. Miters 4" or more from heel to point shall be glued.

3.2 FABRICATION OF MILLWORK

- A. Except as otherwise specified, fabricate all millwork in accordance with AWI Quality Standards and the approved Shop Drawings.
- B. Design and Construction Features: Comply with details shown for profiles and construction of architectural millwork; and, where not otherwise shown, comply with applicable Quality Standards.
- C. Pre-Cut Openings: Fabricate pre-cut openings, wherever possible, to receive hardware, appliances, plumbing fixtures, electrical work, and similar items. Locate openings accurately and use templates or roughing-in diagrams for proper size and shape. Smooth edges of cutouts and, where located in countertops and similar exposures, seal edges of cutouts with a water-resistant coating.
- D. Measurements: Before proceeding with fabrication of millwork required to be fitted to other construction, obtain measurements and verify dimensions and Shop Drawing details as required for accurate fit.
- E. Treatment of Edges: Edge plastic laminate surfaces with high pressure plastic laminate matching adjoining plastic laminate in colors, patterns and finish, unless otherwise indicated. Painted plywood shelves shall have hardwood edging.

3.3 INSTALLATION OF MILLWORK AND TRIM

- A. Standing and Running Trim: Fabricate and install all standing and running trim in accordance with AWI Quality Standards Section 300 for Premium Grade and the approved Shop Drawings. Install with minimum number of joints, using full-length pieces (from maximum lengths of lumber available), to the greatest extent possible. Stagger joints in adjacent and related members. Cope at returns, Miter at corners, to produce tight fitting joints with full surface contact throughout length of joints. Scarf end-to-end joints.
- B. Install all work plumb, level, true, and in plane with no distortions. Shim as required using concealed shims. Install to a tolerance of 1/8" in 8'-0" for plumb and level (including countertops); and with 1/16" in maximum offset in flush adjoining surfaces, 1/8" maximum offsets in revealed adjoining surfaces.
- C. Scribe and cut work to fit adjoining work, and refinish cut surfaces or repair damaged finish at cuts.
- D. Anchor woodwork to anchors or blocking built-in or directly attached to substrates. Secure to grounds, strapping and blocking with countersunk, concealed fasteners and blind nailing as

required for a complete installation. Except where pre-finished matching fastener heads are required, use fine finishing nails for exposed nailing, countersunk and filled flush with woodwork, and matching final finish where transparent finish is indicated.

- E. Paneling: Install paneling as detailed following AWI standards. Book and end match veneers. Size pieces as indicated or as approved. Fasten securely using concealed fasteners as approved. Leave ready for transparent finish under PAINTING Section.
- F. Solid hardwood edging: on plywood veneer panels shall be ploughed-in between face veneers and not less than 3/4" deep.

3.4 HANGING AND FITTING OF DOORS

- A. Receive, store, and be responsible for all finish hardware.
- B. Fit all metal and wood doors and fixed panels to their respective openings and install proper hardware where not installed under another Section.
- C. Fit all hardware accurately from templates supplied with hardware, apply securely, and adjust carefully.
- D. Prior to Substantial Completion, and before building is occupied, inspect entire building with the Architect to see that each piece of finish hardware is undamaged and in perfect order and that the proper key for each lock is provided and identified.

3.5 ADJUSTMENT, CLEANING, AND PROTECTION

- A. Repair damaged and defective woodwork wherever possible to eliminate defects functionally and visually; where not possible to repair properly, replace woodwork. Adjust joinery for uniform appearance.
- B. Clean hardware, lubricate and make final adjustments for proper operation.
- C. Clean woodwork on exposed and semi-exposed surfaces. Touch-up shop-applied finishes to restore damaged or soiled areas.
- D. Complete finishing work not completed at shop or prior to installation.
- E. Protection: Advise Contractor of protection and conditions necessary to ensure that work will be without damage or deterioration at time of Substantial Completion.
- F. Just prior to the completion of all work under this Section, inspect all portions of the Work and make any further required adjustments and corrections.

END OF SECTION 06 20 23

SECTION 07 10 00 SEALANTS AND CAULKING

PART 1 – GENERAL

1.1 GENERAL REQUIREMENTS

- A. Include GENERAL CONDITIONS and applicable parts of Division 1 as part of this Section.
- B. Examine all other sections of the Specifications for requirements that affect work of this Section whether or not such work is specifically mentioned in this Section.
- C. Coordinate work with that of all other trades affecting, or affected by work of this Section. Cooperate with such trades to assure the steady progress of all work under the Contract.

1.2 WORK INCLUDED

- A. Furnish all materials, equipment, labor and services required for all caulking and sealant work as specified herein and as shown on Drawings, or both.
- B. Include caulking, sealants, sanitary sealants, joint back, primers, and elastomeric work.
- C. See Drawings for locations and details.
- D. Furnish, install and maintain all staging, scaffolding, and hoisting required for this work.

1.3 RELATED WORK UNDER OTHER SECTIONS

- A. Related work in other sections may include, but may not be limited, to the following:
 - 1. Steel and aluminum.
 - 2. Painting and high performance coatings.

1.4 REFERENCE STANDARDS

- A. Work shall conform to codes and standards of the following agencies as further cited herein:
 - 1. FS: Federal Specifications published by the United States Government, available from General Services Administration, Specification and Consumer Information Distribution Service, Washington Navy Yard Building 197, Washington, DC.

1.5 SAMPLES AND DATA

- A. Submit samples as requested by the Architect of all sealants and primers in accordance with requirements of Division 1.
- B. Sealant samples shall be 3" strips joining wood, metal or hardboard. Joint backup sample shall be 6" long, 1/2" or greater diameter. Foam sealant shall also be 6" long.

- C. Submit manufacturer's product description, performance and test data on all materials. Include test data on long-term color retention and fading of exterior sealants.
- D. Before ordering materials, obtain Architect's approval.
- E. Colors of all materials shall be as selected by the Architect.

1.6 QUALITY ASSURANCE

- A. Materials used in fulfilling the requirements of this Section shall be suitable for each intended use and shall be of the type specified for each category. Materials shall be applied under temperatures required for each type in accordance with the manufacturer's recommendations.
- B. In addition to other requirements, compounds shall contain no acid or ingredients that will affect masonry, corrode metal, or have injurious effects on paint.
- C. Use proper materials specified herein for each location whether Drawings call for "Caulking" or "Sealant".
- D. Submit manufacturer's certification of compliance with these specifications for each material.

1.7 DELIVERY, STORAGE AND HANDLING

- A. Each container shall bear an unbroken seal, test number and label of the manufacturer upon delivery at the site. Unlabeled materials will be rejected and shall be removed from the site and replaced with approved-labeled materials at no additional cost to the Owner.
- B. Deliver materials to site and install work under this Section in ample time to avoid delay in job progress and at such times as to permit proper coordination of the various parts.

1.8 CLOSEOUT SUBMITTALS, RECORD DOCUMENTS AND GUARANTEES

- A. Submit the following in accordance with Section 017700:
 - 1. Warranties for materials from the manufacturer for five (5) years.
 - 2. Guarantee of workmanship from the installation contractor for five (5) years.

PART 2 – PRODUCTS

2.1 PRIMER AND BACKER ROD

- A. Sealant primers where required shall be liquid type recommended by the sealant manufacturer for each use.
- B. Backer Rod: Shall be closed-cell, non-absorbent, polyethylene foam backer rod, Dow Chemical "Ethafoam" or approved equal. Size for each application shall be selected to provide approximately 33% compression when in place. Use backer rod at all exterior joints and elsewhere as indicated or as required. Vinyl foam is not acceptable.

2.2 SEALANTS

- A. Interior Sealant: For non-moving joints (excludes decks, floors and interior expansion and control joints) shall be one-part polyurethane sealant meeting or exceeding Federal Specification TT-S-00230C, Type II, Class B, as approved by the Architect. Colors shall be selected by the Architect from manufacturer's standard colors to match adjacent materials. For moving joints use exterior sealant specified above (except at floors).
 - B. Foam Joint Sealant: Shall be self-expanding, pre-compressed polyester-polyurethane open cell foam impregnated with neoprene and recommended for wide-joint sealing work, "Will-Seal 150" as manufactured by Illbruck, or equal as approved. Material shall have ten (10) year guarantee. Color shall be black or other manufacturer's standard color as selected.
 - C. Fire-rated Sealant: Shall be UL-rated silicone type by Dow, General Electric or as approved. Use at all openings and sealant joints in fire-rated walls and partitions.
 - D. Prefabricated Compression Seal: Shall be a cellular strip of extruded neoprene meeting ASTM D2628 continuous in length and of required width for compression to optimal fit. Include adhesive, tools, and lubricants as required. Use "E" series by D.S. Brown, CS-200 by M&M Systems, or equal by Acme or Watson-Bowman as approved.

PART 3 – EXECUTION

3.1 INSPECTION AND PREPARATION FOR SEALANTS

- A. Surfaces to receive waterproofing, damp-proofing and sealants shall be clean, dry and free of oil, dust and loose particles.
- B. Before starting work, inspect all surfaces to receive damp-proofing, waterproofing and sealant work and report in writing to the Architect any surfaces that are not suitable for application of such materials.
- C. Unsuitable surfaces shall be corrected before work begins. Commencement of material application to any surface shall constitute acceptance of that surface as proper to receive the work. Subsequent defects in work shall be corrected under this Section without additional cost to the Owner.
- D. Notify the proper trades of locations where adequate rabbets for sealant have not been provided; all such rabbets shall be prepared by cutting and cleaning out material to the minimum depth required and by grinding to the minimum width by the appropriate trade.
- E. Prepare full depth of joints in concrete, masonry, mortar and plaster as required to obtain firm, clean surface. Clean metal surfaces with wire brush where required to remove scale and other deposits and wipe clean with a mild, non-staining solvent. Clean other surfaces by methods approved by the sealant manufacturer. Where joint has been mortar-filled, rake out existing mortar 3/4" deep.
- F. Prime surfaces to receive sealing compounds where recommended by manufacturer in accordance with manufacturer's printed instructions.
- G. Install continuous lengths of joint backing material in proper size, shape, and depth. Except where otherwise specified or recommended by manufacturer, depth of joints not exceeding

1/2" in width shall be approximately the same as the width. Depth of joints exceeding 1/2" in width shall be approximately one half (1/2) the width of the joint. No sealed joint shall be less than 1/4" deep.

H. Install joint backup in all exterior joints in excess of 5/8" deep and in all interior joints requiring backup, placing the bead in the joint in a manner that will assure constant caulking material depth. Set bead into joint continuously by slightly stretching during placement to permit compression against sides of joint without surface wrinkles or buckles.

3.2 APPLICATION OF SEALANTS

- A. Apply sealant only to clean, dry surfaces, and only when the ambient temperature is within manufacturer's recommended range.
- B. Application shall be in strict accordance with manufacturer's printed instructions.
- C. Apply gun grade sealants with caulking guns of type approved by sealant manufacturer using nozzles sized to fit into joints and drive material with sufficient pressure to fill all voids. Install sealant in continuous, uninterrupted, full-length beads. Superficial pointing of joints with a thin bead of compound will not be acceptable.
- D. Neatly point and tool all finished joints, concave, uniformly smooth and free of wrinkles, waves, sag lines and other imperfections. Keep outer edge of sealant 1/8" back from face of surrounding material. Remove masking tape immediately after tooling but before sealant has set.
- E. Provide sealant at thresholds not sealed under another Section. Set same in a full bed of exterior sealant not less than 3/8" thick. Clean off excess compound after installing.
- F. Surfaces of all materials adjoining caulked joints shall be fully protected and be kept clean and free of smears of compound or other soiling due to sealant application. Use non-staining masking tape as required.

3.3 PROTECTION AND CLEANING

- A. Clean all surfaces of adjacent surfaces that have been marked or soiled by the work of this Section, removing all excess materials therefrom. Use only cleaning materials and solvents that will not damage the surfaces in any way.
- B. Remove all debris and rubbish as the work progresses, and legally dispose of same.
- C. At completion of work, do final cleaning, leaving the Work and adjacent surfaces in a clean and neat condition.

END OF SECTION 07 10 00

SECTION 08 20 00 WOOD DOORS (NOT IN CONTRACT – TOILET ROOM ONLY)

PART 1 – GENERAL

1.1 GENERAL REQUIREMENTS

- A. Include GENERAL CONDITIONS and applicable parts of Division 1 as part of this Section.
- B. Examine all other sections of the Specifications for requirements that affect work of this Section whether or not such work is specifically mentioned in this Section.
- C. Coordinate work with that of all other trades affecting, or affected by work of this Section whether or not such work is specifically mentioned in this Section.

1.2 WORK INCLUDED

- A. Furnish all new <u>prefinished</u> wood doors required for the Work, including all flush solid core and mineral core wood veneer-faced doors, labeled where required, with factory-prepared glazing and louver cut-outs where indicated.
- B. Specific locations of door types are indicated on the Drawings. Where door schedules are shown, they are provided for convenience, but door indications on the scale Drawings shall govern. In case of omissions from schedules, doors in question shall be referred to the Architect for determination of type.

1.3 RELATED WORK UNDER OTHER SECTIONS

- A. Related work in other sections may include, but may not be limited, to the following:
 - 1. Furnishing and installing of finish hardware.
 - 2. Painting and finishing of all doors. not specified to be factory finished
 - 3. Glass and glazing of wood doors.
 - 4. Installation of wood doors.
 - 5. Finish carpentry and millwork.

1.4 REFERENCE STANDARDS

- A. Work shall conform to the codes and standards of the following agencies as further cited herein:
 - 1. AWI: Architectural Woodwork Institute, Potomac Falls, Virginia, as published in "Architectural Woodwork Quality Standards," 8th Edition.
 - 2. UL: Underwriters' Laboratories Inc., 333 Pfingsten Road, Northbrook, Illinois.
 - 3. IS, CS: National Bureau of Standards, U.S. Department of Standards, Washington, DC 20234.
 - 4. WDMA Window and Door Manufacturers Association 2001 K street NW, 3rd floor north, Washington D.C. 20006
 - 5. Intertek Warnock Hersey

1.5 SUBMITTALS

- A. Submit the following, in accordance with the provisions of Division 1.
- B. Schedule: Submit complete schedule of wood doors, indicating sizes and characteristics, arranged in the same format as Door Schedule on Contract Drawings.
- C. Certifications: Submit certified statement from manufacturer that doors furnished meet or exceed requirements specified herein.
- D. Samples: Provide cutaway corner section of each type of door showing typical corner construction, methods of joinery, type and species of veneer and solid wood.
- E. Warranties: Provide two copies of manufacturer's standard warranty, signed by an officer of the manufacturer, submitted at the same time doors are shipped, and covering repair and/or replacement of solid core doors for the lifetime of the installation.

1.6 DELIVERY, STORAGE AND HANDLING

- A. Doors shall be properly packaged and protected during shipment and installation. Face veneers shall be covered with opaque material to prevent veneer discoloration.
- B. Doors shall not be delivered to the job site until the building has thoroughly dried out with relative humidity under 55% and temperatures between 50 degrees and 90 degrees. Doors shall be stored flat in a dry area until time for installation.
- C. Deliver work under this Section to site in ample time to avoid delay in job progress and at such times as to permit proper coordination of the various parts.
- D. Provide complete protection for all doors while stored and following installation.
- E. Architect shall have the right to require complete replacement of any damaged doors.

1.7 CLOSEOUT SUBMITTALS, RECORD DOCUMENTS AND GUARANTEES

- A. Submit the following in accordance with section 017700 CLOSEOUT PROCEDURES:
 - 1. Warranties for materials from the manufacturer for five (5) years.
 - 2. Guarantee of workmanship from the installation contractor for five (5) years.

PART 2 – PRODUCTS

2.1 GENERAL

- A. Flush wood doors shall be as manufactured by:
 - 1. Marshfield Door Systems Inc., Marshfield, Wisconsin
 - 2. Algoma Hardwood Products, Algoma, Wisconsin
 - 3. Eggers Industries, Neenah, Wisconsin
 - 4. VT Industries, Holstein, Iowa

- 5. Or approved equal.
- B. Doors shall be manufactured in accordance with WDMA Premium Grade standards, 5-ply, 1-3/4" thick, hot pressed construction. and WDMA standards I.S. 7A-97. Doors shall also. Comply with AWI 8th Edition, Custom Grade, Section 13000 ARCHITECTURAL FLUSH DOORS.
- C. Structural Composite Lumber components shall be AWI SCLC-5 or Timberstrand LSL by Trus Joist MacMillan.
- D. Glues shall be waterproof, type 1 for face and type 2 for core and shall comply with low-emitting adhesives requirements of Sustainable Design Requirements Section. No added Formaldehyde.
- 2.2 STRUCTURAL COMPOSITE LUMBER CORE DOORS (For use at non-rated and 20 minute fire rated doors.)
 - A. Structural Composite Lumber Core Flush Wood Doors: with more than 35% of the door area glazed or louvered and where glazed or louvered areas are indicated to be less than 10" from the edge, doors shall be AWI type SCLC-5 Custom Grade Flush Doors. SCL cores, with plain sliced face veneers for natural finish. SCL core doors shall meet or exceed the requirements of U.S. Department of Commerce Commercial Standard CS-171, and shall be equal to Marshfield DCL-1. "LSL Timberstrand" cores meeting the same standards shall be acceptable.
 - B. Structural Composite Lumber Core Flush Wood Doors: shall be 1-3/4" thick of 5-ply construction with face veneers bonded to both faces. Cross bands shall be a thoroughly kilndried hardwood product, minimum 1/16" thick, extending full width of door.
 - C. Stiles and rails, blocking reinforcements for surface mouned hardware, and top and bottom edges shall be SCLC, minimum 1 3/8" or as required for hardware reinforcement, shall be complete with matching hardwood edge to conceal all crossbands, and shall be factory sealed. Provide solid blocking reinforcement for all closers, pushbars, inserts and other hardware provide shop drawings for coordination and approval.
 - D. Face veneers shall be AWI Grade A. Doors shall be completely sanded, and shall be factory finished as described below.
 - E. Glass Openings: Furnish hard wood glazing beads in all glazing cut-outs. Glass openings shall not be closer than 6" to top and side edges, bottom rail shall be 10" high minimum.

2.2 MINERAL CORE FIRE-RATED DOORS

- A. **Mineral core fire doors:** shall be veneer; mineral core fire rated flush doors shall be WDMA type FD-5.
- B. Veneer wood-faced mineral core doors shall be 1-3/4" thick, and shall have 45, 60 OR 90 minute ratings as indicated on the drawings. Doors shall be manufactured in accordance with ASTM E-152 and NFPA 80. Core shall be cross-banded and veneered. Doors shall have vertical edges of wood in the manufacture's standard thickness to match the face veneer. Veneer shall be treated with a Class A fireproofing agent. Adhesive for bonding veneers shall be waterproof resin glue.
- C. Provide cutouts and frames for glass lights where required. Glass stops and frames shall be flush, with matching hard wood veneer over non-combustible core of simple rectangular sections, and shall finish flush with or slightly recessed from face panel. Openings and glass

stops in mineral core doors shall meet UL requirements for the door rating. Provide internal fire treated blocking equal to Georgia Pacific "Fire Stop" for closers, kickplates, panic devices and any other hardware so as to eliminate through bolting as recommended by the hardware manufacturer.

D. Hollow metal veneer faced doors of the appropriate fire rating may be accepted in lieu of mineral core fire rated doors.

2.3 VENEERS AND FINISH

- A. All doors described in 2.2, 2.3 and 2.4 above shall be of the same matching veneer Select WHITE OAK Veneer and shall have matching veneer edges and glazing beads. Veneers shall be plain sliced, book matched with a running match assembly. Minimum 1/50" after sanding. All pairs of doors shall be pair or set matched.
- B. All doors shall receive a factory clear finish in accordance with WDMA G-17 or AWI Division 1500-S-4 Premium Grade (two finish top coats) catalyzed polyurethane and shall be ultraviolet cured polyurethane meeting EPA guidelines for VOC emissions. Finish must meet or exceed the performance of TR-6 catalyzed polyurethane. Factory seal the top and bottom edges of all doors as required for the manufacturers warranty. (All finishes for touch-up must comply with Sustainable Design Requirements Section only if applied in field.)
- C. Matching wood edges must cover the entire door edge. No exposed crossbands will be allowed on door edges.

2.5 WARRANTY

A. Warranty shall cover WDMA items T-1 Show-through, T-2 Warp, T-3 Square tolerance and delamination. This Lifetime Warranty must cover re-making, shipping, unloading, hardware application, re-glazing and removal of any affected doors.

2.8 SIZING AND HARDWARE PREPARATION

A. Doors shall be pre-fit, beveled, machined for all mortise hardware and have pilot holes drilled for all butt hinge screws and lock front screws at the factory.

PART 3 – EXECUTION

3.1 INSTALLATION OF DOORS

- A. Doors will be machined for hardware and installed under the FINISH CARPENTRY Section.
- B. Door manufacturer shall be responsible for obtaining dimensional variances of the opening, from the general contractor prior to machining doors.

END OF SECTION 08 20 00

SECTION 08 83 00 MIRRORED GLAZING

PART 1 – GENERAL

1.1 GENERAL REQUIREMENTS

- A. Include GENERAL CONDITIONS and applicable parts of Division 1 as part of this Section.
- B. Examine all other Sections of the specifications for requirements which affect work of this Section whether or not such work is specifically mentioned in this Section.
- C. Coordinate work with that of all other trades affecting, or affected by work of this Section. Cooperate with such trades to assure the steady progress of all work under the Contract.

1.2 WORK INCLUDED

- A. Furnish and install all mirrored glass as required for the Work as indicated on Drawings, as specified herein, or both.
- B. Provide all staging, scaffolding, hoisting and planking required for glass and glazing work.
- C. Do all mirrored glass work required for the project and not specified under another Section.
- D. See Drawings for locations and details.

1.3 RELATED WORK UNDER OTHER SECTIONS

- A. Related work in other sections may include, but may not be limited, to the following:
 - 1. Final cleaning of glass.
 - 2. Adhesives and sealants, except as specified herein.

1.4 APPLICABLE STANDARDS

- A. The following standards and specifications are hereby made a part of this Section to the extent to which they apply.
 - 1. Flat Glass Marketing Association Glazing Manual and Sealant Manual, current edition.
 - 2. Federal Specifications DD-G-451d, for non-tempered glass; and DD-G-1403b, for tempered glass.
 - 3. American National Standards Institute ANSI Z97.1, Performance Specifications and Methods of Test for Safety Glazing Material Used in Buildings.
 - 4. Federal Safety Standard 16 CRF 1201.
 - 5. Consumer Product Safety Commission (CPSC): Safety Standard for Architectural Glazing Materials
 - 6. SIGMA 70-7-1 Glazing Recommendations, current edition.
 - 7. ASTM C1036: Standard Specifications for Flat Glass.
 - 8. FGMA GM-Glazing Manual.
 - 9. FGMA SM- Sealant Manual

1.5 SUBMITTALS

- A. Data: Submit in accordance with requirements of Division 1, manufacturer's technical data for each glazing material and fabricated glass product required, including installation and maintenance instructions.
- B. Samples: Submit, for verification purposes, one (1) 8" x 10" square sample of each type of glass indicated except for clear single pane units, and one (1) 10" long sample of each color required for each type of sealant or gasket exposed to view. Install sealant or gasket samples between two (2) strips of material representative of adjoining framing system in color selected.
- C. Certificate: Submit manufacturers' certificates attesting that glass and glazing materials furnished for the Project comply with requirements specified. Separate certification will not be required for glazing materials bearing manufacturer's permanent labels designating type and thickness of glass, provided labels represent a quality control program involving a recognized certification agency or independent testing laboratory acceptable to authorities having jurisdiction.
- D. Compatibility and Adhesion Test Report: Submit statement from sealant manufacturer indicating that glass and glazing materials have been tested for compatibility and adhesion with glazing sealants and interpreting test results relative to material performance, including recommendations for primers and substrate preparation needed to obtain adhesion.
- E. Schedule: Provide a complete schedule of glass types, locations and glazing procedures, including various thicknesses of glass.

1.6 QUALITY ASSURANCE

- A. Glazing Standards: Comply with recommendations of Flat Glass Marketing Association (FGMA) "Glazing Manual" and "Sealant Manual" except where more stringent requirements are indicated. Refer to those publications for definitions of glass and glazing terms not otherwise defined in this Section or other referenced standards.
- B. Safety Glazing Standard: Where safety glass is indicated or required by authorities having jurisdiction, provide type of products indicated which comply with ANSI Z97.1 and testing requirements of 16 CFR Part 1201 for category II materials. Subject to compliance with requirements, safety glass shall be permanently marked with certification label of Safety Glazing Certification Council (SGCC) or other certification agency acceptable to authorities having jurisdiction.
- C. Glazing Standards: FGMA Glazing Manual and Sealant Manual.
- D. Single Source Responsibility for Glass: To ensure consistent quality of appearance and performance, provide materials produced by a single manufacturer or fabricator for each kind and condition of glass indicated and composed of primary glass obtained from a single source for each type and class required.

1.7 DELIVERY, STORAGE AND HANDLING

- A. All materials shall be delivered, stored, handled, and installed so as not to be damaged.
- B. Glass shall be stored in a clean, dry area to prevent staining.

C. Glazing materials shall be delivered in the manufacturer's original unopened containers bearing the manufacturer's labels. Do not unpack material until it is to be set unless unpacking is required for inspection by the Architect.

1.8 GUARANTEES

- A. All glass installed under this Section shall be guaranteed by the Glazing Subcontractor against leakage or water penetration caused by caulking or sealant failure, for a period of two (2) years from date of Substantial Completion.
- B. Such guarantees shall be in addition to and not in lieu of all liabilities manufacturers or Contractor may have by law or by other provisions of the Contract Documents.

1.9 CLOSEOUT SUBMITTALS, RECORD DOCUMENTS AND GUARANTEES

- A. Submit the following in accordance with section 01 77 00:
 - 1. Warranties for materials from the manufacturer for one (1) year.
 - 2. Guarantee of workmanship from the installation contractor for one (1) year.
 - 3. Product data.

PART 2 – PRODUCTS

2.0 MANUFACTURERS

- A. Mirror Glass shall be as manufactured by:
 - 1. PPG Industries, Pittsburgh, PA
 - 2. Pilkington Toledo, OH
 - 3. Libbey-Owen-Ford, Toledo, OH
 - 4. Or approved equal.

2.1 GLASS TYPES

- A. **Mirrors**: Shall be 1/4" mirror grade annealed float glass, with ground polished edges, blue-labeled in accordance with Department of Commerce Standards CS27-36. Mirrors shall have a silver coating hermetically sealed with a uniform coating of electrolytic copper plating. The copper shall be protected by 2 coats of mineral oxide, oil base paint. Mirrors shall be guaranteed for a period of not less than ten (10) years against silver spoilage.
- B Mirrors shall have fully adhered integral vinyl safety film on the back.

2.2 GLAZING MATERIALS

A. Compatibility: Provide glazing materials of proven compatibility with other materials with which they will come into contact, including glass products, seals of insulating glass units and glazing channel substrates, under conditions of installation and service, as demonstrated by testing and field experience.

- B. Suitability: Comply with recommendations of sealant and glass manufacturers for selection of glazing materials that have performance characteristics suitable for applications indicated and conditions at time of installation.
- C. Colors: Provide color of exposed sealants indicated or, if not otherwise indicated, as selected by Architect from manufacturer's standard colors to match or contrast with adjacent materials.

2.3 ADDITIONAL GLAZING MATERIALS

- A. Cleaners, Primers and Sealers: Type recommended by sealant or gasket manufacturer.
- B. Setting Blocks: Neoprene, EPDM or silicone blocks as required for compatibility with glazing sealants, 80 to 90 Shore A durometer hardness, 1/4" thick, 2" to 4" long and 1/8" wider than thickness of insulating glass when used therewith.
- C. <u>Safety Film Backing</u>: as required for safety.

2.4 MIRROR INSTALLATION MATERIALS

- A. Mirror Adhesive: Shall be "Mirro-Mastic" as manufactured by Palmer or equal by Gunther or Concord as approved.
- B. Surface Bonding Agent: For mirror adhesive shall be equal to Palmer "Mirro-Mastic Bond."
- C. Mirror Edge Scaling Paint: Shall be equal to Palmer "Mirro-Bac" paint. Mirror top and bottom support channel: Shall be chrome-plated brass or satin finish stainless steel. Provide neoprene spacers and gaskets as indicated or as required.
- D. Mirror top and bottom support channel: Shall be chrome-plated brass or satin finish stainless steel. Provide neoprene spacers and gaskets as indicated or as required.

PART 3 – EXECUTION

3.0 WORKMANSHIP

- A. Surfaces shall be dry and free from dust, grease, oil and other foreign materials before glazing. Follow "surround preparation" of FGMA Manual. All glass shall be set with the wave parallel to the sill, without springing and with proper clearance at all edges. Install wire glass square with frame, as approved.
- B. Check all openings, prior to glazing, to make certain that the opening is square, plumb and secure in order that uniform face and edge clearances are maintained. Inspect butt and miter joints and remove projections from fixed rabbets.
- C. All glass shall be clean cut; nipping to remove flares or to reduce oversize dimensions will not be permitted. Exposed glass edges shall have TVS treatment. Glass shall be accurately shop-cut to fit openings allowing required clearance. Openings to receive glass shall be perfectly square. Any out of square shall be reported and corrected before glass is sized. Protect edges of glass from abrasion with ground or masonry.

3.1 INSTALLATION

- A. Comply with combined printed recommendations of mirrored glass manufacturers, manufacturers of adhesives and other glazing materials, except where more stringent requirements are indicated, including those of referenced glazing standards.
- B. Protect glass from edge damage during handling and installation; use a rolling block in rotating glass units to prevent damage to glass corners. Do not impact glass with metal framing. Use suction cups to shift glass units within openings; do not raise or drift glass with a pry bar. Rotate glass with flares or bevels along one horizontal edge which would occur in vicinity of setting blocks so that these are located at top of opening. Remove from project and dispose of glass units with edge damage or other imperfections of kind that, when installed, weakens glass and impairs performance and appearance.
- C. Set units of glass in each series with uniformity of pattern, draw, bow and similar characteristics.

D. WALL-MOUNTED MIRROR INSTALLATION, GENERAL:

- 1. Install mirrors in accordance with mirror manufacturer's instructions.
- 2. Mount mirrors in place to avoid distorting reflected images.
- 3. Install unframed mirrors straight level and in one plane for each location. Edges shall be slightly eased. Joints shall have clear sealant tooled flush or slightly concave. Use setting blocks where required and fill with continuous clear sealant. Adhesive shall be applied directly to the back of mirrors in accordance with manufacturer's recommendations to achieve a minimum of 60% coverage when mirror is pressed into place. Space adhesive to allow air movement behind mirrors. Press mirror into position with steady even pressure until adhesive grips mirror to surface. Allow no adhesive to flow at edges. Seal edges of cut mirrors with approved backing paint before mounting, except at butt joints. Apply support channel at base and stop of mirrors as indicated or as required.

E. MASTIC INSTALLATION:

- 1. Inspect surface over which mirror is to be mounted. Comply with mastic manufacturer's installation directions for preparation of mounting surface including coating with mastic manufacturer's special bond coating where applicable.
- 2. Apply mastic in spots to comply with mastic manufacturers directions for coverage and to allow air circulation between back of mirror and mounting surface.

F. HARDWARE INSTALLATION:

- 1. Provide permanent means of structural support at bottom edge of mirror.
- 2. Attach mirror hardware securely to mounting surface with mechanical fasteners with anchors or inserts.
- 3. Place a felt or plastic pad between mirror and metal or plastic clips to prevent spalling of mirror edges.

G. MIRROR INSTALLATION:

- 1. After mastic is applied, align mirror and press into place while at the same time maintaining a minimum air space of 4mm for air circulation between back of mirror and mounting surface.
- 2. Install clips along top of mirror during mastic curing period.

3.2 PROTECTION AND CLEANING

A. All glass shall be protected from damage until acceptance of the project and if broken or defective, shall be removed and replaced with glass of specified type.

- B. Protect glass from contact with contaminating substances resulting from construction operations. If, despite such protection, contaminating substances do come into contact with glass, remove immediately by method recommended by glass manufacturer.
- C. Remove and replace glass which is broken, chipped, cracked, abraded or damaged in other ways during construction period, including natural causes, accidents and vandalism.
- D. Maintain environmental conditions which will prevent mirror from being exposed to moisture from condensation or other sources for continuous periods of time.

3.3 CLEANUP AND CLEANING

- A. Wash mirrors using water or glass cleaners free from substances capable of damaging mirror edges or backing.
- B. Remove all labels, excess glazing sealant, stains, and spots from glass and plastic upon completion of glazing.
- C. Remove all rubbish and debris from the site at the end of each day's work. Clean compound smears and stains from adjacent surfaces as the Work progresses.

END OF SECTION 08 83 13

SECTION 092900 GYPSUM BOARD ASSEMBLIES

PART 1 – GENERAL

1.0 GENERAL REQUIREMENTS

- A. Include GENERAL CONDITIONS and applicable parts of Division 1 as part of this Section.
- B. Examine all other Sections of the Specifications for requirements that affect work under this Section whether or not such work is specifically mentioned in this Section.
- C. Coordinate work with that of all other trades affecting, or affected by work of this Section. Cooperate with such trades to assure the steady progress of all work under the Contract.
- D. Sustainable Design Intent: Comply with project requirements under the specification sections listed below:
 - 1. Refer to Section 01 81 19 INDOOR AIR QUALITY MANAGEMENT for material and procedure requirements.

1.1 WORK INCLUDED

- A. Furnish all materials, equipment, labor and services required for all gypsum wallboard construction work, as specified herein, as indicated on Drawings, or both.
- B. Include all interior metal stud work for partitions, fire-rated partitions, fascias and soffits and all other work indicated on the plans.
- C. Include all acoustical insulation, all insulation indicated on the drawings and all wood blocking specified herein.
- D. Include all interior gypsum wall board at all partitions. Include all fascias and soffits. Include fire-rated partitions and liner board. Include all other gypsum board work indicated on the drawings.
- E. Include the finishing of all gypsum work as specified herein or indicated on the drawings.
- F. Furnish and install, removing when no longer needed, all staging, scaffolding, hoisting and planking required for work of this section.
- G. See Drawings for locations and details.

1.2 RELATED WORK UNDER OTHER SECTIONS

A. The following general classes of work are listed for the convenience of the contractor in determining coordination of the work. In general, the work listed below is work related to the work of this section and is included under other sections. The list of work below shall not be construed as removing any work from the scope of this section if such work is indicated on the drawings, within this section or within the General or Supplemental conditions as being included within this section.

- 1. Sealants, except as specified herein.
- 2. Building insulation, except as specified herein.
- 3. Acoustical ceilings, including suspension systems.
- 4. Painting of drywall.
- 6. Miscellaneous metal work.

1.3 REFERENCE STANDARDS

- A. Work shall conform to the codes and standards of the following agencies as further cited herein:
 - 1. AISI: American Iron and Steel Institute, Washington, DC, including "North American Specification for the Design of Cold-Formed Steel Structural Members".
 - 2. ASTM: American Society for Testing and Materials, West Conshohoken, PA.
 - 3. AWS: American Welding Society, Inc., Miami, FL, as published in "Standard Code for Arc and Gas Welding in Building Construction."
 - 4. UL: Underwriters' Laboratories, Inc., 333 Pfingsten Road, Northbrook, IL 60062.
 - 5. GA: Gypsum Association, Recommended Specifications for the Application and Finishing of Gypsum Panel Products (GA-216).
- B. Perform gypsum board systems work in accordance with recommendations of ASTM C754 and GA-216 unless otherwise specified.
- C. Comply with ASTM C840 for installation and finishing of fiber-reinforced gypsum board.
- D. Design wall, ceiling and soffit framing systems to comply with wind, seismic and other load requirements of CMR 780 Chapter 16 Structural Design.

1.4 SHOP DRAWINGS AND DESIGN COMPUTATIONS

A. Structural Design Criteria for Ceilings and soffits:

- 1. Design the ceiling assembly, its suspension system, and its fasteners to the base building structure to withstand seismic loads pursuant to CMR 780 Chapter 16.
- 2. Use the ceiling self-weight and weight of all partitions, components, furnishings and materials attached to or braced by the ceiling in the calculation of the weight subjected to seismic loads.
- 3. Design and configure attachments to base building structure without compromising the structural, fire protection, fire stopping, or damp proofing integrity of the base building.
- 4. Other than for lateral bracing, neglect any composite action between the studs and sheathing for the axial and flexural strength of the ceiling.
- 5. Transfer forces to braces or partitions bracing ceiling only by bearing. Do not use shear as a mechanism of transferring forces out of the ceiling system.
- 6. Itemize loads considered and indicate design criteria.

1.5 MANUFACTURER'S DATA

A. Submit cuts, drawings and descriptive data for all materials in accordance with requirements of Division 1.

- B. Include strut system, studs, sheathing, suspension systems, accessories and all other framing materials and fasteners.
- C. Provide fastener BOCA reports and catalog data.
- D. Provide certified lab tests and manufacturer's literature indicating the material composition and strength of the light gauge steel elements, gypsum sheathing and of suspension systems.

1.6 QUALITY ASSURANCE

- A. All materials and workmanship under this Section shall be subject to inspection in the mill, shop or field by the Architect, or by qualified inspectors retained and paid directly by the Owner.
- B. However, such inspection, wherever conducted, shall not relieve Contractor of responsibility to furnish materials and workmanship in accordance with Contract requirements, nor shall inspector's acceptance of materials or workmanship prevent later rejection of same by Owner or Architect if defects are discovered.

1.7 SAMPLES

- A. Submit samples of all materials in accordance with requirements of Division 1 and before ordering materials, obtain written approval from the Architect.
- B. Submit samples of all metal component parts (12" long) accessories (12" long) and fastenings for Architect's approval. Show materials, gauges, sizes and finish.
- C. Submit samples (8" x 10") of gypsum sheathing, each type of gypsum wallboard and cement board and all other materials requested by Architect for approval.

1.8 DELIVERY, STORAGE AND HANDLING

- A. All materials shall be delivered to site in original packages and containers bearing manufacturer's brand name and type of material.
- B. Deliver and store work under this Section in a manner to prevent wracking and stress of components, and to prevent mechanical damage.
- C. Steel shall be carefully unloaded on delivery and suitably stored at the site in approved locations. No steel shall be dumped or dropped.
- D. Steel shall be neatly stacked on skids off the ground so that it will not be in contact with water or soil; shall be piled and blocked so that it will not be damaged or bent.
- E. Store gypsum board and cement board horizontally and above ground or slab. Protect board and all materials from damage by moisture, weather and all other causes.
- F. Deliver work under this Section to site in ample to avoid delay in job progress and at such times as to permit proper coordination of the various parts.

G. Verify dimensions and work of other trades that adjoin materials of this Section before the installation of items herein specified.

1.9 FIRE RATINGS

- A. Fire-Resistance Ratings: Where indicated, provide materials and construction which are identical to those of assemblies whose fire resistance rating has been determined per ASTM E119 by a testing and inspecting organization acceptable to authorities having jurisdiction.
- B. Provide fire-resistance-rated assemblies identical to those indicated by reference to GA file number in GA-600 "Fire Resistance Design Manual" or to design designations in U.L. "Fire Resistance Directory" or in listing of other testing agencies acceptable to authorities having jurisdiction.
- C. Fire rated walls and partitions are based on the tests listed below unless indicated otherwise. Construction of these walls and partitions shall conform to these tests, and in addition, shall be in accordance with the details on the Contract Drawings and as specified herein.
 - 1. Two Hour Walls: UL Design No. U412
 - 2. One Hour Walls: UL Design No. U468 or No. U465 as applicable.
 - 3. Two hour shaft walls: UL Design No. U415

1.10 CLOSEOUT SUBMITTALS, RECORD DOCUMENTS AND GUARANTEES

- A. Submit the following in accordance with section 01 77 00 Closeout Procedures:
 - 1. Warranties for materials from the manufacturer for one (1) year.
 - 2. Guarantee of workmanship from the installation contractor for one (1) year.
 - 3. Product data for each material used.
 - 4. Record drawings: record all as built conditions on the general contractor's record set.

PART 2 – PRODUCTS

2.0 MANUFACTURERS

- A. In general, all materials shall be the product of one manufacturer. Products of different manufacturers may be used only after approval by the Architect.
- B. Structural stud framing members, track, bridging, and required accessories shall be of the type, gauge, and size shown on the Drawings, or as specified herein, and shall be manufactured by:
 - 1. Marino/WARE, South Plainfield, NJ.
 - 2. Clark-Dietrrich Building Systems, West Chester, OH.
 - 3. United States Gypsum Co., Chicago, IL.
 - 4. Or approved equal.
- C. Unless otherwise specified, all materials shall be as manufactured by:
 - 1. National Gypsum Co., Charlotte, NC.
 - 2. United States Gypsum Co., Chicago, IL.
 - 3. CertainTeed Saint-Gobain, Malvern, PA.

- 4. Georgia-Pacific (GP), Atlanta, GA.
- 5. or approved equal.
- D. Accessories, joint treatment materials, adhesives, fasteners, stud and furring systems, etc. shall be manufactured by or approved by the maker of the wallboard. Steel studs, track, furring channels, etc., shall be integrated systems
- E. For indication of type and quality only, National Gypsum's catalogue numbers are generally used. USG Cement board systems are similarly used.

2.1 INTERIOR METAL PARTITION FRAMING COMPONENTS

- A **Interior Steel Studs:** Except where otherwise indicated, studs shall be 4" screw studs formed of 20 gauge or heavier electro-galvanized steel And shall have a minimum Fy of 33 ksi. At least two (2) holes approximately 1-1/2" x 1-3/4" shall be punched within 18" of each end of each stud (4 holes per stud). Splicing of studs will not be permitted.
- B. **Steel Floor and Ceiling Track**: Roll-formed, minimum 20-gauge electro-galvanized steel channel track, width to match studs. In general, flanges shall be at least 1-1/4" deep. At conditions requiring provision for creep and deflection, provide additional deflection track with 2-1/2" flange depth as indicated on the Drawings.
- C. **Steel Carrying Channels:** Shall be 1/2" by 1-1/2" cold-rolled 16-gauge channels weighing not less than 475 pounds per thousand lineal feet and primed with rust-inhibiting paint.
- D. **Steel Hanger Clips:** Use manufacturer's standard recommended metal clips suitable for each type of construction. Power driven eye pins will be permitted, but each pin shall be tested after installation for 150 pound load (weight of one workman).
- E. **Hanger Wire:** Use 8 gauge galvanized wire, ASTM A641except at double layer ceiling construction use 1/8" x 1" galvanized steel strap, ASTM A36punched at each end after galvanizing.
- F. **Tie Wire:** Shall be 16-gauge galvanized annealed wire, ASTM A641.
- G. **Channel Clips:** Shall be standard galvanized drywall furring wire clips installed on alternate sides of the carrying channels.
- H. **Steel Furring Channels:** Shall be 7/8" x 2-3/4" hat section, formed of 25-gauge electrogalvanized steel.
- I. **Z-Channels:** Shall be manufacturer's standard formed of 25 gauge electro-galvanized steel.

2.2 ACOUSTICAL MATERIALS AND INSTALLATION

- A. **Sound Insulation:** To be provided between studs for all interior partitions, and between ceiling track at all gypsum ceilings: shall be fiberglass batt insulation meeting ASTM C-665 Type I, equal to Manville sound attenuation blanket, 5-1/2" thick where not otherwise indicated on Drawings, tightly butted and fitted between studs leaving no voids at top or bottom of studs or around pipes and conduit. No added formaldehyde.
- B. **Filler Strips:** Between steel studs and masonry or concrete end walls shall be approved 3/8" continuous compressible non-combustible mineral fiber strips full depth of stud

2.3 GYPSUM WALLBOARD

A. **Fire-Resistant, Moisture-Resistant, Gypsum wallboard:** All Gypsum Wallboard shall be G-P "Toughrock MMR" or equal, Type X, Mold-resistant, paper-faced suitable for skim coat plaster. Gypsum wallboard shall be 5/8" thick standard tapered-edge boards 48" wide and in lengths as required to eliminate end joint conditions, and shall conform to ASTM C630 and ASTM D3273.

2.4 ACCESSORIES FOR INTERIOR WORK

- A. **Corner Bead:** Galvanized steel with paper faced bead and trim 1-1/8" x 1-1/8" for all outside corners.
- B. Casing Bead: At junction of wallboard and dissimilar materials, and at all exposed edges of wallboard shall be No. 200B galvanized steel casing, angle type, finished with joint compound.
- C. **Control Joint:** At control joints, use two (2) 200A channel type casing beads back-to-back separated by recessed foam tape.
- D. **Tape:** Compound: Joint treatment for drywall finish, shall be regular perforated drywall tape.
- E. **Joint compound:** shall conform to ASTM C-475 and shall be as recommended by the wallboard manufacturer. Do not use fiberglass tape at gypsum board joints.
- F. **Gypsum grout:** for pressed steel door frames at drywall partitions: shall be low-slump non-shrink setting type.
- G. **Reveal Trim:** Fry-Regret aluminum trim "DRWT-75-75" or approved equal to be used at all instances of masonry (block and brick) installation with gypsum board ceilings, and soffits, and as detailed on drawings.
- H. **Reveal Trim. Z Reveal:** DRMZ. 50-75 fry regret aluminum trim or approved equal, to be used at all instances of masonry (block and brick) intersections with gypsum board partitions, and as detailed on drawings.
- I. **B.L. BEAD**: At junction of wallboard and dissimilar materials provide zip-strip type plastic "L" Bead as shown on details. By Amico, Plastic Components Inc., or approved equal. Zip Strip to be removed after painting is complete.

2.5 FASTENERS

A. Screws

- 1. Type S bugle head screws: for fastening wallboard to light-gauge members.
- 2. Type W bugle head screws: for fastening wallboard to wood members.
- 3. Type S screws: for fastening .light-gauge members to track shall be pan head, 3/8 long.
- 4. Type S-12 screws: for fastening light-gauge members to door frame anchors, shall be pan head, 3/8" or 1/2" long.

B. Nails and Power Driven Studs

- 1. Concrete Fasteners: for fastening light-gauge track to concrete, shall be concrete stub nails, 1/2" long; or power-driven studs; or masonry nails of sufficient length.
- 2. GWB-54 Nails: For fastening light-gauge members to wood:
- 3. Drywall furring channel to masonry or concrete walls: Hammer-set, power-driven studs or concrete stub nails.
- 4. Type S-12 Screws: for fastening gypsum sheathing to exterior wall framing, shall be 1" large head galvanized bugle-head screws.

2.6 FABRICATION

- A. Furnish and fabricate all light gauge steel framing as indicated on the Drawings and as specified herein.
- B. Do all required forming, drilling, fitting, cutting, welding, and finishing.
- C. Fabrication of steel shall conform to the AISI and AWS Standards and Codes listed above.
- D. In general, connections shall be capable of supporting the maximum uniform load of the member for the span shown and the material specified.
- E. Shop connections shall be welded or securely fastened with screws in accordance with approved details.
- F. The details of all joints, the techniques of welding employed, the appearance and quality of welds made, and the methods used to correct defective work shall conform to requirements of the AISI and AWS Codes.
- G. Welding shall be done only by experienced welders who have been qualified by tests as prescribed in AWS "Standard Qualification Procedure" for the type of work required.
- H. All steel members shall be galvanized before leaving the shop or fabricating plant.

PART 3 – EXECUTION

3.1 ACOUSTICAL MATERIALS INSTALLATION

A. Sound insulation, follow manufacturers recommendation for installation. Stuff all spaces between studs and tracks to full width and full height. Stuff sound insulation behind all electrical boxes blocking and other items in the stud cavity to maintain the sound rating of the partition. Where the top track of walls is against the flutes of the metal deck, stuff all flutes.

- B. Acoustical Sealant: Apply sealant under all floor tracks, above all head tracks which close out to flat under side. Application shall be continuous squiggle at least 1/8" high prior to compressing with track.
- C. Filler Strip: Install at all vertical terminations of metal stud walls and dissimilar walls. Filler strips shall be installed full depth and full height of wall.

3.2 WALLBOARD AND ACCESSORY INSTALLATION

- A. Do not commence wallboard installation unless building interior is at a temperature of 55 degrees F.
- B. Installation shall be in strict accordance with the manufacturer's printed instructions and in accordance with approved details.
- C. Protect finish work of other trades from damage by drywall construction.
- D. Notify Contractor in writing of unsuitable conditions and do no work until same have been corrected. Commencement of work shall constitute acceptance of conditions and surfaces to which materials are to be applied under this Section.
- E. Partitions: Except as otherwise specified herein, all gypsum wallboard shall be installed vertically and all edges and joints shall be centered over studs or furring. Stagger vertical joints with respect to base layer when applying finish layer of double board walls. Joints shall not occur within 12" of door or window frame openings in wallboard surfaces. In no case will joints on opposite sides of partition be allowed over same stud or post, unless specifically indicated.
- F. The second layer of gypsum wall board shall extend from 1/2" above the floor to 6" above all suspended ceilings or to the underside of the structure or deck as required for fire ratings. Where no suspended ceiling occurs, extend the second layer to the eight of the partition.
- G. Ceilings: Apply ceiling board of maximum practical length with the long dimension at right angles to the furring channel. Center end joints over furring channels; fit joints neatly and accurately; stagger end joints from those in adjacent panel rows and from base layer in two layer construction as applicable. Screw-attach both layers of double-layer ceiling board to framing.
- H. Fasten all gypsum board using screws spaced in strict accordance with manufacturer's installation recommendations for fire-rated and for standard walls. Stagger screws in adjacent sheets on opposite side of joints. Depress screw heads slightly below surface of the wallboard. Use screws long enough to penetrate wood 3/4" and light gauge steel members 1/2". Do not drive screws closer than 3/8" from edges and ends of the board. Use wallboard of single, full length in all cases. Use screws on both layers in double layer construction.
- I. Provide either acoustical or fire rated sealant at the 1/2" space between gypsum wall board layers and the floor. Where sealant is required at the head and ceilings of fire-rated and sound partitions for double layer construction, hold first layer back 1/2" for sealant slot at walls, ceilings and floors. Do not apply second layer until sealant slot has been filled. For single layer construction, hold layer back 1/2." Sealant for slots at walls, floors and heads

- shall be applied under this Section using materials described previously, and as required for the sound or fire rating.
- J. Gypsum board shall be cut by scoring and breaking or by sawing, always working from the face side. Where board meets projecting surfaces, it shall be neatly scribed where casing is indicated to be omitted.
- K. Furnish and install metal stud framing and wood blocking required for the support of access panels. Provide openings and install all access panels furnished under other Sections for drywall construction. Do all required patching of damaged drywall construction.
- L. Moisture-resistant board shall be installed behind tile backer board wherever two layer walls are used, above tile backer board at single layer walls and on entire walls in high moisture areas where no tile is used. Use moisture resistant board as described above in all toilet rooms, all shower rooms, all kitchens, food prep areas and dish rooms. Use moisture resistant board in additional locations as indicated on the drawings. All exposed moisture resistant board shall be installed as described above and shall receive a level five finish.

3.3 INTERIOR FASCIA AND SOFFIT INSULATION

- A. Comply with manufacturer's instructions for particular conditions of installation in each case. If printed instruction are not available or do not apply to project conditions, consult manufacturer's technical representative for specific recommendations before proceeding with work.
- B. Extend insulation full thickness as shown over entire area to be insulated. Cut and fit tightly around obstructions, and fill voids with insulation. Remove projections which interfere with placement.
 - 1. Apply a single layer of insulation of required thickness, unless otherwise shown or required to make up total thickness.
 - 2. Safing Insulation: Install safing insulation where indicated, leaving no voids. Compress and install with wire hangers at all openings in floor slabs to seal completely around telephone cables, ducts, piping and other utilities.
 - 3. Blanket Insulation: Shall be used at exterior soffits, fascia and soffits and elsewhere as indicated. Where no specific insulation is indicated, use 5-1/2" thick blanket insulation with vapor barrier.

3.4 JOINT FINISHING (LEVEL FIVE FINISH)

- A. For gypsum board joint treatment, at all exposed joints use regular tape, joint compound and topping compound conforming to ASTM C475 as recommended by wallboard manufacturer. For abuse resistant board, use a setting mud recommended by the manufacturer: Sheetrock brand joint tape and sheetrock brand setting—type joint compound for use with USG's Fiberock panels or equal of approved manufacturer and product. Joint compound shall not contain asbestos and shall be so labeled. Taping of joints in gypsum backerboard at double-layer construction is not required.
- B. A uniform thin layer of joint compound approximately 4" wide shall be applied over each joint. Tape shall be centered over the joint and embedded continuously into the compound, leaving sufficient compound under the tape to provide proper bond. Allow compound to dry thoroughly for a minimum of twenty-four (24) hours
- C. At internal corners, fold tape lengthwise through the middle, and fit neatly into corner.

- D. Apply (2) two separate coats of joint compound over taped joints and one separate coat of joint compound over interior corners. Allow compound to dry thoroughly for a minimum of twenty-four (24) hours between coats. The second coat of compound shall be smooth and uniform with a slight crown over the joint, feathered slightly beyond the preceding coat. Above ceilings one-coat "fire taping" will be accepted.
- E. Dimples at screw heads shall receive three (3) coats of compound each layer feathered slightly beyond the preceding layer.
- F. Flanges of metal corner and casing bead shall be concealed by at least two (2) coats of compound which, when finished, shall extend approximately 8" from exposed nosing.
- G. Each coat shall be sanded as necessary after compound has dried. Use topping compound for finishing coats. Final coat after sanding shall leave the gypsum wallboard and treated areas smooth with joints concealed from view in the finished work. Care shall be taken not to scuff the paper surface of the board when sanding.
- H. Skim coat entire wall surface with joint compound or a material especially made for this purpose. The surface shall be free of tool marks and ridges.
- I. All edges and corners shall be left square, all surfaces plane, plumb, straight and true and ready for painting or other finish.

3.5 CLEANUP

- A. At the completion of wallboard work, clean all joint compound and spatter from adjacent surfaces and leave all work in perfect condition ready for decoration by others.
- B. Remove all rubbish, excess materials, scaffolding, tools and other equipment from the building leaving floors broom clean.

END OF SECTION 09 29 00

SECTION 09 64 00 WOOD FLOORING

PART 1 – GENERAL

1.1 GENERAL REQUIREMENTS

- A. Include GENERAL CONDITIONS and applicable parts of Division 1 as part of this Section.
- B. Examine all other sections of the Specifications for requirements that affect work of this Section whether or not such work is specifically mentioned in this Section.
- C. Coordinate work with that of all other trades affecting, or affected by work of this Section. Cooperation with such trades to assure the steady progress of all work under the Contract.

1.2 WORK INCLUDED

- A. Furnish and install all wood flooring work as indicated on Drawings, as specified herein, or both.
- B. Moisture testing of existing concrete sub-floor prior to installation.
- C. Substrate preparation for floating wood flooring, to be provided by Contractor under this Specification.
 - 1. Removal of existing adhesive and residue by mechanical means consistent with ASTM F710-11 and topping compound manufacturer requirements.
 - 2. Preparation of existing concrete subfloor shall be in conformance with ASTM F710-11, meeting ASTM E1155 Floor Flatness index of 32 or flatter (3/16" max. gap in 10"), and Floor Level Index matching existing floor level condition.
 - 3. Care shall be taken to avoid damage to existing concrete. Where pre-existing damage such as extensive spalling or large voids that exceed structural capacity of specified patching compound to fill, in estimation of Owner's structural engineer, Contractor shall provide a Change Order Proposal based on requirements to be prepared by Owner's structural engineer.
- D. Do all wood flooring work required for the project and not specified to be done under another Section.
- E. See Drawings for locations and details.

1.3 RELATED WORK UNDER OTHER SECTIONS

- A. Related work in other sections may include, but may not be limited, to the following:
 - 1. Painting and finishing of finish carpentry and millwork.
 - 2. Resiliant Tile flooring.
 - 3. Hardwood trim, ballet barres and other finish carpentry not specified herein.

1.4 SUBMITTALS

A. Submit the following, in accordance with requirements of Division 1.

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- B. Shop Drawings: Submit Shop Drawings of wood flooring, including sub-floor and risers, wood flooring trim, wood flooring transition thresholds and all other wood flooring items. Shop Drawings shall indicate materials and species, arrangement, full size profiles of mouldings, thickness, size of parts, construction, fastenings, blocking, clearances, assembly and installation details, applied finishes and surfacing, built-in hardware, and necessary connections to work of other trades.
- C. Samples: Submit the following samples.
 - 1. Engnineered wood flooring: 12" min width x 36" length of each type.
 - 2. Wood flooring edging: 6" x 6" of each specified type and veneer.
 - 3. All other materials and products as requested by Architect.

1.5 QUALITY STANDARDS

- A. The quality standards of the Architectural Woodwork Institute, Fifth Edition, are hereby made a part of this Section. All materials and workmanship shall conform to these standards, except as otherwise indicated.
 - 1. Section 300 Standing and Running Trim, AWI Premium Grade, where not otherwise indicated.
- B. All lumber shall conform to the following standards:
 - 1. New, dressed four- (4) sides (S4S), clear and free from warping, twist, wane, splits and other defects.
 - 2. Conform to U.S. Department of Commerce Simplified Practice Recommendations R-16 for sizes and use classifications.
 - 3. Kiln-dried, with a moisture content not exceeding 15 % when delivered to the site.
 - 4. Be in accordance with the grading rules of the lumber manufacturers' association under whose jurisdiction the species of lumber is produced.
 - 5. Conform to National Institute of Standards and Technology PS-1 (plywood) or PS-20 (softwood lumber) and HPMA HP-1983 (hardwood plywood).
- C. All veneer plywood shall be as graded by the American Plywood Association.
- D. Finish hardwood shall be as graded by the Architectural Woodwork Institute.
- E. Maple flooring and its installation shall conform to requirements of the Maple Flooring Manufacturers' Association (MFMA).
- F. It is not the intent of this Specification to define the types, sizes, or installation methods for each item of architectural millwork. Methods of installation, joinery, sizes, types of finish, and other information pertaining to the trim, millwork and other items of required finish shall be in accordance with the details on the Drawings for the specific areas involved, and as specified herein. Grades and types of finish shall be as specified under this Section.

1.6 DELIVERY, STORAGE AND HANDLING

A. Protect woodwork during transit, delivery, storage, and handling to prevent damage, soiling, and deterioration.

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B. Do not deliver woodwork until masonry, concrete work, cement board finish and similar wet operations which could damage, soil, or deteriorate woodwork have been completed in installation areas. If, due to unforeseen circumstances, woodwork must be stored in other than installation areas, store only in areas meeting requirements specified below.

1.7 JOB CONDITIONS

- A. Conditioning Advise General Contractor of temperature and humidity requirements for interior woodwork installation. Do not install woodwork until required temperature and relative humidity have been stabilized and will be maintained in installation area.
- B. Verify that General Contractor is maintaining temperature and humidity in installation area as required to maintain moisture content of installed woodwork within a 1% tolerance of optimum moisture content, from date of installation through remainder of construction period. The millwork fabricator shall determine optimum moisture content and required temperature and humidity conditions.

1.8 CLOSEOUT SUBMITTALS, RECORD DOCUMENTS AND GUARANTEES

- A. Submit the following in accordance with section 017700:
 - 1. Guarantee for workmanship for one (1) year
 - 2. Warranty for materials for five (5) years
 - 3. Product data on each component of floor system
 - 4. Record drawings indicating as built conditions.

PART 2 – PRODUCTS

2.1 INSTALLATION ACCESSORIES

- A. Glue: For lamination and fabrication of wood and plywood items: Exterior Grade phenolic resin glue.
- B. Nails for Trim Items: 6d or 8d coated or galvanized finish nails, except as otherwise specified herein.
- C. Screws: Flat head plated steel wood screws of appropriate sizes.
- D. Bolts, and other Non-Specified Fastenings: Of appropriate sizes for intended uses. Provide compatibly-sized steel washers for all bolts. Indicate sizes and types of all bolts and fastenings on Shop Drawings.

2.2 HARDWOOD FLOORING

A. **Hardwood flooring** (Click-system Floating Dance Floor) at locations where indicated: shall be engineered "click-system" floating dance flooring suitable for all dance types, including tap. System shall be faced with minimum 3.5mm (.14") plain sawn clear Northern Hard Maple. All pieces shall be first grade and shall have MFMA marking. Flooring shall be end matched, random length, back slotted and kiln-dried to not more than 15% moisture content, marked "MC-15" or

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- "Dry". No piece shall be shorter than 2'-0". Flooring system shall be equal to "Encore Elite" by Stage Step Flooring Solutions.
- 1. **Stage Step Flooring Solutions "Encore Elite"**, 4701 Bath Street #46, Philadelphia, PA 19137 www.stagestep.com, (844) 515-2534,
- 2. **O'Mara Sprung Floors, Maple**, 3728 Robert T Longway Blvd, Flint, MI 48506. www.SprungFloors.com, 810-743-8281.
- 3. **Harlequin "Flexity with Engineered Hardwood Surface"**, AMERICAN HARLEQUIN CORPORATION, 1531 Glen Avenue, Moorestown, NJ 08057 us.harlequinfloors.com, 856-234-5505.
- B. Nails: Shall be spirally grooved 8d small head bright flooring nails.
- C. Plywood sub-floor will be provided under ROUGH CARPENTRY Section. No. 15 felt shall be as specified therein.
- D. **Expansion Joint Filler**: Shall be natural 1" x 7/8" light color cork expansion joint in lengths as long as practicable to minimize number of joints.
- E. Include all nails, clips, attachment devices and accessory materials required for complete floor installation.
- F. **Exposed edge trim, vented trim, treads, risers** and the like shall be Maple as specified above. Use trim as recommended by Manufacturer, where possible.

2.3 FLOOR LEVELING, CRACK FILLING AND UNDERLAYMENTS

- A. Underlayments: Self-leveling cement-based underlayment, 4,000 psi minimum. For new and existing surfaces, use one of the following, or approved equal:
- B. Crack Filler: Compatible crack filler for cracks larger than the underlayment is rated for.
- C. **Vapor Barrier**: Compatible with all other products, where indicated.
- D. **Primers**: For use for all the various conditions and materials shall be as recommended by manufacturer of each specific material for each specific application.

E. MANUFACTURERS:

- 1. ARMSTRONG FLOORING INC. 1770 Hempstead Rd., Lancaster, PA 17601. www.armstrongflooring.com, 888-276-7876
- 2. ARDEX L.P. Witten, Germany. www.ardex.com
- 3. LATICRETE INTERNATIONAL, INC. Bethany, CT. https://laticrete.com
- 4. W.W. HENRY COMPANY, www.wwhenry.com, 800-232-4832.

PART 3 – EXECUTION

3.1 WORKMANSHIP

- A. See Drawings for details of wood trim, wood steps, paneling and other finish carpentry and millwork items.
- B. Running trim shall have a minimum of splices and joints. Where such splices and joints occur, they shall be fastened securely and all exposed surfaces shall be smooth, continuous planes.
- C. Solid wood and plywood surfaces shall be finished smooth and free from all machine and tool marks that might show through the finish.
- D. Set all finishing nails with nail punch to properly receive wood filler. Countersink all screw heads.
- E. All joints shall be tight and formed to conceal shrinkage. Miters 4" or more from heel to point shall be glued.

3.2 EXAMINATION

- A. Examine substrates, areas, and conditions for compliance with requirements for maximum moisture content, alkalinity range, installation tolerances, and other conditions affecting carpet performance. Verify that substrates and conditions are satisfactory for carpet installation and comply with requirements specified.
- B. Concrete Subfloors: Verify that concrete slabs comply with ASTM F 710 and the following:
 - 1. Slab substrates are dry. Determine dryness characteristics by performing moisture tests recommended by the flooring manufacturer.
 - 2. Subfloors are free of cracks, ridges, depressions, scale, and foreign deposits.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.
- 3.3 Sub-floor preparation: Comply with CRI 104, Section 6.2, "Site Conditions; Floor Preparation," and flooring manufacturer's written installation instructions for preparing substrates indicated to receive carpet installation.
 - A. Prior to trowelable leveling and patching compound (Ardex Feather Finish) application, all concrete subfloors must be sound, solid, clean, and free of all oil, grease, dirt, curing compounds and any substance that might act as a bond breaker before priming. Mechanically clean using methods approved for use on suspended slabs. Acid etching and the use of sweeping compounds and solvents are not acceptable.
 - B. Adhesive residues on concrete must first be tested to make certain they are not water-soluble. Water-soluble adhesives must be completely mechanically removed down to clean concrete. Non-water-soluble adhesives should be prepared to a thin, well-bonded residue using the wet scraping technique as recommended by the Resilient Floor Covering Institute (www.rfci.com). The prepared residue should appear as nothing more than a transparent stain on the concrete after scraping.
 - C. In locations where pre-existing adhesive residue remains after Contractor has applied usual and ordinary mechanical means consistent with industry standards to remove it, and sufficient flatness

and smoothness has been attained per the specified requirements, Contractor may encapsulate residue with manufacturer-approved sealant: XL Tri-Seal Residue Encapsulator.

- D. Use trowelable leveling and patching compounds, according to manufacturer's written instructions, to fill cracks, holes, and depressions in substrates.
- E. Broom and vacuum clean substrates to be covered immediately before installing carpet. After cleaning, examine substrates for moisture, alkaline salts, carbonation, or dust. Proceed with installation only after unsatisfactory conditions have been corrected.

3.4 INSTALLATION OF WOOD FLOORING AND TRIM

- A. Standing and Running Trim: Fabricate and install all standing and running trim in accordance with AWI Quality Standards Section 300 for Premium Grade and the approved Shop Drawings. Install with minimum number of joints, using full-length pieces (from maximum lengths of lumber available), to the greatest extent possible. Stagger joints in adjacent and related members. Cope at returns, Miter at corners, to produce tight fitting joints with full surface contact throughout length of joints. Scarf end-to-end joints.
- B. Install all work plumb, level, true, and in plane with no distortions. Shim as required using concealed shims. Install to a tolerance of 1/8" in 8'-0" for plumb and level (including countertops); and with 1/16" in maximum offset in flush adjoining surfaces, 1/8" maximum offsets in revealed adjoining surfaces.
- C. Scribe and cut work to fit adjoining work, and refinish cut surfaces or repair damaged finish at cuts.
- D. Anchor woodwork to anchors or blocking built-in or directly attached to substrates. Secure to grounds, strapping and blocking with countersunk, concealed fasteners and blind nailing as required for a complete installation. Except where pre-finished matching fastener heads are required, use fine finishing nails for exposed nailing, countersunk and filled flush with woodwork, and matching final finish where transparent finish is indicated.
- E. Solid hardwood edging: on plywood veneer panels shall be ploughed-in between face veneers and not less than 3/4" deep.

3.5 ADJUSTMENT, CLEANING, AND PROTECTION

- A. Repair damaged and defective woodwork wherever possible to eliminate defects functionally and visually; where not possible to repair properly, replace woodwork. Adjust joinery for uniform appearance.
- B. Clean hardware, lubricate and make final adjustments for proper operation.
- C. Clean woodwork on exposed and semi-exposed surfaces. Touch-up shop-applied finishes to restore damaged or soiled areas.
- D. Complete finishing work not completed at shop or prior to installation.
- E. Protection: Advise Contractor of protection and conditions necessary to ensure that work will be without damage or deterioration at time of Substantial Completion.

F. Just prior to the completion of all work under this Section, inspect all portions of the Work and make any further required adjustments and corrections.

END OF SECTION 09 64 00

SECTION 09 65 00 RESILIENT TILE FLOORING

PART 1 – GENERAL

1.1 GENERAL REQUIREMENTS

- A. Include GENERAL CONDITIONS and applicable parts of Division 1 as part of this Section.
- B. Examine all other Sections of the specifications for requirements which affect work of this Section whether or not such work is specifically mentioned in this Section.
- C. Coordinate work with that of all other trades affecting, or affected by work of this Section. Cooperate with such trades to assure the steady progress of all work under the Contract
- D. Sustainable Design Intent: Comply with project requirements under the specification sections listed below:
 - 1. Refer to Section 01 81 19 INTERIOR AIR QUALITY MANAGEMENT.

1.2 WORK INCLUDED

- A. Furnish and install all resilient flooring as indicated on Drawings, as specified herein, or both, including the following:
 - 1. Vinyl composition floor tile.
 - 4. Vinyl reducer strips wherever new resilient flooring meets dissimilar flooring except carpeting.
 - 5. Edge strips, where resilient flooring terminates at exposed concrete floors.
 - 6. Latex mastic leveling material as required.
 - 7. Adhesives for resilient tile flooring and wall base.
- B. Do all preparation of surfaces to receive materials and perform all cleaning and finishing of materials furnished and installed hereunder.
- C. Do all Resilient Flooring work required for the project and not specified under another Section.
- D. See Drawings and schedules for locations and details.

1.3 RELATED WORK UNDER OTHER SECTIONS

- A. Related work in other sections may include, but may not be limited, to the following:
 - 1. Vinyl wall base.
 - 2. Wood flooring.

1.4 SUBMITTALS

- A. Submit the following, in accordance with the provisions of Division 1.
- B. Shop Drawings: Submit Shop Drawings of resilient tile flooring and all associated products.
- C. Submit samples, including the following:

- 1. Manufacturer's standard samples of vinyl composition tile, sheet vinyl linoleum vinyl base, rubber tile, nosings, edge strips, and reducing strips, in available colors and patterns, for selection by the Architect.
- 2. One full 12" x 12" unit of vinyl composition tile, ground down with three (3) different sized sanding discs, to indicate pattern concentration at 25%, 50%, and 75% of the total thickness of the tile.
- 3. Manufacturer's standard samples of vinyl bases, in available colors and patterns, for selection by the Architect.
- D. Literature: Submit manufacturer's product data for tile, leveling materials, adhesives, and finish materials.

1.4 QUALITY ASSURANCE

- A. The successful bidder for this section shall have an experienced installer perform work of this Section and shall have record of successful installations.
- B. Obtain each type, color and pattern of each type of products specified from one source for consistent quality in appearance and physical properties.
- C. All flooring materials shall have characteristics as determined by the test method indicated below performed by a recognized test laboratory.
 - 1. Critical Radiant Flux: 0.45 W/sq. cm or greater when tested per ASTM E 648.
 - 2. Smoke Density: Maximum specific optical density of 450 or less when tested per ASTM E 662.

1.5 DELIVERY, STORAGE AND HANDLING

- A. Protect woodwork during transit, delivery, storage, and handling to prevent damage, soiling, and deterioration.
- B. Do not deliver woodwork until masonry, concrete work, cement board finish and similar wet operations which could damage, soil, or deteriorate woodwork have been completed in installation areas. If, due to unforeseen circumstances, woodwork must be stored in other than installation areas, store only in areas meeting requirements specified below.

1.6 JOB CONDITIONS

- A. Conditioning Advise General Contractor of temperature and humidity requirements for interior woodwork installation. Do not install woodwork until required temperature and relative humidity have been stabilized and will be maintained in installation area.
- B. Verify that General Contractor is maintaining temperature and humidity in installation area as required to maintain moisture content of installed woodwork within a 1% tolerance of optimum moisture content, from date of installation through remainder of construction period. The millwork fabricator shall determine optimum moisture content and required temperature and humidity conditions.

1.7 CLOSEOUT SUBMITTALS, RECORD DOCUMENTS AND GUARANTEES

- A. Submit the following in accordance with section 01 77 00:
 - 1. Warranties for materials from the manufacturer for one (1) year.
 - 2. Guarantee of workmanship from the installation contractor for one (1) year.

- 3. Operation and maintenance manuals.
- 4. Record drawings: record all as built conditions on the general contractor's record set.
- 5. Additional materials: Provide fifty (50) of each color vinyl composition tile used and eighteen (18) lineal feet each type of vinyl base, in each color used.

PART 2 – PRODUCTS

2.1 VINYL COMPOSITION TILE

- A. Vinyl Composition Tile (VCT): 12" x 12" x 1/8" thick, with pattern extending through entire thickness of tile in equal concentration, composed of vinyl resins, non-asbestos inorganic mineral fillers, and colorfast pigments, in colors and patterns as selected by the Architect. As many as four-(4) colors may be required in same room as indicated where patterns are used. Pattern shall include 60% standard and 40% premium tile colors. Vinyl composition tile shall have a conform to ASTM F 1066 and shall be asbestos free. Vinyl composition tile shall be one of the following, or approved equal:
 - 1. Armstrong Flooring Company "Standard Excelon Imperial Texture and Standard Excelon MultiColor": ARMSTRONG FLOORING INC. 1770 Hempstead Rd., Lancaster, PA 17601. www.armstrongflooring.com, 888-276-7876.
 - Mannington Commercial "Essentials, and Designer Essentials": MANNINGTON COMMERCIAL, 1844 U.S. Highway 41 S.E. Calhoun, GA 30701. www.manningtoncommercial.com, 800-241-2262.
 - 3. **Tarkett Commercial Flooring VCT products**: TARKETT S. A., commercial.tarkett.com/en US/, 800-248-2878.
 - 4. Or approved equal

2.2 VINYL BASE

- A. **Vinyl Cove Base**: Shall be homogeneous vinyl, 4" high, .080" thick, coved type for all VCT and other locations as indicated on the drawings, and furnished with matching end stops wherever ends of base are exposed to view. External and internal corners shall be job-formed.
- B. **Vinyl Carpet Base**: Shall be homogeneous vinyl, 4" high, .080" thick, straight type for all carpeted locations as indicated on the drawings, and furnished with matching end stops wherever ends of base are exposed to view. External and internal corners shall be job-formed.
- C. All **Vinyl Base**: Shall be furnished in colors as selected by the Architect. Bases shall be as manufactured by Armstrong, Burke Mercer, Johnsonite, Roppe, or equal.

2.3 ACCESSORIES

- A. **Reducing Strips**: Homogeneous vinyl, 1" by 3/32", tapering to featheredge, in colors as selected by the Architect.
- B **Carpet Nosings**: Shall be 3-1/4" deep with 2' base depth, solid rubber in manufacturer's standard colors as selected, in 9 foot lengths or longer, by R.C.A. Rubber, Johnsonite, Roppe (#15) or R.C. Musson (#14) as approved.

C. Carpet Edging: 1/8" thick, tapered, 1" wide, solid vinyl or rubber, in colors selected by the Architect. Carpet Nosings: Shall be 3-1/4" deep with 2" nose depth, solid rubber in manufacturer's standard colors as selected, in 9 foot lengths or longer, by R.C.A. Rubber, Johnsonite, Roppe (#15) or R.C. Musson (#145) as approved.

2.4 ADHESIVES AND UNDERLAYMENTS

- A. Adhesives for vinyl composition tile, vinyl base, rubber tile and accessories shall be type and brand recommended by manufacturer for each of the various conditions and flooring materials. Where manufacturer lists more than one (1) recommended adhesive, the manufacturer's "preferred choice" shall be used. Adhesive for application of base materials shall be specifically recommended for such use. Adhesive for below grade use shall be water-resistant.
- B. **Underlayments**: Self-leveling cement-based underlayment, 4,000 psi minimum. For new and existing surfaces, use one of the following, or approved equal:
- C. Crack Filler: Compatible crack filler for cracks larger than the underlayment is rated for.
- D. **Primers**: For use for all the various conditions and materials shall be as recommended by manufacturer of each specific material for each specific application.
- E. **MANUFACTURERS** or approved equal:
 - 1. ARMSTRONG FLOORING INC. 1770 Hempstead Rd., Lancaster, PA 17601. www.armstrongflooring.com, 888-276-7876
 - 2. ARDEX L.P. Witten, Germany. www.ardex.com
 - 3. LATICRETE INTERNATIONAL, INC. Bethany, CT. https://laticrete.com
 - 4. W.W. HENRY COMPANY, www.wwhenry.com, 800-232-4832.

PART 3 – EXECUTION

3.1 INSTALLATION CONDITIONS AND PREPARATION

- A. Inspect all surfaces and assure that they are in proper condition to receive work to be performed under this Section. Perform calcium chloride or other suitable moisture test to determine slab moisture content before beginning installation work. Report to Architect unsatisfactory conditions. Commencement of work shall constitute acceptance of surfaces and responsibility for results.
- B. A temperature of not less than 70 degrees F shall be maintained for not less than 48 hours before commencing installation of resilient materials and continued for 48 hours after completion.
- C. No work shall start until samples have been submitted to, and approved by, the Architect. All materials shall be labeled, stating colors, locations, type of adhesive and primer (if required), and the areas in which materials are to be used.
- D. General Contractor is required to provide floor slabs level to within 1/8" in 10 feet in any direction. Underlayment used to correct floor slabs with surfaces not constructed to specified tolerances shall be provided as part of the work of CONCRETE Section; other imperfections in floor surfaces shall be corrected using specified latex underlayment as part of the work under this Section.

E. Furnish and install leveling material on receiving surfaces as required to ensure proper adhesion and to achieve a tolerance level on the finish flooring surface of not more than 1/8" from true level for 10'-0" in any direction. Fill all minor cracks in receiving surfaces with latex underlayment. Neatly fill concave joints in masonry to receive vinyl base where joints have not been struck flush.

3.2 INSTALLATION

- A. All products furnished under this Section shall be installed by experienced workers in strict accordance with each manufacturer's written instructions and as specified herein.
- B. Resilient materials shall be laid so as to ensure full, uniform contact. Finished surfaces shall be smooth and in plane, free from buckles, waves, and other imperfections. Resilient flooring shall be completely fitted and joints shall be as inconspicuous as possible.
- C. Except as otherwise indicated, lay tile square with room axis, with continuous joints in both directions or with joints staggered in one (1) direction, as approved by Architect, and with borders not less than 1/2 the width of the field tile. Pattern when laid shall lie in a single direction. Use only full tile in the field. Joints shall be straight and tight.
- D. Resilient flooring shall extend under equipment shown on Drawings and into wall recesses, unless otherwise indicated on the Drawings. Resilient flooring shall be carried to fit neatly into breaks and recesses, against non-resilient bases, around pipes, and under saddles. Flooring shall be cut to, and around, excessively weighty fixed objects.
- E. Vinyl base, including job-formed internal and external corners, shall be firmly cemented to the vertical surfaces, including cabinet bases. Where base is to be applied to masonry walls, apply sufficient underlayment material to surface of masonry to provide a smooth, even surface to which base may be cemented. Use maximum practical lengths. Minimum length of base shall be 12", and only one (1) such length shall be allowed on any one (1) wall.
- F. Use one-piece rubber stair tread and riser to fully cover each stair tread from stringer to stringer and from nosing to top of riser. Cut tread carefully to ensure a minimum perimeter joint. Integral stair risers shall fully cover the metal riser from underside of nosing to top of tread and from stringer to stringer. Lay out landing tile in a manner which will ensure equal-width tiles around all edges, using not less than 1/2 tile in any location. Install landing tile as specified for floor tile.
- G. Ensure that all finish surfaces of resilient floor are within 1/8" from true level for ten (10) feet in any direction.

3.3 CLEANING AND WAXING

- A. Not sooner than five (5) days after installation, clean all materials furnished hereunder with a cleaner recommended by the flooring manufacturer, followed by a thorough rinsing with clear water.
- B. After cleaning, apply three (3) coats of wax to all vinyl composition tile surfaces, and buff to a uniform gloss, with a mechanical buffer. Other surfaces shall have not less than one (1) coat, similarly buffed. Actual time of cleaning and finishing shall be established by the Architect. Wax shall be furnished by the owner.

END OF SECTION 09 65 00

SECTION 09 91 00 PAINTING AND COATING

PART 1 – GENERAL

1.1 GENERAL REQUIREMENTS

- A. Include GENERAL CONDITIONS and applicable parts of Division 1 as part of this Section.
- B. Examine all other Sections of the specifications for requirements which affect work of this Section whether or not such work is specifically mentioned in this Section.
- C. Coordinate work with that of all other trades affecting, or affected by work of this Section. Cooperate with such trades to assure the steady progress of all work under the Contract.
- D. Sustainable Design Intent: Comply with project requirements under the specification sections listed below:
 - 1. Refer to Section 01 81 19 INDOOR AIR QUALITY MANAGEMENT for material and procedure requirements.

1.2 WORK INCLUDED

- A. Provide all labor, materials, equipment, services and transportation required to complete all painting work required under the Contract as indicated on Drawings, as specified herein, or both.
- B. All exposed surfaces shall be painted or otherwise refinished under this Section, including aluminum ceiling grid faces exposed to view, unless specifically excluded. Miscellaneous small existing appurtenances and fixtures, such as thermostats or plaques to remain are excluded. New materials and equipment which are factory-finished or prefinished are excluded.
- C. Paint all new surfaces with not less than one (1) shop or prime coat and two (2) finish coats of paint or other finish, unless otherwise indicated.
- D. Wash, clean, scrape, sand, patch, prime, properly prepare and paint all surfaces to be painted.
- E. Furnish, install and maintain all staging, scaffolding, hoisting and planking required for work of this Section.
- F. See Drawings and Finish Schedule for location of surfaces to be finished where not indicated herein.

1.3 RELATED WORK UNDER OTHER SECTIONS

- A. Related work in other sections may include, but may not be limited, to the following:
 - 1. Shop priming of miscellaneous metals and structural steel.
 - 2. Wood preservative treatments.
 - 3. Finish of shop-fabricated casework and equipment.

- 4. Sealants and caulking.
- 5. Taping and joint treatment of gypsum drywall work.
- 6. Cutting and patching except as specified herein.
- 7. Signage.

1.4 SAMPLES AND DATA

- A. Submit samples of all materials specified herein in accordance with requirements of the Division 1, and before ordering materials, obtain written approval from the Architect.
- B. List: Submit paint and coating materials list giving the manufacturer's name, product name and product number for each material.
- C. Data: Submit manufacturer's technical data sheet for each paint and coating, giving descriptive data, curing time, mixing, thinning and application instructions.
- D. Samples of all colors, stains, and finishes shall be prepared in advance of requirements so as not to delay work, and shall be submitted to the Architect for approval before any work is commenced. Work done without such approval shall be redone to the Architect's satisfaction at the Contractor's expense.
- E. Samples shall be on separate 8" x 10" x 1/2" wallboard panels for painted wallboard; 8" x 10" x 18-gauge metal panels for painted metal surfaces; and 8" x 10" x 1/4" wood panels for painted wood finish. For natural finish, use species of wood intended for the project on same size panels. Identify on each panel: color name and number, finish, formula, sheen and gloss.

1.5 COLORS

- A. The Architect will furnish a schedule of colors for each area and surface. All colors shall be mixed in accordance with the manufacturer's instructions. The number of coats required to ensure adequate and complete coverage in the opinion of the Architect shall not necessarily be limited to the number of coats specified in the Painting Schedule contained in this Section. More than one (1) color may be used on any wall surface with straight line separation between colors at no additional cost to the Owner. Up to three (3) different colors may be selected for use on this Project. The Architect reserves the right to select at no additional cost, heavily pigmented bright or accent colors, in quantity amounting to 20% of the total interior wall surface area to be painted.
- B. Colors of priming coats shall be lighter than those of finish coat.
- C. Colors shall be pure, non-fading pigments, mildew-proof, sunproof, finely ground in approved medium. Colors used on concrete, masonry, gypsum board, and plaster surfaces (as applicable) shall be limeproof. All materials shall be subject to the Architect's approval.
- D. Provide all facilities for comparison and adjustment of colors, and place final samples for approval directly on the surface to be finished. Machine mixing by the manufacturer's representative will be permitted where advantageous, but only after final approval of colors by the Architect.
- E. After final approval of all colors by the Architect, submit to the Owner color chips of all paints and coatings used, with manufacturer's name and designation of the paint and color for the

purpose of future re-ordering. Color chips shall total at least six (6) square inches for each color.

1.6 QUALITY ASSURANCE

- A. Single Source Responsibility: Provide primers and other undercoat paint produced by same manufacturer as finish coats. Use only thinners approved by paint manufacturer, and use only within recommended limits.
- B. Coordination of Work: Review other Sections of these specifications in which prime paints are to be provided to ensure compatibility of total coatings system for various substrates. Upon request from other trades, furnish information or characteristics of finish materials provided for use, to ensure compatible prime coats are used.
- C. Do not paint over code-required labels, such as Underwriters' Laboratories and Factory Mutual, or any equipment identification performance rating, name, or nomenclature plates.
- D. Grade: Where manufacturer makes more than one (1) grade of any material specified, use the highest grade of each type, whether or not the material is mentioned by trade name in these Specifications.
- E. Identification: Include on labels of all containers the manufacturer's name, the product name and number, the color and the batch number.
- F. Suitability: No claim by Painting Subcontractor concerning the unsuitability of any material specified or his ability to produce first class work with same will be entertained after the Contract is signed.

1.7 DELIVERY, STORAGE AND HANDLING

- A. Deliver paint materials in sealed original labeled containers, bearing manufacturer's name, type of paint, brand name, color designation and instructions for mixing or reducing.
- B. Materials shall be delivered in sufficient quantities in advance of the time needed in order that work will not be delayed in any way.
- C. All materials shall be stored in well-ventilated designated spaces in a manner which meets the requirements of applicable codes and fire regulations. When not in use, such spaces shall be kept locked and inaccessible to those not employed under this Section. Each such space shall be provided with a fire extinguisher of carbon dioxide or dry chemical type bearing the label of the National Board of Fire Underwriters and tag of recent inspection.

1.8 PROJECT CONDITIONS

A. Measure moisture content of surfaces using an electronic moisture meter. Do not apply finishes unless moisture contents of surfaces are below following maximums:

Concrete: 12 percent.
 Wood (interior): 7 percent.
 Concrete block: 12 percent.

- B. Ensure surface temperatures and the surrounding air temperature is above 40 degrees F. before applying finishes. Minimum application temperatures for latex paints for interior work is 45 degrees F. and 50 degrees F. for exterior work. Minimum application temperature for urethane finishes is 60 degrees F.
- C. Verify that the General Contractor is able to provide adequate continuous ventilation and sufficient heating facilities to maintain temperatures above 45 degrees F. for 24 hours before, during and for 48 hours after application of finishes.
- D. Verify that the General Contractor has provided minimum 40 foot candles of lighting on surfaces to be finished.
- E. The atmosphere shall be relatively free of airborne dust before painting work is begun.
- F. Do not commence work until proper conditions are provided. Beginning work shall constitute acceptance of conditions.

1.9 CLOSEOUT SUBMITTALS, RECORD DOCUMENTS AND GUARANTEES

- A. Submit the following in accordance with SECTION 01 77 00:
 - 1. Warranties for materials from the manufacturer for one (1) year.
 - 2. Guarantee of workmanship from the installation contractor for one (1) year.
 - 3. Product data for each component provided in the work of this section.
 - 4. Additional materials: provide 2 gallons of assorted colors, including primers used on the job. Clearly label where each paint is used.

PART 2 – PRODUCTS

2.1 MANUFACTURERS

- A. Subject to compliance with requirements, provide paint products as manufactured by one of the following:
 - 1. Benjamin Moore and Co. (Moore), New York, NY
 - 2. PPG Paints, Pittsburgh, PA
 - 3. Sherwin-Williams, Cleveland, OH
 - 4. Pratt & Lambert, Inc. (P&L), Buffalo, NY
 - 5. Rust-Oleum, Vernon Hills, IL (for painting metal)
 - 6. Or approved equal.
- B. Provide specialty paint products, as manufactured by:
 - 1. Tnemec Company Inc. (Tnemec), Kansas City, MO
 - 2. Carboline Company (Carboline), Detroit, MI
 - 3. Sherwin-Williams, Cleveland, OH
 - 4. Or approved equal.
- C. Manufacturers' names are used to indicate quality and type of materials and not to limit competition.

2.2 MATERIALS

- A. Materials used on the Work shall be the brand and quality specified and shall be delivered in the original containers with seals unbroken and labels intact. All materials shall be used only in accordance with the manufacturer's direction label on the container.
- B. Sealers and primers shall be as recommended by the finish paint manufacturer.
- C. Wood filler shall be of the paste type.
- D. Tinting material shall be of the best quality, universal colorants ground in propylene glycol, alkali proof, non-fading, lead-free colorants. Do not use carbon black.
- E. Linseed oil shall be pure, settled, clear and raw or boiled as required to produce best results.
- F. Thinner shall be the best grade of pure grain spirits of turpentine distilled from the sap of live trees, or mineral spirits as approved.
- G. Maintenance Materials: Leave on premises, where directed by Owner, not less than one gallon of each type of paint and finish in each color used. Containers shall be tightly sealed and clearly labeled.

2.3 COMPATIBILITY OF COATINGS

- A. Ensure that all paints and coatings to be applied in the field are compatible with coatings used for shop-primed items and items which have been prime-coated by other trades. Approved Shop Drawings and manufacturer's data sheets generally indicate types of priming materials used. Such information may be obtained from the Architect upon request.
- B. Determine that the materials specified in the Painting Schedule are compatible with shop coats to which these materials are to be applied, and bring to the Architect's attention any condition which may require a change in the specifications before proceeding with the Work. Failure to do so shall be construed as acceptance of the coatings specified. Perform all corrective measures, at no additional cost to the Owner, for defects in the Work resulting from the use of such materials.

2.4 HIGH PERFORMANCE COATINGS

- A. High performance architectural coatings shall be by listed manufacturers as approved by the Architect.
- B. Materials shall be polyvinyl acetate, epoxy coatings and other formulations indicated.
- C. Do not use regular paint or primers where high performance systems are required.
- D. All materials shall be freshly compounded and supplied by coating manufacturer or its franchised representative.

PART 3 – EXECUTION

3.1 INTENT

- A. It is the intent of these Specifications that all exposed surfaces of the Work not painted under another Section be painted under this Section, including surfaces behind cabinets and equipment, insides of all closets, and all items furnished without finish painting, except as specifically noted otherwise.
- B. Paint exposed mechanical and electrical work not prefinished which occurs in rooms to be painted; all exposed metals, exposed equipment, pipes, pipe covering, conduit, ducts, grilles, enclosures, hangers, electrical boxes and all other apparatus and appurtenances not prefinished. Interior of ducts that show through grilles shall also be painted.

3.2 INSPECTION AND ACCEPTANCE OF SURFACES

- A. Inspect all surfaces and assure that they are in proper condition to receive work to be performed under this Section. Do not commence work under this Section until all surfaces are in a satisfactory condition.
- B. If surfaces are not clean, smooth and thoroughly dry or if they cannot be put in proper condition to receive paint by customary cleaning methods, by painter's ordinary preparatory work, spackling, wire-brushing or sanding, notify the General Contractor requesting necessary correction.
- C. Commencement of work in any space will be construed as acceptance of the surfaces as being satisfactory. All defects in painting work resulting from such accepted surfaces shall be corrected under this Section at no additional cost to the Owner.

3.3 PROTECTION

- A. Abide by local, state and federal regulations in regard to safety and the prevention of or protection against fire.
- B. Adequately protect other surfaces from paint and damage. Repair damage as a result of inadequate or unsuitable protection.
- C. Furnish sufficient drop cloths, shields and protective equipment to prevent spray or droppings from fouling surfaces not being painted and in particular, surfaces within storage and preparation area.
- D. Place cotton waste, cloths and material which may constitute a fire hazard in closed metal containers and remove daily from site.
- E. Do not use any plumbing fixture or pipe for the disposal of waste materials. Carry all water required to the mixing room and dump all waste materials in containers outside the building. Remove oily rags and other combustible waste materials from the building daily.
- F. Operating Parts: Unless otherwise indicated, moving parts of operating units, mechanical and electrical parts, such as valve and damper operators, linkages, sinkages, sensing devices, motor and fan shafts will not require finish painting.

G. All damage to adjacent work caused by paint or painting operations shall be rectified by the Painting Subcontractor without additional expense to the Owner.

3.4 PREPARATION

- A. Prepare surfaces as required to properly receive paint and finish materials. Remove all foreign matter which would otherwise prevent adhesion of the applied finishes.
- B. Remove blisters and other imperfections in previous coats caused by foreign substances or paint skins from all painted surfaces before the subsequent coat is applied. Wood and metal surfaces shall be rubbed down before finishing and between coats with sandpaper or steel wool, leaving perfectly clean surface. Smooth finished surfaces shall be sanded before finishing and between coats as required to smooth out rough areas and to assure smooth, even finish. All surfaces to receive paint shall be smooth and free of all sandpaper scratches, mill marks and other imperfections and, except for coats applied in shop, shall be inspected and approved by the Architect before application of prime and finish coats.
- C. Wood: Except as otherwise specified, shall be sandpapered to a smooth, even surface and dust removed. Surface imperfections, damaged veneers and nail holes in work to be finished natural shall be filled with stainable plastic wood filler; work to be painted shall be filled with wood filler. All knots, pitch streaks and sappy spots in wood finish shall be painted with sealer before applying first coat.
- D. Steel and Iron: Shall be cleaned with paint manufacturer's recommended solvents and all greasy and oily substances removed. Rust, scale, paint runs and sags shall be removed by scraping, wire brushing or sandblasting. Abrasions and chipped places in shop coats shall be touched up. Use only rust-inhibiting primer on ferrous metal. Excessive rust scale on new metal, steel, or iron, and unreasonable damage to shop prime coats on new materials due to improper handling in transit, exposure to weather, or improper storage, shall be corrected by the General Contractor or material supplier. Steel to be exposed in the finished work shall be cleaned in accordance with SSPC-SP3, including all weld seams, prior to priming.
- E. Masonry: Surfaces to be painted shall be prepared by removing all dirt, dust, oil and grease stains and efflorescence and by acid etching when necessary to provide good adhesion for the paint.
- F. All scratches, cuts, cracks and abrasions in gypsum wallboard and plaster surfaces shall be cut out as required, then filled with approved joint or plaster patching compound flush with adjoining surfaces and when dry shall be sanded and sealed before application of priming coat.
- G. Plaster: New plaster shall be neutralized by zinc sulphate solution wash or primed with alkaline-resistant primer. Touch up "hot spots" appearing after prime coat has dried.

3.5 REMOVAL OF ACCESSORIES

A. Remove electrical plates, surface hardware, fittings and fastenings, prior to painting operations. These items shall be carefully stored, cleaned and replaced on completion of work in each area. Do not clean hardware with solvents that may remove permanent lacquer finish. Do not use abrasive paper or abrasive cleaner on hardware or similar finished surfaces.

B. In no case shall there be any attempt to paint around finish hardware or other removable items already in place.

3.6 APPLICATION

- A. Application of paints and coatings for ceiling grid lay-in:
 - 1. Protect ductwork from overspray or use roller.
 - 2. Color shall match new manufacturer-painted grid sections (to be provided by Owner).
 - 3. Provide painted samples applied on existing grid for approval.
- B. All work shall be done in a workmanlike manner by skilled mechanics under proper supervision. All materials shall be cut in neatly to spread evenly, flowed on smoothly, free from brush marks, hair, runs and sags. No paint or enamel shall be applied until preceding coat is thoroughly dry and hard. Finished surfaces shall be uniform in gloss, finish and color.
- C. All spaces shall have permanent lighting operating, be broom-clean and all surfaces dry before painting is started. All dust, dirt, plaster, grease, and other extraneous matter affecting the finish work shall be removed. Foreign matter on surfaces left by other trades shall be removed by the respective trades.
- D. In general and unless otherwise specified, exterior paints shall be allowed to dry at least 72 hours between coats and interior paints shall be allowed to dry at least 48 hours between coats. Nail holes, open places and cracks shall be filled with wood filler, tinted to match finish after the priming coat has been applied.
- E. Before application, materials in containers shall be thoroughly stirred, unless otherwise directed by the manufacturer, to ensure uniformity of color and mass, and all paint skins or other materials which could cause lumps or roughness shall be strained out. Materials shall be applied without the addition of any ingredients and without reducing or thinning.
- F. All materials shall be applied in accordance with the manufacturer's directions Each coat shall be inspected and approved by the Architect before succeeding coat is applied.
- G. Priming coat and undercoat on all surfaces shall be tinted the approximate shade of the final coat. Consult color schedule before priming. Each succeeding coat shall be tinted a slightly different shade from the preceding coat.
- H. Cracks between wood and metal surfaces shall be filled with paste filler or spackle before priming or caulked as directed.
- I. Exterior and interior wood finish shall be back-primed immediately following delivery of such materials to job site.
- J. Priming coat shall be as recommended by the manufacturer of the succeeding coats.
- K. Paint finish shall be dull flat, eggshell, semi-gloss or gloss as selected and directed by the Architect.
- L. All paint shall be applied by brush or roller except as otherwise indicated or specifically approved by Architect. Spray painting will be permitted on sheet metal surfaces.

M. Touch up finish coats of finished items that become damaged before completion of the building. Sand damaged areas smooth and apply primer before applying finish coat. Where spot touch-up cannot be done neatly and blended smooth with other finish material, repaint entire surface or panel as approved by the Architect.

3.7 MECHANICAL AND ELECTRICAL EQUIPMENT

- A. Paint all exposed metal in Work Area except stainless steel, finish hardware, anodized aluminum and factory finished items provided under the Mechanical and Electrical Divisions. Paint all exposed wall louvers, radiator enclosures, radiators, registers, grilles, filters, pumps, fans, enclosures, hangers, electrical boxes and all other apparatus and appurtenances. Paint registers and grilles that are not factory finished. Interior surfaces that show through grilles shall be painted. Prime and paint interiors of panelboard cabinets, before equipment installation. Coordinate with Mechanical and Electrical trades. In rooms to receive paint, all pipes, pipe coverings, conduit and ducts shall be painted except in unfinished concealed spaces.
- B. All access doors shall be opened and edges of door frame cleaned before painting to prevent chipping when door is opened. Cadmium plated screws used for identification shall be painted to the Standard Color Code System identifying the item concealed.
- C. Painting Subcontractor shall review the scope of painting included in MECHANICAL and ELECTRICAL Sections to avoid duplication of work included therein.

3.8 HIGH PERFORMANCE COATINGS

- A. Use high performance architectural coatings at indicated areas.
- B. Areas in which coatings are to be applied shall be kept free of traffic and no other trade shall be permitted to work in rooms during application and curing of coating.
- C. Accessories, grilles, convectors, metal partitions, etc., shall not be installed until after coating work is complete.
- D. Coordinate with other trades the removal of fixtures and other equipment in place to permit coating application; and the replacement and reconnection of these items upon completion of work. Remove and replace wall receptacle plates, switch plates and the like as required.
- E. Installation of suspended ceilings, painting of surrounding areas and caulking shall be done after coating work is finished. Oil-based or solvent-release caulking compound shall not be used in contact with coating material.
- F. Surfaces to receive coating shall be dry, clean, and free of grease, with moisture content not exceeding 16%. Wall temperature shall be maintained at a minimum of 60 degrees F., during the application of wall coating and for at least two weeks thereafter.
- G. Application shall be by skilled applicators regularly engaged in this type of work and in strict compliance with the manufacturer's written instructions. Filler coats and primers shall be compatible and formulated as part of the coating systems.
- H. Areas not to receive coating shall be effectively masked and protected.

3.9 APPLICATION OF HIGH PERFORMANCE COATINGS

- A. Apply to surfaces by roller except as otherwise indicated. Coating thickness shall be adjusted in accordance with manufacturer's written instructions where Architect permits airless spray application. Do not attempt to fill concave joints flush. Tint filler close to finish coat color. Allow adequate time for base coat to cure before proceeding. Where other surfaces are required to be coated, use manufacturer's compatible first coat suitable for such surfaces to assure uniform finish results.
- B. Apply colored finish coats to all surfaces by roller to minimum dry film thickness indicated. Back roll with roller as required to remove pinholes and unevenness. Allow 24 hours between coats for curing and protect from damage during curing periods.
- C. Each coat shall be inspected and approved by the Architect before succeeding coat is applied. Provide a progress schedule showing proposed date of application of each coat for each room, space or area for approval by the Architect. Finish coat shall match approved samples in all respects.
- D. Unless otherwise indicated on Drawings, wall coating shall cover full height of wall from floor to ceiling in each room or area.

3.10 COMPLETION

- A. Cleaning: At the completion of work under this Section, remove all paint and varnish spots and all oil, grease, and other stains caused by this work from floors, walls, glass, fixtures, hardware, equipment and other surfaces, leaving their finishes in satisfactory condition. Remove all Painter's equipment, materials and debris and leave all painted work and surrounding areas in a clean condition.
- B. Retouching: Touch up and repair all paint applied under the Contract which for any reason has been damaged during construction work. All finished work applied under this Section shall have perfect surfaces when completed work is ready for inspection for Substantial Completion.
- C. Final Inspection: The General Contractor shall protect all painted surfaces against damage until the date of Substantial Completion. The Architect will at this time conduct a final inspection of all painting work. All areas which do not comply with the requirements of this Section shall be repainted, refinished or retouched at no additional cost to Owner. Architect may require imperfect touch-up work to be repainted corner to corner and floor to ceiling. Retouch work required after painted and finished surfaces have been accepted by the Architect shall be paid for by the General Contractor.

3.11 INTERIOR PAINTING SCHEDULE

- A. Plaster and Gypsum Board: (except epoxy finish and ceilings).
 - 1. First Coat:

a. SW: ProMar 200 Zero VOC Primer

b. Moore: ECO SPEC INTERIOR LATEX PRIMER 231c. PPG: SPEEDHIDE Zero-VOC Interior Latex Sealer

2. Second and Third Coats:

a. SW: ProMar 200 Zero VOC Semi-Gloss

b. Moore: ECO SPEC INTERIOR LATEX SEMI-GLOSS ENAMEL 224

c. PPG: Pure Performance Interior Semi-Gloss Latex

- B. Plaster and Gypsum Board Ceilings:
 - 1. First Coat:

a. SW: ProMar 200 Zero VOC Primer

b. Moore: ECO SPEC INTERIOR LATEX PRIMER 231c. PPG: SPEEDHIDE Zero-VOC Interior Latex Sealer

2. Second Coat and Third Coats:

a. SW: ProMar 200 Zero VOC Eg-Shel

b. Moore: ECO SPEC INTERIOR LATEX EGGSHELL ENAMEL 223

c. PPG: Pure Performance Interior Eggshell Latex

- C. Ferrous Metal (not shop-primed):
 - 1. First Coat:

a. SW: Pro -Cryl Primer

b. Moore: Ultra Spec HP Acrylic Metal Primer

c. Rust-Oleum: Universal Acrylic Primer

2. Second and Third Coats:

a. SW: Pro Industrial Semi-Gloss Acrylic Coatingb. Rust-Oleum: Industrial Coating 5200 System DTM Acrylic

c. PPG: DEVFLEX HP Waterborne Acrylic Enamel 4216 HP

- D. Ferrous Metal (shop-primed):
 - 1. First and Second Coats:

a. SW Pro Industrial Semi-Gloss Acrylic Coating

b. Moore: Ultra Spec HP DTM Acrylic Semi-Gloss Enamelc. Rust-Oleum: HP 3800 System DTM Acrylic Semi-Gloss Enamel

- E. Grilles, Uncovered Runout, Housings and Accessories of Mechanical Equipment and Apparatus:
 - 1. First Coat:

a. SW: Pro-Cryl Primer

b. Moore: Ultra Spec HP Acrylic Metal Primer

c. Rust-Oleum: Universal Acrylic Primer

2. Second and Third Coats:

a. SW: Pro Industrial Semi-Gloss Acrylic Coating

b. Rust-Oleum: Industrial Coating 5200 System DTM Acrylic

c. PPG: DEVFLEX HP Waterborne Acrylic Enamel 4216 HP

F. Painted Wood (opaque finish), including wood with MDO surface (General Contractor to provide certification from MDO panel provider of compatibility of paints):

1. First Coat:

a. SW: Premiun Wall Wood Primer

b. Moore: SUPER SPEC Latex Undercoater & Primer Sealer

c. PPG: SEAL GRIP PRIMELINE Fast Dry Latex Wood Undercoat

2. Second and Third Coats:

a. SW: ProClassic Waterborne Acrylic Semi-Glossb. P&L: Accolade Interior Acrylic Latex Semi-Gloss

c. Moore: SUPER SPEC 100% ACRYLIC SEMI-GLOSS ENAMEL 281

- G. Piping, Electrical Conduit, Fittings, Hangers, Brackets, Sleeves, and Plates:
 - 1. First Coat:

a. SW: Pro-Cryl Primer

b. Moore: Ultra Spec HP Acrylic Metal Primer

c. Rust-Oleum: Universal Acrylic Primer

2. Second and Third Coats:

a. SW: Pro Industrial Eg-Shel Acrylic Coating

b. Carboline: Multi-Gard 55

c. PPG: Devflex 4210 Water-borne Acrylic Eggshell

- H. Acoustical Ceiling Tile:
 - 1. Water-based flat-latex paint.

END OF SECTION 09 91 00

BUILDING CODE INFORMATION

GOVERNING CODES AND REFERENCED STANDARDS APPLICABLE TO PROJECT:

- 780 CMR, MASSACHUSETTS STATE BUILDING CODE 9TH EDITION (AMENDED VERSION OF IEBC 2015)

- 780 CMR CHAPTER 34 (AMENDED VERSION OF IEBC 2015)

- 521 CMR, MASSACHUSETTS ARCHITECTURAL ACCESS BOARD REGULATIONS

- 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN

- 527 CMR SECTION 1, MA COMPREHENSIVE FIRE CODE (AMENDED VERSION OF NFPA 1 NATIONAL FIRE CODE)

- 527 CMR SECTION 12, MA ELECTRICAL CODE

(AMENDED VERSION OF NFPA 70 NATIONAL ELECTRICAL CODE)

- 248, MASSACHUSETTS FUEL GAS AND PLUMBING CODE

- MA BUILDING CODE CHAPTER 13 (REF. INTERNATIONAL ENERGY CODE 2018)

- TOWN OF DEDHAM ZONING BY-LAW & ZONING BOARD OF APPEALS VARIANCES AND SPECIAL PERMITS

- STORMWATER MANAGEMENT RULES & REGULATIONS ADOPTED BY THE DEDHAM CONSERVATION COMMISSION, AS AMENDED IN MAY 2021

248, MASSACHUSETTS FUEL GAS AND PLUMBING CODE:

10.10 (18) Table 1. Plumbing Fixture Count NO CHANGE IN BUILDING OCCUPANCY COUNT. NEW DANCE CLASSROOM IS IN A CONVERTED EXISTING CLASSROOM. THEREFORE, OCCUPANCY COUNT IS IDENTICAL. AS AN EXISTING BUILDING WHERE NO CHANGE I OR OCCUPANCY OR BUILDING AREA IS BEING MADE, PRE-EXISTING PERMITTED FACILITIES ARE NOT REQUIRED

ALTERED. 10.10(18)(i) - Unisex Toilet Rooms

MA. G.L. 780 CMR 9TH ED. CHAPTER 1 - SCOPE AND ADMINISTRATION:

PROJECT APPROVALS: THE CONTRACTOR WILL BE REQUIRED TO COMPLETE THE PERMIT APPLICATION PROCESS AND PULL THE FINAL PERMIT, INCLUDING PAYING PERMIT FEE.

PROJECT SCOPE IS INTERIOR RENOIVATIONS ONLY.

NO CHANGE OF USE. NO REQUIREMENT TO UPGRADE ENERGY EFFICIENCY OF EXTERIOR FENESTRATION, PER IEBC EXISTING BUILDING

CODE, WORK AREA CLASSIFICATION. NO REQUIREMENT TO UPGRADE ACCESIBILITY OF ENTRANCE OR TOILET FACILITIES, PER IEBC EXISTING BUILDING CODE WORK AREA CLASSIFICATION, AND 521 CMR. 3.3 AND 3.4

IEBC CHAPTER 5 - CLASSIFICATION OF WORK:

LEVEL 2 - SPACE RECONFIGURATION AND NEW EQUIPMENT, UNDER 50% OF BUILDING AREA.

GROSS BUILDING AREA: APPROX. 34,000 SF ALTERATION AREA/WORK AREA: 1,570 SF

PROJECT: LEVEL 2 ALTERATION, INCL. RECONFIGURATION OF SPACE, NEW INTERIOR DOOR (TOILET ROOM), AND NEW FINISHES. WORK DOES NOT EXCEED 50% OF BUILDING AREA.

PROJECT IS USING THE WORK AREA METHOD (SEE PLAN FOR WORK AREA).

<u>IEBC CHAPTER 10 - NO CHANGE OF OCCUPANCY:</u>

EXISTING BUILDING OCCUPANCY GROUP: "E" EDUCATIONAL

EXISTING OCCUPANCY: CLASSROOM.

PROPOSED OCCUPANCY: CLASSROOM (DANCE).

IEBC CHAPTER 15 - CONSTRUCTION SAFEGUARDS:

SEE GENERAL NOTES.

<u>IEBC APPENDIX B - SUPPLEMENTARY ACCESSIBILITY STANDARDS:</u>

NONE APPLICABLE.

<u>IBC CHAPTER 3 – USE AND OCCUPANCY CLASSIFICATION:</u>

OCCUPANCY TYPE:

IBC CHAPTER 4 - SPECIAL DETAILED REQUIREMENTS BASED ON USE AND OCCUPANCY: SECTION 414: HAZARDOUS MATERIALS

IBC CHAPTER 5 - GENERAL BUILDING HEIGHTS AND AREAS:

HEIGHT AND AREA: 2 STORY WITH BASEMENT. HEIGHT - EXISTING BUILDING, NO CHANGE IN HEIGHT.

EXISTING FLOOR AREA: APPROX. _ PROPOSED AREA: NO CHANGE.

IBC CHAPTER 6 - TYPES OF CONSTRUCTION:

TYPE OF CONSTRUCTION:

EXISTING BUILDING (ARCHAIC BUILDING CODE)

NO CHANGE PROPOSED.

EXISTING MATERIALS NOT KNOWN OR INVESTIGATED - ASSUMED TO BE MASONRY BEARING WITH WOOD ROOF.

IBC CHAPTER 7 - FIRE AND SMOKE PROTECTION:

ALL EXISTING FIRE RATINGS TO REMAIN - NO CHANGE TO WALLS, DOORS OR CEILINGS.

FIRE/SMOKE/CO ALARM SYSTEM:

MAINTAIN EXISTING FIRE ALARM SYSTEM - TO BE TESTED AND APPROVED BY FIRE MARSHALL IN FIELD PRIOR TO

OCCUPANCY. OWNER TO PROVIDE NEW HORN/STROBE IN TOILET ROOM.

IBC CHAPTER 8 - INTERIOR FINISHES:

DANCE CLASSROOM FINISHES: NEW WOOD DANCE FLOOR. NEW VINYL COMPOSITION TILE FLOOR. TOILET ROOM BY OWNER FINISHES:

NEW TYPE-X DRYWALL, PAINTED. NEW VINYL COMPOSITION TILE FLOOR.

IBC CHAPTER 9 - FIRE PROTECTION SYSTEMS:

EXISTING BUILDING, SPRINKLERED. (VERIFY)

IBC CHAPTER 10 - MEANS OF EGRESS:

MAXIMUM TRAVEL DISTANCE ALLOWED PER TABLE 1006.2.1: 75 FEET. BASEMENT CLASSROOM EGRESS IS THROUGH DOOR - WALK OUT TO PARKING LOT. ALL EGRESS TRAVEL DISTANCES

<75 FEET. EXIT SIGNS ARE EXISTING.

NO CHANGE TO EXISTING MEANS OF EGRESS.

TABLE 1004.1.2 MAXIMUM FLOOR AREA ALLOWANCES PER OCCUPANT

GROUP E (EDUCATIONAL) - 20 NET SF PER OCCUPANT

OCCUPANT LOAD CALCULATIONS (WORK AREA ONLY):

USE TYPE	GR055 5F	NETSF	LOAD REQUIREMENT	COUNT
CLASSROOM (GROUP E)	1570	1520	20 SF (NET)	76

EXISTING PROVIDED: THREE (3) EXITS, WITH PANIC HARDWARE. NO CHANGE REQUIRED.

Chapter 11 - ACCESSIBILITY:

TOTAL OCCUPANT LOAD:

NEW ACCESSIBLE UNISEX TOILET REQUIRED.

ALL NEW INTERIOR COMPONENTS SHALL MEET ALL REQUIREMENTS OF IBC CHAPTER 11 AS AMENDED.

IBC CHAPTER 12 - INTERIOR ENVIRONMENT:

NO CHANGE TO EXISTING HEAT, LIGHTING OR VENTILATION.

IBC CHAPTER 13 - ENEREGY EFFICIENCY:

NO CHANGE TO EXISTING FENESTRATION OR DOORS.

NO CHANGE TO EXISTING SYSTEMS.

IBC CHAPTER 27 - ELECTRICAL:

ALL WORK TO BE PERFORMED BY MASSACHUSETTS LICENSED TRADESPERSON.

IBC CHAPTER 28 - MECHANICAL:

NO WORK.

IBC CHAPTER 29 - PLUMBING:

ALL WORK TO BE PERFORMED BY MASSACHUSETTS LICENSED TRADESPERSON.

TABLE 2902.1 MINIMUM NUMBER OF PLUMBING FIXTURES:

WATER CLOSETS <u>OCCUPANCY</u> **LAVATORIES** SINGLE-USER UNISEX TOILET RM. E (EDUCATIONAL) 1 per 50

NO CHANGE.

SECTION 290 -2.2 SEPARATE FACILITIES

WHERE PLUMBING FIXTURES ARE REQUIRED, SEPARATE FACILITIES SHALL BE PROVIDED FOR EACH SEX.

EXISTING BUILDING PROVIDES SEPARATE FACILITIES ON FLOOR ABOVE.

UNISEX SINGLE-USER TOILET ROOM IS ALLOWED PER CMR 521 SECTION 30.1A.

DEDHAM CAPEN DANCE STUDIO 2023 322 SPRAGUE STREET, DEDHAM, MA

1. ALL ITEMS SHOWN ARE TO BE ASSUMED AS NEW AND PROVIDED UNDER THIS CONTRACT, WHETHER OR NOT INDICATED AS "NEW" OR "(N)" ON THESE PLANS, UNLESS NOTED OTHERWISE.

2. ALL EXISTING ITEMS SHOWN (INCLUDING LOCATIONS, QUANTITIES, AND DIMENSIONS) ARE TO BE VERIFIED IN FIELD BY CONTRACTOR

General Notes:

NOTES, INDEX, SITE PLAN, AREA OF WORK ACCESSIBILITY REQUIREMENTS AND SITEWORK (SITEWORK BY OWNER) PLANS - DANCE STUDIO PLANS - BATHROOM (BY OWNER)

Sheet Notes

GENERAL NOTES:

INDICATED IN THE DRAWINGS.

BASEMENT LEVEL - AREA OF WORK PLAN

Scale: 1" = 20'-0"

1. SCOPE OF WORK (IN CONTRACT): RENOVATION OF EXISTING CLASSROOM FOR DANCE STUDIO, INCLUDING NEW FLOORING, MIRRORS, AND BARRE (ALTERNATE BID.)

SCOPE OF WORK (NOT IN CONTRACT - BY OWNER): RENOVATION OF TOILET ROOM AND CORRIDOR, AND ADDITION OF ACCESSIBLE PARKING SPACE STRIPING AND SIGNAGE.

2. ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE MASSACHUSETTS BUILDING CODE, 780 CMR 9TH EDITION, WITH ALL LOCAL AMENDMENTS, TOWN HEALTH AND FIRE DEPARTMENT REGULATIONS, UTILITY COMPANY REQUIREMENTS, AND BEST TRADE

3. BEFORE COMMENCING WORK, THE CONTRACTOR SHALL FILE ALL REQUIRED CERTIFICATES OF INSURANCE WITH THE OWNER AND WITH THE BUILDING DEPARTMENT, OBTAIN ALL REQUIRED PERMITS, AND PAY ALL FEES REQUIRED BY GOVERNING AGENCIES.

FIELD CONDITIONS TO THE ARCHITECT. 5. MINOR DETAILS NOT SHOWN OR SPECIFIED BUT NECESSARY TO THE PROPER CONSTRUCTION OF ANY PART OF THE WORK, SHALL BE INCLUDED AS IF THEY WERE

4. THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS IN THE FIELD PRIOR TO COMMENCING WORK AND SHALL REPORT ANY DISCREPANCIES BETWEEN DRAWINGS AND

6. THE CONTRACTOR SHALL COORDINATE ALL WORK PROCEDURES WITH THE REQUIREMENTS OF LOCAL AUTHORITIES AND BUILDING OWNER.

7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL CONDITIONS AND MATERIALS WITHIN THE PROPOSED CONSTRUCTION AREA.

8. THE CONTRACTOR SHALL HAVE SOLE RESPONSIBILITY FOR ANY DAMAGE OR INJURIES CAUSED BY OR DURING THE EXECUTION OF THE WORK.

REQUIRED FOR OTHER TRADES (PLUMBING, ELECTRICAL, ETC.) 10. PLUMBING AND ELECTRICAL WORK SHALL BE PERFORMED BY PERSONS LICENSED IN

THEIR TRADES IN THE COMMONWEALTH OF MASSACHUSETTS, WHO SHALL ARRANGE FOR

AND OBTAIN INSPECTIONS AND REQUIRED SIGN-OFFS.

9. THE CONTRACTOR SHALL LAY OUT HIS OWN WORK AND SHALL PROVIDE ALL DIMENSIONS

11. THE CONTRACTOR SHALL DO ALL CUTTING, PATCHING, AND REPAIRING AS REQUIRED TO PERFORM ALL OF THE WORK INDICATED ON THE DRAWINGS AND ALL OTHER WORK THAT MAY BE REQUIRED TO COMPLETE THE JOB.

12. ALL PIPING AND WIRING TO BE REMOVED SHALL BE REMOVED TO A POINT OF CONCEALMENT AND SHALL BE PROPERLY CAPPED OR PLUGGED.

13. THE CONTRACTOR, PRIOR TO COMPLETION OF THE WORK, SHALL ARRANGE FOR

BUILDING DEPARTMENT INSPECTIONS AND SIGN-OFFS AS REQUIRED.

ASBESTOS, AND PCBS ON COMMERCIAL BUILDINGS.

NO WORK.

STORAGE -

NO WORK

HALLWAY

UNEXCAVATED

CLASSROOM TO BE

CONVERTED TO DANCE

CLASSROOM

COONTRACT AREA OF WORK

(E) ACCESSIBLE ENTRANCE -

CONVERTED

TO TOILET

ROOM AND

GENERAL USE

- DANCE CLASSROOM

ADDITIONAL NOTES

1. STRUCTURAL: CONTRACTOR TO PROVIDE ADEQUATE TEMPORARY BRACING AND SHORING WHEREVER ANY STRUCTURAL WORK IS INVOLVED AS MAY BE REQUIRED.

INTERIOR ELEVATIONS & DETAILS

2. MEANS OF EGRESS: ALL EXISTING MEANS OF EGRESS FOR OCCUPANTS OF THE BUILDING TO BE MAINTAINED CLEAR AND FREE OF ALL OBSTRUCTIONS SUCH AS BUILDING MATERIALS, TOOLS, ETC.

3. FIRE SAFETY: ALL BUILDING MATERIALS STORED AT CONSTRUCTION AREA ARE TO BE SECURED, PROTECTED FROM THE ELEMENTS AND RAISED OFF THE GROUND IN A LOCKED AREA OR JOB BOX ON SITE TO BE PROVIDED BY THE CONTRACTOR. ACCESS TO SUCH AREAS TO BE CONTROLLED BY OWNER AND/OR GENERAL CONTRACTOR.

4. DUST CONTROL: DEBRIS, DIRT, AND DUST TO BE KEPT TO A MINIMUM, BE CONFINED TO THE IMMEDIATE CONSTRUCTION AREA, AND BE CLEANED UP AND CLEARED FROM THE BUILDING PERIODICALLY TO AVOID ANY EXCESSIVE ACCUMULATION. COVER ALL SMOKE DETECTORS DURING DUST-MAKING ACTIVITIES AND IMMEDIATELY UNCOVER AND TEST FOLLOWING SUCH ACTIVITIES OR WHENEVER THE SPACE IS VACANT.

5. CONSTRUCTION HOURS AND NOISE: PER TOWN BY-LAWS.

6. BUILDING OCCUPANCY: THE BUILDING WILL BE OCCUPIED DURING THE COURSE OF CONSTRUCTION WORK. CARE IS TO BE TAKEN TO COORDINATE AND AVOID DISTURBING OR CAUSING INCONVENIENCE TO OCCUPANTS.

7. SAFETY: CONTRACTOR IS REQUIRED TO PREPARE A FINAL SITE LAYOUT AND SAFETY PLAN FOR APPROVAL BY OWNER, MEETING ALL OSHA REQUIREMENTS. CONTRACTOR TO PROVIDE ALL JOB BOXES, SIGNANGE AND FENCING AS MAY BE REQUIRED TO SECURE THE WORK OR TEMPORARY STORAGE AREAS. WARNING SIGNS TO BE PROVIDED ON ALL SIDES OF AREA AND TO BE PROFESSIONAL SIGNS MEETING OSHA STANDARDS

8. CONSTRUCTION WASTE MANAGEMENT: CONTRACTOR IS REQUIRED TO REMOVE ALL DEBRIS AND CONSTRUCTION WASTE FROM THE SITE AT THE END OF THE WORK DAY TO CONTROL UNSIGHTLY CONDITIONS. CONTRACTOR IS RESPONSIBLE TO PREPARE AND IMPLEMENT A CONSTRUCTION WASTE MANAGEMENT PLAN, LEGALLY DISPOSE OF ALL CONSTRUCTION WASTE AND DEBRIS REMOVED FROM THE SITE AND RETAIN RECORDS THEREOF. A DUMPSTER MAY BE USED (TO BE PROVIDED BY CONTRACTOR) FOR A LIMITED TIME DURING DEMOLITION ONLY AND WITH COORDINATION WITH BUILDING OWNER AND ABIDING BY ALL TOWN BY-LAWS.

9. HAZARDOUS MATERIALS: CONTRACTOR IS REQUIRED TO ABIDE BY ALL MASSACHUSETTS REQUIREMENTS FOR THE HANDLING AND DISPOSAL OF LEAD PAINT,

ISSUED: 00/00/0000 REVISION #: REVISION #: 00/00/0000 REVISION #: 00/00/0000 REVISION #: 00/00/0000 BIDDING ISSUED FOR:

DEDHAM CAPEN

DANCE STUDIO 2023

OWNER:

DEDHAM FACILITIES DEPARTMENT 450 Washington Street Dedham, MA 02026

ENGINEER:

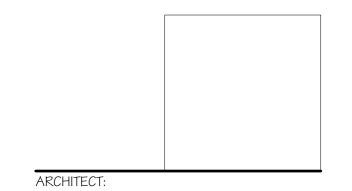
AREA OF WORK BY OWNER (N.I.C.) -

NEW TOILET ROOM

JANITOR'S AREA

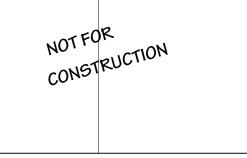
_STAIR HALL

BLW ENGINEERS, INC. 311 GREDAT RD. LITTLETON, MA



James Carr architecture + design

AIA, NCARB, LEED AP BD+C 366 Boylston St. Brookline, MA 02445 o: 617.879.0725 c: 617.595.6351 e: jcarr@alum.mit.edu



DRAWING TITLE

2202

Notes, Index, Site Plan, Area of Work

SCALE SEE DRAWINGS 03.01.23 PROJ. NO.

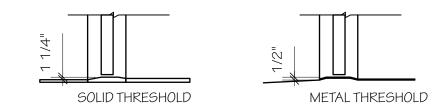
ELECTRONIC (PDF) COPIES OF THESE PLANS ARE FOR CONVENIENCE ONLY. DRAWINGS ARE TO BE PROFESSIONALLY PRINTED AT FULL SHEET SIZE (36' X 24"). REDUCED OR NON-PROFESSIONALLY PRINTED COPIES ARE NOT TO BE USED. ELECTRONIC COPIES

ACCESSIBILITY STANDARDS

ACCESS REGULATIONS PER MA C.M.R. 521 REFER TO M.A.A.B GUIDELINES LATEST EDITION

THRESHOLDS

THRESHOLDS SHALL NOT EXCEED 1/2 INCH IN HEIGHT AND SHALL BE BEVELED ON BOTH SIDES WITH A SLOPE NO GREATER THAN 40%.

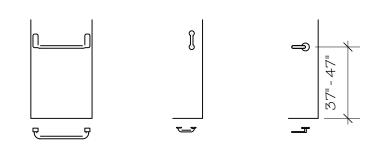


DOOR HARDWARE

HEIGHT: HAND OPERATED DOOR OPENING HARDWARE SHALL BE LOCATED 37 INCHES TO 47 INCHES

OPERATION: DOORS IN THE MEANS OF EGRESS SHALL BE OPERABLE WITH ONE HAND AND WITH A SINGLE EFFORT. DOORS IN THE PATHS OF INGRESS SHALL BE ABLE TO BE UNLOCKED AND OPENED WITH ONE HAND. THE FORCE REQUIRED TO OPERATE THE HARDWARE SHALL BE NO GREATER THAN 5 FT. LB.

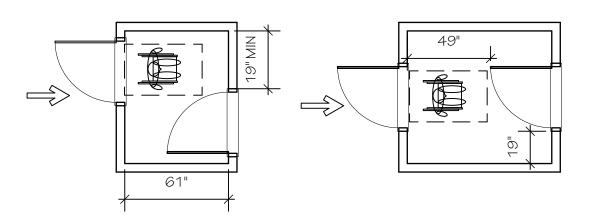
SPECIAL HARDWARE: DOORS OPENING INTO HAZARDOUS AREAS SHALL HAVE DOOR-OPENING HARDWARE WHICH IS KNURLED OR HAS A ROUGHENED SURFACE TO GIVE TACTILE WARNING TO PERSONS WITH VISUAL IMPAIRMENTS. HAZARDOUS AREAS SHALL INCLUDE BUT NOT BE LIMITED TO LOADING PLATFORMS, BOILER ROOMS, AND ELECTRICAL EQUIPMENT ROOMS.



ENTRANCES

VESTIBULES

BETWEEN ANY TWO HINGED OR PIVOTED DOORS, THERE SHALL BE A MINIMUM OF 49 INCHES PLUS THE WIDTH OF ANY DOOR SWINGING INTO THE SPACE.

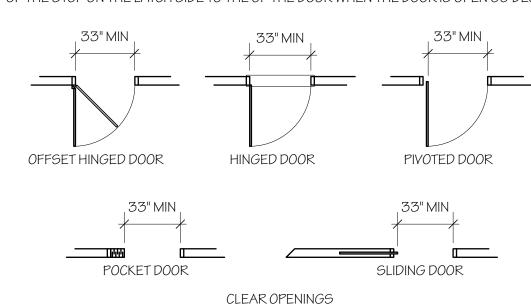


ANY ENTRANCE/EXIT OF A FACILITY NOT ACCESSIBLE BY PERSONS IN WHEELCHAIRS SHALL HAVE A SIGN CLEARLY INDICATING THE LOCATION OF THE ACCESSIBLE ENTRANCE/EXIT.

DOORS AND DOORWAYS

WIDTH

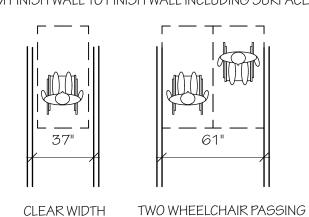
ALL DOORWAYS AND OPENINGS THAT ARE REQUIRED TO BE ACCESSIBLE SHALL HAVE A CLEAR OPENING OF NOT LESS THAN 33 INCHES. CLEAR OPENING OF A DOOR IS MEASURED FROM THE FACE OF THE STOP ON THE LATCH SIDE TO THE OF THE DOOR WHEN THE DOOR IS OPEN 90 DEGREES.



SPACE ALLOWANCE

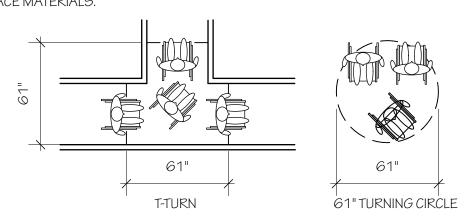
WHEELCHAIR PASSAGE WIDTH

THE MINIMUM CLEAR WIDTH FOR SINGLE WHEELCHAIR PASSAGE SHALL BE 37 INCHES AND FOR TWO CHAIRS SHALL BE 61 INCHES. THE MINIMUM CLEAR WIDTH MUST BE ADHERED TO ALL PASSAGEWAYS FROM FINISH WALL TO FINISH WALL INCLUDING SURFACE MATERIALS.



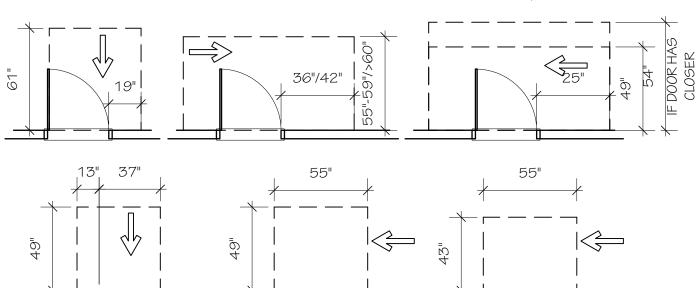
WHEELCHAIR TURNING SPACE

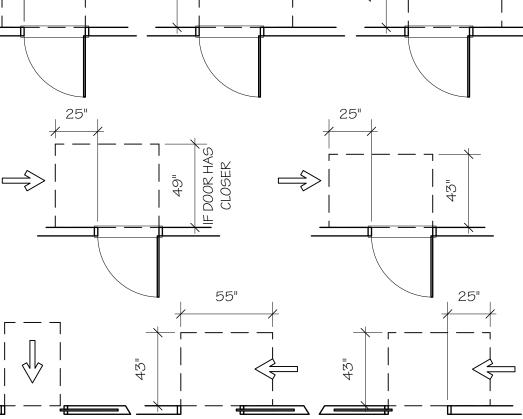
THE SPACE REQUIRED FOR A WHEELCHAIR TO MAKE A 180-DEGREE TURN IS A CLEAR SPACE OF 61 INCHES. THE MINIMUM SPACE MUST BE ADHERED TO FROM FINISH WALL TO FINISH WALL INCLUDING SURFACE MATERIALS.



MANEUVERING CLEARANCE

PULL SIDE CLEARANCE SHALL COMPLY WITH THE FOLLOWING: A MINIMUM OF 19 INCHES OF CLEAR FLOOR SPACE SHALL BE PROVIDED ON THE LATCH, PULL SIDE OF THE DOOR.





MANEUVERING CLEARANCE AT DOORS

521 CMR CHAPTER 23: PARKING AND PASSENGER LOADING ZONES

23.4 PARKING SPACES

SHALL COMPLY WITH THE FOLLOWING:

23.4.1 WIDTH: ACCESSIBLE PARKING SPACES SHALL BE AT LEAST EIGHT FEET (8') WIDE, PLUS THE ACCESS AISLE.

23.4.2 LENGTH: THE LENGTH OF ACCESSIBLE PARKING SPACES SHALL BE AT LEAST THE SAME AS FOR PARKING SPACES GENERALLY IN ACCORDANCE WITH 780 CMR: THE STATE BUILDING CODE OR LOCAL ZONING REQUIREMENTS. PARKED VEHICLES SHALL NOT REDUCE THE CLEAR WIDTH OF AN ACCESSIBLE ROUTE BY OVERHANGING OR PROTRUDING INTO IT.

23.4.3 SLOPE: PARKING SPACES SHALL BE LEVEL WITH SURFACE SLOPES NOT EXCEEDING 1:50 (2%) IN ALL DIRECTIONS.

23.4.4 SURFACE: SPACES SHALL HAVE A UNIFORM, PAVED OR HARD PACKED SMOOTH

23.4.5 DELINEATION: ACCESSIBLE SPACES SHALL BE MARKED BY HIGH CONTRAST PAINTED LINES OR OTHER HIGH CONTRAST DELINEATION.

23.4.6 ACCESS AIGLES: ALL ACCESSIBLE SPACES SHALL HAVE ACCESS AIGLES THAT COMPLY WITH THE FOLLOWING:

A. PARKING ACCESS AISLES SHALL BE PART OF AN ACCESSIBLE ROUTE TO THE BUILDING OR FACILITY ENTRANCE AND SHALL COMPLY WITH 521 CMR 20.00: ACCESSIBLE ROUTE. B. ACCESS AISLES ADJACENT TO ACCESSIBLE SPACES SHALL BE FIVE FEET (5') WIDE MINIMUM, EXCEPT ADJACENT TO VAN ACCESSIBLE SPACES THE ACCESS AIGLE SHALL BE A

C. TWO ACCESIBLE PARKING SPACES MAY SHARE A COMMON ACCESS AISLE. D. ACCESS AISLES SHALL BE LEVEL WITH SURFACE SLOPES NOT EXCEEDING 1:50 (2%) IN

E. ACCESS AISLES SHALL BE CLEARLY MARKED BY MEANS OF DIAGONAL STRIPES.

B. EACH SPACE SHALL HAVE A SIGN DESIGNATING IT "VAN ACCESSIBLE" AS REQUIRED BY

E. PROVIDE AN ACCESS AISLE OF EIGHT FEET (8').

ALL DIRECTIONS.

C. ALL SUCH SPACES MAY BE GROUPED ON ONE LEVEL OF A PARKING STRUCTURE. D. SPACES TO BE A MINIMUM OF EIGHT FEET (8') WIDE.

EXCEPTION: VAN ACCESSIBLE SPACES DO NOT HAVE TO BE SEPARATELY PROVIDED IF ALL REQUIRED ACCESSIBLE PARKING SPACES ARE 11 FEET (11') WIDE WITH A FIVE FOOT (5')

General Notes:

Sheet Notes

1. ALL ITEMS SHOWN ARE TO BE ASSUMED AS NEW AND PROVIDED UNDER THIS CONTRACT,

WHETHER OR NOT INDICATED AS "NEW" OR "(N)"

ON THESE PLANS, UNLESS NOTED OTHERWISE.

2. ALL EXISTING ITEMS SHOWN (INCLUDING

LOCATIONS, QUANTITIES, AND DIMENSIONS)

ARE TO BE VERIFIED IN FIELD BY CONTRACTOR.

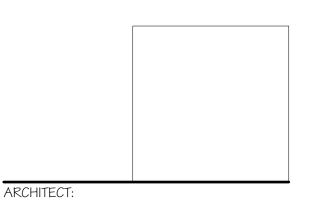
ISSUED: REVISION #: 00/00/0000 REVISION #: 00/00/0000 REVISION #: 00/00/0000 REVISION #: 00/00/0000 ISSUED FOR: BIDDING

DEDHAM CAPEN DANCE STUDIO 2023

DEDHAM FACILITIES DEPARTMENT 450 Washington Street Dedham, MA 02026

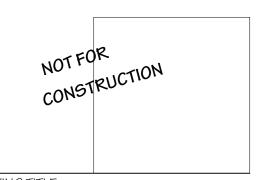
ENGINEER:

BLW ENGINEERS, INC. 311 GREDAT RD. LITTLETON, MA



James Carr architecture + design

AIA, NCARB, LEED AP BD+C 366 Boylston St. Brookline, MA 02445 o: 617.879.0725 c: 617.595.6351 e: jcarr@alum.mit.edu



DRAWING TITLE

Accessibility Requirements and Sitework (SITEWORK BY OWNER)

SCALE

2202

SEE DRAWINGS DATE 03.01.23 PROJ. NO.

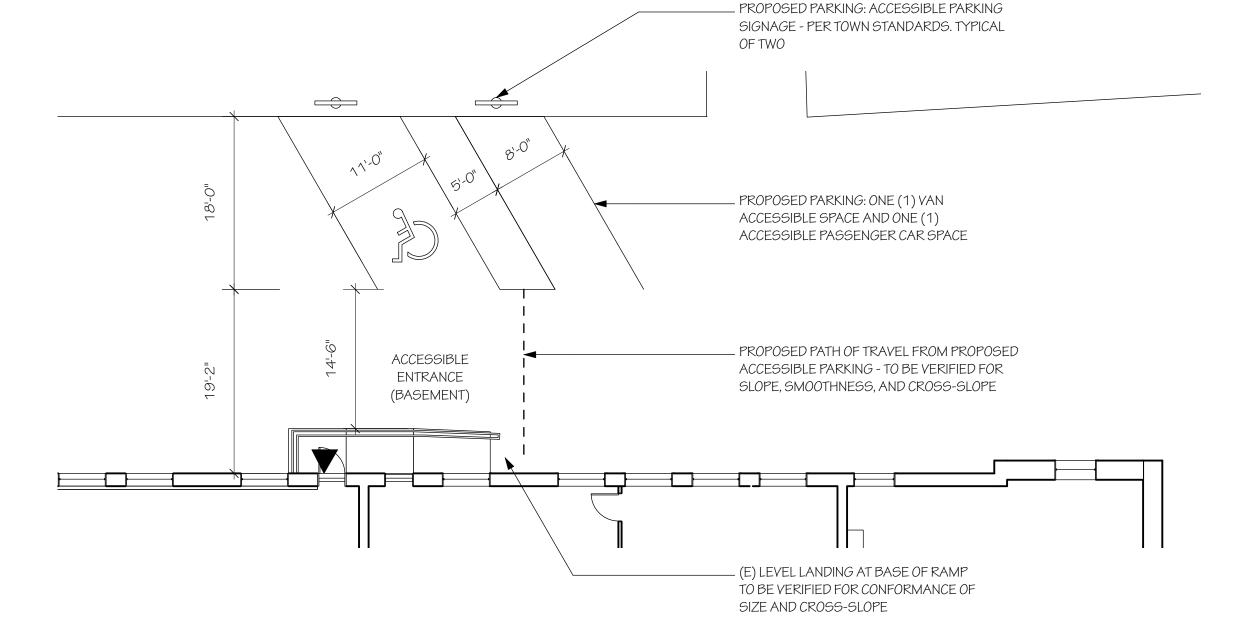
MINIMUM OF EIGHT FEET (8') WIDE.

23.4.7 VAN ACCESSIBLE SPACES SHALL COMPLY WITH THE FOLLOWING:

A. PROVIDE MINIMUM VERTICAL CLEARANCE OF EIGHT FEET, TWO INCHES (8'2") AT THE PARKING SPACE AND ALONG AT LEAST ONE VEHICLE ACCESS ROUTE TO SUCH SPACES FROM SITE ENTRANCE(S) AND EXIT(S).

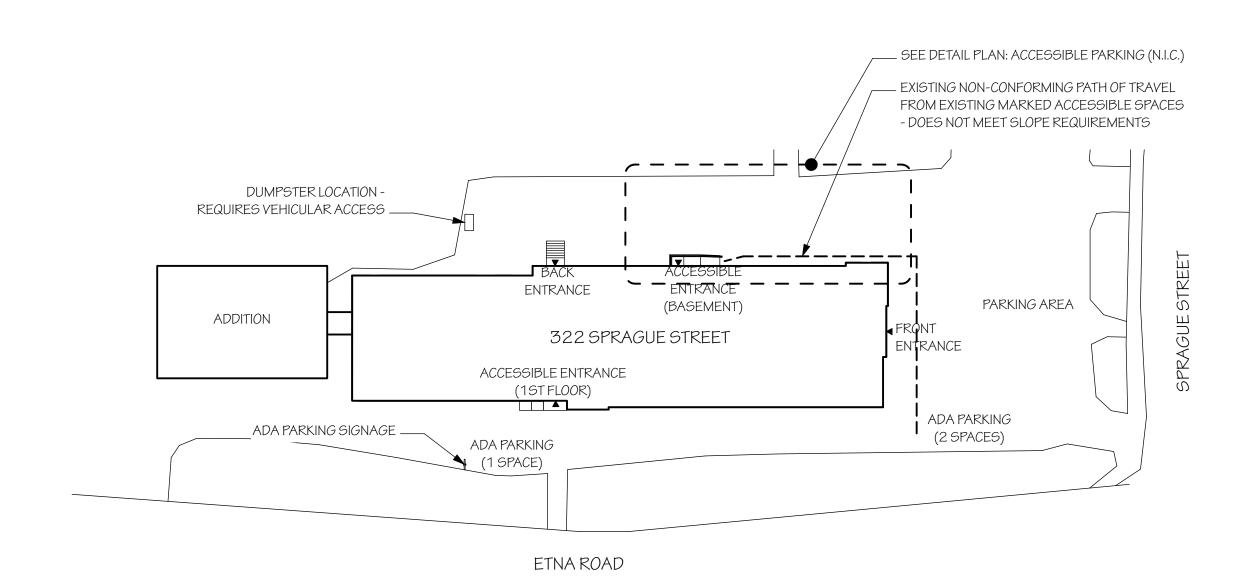
521 CMR 23.6, SIGNAGE.

ACCESS AISLE.



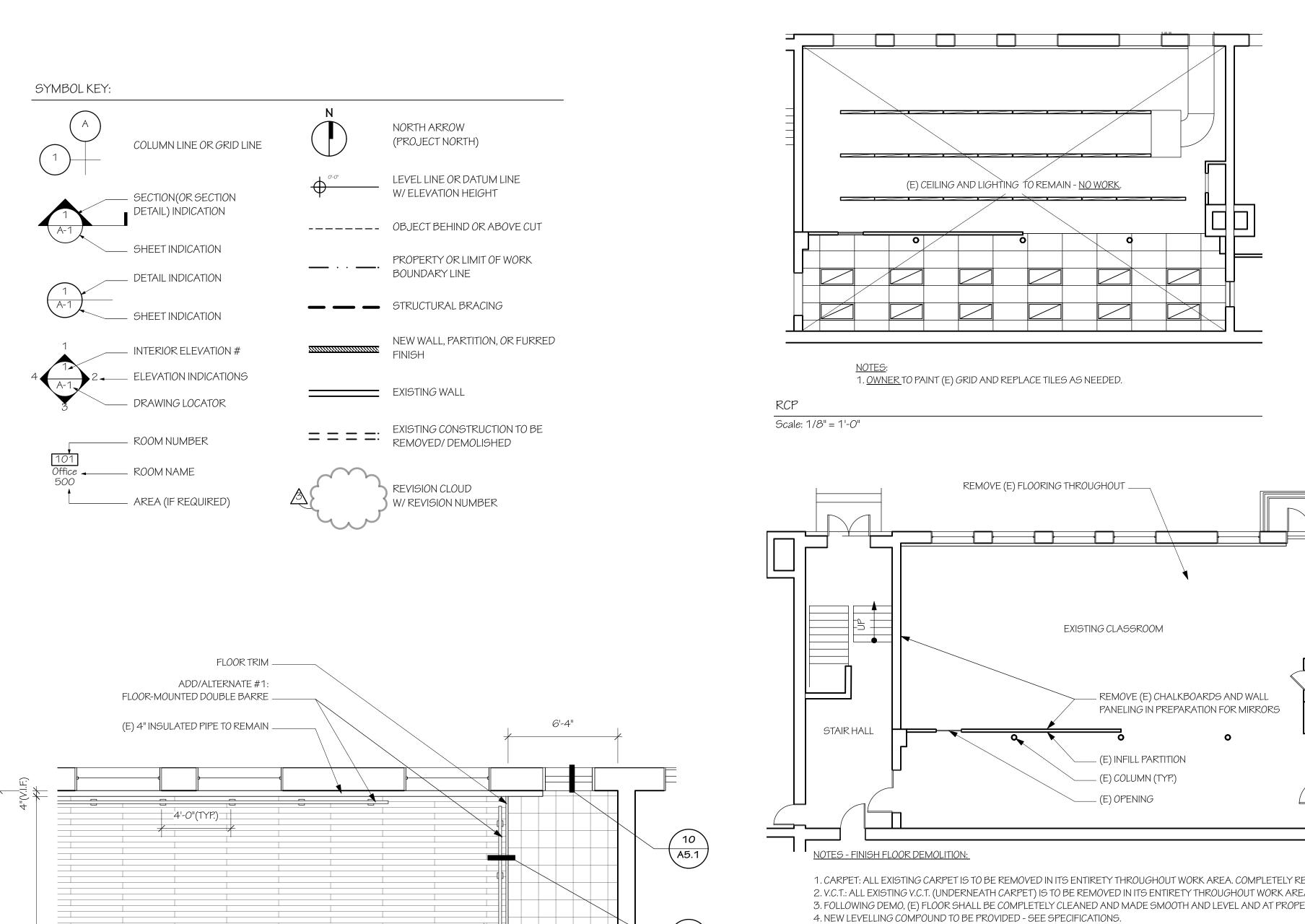
DETAIL PLAN - ACCESSIBLE PARKING BY OWNER (N.I.C.)	

Scale: 1" = 10'-0"



SITE PLAN - EXISTING. NO WORK (FOR INFORMATION ONLY) Scale: 1" = 40'-0"

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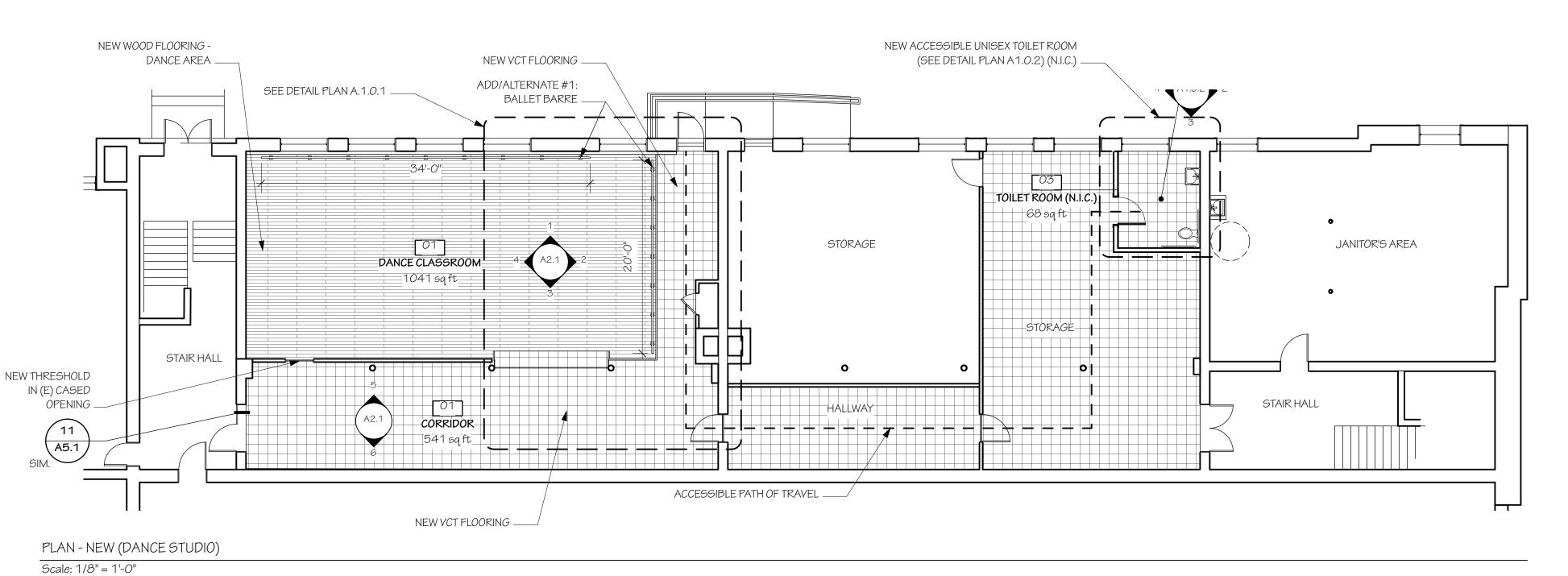
EXISTING FLOORING TO BE REMOVED (N.I.C.) _ STORAGE STORAGE JANITOR'S AREA OFFICE _ (E) STORAGE CLOSET TO REMAIN STAIR HALL HALLWAY

EXISTING PARTITION TO BE REMOVED (N.I.C.)

- 1. CARPET: ALL EXISTING CARPET IS TO BE REMOVED IN ITS ENTIRETY THROUGHOUT WORK AREA. COMPLETELY REMOVE & DISPOSE OF CARPET, ADHESIVE, RESIDUE AND ANY UNDERLAYMENT AS MAY EXIST (V.I.F.).
- 2. V.C.T.: ALL EXISTING V.C.T. (UNDERNEATH CARPET) IS TO BE REMOVED IN ITS ENTIRETY THROUGHOUT WORK AREA. COMPLETELY REMOVE & DISPOSE OF V.C.T., ADHESIVE, AND RESIDUE.
- 3. FOLLOWING DEMO, (E) FLOOR SHALL BE COMPLETELY CLEANED AND MADE SMOOTH AND LEVEL AND AT PROPER ELEVATIONS FOR NEW FLOORING WORK. EXPOSED CONCRETE DEFECTS SHALL BE PATCHED AND FILLED, INCL. GRINDING DOWN OR ROUGHENING AS REQ'D.
- 5. CONDUCT MOISTURE TESTING TO ENSURE (E) SUBFLOOR IS DRY BEFORE INSTALLATION OF NEW FLOORING.
- 6. SEE SPECITICATIONS FOR DEMOLITION AND PREPARATION DETAILS.

PLAN - EXISTING AND DEMOLITION (EXISTING CLASSROOM)

Scale: 1/8" = 1'-0"



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Sheet Notes

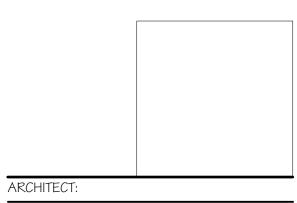
ISSUED: REVISION #: 00/00/0000 REVISION #: 00/00/0000 REVISION #: 00/00/0000 REVISION #: 00/00/0000 ISSUED FOR: BIDDING

DEDHAM CAPEN DANCE STUDIO 2023

DEDHAM FACILITIES DEPARTMENT 450 Washington Street Dedham, MA 02026

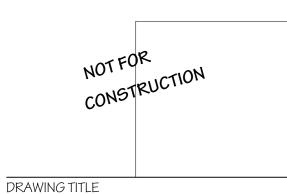
ENGINEER:

BLW ENGINEERS, INC. 311 GREDAT RD. LITTLETON, MA



James Carr architecture + design

AIA, NCARB, LEED AP BD+C 366 Boylston St. Brookline, MA 02445 o: 617.879.0725 c: 617.595.6351 e: jcarr@alum.mit.edu



Plans - Dance Studio

2202

SCALE SEE DRAWINGS 03.01.23 PROJ. NO.

DETAIL PLAN Scale: 1/4" = 1'-0" DANCE FLOORING AREA:

__42'-6" X 21'-6"__

-11'-9'3/8"(V.I.F.)

VCT FLOORING

√ A5.1

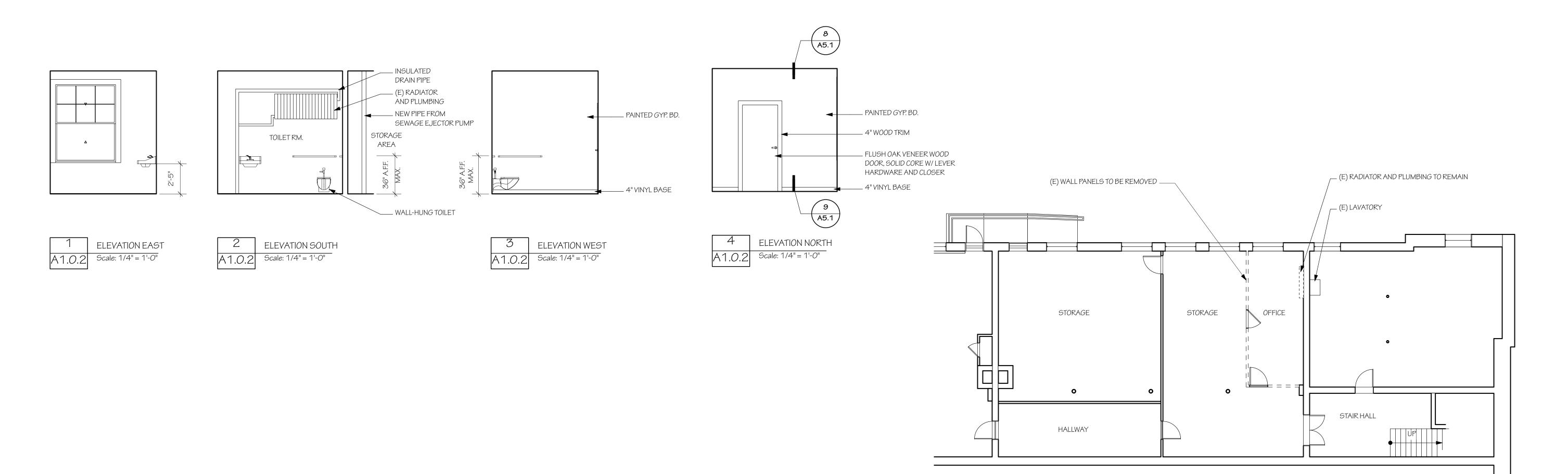
A5.1

4'-0"(V.I.F.) | 2'-4"(V.I.F.)

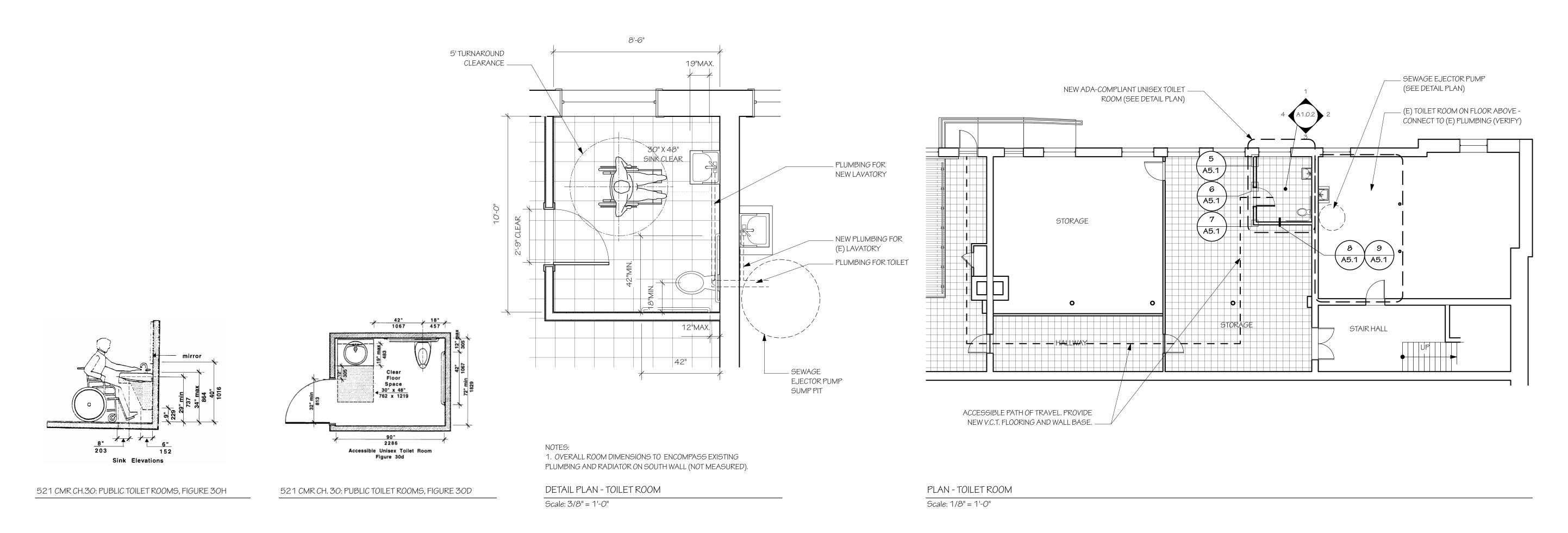
SLOPED_

THRESHOLD_

MAX SLOPE 1:20







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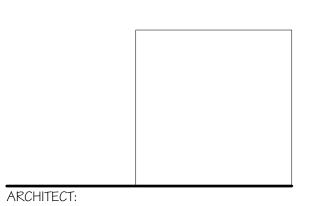
DEDHAM CAPEN DANCE STUDIO 2023

OWNED.

DEDHAM FACILITIES DEPARTMENT 450 Washington Street Dedham, MA 02026

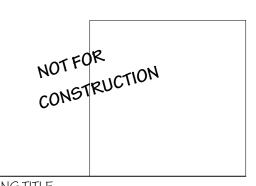
ENGINEER:

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James Carr architecture + design

AIA, NCARB, LEED APBD+C
366 Boylston St.
Brookline, MA 02445
o: 617.879.0725 c: 617.595.6351
e: jcarr@alum.mit.edu



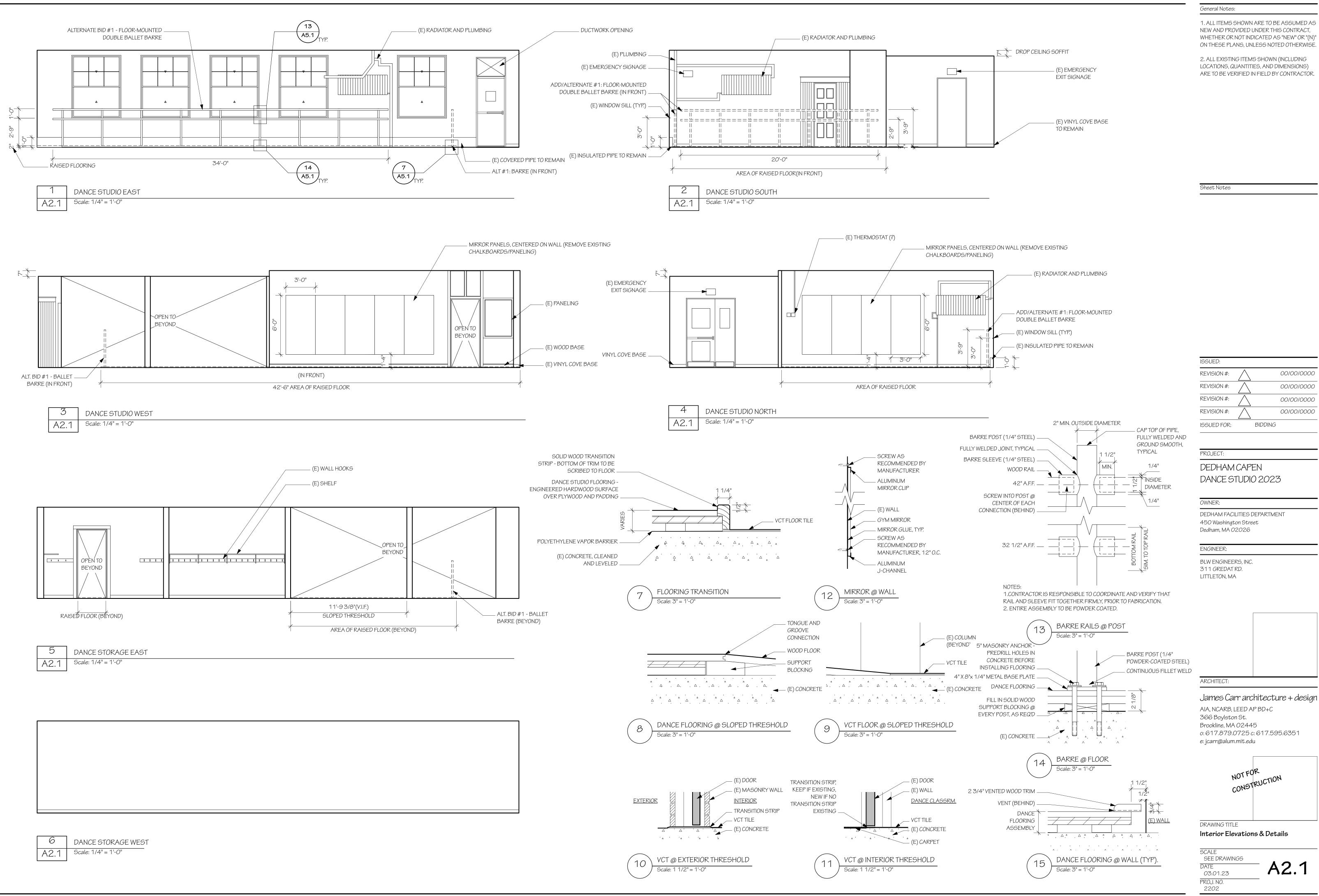
DRAWING TITLE

TOILET ROOM (BY OWNER)

SCALE
SEE DRAWINGS

DATE
03.01.23

PROJ. NO.
2202



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[Wage Rates]



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

Lt. Governor

Awarding Authority:

Contract Number: 20230010 City/Town: DEDHAM

Description of Work: The Work consists of renovation of an existing classroom for a new dance studio, including new flooring, mirror,

barre.

Town of Dedham

Job Location: 322 Sprauge Street

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.

Issue Date: 02/28/2023 **Wage Request Number:** 20230224-004

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
Construction						
(2 AXLE) DRIVER - EQUIPMENT TEAMSTERS JOINT COUNCIL NO. 10 ZONE A	12/01/2021	\$37.05	\$13.41	\$16.01	\$0.00	\$66.47
(3 AXLE) DRIVER - EQUIPMENT TEAMSTERS JOINT COUNCIL NO. 10 ZONE A	12/01/2021	\$37.12	\$13.41	\$16.01	\$0.00	\$66.54
(4 & 5 AXLE) DRIVER - EQUIPMENT TEAMSTERS JOINT COUNCIL NO. 10 ZONE A	12/01/2021	\$37.24	\$13.41	\$16.01	\$0.00	\$66.66
ADS/SUBMERSIBLE PILOT PILE DRIVER LOCAL 56 (ZONE 1)	08/01/2020	\$103.05	\$9.40	\$23.12	\$0.00	\$135.57
For apprentice rates see "Apprentice-PILE DRIVER"						
AIR TRACK OPERATOR	12/01/2022	\$43.93	\$9.10	\$17.57	\$0.00	\$70.60
LABORERS - ZONE 1	06/01/2023	\$44.93	\$9.10	\$17.57	\$0.00	\$71.60
	12/01/2023	\$46.18	\$9.10	\$17.57	\$0.00	\$72.85
For apprentice rates see "Apprentice- LABORER"						
AIR TRACK OPERATOR (HEAVY & HIGHWAY)	12/01/2022	\$43.33	\$9.35	\$17.82	\$0.00	\$70.50
LABORERS - ZONE 1 (HEAVY & HIGHWAY)	06/01/2023	\$44.33	\$9.35	\$17.82	\$0.00	\$71.50
	12/01/2023	\$45.58	\$9.35	\$17.82	\$0.00	\$72.75
	06/01/2024	\$47.06	\$9.35	\$17.82	\$0.00	\$74.23
	12/01/2024	\$48.53	\$9.35	\$17.82	\$0.00	\$75.70
	06/01/2025	\$50.03	\$9.35	\$17.82	\$0.00	\$77.20
	12/01/2025	\$51.53	\$9.35	\$17.82	\$0.00	\$78.70
	06/01/2026	\$53.08	\$9.35	\$17.82	\$0.00	\$80.25
	12/01/2026	\$54.58	\$9.35	\$17.82	\$0.00	\$81.75
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)						
ASBESTOS REMOVER - PIPE / MECH. EQUIPT. HEAT & FROST INSULATORS LOCAL 6 (BOSTON)	12/01/2020	\$38.10	\$12.80	\$9.45	\$0.00	\$60.35
ASPHALT RAKER	12/01/2022	\$43.43	\$9.10	\$17.57	\$0.00	\$70.10
LABORERS - ZONE I	06/01/2023	\$44.43	\$9.10	\$17.57	\$0.00	\$71.10
For apprentice rates see "Apprentice- LABORER"	12/01/2023	\$45.68	\$9.10	\$17.57	\$0.00	\$72.35
ASPHALT RAKER (HEAVY & HIGHWAY)	12/01/2022	\$42.83	\$9.35	\$17.82	\$0.00	\$70.00
LABORERS - ZONE 1 (HEAVY & HIGHWAY)	06/01/2023	\$43.83	\$9.35	\$17.82	\$0.00	\$71.00
	12/01/2023	\$45.08	\$9.35	\$17.82	\$0.00	\$72.25
	06/01/2024	\$46.56	\$9.35	\$17.82	\$0.00	\$73.73
	12/01/2024	\$48.03	\$9.35	\$17.82	\$0.00	\$75.20
	06/01/2025	\$49.53	\$9.35	\$17.82	\$0.00	\$76.70
	12/01/2025	\$51.03	\$9.35	\$17.82	\$0.00	\$78.20
	06/01/2026	\$52.58	\$9.35	\$17.82	\$0.00	\$79.75
	12/01/2026	\$54.08	\$9.35	\$17.82	\$0.00	\$81.25
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)			4,.00		.	+

 Issue Date:
 02/28/2023
 Wage Request Number:
 20230224-004
 Page 2 of 41

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
ASPHALT/CONCRETE/CRUSHER PLANT-ON SITE	12/01/2022	\$53.63	\$14.25	\$16.05	\$0.00	\$83.93
OPERATING ENGINEERS LOCAL 4	06/01/2023	\$54.88	\$14.25	\$16.05	\$0.00	\$85.18
	12/01/2023	\$56.13	\$14.25	\$16.05	\$0.00	\$86.43
	06/01/2024	\$57.43	\$14.25	\$16.05	\$0.00	\$87.73
	12/01/2024	\$58.88	\$14.25	\$16.05	\$0.00	\$89.18
	06/01/2025	\$60.18	\$14.25	\$16.05	\$0.00	\$90.48
	12/01/2025	\$61.63	\$14.25	\$16.05	\$0.00	\$91.93
	06/01/2026	\$62.93	\$14.25	\$16.05	\$0.00	\$93.23
	12/01/2026	\$64.38	\$14.25	\$16.05	\$0.00	\$94.68
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
BACKHOE/FRONT-END LOADER OPERATING ENGINEERS LOCAL 4	12/01/2022	\$53.63	\$14.25	\$16.05	\$0.00	\$83.93
0. 24.1 2. 0.1.22.0 200.2 /	06/01/2023	\$54.88	\$14.25	\$16.05	\$0.00	\$85.18
	12/01/2023	\$56.13	\$14.25	\$16.05	\$0.00	\$86.43
	06/01/2024	\$57.43	\$14.25	\$16.05	\$0.00	\$87.73
	12/01/2024	\$58.88	\$14.25	\$16.05	\$0.00	\$89.18
	06/01/2025	\$60.18	\$14.25	\$16.05	\$0.00	\$90.48
	12/01/2025	\$61.63	\$14.25	\$16.05	\$0.00	\$91.93
	06/01/2026	\$62.93	\$14.25	\$16.05	\$0.00	\$93.23
For apprentice rates see "Apprentice- OPERATING ENGINEERS"	12/01/2026	\$64.38	\$14.25	\$16.05	\$0.00	\$94.68
BARCO-TYPE JUMPING TAMPER	12/01/2022	\$43.43	\$9.10	\$17.57	\$0.00	\$70.10
LABORERS - ZONE 1	06/01/2023	\$44.43	\$9.10	\$17.57	\$0.00	\$71.10
	12/01/2023	\$45.68	\$9.10	\$17.57	\$0.00	\$72.35
For apprentice rates see "Apprentice- LABORER"						
BLOCK PAVER, RAMMER / CURB SETTER	12/01/2022	\$43.93	\$9.10	\$17.57	\$0.00	\$70.60
LABORERS - ZONE I	06/01/2023	\$44.93	\$9.10	\$17.57	\$0.00	\$71.60
For apprentice rates see "Apprentice- LABORER"	12/01/2023	\$46.18	\$9.10	\$17.57	\$0.00	\$72.85
BLOCK PAVER, RAMMER / CURB SETTER (HEAVY &	12/01/2022	\$43.33	\$9.35	\$17.82	\$0.00	\$70.50
HIGHWAY) LABORERS - ZONE I (HEAVY & HIGHWAY)	06/01/2023	\$44.33	\$9.35	\$17.82	\$0.00	\$71.50
LABORERS - ZONE I (REAVI & RIORWAI)	12/01/2023	\$45.58	\$9.35	\$17.82	\$0.00	\$72.75
	06/01/2024	\$47.06	\$9.35	\$17.82	\$0.00	\$74.23
	12/01/2024	\$48.53	\$9.35	\$17.82	\$0.00	\$75.70
	06/01/2025	\$50.03	\$9.35	\$17.82	\$0.00	\$77.20
	12/01/2025	\$51.53	\$9.35	\$17.82	\$0.00	\$78.70
	06/01/2026	\$53.08	\$9.35	\$17.82	\$0.00	\$80.25
	12/01/2026	\$54.58	\$9.35	\$17.82	\$0.00	\$81.75
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)						
BOILER MAKER	01/01/2023	\$47.37	\$7.07	\$20.31	\$0.00	\$74.75
BOILERMAKERS LOCAL 29	01/01/2024	\$48.12	\$7.07	\$20.60	\$0.00	\$75.79

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Pension

	Effectiv Step	ve Date -	01/01/2023	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate	<u>.</u>
-	1	65		\$30.79	\$7.07	\$13.22	\$0.00	\$51.08	
	2	65		\$30.79	\$7.07	\$13.22	\$0.00	\$51.08 \$51.08	
	3	70		\$33.16	\$7.07	\$13.22	\$0.00	\$51.06 \$54.46	
	4	75		\$35.53	\$7.07	\$14.23 \$15.24	\$0.00	\$57.84	
	5	80		\$33.33 \$37.90	\$7.07	\$13.24 \$16.25	\$0.00	\$57.84 \$61.22	
	6	85		\$40.26	\$7.07	\$10.23	\$0.00	\$64.61	
	7	90							
	8	95		\$42.63 \$45.00	\$7.07 \$7.07	\$18.28 \$19.32	\$0.00 \$0.00	\$67.98 \$71.39	
	Ü)3		\$45.00	\$7.07	\$19.32	\$0.00	\$/1.59	,
1	Effecti	ve Date -	01/01/2024				Supplemental		
5	Step	percent	A	Apprentice Base Wage	Health	Pension	Unemployment	Total Rate	e
	1	65		\$31.28	\$7.07	\$13.22	\$0.00	\$51.57	7
	2	65		\$31.28	\$7.07	\$13.22	\$0.00	\$51.57	7
	3	70		\$33.68	\$7.07	\$14.23	\$0.00	\$54.98	3
	4	75		\$36.09	\$7.07	\$15.24	\$0.00	\$58.40)
	5	80		\$38.50	\$7.07	\$16.25	\$0.00	\$61.82	2
	6	85		\$40.90	\$7.07	\$17.28	\$0.00	\$65.25	5
	7	90		\$43.31	\$7.07	\$18.28	\$0.00	\$68.66	ó
	8	95		\$45.71	\$7.07	\$19.32	\$0.00	\$72.10)
- []	Notes:								
į									
1	Apprei	ntice to Jou	rneyworker Ratio:1:4						
		ICIAL MA	SONRY (INCL. MASONRY	02/01/2023	\$58.21	\$11.49	\$21.65	\$0.00	\$91.35
RPROOFII AYERS LOCA	,	XBORO)		08/01/2023	\$60.26	\$11.49	\$21.65	\$0.00	\$93.40
				02/01/2024	\$61.51	\$11.49	\$21.65	\$0.00	\$94.65
				08/01/2024	\$63.61	\$11.49	\$21.65	\$0.00	\$96.75
				02/01/2025	\$64.91	\$11.49	\$21.65	\$0.00	\$98.05
				08/01/2025	\$67.06	\$11.49	\$21.65	\$0.00	\$100.2
				02/01/2026	\$68.41	\$11.49	\$21.65	\$0.00	\$101.5
				08/01/2026	\$70.61	\$11.49	\$21.65	\$0.00	\$103.7
				02/01/2027	\$72.01	\$11.49	\$21.65	\$0.00	\$105.1

Pension

		ntice - BRICK/PLASTER/CEME	NT MASON - Local 3 Foxbor	0				
	Effecti Step	ve Date - 02/01/2023 percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate	
	$\frac{\operatorname{step}}{1}$	50	\$29.11	\$11.49	\$21.65		\$62.25	
	2	60	\$29.11 \$34.93	\$11.49	\$21.65	\$0.00 \$0.00	\$62.23 \$68.07	
	3	70						
	4		\$40.75	\$11.49	\$21.65	\$0.00	\$73.89	
		80	\$46.57	\$11.49	\$21.65	\$0.00	\$79.71	
	5	90	\$52.39	\$11.49	\$21.65	\$0.00	\$85.53	
	Effecti	ve Date - 08/01/2023				Supplemental		
	Step	percent	Apprentice Base Wage	Health	Pension	Unemployment	Total Rate	
	1	50	\$30.13	\$11.49	\$21.65	\$0.00	\$63.27	
	2	60	\$36.16	\$11.49	\$21.65	\$0.00	\$69.30	
	3	70	\$42.18	\$11.49	\$21.65	\$0.00	\$75.32	
	4	80	\$48.21	\$11.49	\$21.65	\$0.00	\$81.35	
	5	90	\$54.23	\$11.49	\$21.65	\$0.00	\$87.37	
	Notes:							
		ntice to Journeyworker Ratio:1:5	5					
BULLDOZER/ OPERATING ENGI			12/01/2022	2 \$53.05	\$14.25	\$16.05	\$0.00	\$83.35
on Ekaning Engl	NEEKS EC	CAL 4	06/01/2023	\$54.29	\$14.25	\$16.05	\$0.00	\$84.59
			12/01/2023	\$55.53	\$14.25	\$16.05	\$0.00	\$85.83
			06/01/2024	\$56.81	\$14.25	\$16.05	\$0.00	\$87.11
			12/01/2024	\$58.25	\$14.25	\$16.05	\$0.00	\$88.55
			06/01/2025	\$59.53	\$14.25	\$16.05	\$0.00	\$89.83
			12/01/2025	\$60.97	\$14.25	\$16.05	\$0.00	\$91.27
			06/01/2020	\$62.25	\$14.25	\$16.05	\$0.00	\$92.55
			12/01/2020	\$63.69	\$14.25	\$16.05	\$0.00	\$93.99
		Apprentice- OPERATING ENGINEERS"				44.5.05	40.00	
LABORERS - FOU		INNING BOTTOM MAN AND MARINE	12/01/2022			\$17.97	\$0.00	\$71.05
			06/01/2023			\$17.97	\$0.00	\$72.05
			12/01/2023			\$17.97	\$0.00	\$73.30
			06/01/2024	4 \$47.46	\$9.35	\$17.97	\$0.00	\$74.78
			12/01/2024	\$48.93	\$9.35	\$17.97	\$0.00	\$76.25
			06/01/2025	\$50.43	\$9.35	\$17.97	\$0.00	\$77.75
			12/01/2025	\$51.93	\$9.35	\$17.97	\$0.00	\$79.25
			06/01/2026	\$53.48	\$9.35	\$17.97	\$0.00	\$80.80
			12/01/2026	5 \$54.98	\$9.35	\$17.97	\$0.00	\$82.30
For apprentice	rates see "	Apprentice- LABORER"						

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Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
CAISSON & UNDERPINNING LABORER	12/01/2022	\$42.58	\$9.35	\$17.97	\$0.00	\$69.90
LABORERS - FOUNDATION AND MARINE	06/01/2023	\$43.58	\$9.35	\$17.97	\$0.00	\$70.90
	12/01/2023	\$44.83	\$9.35	\$17.97	\$0.00	\$72.15
	06/01/2024	\$46.31	\$9.35	\$17.97	\$0.00	\$73.63
	12/01/2024	\$47.78	\$9.35	\$17.97	\$0.00	\$75.10
	06/01/2025	\$49.28	\$9.35	\$17.97	\$0.00	\$76.60
	12/01/2025	\$50.78	\$9.35	\$17.97	\$0.00	\$78.10
	06/01/2026	\$52.33	\$9.35	\$17.97	\$0.00	\$79.65
	12/01/2026	\$53.83	\$9.35	\$17.97	\$0.00	\$81.15
For apprentice rates see "Apprentice- LABORER"						
CAISSON & UNDERPINNING TOP MAN	12/01/2022	\$42.58	\$9.35	\$17.97	\$0.00	\$69.90
ABORERS - FOUNDATION AND MARINE	06/01/2023	\$43.58	\$9.35	\$17.97	\$0.00	\$70.90
	12/01/2023	\$44.83	\$9.35	\$17.97	\$0.00	\$72.15
	06/01/2024	\$46.31	\$9.35	\$17.97	\$0.00	\$73.63
	12/01/2024	\$47.78	\$9.35	\$17.97	\$0.00	\$75.10
	06/01/2025	\$49.28	\$9.35	\$17.97	\$0.00	\$76.60
	12/01/2025	\$50.78	\$9.35	\$17.97	\$0.00	\$78.10
	06/01/2026	\$52.33	\$9.35	\$17.97	\$0.00	\$79.65
	12/01/2026	\$53.83	\$9.35	\$17.97	\$0.00	\$81.15
For apprentice rates see "Apprentice- LABORER"						
CARBIDE CORE DRILL OPERATOR	12/01/2022	\$43.43	\$9.10	\$17.57	\$0.00	\$70.10
LABORERS - ZONE I	06/01/2023	\$44.43	\$9.10	\$17.57	\$0.00	\$71.10
	12/01/2023	\$45.68	\$9.10	\$17.57	\$0.00	\$72.35
For apprentice rates see "Apprentice- LABORER"						
CARPENTER CARPENTERS -ZONE 1 (Metro Boston)	09/01/2022	\$54.77	\$8.68	\$19.97	\$0.00	\$83.42
CAM ENTERS -ZONE I (METO DOSION)	03/01/2023	\$55.62	\$8.68	\$19.97	\$0.00	\$84.27

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Pension

Apprentice -	CARPENTER -	- Zone	1 Metro	Boston
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Effect	ive Date -	09/01/2022				Supplemental		
Step	percent		Apprentice Base Wage	Health	Pension	Unemployment	Total Rate	
1	50		\$27.39	\$8.68	\$1.73	\$0.00	\$37.80	
2	60		\$32.86	\$8.68	\$1.73	\$0.00	\$43.27	
3	70		\$38.34	\$8.68	\$14.78	\$0.00	\$61.80	
4	75		\$41.08	\$8.68	\$14.78	\$0.00	\$64.54	
5	80		\$43.82	\$8.68	\$16.51	\$0.00	\$69.01	
6	80		\$43.82	\$8.68	\$16.51	\$0.00	\$69.01	
7	90		\$49.29	\$8.68	\$18.24	\$0.00	\$76.21	
8	90		\$49.29	\$8.68	\$18.24	\$0.00	\$76.21	
Effect Step	ive Date -	03/01/2023	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate	
1	50		\$27.81	\$8.68	\$1.73	\$0.00	\$38.22	
2	60		\$33.37	\$8.68	\$1.73	\$0.00	\$43.78	
3	70		\$38.93	\$8.68	\$14.78	\$0.00	\$62.39	
4	75		\$41.72	\$8.68	\$14.78	\$0.00	\$65.18	
5	80		\$44.50	\$8.68	\$16.51	\$0.00	\$69.69	
6	80		\$44.50	\$8.68	\$16.51	\$0.00	\$69.69	
7	90		\$50.06	\$8.68	\$18.24	\$0.00	\$76.98	
8	90		\$50.06	\$8.68	\$18.24	\$0.00	\$76.98	
Notes			/55/70/70/80/80					
		\$35.03/3&4 \$42.20/5&6 \$						
Appro	entice to Jo	urneyworker Ratio:1:5						
RPENTER WOOD			04/01/2022	2 \$28.62	\$7.21	\$5.80	\$0.00	\$41.63
RPENTERS -ZONE 2 (Wo	od Frame)		04/01/2023	\$28.97	\$7.21	\$5.80	\$0.00	\$41.98

All Aspects of New Wood Frame Work

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Pension

\$22.74

\$12.75

\$0.87

\$88.09

Total Rate

Apprentice - CARPENTER (Wood Frame) - Zone 2 04/01/2022 **Effective Date -**Supplemental Apprentice Base Wage Health Unemployment Total Rate Step percent Pension 1 50 \$14.31 \$7.21 \$0.00 \$0.00 \$21.52 2 50 \$14.31 \$7.21 \$0.00 \$0.00 \$21.52 3 55 \$15.74 \$7.21 \$2.00 \$0.00 \$24.95 4 55 \$15.74 \$7.21 \$2.00 \$0.00 \$24.95 5 70 \$20.03 \$7.21 \$0.00 \$33.04 \$5.80 6 70 \$20.03 \$7.21 \$5.80 \$0.00 \$33.04 7 80 \$22.90 \$7.21 \$5.80 \$0.00 \$35.91 8 80 \$22.90 \$7.21 \$5.80 \$0.00 \$35.91 **Effective Date -**04/01/2023 Supplemental Apprentice Base Wage Health Pension Unemployment Total Rate Step percent 1 50 \$14.49 \$7.21 \$0.00 \$0.00 \$21.70 2 50 \$14.49 \$7.21 \$0.00 \$0.00 \$21.70 3 55 \$15.93 \$7.21 \$2.00 \$0.00 \$25.14 4 55 \$15.93 \$0.00 \$7.21 \$2.00 \$25.14 5 70 \$20.28 \$7.21 \$5.80 \$0.00 \$33.29 6 70 \$20.28 \$7.21 \$5.80 \$0.00 \$33.29 7 80 \$23.18 \$7.21 \$5.80 \$0.00 \$36.19 8 80 \$23.18 \$7.21 \$0.00 \$5.80 \$36.19 Notes: % Indentured After 10/1/17; 45/45/55/55/70/70/80/80 Step 1&2 \$20.09/ 3&4 \$24.95/ 5&6 \$33.04/ 7&8 \$35.91

Apprentice to Journeyworker Ratio:1:5						
CEMENT MASONRY/PLASTERING BRICKLAYERS LOCAL 3 (FOXBORO)	01/01/2023	\$49.45	\$12.75	\$22.74	\$0.87	\$85.81
BRICKLAIERS LOCAL 5 (FOABORO)	07/01/2023	\$50.59	\$12.75	\$22.74	\$0.87	\$86.95

01/01/2024

\$51.73

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Total Rate

Unemployment

Apprentice - CEMENT MASONRY/PLASTERING - Foxboro 01/01/2023 **Effective Date -**Supplemental percent Apprentice Base Wage Health Pension Unemployment Total Rate Step 1 50 \$24.73 \$12.75 \$15.49 \$52.97 \$0.00 2 60 \$29.67 \$12.75 \$22.74 \$0.87 \$66.03 3 65 \$32.14 \$22.74 \$0.87 \$68.50 \$12.75 4 70 \$34.62 \$12.75 \$22.74 \$0.87 \$70.98 5 75 \$37.09 \$12.75 \$22.74 \$0.87 \$73.45 6 80 \$39.56 \$12.75 \$22.74 \$0.87 \$75.92 7 90 \$44.51 \$12.75 \$22.74 \$0.87 \$80.87 07/01/2023 **Effective Date -**Supplemental Unemployment Total Rate Step percent Apprentice Base Wage Health Pension 1 50 \$25.30 \$12.75 \$15.49 \$0.00 \$53.54 2 60 \$30.35 \$12.75 \$22.74 \$0.87 \$66.71 3 65 \$32.88 \$0.87 \$12.75 \$22.74 \$69.24 4 70 \$35.41 \$22.74 \$0.87 \$71.77 \$12.75 5 75 \$37.94 \$12.75 \$22.74 \$0.87 \$74.30 6 80 \$40.47 \$12.75 \$22.74 \$0.87 \$76.83 7 90 \$45.53 \$0.87 \$12.75 \$22.74 \$81.89 Notes: Steps 3,4 are 500 hrs. All other steps are 1,000 hrs. Apprentice to Journeyworker Ratio:1:3 CHAIN SAW OPERATOR \$17.57 \$0.00 \$70.10 12/01/2022 \$43.43 \$9.10 LABORERS - ZONE 1 \$17.57 \$0.00 06/01/2023 \$44.43 \$9.10 \$71.10 \$0.00 \$9.10 \$17.57 \$72.35 12/01/2023 \$45.68 12/01/2022 \$54.68 \$14.25 \$16.05 \$0.00 \$84.98 \$0.00 06/01/2023 \$55.95 \$14.25 \$16.05 \$86.25 12/01/2023 \$57.23 \$14.25 \$16.05 \$0.00 \$87.53

For apprentice rates see "Apprentice- LABORER" CLAM SHELLS/SLURRY BUCKETS/HEADING MACHINES OPERATING ENGINEERS LOCAL 4 06/01/2024 \$58.55 \$14.25 \$16.05 \$0.00 \$88.85 \$16.05 \$0.00 12/01/2024 \$60.03 \$14.25 \$90.33 \$0.00 06/01/2025 \$16.05 \$61.36 \$14.25 \$91.66 \$16.05 \$0.00 \$93.13 12/01/2025 \$62.83 \$14.25 06/01/2026 \$16.05 \$0.00 \$94.46 \$64.16 \$14.25 12/01/2026 \$65.64 \$14.25 \$16.05 \$0.00 \$95.94

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

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Classification			Effective Da	te Base Wag	e Health		Supplemental Unemployment	Total Rate
COMPRESSO			12/01/2022	\$35.08	\$14.25	\$16.05	\$0.00	\$65.38
OPERATING ENG	INEERS LO	OCAL 4	06/01/2023	\$35.90	\$14.25	\$16.05	\$0.00	\$66.20
			12/01/2023	\$36.72	\$14.25	\$16.05	\$0.00	\$67.02
			06/01/2024	\$37.57	\$14.25	\$16.05	\$0.00	\$67.87
			12/01/2024	\$38.52	\$14.25	\$16.05	\$0.00	\$68.82
			06/01/2025	\$39.37	\$14.25	\$16.05	\$0.00	\$69.67
			12/01/2025	\$40.32	\$14.25	\$16.05	\$0.00	\$70.62
			06/01/2026	\$41.18	\$14.25	\$16.05	\$0.00	\$71.48
			12/01/2026	\$42.13	\$14.25	\$16.05	\$0.00	\$72.43
		'Apprentice- OPERATING ENGINEERS"						
DELEADER (1 PAINTERS LOCAL			01/01/2023			\$23.05	\$0.00	\$87.76
			07/01/2023	\$57.26		\$23.05	\$0.00	\$88.96
			01/01/2024			\$23.05	\$0.00	\$90.16
			07/01/2024			\$23.05	\$0.00	\$91.36
			01/01/2025	\$60.86	\$8.65	\$23.05	\$0.00	\$92.56
		ntice - PAINTER Local 35 - BRIDG ive Date - 01/01/2023 percent	ES/TANKS Apprentice Base Wage	Health	Pension	Supplementa Unemploymen		
	1	50	\$28.03	\$8.65	\$0.00	\$0.00	\$36.68	
	2	55	\$30.83	\$8.65	\$6.27	\$0.00		
	3	60	\$33.64	\$8.65	\$6.84	\$0.00		
	4	65	\$36.44	\$8.65	\$7.41	\$0.00		
	5	70	\$39.24	\$8.65	\$19.63	\$0.00		
	6	75	\$42.05	\$8.65	\$20.20	\$0.00		
	7	80	\$44.85	\$8.65	\$20.77	\$0.00		
	8	90	\$50.45	\$8.65	\$21.91	\$0.00		
	Effecti	ive Date - 07/01/2023				Supplementa	I	
	Step	percent	Apprentice Base Wage	Health	Pension	Unemploymen		
	1	50	\$28.63	\$8.65	\$0.00	\$0.00	\$37.28	
	2	55	\$31.49	\$8.65	\$6.27	\$0.00	\$46.41	
	3	60	\$34.36	\$8.65	\$6.84	\$0.00	\$49.85	
	4	65	\$37.22	\$8.65	\$7.41	\$0.00	\$53.28	
	5	70	\$40.08	\$8.65	\$19.63	\$0.00	\$68.36	
	6	75	\$42.95	\$8.65	\$20.20	\$0.00		
	7	80	\$45.81	\$8.65	\$20.77	\$0.00	\$75.23	
	8	90	\$51.53	\$8.65	\$21.91	\$0.00		
	Notes:	Steps are 750 hrs.						
	Appre	ntice to Journeyworker Ratio:1:1						
DEMO: ADZE			12/01/2022	\$43.33	\$9.10	\$17.57	\$0.00	\$70.00
LABORERS - ZON	ΕΊ		06/01/2023	\$44.33	\$9.10	\$17.57	\$0.00	\$71.00
			12/01/2023	\$45.58	\$9.10	\$17.57	\$0.00	\$72.25

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Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
For apprentice rates see "Apprentice- LABORER"					Chempioyment	
DEMO: BACKHOE/LOADER/HAMMER OPERATOR	12/01/2022	\$44.33	\$9.10	\$17.57	\$0.00	\$71.00
LABORERS - ZONE I	06/01/2023	\$45.33	\$9.10	\$17.57	\$0.00	\$72.00
	12/01/2023	\$46.58	\$9.10	\$17.57	\$0.00	\$73.25
For apprentice rates see "Apprentice- LABORER"						
DEMO: BURNERS LABORERS - ZONE 1	12/01/2022	\$44.08	\$9.10	\$17.57	\$0.00	\$70.75
LADURERS - ZUNE I	06/01/2023	\$45.08	\$9.10	\$17.57	\$0.00	\$71.75
	12/01/2023	\$46.33	\$9.10	\$17.57	\$0.00	\$73.00
For apprentice rates see "Apprentice- LABORER"						
DEMO: CONCRETE CUTTER/SAWYER LABORERS - ZONE 1	12/01/2022	\$44.33	\$9.10	\$17.57	\$0.00	\$71.00
Elborero - Zone 1	06/01/2023	\$45.33	\$9.10	\$17.57	\$0.00	\$72.00
	12/01/2023	\$46.58	\$9.10	\$17.57	\$0.00	\$73.25
For apprentice rates see "Apprentice- LABORER"						
DEMO: JACKHAMMER OPERATOR LABORERS - ZONE 1	12/01/2022	\$44.08	\$9.10	\$17.57	\$0.00	\$70.75
	06/01/2023	\$45.08	\$9.10	\$17.57	\$0.00	\$71.75
To the state of Laboretti	12/01/2023	\$46.33	\$9.10	\$17.57	\$0.00	\$73.00
For apprentice rates see "Apprentice- LABORER"						
DEMO: WRECKING LABORER LABORERS - ZONE 1	12/01/2022	\$43.33	\$9.10	\$17.57	\$0.00	\$70.00
	06/01/2023	\$44.33	\$9.10	\$17.57	\$0.00	\$71.00
For appropriate state one "Appropriate LADODED"	12/01/2023	\$45.58	\$9.10	\$17.57	\$0.00	\$72.25
For apprentice rates see "Apprentice- LABORER" DIRECTIONAL DRILL MACHINE OPERATOR			****	#1605	Ф0.00	
OPERATING ENGINEERS LOCAL 4	12/01/2022	\$53.05	\$14.25	\$16.05	\$0.00	\$83.35
	06/01/2023	\$54.29	\$14.25	\$16.05	\$0.00	\$84.59
	12/01/2023	\$55.53	\$14.25	\$16.05	\$0.00	\$85.83
	06/01/2024	\$56.81	\$14.25	\$16.05	\$0.00	\$87.11
	12/01/2024	\$58.25	\$14.25	\$16.05	\$0.00	\$88.55
	06/01/2025	\$59.53	\$14.25	\$16.05	\$0.00	\$89.83
	12/01/2025	\$60.97	\$14.25	\$16.05	\$0.00	\$91.27
	06/01/2026	\$62.25	\$14.25	\$16.05	\$0.00	\$92.55
	12/01/2026	\$63.69	\$14.25	\$16.05	\$0.00	\$93.99
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
DIVER PILE DRIVER LOCAL 56 (ZONE 1)	08/01/2020	\$68.70	\$9.40	\$23.12	\$0.00	\$101.22
For apprentice rates see "Apprentice- PILE DRIVER"						
DIVER TENDER PILE DRIVER LOCAL 56 (ZONE 1)	08/01/2020	\$49.07	\$9.40	\$23.12	\$0.00	\$81.59
For apprentice rates see "Apprentice- PILE DRIVER"						
DIVER TENDER (EFFLUENT) PILE DRIVER LOCAL 56 (ZONE 1)	08/01/2020	\$73.60	\$9.40	\$23.12	\$0.00	\$106.12
For apprentice rates see "Apprentice- PILE DRIVER"						
DIVER/SLURRY (EFFLUENT) PILE DRIVER LOCAL 56 (ZONE 1)	08/01/2020	\$103.05	\$9.40	\$23.12	\$0.00	\$135.57
For apprentice rates see "Apprentice- PILE DRIVER"						
DRAWBRIDGE OPERATOR (Construction) DRAWBRIDGE - SEIU LOCAL 888	07/01/2020	\$26.77	\$6.67	\$3.93	\$0.16	\$37.53
ELECTRICIAN	09/01/2022	\$58.28	\$13.00	\$21.35	\$0.00	\$92.63
ELECTRICIANS LOCAL 103	03/01/2023	\$59.23	\$13.00	\$21.63	\$0.00	\$93.86
	22. 01. 2023	457.25	ψ15.00	.=05	* * *	4,2.00

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Pension

\$20.21

\$16.03

\$0.00

\$101.86

Total Rate

tep	percent		Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40		\$23.31	\$13.00	\$0.70	\$0.00	\$37.01
2	40		\$23.31	\$13.00	\$0.70	\$0.00	\$37.01
3	45		\$26.23	\$13.00	\$15.87	\$0.00	\$55.10
4	45		\$26.23	\$13.00	\$15.87	\$0.00	\$55.10
5	50		\$29.14	\$13.00	\$16.36	\$0.00	\$58.50
6	55		\$32.05	\$13.00	\$16.86	\$0.00	\$61.91
7	60		\$34.97	\$13.00	\$17.36	\$0.00	\$65.33
8	65		\$37.88	\$13.00	\$17.86	\$0.00	\$68.74
			\$40.80	\$13.00	\$18.35	\$0.00	\$72.15
9	70		Ψ10.00				
10	75	03/01/2023	\$43.71	\$13.00	\$18.86	\$0.00	\$75.57
10		03/01/2023		\$13.00	\$18.86 Pension	\$0.00 Supplemental Unemployment	\$75.57 Total Rate
10 E ffecti	75	03/01/2023	\$43.71	\$13.00		Supplemental	
10 E ffecti Step	75 ive Date - percent	03/01/2023	\$43.71 Apprentice Base Wage	\$13.00 Health	Pension	Supplemental Unemployment	Total Rate
10 Effecti Step 1	75 ive Date - percent 40	03/01/2023	\$43.71 Apprentice Base Wage \$23.69	\$13.00 Health \$13.00	Pension \$0.71	Supplemental Unemployment \$0.00	Total Rate \$37.40 \$37.40
Effecti Step 1	75 ive Date - percent 40 40	03/01/2023	\$43.71 Apprentice Base Wage \$23.69 \$23.69	\$13.00 Health \$13.00 \$13.00	Pension \$0.71 \$0.71	Supplemental Unemployment \$0.00 \$0.00	Total Rate
Effecti Step 1 2 3	75 ive Date - percent 40 40 45	03/01/2023	\$43.71 Apprentice Base Wage \$23.69 \$23.69 \$26.65	\$13.00 Health \$13.00 \$13.00 \$13.00	\$0.71 \$0.71 \$16.13	Supplemental Unemployment \$0.00 \$0.00 \$0.00	Total Rate \$37.40 \$37.40 \$55.78
Effecti Step 1 2 3 4	75 ive Date - percent 40 40 45 45	03/01/2023	\$43.71 Apprentice Base Wage \$23.69 \$23.69 \$26.65 \$26.65	\$13.00 Health \$13.00 \$13.00 \$13.00 \$13.00	\$0.71 \$0.71 \$16.13 \$16.13	Supplemental Unemployment \$0.00 \$0.00 \$0.00 \$0.00	Total Rate \$37.40 \$37.40 \$55.78
Effecti Step 1 2 3 4 5	75 ive Date - percent 40 40 45 45 50	03/01/2023	\$43.71 Apprentice Base Wage \$23.69 \$23.69 \$26.65 \$26.65 \$29.62	\$13.00 Health \$13.00 \$13.00 \$13.00 \$13.00 \$13.00	\$0.71 \$0.71 \$16.13 \$16.13 \$16.63	\$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00	Total Rate \$37.40 \$37.40 \$55.78 \$55.78 \$59.25
Effecti Step 1 2 3 4 5 6	75 ive Date - percent 40 40 45 45 50 55	03/01/2023	\$43.71 Apprentice Base Wage \$23.69 \$23.69 \$26.65 \$26.65 \$29.62 \$32.58	\$13.00 Health \$13.00 \$13.00 \$13.00 \$13.00 \$13.00	\$0.71 \$0.71 \$16.13 \$16.13 \$16.63 \$17.13	\$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00	Total Rate \$37.40 \$37.40 \$55.78 \$55.78 \$59.25 \$62.71
10 Effecti Step 1 2 3 4 5 6 7	75 ive Date - percent 40 40 45 45 50 55 60	03/01/2023	\$43.71 Apprentice Base Wage \$23.69 \$23.69 \$26.65 \$26.65 \$29.62 \$32.58 \$35.54	\$13.00 Health \$13.00 \$13.00 \$13.00 \$13.00 \$13.00 \$13.00 \$13.00	\$0.71 \$0.71 \$16.13 \$16.13 \$16.63 \$17.13	\$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00	Total Rate \$37.40 \$37.40 \$55.78 \$59.25 \$62.71 \$66.17

Apprentice to Journeyworker Ratio:2:3***

ELEVATOR CONSTRUCTOR

ELEVATOR CONSTRUCTORS LOCAL 4

01/01/2022

\$65.62

Total Rate

	Step	ve Date - 01/01/2022 percent	Apprentice Base Wag	ge Health	Į.	Pension	Supplemental Unemployment	Tota	l Rate
	1	50	\$32.81	\$16.03		\$0.00	\$0.00	\$	548.84
	2	55	\$36.09	\$16.03		\$20.21	\$0.00	\$	372.33
	3	65	\$42.65	\$16.03		\$20.21	\$0.00	\$	578.89
	4	70	\$45.93	\$16.03		\$20.21	\$0.00	\$	882.17
	5	80	\$52.50	\$16.03		\$20.21	\$0.00	\$	888.74
	Notes:								. –
		Steps 1-2 are 6 mos.; S	teps 3-5 are 1 year						
		ntice to Journeyworker	Ratio:1:1						
LEVATOR CONS		JCTOR HELPER S <i>LOCAL 4</i>	01/01/20)22 \$	345.93	\$16.03	\$20.21	\$0.00	\$82.17
For apprentice	e rates see '	Apprentice - ELEVATOR CO	NSTRUCTOR"						
		IL ERECTOR (HEAVY	& HIGHWAY) 12/01/20)22 \$	342.83	\$9.35	\$17.82	\$0.00	\$70.00
ABORERS - ZON	E I (HEAV	i & Highwai)	06/01/20)23 \$	343.83	\$9.35	\$17.82	\$0.00	\$71.0
			12/01/20)23 \$	45.08	\$9.35	\$17.82	\$0.00	\$72.2
			06/01/20)24 \$	346.56	\$9.35	\$17.82	\$0.00	\$73.7
			12/01/20)24 \$	348.03	\$9.35	\$17.82	\$0.00	\$75.20
			06/01/20)25 \$	349.53	\$9.35	\$17.82	\$0.00	\$76.70
			12/01/20)25 \$	51.03	\$9.35	\$17.82	\$0.00	\$78.20
			06/01/20	026 \$	52.58	\$9.35	\$17.82	\$0.00	\$79.73
For apprentic	e rates see '	'Apprentice- LABORER (Heav	12/01/20)26 \$	554.08	\$9.35	\$17.82	\$0.00	\$81.2:
		SON-BLDG,SITE,HVY)22 \$	548.67	\$14.25	\$16.05	\$0.00	\$78.9
PERATING ENG	SINEERS LO	OCAL 4	05/01/20		49.91	\$14.25	\$16.05	\$0.00	\$80.2
			11/01/20		51.15	\$14.25	\$16.05	\$0.00	\$81.4:
			05/01/20	,	52.39	\$14.25	\$16.05	\$0.00	\$82.69
			11/01/20	•	53.68	\$14.25	\$16.05	\$0.00	\$83.98
			05/01/20		55.12	\$14.25	\$16.05	\$0.00	\$85.42
			11/01/20		556.41	\$14.25	\$16.05	\$0.00	\$86.7
			05/01/20		557.85	\$14.25	\$16.05	\$0.00	\$88.1:
			11/01/20)26 \$	59.14	\$14.25	\$16.05	\$0.00	\$89.4

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Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
FIELD ENG.PARTY CHIEF-BLDG,SITE,HVY/HWY	11/01/2022	\$50.22	\$14.25	\$16.05	\$0.00	\$80.52
OPERATING ENGINEERS LOCAL 4	05/01/2023	\$51.47	\$14.25	\$16.05	\$0.00	\$81.77
	11/01/2023	\$52.72	\$14.25	\$16.05	\$0.00	\$83.02
	05/01/2024	\$53.97	\$14.25	\$16.05	\$0.00	\$84.27
	11/01/2024	\$55.27	\$14.25	\$16.05	\$0.00	\$85.57
	05/01/2025	\$56.72	\$14.25	\$16.05	\$0.00	\$87.02
	11/01/2025	\$58.02	\$14.25	\$16.05	\$0.00	\$88.32
	05/01/2026	\$59.47	\$14.25	\$16.05	\$0.00	\$89.77
	11/01/2026	\$60.77	\$14.25	\$16.05	\$0.00	\$91.07
	05/01/2027	\$62.22	\$14.25	\$16.05	\$0.00	\$92.52
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
FIELD ENG.ROD PERSON-BLDG,SITE,HVY/HWY OPERATING ENGINEERS LOCAL 4	11/01/2022	\$24.31	\$14.25	\$16.05	\$0.00	\$54.61
	05/01/2023	\$25.05	\$14.25	\$16.05	\$0.00	\$55.35
	11/01/2023	\$25.78	\$14.25	\$16.05	\$0.00	\$56.08
	05/01/2024	\$26.51	\$14.25	\$16.05	\$0.00	\$56.81
	11/01/2024	\$27.27	\$14.25	\$16.05	\$0.00	\$57.57
	05/01/2025	\$28.12	\$14.25	\$16.05	\$0.00	\$58.42
	11/01/2025	\$28.88	\$14.25	\$16.05	\$0.00	\$59.18
	05/01/2026	\$29.73	\$14.25	\$16.05	\$0.00	\$60.03
	11/01/2026	\$30.49	\$14.25	\$16.05	\$0.00	\$60.79
The state of the s	05/01/2027	\$31.34	\$14.25	\$16.05	\$0.00	\$61.64
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
FIRE ALARM INSTALLER ELECTRICIANS LOCAL 103	09/01/2022	\$58.28	\$13.00	\$21.35	\$0.00	\$92.63
For apprentice rates see "Apprentice- ELECTRICIAN"	03/01/2023	\$59.23	\$13.00	\$21.63	\$0.00	\$93.86
FIRE ALARM REPAIR / MAINTENANCE	09/01/2022	\$46.42	\$13.00	\$18.87	\$0.00	\$78.29
/ COMMISSIONING ELECTRICIANS LOCAL 103	03/01/2023	\$48.34	\$13.00	\$19.01	\$0.00	\$80.35
For apprentice rates see "Apprentice- TELECOMMUNICATIONS TECHNICIAN"						
FIREMAN (ASST. ENGINEER)	12/01/2022	\$43.54	\$14.25	\$16.05	\$0.00	\$73.84
OPERATING ENGINEERS LOCAL 4	06/01/2023	\$44.56	\$14.25	\$16.05	\$0.00	\$74.86
	12/01/2023	\$45.57	\$14.25	\$16.05	\$0.00	\$75.87
	06/01/2024	\$46.63	\$14.25	\$16.05	\$0.00	\$76.93
	12/01/2024	\$47.81	\$14.25	\$16.05	\$0.00	\$78.11
	06/01/2025	\$48.87	\$14.25	\$16.05	\$0.00	\$79.17
	12/01/2025	\$50.04	\$14.25	\$16.05	\$0.00	\$80.34
	06/01/2026	\$51.10	\$14.25	\$16.05	\$0.00	\$81.40
	12/01/2026	\$52.28	\$14.25	\$16.05	\$0.00	\$82.58
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						

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Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
FLAGGER & SIGNALER (HEAVY & HIGHWAY)	12/01/2022	\$25.23	\$9.35	\$17.82	\$0.00	\$52.40
LABORERS - ZONE 1 (HEAVY & HIGHWAY)	06/01/2023	\$25.98	\$9.35	\$17.82	\$0.00	\$53.15
	12/01/2023	\$25.98	\$9.35	\$17.82	\$0.00	\$53.15
	06/01/2024	\$27.01	\$9.35	\$17.82	\$0.00	\$54.18
	12/01/2024	\$27.01	\$9.35	\$17.82	\$0.00	\$54.18
	06/01/2025	\$28.09	\$9.35	\$17.82	\$0.00	\$55.26
	12/01/2025	\$28.09	\$9.35	\$17.82	\$0.00	\$55.26
	06/01/2026	\$29.21	\$9.35	\$17.82	\$0.00	\$56.38
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)	12/01/2026	\$29.21	\$9.35	\$17.82	\$0.00	\$56.38
FLOORCOVERER FLOORCOVERERS LOCAL 2168 ZONE I	03/01/2022	\$49.93	\$8.68	\$20.27	\$0.00	\$78.88

Apprentice - FLOORCOVERER - Local 2168 Zone I

Effect	ive Date - 03/01/	022			Supplemental	
Step	percent	Apprentice Base Wage	Health	Pension	Unemployment	Total Rate
1	50	\$24.97	\$8.68	\$1.79	\$0.00	\$35.44
2	55	\$27.46	\$8.68	\$1.79	\$0.00	\$37.93
3	60	\$29.96	\$8.68	\$14.90	\$0.00	\$53.54
4	65	\$32.45	\$8.68	\$14.90	\$0.00	\$56.03
5	70	\$34.95	\$8.68	\$16.69	\$0.00	\$60.32
6	75	\$37.45	\$8.68	\$16.69	\$0.00	\$62.82
7	80	\$39.94	\$8.68	\$18.48	\$0.00	\$67.10
8	85	\$42.44	\$8.68	\$18.48	\$0.00	\$69.60

Notes: Steps are 750 hrs.

% After 10/1/17; 45/45/55/55/70/70/80/80 (1500hr Steps) Step 1&2 \$32.94/ 3&4 \$39.66/ 5&6 \$60.32/ 7&8 \$67.10

Apprentice to Journeyworker Ratio:1:1

FORK LIFT/CHERRY PICKER	12/01/2022	\$53.63	\$14.25	\$16.05	\$0.00	\$83.93
OPERATING ENGINEERS LOCAL 4	06/01/2023	\$54.88	\$14.25	\$16.05	\$0.00	\$85.18
	12/01/2023	\$56.13	\$14.25	\$16.05	\$0.00	\$86.43
	06/01/2024	\$57.43	\$14.25	\$16.05	\$0.00	\$87.73
	12/01/2024	\$58.88	\$14.25	\$16.05	\$0.00	\$89.18
	06/01/2025	\$60.18	\$14.25	\$16.05	\$0.00	\$90.48
	12/01/2025	\$61.63	\$14.25	\$16.05	\$0.00	\$91.93
	06/01/2026	\$62.93	\$14.25	\$16.05	\$0.00	\$93.23
	12/01/2026	\$64.38	\$14.25	\$16.05	\$0.00	\$94.68

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

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Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
GENERATOR/LIGHTING PLANT/HEATERS	12/01/2022	\$35.08	\$14.25	\$16.05	\$0.00	\$65.38
OPERATING ENGINEERS LOCAL 4	06/01/2023	\$35.90	\$14.25	\$16.05	\$0.00	\$66.20
	12/01/2023	\$36.72	\$14.25	\$16.05	\$0.00	\$67.02
	06/01/2024	\$37.57	\$14.25	\$16.05	\$0.00	\$67.87
	12/01/2024	\$38.52	\$14.25	\$16.05	\$0.00	\$68.82
	06/01/2025	\$39.37	\$14.25	\$16.05	\$0.00	\$69.67
	12/01/2025	\$40.32	\$14.25	\$16.05	\$0.00	\$70.62
	06/01/2026	\$41.18	\$14.25	\$16.05	\$0.00	\$71.48
For apprentice rates see "Apprentice- OPERATING ENGINEERS"	12/01/2026	\$42.13	\$14.25	\$16.05	\$0.00	\$72.43
GLAZIER (GLASS PLANK/AIR BARRIER/INTERIOR	01/01/2023	\$51.35	\$8.65	\$23.05	\$0.00	\$83.05
SYSTEMS) GLAZIERS LOCAL 35 (ZONE 1)	07/01/2023	\$52.55	\$8.65	\$23.05	\$0.00	\$84.25
oznazno ze chiz v (zeniz i)	01/01/2024	\$53.75	\$8.65	\$23.05	\$0.00	\$85.45
	07/01/2024	\$54.95	\$8.65	\$23.05	\$0.00	\$86.65
	01/01/2025	\$56.15	\$8.65	\$23.05	\$0.00	\$87.85

Apprentice - GLAZIER - Local 35 Zone 1

Step	ive Date -	01/01/2023	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50		\$25.68	\$8.65	\$0.00	\$0.00	\$34.33
2	55		\$28.24	\$8.65	\$6.27	\$0.00	\$43.16
3	60		\$30.81	\$8.65	\$6.84	\$0.00	\$46.30
4	65		\$33.38	\$8.65	\$7.41	\$0.00	\$49.44
5	70		\$35.95	\$8.65	\$19.63	\$0.00	\$64.23
6	75		\$38.51	\$8.65	\$20.20	\$0.00	\$67.36
7	80		\$41.08	\$8.65	\$20.77	\$0.00	\$70.50
8	90		\$46.22	\$8.65	\$21.91	\$0.00	\$76.78
Effect	ive Date -	07/01/2023				Sunnlemental	
Effect Step	ive Date -	07/01/2023	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
		07/01/2023	Apprentice Base Wage \$26.28	Health \$8.65	Pension \$0.00		
Step	percent	07/01/2023				Unemployment	\$34.93
Step 1	percent 50	07/01/2023	\$26.28	\$8.65	\$0.00	Unemployment \$0.00	\$34.93 \$43.82
Step 1 2	50 55	07/01/2023	\$26.28 \$28.90	\$8.65 \$8.65	\$0.00 \$6.27	\$0.00 \$0.00	Total Rate \$34.93 \$43.82 \$47.02 \$50.22
Step 1 2 3	50 55 60	07/01/2023	\$26.28 \$28.90 \$31.53	\$8.65 \$8.65 \$8.65	\$0.00 \$6.27 \$6.84	\$0.00 \$0.00 \$0.00	\$34.93 \$43.82 \$47.02 \$50.22
Step 1 2 3 4	50 55 60 65	07/01/2023	\$26.28 \$28.90 \$31.53 \$34.16	\$8.65 \$8.65 \$8.65 \$8.65	\$0.00 \$6.27 \$6.84 \$7.41	\$0.00 \$0.00 \$0.00 \$0.00 \$0.00	\$34.93 \$43.82 \$47.02
Step 1 2 3 4 5 5	50 55 60 65 70	07/01/2023	\$26.28 \$28.90 \$31.53 \$34.16 \$36.79	\$8.65 \$8.65 \$8.65 \$8.65 \$8.65	\$0.00 \$6.27 \$6.84 \$7.41 \$19.63	\$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00	\$34.93 \$43.82 \$47.02 \$50.22

Apprentice to Journeyworker Ratio:1:1

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							mempioyment	
HOISTING ENGIN		R/CRANES/GRADALLS	12/01/2022	\$53.63	\$14.25	\$16.05	\$0.00	\$83.93
OI EKATING ENGII	WEEKS LC	CAL 4	06/01/2023	\$54.88	\$14.25	\$16.05	\$0.00	\$85.18
			12/01/2023	\$56.13	\$14.25	\$16.05	\$0.00	\$86.43
			06/01/2024	\$57.43	\$14.25	\$16.05	\$0.00	\$87.73
			12/01/2024	\$58.88	\$14.25	\$16.05	\$0.00	\$89.18
			06/01/2025	\$60.18	\$14.25	\$16.05	\$0.00	\$90.48
			12/01/2025	\$61.63	\$14.25	\$16.05	\$0.00	\$91.93
			06/01/2026	\$62.93	\$14.25	\$16.05	\$0.00	\$93.23
			12/01/2026	5 \$64.38	\$14.25	\$16.05	\$0.00	\$94.68
	Apprer Effecti	ntice - OPERATING ENGINEERS - A	Local 4			Supplemental		
	Step	percent	Apprentice Base Wage	Health	Pension	Unemployment	Total Rate	
	1	55	\$29.50	\$14.25	\$0.00	\$0.00	\$43.75	
	2	60	\$32.18	\$14.25	\$16.05	\$0.00	\$62.48	
	3	65	\$34.86	\$14.25	\$16.05	\$0.00		
	4	70	\$37.54	\$14.25	\$16.05	\$0.00		
	5	75	\$40.22	\$14.25	\$16.05	\$0.00	\$70.52	
	6	80	\$42.90	\$14.25	\$16.05	\$0.00		
	7	85	\$45.59	\$14.25	\$16.05	\$0.00		
	8	90	\$48.27	\$14.25	\$16.05	\$0.00	\$78.57	
			Ψ10.27	ψ11.23	Ψ10.03	ψ0.00	Ψ70.57	
		ve Date - 06/01/2023	A C D W	II 1/1	D '	Supplemental	T (1 D (
	Step	percent	Apprentice Base Wage		Pension	Unemployment		
	1	55	\$30.18	\$14.25	\$0.00	\$0.00		
	2	60	\$32.93	\$14.25	\$16.05	\$0.00	\$63.23	
	3	65	\$35.67	\$14.25	\$16.05	\$0.00		
	4	70	\$38.42	\$14.25	\$16.05	\$0.00	\$68.72	
	5	75	\$41.16	\$14.25	\$16.05	\$0.00	\$71.46	
	6	80	\$43.90	\$14.25	\$16.05	\$0.00	\$74.20	
	7	85	\$46.65	\$14.25	\$16.05	\$0.00	\$76.95	
	8	90	\$49.39	\$14.25	\$16.05	\$0.00	\$79.69	
	Notes:							
							ĺ	
	Appre	ntice to Journeyworker Ratio:1:6						
HVAC (DUCTW SHEETMETAL WOR		OCAL 17 - 4	02/01/2023	\$55.31	\$14.11	\$26.64	\$2.83	\$98.89
SHEETMEIAL WOR	MEND LO	VIII 17 - II	08/01/2023	\$57.01	\$14.11	\$26.64	\$2.83	\$100.59
			02/01/2024	\$58.71	\$14.11	\$26.64	\$2.83	\$102.29
			08/01/2024	\$60.46	\$14.11	\$26.64	\$2.83	\$104.04
			02/01/2025	\$62.21	\$14.11	\$26.64	\$2.83	\$105.79
			08/01/2025	\$64.06	\$14.11	\$26.64	\$2.83	\$107.64
		Apprentice- SHEET METAL WORKER"	02/01/2026		\$14.11	\$26.64	\$2.83	\$109.59

Effective Date Base Wage Health

Classification

Supplemental

Unemployment

Pension

Total Rate

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Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
HVAC (ELECTRICAL CONTROLS)	09/01/2022	\$58.28	\$13.00	\$21.35	\$0.00	\$92.63
ELECTRICIANS LOCAL 103	03/01/2023	\$59.23	\$13.00	\$21.63	\$0.00	\$93.86
For apprentice rates see "Apprentice- ELECTRICIAN"						
HVAC (TESTING AND BALANCING - AIR)	02/01/2023	\$55.31	\$14.11	\$26.64	\$2.83	\$98.89
SHEETMETAL WORKERS LOCAL 17 - A	08/01/2023	\$57.01	\$14.11	\$26.64	\$2.83	\$100.59
	02/01/2024	\$58.71	\$14.11	\$26.64	\$2.83	\$102.29
	08/01/2024	\$60.46	\$14.11	\$26.64	\$2.83	\$104.04
	02/01/2025	\$62.21	\$14.11	\$26.64	\$2.83	\$105.79
	08/01/2025	\$64.06	\$14.11	\$26.64	\$2.83	\$107.64
	02/01/2026	\$66.01	\$14.11	\$26.64	\$2.83	\$109.59
For apprentice rates see "Apprentice- SHEET METAL WORKER"						
HVAC (TESTING AND BALANCING -WATER) PIPEFITTERS LOCAL 537	03/01/2021	\$57.94	\$11.70	\$20.24	\$0.00	\$89.88
For apprentice rates see "Apprentice- PIPEFITTER" or "PLUMBER/PIPEFITTER"						
HVAC MECHANIC PIPEFITTERS LOCAL 537	03/01/2021	\$57.94	\$11.70	\$20.24	\$0.00	\$89.88
For apprentice rates see "Apprentice- PIPEFITTER" or "PLUMBER/PIPEFITTER"						
HYDRAULIC DRILLS	12/01/2022	\$43.93	\$9.10	\$17.57	\$0.00	\$70.60
LABORERS - ZONE I	06/01/2023	\$44.93	\$9.10	\$17.57	\$0.00	\$71.60
	12/01/2023	\$46.18	\$9.10	\$17.57	\$0.00	\$72.85
For apprentice rates see "Apprentice- LABORER"						
HYDRAULIC DRILLS (HEAVY & HIGHWAY)	12/01/2022	\$43.33	\$9.35	\$17.82	\$0.00	\$70.50
LABORERS - ZONE 1 (HEAVY & HIGHWAY)	06/01/2023	\$44.33	\$9.35	\$17.82	\$0.00	\$71.50
	12/01/2023	\$45.58	\$9.35	\$17.82	\$0.00	\$72.75
	06/01/2024	\$47.06	\$9.35	\$17.82	\$0.00	\$74.23
	12/01/2024	\$48.53	\$9.35	\$17.82	\$0.00	\$75.70
	06/01/2025	\$50.03	\$9.35	\$17.82	\$0.00	\$77.20
	12/01/2025	\$51.53	\$9.35	\$17.82	\$0.00	\$78.70
	06/01/2026	\$53.08	\$9.35	\$17.82	\$0.00	\$80.25
	12/01/2026	\$54.58	\$9.35	\$17.82	\$0.00	\$81.75
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)						
INSULATOR (PIPES & TANKS) HEAT & FROST INSULATORS LOCAL 6 (BOSTON)	09/01/2022	\$53.85	\$13.80	\$17.14	\$0.00	\$84.79

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

Effecti	ve Date - 09/01/2022				Supplemental	
Step	percent	Apprentice Base Wage	Health	Pension	Unemployment	Total Rate
1	50	\$26.93	\$13.80	\$12.42	\$0.00	\$53.15
2	60	\$32.31	\$13.80	\$13.36	\$0.00	\$59.47
3	70	\$37.70	\$13.80	\$14.31	\$0.00	\$65.81
4	80	\$43.08	\$13.80	\$15.25	\$0.00	\$72.13
Notes:	Steps are 1 year					
Apprei	ntice to Journeyworker Ratio:1:4					

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	Appre	ntice - IRONWORKER - Local 7 B	Poston					
		ive Date - 09/16/2022				Supplemental		
	Step	percent	Apprentice Base Wage		Pension	Unemployment	Total Rate	
	1	60	\$30.95	\$8.25	\$26.70	\$0.00	\$65.90	
	2	70	\$36.11	\$8.25	\$26.70	\$0.00	\$71.06	
	3	75	\$38.69	\$8.25	\$26.70	\$0.00	\$73.64	
	4	80	\$41.27	\$8.25	\$26.70	\$0.00	\$76.22	
	5	85	\$43.85	\$8.25	\$26.70	\$0.00	\$78.80	
	6	90	\$46.43	\$8.25	\$26.70	\$0.00	\$81.38	
	Notes:							
	i							
	Appre	entice to Journeyworker Ratio:1:4						
		VING BREAKER OPERATOR	12/01/2022	2 \$43.43	\$9.10	\$17.57	\$0.00	\$70.10
ABORERS - ZON	NE I		06/01/2023	\$44.43	\$9.10	\$17.57	\$0.00	\$71.10
			12/01/2023	\$45.68	\$9.10	\$17.57	\$0.00	\$72.35
	ce rates see	"Apprentice- LABORER"						
ABORER ABORERS - ZON	NE 1		12/01/2022		\$9.10	\$17.57	\$0.00	\$69.85
			06/01/2023 12/01/2023			\$17.57 \$17.57	\$0.00 \$0.00	\$70.85 \$72.10
		ntice - LABORER - Zone 1						
	Effect	ive Date - 12/01/2022	Apprentice Rose Wage	Health	Pension	Supplemental	Total Pata	
	Effecti Step	ive Date - 12/01/2022 percent	Apprentice Base Wage		Pension	Unemployment	Total Rate	
	Step 1	percent 12/01/2022 60	\$25.91	\$9.10	\$17.57	Unemployment \$0.00	\$52.58	
	Step 1 2	ive Date - 12/01/2022 percent 60 70	\$25.91 \$30.23	\$9.10 \$9.10	\$17.57 \$17.57	\$0.00 \$0.00	\$52.58 \$56.90	
	Step 1	percent 12/01/2022 60	\$25.91 \$30.23 \$34.54	\$9.10 \$9.10 \$9.10	\$17.57 \$17.57 \$17.57	\$0.00 \$0.00 \$0.00 \$0.00	\$52.58	
	Step 1 2 3 4	percent 60 70 80 90	\$25.91 \$30.23	\$9.10 \$9.10	\$17.57 \$17.57	\$0.00 \$0.00 \$0.00 \$0.00 \$0.00	\$52.58 \$56.90 \$61.21	
	Effection Step 1 2 3 4 Effection Effection Step 2 5 4 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	percent 60 70 80 90 ive Date - 06/01/2023	\$25.91 \$30.23 \$34.54 \$38.86	\$9.10 \$9.10 \$9.10 \$9.10	\$17.57 \$17.57 \$17.57 \$17.57	\$0.00 \$0.00 \$0.00 \$0.00 \$0.00	\$52.58 \$56.90 \$61.21 \$65.53	
	Effection Step 1 2 3 4 Effection Step	12/01/2022 percent 60 70 80 90 ive Date - 06/01/2023 percent	\$25.91 \$30.23 \$34.54 \$38.86 Apprentice Base Wage	\$9.10 \$9.10 \$9.10 \$9.10	\$17.57 \$17.57 \$17.57 \$17.57 Pension	\$0.00 \$0.00 \$0.00 \$0.00 \$0.00 Supplemental Unemployment	\$52.58 \$56.90 \$61.21 \$65.53	
	Step 1 2 3 4 Effection Step 1 1	12/01/2022 percent 60 70 80 90 ive Date - 06/01/2023 percent 60	\$25.91 \$30.23 \$34.54 \$38.86 Apprentice Base Wage \$26.51	\$9.10 \$9.10 \$9.10 \$9.10 Health	\$17.57 \$17.57 \$17.57 \$17.57 Pension \$17.57	\$0.00 \$0.00 \$0.00 \$0.00 \$0.00 Supplemental Unemployment	\$52.58 \$56.90 \$61.21 \$65.53 Total Rate	
	Step 1 2 3 4	ive Date - 12/01/2022 percent 60 70 80 90 ive Date - 06/01/2023 percent 60 70	\$25.91 \$30.23 \$34.54 \$38.86 Apprentice Base Wage \$26.51 \$30.93	\$9.10 \$9.10 \$9.10 \$9.10 Health \$9.10	\$17.57 \$17.57 \$17.57 \$17.57 Pension \$17.57	Supplemental Unemployment \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00	\$52.58 \$56.90 \$61.21 \$65.53 Total Rate \$53.18 \$57.60	
	Step 1 2 3 4 Effection Step 1 1	12/01/2022 percent 60 70 80 90 ive Date - 06/01/2023 percent 60	\$25.91 \$30.23 \$34.54 \$38.86 Apprentice Base Wage \$26.51 \$30.93 \$35.34	\$9.10 \$9.10 \$9.10 \$9.10 Health \$9.10 \$9.10	\$17.57 \$17.57 \$17.57 \$17.57 Pension \$17.57 \$17.57	\$0.00 \$0.00 \$0.00 \$0.00 \$0.00 Supplemental Unemployment \$0.00 \$0.00	\$52.58 \$56.90 \$61.21 \$65.53 Total Rate \$53.18 \$57.60 \$62.01	
	Effecti Step 1 2 3 4 Effecti Step 1 2 3 4	ive Date - 12/01/2022 percent 60 70 80 90 ive Date - 06/01/2023 percent 60 70 80 90	\$25.91 \$30.23 \$34.54 \$38.86 Apprentice Base Wage \$26.51 \$30.93	\$9.10 \$9.10 \$9.10 \$9.10 Health \$9.10	\$17.57 \$17.57 \$17.57 \$17.57 Pension \$17.57	Supplemental Unemployment \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00	\$52.58 \$56.90 \$61.21 \$65.53 Total Rate \$53.18 \$57.60	
	Effects Step 1 2 3 4 Effects Step 1 2 3 4	ive Date - 12/01/2022 percent 60 70 80 90 ive Date - 06/01/2023 percent 60 70 80 90	\$25.91 \$30.23 \$34.54 \$38.86 Apprentice Base Wage \$26.51 \$30.93 \$35.34	\$9.10 \$9.10 \$9.10 \$9.10 Health \$9.10 \$9.10	\$17.57 \$17.57 \$17.57 \$17.57 Pension \$17.57 \$17.57	\$0.00 \$0.00 \$0.00 \$0.00 \$0.00 Supplemental Unemployment \$0.00 \$0.00	\$52.58 \$56.90 \$61.21 \$65.53 Total Rate \$53.18 \$57.60 \$62.01	

Effective Date

09/16/2022

Base Wage

\$51.59

Health

\$8.25

Classification

IRONWORKER/WELDER

IRONWORKERS LOCAL 7 (BOSTON AREA)

Supplemental

\$0.00

Unemployment

Pension

\$26.70

Total Rate

\$86.54

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						Jnemployment		
ABORER (HI ABORERS - ZONE			12/01/2022	\$42.58	\$9.35	\$17.82	\$0.00	\$69.75
ADOREKS - ZOM	L I (IILA)	I & IIIOII#AI)	06/01/2023	\$43.58	\$9.35	\$17.82	\$0.00	\$70.75
			12/01/2023	\$44.83	\$9.35	\$17.82	\$0.00	\$72.00
			06/01/2024	\$46.31	\$9.35	\$17.82	\$0.00	\$73.48
			12/01/2024	\$47.78	\$9.35	\$17.82	\$0.00	\$74.95
			06/01/2025	\$49.28	\$9.35	\$17.82	\$0.00	\$76.45
			12/01/2025	\$50.78	\$9.35	\$17.82	\$0.00	\$77.95
			06/01/2026	\$52.33	\$9.35	\$17.82	\$0.00	\$79.50
			12/01/2026	\$53.83	\$9.35	\$17.82	\$0.00	\$81.00
	Annwa	ntice - LABORER (Heavy & Highw	vav) - Zone 1					
		ive Date - 12/01/2022	(uy) - 2011C 1			G 1		
	Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate	
	1	60	\$25.55	\$9.35	\$17.82	\$0.00	\$52.72	
	2	70	\$29.81	\$9.35	\$17.82	\$0.00	\$56.98	
	3	80	\$34.06	\$9.35	\$17.82	\$0.00	\$61.23	
	4	90	\$38.32	\$9.35	\$17.82	\$0.00	\$65.49	
	-	70	ψ36.32	\$7.55	\$17.02	φ0.00	ψ05.47	
	Effecti	ive Date - 06/01/2023				Supplemental		
	Step	percent	Apprentice Base Wage	Health	Pension	Unemployment	Total Rate	
	1	60	\$26.15	\$9.35	\$17.82	\$0.00	\$53.32	
	2	70	\$30.51	\$9.35	\$17.82	\$0.00	\$57.68	
	3	80	\$34.86	\$9.35	\$17.82	\$0.00	\$62.03	
	4	90	\$39.22	\$9.35	\$17.82	\$0.00	\$66.39	
	Notes:							
	Annre	ntice to Journeyworker Ratio:1:5						
BORER: CA		TER TENDER	12/01/2022	0 042.10	¢0.10	¢17.57	\$0.00	¢(0.05
BORERS - ZONE		EK TENDEK	12/01/2022		\$9.10	\$17.57	\$0.00	\$69.85
			06/01/2023	,	\$9.10	\$17.57 \$17.57	\$0.00	\$70.85
For apprentice	e rates see '	'Apprentice- LABORER"	12/01/2023	\$45.43	\$9.10	\$17.57	\$0.00	\$72.10
		FINISHER TENDER	12/01/2022	2 \$43.18	\$9.10	\$17.57	\$0.00	\$69.85
BORERS - ZONE			06/01/2023		\$9.10	\$17.57	\$0.00	\$70.85
			12/01/2023		\$9.10	\$17.57	\$0.00	\$70.83
For apprentice	e rates see '	'Apprentice- LABORER"	12/01/2023	, ψισιτσ	Ψ2.10	± = 1.00 1	40.00	Ψ, Δ.10
		OUS WASTE/ASBESTOS REMOV	ER 12/01/2022	2 \$43.33	\$9.10	\$17.57	\$0.00	\$70.00
RORERS - ZONE	E 1		06/01/2023		\$9.10	\$17.57	\$0.00	\$71.00
			12/01/2023		\$9.10	\$17.57	\$0.00	\$72.25
	rates see !	'Apprentice- LABORER"						
For apprentice	For apprentice rates see "Apprentice- LABORER"					*	***	Φ70.10
ABORER: MA	ASON T	ENDER	12/01/2022	\$43.43	\$9.10	\$17.57	\$0.00	\$70.10
	ASON T	ENDER	12/01/2022 06/01/2023		\$9.10 \$9.10	\$17.57 \$17.57	\$0.00 \$0.00	\$70.10

Effective Date Base Wage

Classification

Supplemental

Unemployment

Pension

Health

Total Rate

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Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
LABORER: MASON TENDER (HEAVY & HIGHWAY)	12/01/2022	\$42.83	\$9.35	\$17.82	\$0.00	\$70.00
LABORERS - ZONE 1 (HEAVY & HIGHWAY)	06/01/2023	\$43.83	\$9.35	\$17.82	\$0.00	\$71.00
	12/01/2023	\$45.08	\$9.35	\$17.82	\$0.00	\$72.25
	06/01/2024	\$46.56	\$9.35	\$17.82	\$0.00	\$73.73
	12/01/2024	\$48.03	\$9.35	\$17.82	\$0.00	\$75.20
	06/01/2025	\$49.53	\$9.35	\$17.82	\$0.00	\$76.70
	12/01/2025	\$51.03	\$9.35	\$17.82	\$0.00	\$78.20
	06/01/2026	\$52.58	\$9.35	\$17.82	\$0.00	\$79.75
	12/01/2026	\$54.08	\$9.35	\$17.82	\$0.00	\$81.25
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)						
LABORER: MULTI-TRADE TENDER LABORERS - ZONE 1	12/01/2022	\$43.18	\$9.10	\$17.57	\$0.00	\$69.85
LABORERS - ZONE I	06/01/2023	\$44.18	\$9.10	\$17.57	\$0.00	\$70.85
	12/01/2023	\$45.43	\$9.10	\$17.57	\$0.00	\$72.10
For apprentice rates see "Apprentice- LABORER"						
LABORER: TREE REMOVER LABORERS - ZONE 1	12/01/2022	\$43.18	\$9.10	\$17.57	\$0.00	\$69.85
	06/01/2023	\$44.18	\$9.10	\$17.57	\$0.00	\$70.85
This design at the second of t	12/01/2023	\$45.43	\$9.10	\$17.57	\$0.00	\$72.10
This classification applies to the removal of standing trees, and the trimming and remo clearance incidental to construction. For apprentice rates see "Apprentice- LABORER		ios when related	to public work	is construction	or site	
LASER BEAM OPERATOR	12/01/2022	\$43.43	\$9.10	\$17.57	\$0.00	\$70.10
LABORERS - ZONE 1	06/01/2023	\$44.43	\$9.10	\$17.57	\$0.00	\$71.10
	12/01/2023	\$45.68	\$9.10	\$17.57	\$0.00	\$72.35
For apprentice rates see "Apprentice- LABORER"						
LASER BEAM OPERATOR (HEAVY & HIGHWAY)	12/01/2022	\$42.83	\$9.35	\$17.82	\$0.00	\$70.00
LABORERS - ZONE 1 (HEAVY & HIGHWAY)	06/01/2023	\$43.83	\$9.35	\$17.82	\$0.00	\$71.00
	12/01/2023	\$45.08	\$9.35	\$17.82	\$0.00	\$72.25
	06/01/2024	\$46.56	\$9.35	\$17.82	\$0.00	\$73.73
	12/01/2024	\$48.03	\$9.35	\$17.82	\$0.00	\$75.20
	06/01/2025	\$49.53	\$9.35	\$17.82	\$0.00	\$76.70
	12/01/2025	\$51.03	\$9.35	\$17.82	\$0.00	\$78.20
	06/01/2026	\$52.58	\$9.35	\$17.82	\$0.00	\$79.75
	12/01/2026	\$54.08	\$9.35	\$17.82	\$0.00	\$81.25
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)						
MARBLE & TILE FINISHERS BRICKLAYERS LOCAL 3 - MARBLE & TILE	02/01/2023	\$46.25	\$11.49	\$20.37	\$0.00	\$78.11
BRICKLATERS LOCAL 3 - MARBLE & TILE	08/01/2023	\$47.89	\$11.49	\$20.37	\$0.00	\$79.75
	02/01/2024	\$48.89	\$11.49	\$20.37	\$0.00	\$80.75
	08/01/2024	\$50.57	\$11.49	\$20.37	\$0.00	\$82.43
	02/01/2025	\$51.61	\$11.49	\$20.37	\$0.00	\$83.47
	08/01/2025	\$53.33	\$11.49	\$20.37	\$0.00	\$85.19
	02/01/2026	\$54.41	\$11.49	\$20.37	\$0.00	\$86.27
	08/01/2026	\$56.17	\$11.49	\$20.37	\$0.00	\$88.03
	02/01/2027	\$57.29	\$11.49	\$20.37	\$0.00	\$89.15

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Pension

Apprentice -	MARBLE & TILE FINISHER - Local 3 Marble & Til	e
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		ve Date - 02/01/2023 percent Apprentice Base Wage Health Pension Unemployment Total Rate							
	Step	percent	Apprentice Base Wage	Health	Pension	Unemployment	Total Rate		
-	1	50	\$23.13	\$11.49	\$20.37	\$0.00	\$54.99		
	2	60	\$27.75	\$11.49	\$20.37	\$0.00	\$59.61		
	3	70	\$32.38	\$11.49	\$20.37	\$0.00	\$64.24		
	4	80	\$37.00	\$11.49	\$20.37	\$0.00	\$68.86		
	5	90	\$41.63	\$11.49	\$20.37	\$0.00	\$73.49		
	Effect	ve Date - 08/01/2023				Supplemental			
_	Step	percent	Apprentice Base Wage	Health	Pension	Unemployment	Total Rate		
	1	50	\$23.95	\$11.49	\$20.37	\$0.00	\$55.81		
	2	60	\$28.73	\$11.49	\$20.37	\$0.00	\$60.59		
	3	70	\$33.52	\$11.49	\$20.37	\$0.00	\$65.38		
	4	80	\$38.31	\$11.49	\$20.37	\$0.00	\$70.17		
	5	90	\$43.10	\$11.49	\$20.37	\$0.00	\$74.96		
-	Notes:								
							į		
	Appre	ntice to Journeyworker Ratio:1:3							
		ILELAYERS & TERRAZZO MECH	02/01/2023	3 \$60.37	\$11.49	\$22.31	\$0.00	\$94.17	
CKLAYERS LOCA	4L 3 - M	ARBLE & TILE	08/01/2023	\$62.42	\$11.49	\$22.31	\$0.00	\$96.22	
			02/01/2024	\$63.67	\$11.49	\$22.31	\$0.00	\$97.47	
			08/01/2024	\$65.77	\$11.49	\$22.31	\$0.00	\$99.57	
			02/01/2023	\$67.07	\$11.49	\$22.31	\$0.00	\$100.87	
			08/01/2023	\$69.22	\$11.49	\$22.31	\$0.00	\$103.02	
			02/01/2020	5 \$70.57	\$11.49	\$22.31	\$0.00	\$104.3	
						000.01	0000		

08/01/2026

02/01/2027

\$72.77

\$74.17

\$11.49

\$11.49

\$22.31

\$22.31

\$0.00

\$0.00

\$106.57

\$107.97

Issue Date: 02/28/2023 **Wage Request Number:** 20230224-004 Page 22 of 41

Total Rate

Pension

	Step	ve Date - 02/01/2023 percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate	
	1	50	\$30.19	\$11.49	\$22.31	\$0.00	\$63.99	
	2	60	\$36.22	\$11.49	\$22.31	\$0.00	\$70.02	
	3	70	\$42.26	\$11.49	\$22.31	\$0.00	\$76.06	
	4	80	\$48.30	\$11.49	\$22.31	\$0.00	\$82.10	
	5	90	\$54.33	\$11.49	\$22.31	\$0.00	\$88.13	
	Effecti	ve Date - 08/01/2023				Supplemental		
	Step	percent	Apprentice Base Wage	Health	Pension	Unemployment	Total Rate	
	1	50	\$31.21	\$11.49	\$22.31	\$0.00	\$65.01	
	2	60	\$37.45	\$11.49	\$22.31	\$0.00	\$71.25	
	3	70	\$43.69	\$11.49	\$22.31	\$0.00	\$77.49	
	4	80	\$49.94	\$11.49	\$22.31	\$0.00	\$83.74	
	5	90	\$56.18	\$11.49	\$22.31	\$0.00	\$89.98	
	Notes:							
	Appre	ntice to Journeyworker Ratio:1	:5				'	
ECH. SWEEP	ER OP	ERATOR (ON CONST. SITES)	12/01/2022	2 \$53.05	\$14.25	\$16.05	\$0.00	\$83.35
ERATING ENGI	NEERS LO	OCAL 4	06/01/2023	3 \$54.29	\$14.25	\$16.05	\$0.00	\$84.59
			12/01/2023	3 \$55.53	\$14.25	\$16.05	\$0.00	\$85.83
			06/01/2024	\$56.81	\$14.25	\$16.05	\$0.00	\$87.11
			12/01/2024	\$58.25	\$14.25	\$16.05	\$0.00	\$88.55
			06/01/2025	5 \$59.53	\$14.25	\$16.05	\$0.00	\$89.83
			12/01/2025	\$60.97	\$14.25	\$16.05	\$0.00	\$91.27
			06/01/2026	5 \$62.25	\$14.25	\$16.05	\$0.00	\$92.55
For apprentice	rates see "	Apprentice- OPERATING ENGINEERS'	12/01/2020	\$63.69	\$14.25	\$16.05	\$0.00	\$93.99
ECHANICS N	AAINT	ENANCE	12/01/2022	2 \$53.05	\$14.25	\$16.05	\$0.00	\$83.35
ERATING ENGI	NEERS LO	OCAL 4	06/01/2023	3 \$54.29	\$14.25	\$16.05	\$0.00	\$84.59
			12/01/2023	3 \$55.53	\$14.25	\$16.05	\$0.00	\$85.83
			06/01/2024	\$56.81	\$14.25	\$16.05	\$0.00	\$87.11
			12/01/2024	4 \$58.25	\$14.25	\$16.05	\$0.00	\$88.55
			06/01/2025	5 \$59.53	\$14.25	\$16.05	\$0.00	\$89.83
			12/01/2025	\$60.97	\$14.25	\$16.05	\$0.00	\$91.27
			06/01/2026	5 \$62.25	\$14.25	\$16.05	\$0.00	\$92.55
		A OPEN ATRICO EVOLUTION	12/01/2026			\$16.05	\$0.00	\$93.99
	ratec cee "	Apprentice- OPERATING ENGINEERS'						

		ntice - MILLWRIGHT - Local 1121	Zone 1					
	Effecti Step	percent 01/02/2023	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate	
	1	55						
	2	65	\$26.00 \$30.73	\$8.58 \$8.58	\$5.72 \$17.93	\$0.00 \$0.00	\$40.30 \$57.24	
	3	75						
	4	85	\$35.45	\$8.58	\$18.98	\$0.00	\$63.01	
	7	63	\$40.18	\$8.58	\$20.01	\$0.00	\$68.77	
	Notes:	Step 1&2 Appr. indentured after 1/6/	•					
		but do receive annuity. (Step 1 \$5.7)	2, Step 2 \$6.66)				i	
	Annre	Steps are 2,000 hours entice to Journeyworker Ratio:1:4						
MORTAR MIXE		mile to gourney worker Ratio.1.4	12/01/2022	ф.12. 12.	00.10	¢17.57	Ф0.00	Ф Т О 1 О
LABORERS - ZONE			12/01/2022		\$9.10	\$17.57	\$0.00	\$70.10
			06/01/2023		\$9.10	\$17.57	\$0.00	\$71.10
For apprentice r	rates see '	"Apprentice- LABORER"	12/01/2023	\$45.68	\$9.10	\$17.57	\$0.00	\$72.35
OILER (OTHER	R THAN	N TRUCK CRANES,GRADALLS)	12/01/2022	\$24.37	\$14.25	\$16.05	\$0.00	\$54.67
OPERATING ENGIN	VEERS L	OCAL 4	06/01/2023		\$14.25	\$16.05	\$0.00	\$55.24
			12/01/2023		\$14.25	\$16.05	\$0.00	\$55.81
			06/01/2024		\$14.25	\$16.05	\$0.00	\$56.41
			12/01/2024	\$26.77	\$14.25	\$16.05	\$0.00	\$57.07
			06/01/2025	\$27.37	\$14.25	\$16.05	\$0.00	\$57.67
			12/01/2025	\$28.03	\$14.25	\$16.05	\$0.00	\$58.33
			06/01/2026	\$28.62	\$14.25	\$16.05	\$0.00	\$58.92
			12/01/2026	\$29.29	\$14.25	\$16.05	\$0.00	\$59.59
		"Apprentice- OPERATING ENGINEERS"						
OILER (TRUCK		NES, GRADALLS)	12/01/2022	\$29.57	\$14.25	\$16.05	\$0.00	\$59.87
OI EKATIIVO EIVOIN	VELKO E	JCAL 4	06/01/2023	\$30.27	\$14.25	\$16.05	\$0.00	\$60.57
			12/01/2023	\$30.96	\$14.25	\$16.05	\$0.00	\$61.26
			06/01/2024	\$31.68	\$14.25	\$16.05	\$0.00	\$61.98
			12/01/2024	\$32.48	\$14.25	\$16.05	\$0.00	\$62.78
			06/01/2025	\$33.20	\$14.25	\$16.05	\$0.00	\$63.50
			12/01/2025	\$34.00	\$14.25	\$16.05	\$0.00	\$64.30
			06/01/2026	\$34.72	\$14.25	\$16.05	\$0.00	\$65.02
F		"A	12/01/2026	\$35.52	\$14.25	\$16.05	\$0.00	\$65.82
		"Apprentice- OPERATING ENGINEERS" VEN EQUIPMENT - CLASS II	10/01/0000		01107	Φ1.C.0.7	Ф0.00	0000
OPERATING ENGIN		~	12/01/2022		\$14.25	\$16.05	\$0.00	\$83.35
			06/01/2023		\$14.25	\$16.05	\$0.00	\$84.59
			12/01/2023		\$14.25	\$16.05	\$0.00	\$85.83
			06/01/2024		\$14.25	\$16.05	\$0.00	\$87.11
			12/01/2024		\$14.25	\$16.05	\$0.00	\$88.55
			06/01/2025		\$14.25	\$16.05	\$0.00	\$89.83
			12/01/2025			\$16.05	\$0.00	\$91.27
			06/01/2026		\$14.25	\$16.05	\$0.00	\$92.55
			12/01/2026	\$63.69	\$14.25	\$16.05	\$0.00	\$93.99

AINTER (BRIDGES/TANKS) AINTERS LOCAL 35 - ZONE 1			01/01/2023	\$56.06	\$8.65	\$23.05	\$0.00	\$87.76	
INTERS LOCA	TERS LOCAL 35 - ZONE I			07/01/2023	\$57.26	\$8.65	\$23.05	\$0.00	\$88.96
				01/01/2024	\$58.46	\$8.65	\$23.05	\$0.00	\$90.16
				07/01/2024	\$59.66	\$8.65	\$23.05	\$0.00	\$91.36
				01/01/2025	\$60.86	\$8.65	\$23.05	\$0.00	\$92.56
	Annua	ntico PAINTER L	ocal 35 - BRIDGES/TAN	KS					
		ive Date - 01/01/20		NS			0 1		
	Step	percent		entice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate	
	1	50		\$28.03	\$8.65	\$0.00	\$0.00	\$36.68	
	2	55		\$30.83	\$8.65	\$6.27	\$0.00	\$45.75	
	3	60		\$33.64	\$8.65	\$6.84	\$0.00	\$49.13	
	4	65		\$36.44	\$8.65	\$7.41	\$0.00	\$52.50	
	5	70		\$39.24	\$8.65	\$19.63	\$0.00	\$67.52	
	6	75		\$42.05	\$8.65	\$20.20	\$0.00	\$70.90	
	7	80		\$44.85	\$8.65	\$20.77	\$0.00	\$74.27	
	8	90		\$50.45	\$8.65	\$21.91	\$0.00	\$81.01	
	Effect	ive Date - 07/01/20	023				Supplemental		
	Step	percent	Appro	entice Base Wage	Health	Pension	Unemployment	Total Rate	
	1	50		\$28.63	\$8.65	\$0.00	\$0.00	\$37.28	
	2	55		\$31.49	\$8.65	\$6.27	\$0.00	\$46.41	
	3	60		\$34.36	\$8.65	\$6.84	\$0.00	\$49.85	
	4	65		\$37.22	\$8.65	\$7.41	\$0.00	\$53.28	
	5	70		\$40.08	\$8.65	\$19.63	\$0.00	\$68.36	
	6	75		\$42.95	\$8.65	\$20.20	\$0.00	\$71.80	
	7	80		\$45.81	\$8.65	\$20.77	\$0.00	\$75.23	
	8	90		\$51.53	\$8.65	\$21.91	\$0.00	\$82.09	
	Notes:								
	i	Steps are 750 hrs.							
	Appre	ntice to Journeywor	ker Ratio:1:1						
		SANDBLAST, NEW		01/01/2023	\$52.75	\$8.65	\$23.05	\$0.00	\$84.45
If 30% or more of surfaces to be painted are new construction		rraces to be painted at a used. PAINTERS LOCAL		07/01/2023	\$53.95	\$8.65	\$23.05	\$0.00	\$85.65
	te shall be				05515	\$8.65	\$23.05	\$0.00	\$86.85
	te shall be			01/01/2024	\$55.15	\$6.03	Ψ23.03	ψ0.00	Ψ00.05
	te shall be			01/01/2024 07/01/2024		\$8.65	\$23.05	\$0.00	\$88.05

Effective Date Base Wage Health

Classification

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

Supplemental

Unemployment

Pension

Total Rate

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Pension

Total Rate Unemployment

Apprentice -	PAINTER Local 35 Zone 1 - Spray/Sandblast - New
Effective Date	01/01/2023

Effecti	ive Date - 01/01/2023				Supplemental		
Step	percent	Apprentice Base Wage	Health	Pension	Unemployment	Total Rate	
1	50	\$26.38	\$8.65	\$0.00	\$0.00	\$35.03	
2	55	\$29.01	\$8.65	\$6.27	\$0.00	\$43.93	
3	60	\$31.65	\$8.65	\$6.84	\$0.00	\$47.14	
4	65	\$34.29	\$8.65	\$7.41	\$0.00	\$50.35	
5	70	\$36.93	\$8.65	\$19.63	\$0.00	\$65.21	
6	75	\$39.56	\$8.65	\$20.20	\$0.00	\$68.41	
7	80	\$42.20	\$8.65	\$20.77	\$0.00	\$71.62	
8	90	\$47.48	\$8.65	\$21.91	\$0.00	\$78.04	
Effect	ive Date - 07/01/2023				Supplemental		
Step	percent	Apprentice Base Wage	Health	Pension	Unemployment	Total Rate	
1	50	\$26.98	\$8.65	\$0.00	\$0.00	\$35.63	
2	55	\$29.67	\$8.65	\$6.27	\$0.00	\$44.59	
3	60	\$32.37	\$8.65	\$6.84	\$0.00	\$47.86	
4	65	\$35.07	\$8.65	\$7.41	\$0.00	\$51.13	
5	70	\$37.77	\$8.65	\$19.63	\$0.00	\$66.05	
6	75	\$40.46	\$8.65	\$20.20	\$0.00	\$69.31	
7	80	\$43.16	\$8.65	\$20.77	\$0.00	\$72.58	
8	90	\$48.56	\$8.65	\$21.91	\$0.00	\$79.12	
Notes:							
į	Steps are 750 hrs.						
Appre	ntice to Journeyworker Ratio:1:1						
NTER (SPRAY OR	SANDBLAST, REPAINT)	01/01/2023	\$50.81	\$8.65	\$23.05	\$0.00	\$82.51
TEMO ECCIE 33 - ZOM		07/01/2023	\$52.01	\$8.65	\$23.05	\$0.00	\$83.71
		01/01/2024	\$53.21	\$8.65	\$23.05	\$0.00	\$84.91
		01/01/2025	\$55.61	\$8.65	\$23.05	\$0.00	\$87.31
		07/01/2025	\$54.41	\$8.65	\$23.05	\$0.00	\$86.11

Issue Date: 02/28/2023

Pension Sup

Total Rate

		TER Local 35 Zone 1 - Spr	ay/Sandblast - Repaint					
Effec Step	tive Date - 0 percent	1/01/2023	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate	;
1	50		\$25.41	\$8.65	\$0.00	\$0.00	\$34.06	·)
2	55		\$27.95	\$8.65	\$6.27	\$0.00	\$42.87	
3	60		\$30.49	\$8.65	\$6.84	\$0.00	\$45.98	
4	65		\$33.03	\$8.65	\$7.41	\$0.00	\$49.09)
5	70		\$35.57	\$8.65	\$19.63	\$0.00	\$63.85	
6	75		\$38.11	\$8.65	\$20.20	\$0.00	\$66.96	
7	80		\$40.65	\$8.65	\$20.77	\$0.00	\$70.07	
8	90		\$45.73	\$8.65	\$21.91	\$0.00	\$76.29)
Effec Step	tive Date - 0	7/01/2023	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate	;
1	50		\$26.01	\$8.65	\$0.00	\$0.00	\$34.66	I
2	55		\$28.61	\$8.65	\$6.27	\$0.00	\$43.53	
3	60		\$31.21	\$8.65	\$6.84	\$0.00	\$46.70	
4	65		\$33.81	\$8.65	\$7.41	\$0.00	\$49.87	
5	70		\$36.41	\$8.65	\$19.63	\$0.00	\$64.69)
6	75		\$39.01	\$8.65	\$20.20	\$0.00	\$67.86	
7	80		\$41.61	\$8.65	\$20.77	\$0.00	\$71.03	
8	90		\$46.81	\$8.65	\$21.91	\$0.00	\$77.37	
Notes	Steps are 750							
Appr	entice to Journ	eyworker Ratio:1:1					'	
TER / TAPER (E			01/01/2023	\$51.35	\$8.65	\$23.05	\$0.00	\$83.05
	•	nted are new construction, SLOCAL 35 - ZONE 1	07/01/2023	\$52.55	\$8.65	\$23.05	\$0.00	\$84.25
pann raic snan 0	e useu. <i>PAINTER</i> S	LOCAL 33 - ZONE I	01/01/2024	\$53.75	\$8.65	\$23.05	\$0.00	\$85.45
			07/01/2024	\$54.95	\$8.65	\$23.05	\$0.00	\$86.65
			01/01/2025	\$56.15	\$8.65	\$23.05	\$0.00	\$87.85

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70

75

80

90

Pension Suj

Total Rate

Effect	ive Date - 01/01/2023				Supplemental	
Step	percent	Apprentice Base Wage	Health	Pension	Unemployment	Total Rate
1	50	\$25.68	\$8.65	\$0.00	\$0.00	\$34.33
2	55	\$28.24	\$8.65	\$6.27	\$0.00	\$43.16
3	60	\$30.81	\$8.65	\$6.84	\$0.00	\$46.30
4	65	\$33.38	\$8.65	\$7.41	\$0.00	\$49.44
5	70	\$35.95	\$8.65	\$19.63	\$0.00	\$64.23
6	75	\$38.51	\$8.65	\$20.20	\$0.00	\$67.36
7	80	\$41.08	\$8.65	\$20.77	\$0.00	\$70.50
8	90	\$46.22	\$8.65	\$21.91	\$0.00	\$76.78
Effect	ive Date - 07/01/2023				Supplemental	
Step	percent	Apprentice Base Wage	Health	Pension	Unemployment	Total Rate
1	50	\$26.28	\$8.65	\$0.00	\$0.00	\$34.93
2	55	\$28.90	\$8.65	\$6.27	\$0.00	\$43.82
3	60	\$31.53	\$8.65	\$6.84	\$0.00	\$47.02
4	65	\$34.16	\$8.65	\$7.41	\$0.00	\$50.22

\$8.65

\$8.65

\$8.65

\$8.65

\$50.61

\$51.81

\$53.01

\$54.21

\$19.63

\$20.20

\$20.77

\$21.91

\$8.65

\$8.65

\$8.65

\$8.65

\$0.00

\$0.00

\$0.00

\$0.00

\$23.05

\$23.05

\$23.05

\$23.05

\$0.00

\$0.00

\$0.00

\$0.00

\$65.07

\$68.26

\$71.46

\$77.86

\$82.31

\$83.51

\$84.71

\$85.91

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Notes:						
Steps are 750 hrs.						
•						
Apprentice to Journeyworker Ratio:1:1						
PAINTER / TAPER (BRUSH, REPAINT)	01/01/2023	\$49.41	\$8.65	\$23.05	\$0.00	\$81.11
PAINTERS LOCAL 35 - ZONE 1			**	# 22.05	40.00	

07/01/2023

01/01/2024

07/01/2024

01/01/2025

\$36.79

\$39.41

\$42.04

\$47.30

.....

Apprentice - PAINTER Local 35 Zone 1 - BRUSH REPAINT

Pension

Total Rate

	Effecti	ve Date -	01/01/2023				Supplemental		
	Step	percent		Apprentice Base Wage	Health	Pension	Unemployment	Total Rate	•
	1	50		\$24.71	\$8.65	\$0.00	\$0.00	\$33.36	ó
	2	55		\$27.18	\$8.65	\$6.27	\$0.00	\$42.10)
	3	60		\$29.65	\$8.65	\$6.84	\$0.00	\$45.14	ţ
	4	65		\$32.12	\$8.65	\$7.41	\$0.00	\$48.18	}
	5	70		\$34.59	\$8.65	\$19.63	\$0.00	\$62.87	7
	6	75		\$37.06	\$8.65	\$20.20	\$0.00	\$65.91	Ĺ
	7	80		\$39.53	\$8.65	\$20.77	\$0.00	\$68.95	;
	8	90		\$44.47	\$8.65	\$21.91	\$0.00	\$75.03	}
	Effecti	ve Date -	07/01/2023				Supplemental		
	Step	percent		Apprentice Base Wage	Health	Pension	Unemployment	Total Rate	•
	1	50		\$25.31	\$8.65	\$0.00	\$0.00	\$33.96	5
	2	55		\$27.84	\$8.65	\$6.27	\$0.00	\$42.76	5
	3	60		\$30.37	\$8.65	\$6.84	\$0.00	\$45.86	5
	4	65		\$32.90	\$8.65	\$7.41	\$0.00	\$48.96	5
	5	70		\$35.43	\$8.65	\$19.63	\$0.00	\$63.71	Ĺ
	6	75		\$37.96	\$8.65	\$20.20	\$0.00	\$66.81	Ĺ
	7	80		\$40.49	\$8.65	\$20.77	\$0.00	\$69.91	Ĺ
	8	90		\$45.55	\$8.65	\$21.91	\$0.00	\$76.11	Į
	Notes:	Steps are	750 hrs.						
	Appre	ntice to Jo	urneyworker Ratio:1:1						
			S (HEAVY/HIGHWAY)	12/01/2022	2 \$42.58	\$9.35	\$17.82	\$0.00	\$69.75
ABORERS - ZON	E I (HEAV	Y & HIGHWA	11)	06/01/2023	\$43.58	\$9.35	\$17.82	\$0.00	\$70.75
				12/01/2023	\$44.83	\$9.35	\$17.82	\$0.00	\$72.00
				06/01/2024	\$46.31	\$9.35	\$17.82	\$0.00	\$73.48
				12/01/2024	\$47.78	\$9.35	\$17.82	\$0.00	\$74.95
				06/01/2025	\$49.28	\$9.35	\$17.82	\$0.00	\$76.45
				12/01/2025	\$50.78	\$9.35	\$17.82	\$0.00	\$77.95
				06/01/2026	\$52.33	\$9.35	\$17.82	\$0.00	\$79.50
For apprentice	e rates see "	Apprentice- I	ABORER (Heavy and Highway)	12/01/2026	\$53.83	\$9.35	\$17.82	\$0.00	\$81.00
ANEL & PIC	KUP TR	JCKS DRI	IVER	12/01/2021	\$36.88	\$13.41	\$16.01	\$0.00	\$66.30
			OR (UNDERPINNING AN	D 08/01/2020	\$49.07	\$9.40	\$23.12	\$0.00	\$81.59
ECK) ILE DRIVER LO	CAL 56 (ZC	NE I)	PILE DRIVER"	00/01/2020	ф 1 7.0/	ψ 7.4 0	ψ <i>ω</i> J.12	ψ0.00	φ01.39
ILE DRIVER		NE I)		08/01/2020	\$49.07	\$9.40	\$23.12	\$0.00	\$81.59

Total Rate

:			0			Supplemental		
_	Step	percent	Apprentice Base Wage	Health	Pension	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:		0/1/17; 45/45/55/55/70/70/80/80 4 \$41.46/ 5&6 \$62.80/ 7&8 \$69.25 r Ratio:1:5					
EFITTER & S		·	03/01/202	21 \$57.94	\$11.70	\$20.24	\$0.00	\$89.8
-	Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate	
	1	40	\$23.18	\$11.70	\$8.25	\$0.00	\$43.13	
	2	45	\$26.07	\$11.70	\$20.24	\$0.00		
	2						\$58.01	
	3	60	\$34.76	\$11.70	\$20.24	\$0.00	\$66.70	
	4	70	\$40.56	\$11.70	\$20.24	\$0.00 \$0.00	\$66.70 \$72.50	
						\$0.00	\$66.70	
- []]	4 5 Notes:	70 80 ** 1:3; 3:15; 1:10 then Refrig/AC Mechanic	\$40.56 \$46.35 ————————————————————————————————————	\$11.70 \$11.70	\$20.24 \$20.24	\$0.00 \$0.00	\$66.70 \$72.50	
- 1 -	4 5 Notes:	70 80 — — — — — ** 1:3; 3:15; 1:10 then	\$40.56 \$46.35 reafter / Steps are 1 yr. **1:1;1:2;2:4;3:6;4:8;5:10;6:12;7:14;8: r Ratio:**	\$11.70 \$11.70 — — — — — — — — — — — — — — — — — — —	\$20.24 \$20.24 — — — — Max)	\$0.00 \$0.00 \$0.00	\$66.70 \$72.50 \$78.29	0.50
- []]	4 5 Notes:	70 80 ** 1:3; 3:15; 1:10 then Refrig/AC Mechanic	\$40.56 \$46.35 reafter / Steps are 1 yr. **1:1;1:2;2:4;3:6;4:8;5:10;6:12;7:14;8: reafter / Steps are 1 yr.	\$11.70 \$11.70 	\$20.24 \$20.24 ————————————————————————————————————	\$0.00 \$0.00 \$0.00 	\$66.70 \$72.50 \$78.29	
] 	4 5 Notes:	70 80 ** 1:3; 3:15; 1:10 then Refrig/AC Mechanic	\$40.56 \$46.35 reafter / Steps are 1 yr. **1:1;1:2;2:4;3:6;4:8;5:10;6:12;7:14;8: r Ratio:**	\$11.70 \$11.70 	\$20.24 \$20.24 — — — — Max)	\$0.00 \$0.00 \$0.00	\$66.70 \$72.50 \$78.29	\$71.1
ELAYER ORERS - ZONE I For apprentice ra	Apprei	70 80 ** 1:3; 3:15; 1:10 then Refrig/AC Mechanic ritice to Journeyworke	\$40.56 \$46.35 reafter / Steps are 1 yr. **1:1;1:2;2:4;3:6;4:8;5:10;6:12;7:14;8: r Ratio:** 12/01/202 06/01/202	\$11.70 \$11.70 	\$20.24 \$20.24 ————————————————————————————————————	\$0.00 \$0.00 \$0.00 	\$66.70 \$72.50 \$78.29 	\$71.10
ELAYER ORERS - ZONE I For apprentice ra ELAYER (HE	Apprei	70 80 ** 1:3; 3:15; 1:10 then Refrig/AC Mechanic ntice to Journeyworke Apprentice- LABORER"	\$40.56 \$46.35 reafter / Steps are 1 yr. **1:1;1:2;2:4;3:6;4:8;5:10;6:12;7:14;8: r Ratio:** 12/01/202 06/01/202	\$11.70 \$11.70 	\$20.24 \$20.24 ————————————————————————————————————	\$0.00 \$0.00 \$0.00 	\$66.70 \$72.50 \$78.29 	\$71.1 \$72.3
ELAYER ORERS - ZONE I For apprentice ra ELAYER (HE	Apprei	70 80 ** 1:3; 3:15; 1:10 then Refrig/AC Mechanic ntice to Journeyworke Apprentice- LABORER"	\$40.56 \$46.35 reafter / Steps are 1 yr. **1:1;1:2;2:4;3:6;4:8;5:10;6:12;7:14;8: r Ratio:** 12/01/202 06/01/202 12/01/202	\$11.70 \$11.70 \$17;9:20;10:23(1) 22 \$43.43 23 \$44.43 23 \$45.68 22 \$42.83	\$20.24 \$20.24 ————————————————————————————————————	\$0.00 \$0.00 \$0.00 \$17.57 \$17.57 \$17.57	\$66.70 \$72.50 \$78.29 	\$71.10 \$72.3 \$70.0
ELAYER ORERS - ZONE I For apprentice ra	Apprei	70 80 ** 1:3; 3:15; 1:10 then Refrig/AC Mechanic ntice to Journeyworke Apprentice- LABORER"	\$40.56 \$46.35 reafter / Steps are 1 yr. **1:1;1:2;2:4;3:6;4:8;5:10;6:12;7:14;8: r Ratio:** 12/01/202 12/01/202	\$11.70 \$11.70 \$11.70 	\$20.24 \$20.24 ————————————————————————————————————	\$0.00 \$0.00 \$0.00 \$17.57 \$17.57 \$17.57	\$66.70 \$72.50 \$78.29 	\$71.10 \$72.3 \$70.0 \$71.0
ELAYER ORERS - ZONE I For apprentice ra ELAYER (HE	Apprei	70 80 ** 1:3; 3:15; 1:10 then Refrig/AC Mechanic ntice to Journeyworke Apprentice- LABORER"	\$40.56 \$46.35 reafter / Steps are 1 yr. **1:1;1:2;2:4;3:6;4:8;5:10;6:12;7:14;8: r Ratio:** 12/01/202 12/01/202 12/01/202 06/01/202	\$11.70 \$11.70 \$11.70 	\$20.24 \$20.24 \$20.24 Max) \$9.10 \$9.10 \$9.35 \$9.35	\$0.00 \$0.00 \$0.00 \$17.57 \$17.57 \$17.57 \$17.52 \$17.82	\$66.70 \$72.50 \$78.29 	\$71.10 \$72.3 \$70.0 \$71.0 \$72.2
ELAYER ORERS - ZONE I For apprentice ra ELAYER (HE	Apprei	70 80 ** 1:3; 3:15; 1:10 then Refrig/AC Mechanic ntice to Journeyworke Apprentice- LABORER"	\$40.56 \$46.35 reafter / Steps are 1 yr. **1:1;1:2;2:4;3:6;4:8;5:10;6:12;7:14;8: r Ratio:** 12/01/202 06/01/202 12/01/202 06/01/202 12/01/202	\$11.70 \$11.70 \$11.70 17;9:20;10:23(1) 22 \$43.43 23 \$44.43 23 \$45.68 22 \$42.83 23 \$43.83 24 \$45.08 24 \$46.56	\$20.24 \$20.24 \$20.24 \$9.10 \$9.10 \$9.35 \$9.35 \$9.35	\$0.00 \$0.00 \$0.00 \$17.57 \$17.57 \$17.57 \$17.82 \$17.82 \$17.82	\$66.70 \$72.50 \$78.29 	\$70.10 \$71.10 \$72.3: \$70.00 \$71.00 \$72.2: \$73.7: \$75.20

06/01/2026

12/01/2026

\$52.58

\$54.08

\$17.82

\$17.82

\$0.00

\$0.00

\$79.75

\$81.25

\$9.35

\$9.35

PLUMBERS &	GASFI	TTERS		02/26/2023	3 \$65.19	\$14.07	\$18.36	\$0.00	\$97.62
PLUMBERS & GAS	SFITTERS	LOCAL 12		09/03/2023		\$14.07	\$18.36	\$0.00	\$99.37
				03/03/2024		\$14.07	\$18.36	\$0.00	\$101.17
				09/01/2024		\$14.07	\$18.36	\$0.00	\$102.97
				03/02/2025		\$14.07	\$18.36	\$0.00	\$104.77
				03/02/202	ψ,2.3 ι	Ψ11.07	******	\$0.00	Ψ101.77
	Appre	ntice - PLUMBER/GAS	FITTER - Local 12						
		ve Date - 02/26/2023					Supplemental		
	Step	percent	Appren	tice Base Wage	Health	Pension	Unemployment	Total Rate	
	1	35		\$22.82	\$14.07	\$6.63	\$0.00	\$43.52	
	2	40		\$26.08	\$14.07	\$7.52	\$0.00	\$47.67	
	3	55		\$35.85	\$14.07	\$10.24	\$0.00	\$60.16	
	4	65		\$42.37	\$14.07	\$12.04	\$0.00	\$68.48	
	5	75		\$48.89	\$14.07	\$13.85	\$0.00	\$76.81	
	Notes:								
	1	** 1:2; 2:6; 3:10; 4:14; <i>:</i>	5:19/Steps are 1 yr						
		Step4 with lic\$69.00, St							
	Appre	ntice to Journeyworker	Ratio:**						
PNEUMATIC C		OLS (TEMP.)		03/01/202	1 \$57.94	\$11.70	\$20.24	\$0.00	\$89.88
		'Apprentice- PIPEFITTER" or "I	PLUMBER/PIPEFITTER"						
PNEUMATIC I LABORERS - ZONE		TOOL OPERATOR		12/01/2022	2 \$43.43	\$9.10	\$17.57	\$0.00	\$70.10
E.IDOTILITIES EGIVE				06/01/2023	3 \$44.43	\$9.10	\$17.57	\$0.00	\$71.10
T				12/01/2023	3 \$45.68	\$9.10	\$17.57	\$0.00	\$72.35
		'Apprentice- LABORER"	1717 O.						
HIGHWAY)	JKILL/ I	TOOL OPERATOR (HEA	VYX	12/01/2022		\$9.35	\$17.82	\$0.00	\$70.00
LABORERS - ZONE	E 1 (HEAV	Y & HIGHWAY)		06/01/2023	,	\$9.35	\$17.82	\$0.00	\$71.00
				12/01/2023		\$9.35	\$17.82	\$0.00	\$72.25
				06/01/2024			\$17.82	\$0.00	\$73.73
				12/01/2024	4 \$48.03	\$9.35	\$17.82	\$0.00	\$75.20
				06/01/2025	5 \$49.53	\$9.35	\$17.82	\$0.00	\$76.70
				12/01/2025	5 \$51.03	\$9.35	\$17.82	\$0.00	\$78.20
				06/01/2020	5 \$52.58	\$9.35	\$17.82	\$0.00	\$79.75
			177.1	12/01/2020	5 \$54.08	\$9.35	\$17.82	\$0.00	\$81.25
		'Apprentice- LABORER (Heavy	and Highway)						
POWDERMAN LABORERS - ZONE		ASTEK		12/01/2022	2 \$44.18	\$9.10	\$17.57	\$0.00	\$70.85
				06/01/2023	3 \$45.18		\$17.57	\$0.00	\$71.85
F	, .	I LABORER		12/01/2023	3 \$46.43	\$9.10	\$17.57	\$0.00	\$73.10
For apprentice	rates see '	'Apprentice- LABORER"							

Effective Date Base Wage Health

Classification

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

Supplemental

Unemployment

Pension

Total Rate

 Issue Date:
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Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
POWDERMAN & BLASTER (HEAVY & HIGHWAY)	12/01/2022	\$43.58	\$9.35	\$17.82	\$0.00	\$70.75
LABORERS - ZONE 1 (HEAVY & HIGHWAY)	06/01/2023	\$44.58	\$9.35	\$17.82	\$0.00	\$71.75
	12/01/2023	\$45.83	\$9.35	\$17.82	\$0.00	\$73.00
	06/01/2024	\$47.31	\$9.35	\$17.82	\$0.00	\$74.48
	12/01/2024	\$48.78	\$9.35	\$17.82	\$0.00	\$75.95
	06/01/2025	\$50.28	\$9.35	\$17.82	\$0.00	\$77.45
	12/01/2025	\$51.78	\$9.35	\$17.82	\$0.00	\$78.95
	06/01/2026	\$53.33	\$9.35	\$17.82	\$0.00	\$80.50
	12/01/2026	\$54.83	\$9.35	\$17.82	\$0.00	\$82.00
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)						
POWER SHOVEL/DERRICK/TRENCHING MACHINE OPERATING ENGINEERS LOCAL 4	12/01/2022	\$53.63	\$14.25	\$16.05	\$0.00	\$83.93
I EKATING ENGINEEKS EOCAL 4	06/01/2023	\$54.88	\$14.25	\$16.05	\$0.00	\$85.18
	12/01/2023	\$56.13	\$14.25	\$16.05	\$0.00	\$86.43
	06/01/2024	\$57.43	\$14.25	\$16.05	\$0.00	\$87.73
	12/01/2024	\$58.88	\$14.25	\$16.05	\$0.00	\$89.18
	06/01/2025	\$60.18	\$14.25	\$16.05	\$0.00	\$90.48
	12/01/2025	\$61.63	\$14.25	\$16.05	\$0.00	\$91.93
	06/01/2026	\$62.93	\$14.25	\$16.05	\$0.00	\$93.23
For apprentice rates see "Apprentice- OPERATING ENGINEERS"	12/01/2026	\$64.38	\$14.25	\$16.05	\$0.00	\$94.68
PUMP OPERATOR (CONCRETE)	12/01/2022	\$53.63	\$14.25	\$16.05	\$0.00	\$83.93
PPERATING ENGINEERS LOCAL 4	06/01/2023	\$54.88	\$14.25	\$16.05	\$0.00	\$85.18
	12/01/2023	\$56.13	\$14.25	\$16.05	\$0.00	\$86.43
	06/01/2024	\$57.43	\$14.25	\$16.05	\$0.00	\$87.73
	12/01/2024	\$58.88	\$14.25	\$16.05	\$0.00	\$89.18
	06/01/2025	\$60.18	\$14.25	\$16.05	\$0.00	\$90.48
	12/01/2025	\$61.63	\$14.25	\$16.05	\$0.00	\$91.93
	06/01/2026	\$62.93	\$14.25	\$16.05	\$0.00	\$93.23
	12/01/2026	\$64.38	\$14.25	\$16.05	\$0.00	\$94.68
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
PUMP OPERATOR (DEWATERING, OTHER)	12/01/2022	\$35.08	\$14.25	\$16.05	\$0.00	\$65.38
PERATING ENGINEERS LOCAL 4	06/01/2023	\$35.90	\$14.25	\$16.05	\$0.00	\$66.20
	12/01/2023	\$36.72	\$14.25	\$16.05	\$0.00	\$67.02
	06/01/2024	\$37.57	\$14.25	\$16.05	\$0.00	\$67.87
	12/01/2024	\$38.52	\$14.25	\$16.05	\$0.00	\$68.82
	06/01/2025	\$39.37	\$14.25	\$16.05	\$0.00	\$69.67
	12/01/2025	\$40.32	\$14.25	\$16.05	\$0.00	\$70.62
	06/01/2026	\$41.18	\$14.25	\$16.05	\$0.00	\$71.48
	12/01/2026	\$42.13	\$14.25	\$16.05	\$0.00	\$72.43
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						

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Issue Date: 02/28/2023

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
READY-MIX CONCRETE DRIVER	01/01/2023	\$25.75	\$12.46	\$8.00	\$0.00	\$46.21
TEAMSTERS 170 - Rosenfeld (Walpole)	05/01/2023	\$26.40	\$12.46	\$8.00	\$0.00	\$46.86
	01/01/2024	\$26.40	\$12.96	\$8.00	\$0.00	\$47.36
	05/01/2024	\$27.00	\$12.96	\$8.00	\$0.00	\$47.96
	01/01/2025	\$27.00	\$13.46	\$8.00	\$0.00	\$48.46
	05/01/2025	\$27.60	\$13.46	\$8.25	\$0.00	\$49.31
	01/01/2026	\$27.60	\$13.96	\$8.25	\$0.00	\$49.81
RECLAIMERS	12/01/2022	\$53.05	\$14.25	\$16.05	\$0.00	\$83.35
OPERATING ENGINEERS LOCAL 4	06/01/2023	\$54.29	\$14.25	\$16.05	\$0.00	\$84.59
	12/01/2023	\$55.53	\$14.25	\$16.05	\$0.00	\$85.83
	06/01/2024	\$56.81	\$14.25	\$16.05	\$0.00	\$87.11
	12/01/2024	\$58.25	\$14.25	\$16.05	\$0.00	\$88.55
	06/01/2025	\$59.53	\$14.25	\$16.05	\$0.00	\$89.83
	12/01/2025	\$60.97	\$14.25	\$16.05	\$0.00	\$91.27
	06/01/2026	\$62.25	\$14.25	\$16.05	\$0.00	\$92.55
	12/01/2026	\$63.69	\$14.25	\$16.05	\$0.00	\$93.99
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
RIDE-ON MOTORIZED BUGGY OPERATOR LABORERS - ZONE 1	12/01/2022	\$43.43	\$9.10	\$17.57	\$0.00	\$70.10
EBOAERS 2012 I	06/01/2023	\$44.43	\$9.10	\$17.57	\$0.00	\$71.10
E C LADONENI	12/01/2023	\$45.68	\$9.10	\$17.57	\$0.00	\$72.35
For apprentice rates see "Apprentice- LABORER" DOLLED (SDDE A DED /MILL CHING MACHINE	10/01/0000		****	#1605	Ф0.00	***
ROLLER/SPREADER/MULCHING MACHINE OPERATING ENGINEERS LOCAL 4	12/01/2022	\$53.05	\$14.25	\$16.05	\$0.00	\$83.35
	06/01/2023	\$54.29	\$14.25	\$16.05	\$0.00	\$84.59
	12/01/2023	\$55.53	\$14.25	\$16.05	\$0.00	\$85.83
	06/01/2024	\$56.81	\$14.25	\$16.05	\$0.00	\$87.11
	12/01/2024	\$58.25	\$14.25	\$16.05	\$0.00	\$88.55
	06/01/2025	\$59.53	\$14.25	\$16.05	\$0.00	\$89.83
	12/01/2025	\$60.97	\$14.25	\$16.05	\$0.00	\$91.27
	06/01/2026	\$62.25	\$14.25	\$16.05	\$0.00	\$92.55
Description of the control of the co	12/01/2026	\$63.69	\$14.25	\$16.05	\$0.00	\$93.99
For apprentice rates see "Apprentice- OPERATING ENGINEERS"					***	
ROOFER (Inc.Roofer Waterproofing &Roofer Damproofg) ROOFERS LOCAL 33	02/01/2023	\$48.53	\$12.78	\$20.20	\$0.00	\$81.51
	08/01/2023	\$50.03	\$12.78	\$20.20	\$0.00	\$83.01
	02/01/2024	\$51.28	\$12.78	\$20.20	\$0.00	\$84.26
	08/01/2024	\$52.78	\$12.78	\$20.20	\$0.00	\$85.76
	02/01/2025	\$54.03	\$12.78	\$20.20	\$0.00	\$87.01
	08/01/2025	\$55.53	\$12.78	\$20.20	\$0.00	\$88.51
	02/01/2026	\$56.78	\$12.78	\$20.20	\$0.00	\$89.76

 Issue Date:
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Total Rate

Apprentice - ROOFER - Local 33

Pension

	Apprei	itice - Tee	OTER Boom 55						
		ve Date -	02/01/2023	d D W	TT 1/1	ъ.	Supplemental	T . 1 D .	
	Step	percent	A	apprentice Base Wage		Pension	Unemployment	Total Rate	
	1	50		\$24.27	\$12.78	\$5.59	\$0.00	\$42.64	
	2	60		\$29.12	\$12.78	\$20.20	\$0.00	\$62.10	
	3	65		\$31.54	\$12.78	\$20.20	\$0.00	\$64.52	
	4	75		\$36.40	\$12.78	\$20.20	\$0.00	\$69.38	
	5	85		\$41.25	\$12.78	\$20.20	\$0.00	\$74.23	
	Effecti	ve Date -	08/01/2023				Supplemental		
	Step	percent	A	pprentice Base Wage	Health	Pension	Unemployment	Total Rate	
	1	50		\$25.02	\$12.78	\$5.59	\$0.00	\$43.39	
	2	60		\$30.02	\$12.78	\$20.20	\$0.00	\$63.00	
	3	65		\$32.52	\$12.78	\$20.20	\$0.00	\$65.50	
	4	75		\$37.52	\$12.78	\$20.20	\$0.00	\$70.50	
	5	85		\$42.53	\$12.78	\$20.20	\$0.00	\$75.51	
	Notes:	Step 1 is 2	1-10, the 1:10; Reroofing: 1:4, to 2000 hrs.; Steps 2-5 are 1000 hr. Mechanics' receive \$1.00 hr.	rs.					
	Appre	ntice to Jo	urneyworker Ratio:**						
		E / PRECA	ST CONCRETE	02/01/2023	3 \$48.78	\$12.78	\$20.20	\$0.00	\$81.76
ROOFERS LOCAL .	33			08/01/2023	\$50.28	\$12.78	\$20.20	\$0.00	\$83.26
				02/01/2024	\$51.53	\$12.78	\$20.20	\$0.00	\$84.51
				08/01/2024	\$53.03	\$12.78	\$20.20	\$0.00	\$86.01
				02/01/2025	\$54.28	\$12.78	\$20.20	\$0.00	\$87.26
				08/01/2025	\$55.78	\$12.78	\$20.20	\$0.00	\$88.76
				02/01/2026	5 \$57.03	\$12.78	\$20.20	\$0.00	\$90.01
For apprentice			LOOFER"						
SHEETMETAL WO				02/01/2023	3 \$55.31	\$14.11	\$26.64	\$2.83	\$98.89
				08/01/2023	\$57.01	\$14.11	\$26.64	\$2.83	\$100.59
				02/01/2024	\$58.71	\$14.11	\$26.64	\$2.83	\$102.29
				08/01/2024	\$60.46	\$14.11	\$26.64	\$2.83	\$104.04
				02/01/2025	\$62.21	\$14.11	\$26.64	\$2.83	\$105.79
				08/01/2025	\$64.06	\$14.11	\$26.64	\$2.83	\$107.64
				02/01/2026	\$66.01	\$14.11	\$26.64	\$2.83	\$109.59

Total Rate

		e Date - 02/01/2023 percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total R	ate
1	1	42	\$23.23	\$14.11	\$6.13	\$0.00	\$43.	.47
2	2	42	\$23.23	\$14.11	\$6.13	\$0.00	\$43.	.47
3	3	47	\$26.00	\$14.11	\$11.90	\$1.54	\$53.	.55
4	1	47	\$26.00	\$14.11	\$11.90	\$1.54	\$53.	.55
4	5	52	\$28.76	\$14.11	\$12.88	\$1.65	\$57.	.40
(5	52	\$28.76	\$14.11	\$13.13	\$1.65	\$57.	.65
7	7	60	\$33.19	\$14.11	\$14.54	\$1.83	\$63.	.67
8	3	65	\$35.95	\$14.11	\$15.52	\$1.94	\$67.	.52
ç)	75	\$41.48	\$14.11	\$17.48	\$2.16	\$75.	.23
1	10	85	\$47.01	\$14.11	\$18.94	\$2.36	\$82.	.42
		e Date - 08/01/2023 percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total R	ate
	1	42	\$23.94	\$14.11	\$6.13	\$0.00	\$44.	.18
2	2	42	\$23.94	\$14.11	\$6.13	\$0.00	\$44.	.18
3	3	47	\$26.79	\$14.11	\$11.90	\$1.58	\$54.	.38
2	1	47	\$26.79	\$14.11	\$11.90	\$1.58	\$54.	.38
5	5	52	\$29.65	\$14.11	\$12.88	\$1.70	\$58.	.34
(5	52	\$29.65	\$14.11	\$13.13	\$1.70	\$58.	.59
7	7	60	\$34.21	\$14.11	\$14.54	\$1.89	\$64.	.75
8	3	65	\$37.06	\$14.11	\$15.52	\$2.00	\$68.	.69
Ģ)	75	\$42.76	\$14.11	\$17.48	\$2.23	\$76.	.58
1	10	85	\$48.46	\$14.11	\$18.94	\$2.45	\$83.	.96
N	Notes:	Steps are 6 mos.						-
Ā	ppren	tice to Journeyworker Ratio:1:4						
		MOVING EQUIP < 35 TONS NO. 10 ZONE A	12/01/202	\$37	.34 \$13.41	\$16.01	\$0.00	\$66.7
		MOVING EQUIP > 35 TONS NO. 10 ZONE A	12/01/202	\$37	.63 \$13.41	\$16.01	\$0.00	\$67.0
NKLER FIT			10/01/2022	2 \$65	.56 \$15.50	\$22.10	\$0.00	\$103.
KLER FITTERS	LOCAL	550 - (Section A) Zone 1	03/01/2023	\$67	.26 \$15.50	\$22.10	\$0.00	\$104.
			10/01/2023	\$69	.01 \$15.50	\$22.10	\$0.00	\$106
			03/01/2024	\$70	.81 \$15.50	\$22.10	\$0.00	\$108.
			10/01/2024	\$72	.61 \$15.50	\$22.10	\$0.00	\$110.

\$0.00

\$93.99

Pension

Total Rate

Apprentice - SPRINKLER FITTER - Local 550 (Section A) Zone 1 10/01/2022 **Effective Date -**Supplemental percent Apprentice Base Wage Health Pension Unemployment Total Rate Step 1 35 \$22.95 \$9.60 \$48.05 \$15.50 \$0.00 2 40 \$26.22 \$9.60 \$0.00 \$51.32 \$15.50 3 45 \$29.50 \$9.60 \$0.00 \$54.60 \$15.50 4 50 \$32.78 \$15.50 \$9.60 \$0.00 \$57.88 5 55 \$36.06 \$0.00 \$15.50 \$9.60 \$61.16 6 60 \$39.34 \$15.50 \$11.10 \$0.00 \$65.94 7 65 \$42.61 \$15.50 \$11.10 \$0.00 \$69.21 8 70 \$45.89 \$15.50 \$11.10 \$0.00 \$72.49 9 75 \$49.17 \$15.50 \$11.10 \$0.00 \$75.77 10 80 \$52.45 \$15.50 \$11.10 \$0.00 \$79.05 03/01/2023 **Effective Date -**Supplemental Step percent Apprentice Base Wage Health Pension Unemployment Total Rate 1 35 \$23.54 \$15.50 \$9.60 \$48.64 \$0.00 2 40 \$26.90 \$15.50 \$9.60 \$0.00 \$52.00 3 45 \$30.27 \$15.50 \$9.60 \$0.00 \$55.37 4 50 \$9.60 \$0.00 \$33.63 \$15.50 \$58.73 5 55 \$36.99 \$15.50 \$9.60 \$0.00 \$62.09 6 60 \$40.36 \$15.50 \$11.10 \$0.00 \$66.96 7 65 \$43.72 \$15.50 \$11.10 \$0.00 \$70.32 8 70 \$47.08 \$15.50 \$11.10 \$0.00 \$73.68 9 75 \$50.45 \$15.50 \$11.10 \$0.00 \$77.05 10 80 \$53.81 \$15.50 \$11.10 \$0.00 \$80.41 |**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 12/01/2022 \$53.05 \$14.25 \$16.05 \$0.00 \$83.35 OPERATING ENGINEERS LOCAL 4 \$0.00 06/01/2023 \$16.05 \$54.29 \$14.25 \$84.59 \$16.05 \$0.00 12/01/2023 \$55.53 \$14.25 \$85.83 \$16.05 \$0.00 06/01/2024 \$56.81 \$14.25 \$87.11 12/01/2024 \$58.25 \$14.25 \$16.05 \$0.00 \$88.55 06/01/2025 \$16.05 \$0.00 \$89.83 \$59.53 \$14.25 12/01/2025 \$60.97 \$14.25 \$16.05 \$0.00 \$91.27 06/01/2026 \$16.05 \$0.00 \$62.25 \$14.25 \$92.55

12/01/2026

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

\$63.69

\$14.25

\$16.05

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
TAMPERS, SELF-PROPELLED OR TRACTOR DRAWN	12/01/2022	\$53.05	\$14.25	\$16.05	\$0.00	\$83.35
OPERATING ENGINEERS LOCAL 4	06/01/2023	\$54.29	\$14.25	\$16.05	\$0.00	\$84.59
	12/01/2023	\$55.53	\$14.25	\$16.05	\$0.00	\$85.83
	06/01/2024	\$56.81	\$14.25	\$16.05	\$0.00	\$87.11
	12/01/2024	\$58.25	\$14.25	\$16.05	\$0.00	\$88.55
	06/01/2025	\$59.53	\$14.25	\$16.05	\$0.00	\$89.83
	12/01/2025	\$60.97	\$14.25	\$16.05	\$0.00	\$91.27
	06/01/2026	\$62.25	\$14.25	\$16.05	\$0.00	\$92.55
For apprentice rates see "Apprentice- OPERATING ENGINEERS"	12/01/2026	\$63.69	\$14.25	\$16.05	\$0.00	\$93.99
TELECOMMUNICATION TECHNICIAN	09/01/2022	\$46.42	\$13.00	\$18.87	\$0.00	\$78.29
ELECTRICIANS LOCAL 103	03/01/2023	\$48.34	\$13.00	\$19.01	\$0.00	\$80.35

Apprentice - TELECOMMUNICATION TECHNICIAN - Local 103

_	ve Date -	09/01/2022				Supplemental	
Step	percent		Apprentice Base Wage	Health	Pension	Unemployment	Total Rate
1	45		\$20.89	\$13.00	\$0.63	\$0.00	\$34.52
2	45		\$20.89	\$13.00	\$0.63	\$0.00	\$34.52
3	50		\$23.21	\$13.00	\$15.13	\$0.00	\$51.34
4	50		\$23.21	\$13.00	\$15.13	\$0.00	\$51.34
5	55		\$25.53	\$13.00	\$15.51	\$0.00	\$54.04
6	60		\$27.85	\$13.00	\$15.88	\$0.00	\$56.73
7	65		\$30.17	\$13.00	\$16.26	\$0.00	\$59.43
8	70		\$32.49	\$13.00	\$16.62	\$0.00	\$62.11
9	75		\$34.82	\$13.00	\$17.00	\$0.00	\$64.82
10	80		\$37.14	\$13.00	\$17.37	\$0.00	\$67.51
Effecti	ve Date -	03/01/2023				Supplemental	
Step	percent		Apprentice Base Wage	Health	Pension	Unemployment	Total Rate
1	45		\$21.75	\$13.00	\$0.65	\$0.00	\$35.40
2	45		\$21.75	\$13.00	\$0.65	\$0.00	\$35.40
2 3	45 50		\$21.75 \$24.17	\$13.00 \$13.00	\$0.65 \$15.20	\$0.00 \$0.00	\$35.40 \$52.37
3	50		\$24.17	\$13.00	\$15.20	\$0.00	\$52.37
3 4	50 50		\$24.17 \$24.17	\$13.00 \$13.00	\$15.20 \$15.20	\$0.00 \$0.00	\$52.37 \$52.37
3 4 5	50 50 55		\$24.17 \$24.17 \$26.59	\$13.00 \$13.00 \$13.00	\$15.20 \$15.20 \$15.58	\$0.00 \$0.00 \$0.00	\$52.37 \$52.37 \$55.17
3 4 5 6	50 50 55 60		\$24.17 \$24.17 \$26.59 \$29.00	\$13.00 \$13.00 \$13.00 \$13.00	\$15.20 \$15.20 \$15.58 \$15.96	\$0.00 \$0.00 \$0.00 \$0.00	\$52.37 \$52.37 \$55.17 \$57.96
3 4 5 6 7	50 50 55 60 65		\$24.17 \$24.17 \$26.59 \$29.00 \$31.42	\$13.00 \$13.00 \$13.00 \$13.00 \$13.00	\$15.20 \$15.20 \$15.58 \$15.96 \$16.34	\$0.00 \$0.00 \$0.00 \$0.00 \$0.00	\$52.37 \$52.37 \$55.17 \$57.96 \$60.76

 ${\bf Apprentice\ to\ Journeyworker\ Ratio: 1:1}$

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TERRAZZO FIN			02/01/2023	3 \$59.29	\$11.49	\$22.34	\$0.00	\$93.12
BRICKLAYERS LOC	'AL 3 - M.	ARBLE & TILE	08/01/2023		\$11.49	\$22.34	\$0.00	\$95.17
			02/01/2024	4 \$62.59	\$11.49	\$22.34	\$0.00	\$96.42
			08/01/2024	4 \$64.69	\$11.49	\$22.34	\$0.00	\$98.52
			02/01/2025	\$65.99	\$11.49	\$22.34	\$0.00	\$99.82
			08/01/2023	5 \$68.14	\$11.49	\$22.34	\$0.00	\$101.97
			02/01/2020	\$69.49	\$11.49	\$22.34	\$0.00	\$103.32
			08/01/2020	5 \$71.69	\$11.49	\$22.34	\$0.00	\$105.52
			02/01/202	7 \$73.09	\$11.49	\$22.34	\$0.00	\$106.92
	Appre Effecti	ntice - TERRAZZO FINISHER ive Date - 02/01/2023	Local 3 Marble & Tile			Constant		
	Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate	
	1	50	\$29.65	\$11.49	\$22.34	\$0.00	\$63.48	
	2	60	\$35.57	\$11.49	\$22.34	\$0.00	\$69.40	
	3	70	\$41.50	\$11.49	\$22.34	\$0.00	\$75.33	
	4	80	\$47.43	\$11.49	\$22.34	\$0.00	\$81.26	
	5	90	\$53.36	\$11.49	\$22.34	\$0.00	\$87.19	
		ve Date - 08/01/2023	Apprentice Base Wage	Ugalth	Pension	Supplemental Unemployment	Total Rate	
	Step 1	percent 50						
	2	60	\$30.67	\$11.49	\$22.34	\$0.00	\$64.50	
	3	70	\$36.80	\$11.49	\$22.34	\$0.00	\$70.63	
	4	80	\$42.94	\$11.49	\$22.34	\$0.00	\$76.77	
	5	90	\$49.07	\$11.49	\$22.34	\$0.00 \$0.00	\$82.90 \$89.04	
		90	\$55.21	\$11.49	\$22.34	\$0.00	\$89.04 	
	Notes:						 	
1	Appre	ntice to Journeyworker Ratio:1:3						
TEST BORING			12/01/2022	2 \$46.58	\$9.35	\$17.97	\$0.00	\$73.90
LABORERS - FOUN	DATION	AND MARINE	06/01/2023	3 \$47.58	\$9.35	\$17.97	\$0.00	\$74.90
			12/01/2023	\$48.83	\$9.35	\$17.97	\$0.00	\$76.15
			06/01/2024	\$50.31	\$9.35	\$17.97	\$0.00	\$77.63
			12/01/2024	\$51.78	\$9.35	\$17.97	\$0.00	\$79.10
			06/01/2025	\$53.28	\$9.35	\$17.97	\$0.00	\$80.60
			12/01/2023	5 \$54.78	\$9.35	\$17.97	\$0.00	\$82.10
			06/01/2020	\$56.33	\$9.35	\$17.97	\$0.00	\$83.65
T	, .	IA C LADORER"	12/01/2020	5 \$57.83	\$9.35	\$17.97	\$0.00	\$85.15
For apprentice r	ates see '	'Apprentice- LABORER"						

Effective Date Base Wage Health

Classification

Supplemental

Unemployment

Pension

Total Rate

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Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
TEST BORING DRILLER HELPER LABORERS - FOUNDATION AND MARINE	12/01/2022	\$42.70	\$9.35	\$17.97	\$0.00	\$70.02
	06/01/2023	\$43.70	\$9.35	\$17.97	\$0.00	\$71.02
	12/01/2023	\$44.95	\$9.35	\$17.97	\$0.00	\$72.27
	06/01/2024	\$46.43	\$9.35	\$17.97	\$0.00	\$73.75
	12/01/2024	\$47.90	\$9.35	\$17.97	\$0.00	\$75.22
	06/01/2025	\$49.40	\$9.35	\$17.97	\$0.00	\$76.72
	12/01/2025	\$50.90	\$9.35	\$17.97	\$0.00	\$78.22
	06/01/2026	\$52.45	\$9.35	\$17.97	\$0.00	\$79.77
	12/01/2026	\$53.95	\$9.35	\$17.97	\$0.00	\$81.27
For apprentice rates see "Apprentice- LABORER"						
TEST BORING LABORER LABORERS - FOUNDATION AND MARINE	12/01/2022	\$42.58	\$9.35	\$17.97	\$0.00	\$69.90
ADOREMS TO CHEMICAL MAINTE	06/01/2023	\$43.58	\$9.35	\$17.97	\$0.00	\$70.90
	12/01/2023	\$44.83	\$9.35	\$17.97	\$0.00	\$72.15
	06/01/2024	\$46.31	\$9.35	\$17.97	\$0.00	\$73.63
	12/01/2024	\$47.78	\$9.35	\$17.97	\$0.00	\$75.10
	06/01/2025	\$49.28	\$9.35	\$17.97	\$0.00	\$76.60
	12/01/2025	\$50.78	\$9.35	\$17.97	\$0.00	\$78.10
	06/01/2026	\$52.33	\$9.35	\$17.97	\$0.00	\$79.65
	12/01/2026	\$53.83	\$9.35	\$17.97	\$0.00	\$81.15
For apprentice rates see "Apprentice- LABORER"						
TRACTORS/PORTABLE STEAM GENERATORS OPERATING ENGINEERS LOCAL 4	12/01/2022	\$53.05	\$14.25	\$16.05	\$0.00	\$83.35
	06/01/2023	\$54.29	\$14.25	\$16.05	\$0.00	\$84.59
	12/01/2023	\$55.53	\$14.25	\$16.05	\$0.00	\$85.83
	06/01/2024	\$56.81	\$14.25	\$16.05	\$0.00	\$87.11
	12/01/2024	\$58.25	\$14.25	\$16.05	\$0.00	\$88.55
	06/01/2025	\$59.53	\$14.25	\$16.05	\$0.00	\$89.83
	12/01/2025	\$60.97	\$14.25	\$16.05	\$0.00	\$91.27
	06/01/2026	\$62.25	\$14.25	\$16.05	\$0.00	\$92.55
For apprentice rates see "Apprentice- OPERATING ENGINEERS"	12/01/2026	\$63.69	\$14.25	\$16.05	\$0.00	\$93.99
TRAILERS FOR EARTH MOVING EQUIPMENT TEAMSTERS JOINT COUNCIL NO. 10 ZONE A	12/01/2021	\$37.92	\$13.41	\$16.01	\$0.00	\$67.34
TUNNEL WORK - COMPRESSED AIR LABORERS (COMPRESSED AIR)	12/01/2022	\$54.81	\$9.35	\$18.42	\$0.00	\$82.58
	06/01/2023	\$55.81	\$9.35	\$18.42	\$0.00	\$83.58
	12/01/2023	\$57.06	\$9.35	\$18.42	\$0.00	\$84.83
	06/01/2024	\$58.54	\$9.35	\$18.42	\$0.00	\$86.31
	12/01/2024	\$60.01	\$9.35	\$18.42	\$0.00	\$87.78
	06/01/2025	\$61.51	\$9.35	\$18.42	\$0.00	\$89.28
	12/01/2025	\$63.01	\$9.35	\$18.42	\$0.00	\$90.78
	06/01/2026	\$64.56	\$9.35	\$18.42	\$0.00	\$92.33
	12/01/2026	\$66.06	\$9.35	\$18.42	\$0.00	\$93.83
For apprentice rates see "Apprentice- LABORER"						

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Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
TUNNEL WORK - COMPRESSED AIR (HAZ. WASTE) LABORERS (COMPRESSED AIR)	12/01/2022	\$56.81	\$9.35	\$18.42	\$0.00	\$84.58
	06/01/2023	\$57.81	\$9.35	\$18.42	\$0.00	\$85.58
	12/01/2023	\$59.06	\$9.35	\$18.42	\$0.00	\$86.83
	06/01/2024	\$60.54	\$9.35	\$18.42	\$0.00	\$88.31
	12/01/2024	\$62.01	\$9.35	\$18.42	\$0.00	\$89.78
For apprentice rates see "Apprentice- LABORER"	06/01/2025	\$63.51	\$9.35	\$18.42	\$0.00	\$91.28
	12/01/2025	\$65.01	\$9.35	\$18.42	\$0.00	\$92.78
	06/01/2026	\$66.56	\$9.35	\$18.42	\$0.00	\$94.33
	12/01/2026	\$68.06	\$9.35	\$18.42	\$0.00	\$95.83
TUNNEL WORK - FREE AIR	12/01/2022	¢47,00	¢0.25	¢10.42	\$0.00	Φ74.65
ABORERS (FREE AIR TUNNEL)	12/01/2022	\$46.88	\$9.35	\$18.42	\$0.00	\$74.65
	06/01/2023	\$47.88	\$9.35	\$18.42	\$0.00	\$75.65
	12/01/2023	\$49.13	\$9.35	\$18.42	\$0.00	\$76.90
	06/01/2024	\$50.61	\$9.35	\$18.42	\$0.00	\$78.38
	12/01/2024	\$52.08	\$9.35	\$18.42	\$0.00	\$79.85
	06/01/2025	\$53.58	\$9.35	\$18.42	\$0.00	\$81.35
	12/01/2025	\$55.08	\$9.35	\$18.42	\$0.00	\$82.85
	06/01/2026	\$56.63	\$9.35	\$18.42	\$0.00	\$84.40
For apprentice rates see "Apprentice- LABORER"	12/01/2026	\$58.13	\$9.35	\$18.42	\$0.00	\$85.90
UNNEL WORK - FREE AIR (HAZ. WASTE)	12/01/2022	\$48.88	\$9.35	\$18.42	\$0.00	\$76.65
ABORERS (FREE AIR TUNNEL)	06/01/2023	\$49.88	\$9.35	\$18.42	\$0.00	\$77.65
	12/01/2023	\$51.13	\$9.35	\$18.42	\$0.00	\$78.90
	06/01/2024	\$52.61	\$9.35	\$18.42	\$0.00	\$80.38
	12/01/2024	\$54.08	\$9.35	\$18.42	\$0.00	\$81.85
	06/01/2025	\$55.58	\$9.35	\$18.42	\$0.00	\$83.35
	12/01/2025	\$57.08	\$9.35	\$18.42	\$0.00	\$84.85
	06/01/2026	\$58.63	\$9.35	\$18.42	\$0.00	\$86.40
	12/01/2026	\$60.13	\$9.35	\$18.42	\$0.00	\$87.90
For apprentice rates see "Apprentice- LABORER"		40000	4,,,,,,			40,00
VAC-HAUL EAMSTERS JOINT COUNCIL NO. 10 ZONE A	12/01/2021	\$37.34	\$13.41	\$16.01	\$0.00	\$66.76
WAGON DRILL OPERATOR	12/01/2022	\$43.43	\$9.10	\$17.57	\$0.00	\$70.10
ABORERS - ZONE 1	06/01/2023	\$44.43	\$9.10	\$17.57	\$0.00	\$71.10
E	12/01/2023	\$45.68	\$9.10	\$17.57	\$0.00	\$72.35
For apprentice rates see "Apprentice- LABORER" VAGON DRILL OPERATOR (HEAVY & HIGHWAY)	10/01/2022	ф.42.02	ФО 2.5	¢17.00	¢0.00	ф д о ос
ABORERS - ZONE 1 (HEAVY & HIGHWAY)	12/01/2022	\$42.83	\$9.35	\$17.82	\$0.00	\$70.00
	06/01/2023	\$43.83	\$9.35	\$17.82	\$0.00	\$71.00
	12/01/2023	\$45.08	\$9.35	\$17.82	\$0.00	\$72.25
	06/01/2024	\$46.56	\$9.35	\$17.82	\$0.00	\$73.73
	12/01/2024	\$48.03	\$9.35	\$17.82	\$0.00	\$75.20
	06/01/2025	\$49.53	\$9.35	\$17.82	\$0.00	\$76.70
	12/01/2025	\$51.03	\$9.35	\$17.82	\$0.00	\$78.20
	06/01/2026	\$52.58	\$9.35	\$17.82	\$0.00	\$79.75
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)	12/01/2026	\$54.08	\$9.35	\$17.82	\$0.00	\$81.25

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Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
WASTE WATER PUMP OPERATOR OPERATING ENGINEERS LOCAL 4	12/01/2022	\$53.63	\$14.25	\$16.05	\$0.00	\$83.93
	06/01/2023	\$54.88	\$14.25	\$16.05	\$0.00	\$85.18
	12/01/2023	\$56.13	\$14.25	\$16.05	\$0.00	\$86.43
	06/01/2024	\$57.43	\$14.25	\$16.05	\$0.00	\$87.73
	12/01/2024	\$58.88	\$14.25	\$16.05	\$0.00	\$89.18
	06/01/2025	\$60.18	\$14.25	\$16.05	\$0.00	\$90.48
	12/01/2025	\$61.63	\$14.25	\$16.05	\$0.00	\$91.93
	06/01/2026	\$62.93	\$14.25	\$16.05	\$0.00	\$93.23
	12/01/2026	\$64.38	\$14.25	\$16.05	\$0.00	\$94.68
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
WATER METER INSTALLER PLUMBERS & GASFITTERS LOCAL 12	02/26/2023	\$65.19	\$14.07	\$18.36	\$0.00	\$97.62
	09/03/2023	\$66.94	\$14.07	\$18.36	\$0.00	\$99.37
	03/03/2024	\$68.74	\$14.07	\$18.36	\$0.00	\$101.17
	09/01/2024	\$70.54	\$14.07	\$18.36	\$0.00	\$102.97
	03/02/2025	\$72.34	\$14.07	\$18.36	\$0.00	\$104.77
For apprentice rates see "Apprentice- PLUMBER/PIPEFITTER" or "PLUMBER/GA	SFITTER"					

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.

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