TOWN OF MIDDLEBORO, MASSACHUSETTS

CONTRACT DOCUMENTS
FOR

Center Street Utility Bridge and Water System Improvements

October 2026

Town of Middleboro

Department of Public Works

65 Sachem Street

Middleboro, MA 02346

COMMONWEALTH OF MASSACHUSETTS
LAWRENCE P. MCGILLICUDDY
CIVIL
No. 56018
REGISTERED PROFESSIONAL ENGINEER

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DIVISION 0

SECTION 00020
INVITATION FOR BIDS

Sealed bids for furnishing the following item will be received at the Office of the Department of Public Works, 65 Sachem Street, Middleboro, MA 02346 until the time specified below at which time the bids will be publicly opened and read.

Bid Documents will only be available electronically on or after October 22, 2026. Email requests for bid documents to lmcgillicuddy@benesch.com. There is no charge for bid documents. Provide the company name, contact person, phone number, and address in the email request. All addenda will be sent to the email address used to request the bid documents.

Bids will be opened at the Middleboro Department of Public Works facility located 65 Sachem Street, Middleboro, MA 02346 on December 03, 2026, at 2:00 p.m. Each Bid must be accompanied by a bid security consisting of a BID BOND, CASH, or, CERTIFIED CHECK issued by a responsible bank or trust company in the amount of 5% of the bid price.

A non-mandatory Pre-Bid Conference will be held on November 12, 2026 at 10:00 a.m. at 65 Sachem Street.

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.30, §39M.

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.

MassDOT prequalification of contractors with the class of work as, Bridge – Construction, for the project with an estimated value of $811,514.00 will be required.

The Town of Middleboro

By: Robert Nunes, Interim Town Manager

SECTION 00100

INSTRUCTIONS TO BIDDERS

1. Receipt and Opening of Bids

The Town of Middleboro, Massachusetts, herein called the Owner, acting by and through its Board of Selectmen, will receive sealed Bids for the project known as the **Center Street Utility Bridge and Water System Improvements** Project.

General bids shall be addressed to the Department of Public Works, 65 Sachem Street Middleboro, MA 02346 and endorsed "Bid for Center Street Utility Bridge and Water System Improvements Project" (Project) will be received at the Middleboro Department of Public Works until 10:00 a.m. Eastern Standard time, on the 3rd Day of December, 2026 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 the construction of a utility bridge over the MBTA to carry a 12" insulated water main which utilizes the existing abutment wingwalls of the Center Street Bridge over the MBTA for support. In addition, the work includes providing and installing a 12" water main from along Center Street that begins at the intersection with Railway HI Road and continues eastward over the MBTA and ends at the Center Street intersection with Cambridge Street. The water main crosses under the concrete wingwalls that support the east side of Center Street in order to access the proposed utility bridge. The work also includes pavement saw cutting, excavation, backfill and compaction, installing a steel pipe sleeve under the existing wingwalls, placement of controlled low strength material (CLSM), traffic control during construction 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.

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 Receipt and Opening of Bids, above. If forwarded by mail, the sealed envelope containing the bid must be enclosed in another envelope addressed as specified in Receipt and Opening of Bids, above.

4. Bid Opening Procedure

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 Receipt and Opening of Bids, above.

Properly executed bid security shall be placed in a sealed envelope and shall be attached 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.

The Town reserves the right to reject any or all Bids, if it is in the public interest to do so or for any other good cause, not limited to the following.

The Town reserves the right to reject any or all Bids, if it determines that the Bidder does not possess the qualifications to perform the Work specified in the Bidding Documents.

The Town reserves the right to reject the Bid of any Bidder who the Town has determined has not completed a prior project, whether with the Town or elsewhere, because of the fault of the Bidder, its Subcontractors or employees; has been declared in default on a prior contract whether with the Town or elsewhere; has failed to complete a prior project in a timely fashion whether with the Town or elsewhere; based on its work record, is not capable of performing the within Contract whether due to lack of sufficient prior experience, as determined by the Town, or any other reason; has a work record of its Subcontractors demanding direct payment from the Town; has a work record of its Subcontractors, employees or material suppliers complaining to the Town or other awarding authority regarding the Bidder's failure to pay them; has a record of complaints made to the Town or other awarding authority by persons offended by the behavior of the Bidder, its Subcontractors or employees; or has a record of its failure to comply with the Commonwealth and/or Town laws and ordinances or requirements. "Work record" or "record" constitutes a minimum of one event in the work history of the Bidder.

The Town shall reject every Bid that is not accompanied by a Bid deposit.

A. Subject to the requirements of Chapter 29, Section 8B of the General Laws, each prospective Bidder proposing to bid on this project must be prequalified and certified by the Massachusetts Department of Transportation, Highway Division to perform this work in accordance with the "Regulations Governing Classification and Rating of Prospective Bidders."

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.

Every request for such interpretation should be in writing addressed to Larry McGillicuddy, P.E. Project Manager, Benesch, Email lmcgillicuddy@benesch.com, and to be given consideration must be received at least seven (7) days prior to the date fixed for the opening of bids. Any and all such interpretations and any supplemental instructions will be in the form of written addenda to the specifications which, when issued, will be mailed by certified mail with return receipt requested to all prospective bidders (at the respective address furnished by them for such purposes), or sent via facsimile or email if time requires. Failure of any bidder to receive any such addendum or interpretation shall not relieve such bidder from any obligation under his bid as submitted. 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. Power of Attorney

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

11. Laws and Regulations

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. Time for Completion

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. Comparison of Bids

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 30, Section 39M, 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 30, Section 39M, 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 Middleboro 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 and Benesch 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. BUY AMERICA REQUIREMENT

The Town of Middleborough requires that permanent water system components provided for this project are manufactured in the United States of America.

The Town of Middleborough requires that all structural steel and reinforcing steel incorporated into the Work is produced and fabricated in the United States of America, including all processes from initial melting through final fabrication and application of coatings.

SECTION 00300

FORM OF GENERAL BID

Bid of _____ (hereinafter called "Bidder")*

(____) 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/Town of Middleboro, Massachusetts (hereinafter called "Owner").

Gentlemen:

A) The undersigned Bidder, in compliance with your invitation for bids for the project known as **Center Street Utility Bridge and Water System Improvements**, 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 365 consecutive calendar days thereafter. The Bidder further agrees to pay as liquidated damages the sum of one-thousand five hundred ($1,500.00) 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 acknowledges receipt of and this bid includes the following addenda:

No. _____ Dated:

No. _____ Dated:

No. _____ Dated:

No. _____ Dated:

C) The Bidder agrees to perform the bid work described in the specifications and shown on the plans for the following Bid Prices:

Item No.	Description	Unit	Quantity	Bid Unit Price	Bid Amount
101.	Clearing and Grubbing	A	0.2	$	$
102.1	Tree Trimming	FT	125	$	$
103.	Tree Removed - Diameter Under 24 Inches	EA	12	$	$
104.	Tree Removed - Diameter 24 Inches and Over	EA	4	$	$
121.	Class A Rock Excavation	CY	2.0	$	$
141.	Class A Trench Excavation	CY	30	$	$
141.1	Test Pit for Exploration	CY	15	$	$
142.	Class B Trench Excavation	CY	75	$	$
144.	Class B Rock Excavation	CY	25	$	$
151.	Gravel Borrow	CY	15	$	$
151.22	Gravel Borrow For Sidewalk	CY	20	$	$
154.	Sand Borrow	CY	15	$	$
160.1	Controlled Low-Strength Material - Manual Excavatable (<= 100 PSI)	CY	7	$	$
170.	Fine Grading and Compacting - Subgrade Area	SY	110	$	$
302.12	12 Inch Ductile Iron Water Pipe (Rubber Gasket)	FT	450	$	$
309.	Ductile Iron Fittings for Water Pipe	LB	1100	$	$
325.20	20 Inch Steel Pipe Casing For Water Pipe	FT	40	$	$
372.	Adjustable Double Roller Pipe Support	EA	13	$	$
373.12	12 Inch Water Pipe Insulation	FT	250	$	$
379.075	3/4 Inch Air Release Valve	EA	1	$	$

450.22	Superpave Surface Course - 9.5 (SSC - 9.5)	TON	16	$	$
450.31	Superpave Intermediate Course - 12.5 (SSC - 12.5)	TON	11	$	$
450.42	Superpave Base Course - 37.5 (SBC - 37.5)	TON	24	$	$
482.3	Sawcutting Asphalt Pavement	FT	520	$	$
504.	Granite Curb Type V4A - Straight	FT	40	$	$
504.1	Granite Curb Type VA4 - Curved	FT	20	$	$
504.2	Granite Curb Type VA4 - Splayed End	EA	1	$	$
509.	Granite Transition Curb for Pedestrian Curb Ramps - Straight	FT	10	$	$
509.1	Granite Transition Curb for Pedestrian Curb Ramps - Curved	FT	10	$	$
580.	Curb Removed and Reset	FT	30	$	$
666.	Chain Link Fence Remove and Reset	FT	50	$	$
748.	Mobilization	LS	1	$	$
751.1	Loam for Lawns	CY	6	$	$
765.	Seeding	SY	35	$	$
767.121	Sediment Control Barrier	FT	400	$	$
852.	Safety Signing for Traffic Management	SF	380	$	$
853.1	Portable Breakaway Barricade Type III	EA	2	$	$
856.	Arrow Board	DAY	40	$	$
856.12	Portable Changeable Message Sign	DAY	40	$	$
859.	Reflectorized Drum	DAY	500	$	$
903.	3000 PSI, 1.5 INCH, 470 Cement Concrete	CY	10	$	$
904.3	5000 PSI, 3/4 INCH, 685 HP Cement Concrete	CY	5	$	$
910.1	Steel Reinforcement For Structures - Epoxy Coated	LB	150	$	$

912.5	Drilled and Grouted #5 Dowels	EA	25	$	$
913.2	Coring and Grouting Anchor Bolts	EA	40	$	$
933.1	Plain Elastomeric Bearing Pad With Anchor Bolts	EA	4	$	$
960.1	Structural Steel - Coated Steel	LB	18000	$	$
998.1	Police Detail Allowance	AN	1	$32,000.00	$32,000.00
999.1	Price Adjustment for Diesel Fuel, per gallon (Base Price = $4.693)	N/A			
999.2	Price Adjustment for Gasoline, per gallon (Base Price = $3.341)	N/A			
999.3	Price Adjustment for Liquid Asphalt, per gallon (Base Price = $712.50)	N/A			
999.4	Price Adjustment for Portland Cement, per ton (Base Price = $452.13)	N/A			

TOTAL BID PRICE WITH ALLOWANCES:

_____

_____dollars

and_____cents $_____

The above unit prices 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.

1. Have been in business under present name for five (5) years.

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

_____
_____
_____
_____
_____
_____

(attach supplementary list if necessary)

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 Date	Project Name	Contract Amount	Design Engineer	Reference Name	Telephone No.

a._____

_____

b._____

_____

c._____

_____

d._____

_____

e._____

_____

f._____

_____

Bank reference _____
(Name)

_____
(Bank)

_____
(Address)

_____
(Telephone No.)

Pursuant to G.L. c.62C, §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:

Date: _____

By: _____
(Signature)

_____
(Type Name of Bidder)

_____
(Title)

_____
(Business Address)

_____
(City and State)

_____
(Telephone Number

SECTION 00500

AGREEMENT

THIS AGREEMENT, made this _____ day of _____,

2026, by and between the party of the first part, the Town of Middleboro hereinafter called "OWNER," acting herein through its Department of Public Works and the party of the second part, _____ doing business as *(an individual) (a partnership) (a joint venture) (a corporation) located in the *(City) (Town) of _____, County of _____, and State of _____, hereinafter called "CONTRACTOR."

WITNESSETH: That for and in consideration of the payments and agreements hereinafter mentioned, to be made and performed by the OWNER, the CONTRACTOR hereby agrees with the OWNER to commence and complete the project described as follows: **Center Street Utility Bridge and Water System Improvements**, hereinafter called the Project,

for the sum of _____

Dollars ($_____) and all extra work in connection therewith, under the terms as stated in the Contract Documents; and at his (its or their) own proper cost and expense to furnish all the materials, supplies, machinery equipment, tools, superintendence, labor, insurance, and other accessories and services necessary to complete the said project in accordance with the conditions and prices stated in Section 00300 FORM OF GENERAL BID, Section 00700 GENERAL CONDITIONS, and Section 00800 SUPPLEMENTAL GENERAL CONDITIONS, the plans, which include all maps, plates, blue prints, and the specifications and Contract Documents as prepared by the Owner.

_____

*Strike out inapplicable term.

The CONTRACTOR hereby agrees to commence work under this Contract on or before a date to be specified in written "Notice to Proceed" of the OWNER.

The CONTRACTOR further agrees to fully complete the project within **365** consecutive calendar days of the date of the notice to proceed.

The CONTRACTOR further agrees to pay as liquidated damages the sum of **$1,500.00** for each consecutive calendar day thereafter as provided in the Liquidated Damages Paragraph of Section 00700 GENERAL CONDITIONS.

The CONTRACTOR agrees not to discriminate against or exclude any person from participation herein on grounds of race, religion, color, sex, age or national origin; and that it shall take affirmative actions to insure that applicants are employed, and that employees are treated during their employment, without regard to race, religion, color, sex, age, handicapped status, or national origin.

The CONTRACTOR agrees not to participate in or cooperate with an international boycott, as defined in Section 999 (b)(3) and (4) of the Internal Revenue Code of 1954, as amended, or engage in conduct declared to be unlawful by Section 2 of Chapter 151E of the Massachusetts General Laws.

The OWNER agrees to pay the CONTRACTOR in current funds for the performance of the contract, subject to additions and deductions, as provided in Section 00700 GENERAL CONDITIONS as amended by the supplementary general conditions, and to make payments on account thereof as provided in Section 00700 GENERAL CONDITIONS.

IN WITNESS WHEREOF, the parties to these presents have executed this contract in counterparts, each of which shall be deemed an original, in the year and day first above mentioned.

AGREED:

Town of Middleboro, Massachusetts
(Owner)

By_____

_____
(Name)

_____
(Title)

_____
(Contractor)

By_____

_____
(Name)

_____
(Title)

_____
(Address)

_____
(City and State)

Approved as to Form:

By_____
(Owner's Counsel)

_____
(Name)

In accordance with M.G.L. C.44, Section 31C, this is to certify that an appropriation in the amount of this contract is available therefor and that the _____ has been authorized to execute the contract and approve all requisitions and change orders.

By_____
(Owner'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)

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 vote was unanimously passed:

VOTED: To authorize and empower

_____

_____

_____

_____

_____

Anyone acting singly, to execute Forms of General Bid, Contracts or Bonds on behalf of the Corporation.

I further certify that the above vote is still in effect and has not been changed or modified in any respect.

By:_____
(Secretary of Corporation)
A True Copy:

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 PRESENTS: That we _____
(Name of Contractor)

a _____ hereinafter called "Principal" and
(Corporation, Partnership, Joint Venture or Individual)

_____of _____, State of _____
(Surety) (City & State)

_____ hereinafter called the "Surety" and licensed by the State Division of Insurance to do business under the laws of the Commonwealth of Massachusetts, are held and firmly bound to the City/Town of Middleboro, Massachusetts, hereinafter called "Owner", in the penal sum of _____ Dollars ($_____) in lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that Whereas, the Principal entered into a certain contract with the Owner, dated the _____ day of _____, 20___ (the "Construction Contract"), for the construction described as follows: **Center Street Utility Bridge and Water System Improvements.**

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.

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

ATTEST:

_____
Principal

_____ By _____
(Principal Secretary)

_____

_____

_____
(Address-Zip Code)

_____ (SEAL)
Witness as to Principal

_____

_____
(Address-Zip Code)

ATTEST:

_____
Surety

_____ By _____
(Attorney-in-Fact)

_____

_____
(Address-Zip Code)

_____ (SEAL)
Witness as to Surety

_____

_____
(Address-Zip Code)

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

SECTION 00620

PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS: That we _____

_____ a_____ _____
(Name of Contractor) (Corporation, Partnership, Joint Venture or Individual)

hereinafter called "Principal" and _____ of _____,
(Surety)

State of _____ hereinafter called the "Surety" and licensed by the State
(City and State)

Division of Insurance to do business under the laws of the Commonwealth of Massachusetts, are held and firmly bound to the City/Town of Middleboro, Massachusetts, hereinafter called "Owner", in the penal sum of _____ Dollars ($_____) in lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that Whereas, the Principal entered into a certain contract with the Owner, dated the _____ day of _____, 20___, for the construction described as follows: **Center Street Utility Bridge and Water System Improvements**

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:

_____
Surety

_____ By _____
(Attorney-in-Fact)

_____

_____
(Address-Zip Code)

_____ (SEAL)
Witness as to Surety

_____

_____
(Address-Zip Code)

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

SECTION 00700
GENERAL CONDITIONS

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STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

ARTICLE 1—DEFINITIONS AND TERMINOLOGY

1.01 *Defined Terms*

A. Wherever used in the Bidding Requirements or Contract Documents, a term printed with initial capital letters, including the term's singular and plural forms, will have the meaning indicated in the definitions below. In addition to terms specifically defined, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs, and the titles of other documents or forms.

1. *Addenda*—Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the proposed Contract Documents.

2. *Agreement*—The written instrument, executed by Owner and Contractor, that sets forth the Contract Price and Contract Times, identifies the parties and the Engineer, and designates the specific items that are Contract Documents.

3. *Application for Payment*—The document prepared by Contractor, in a form acceptable to Engineer, to request progress or final payments, and which is to be accompanied by such supporting documentation as is required by the Contract Documents.

4. *Bid*—The offer of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.

5. *Bidder*—An individual or entity that submits a Bid to Owner.

6. *Bidding Documents*—The Bidding Requirements, the proposed Contract Documents, and all Addenda.

7. *Bidding Requirements*—The Advertisement or invitation to bid, Instructions to Bidders, Bid Bond or other Bid security, if any, the Bid Form, and the Bid with any attachments.

8. *Change Order*—A document which is signed by Contractor and Owner and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times, or other revision to the Contract, issued on or after the Effective Date of the Contract.

9. *Change Proposal*—A written request by Contractor, duly submitted in compliance with the procedural requirements set forth herein, seeking an adjustment in Contract Price or Contract Times; contesting an initial decision by Engineer concerning the requirements of the Contract Documents or the acceptability of Work under the Contract Documents; challenging a set-off against payments due; or seeking other relief with respect to the terms of the Contract.

10. *Claim*

    a. A demand or assertion by Owner directly to Contractor, duly submitted in compliance with the procedural requirements set forth herein, seeking an adjustment of Contract Price or Contract Times; contesting an initial decision by

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Engineer concerning the requirements of the Contract Documents or the acceptability of Work under the Contract Documents; contesting Engineer's decision regarding a Change Proposal; seeking resolution of a contractual issue that Engineer has declined to address; or seeking other relief with respect to the terms of the Contract.

b. A demand or assertion by Contractor directly to Owner, duly submitted in compliance with the procedural requirements set forth herein, contesting Engineer's decision regarding a Change Proposal, or seeking resolution of a contractual issue that Engineer has declined to address.

c. A demand or assertion by Owner or Contractor, duly submitted in compliance with the procedural requirements set forth herein, made pursuant to Paragraph 12.01.A.4, concerning disputes arising after Engineer has issued a recommendation of final payment.

d. A demand for money or services by a third party is not a Claim.

11. *Constituent of Concern*—Asbestos, petroleum, radioactive materials, polychlorinated biphenyls (PCBs), lead-based paint (as defined by the HUD/EPA standard), hazardous waste, and any substance, product, waste, or other material of any nature whatsoever that is or becomes listed, regulated, or addressed pursuant to Laws and Regulations regulating, relating to, or imposing liability or standards of conduct concerning, any hazardous, toxic, or dangerous waste, substance, or material.

12. *Contract*—The entire and integrated written contract between Owner and Contractor concerning the Work.

13. *Contract Documents*—Those items so designated in the Agreement, and which together comprise the Contract.

14. *Contract Price*—The money that Owner has agreed to pay Contractor for completion of the Work in accordance with the Contract Documents.

15. *Contract Times*—The number of days or the dates by which Contractor shall: (a) achieve Milestones, if any; (b) achieve Substantial Completion; and (c) complete the Work.

16. *Contractor*—The individual or entity with which Owner has contracted for performance of the Work.

17. *Cost of the Work*—See Paragraph 13.01 for definition.

18. *Drawings*—The part of the Contract that graphically shows the scope, extent, and character of the Work to be performed by Contractor.

19. *Effective Date of the Contract*—The date, indicated in the Agreement, on which the Contract becomes effective.

20. *Electronic Document*—Any Project-related correspondence, attachments to correspondence, data, documents, drawings, information, or graphics, including but not limited to Shop Drawings and other Submittals, that are in an electronic or digital format.

21. *Electronic Means*—Electronic mail (email), upload/download from a secure Project website, or other communications methods that allow: (a) the transmission or

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communication of Electronic Documents; (b) the documentation of transmissions, including sending and receipt; (c) printing of the transmitted Electronic Document by the recipient; (d) the storage and archiving of the Electronic Document by sender and recipient; and (e) the use by recipient of the Electronic Document for purposes permitted by this Contract. Electronic Means does not include the use of text messaging, or of Facebook, Twitter, Instagram, or similar social media services for transmission of Electronic Documents.

22. *Engineer*—The individual or entity named as such in the Agreement.

23. *Field Order*—A written order issued by Engineer which requires minor changes in the Work but does not change the Contract Price or the Contract Times.

24. *Hazardous Environmental Condition*—The presence at the Site of Constituents of Concern in such quantities or circumstances that may present a danger to persons or property exposed thereto.

    a. The presence at the Site of materials that are necessary for the execution of the Work, or that are to be incorporated into the Work, and that are controlled and contained pursuant to industry practices, Laws and Regulations, and the requirements of the Contract, is not a Hazardous Environmental Condition.

    b. The presence of Constituents of Concern that are to be removed or remediated as part of the Work is not a Hazardous Environmental Condition.

    c. The presence of Constituents of Concern as part of the routine, anticipated, and obvious working conditions at the Site, is not a Hazardous Environmental Condition.

25. *Laws and Regulations; Laws or Regulations*—Any and all applicable laws, statutes, rules, regulations, ordinances, codes, and binding decrees, resolutions, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.

26. *Liens*—Charges, security interests, or encumbrances upon Contract-related funds, real property, or personal property.

27. *Milestone*—A principal event in the performance of the Work that the Contract requires Contractor to achieve by an intermediate completion date, or by a time prior to Substantial Completion of all the Work.

28. *Notice of Award*—The written notice by Owner to a Bidder of Owner's acceptance of the Bid.

29. *Notice to Proceed*—A written notice by Owner to Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform the Work.

30. *Owner*—The individual or entity with which Contractor has contracted regarding the Work, and which has agreed to pay Contractor for the performance of the Work, pursuant to the terms of the Contract.

31. *Progress Schedule*—A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising Contractor's plan to accomplish the Work within the Contract Times.

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32. *Project*—The total undertaking to be accomplished for Owner by engineers, contractors, and others, including planning, study, design, construction, testing, commissioning, and start-up, and of which the Work to be performed under the Contract Documents is a part.

33. *Resident Project Representative*—The authorized representative of Engineer assigned to assist Engineer at the Site. As used herein, the term Resident Project Representative (RPR) includes any assistants or field staff of Resident Project Representative.

34. *Samples*—Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and that establish the standards by which such portion of the Work will be judged.

35. *Schedule of Submittals*—A schedule, prepared and maintained by Contractor, of required submittals and the time requirements for Engineer's review of the submittals.

36. *Schedule of Values*—A schedule, prepared and maintained by Contractor, allocating portions of the Contract Price to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.

37. *Shop Drawings*—All drawings, diagrams, illustrations, schedules, and other data or information that are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work. Shop Drawings, whether approved or not, are not Drawings and are not Contract Documents.

38. *Site*—Lands or areas indicated in the Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements, and such other lands or areas furnished by Owner which are designated for the use of Contractor.

39. *Specifications*—The part of the Contract that consists of written requirements for materials, equipment, systems, standards, and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable to the Work.

40. *Subcontractor*—An individual or entity having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work.

41. *Submittal*—A written or graphic document, prepared by or for Contractor, which the Contract Documents require Contractor to submit to Engineer, or that is indicated as a Submittal in the Schedule of Submittals accepted by Engineer. Submittals may include Shop Drawings and Samples; schedules; product data; Owner-delegated designs; sustainable design information; information on special procedures; testing plans; results of tests and evaluations, source quality-control testing and inspections, and field or Site quality-control testing and inspections; warranties and certifications; Suppliers' instructions and reports; records of delivery of spare parts and tools; operations and maintenance data; Project photographic documentation; record documents; and other such documents required by the Contract Documents. Submittals, whether or not approved or accepted by Engineer, are not Contract Documents. Change Proposals, Change Orders, Claims, notices, Applications for Payment, and requests for interpretation or clarification are not Submittals.

42. *Substantial Completion*—The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer, the Work (or a specified part

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thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms "substantially complete" and "substantially completed" as applied to all or part of the Work refer to Substantial Completion of such Work.

43. *Successful Bidder*—The Bidder to which the Owner makes an award of contract.

44. *Supplementary Conditions*—The part of the Contract that amends or supplements these General Conditions.

45. *Supplier*—A manufacturer, fabricator, supplier, distributor, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or a Subcontractor.

46. *Technical Data*

    a. Those items expressly identified as Technical Data in the Supplementary Conditions, with respect to either (1) existing subsurface conditions at or adjacent to the Site, or existing physical conditions at or adjacent to the Site including existing surface or subsurface structures (except Underground Facilities) or (2) Hazardous Environmental Conditions at the Site.

    b. If no such express identifications of Technical Data have been made with respect to conditions at the Site, then Technical Data is defined, with respect to conditions at the Site under Paragraphs 5.03, 5.04, and 5.06, as the data contained in boring logs, recorded measurements of subsurface water levels, assessments of the condition of subsurface facilities, laboratory test results, and other factual, objective information regarding conditions at the Site that are set forth in any geotechnical, environmental, or other Site or facilities conditions report prepared for the Project and made available to Contractor.

    c. Information and data regarding the presence or location of Underground Facilities are not intended to be categorized, identified, or defined as Technical Data, and instead Underground Facilities are shown or indicated on the Drawings.

47. *Underground Facilities*—All active or not-in-service underground lines, pipelines, conduits, ducts, encasements, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or systems at the Site, including but not limited to those facilities or systems that produce, transmit, distribute, or convey telephone or other communications, cable television, fiber optic transmissions, power, electricity, light, heat, gases, oil, crude oil products, liquid petroleum products, water, steam, waste, wastewater, storm water, other liquids or chemicals, or traffic or other control systems. An abandoned facility or system is not an Underground Facility.

48. *Unit Price Work*—Work to be paid for on the basis of unit prices.

49. *Work*—The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction; furnishing, installing, and incorporating all materials and equipment into such construction; and may include related services such as testing, start-up, and commissioning, all as required by the Contract Documents.

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50. *Work Change Directive*—A written directive to Contractor issued on or after the Effective Date of the Contract, signed by Owner and recommended by Engineer, ordering an addition, deletion, or revision in the Work.

1.02 *Terminology*

A. The words and terms discussed in Paragraphs 1.02.B, C, D, and E are not defined terms that require initial capital letters, but, when used in the Bidding Requirements or Contract Documents, have the indicated meaning.

B. *Intent of Certain Terms or Adjectives*: The Contract Documents include the terms "as allowed," "as approved," "as ordered," "as directed" or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, the adjectives "reasonable," "suitable," "acceptable," "proper," "satisfactory," or adjectives of like effect or import are used to describe an action or determination of Engineer as to the Work. It is intended that such exercise of professional judgment, action, or determination will be solely to evaluate, in general, the Work for compliance with the information in the Contract Documents and with the design concept of the Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility contrary to the provisions of Article 10 or any other provision of the Contract Documents.

C. *Day*: The word "day" means a calendar day of 24 hours measured from midnight to the next midnight.

D. *Defective*: The word "defective," when modifying the word "Work," refers to Work that is unsatisfactory, faulty, or deficient in that it:

1. does not conform to the Contract Documents;

2. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents; or

3. has been damaged prior to Engineer's recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with Paragraph 15.03 or Paragraph 15.04).

E. *Furnish, Install, Perform, Provide*

1. The word "furnish," when used in connection with services, materials, or equipment, means to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.

2. The word "install," when used in connection with services, materials, or equipment, means to put into use or place in final position said services, materials, or equipment complete and ready for intended use.

3. The words "perform" or "provide," when used in connection with services, materials, or equipment, means to furnish and install said services, materials, or equipment complete and ready for intended use.

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4. If the Contract Documents establish an obligation of Contractor with respect to specific services, materials, or equipment, but do not expressly use any of the four words "furnish," "install," "perform," or "provide," then Contractor shall furnish and install said services, materials, or equipment complete and ready for intended use.

F. *Contract Price or Contract Times*: References to a change in "Contract Price or Contract Times" or "Contract Times or Contract Price" or similar, indicate that such change applies to (1) Contract Price, (2) Contract Times, or (3) both Contract Price and Contract Times, as warranted, even if the term "or both" is not expressed.

G. Unless stated otherwise in the Contract Documents, words or phrases that have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

ARTICLE 2—PRELIMINARY MATTERS

2.01 *Delivery of Performance and Payment Bonds; Evidence of Insurance*

A. *Performance and Payment Bonds*: When Contractor delivers the signed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner the performance bond and payment bond (if the Contract requires Contractor to furnish such bonds).

B. *Evidence of Contractor's Insurance*: When Contractor delivers the signed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner, with copies to each additional insured (as identified in the Contract), the certificates, endorsements, and other evidence of insurance required to be provided by Contractor in accordance with Article 6, except to the extent the Supplementary Conditions expressly establish other dates for delivery of specific insurance policies.

C. *Evidence of Owner's Insurance*: After receipt of the signed counterparts of the Agreement and all required bonds and insurance documentation, Owner shall promptly deliver to Contractor, with copies to each additional insured (as identified in the Contract), the certificates and other evidence of insurance required to be provided by Owner under Article 6.

2.02 *Copies of Documents*

A. Owner shall furnish to Contractor four printed copies of the Contract (including one fully signed counterpart of the Agreement), and one copy in electronic portable document format (PDF). Additional printed copies will be furnished upon request at the cost of reproduction.

B. Owner shall maintain and safeguard at least one original printed record version of the Contract, including Drawings and Specifications signed and sealed by Engineer and other design professionals. Owner shall make such original printed record version of the Contract available to Contractor for review. Owner may delegate the responsibilities under this provision to Engineer.

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2.03 *Before Starting Construction*

A. *Preliminary Schedules*: Within 10 days after the Effective Date of the Contract (or as otherwise required by the Contract Documents), Contractor shall submit to Engineer for timely review:

1. a preliminary Progress Schedule indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract;

2. a preliminary Schedule of Submittals; and

3. a preliminary Schedule of Values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and subdivides the Work into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.

2.04 *Preconstruction Conference; Designation of Authorized Representatives*

A. Before any Work at the Site is started, a conference attended by Owner, Contractor, Engineer, and others as appropriate will be held to establish a working understanding among the parties as to the Work, and to discuss the schedules referred to in Paragraph 2.03.A, procedures for handling Shop Drawings, Samples, and other Submittals, processing Applications for Payment, electronic or digital transmittals, and maintaining required records.

B. At this conference Owner and Contractor each shall designate, in writing, a specific individual to act as its authorized representative with respect to the services and responsibilities under the Contract. Such individuals shall have the authority to transmit and receive information, render decisions relative to the Contract, and otherwise act on behalf of each respective party.

2.05 *Acceptance of Schedules*

A. At least 10 days before submission of the first Application for Payment a conference, attended by Contractor, Engineer, and others as appropriate, will be held to review the schedules submitted in accordance with Paragraph 2.03.A. No progress payment will be made to Contractor until acceptable schedules are submitted to Engineer.

1. The Progress Schedule will be acceptable to Engineer if it provides an orderly progression of the Work to completion within the Contract Times. Such acceptance will not impose on Engineer responsibility for the Progress Schedule, for sequencing, scheduling, or progress of the Work, nor interfere with or relieve Contractor from Contractor's full responsibility therefor.

2. Contractor's Schedule of Submittals will be acceptable to Engineer if it provides a workable arrangement for reviewing and processing the required submittals.

3. Contractor's Schedule of Values will be acceptable to Engineer as to form and substance if it provides a reasonable allocation of the Contract Price to the component parts of the Work.

4. If a schedule is not acceptable, Contractor will have an additional 10 days to revise and resubmit the schedule.

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2.06 *Electronic Transmittals*

A. Except as otherwise stated elsewhere in the Contract, the Owner, Engineer, and Contractor may send, and shall accept, Electronic Documents transmitted by Electronic Means.

B. If the Contract does not establish protocols for Electronic Means, then Owner, Engineer, and Contractor shall jointly develop such protocols.

C. Subject to any governing protocols for Electronic Means, when transmitting Electronic Documents by Electronic Means, the transmitting party makes no representations as to long-term compatibility, usability, or readability of the Electronic Documents resulting from the recipient's use of software application packages, operating systems, or computer hardware differing from those used in the drafting or transmittal of the Electronic Documents.

ARTICLE 3—CONTRACT DOCUMENTS: INTENT, REQUIREMENTS, REUSE

3.01 *Intent*

A. The Contract Documents are complementary; what is required by one Contract Document is as binding as if required by all.

B. It is the intent of the Contract Documents to describe a functionally complete Project (or part thereof) to be constructed in accordance with the Contract Documents.

C. Unless otherwise stated in the Contract Documents, if there is a discrepancy between the electronic versions of the Contract Documents (including any printed copies derived from such electronic versions) and the printed record version, the printed record version will govern.

D. The Contract supersedes prior negotiations, representations, and agreements, whether written or oral.

E. Engineer will issue clarifications and interpretations of the Contract Documents as provided herein.

F. Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation will be deemed stricken, and all remaining provisions will continue to be valid and binding upon Owner and Contractor, which agree that the Contract Documents will be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.

G. Nothing in the Contract Documents creates:

1. any contractual relationship between Owner or Engineer and any Subcontractor, Supplier, or other individual or entity performing or furnishing any of the Work, for the benefit of such Subcontractor, Supplier, or other individual or entity; or

2. any obligation on the part of Owner or Engineer to pay or to see to the payment of any money due any such Subcontractor, Supplier, or other individual or entity, except as may otherwise be required by Laws and Regulations.

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3.02 *Reference Standards*

A. *Standards Specifications, Codes, Laws and Regulations*

1. Reference in the Contract Documents to standard specifications, manuals, reference standards, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, means the standard specification, manual, reference standard, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Contract if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.

2. No provision of any such standard specification, manual, reference standard, or code, and no instruction of a Supplier, will be effective to change the duties or responsibilities of Owner, Contractor, or Engineer from those set forth in the part of the Contract Documents prepared by or for Engineer. No such provision or instruction shall be effective to assign to Owner or Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility inconsistent with the provisions of the part of the Contract Documents prepared by or for Engineer.

3.03 *Reporting and Resolving Discrepancies*

A. *Reporting Discrepancies*

1. *Contractor's Verification of Figures and Field Measurements*: Before undertaking each part of the Work, Contractor shall carefully study the Contract Documents, and check and verify pertinent figures and dimensions therein, particularly with respect to applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy that Contractor discovers, or has actual knowledge of, and shall not proceed with any Work affected thereby until the conflict, error, ambiguity, or discrepancy is resolved by a clarification or interpretation by Engineer, or by an amendment or supplement to the Contract issued pursuant to Paragraph 11.01.

2. *Contractor's Review of Contract Documents*: If, before or during the performance of the Work, Contractor discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents, or between the Contract Documents and (a) any applicable Law or Regulation, (b) actual field conditions, (c) any standard specification, manual, reference standard, or code, or (d) any instruction of any Supplier, then Contractor shall promptly report it to Engineer in writing. Contractor shall not proceed with the Work affected thereby (except in an emergency as required by Paragraph 7.15) until the conflict, error, ambiguity, or discrepancy is resolved, by a clarification or interpretation by Engineer, or by an amendment or supplement to the Contract issued pursuant to Paragraph 11.01.

3. Contractor shall not be liable to Owner or Engineer for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents unless Contractor had actual knowledge thereof.

B. *Resolving Discrepancies*

1. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the part of the Contract Documents prepared by or for Engineer take

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precedence in resolving any conflict, error, ambiguity, or discrepancy between such provisions of the Contract Documents and:

a. the provisions of any standard specification, manual, reference standard, or code, or the instruction of any Supplier (whether or not specifically incorporated by reference as a Contract Document); or

b. the provisions of any Laws or Regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).

3.04 *Requirements of the Contract Documents*

A. During the performance of the Work and until final payment, Contractor and Owner shall submit to the Engineer in writing all matters in question concerning the requirements of the Contract Documents (sometimes referred to as requests for information or interpretation—RFIs), or relating to the acceptability of the Work under the Contract Documents, as soon as possible after such matters arise. Engineer will be the initial interpreter of the requirements of the Contract Documents, and judge of the acceptability of the Work.

B. Engineer will, with reasonable promptness, render a written clarification, interpretation, or decision on the issue submitted, or initiate an amendment or supplement to the Contract Documents. Engineer's written clarification, interpretation, or decision will be final and binding on Contractor, unless it appeals by submitting a Change Proposal, and on Owner, unless it appeals by filing a Claim.

C. If a submitted matter in question concerns terms and conditions of the Contract Documents that do not involve (1) the performance or acceptability of the Work under the Contract Documents, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, then Engineer will promptly notify Owner and Contractor in writing that Engineer is unable to provide a decision or interpretation. If Owner and Contractor are unable to agree on resolution of such a matter in question, either party may pursue resolution as provided in Article 12.

3.05 *Reuse of Documents*

A. Contractor and its Subcontractors and Suppliers shall not:

1. have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of Engineer or its consultants, including electronic media versions, or reuse any such Drawings, Specifications, other documents, or copies thereof on extensions of the Project or any other project without written consent of Owner and Engineer and specific written verification or adaptation by Engineer; or

2. have or acquire any title or ownership rights in any other Contract Documents, reuse any such Contract Documents for any purpose without Owner's express written consent, or violate any copyrights pertaining to such Contract Documents.

B. The prohibitions of this Paragraph 3.05 will survive final payment, or termination of the Contract. Nothing herein precludes Contractor from retaining copies of the Contract Documents for record purposes.

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ARTICLE 4—COMMENCEMENT AND PROGRESS OF THE WORK

4.01 *Commencement of Contract Times; Notice to Proceed*

A. The Contract Times will commence to run on the 30th day after the Effective Date of the Contract or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed. A Notice to Proceed may be given at any time within 30 days after the Effective Date of the Contract. In no event will the Contract Times commence to run later than the 60th day after the day of Bid opening or the 30th day after the Effective Date of the Contract, whichever date is earlier.

4.02 *Starting the Work*

A. Contractor shall start to perform the Work on the date when the Contract Times commence to run. No Work may be done at the Site prior to such date.

4.03 *Reference Points*

A. Owner shall provide engineering surveys to establish reference points for construction which in Engineer's judgment are necessary to enable Contractor to proceed with the Work. Contractor shall be responsible for laying out the Work, shall protect and preserve the established reference points and property monuments, and shall make no changes or relocations without the prior written approval of Owner. Contractor shall report to Engineer whenever any reference point or property monument is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points or property monuments by professionally qualified personnel.

4.04 *Progress Schedule*

A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.05 as it may be adjusted from time to time as provided below.

1. Contractor shall submit to Engineer for acceptance (to the extent indicated in Paragraph 2.05) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times.

2. Proposed adjustments in the Progress Schedule that will change the Contract Times must be submitted in accordance with the requirements of Article 11.

B. Contractor shall carry on the Work and adhere to the Progress Schedule during all disputes or disagreements with Owner. No Work will be delayed or postponed pending resolution of any disputes or disagreements, or during any appeal process, except as permitted by Paragraph 16.04, or as Owner and Contractor may otherwise agree in writing.

4.05 *Delays in Contractor's Progress*

A. If Owner, Engineer, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times.

B. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delay, disruption, or interference caused by or within the control of Contractor. Delay, disruption, and interference attributable to and within the control of a Subcontractor or Supplier shall be deemed to be within the control of Contractor.

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C. If Contractor's performance or progress is delayed, disrupted, or interfered with by unanticipated causes not the fault of and beyond the control of Owner, Contractor, and those for which they are responsible, then Contractor shall be entitled to an equitable adjustment in Contract Times. Such an adjustment will be Contractor's sole and exclusive remedy for the delays, disruption, and interference described in this paragraph. Causes of delay, disruption, or interference that may give rise to an adjustment in Contract Times under this paragraph include but are not limited to the following:

1. Severe and unavoidable natural catastrophes such as fires, floods, epidemics, and earthquakes;
2. Abnormal weather conditions;
3. Acts or failures to act of third-party utility owners or other third-party entities (other than those third-party utility owners or other third-party entities performing other work at or adjacent to the Site as arranged by or under contract with Owner, as contemplated in Article 8); and
4. Acts of war or terrorism.

D. Contractor's entitlement to an adjustment of Contract Times or Contract Price is limited as follows:

1. Contractor's entitlement to an adjustment of the Contract Times is conditioned on the delay, disruption, or interference adversely affecting an activity on the critical path to completion of the Work, as of the time of the delay, disruption, or interference.
2. Contractor shall not be entitled to an adjustment in Contract Price for any delay, disruption, or interference if such delay is concurrent with a delay, disruption, or interference caused by or within the control of Contractor. Such a concurrent delay by Contractor shall not preclude an adjustment of Contract Times to which Contractor is otherwise entitled.
3. Adjustments of Contract Times or Contract Price are subject to the provisions of Article 11.

E. Each Contractor request or Change Proposal seeking an increase in Contract Times or Contract Price must be supplemented by supporting data that sets forth in detail the following:

1. The circumstances that form the basis for the requested adjustment;
2. The date upon which each cause of delay, disruption, or interference began to affect the progress of the Work;
3. The date upon which each cause of delay, disruption, or interference ceased to affect the progress of the Work;
4. The number of days' increase in Contract Times claimed as a consequence of each such cause of delay, disruption, or interference; and
5. The impact on Contract Price, in accordance with the provisions of Paragraph 11.07.

Contractor shall also furnish such additional supporting documentation as Owner or Engineer may require including, where appropriate, a revised progress schedule indicating all the activities affected by the delay, disruption, or interference, and an explanation of the

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effect of the delay, disruption, or interference on the critical path to completion of the Work.

F. Delays, disruption, and interference to the performance or progress of the Work resulting from the existence of a differing subsurface or physical condition, an Underground Facility that was not shown or indicated by the Contract Documents, or not shown or indicated with reasonable accuracy, and those resulting from Hazardous Environmental Conditions, are governed by Article 5, together with the provisions of Paragraphs 4.05.D and 4.05.E.

G. Paragraph 8.03 addresses delays, disruption, and interference to the performance or progress of the Work resulting from the performance of certain other work at or adjacent to the Site.

ARTICLE 5—SITE; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS

5.01 *Availability of Lands*

A. Owner shall furnish the Site. Owner shall notify Contractor in writing of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Contractor must comply in performing the Work.

B. Upon reasonable written request, Owner shall furnish Contractor with a current statement of record legal title and legal description of the lands upon which permanent improvements are to be made and Owner's interest therein as necessary for giving notice of or filing a mechanic's or construction lien against such lands in accordance with applicable Laws and Regulations.

C. Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

5.02 *Use of Site and Other Areas*

A. *Limitation on Use of Site and Other Areas*

1. Contractor shall confine construction equipment, temporary construction facilities, the storage of materials and equipment, and the operations of workers to the Site, adjacent areas that Contractor has arranged to use through construction easements or otherwise, and other adjacent areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and such other adjacent areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for (a) damage to the Site; (b) damage to any such other adjacent areas used for Contractor's operations; (c) damage to any other adjacent land or areas, or to improvements, structures, utilities, or similar facilities located at such adjacent lands or areas; and (d) for injuries and losses sustained by the owners or occupants of any such land or areas; provided that such damage or injuries result from the performance of the Work or from other actions or conduct of the Contractor or those for which Contractor is responsible.

2. If a damage or injury claim is made by the owner or occupant of any such land or area because of the performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible, Contractor shall (a) take immediate corrective or remedial action as required by Paragraph 7.13, or otherwise;

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(b) promptly attempt to settle the claim as to all parties through negotiations with such owner or occupant, or otherwise resolve the claim by arbitration or other dispute resolution proceeding, or in a court of competent jurisdiction; and (c) to the fullest extent permitted by Laws and Regulations, indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, from and against any such claim, and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such owner or occupant against Owner, Engineer, or any other party indemnified hereunder to the extent caused directly or indirectly, in whole or in part by, or based upon, Contractor's performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible.

B. *Removal of Debris During Performance of the Work*: During the progress of the Work the Contractor shall keep the Site and other adjacent areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris will conform to applicable Laws and Regulations.

C. *Cleaning*: Prior to Substantial Completion of the Work Contractor shall clean the Site and the Work and make it ready for utilization by Owner. At the completion of the Work Contractor shall remove from the Site and adjacent areas all tools, appliances, construction equipment and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.

D. *Loading of Structures*: Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Contractor subject any part of the Work or adjacent structures or land to stresses or pressures that will endanger them.

5.03 *Subsurface and Physical Conditions*

A. *Reports and Drawings*: The Supplementary Conditions identify:

1. Those reports of explorations and tests of subsurface conditions at or adjacent to the Site that contain Technical Data;

2. Those drawings of existing physical conditions at or adjacent to the Site, including those drawings depicting existing surface or subsurface structures at or adjacent to the Site (except Underground Facilities), that contain Technical Data; and

3. Technical Data contained in such reports and drawings.

B. *Underground Facilities*: Underground Facilities are shown or indicated on the Drawings, pursuant to Paragraph 5.05, and not in the drawings referred to in Paragraph 5.03.A. Information and data regarding the presence or location of Underground Facilities are not intended to be categorized, identified, or defined as Technical Data.

C. *Reliance by Contractor on Technical Data*: Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely upon the accuracy of the Technical Data as defined in Paragraph 1.01.A.46.b.

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D. *Limitations of Other Data and Documents*: Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto;
2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings;
3. the contents of other Site-related documents made available to Contractor, such as record drawings from other projects at or adjacent to the Site, or Owner's archival documents concerning the Site; or
4. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions, or information.

5.04 *Differing Subsurface or Physical Conditions*

A. *Notice by Contractor*: If Contractor believes that any subsurface or physical condition that is uncovered or revealed at the Site:

1. is of such a nature as to establish that any Technical Data on which Contractor is entitled to rely as provided in Paragraph 5.03 is materially inaccurate;
2. is of such a nature as to require a change in the Drawings or Specifications;
3. differs materially from that shown or indicated in the Contract Documents; or
4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

then Contractor shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except with respect to an emergency) until receipt of a written statement permitting Contractor to do so.

B. *Engineer's Review*: After receipt of written notice as required by the preceding paragraph, Engineer will promptly review the subsurface or physical condition in question; determine whether it is necessary for Owner to obtain additional exploration or tests with respect to the condition; conclude whether the condition falls within any one or more of the differing site condition categories in Paragraph 5.04.A; obtain any pertinent cost or schedule information from Contractor; prepare recommendations to Owner regarding the Contractor's resumption of Work in connection with the subsurface or physical condition in question and the need for any change in the Drawings or Specifications; and advise Owner in writing of Engineer's findings, conclusions, and recommendations.

C. *Owner's Statement to Contractor Regarding Site Condition*: After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement

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to Contractor (with a copy to Engineer) regarding the subsurface or physical condition in question, addressing the resumption of Work in connection with such condition, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations, in whole or in part.

D. *Early Resumption of Work*: If at any time Engineer determines that Work in connection with the subsurface or physical condition in question may resume prior to completion of Engineer's review or Owner's issuance of its statement to Contractor, because the condition in question has been adequately documented, and analyzed on a preliminary basis, then the Engineer may at its discretion instruct Contractor to resume such Work.

E. *Possible Price and Times Adjustments*

1. Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times, to the extent that the existence of a differing subsurface or physical condition, or any related delay, disruption, or interference, causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:

    a. Such condition must fall within any one or more of the categories described in Paragraph 5.04.A;

    b. With respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03; and,

    c. Contractor's entitlement to an adjustment of the Contract Times is subject to the provisions of Paragraphs 4.05.D and 4.05.E.

2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times with respect to a subsurface or physical condition if:

    a. Contractor knew of the existence of such condition at the time Contractor made a commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract, or otherwise;

    b. The existence of such condition reasonably could have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas expressly required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such commitment; or

    c. Contractor failed to give the written notice required by Paragraph 5.04.A.

3. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, then any such adjustment will be set forth in a Change Order.

4. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the subsurface or physical condition in question.

F. *Underground Facilities; Hazardous Environmental Conditions*: Paragraph 5.05 governs rights and responsibilities regarding the presence or location of Underground Facilities.

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Paragraph 5.06 governs rights and responsibilities regarding Hazardous Environmental Conditions. The provisions of Paragraphs 5.03 and 5.04 are not applicable to the presence or location of Underground Facilities, or to Hazardous Environmental Conditions.

5.05 *Underground Facilities*

A. *Contractor's Responsibilities*: Unless it is otherwise expressly provided in the Supplementary Conditions, the cost of all of the following are included in the Contract Price, and Contractor shall have full responsibility for:

1. reviewing and checking all information and data regarding existing Underground Facilities at the Site;

2. complying with applicable state and local utility damage prevention Laws and Regulations;

3. verifying the actual location of those Underground Facilities shown or indicated in the Contract Documents as being within the area affected by the Work, by exposing such Underground Facilities during the course of construction;

4. coordination of the Work with the owners (including Owner) of such Underground Facilities, during construction; and

5. the safety and protection of all existing Underground Facilities at the Site, and repairing any damage thereto resulting from the Work.

B. *Notice by Contractor*: If Contractor believes that an Underground Facility that is uncovered or revealed at the Site was not shown or indicated on the Drawings, or was not shown or indicated on the Drawings with reasonable accuracy, then Contractor shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), notify Owner and Engineer in writing regarding such Underground Facility.

C. *Engineer's Review*: Engineer will:

1. promptly review the Underground Facility and conclude whether such Underground Facility was not shown or indicated on the Drawings, or was not shown or indicated with reasonable accuracy;

2. identify and communicate with the owner of the Underground Facility; prepare recommendations to Owner (and if necessary issue any preliminary instructions to Contractor) regarding the Contractor's resumption of Work in connection with the Underground Facility in question;

3. obtain any pertinent cost or schedule information from Contractor; determine the extent, if any, to which a change is required in the Drawings or Specifications to reflect and document the consequences of the existence or location of the Underground Facility; and

4. advise Owner in writing of Engineer's findings, conclusions, and recommendations.

During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.

D. *Owner's Statement to Contractor Regarding Underground Facility*: After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written

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statement to Contractor (with a copy to Engineer) regarding the Underground Facility in question addressing the resumption of Work in connection with such Underground Facility, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations in whole or in part.

E. *Early Resumption of Work*: If at any time Engineer determines that Work in connection with the Underground Facility may resume prior to completion of Engineer's review or Owner's issuance of its statement to Contractor, because the Underground Facility in question and conditions affected by its presence have been adequately documented, and analyzed on a preliminary basis, then the Engineer may at its discretion instruct Contractor to resume such Work.

F. *Possible Price and Times Adjustments*

1. Contractor shall be entitled to an equitable adjustment in the Contract Price or Contract Times, to the extent that any existing Underground Facility at the Site that was not shown or indicated on the Drawings, or was not shown or indicated with reasonable accuracy, or any related delay, disruption, or interference, causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:

    a. With respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03;

    b. Contractor's entitlement to an adjustment of the Contract Times is subject to the provisions of Paragraphs 4.05.D and 4.05.E; and

    c. Contractor gave the notice required in Paragraph 5.05.B.

2. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, then any such adjustment will be set forth in a Change Order.

3. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the Underground Facility in question.

4. The information and data shown or indicated on the Drawings with respect to existing Underground Facilities at the Site is based on information and data (a) furnished by the owners of such Underground Facilities, or by others, (b) obtained from available records, or (c) gathered in an investigation conducted in accordance with the current edition of ASCE 38, Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data, by the American Society of Civil Engineers. If such information or data is incorrect or incomplete, Contractor's remedies are limited to those set forth in this Paragraph 5.05.F.

5.06 *Hazardous Environmental Conditions at Site*

A. *Reports and Drawings*: The Supplementary Conditions identify:

1. those reports known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site;

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2. drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site; and

3. Technical Data contained in such reports and drawings.

B. *Reliance by Contractor on Technical Data Authorized*: Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely on the accuracy of the Technical Data as defined in Paragraph 1.01.A.46.b. Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto;

2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or

3. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions or information.

C. Contractor shall not be responsible for removing or remediating any Hazardous Environmental Condition encountered, uncovered, or revealed at the Site unless such removal or remediation is expressly identified in the Contract Documents to be within the scope of the Work.

D. Contractor shall be responsible for controlling, containing, and duly removing all Constituents of Concern brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible, and for any associated costs; and for the costs of removing and remediating any Hazardous Environmental Condition created by the presence of any such Constituents of Concern.

E. If Contractor encounters, uncovers, or reveals a Hazardous Environmental Condition whose removal or remediation is not expressly identified in the Contract Documents as being within the scope of the Work, or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, then Contractor shall immediately: (1) secure or otherwise isolate such condition; (2) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 7.15); and (3) notify Owner and Engineer (and promptly thereafter confirm such notice in writing). Owner shall promptly consult with Engineer concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take corrective action, if any. Promptly after consulting with Engineer, Owner shall take such actions as are necessary to permit Owner to timely obtain required permits and provide Contractor the written notice required by Paragraph 5.06.F. If Contractor or anyone for whom Contractor is responsible created the Hazardous Environmental Condition in question, then Owner may remove and remediate the Hazardous Environmental Condition, and impose a set-off against payments to account for the associated costs.

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F. Contractor shall not resume Work in connection with such Hazardous Environmental Condition or in any affected area until after Owner has obtained any required permits related thereto, and delivered written notice to Contractor either (1) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work, or (2) specifying any special conditions under which such Work may be resumed safely.

G. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, as a result of such Work stoppage, such special conditions under which Work is agreed to be resumed by Contractor, or any costs or expenses incurred in response to the Hazardous Environmental Condition, then within 30 days of Owner's written notice regarding the resumption of Work, Contractor may submit a Change Proposal, or Owner may impose a set-off. Entitlement to any such adjustment is subject to the provisions of Paragraphs 4.05.D, 4.05.E, 11.07, and 11.08.

H. If, after receipt of such written notice, Contractor does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special conditions, then Owner may order the portion of the Work that is in the area affected by such condition to be deleted from the Work, following the contractual change procedures in Article 11. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 8.

I. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court, arbitration, or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition (1) was not shown or indicated in the Drawings, Specifications, or other Contract Documents, identified as Technical Data entitled to limited reliance pursuant to Paragraph 5.06.B, or identified in the Contract Documents to be included within the scope of the Work, and (2) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.I obligates Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

J. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the failure to control, contain, or remove a Constituent of Concern brought to the Site by Contractor or by anyone for whom Contractor is responsible, or to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.J obligates Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

K. The provisions of Paragraphs 5.03, 5.04, and 5.05 do not apply to the presence of Constituents of Concern or to a Hazardous Environmental Condition uncovered or revealed at the Site.

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ARTICLE 6—BONDS AND INSURANCE

6.01 *Performance, Payment, and Other Bonds*

A. Contractor shall furnish a performance bond and a payment bond, each in an amount at least equal to the Contract Price, as security for the faithful performance and payment of Contractor's obligations under the Contract. These bonds must remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified in Paragraph 15.08, whichever is later, except as provided otherwise by Laws or Regulations, the terms of a prescribed bond form, the Supplementary Conditions, or other provisions of the Contract.

B. Contractor shall also furnish such other bonds (if any) as are required by the Supplementary Conditions or other provisions of the Contract.

C. All bonds must be in the form included in the Bidding Documents or otherwise specified by Owner prior to execution of the Contract, except as provided otherwise by Laws or Regulations, and must be issued and signed by a surety named in "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Department Circular 570 (as amended and supplemented) by the Bureau of the Fiscal Service, U.S. Department of the Treasury. A bond signed by an agent or attorney-in-fact must be accompanied by a certified copy of that individual's authority to bind the surety. The evidence of authority must show that it is effective on the date the agent or attorney-in-fact signed the accompanying bond.

D. Contractor shall obtain the required bonds from surety companies that are duly licensed or authorized, in the state or jurisdiction in which the Project is located, to issue bonds in the required amounts.

E. If the surety on a bond furnished by Contractor is declared bankrupt or becomes insolvent, or the surety ceases to meet the requirements above, then Contractor shall promptly notify Owner and Engineer in writing and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which must comply with the bond and surety requirements above.

F. If Contractor has failed to obtain a required bond, Owner may exclude the Contractor from the Site and exercise Owner's termination rights under Article 16.

G. Upon request to Owner from any Subcontractor, Supplier, or other person or entity claiming to have furnished labor, services, materials, or equipment used in the performance of the Work, Owner shall provide a copy of the payment bond to such person or entity.

H. Upon request to Contractor from any Subcontractor, Supplier, or other person or entity claiming to have furnished labor, services, materials, or equipment used in the performance of the Work, Contractor shall provide a copy of the payment bond to such person or entity.

6.02 *Insurance—General Provisions*

A. Owner and Contractor shall obtain and maintain insurance as required in this article and in the Supplementary Conditions.

B. All insurance required by the Contract to be purchased and maintained by Owner or Contractor shall be obtained from insurance companies that are duly licensed or authorized in the state or jurisdiction in which the Project is located to issue insurance policies for the

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required limits and coverages. Unless a different standard is indicated in the Supplementary Conditions, all companies that provide insurance policies required under this Contract shall have an A.M. Best rating of A-VII or better.

C. Alternative forms of insurance coverage, including but not limited to self-insurance and "Occupational Accident and Excess Employer's Indemnity Policies," are not sufficient to meet the insurance requirements of this Contract, unless expressly allowed in the Supplementary Conditions.

D. Contractor shall deliver to Owner, with copies to each additional insured identified in the Contract, certificates of insurance and endorsements establishing that Contractor has obtained and is maintaining the policies and coverages required by the Contract. Upon request by Owner or any other insured, Contractor shall also furnish other evidence of such required insurance, including but not limited to copies of policies, documentation of applicable self-insured retentions (if allowed) and deductibles, full disclosure of all relevant exclusions, and evidence of insurance required to be purchased and maintained by Subcontractors or Suppliers. In any documentation furnished under this provision, Contractor, Subcontractors, and Suppliers may block out (redact) (1) any confidential premium or pricing information and (2) any wording specific to a project or jurisdiction other than those applicable to this Contract.

E. Owner shall deliver to Contractor, with copies to each additional insured identified in the Contract, certificates of insurance and endorsements establishing that Owner has obtained and is maintaining the policies and coverages required of Owner by the Contract (if any). Upon request by Contractor or any other insured, Owner shall also provide other evidence of such required insurance (if any), including but not limited to copies of policies, documentation of applicable self-insured retentions (if allowed) and deductibles, and full disclosure of all relevant exclusions. In any documentation furnished under this provision, Owner may block out (redact) (1) any confidential premium or pricing information and (2) any wording specific to a project or jurisdiction other than those relevant to this Contract.

F. Failure of Owner or Contractor to demand such certificates or other evidence of the other party's full compliance with these insurance requirements, or failure of Owner or Contractor to identify a deficiency in compliance from the evidence provided, will not be construed as a waiver of the other party's obligation to obtain and maintain such insurance.

G. In addition to the liability insurance required to be provided by Contractor, the Owner, at Owner's option, may purchase and maintain Owner's own liability insurance. Owner's liability policies, if any, operate separately and independently from policies required to be provided by Contractor, and Contractor cannot rely upon Owner's liability policies for any of Contractor's obligations to the Owner, Engineer, or third parties.

H. Contractor shall require:

1. Subcontractors to purchase and maintain worker's compensation, commercial general liability, and other insurance that is appropriate for their participation in the Project, and to name as additional insureds Owner and Engineer (and any other individuals or entities identified in the Supplementary Conditions as additional insureds on Contractor's liability policies) on each Subcontractor's commercial general liability insurance policy; and

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2. Suppliers to purchase and maintain insurance that is appropriate for their participation in the Project.

I. If either party does not purchase or maintain the insurance required of such party by the Contract, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage.

J. If Contractor has failed to obtain and maintain required insurance, Contractor's entitlement to enter or remain at the Site will end immediately, and Owner may impose an appropriate set-off against payment for any associated costs (including but not limited to the cost of purchasing necessary insurance coverage), and exercise Owner's termination rights under Article 16.

K. Without prejudice to any other right or remedy, if a party has failed to obtain required insurance, the other party may elect (but is in no way obligated) to obtain equivalent insurance to protect such other party's interests at the expense of the party who was required to provide such coverage, and the Contract Price will be adjusted accordingly.

L. Owner does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect Contractor or Contractor's interests. Contractor is responsible for determining whether such coverage and limits are adequate to protect its interests, and for obtaining and maintaining any additional insurance that Contractor deems necessary.

M. The insurance and insurance limits required herein will not be deemed as a limitation on Contractor's liability, or that of its Subcontractors or Suppliers, under the indemnities granted to Owner and other individuals and entities in the Contract or otherwise.

N. All the policies of insurance required to be purchased and maintained under this Contract will contain a provision or endorsement that the coverage afforded will not be canceled, or renewal refused, until at least 10 days prior written notice has been given to the purchasing policyholder. Within three days of receipt of any such written notice, the purchasing policyholder shall provide a copy of the notice to each other insured and Engineer.

6.03 *Contractor's Insurance*

A. *Required Insurance*: Contractor shall purchase and maintain Worker's Compensation, Commercial General Liability, and other insurance pursuant to the specific requirements of the Supplementary Conditions.

B. *General Provisions*: The policies of insurance required by this Paragraph 6.03 as supplemented must:

1. include at least the specific coverages required;

2. be written for not less than the limits provided, or those required by Laws or Regulations, whichever is greater;

3. remain in effect at least until the Work is complete (as set forth in Paragraph 15.06.D), and longer if expressly required elsewhere in this Contract, and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work as a warranty or correction obligation, or otherwise, or returning to the Site to conduct other tasks arising from the Contract;

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4. apply with respect to the performance of the Work, whether such performance is by Contractor, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable; and

5. include all necessary endorsements to support the stated requirements.

C. *Additional Insureds*: The Contractor's commercial general liability, automobile liability, employer's liability, umbrella or excess, pollution liability, and unmanned aerial vehicle liability policies, if required by this Contract, must:

1. include and list as additional insureds Owner and Engineer, and any individuals or entities identified as additional insureds in the Supplementary Conditions;

2. include coverage for the respective officers, directors, members, partners, employees, and consultants of all such additional insureds;

3. afford primary coverage to these additional insureds for all claims covered thereby (including as applicable those arising from both ongoing and completed operations);

4. not seek contribution from insurance maintained by the additional insured; and

5. as to commercial general liability insurance, apply to additional insureds with respect to liability caused in whole or in part by Contractor's acts or omissions, or the acts and omissions of those working on Contractor's behalf, in the performance of Contractor's operations.

6.04 *Builder's Risk and Other Property Insurance*

A. *Builder's Risk*: Unless otherwise provided in the Supplementary Conditions, Contractor shall purchase and maintain builder's risk insurance upon the Work on a completed value basis, in the amount of the Work's full insurable replacement cost (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). The specific requirements applicable to the builder's risk insurance are set forth in the Supplementary Conditions.

B. *Property Insurance for Facilities of Owner Where Work Will Occur*: Owner is responsible for obtaining and maintaining property insurance covering each existing structure, building, or facility in which any part of the Work will occur, or to which any part of the Work will attach or be adjoined. Such property insurance will be written on a special perils (all-risk) form, on a replacement cost basis, providing coverage consistent with that required for the builder's risk insurance, and will be maintained until the Work is complete, as set forth in Paragraph 15.06.D.

C. *Property Insurance for Substantially Complete Facilities*: Promptly after Substantial Completion, and before actual occupancy or use of the substantially completed Work, Owner will obtain property insurance for such substantially completed Work, and maintain such property insurance at least until the Work is complete, as set forth in Paragraph 15.06.D. Such property insurance will be written on a special perils (all-risk) form, on a replacement cost basis, and provide coverage consistent with that required for the builder's risk insurance. The builder's risk insurance may terminate upon written confirmation of Owner's procurement of such property insurance.

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D. *Partial Occupancy or Use by Owner*: If Owner will occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work, as provided in Paragraph 15.04, then Owner (directly, if it is the purchaser of the builder's risk policy, or through Contractor) will provide advance notice of such occupancy or use to the builder's risk insurer, and obtain an endorsement consenting to the continuation of coverage prior to commencing such partial occupancy or use.

E. *Insurance of Other Property; Additional Insurance*: If the express insurance provisions of the Contract do not require or address the insurance of a property item or interest, then the entity or individual owning such property item will be responsible for insuring it. If Contractor elects to obtain other special insurance to be included in or supplement the builder's risk or property insurance policies provided under this Paragraph 6.04, it may do so at Contractor's expense.

6.05 *Property Losses; Subrogation*

A. The builder's risk insurance policy purchased and maintained in accordance with Paragraph 6.04 (or an installation floater policy if authorized by the Supplementary Conditions), will contain provisions to the effect that in the event of payment of any loss or damage the insurer will have no rights of recovery against any insureds thereunder, or against Engineer or its consultants, or their officers, directors, members, partners, employees, agents, consultants, or subcontractors.

1. Owner and Contractor waive all rights against each other and the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, or resulting from any of the perils, risks, or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Engineer, its consultants, all individuals or entities identified in the Supplementary Conditions as builder's risk or installation floater insureds, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, under such policies for losses and damages so caused.

2. None of the above waivers extends to the rights that any party making such waiver may have to the proceeds of insurance held by Owner or Contractor as trustee or fiduciary, or otherwise payable under any policy so issued.

B. Any property insurance policy maintained by Owner covering any loss, damage, or consequential loss to Owner's existing structures, buildings, or facilities in which any part of the Work will occur, or to which any part of the Work will attach or adjoin; to adjacent structures, buildings, or facilities of Owner; or to part or all of the completed or substantially completed Work, during partial occupancy or use pursuant to Paragraph 15.04, after Substantial Completion pursuant to Paragraph 15.03, or after final payment pursuant to Paragraph 15.06, will contain provisions to the effect that in the event of payment of any loss or damage the insurer will have no rights of recovery against any insureds thereunder, or against Contractor, Subcontractors, or Engineer, or the officers, directors, members, partners, employees, agents, consultants, or subcontractors of each and any of them, and that the insured is allowed to waive the insurer's rights of subrogation in a written contract executed prior to the loss, damage, or consequential loss.

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1. Owner waives all rights against Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, for all losses and damages caused by, arising out of, or resulting from fire or any of the perils, risks, or causes of loss covered by such policies.

C. The waivers in this Paragraph 6.05 include the waiver of rights due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to Owner's property or the Work caused by, arising out of, or resulting from fire or other insured peril, risk, or cause of loss.

D. Contractor shall be responsible for assuring that each Subcontract contains provisions whereby the Subcontractor waives all rights against Owner, Contractor, all individuals or entities identified in the Supplementary Conditions as insureds, the Engineer and its consultants, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, relating to, or resulting from fire or other peril, risk, or cause of loss covered by builder's risk insurance, installation floater, and any other property insurance applicable to the Work.

6.06 *Receipt and Application of Property Insurance Proceeds*

A. Any insured loss under the builder's risk and other policies of property insurance required by Paragraph 6.04 will be adjusted and settled with the named insured that purchased the policy. Such named insured shall act as fiduciary for the other insureds, and give notice to such other insureds that adjustment and settlement of a claim is in progress. Any other insured may state its position regarding a claim for insured loss in writing within 15 days after notice of such claim.

B. Proceeds for such insured losses may be made payable by the insurer either jointly to multiple insureds, or to the named insured that purchased the policy in its own right and as fiduciary for other insureds, subject to the requirements of any applicable mortgage clause. A named insured receiving insurance proceeds under the builder's risk and other policies of insurance required by Paragraph 6.04 shall maintain such proceeds in a segregated account, and distribute such proceeds in accordance with such agreement as the parties in interest may reach, or as otherwise required under the dispute resolution provisions of this Contract or applicable Laws and Regulations.

C. If no other special agreement is reached, Contractor shall repair or replace the damaged Work, using allocated insurance proceeds.

ARTICLE 7—CONTRACTOR'S RESPONSIBILITIES

7.01 *Contractor's Means and Methods of Construction*

A. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction.

B. If the Contract Documents note, or Contractor determines, that professional engineering or other design services are needed to carry out Contractor's responsibilities for construction means, methods, techniques, sequences, and procedures, or for Site safety, then Contractor shall cause such services to be provided by a properly licensed design professional, at

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Contractor's expense. Such services are not Owner-delegated professional design services under this Contract, and neither Owner nor Engineer has any responsibility with respect to (1) Contractor's determination of the need for such services, (2) the qualifications or licensing of the design professionals retained or employed by Contractor, (3) the performance of such services, or (4) any errors, omissions, or defects in such services.

7.02 *Supervision and Superintendence*

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

B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who will not be replaced without written notice to Owner and Engineer except under extraordinary circumstances.

7.03 *Labor; Working Hours*

A. Contractor shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. Contractor shall maintain good discipline and order at the Site.

B. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of Contractor's employees; of Suppliers and Subcontractors, and their employees; and of any other individuals or entities performing or furnishing any of the Work, just as Contractor is responsible for Contractor's own acts and omissions.

C. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site will be performed during regular working hours, Monday through Friday. Contractor will not perform Work on a Saturday, Sunday, or any legal holiday. Contractor may perform Work outside regular working hours or on Saturdays, Sundays, or legal holidays only with Owner's written consent, which will not be unreasonably withheld.

7.04 *Services, Materials, and Equipment*

A. Unless otherwise specified in the Contract Documents, Contractor shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the performance, testing, start up, and completion of the Work, whether or not such items are specifically called for in the Contract Documents.

B. All materials and equipment incorporated into the Work must be new and of good quality, except as otherwise provided in the Contract Documents. All special warranties and guarantees required by the Specifications will expressly run to the benefit of Owner. If required by Engineer, Contractor shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment.

C. All materials and equipment must be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise may be provided in the Contract Documents.

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7.05 *"Or Equals"*

A. *Contractor's Request; Governing Criteria*: Whenever an item of equipment or material is specified or described in the Contract Documents by using the names of one or more proprietary items or specific Suppliers, the Contract Price has been based upon Contractor furnishing such item as specified. The specification or description of such an item is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or equal" item is permitted, Contractor may request that Engineer authorize the use of other items of equipment or material, or items from other proposed Suppliers, under the circumstances described below.

1. If Engineer in its sole discretion determines that an item of equipment or material proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, Engineer will deem it an "or equal" item. For the purposes of this paragraph, a proposed item of equipment or material will be considered functionally equal to an item so named if:

    a. in the exercise of reasonable judgment Engineer determines that the proposed item:

        1) is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;

        2) will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole;

        3) has a proven record of performance and availability of responsive service; and

        4) is not objectionable to Owner.

    b. Contractor certifies that, if the proposed item is approved and incorporated into the Work:

        1) there will be no increase in cost to the Owner or increase in Contract Times; and

        2) the item will conform substantially to the detailed requirements of the item named in the Contract Documents.

B. *Contractor's Expense*: Contractor shall provide all data in support of any proposed "or equal" item at Contractor's expense.

C. *Engineer's Evaluation and Determination*: Engineer will be allowed a reasonable time to evaluate each "or-equal" request. Engineer may require Contractor to furnish additional data about the proposed "or-equal" item. Engineer will be the sole judge of acceptability. No "or-equal" item will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an "or-equal," which will be evidenced by an approved Shop Drawing or other written communication. Engineer will advise Contractor in writing of any negative determination.

D. *Effect of Engineer's Determination*: Neither approval nor denial of an "or-equal" request will result in any change in Contract Price. The Engineer's denial of an "or-equal" request will be final and binding, and may not be reversed through an appeal under any provision of the Contract.

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E. *Treatment as a Substitution Request*: If Engineer determines that an item of equipment or material proposed by Contractor does not qualify as an "or-equal" item, Contractor may request that Engineer consider the item a proposed substitute pursuant to Paragraph 7.06.

7.06 *Substitutes*

A. *Contractor's Request; Governing Criteria*: Unless the specification or description of an item of equipment or material required to be furnished under the Contract Documents contains or is followed by words reading that no substitution is permitted, Contractor may request that Engineer authorize the use of other items of equipment or material under the circumstances described below. To the extent possible such requests must be made before commencement of related construction at the Site.

1. Contractor shall submit sufficient information as provided below to allow Engineer to determine if the item of material or equipment proposed is functionally equivalent to that named and an acceptable substitute therefor. Engineer will not accept requests for review of proposed substitute items of equipment or material from anyone other than Contractor.

2. The requirements for review by Engineer will be as set forth in Paragraph 7.06.B, as supplemented by the Specifications, and as Engineer may decide is appropriate under the circumstances.

3. Contractor shall make written application to Engineer for review of a proposed substitute item of equipment or material that Contractor seeks to furnish or use. The application:

a. will certify that the proposed substitute item will:

1) perform adequately the functions and achieve the results called for by the general design;

2) be similar in substance to the item specified; and

3) be suited to the same use as the item specified.

b. will state:

1) the extent, if any, to which the use of the proposed substitute item will necessitate a change in Contract Times;

2) whether use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for other work on the Project) to adapt the design to the proposed substitute item; and

3) whether incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty.

c. will identify:

1) all variations of the proposed substitute item from the item specified; and

2) available engineering, sales, maintenance, repair, and replacement services.

d. will contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including but not limited to changes in

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Contract Price, shared savings, costs of redesign, and claims of other contractors affected by any resulting change.

B. *Engineer's Evaluation and Determination*: Engineer will be allowed a reasonable time to evaluate each substitute request, and to obtain comments and direction from Owner. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No substitute will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an acceptable substitute. Engineer's determination will be evidenced by a Field Order or a proposed Change Order accounting for the substitution itself and all related impacts, including changes in Contract Price or Contract Times. Engineer will advise Contractor in writing of any negative determination.

C. *Special Guarantee*: Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.

D. *Reimbursement of Engineer's Cost*: Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor. Whether or not Engineer approves a substitute so proposed or submitted by Contractor, Contractor shall reimburse Owner for the reasonable charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the reasonable charges of Engineer for making changes in the Contract Documents (or in the provisions of any other direct contract with Owner) resulting from the acceptance of each proposed substitute.

E. *Contractor's Expense*: Contractor shall provide all data in support of any proposed substitute at Contractor's expense.

F. *Effect of Engineer's Determination*: If Engineer approves the substitution request, Contractor shall execute the proposed Change Order and proceed with the substitution. The Engineer's denial of a substitution request will be final and binding, and may not be reversed through an appeal under any provision of the Contract. Contractor may challenge the scope of reimbursement costs imposed under Paragraph 7.06.D, by timely submittal of a Change Proposal.

7.07 *Concerning Subcontractors and Suppliers*

A. Contractor may retain Subcontractors and Suppliers for the performance of parts of the Work. Such Subcontractors and Suppliers must be acceptable to Owner. The Contractor's retention of a Subcontractor or Supplier for the performance of parts of the Work will not relieve Contractor's obligation to Owner to perform and complete the Work in accordance with the Contract Documents.

B. Contractor shall retain specific Subcontractors and Suppliers for the performance of designated parts of the Work if required by the Contract to do so.

C. Subsequent to the submittal of Contractor's Bid or final negotiation of the terms of the Contract, Owner may not require Contractor to retain any Subcontractor or Supplier to furnish or perform any of the Work against which Contractor has reasonable objection.

D. Prior to entry into any binding subcontract or purchase order, Contractor shall submit to Owner the identity of the proposed Subcontractor or Supplier (unless Owner has already deemed such proposed Subcontractor or Supplier acceptable during the bidding process or

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otherwise). Such proposed Subcontractor or Supplier shall be deemed acceptable to Owner unless Owner raises a substantive, reasonable objection within 5 days.

E. Owner may require the replacement of any Subcontractor or Supplier. Owner also may require Contractor to retain specific replacements; provided, however, that Owner may not require a replacement to which Contractor has a reasonable objection. If Contractor has submitted the identity of certain Subcontractors or Suppliers for acceptance by Owner, and Owner has accepted it (either in writing or by failing to make written objection thereto), then Owner may subsequently revoke the acceptance of any such Subcontractor or Supplier so identified solely on the basis of substantive, reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor or Supplier.

F. If Owner requires the replacement of any Subcontractor or Supplier retained by Contractor to perform any part of the Work, then Contractor shall be entitled to an adjustment in Contract Price or Contract Times, with respect to the replacement; and Contractor shall initiate a Change Proposal for such adjustment within 30 days of Owner's requirement of replacement.

G. No acceptance by Owner of any such Subcontractor or Supplier, whether initially or as a replacement, will constitute a waiver of the right of Owner to the completion of the Work in accordance with the Contract Documents.

H. On a monthly basis, Contractor shall submit to Engineer a complete list of all Subcontractors and Suppliers having a direct contract with Contractor, and of all other Subcontractors and Suppliers known to Contractor at the time of submittal.

I. Contractor shall be solely responsible for scheduling and coordinating the work of Subcontractors and Suppliers.

J. The divisions and sections of the Specifications and the identifications of any Drawings do not control Contractor in dividing the Work among Subcontractors or Suppliers, or in delineating the Work to be performed by any specific trade.

K. All Work performed for Contractor by a Subcontractor or Supplier must be pursuant to an appropriate contractual agreement that specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract for the benefit of Owner and Engineer.

L. Owner may furnish to any Subcontractor or Supplier, to the extent practicable, information about amounts paid to Contractor for Work performed for Contractor by the Subcontractor or Supplier.

M. Contractor shall restrict all Subcontractors and Suppliers from communicating with Engineer or Owner, except through Contractor or in case of an emergency, or as otherwise expressly allowed in this Contract.

7.08 *Patent Fees and Royalties*

A. Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If an invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if, to the actual knowledge of Owner or Engineer, its use is subject to patent rights or copyrights calling for the payment of any

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license fee or royalty to others, the existence of such rights will be disclosed in the Contract Documents.

B. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, and its officers, directors, members, partners, employees, agents, consultants, and subcontractors, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device specified in the Contract Documents, but not identified as being subject to payment of any license fee or royalty to others required by patent rights or copyrights.

C. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device not specified in the Contract Documents.

7.09 *Permits*

A. Unless otherwise provided in the Contract Documents, Contractor shall obtain and pay for all construction permits, licenses, and certificates of occupancy. Owner shall assist Contractor, when necessary, in obtaining such permits and licenses. Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work which are applicable at the time of the submission of Contractor's Bid (or when Contractor became bound under a negotiated contract). Owner shall pay all charges of utility owners for connections for providing permanent service to the Work.

7.10 *Taxes*

A. Contractor shall pay all sales, consumer, use, and other similar taxes required to be paid by Contractor in accordance with the Laws and Regulations of the place of the Project which are applicable during the performance of the Work.

7.11 *Laws and Regulations*

A. Contractor shall give all notices required by and shall comply with all Laws and Regulations applicable to the performance of the Work. Neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.

B. If Contractor performs any Work or takes any other action knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear all resulting costs and losses, and shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to

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such Work or other action. It is not Contractor's responsibility to make certain that the Work described in the Contract Documents is in accordance with Laws and Regulations, but this does not relieve Contractor of its obligations under Paragraph 3.03.

C. Owner or Contractor may give written notice to the other party of any changes after the submission of Contractor's Bid (or after the date when Contractor became bound under a negotiated contract) in Laws or Regulations having an effect on the cost or time of performance of the Work, including but not limited to changes in Laws or Regulations having an effect on procuring permits and on sales, use, value-added, consumption, and other similar taxes. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times resulting from such changes, then within 30 days of such written notice Contractor may submit a Change Proposal, or Owner may initiate a Claim.

7.12 *Record Documents*

A. Contractor shall maintain in a safe place at the Site one printed record copy of all Drawings, Specifications, Addenda, Change Orders, Work Change Directives, Field Orders, written interpretations and clarifications, and approved Shop Drawings. Contractor shall keep such record documents in good order and annotate them to show changes made during construction. These record documents, together with all approved Samples, will be available to Engineer for reference. Upon completion of the Work, Contractor shall deliver these record documents to Engineer.

7.13 *Safety and Protection*

A. Contractor shall be solely responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the Work. Such responsibility does not relieve Subcontractors of their responsibility for the safety of persons or property in the performance of their work, nor for compliance with applicable safety Laws and Regulations.

B. Contractor shall designate a qualified and experienced safety representative whose duties and responsibilities are the prevention of Work-related accidents and the maintenance and supervision of safety precautions and programs.

C. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury, or loss to:

1. all persons on the Site or who may be affected by the Work;

2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and

3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, other work in progress, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.

D. All damage, injury, or loss to any property referred to in Paragraph 7.13.C.2 or 7.13.C.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor at its expense (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner or Engineer or anyone employed by any

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of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them).

E. Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection.

F. Contractor shall notify Owner; the owners of adjacent property; the owners of Underground Facilities and other utilities (if the identity of such owners is known to Contractor); and other contractors and utility owners performing work at or adjacent to the Site, in writing, when Contractor knows that prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property or work in progress.

G. Contractor shall comply with the applicable requirements of Owner's safety programs, if any. Any Owner's safety programs that are applicable to the Work are identified or included in the Supplementary Conditions or Specifications.

H. Contractor shall inform Owner and Engineer of the specific requirements of Contractor's safety program with which Owner's and Engineer's employees and representatives must comply while at the Site.

I. Contractor's duties and responsibilities for safety and protection will continue until all the Work is completed, Engineer has issued a written notice to Owner and Contractor in accordance with Paragraph 15.06.C that the Work is acceptable, and Contractor has left the Site (except as otherwise expressly provided in connection with Substantial Completion).

J. Contractor's duties and responsibilities for safety and protection will resume whenever Contractor or any Subcontractor or Supplier returns to the Site to fulfill warranty or correction obligations, or to conduct other tasks arising from the Contract Documents.

7.14 *Hazard Communication Programs*

A. Contractor shall be responsible for coordinating any exchange of safety data sheets (formerly known as material safety data sheets) or other hazard communication information required to be made available to or exchanged between or among employers at the Site in accordance with Laws or Regulations.

7.15 *Emergencies*

A. In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, Contractor is obligated to act to prevent damage, injury, or loss. Contractor shall give Engineer prompt written notice if Contractor believes that any significant changes in the Work or variations from the Contract Documents have been caused by an emergency, or are required as a result of Contractor's response to an emergency. If Engineer determines that a change in the Contract Documents is required because of an emergency or Contractor's response, a Work Change Directive or Change Order will be issued.

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7.16 *Submittals*

A. *Shop Drawing and Sample Requirements*

1. Before submitting a Shop Drawing or Sample, Contractor shall:

a. review and coordinate the Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents;

b. determine and verify:

1) all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect to the Submittal;

2) the suitability of all materials and equipment offered with respect to the indicated application, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work; and

3) all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto;

c. confirm that the Submittal is complete with respect to all related data included in the Submittal.

2. Each Shop Drawing or Sample must bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review of that Submittal, and that Contractor approves the Submittal.

3. With each Shop Drawing or Sample, Contractor shall give Engineer specific written notice of any variations that the Submittal may have from the requirements of the Contract Documents. This notice must be set forth in a written communication separate from the Submittal; and, in addition, in the case of a Shop Drawing by a specific notation made on the Shop Drawing itself.

B. *Submittal Procedures for Shop Drawings and Samples*: Contractor shall label and submit Shop Drawings and Samples to Engineer for review and approval in accordance with the accepted Schedule of Submittals.

1. *Shop Drawings*

a. Contractor shall submit the number of copies required in the Specifications.

b. Data shown on the Shop Drawings must be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Engineer the services, materials, and equipment Contractor proposes to provide, and to enable Engineer to review the information for the limited purposes required by Paragraph 7.16.C.

2. *Samples*

a. Contractor shall submit the number of Samples required in the Specifications.

b. Contractor shall clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Engineer

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may require to enable Engineer to review the Submittal for the limited purposes required by Paragraph 7.16.C.

3. Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals, any related Work performed prior to Engineer's review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.

C. *Engineer's Review of Shop Drawings and Samples*

1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the accepted Schedule of Submittals. Engineer's review and approval will be only to determine if the items covered by the Submittals will, after installation or incorporation in the Work, comply with the requirements of the Contract Documents, and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.

2. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction, or to safety precautions or programs incident thereto.

3. Engineer's review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.

4. Engineer's review and approval of a Shop Drawing or Sample will not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 7.16.A.3 and Engineer has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample. Engineer will document any such approved variation from the requirements of the Contract Documents in a Field Order or other appropriate Contract modification.

5. Engineer's review and approval of a Shop Drawing or Sample will not relieve Contractor from responsibility for complying with the requirements of Paragraphs 7.16.A and B.

6. Engineer's review and approval of a Shop Drawing or Sample, or of a variation from the requirements of the Contract Documents, will not, under any circumstances, change the Contract Times or Contract Price, unless such changes are included in a Change Order.

7. Neither Engineer's receipt, review, acceptance, or approval of a Shop Drawing or Sample will result in such item becoming a Contract Document.

8. Contractor shall perform the Work in compliance with the requirements and commitments set forth in approved Shop Drawings and Samples, subject to the provisions of Paragraph 7.16.C.4.

D. *Resubmittal Procedures for Shop Drawings and Samples*

1. Contractor shall make corrections required by Engineer and shall return the required number of corrected copies of Shop Drawings and submit, as required, new Samples for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Engineer on previous Submittals.

2. Contractor shall furnish required Shop Drawing and Sample submittals with sufficient information and accuracy to obtain required approval of an item with no more than two

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resubmittals. Engineer will record Engineer's time for reviewing a third or subsequent resubmittal of a Shop Drawing or Sample, and Contractor shall be responsible for Engineer's charges to Owner for such time. Owner may impose a set-off against payments due Contractor to secure reimbursement for such charges.

3. If Contractor requests a change of a previously approved Shop Drawing or Sample, Contractor shall be responsible for Engineer's charges to Owner for its review time, and Owner may impose a set-off against payments due Contractor to secure reimbursement for such charges, unless the need for such change is beyond the control of Contractor.

E. *Submittals Other than Shop Drawings, Samples, and Owner-Delegated Designs*

1. The following provisions apply to all Submittals other than Shop Drawings, Samples, and Owner-delegated designs:

a. Contractor shall submit all such Submittals to the Engineer in accordance with the Schedule of Submittals and pursuant to the applicable terms of the Contract Documents.

b. Engineer will provide timely review of all such Submittals in accordance with the Schedule of Submittals and return such Submittals with a notation of either Accepted or Not Accepted. Any such Submittal that is not returned within the time established in the Schedule of Submittals will be deemed accepted.

c. Engineer's review will be only to determine if the Submittal is acceptable under the requirements of the Contract Documents as to general form and content of the Submittal.

d. If any such Submittal is not accepted, Contractor shall confer with Engineer regarding the reason for the non-acceptance, and resubmit an acceptable document.

2. Procedures for the submittal and acceptance of the Progress Schedule, the Schedule of Submittals, and the Schedule of Values are set forth in Paragraphs 2.03. 2.04, and 2.05.

F. Owner-delegated Designs: Submittals pursuant to Owner-delegated designs are governed by the provisions of Paragraph 7.19.

7.17 *Contractor's General Warranty and Guarantee*

A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Engineer is entitled to rely on Contractor's warranty and guarantee.

B. Owner's rights under this warranty and guarantee are in addition to, and are not limited by, Owner's rights under the correction period provisions of Paragraph 15.08. The time in which Owner may enforce its warranty and guarantee rights under this Paragraph 7.17 is limited only by applicable Laws and Regulations restricting actions to enforce such rights; provided, however, that after the end of the correction period under Paragraph 15.08:

1. Owner shall give Contractor written notice of any defective Work within 60 days of the discovery that such Work is defective; and

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2. Such notice will be deemed the start of an event giving rise to a Claim under Paragraph 12.01.B, such that any related Claim must be brought within 30 days of the notice.

C. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:

1. abuse, or improper modification, maintenance, or operation, by persons other than Contractor, Subcontractors, Suppliers, or any other individual or entity for whom Contractor is responsible; or

2. normal wear and tear under normal usage.

D. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents is absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents, a release of Contractor's obligation to perform the Work in accordance with the Contract Documents, or a release of Owner's warranty and guarantee rights under this Paragraph 7.17:

1. Observations by Engineer;

2. Recommendation by Engineer or payment by Owner of any progress or final payment;

3. The issuance of a certificate of Substantial Completion by Engineer or any payment related thereto by Owner;

4. Use or occupancy of the Work or any part thereof by Owner;

5. Any review and approval of a Shop Drawing or Sample submittal;

6. The issuance of a notice of acceptability by Engineer;

7. The end of the correction period established in Paragraph 15.08;

8. Any inspection, test, or approval by others; or

9. Any correction of defective Work by Owner.

E. If the Contract requires the Contractor to accept the assignment of a contract entered into by Owner, then the specific warranties, guarantees, and correction obligations contained in the assigned contract will govern with respect to Contractor's performance obligations to Owner for the Work described in the assigned contract.

7.18 *Indemnification*

A. To the fullest extent permitted by Laws and Regulations, and in addition to any other obligations of Contractor under the Contract or otherwise, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, from losses, damages, costs, and judgments (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) arising from third-party claims or actions relating to or resulting from the performance or furnishing of the Work, provided that any such claim, action, loss, cost, judgment or damage is attributable to bodily injury, sickness, disease, or death, or to damage to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom, but only to the extent caused by any negligent act or omission of Contractor, any Subcontractor, any Supplier, or any individual or entity

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directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable.

B. In any and all claims against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, by any employee (or the survivor or personal representative of such employee) of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 7.18.A will not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.

7.19 *Delegation of Professional Design Services*

A. Owner may require Contractor to provide professional design services for a portion of the Work by express delegation in the Contract Documents. Such delegation will specify the performance and design criteria that such services must satisfy, and the Submittals that Contractor must furnish to Engineer with respect to the Owner-delegated design.

B. Contractor shall cause such Owner-delegated professional design services to be provided pursuant to the professional standard of care by a properly licensed design professional, whose signature and seal must appear on all drawings, calculations, specifications, certifications, and Submittals prepared by such design professional. Such design professional must issue all certifications of design required by Laws and Regulations.

C. If a Shop Drawing or other Submittal related to the Owner-delegated design is prepared by Contractor, a Subcontractor, or others for submittal to Engineer, then such Shop Drawing or other Submittal must bear the written approval of Contractor's design professional when submitted by Contractor to Engineer.

D. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy, and completeness of the services, certifications, and approvals performed or provided by the design professionals retained or employed by Contractor under an Owner-delegated design, subject to the professional standard of care and the performance and design criteria stated in the Contract Documents.

E. Pursuant to this Paragraph 7.19, Engineer's review, approval, and other determinations regarding design drawings, calculations, specifications, certifications, and other Submittals furnished by Contractor pursuant to an Owner-delegated design will be only for the following limited purposes:

1. Checking for conformance with the requirements of this Paragraph 7.19;

2. Confirming that Contractor (through its design professionals) has used the performance and design criteria specified in the Contract Documents; and

3. Establishing that the design furnished by Contractor is consistent with the design concept expressed in the Contract Documents.

F. Contractor shall not be responsible for the adequacy of performance or design criteria specified by Owner or Engineer.

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G. Contractor is not required to provide professional services in violation of applicable Laws and Regulations.

ARTICLE 8—OTHER WORK AT THE SITE

8.01 *Other Work*

A. In addition to and apart from the Work under the Contract Documents, the Owner may perform other work at or adjacent to the Site. Such other work may be performed by Owner's employees, or through contracts between the Owner and third parties. Owner may also arrange to have third-party utility owners perform work on their utilities and facilities at or adjacent to the Site.

B. If Owner performs other work at or adjacent to the Site with Owner's employees, or through contracts for such other work, then Owner shall give Contractor written notice thereof prior to starting any such other work. If Owner has advance information regarding the start of any third-party utility work that Owner has arranged to take place at or adjacent to the Site, Owner shall provide such information to Contractor.

C. Contractor shall afford proper and safe access to the Site to each contractor that performs such other work, each utility owner performing other work, and Owner, if Owner is performing other work with Owner's employees, and provide a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work.

D. Contractor shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and properly integrate with such other work. Contractor shall not endanger any work of others by cutting, excavating, or otherwise altering such work; provided, however, that Contractor may cut or alter others' work with the written consent of Engineer and the others whose work will be affected.

E. If the proper execution or results of any part of Contractor's Work depends upon work performed by others, Contractor shall inspect such other work and promptly report to Engineer in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of Contractor's Work. Contractor's failure to so report will constitute an acceptance of such other work as fit and proper for integration with Contractor's Work except for latent defects and deficiencies in such other work.

F. The provisions of this article are not applicable to work that is performed by third-party utilities or other third-party entities without a contract with Owner, or that is performed without having been arranged by Owner. If such work occurs, then any related delay, disruption, or interference incurred by Contractor is governed by the provisions of Paragraph 4.05.C.3.

8.02 *Coordination*

A. If Owner intends to contract with others for the performance of other work at or adjacent to the Site, to perform other work at or adjacent to the Site with Owner's employees, or to arrange to have utility owners perform work at or adjacent to the Site, the following will be

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set forth in the Supplementary Conditions or provided to Contractor prior to the start of any such other work:

1. The identity of the individual or entity that will have authority and responsibility for coordination of the activities among the various contractors;
2. An itemization of the specific matters to be covered by such authority and responsibility; and
3. The extent of such authority and responsibilities.

B. Unless otherwise provided in the Supplementary Conditions, Owner shall have sole authority and responsibility for such coordination.

8.03 *Legal Relationships*

A. If, in the course of performing other work for Owner at or adjacent to the Site, the Owner's employees, any other contractor working for Owner, or any utility owner that Owner has arranged to perform work, causes damage to the Work or to the property of Contractor or its Subcontractors, or delays, disrupts, interferes with, or increases the scope or cost of the performance of the Work, through actions or inaction, then Contractor shall be entitled to an equitable adjustment in the Contract Price or the Contract Times. Contractor must submit any Change Proposal seeking an equitable adjustment in the Contract Price or the Contract Times under this paragraph within 30 days of the damaging, delaying, disrupting, or interfering event. The entitlement to, and extent of, any such equitable adjustment will take into account information (if any) regarding such other work that was provided to Contractor in the Contract Documents prior to the submittal of the Bid or the final negotiation of the terms of the Contract, and any remedies available to Contractor under Laws or Regulations concerning utility action or inaction. When applicable, any such equitable adjustment in Contract Price will be conditioned on Contractor assigning to Owner all Contractor's rights against such other contractor or utility owner with respect to the damage, delay, disruption, or interference that is the subject of the adjustment. Contractor's entitlement to an adjustment of the Contract Times or Contract Price is subject to the provisions of Paragraphs 4.05.D and 4.05.E.

B. Contractor shall take reasonable and customary measures to avoid damaging, delaying, disrupting, or interfering with the work of Owner, any other contractor, or any utility owner performing other work at or adjacent to the Site.

1. If Contractor fails to take such measures and as a result damages, delays, disrupts, or interferes with the work of any such other contractor or utility owner, then Owner may impose a set-off against payments due Contractor, and assign to such other contractor or utility owner the Owner's contractual rights against Contractor with respect to the breach of the obligations set forth in this Paragraph 8.03.B.
2. When Owner is performing other work at or adjacent to the Site with Owner's employees, Contractor shall be liable to Owner for damage to such other work, and for the reasonable direct delay, disruption, and interference costs incurred by Owner as a result of Contractor's failure to take reasonable and customary measures with respect to Owner's other work. In response to such damage, delay, disruption, or interference, Owner may impose a set-off against payments due Contractor.

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C. If Contractor damages, delays, disrupts, or interferes with the work of any other contractor, or any utility owner performing other work at or adjacent to the Site, through Contractor's failure to take reasonable and customary measures to avoid such impacts, or if any claim arising out of Contractor's actions, inactions, or negligence in performance of the Work at or adjacent to the Site is made by any such other contractor or utility owner against Contractor, Owner, or Engineer, then Contractor shall (1) promptly attempt to settle the claim as to all parties through negotiations with such other contractor or utility owner, or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law, and (2) indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against any such claims, and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such damage, delay, disruption, or interference.

ARTICLE 9—OWNER'S RESPONSIBILITIES

9.01 *Communications to Contractor*

A. Except as otherwise provided in these General Conditions, Owner shall issue all communications to Contractor through Engineer.

9.02 *Replacement of Engineer*

A. Owner may at its discretion appoint an engineer to replace Engineer, provided Contractor makes no reasonable objection to the replacement engineer. The replacement engineer's status under the Contract Documents will be that of the former Engineer.

9.03 *Furnish Data*

A. Owner shall promptly furnish the data required of Owner under the Contract Documents.

9.04 *Pay When Due*

A. Owner shall make payments to Contractor when they are due as provided in the Agreement.

9.05 *Lands and Easements; Reports, Tests, and Drawings*

A. Owner's duties with respect to providing lands and easements are set forth in Paragraph 5.01.

B. Owner's duties with respect to providing engineering surveys to establish reference points are set forth in Paragraph 4.03.

C. Article 5 refers to Owner's identifying and making available to Contractor copies of reports of explorations and tests of conditions at the Site, and drawings of physical conditions relating to existing surface or subsurface structures at the Site.

9.06 *Insurance*

A. Owner's responsibilities, if any, with respect to purchasing and maintaining liability and property insurance are set forth in Article 6.

9.07 *Change Orders*

A. Owner's responsibilities with respect to Change Orders are set forth in Article 11.

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9.08 *Inspections, Tests, and Approvals*

A. Owner's responsibility with respect to certain inspections, tests, and approvals is set forth in Paragraph 14.02.B.

9.09 *Limitations on Owner's Responsibilities*

A. The Owner shall not supervise, direct, or have control or authority over, nor be responsible for, Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Owner will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

9.10 *Undisclosed Hazardous Environmental Condition*

A. Owner's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 5.06.

9.11 *Evidence of Financial Arrangements*

A. Upon request of Contractor, Owner shall furnish Contractor reasonable evidence that financial arrangements have been made to satisfy Owner's obligations under the Contract (including obligations under proposed changes in the Work).

9.12 *Safety Programs*

A. While at the Site, Owner's employees and representatives shall comply with the specific applicable requirements of Contractor's safety programs of which Owner has been informed.

B. Owner shall furnish copies of any applicable Owner safety programs to Contractor.

ARTICLE 10—ENGINEER'S STATUS DURING CONSTRUCTION

10.01 *Owner's Representative*

A. Engineer will be Owner's representative during the construction period. The duties and responsibilities and the limitations of authority of Engineer as Owner's representative during construction are set forth in the Contract.

10.02 *Visits to Site*

A. Engineer will make visits to the Site at intervals appropriate to the various stages of construction as Engineer deems necessary in order to observe, as an experienced and qualified design professional, the progress that has been made and the quality of the various aspects of Contractor's executed Work. Based on information obtained during such visits and observations, Engineer, for the benefit of Owner, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. Engineer will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. Engineer's efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, Engineer will keep Owner informed of the progress of the Work and will endeavor to guard Owner against defective Work.

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B. Engineer's visits and observations are subject to all the limitations on Engineer's authority and responsibility set forth in Paragraph 10.07. Particularly, but without limitation, during or as a result of Engineer's visits or observations of Contractor's Work, Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work.

10.03 *Resident Project Representative*

A. If Owner and Engineer have agreed that Engineer will furnish a Resident Project Representative to represent Engineer at the Site and assist Engineer in observing the progress and quality of the Work, then the authority and responsibilities of any such Resident Project Representative will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in the Supplementary Conditions and in Paragraph 10.07.

B. If Owner designates an individual or entity who is not Engineer's consultant, agent, or employee to represent Owner at the Site, then the responsibilities and authority of such individual or entity will be as provided in the Supplementary Conditions.

10.04 *Engineer's Authority*

A. Engineer has the authority to reject Work in accordance with Article 14.

B. Engineer's authority as to Submittals is set forth in Paragraph 7.16.

C. Engineer's authority as to design drawings, calculations, specifications, certifications and other Submittals from Contractor in response to Owner's delegation (if any) to Contractor of professional design services, is set forth in Paragraph 7.19.

D. Engineer's authority as to changes in the Work is set forth in Article 11.

E. Engineer's authority as to Applications for Payment is set forth in Article 15.

10.05 *Determinations for Unit Price Work*

A. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor as set forth in Paragraph 13.03.

10.06 *Decisions on Requirements of Contract Documents and Acceptability of Work*

A. Engineer will render decisions regarding the requirements of the Contract Documents, and judge the acceptability of the Work, pursuant to the specific procedures set forth herein for initial interpretations, Change Proposals, and acceptance of the Work. In rendering such decisions and judgments, Engineer will not show partiality to Owner or Contractor, and will not be liable to Owner, Contractor, or others in connection with any proceedings, interpretations, decisions, or judgments conducted or rendered in good faith.

10.07 *Limitations on Engineer's Authority and Responsibilities*

A. Neither Engineer's authority or responsibility under this Article 10 or under any other provision of the Contract, nor any decision made by Engineer in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Engineer, will create, impose, or give rise to any duty in contract, tort, or otherwise owed by Engineer to Contractor, any Subcontractor, any

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Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.

B. Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Engineer will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

C. Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.

D. Engineer's review of the final Application for Payment and accompanying documentation, and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by Contractor under Paragraph 15.06.A, will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals, that the results certified indicate compliance with the Contract Documents.

E. The limitations upon authority and responsibility set forth in this Paragraph 10.07 also apply to the Resident Project Representative, if any.

10.08 *Compliance with Safety Program*

A. While at the Site, Engineer's employees and representatives will comply with the specific applicable requirements of Owner's and Contractor's safety programs of which Engineer has been informed.

ARTICLE 11—CHANGES TO THE CONTRACT

11.01 *Amending and Supplementing the Contract*

A. The Contract may be amended or supplemented by a Change Order, a Work Change Directive, or a Field Order.

B. If an amendment or supplement to the Contract includes a change in the Contract Price or the Contract Times, such amendment or supplement must be set forth in a Change Order.

C. All changes to the Contract that involve (1) the performance or acceptability of the Work, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, must be supported by Engineer's recommendation. Owner and Contractor may amend other terms and conditions of the Contract without the recommendation of the Engineer.

11.02 *Change Orders*

A. Owner and Contractor shall execute appropriate Change Orders covering:

1. Changes in Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive;

2. Changes in Contract Price resulting from an Owner set-off, unless Contractor has duly contested such set-off;

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3. Changes in the Work which are: (a) ordered by Owner pursuant to Paragraph 11.05, (b) required because of Owner's acceptance of defective Work under Paragraph 14.04 or Owner's correction of defective Work under Paragraph 14.07, or (c) agreed to by the parties, subject to the need for Engineer's recommendation if the change in the Work involves the design (as set forth in the Drawings, Specifications, or otherwise) or other engineering or technical matters; and

4. Changes that embody the substance of any final and binding results under: Paragraph 11.03.B, resolving the impact of a Work Change Directive; Paragraph 11.09, concerning Change Proposals; Article 12, Claims; Paragraph 13.02.D, final adjustments resulting from allowances; Paragraph 13.03.D, final adjustments relating to determination of quantities for Unit Price Work; and similar provisions.

B. If Owner or Contractor refuses to execute a Change Order that is required to be executed under the terms of Paragraph 11.02.A, it will be deemed to be of full force and effect, as if fully executed.

11.03 *Work Change Directives*

A. A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the modification ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order, following negotiations by the parties as to the Work Change Directive's effect, if any, on the Contract Price and Contract Times; or, if negotiations are unsuccessful, by a determination under the terms of the Contract Documents governing adjustments, expressly including Paragraph 11.07 regarding change of Contract Price.

B. If Owner has issued a Work Change Directive and:

1. Contractor believes that an adjustment in Contract Times or Contract Price is necessary, then Contractor shall submit any Change Proposal seeking such an adjustment no later than 30 days after the completion of the Work set out in the Work Change Directive.

2. Owner believes that an adjustment in Contract Times or Contract Price is necessary, then Owner shall submit any Claim seeking such an adjustment no later than 60 days after issuance of the Work Change Directive.

11.04 *Field Orders*

A. Engineer may authorize minor changes in the Work if the changes do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Such changes will be accomplished by a Field Order and will be binding on Owner and also on Contractor, which shall perform the Work involved promptly.

B. If Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, then before proceeding with the Work at issue, Contractor shall submit a Change Proposal as provided herein.

11.05 *Owner-Authorized Changes in the Work*

A. Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work. Changes involving

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the design (as set forth in the Drawings, Specifications, or otherwise) or other engineering or technical matters will be supported by Engineer's recommendation.

B. Such changes in the Work may be accomplished by a Change Order, if Owner and Contractor have agreed as to the effect, if any, of the changes on Contract Times or Contract Price; or by a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved; or, in the case of a deletion in the Work, promptly cease construction activities with respect to such deleted Work. Added or revised Work must be performed under the applicable conditions of the Contract Documents.

C. Nothing in this Paragraph 11.05 obligates Contractor to undertake work that Contractor reasonably concludes cannot be performed in a manner consistent with Contractor's safety obligations under the Contract Documents or Laws and Regulations.

11.06 *Unauthorized Changes in the Work*

A. Contractor shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents, as amended, modified, or supplemented, except in the case of an emergency as provided in Paragraph 7.15 or in the case of uncovering Work as provided in Paragraph 14.05.C.2.

11.07 *Change of Contract Price*

A. The Contract Price may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Price must comply with the provisions of Paragraph 11.09. Any Claim for an adjustment of Contract Price must comply with the provisions of Article 12.

B. An adjustment in the Contract Price will be determined as follows:

1. Where the Work involved is covered by unit prices contained in the Contract Documents, then by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 13.03);

2. Where the Work involved is not covered by unit prices contained in the Contract Documents, then by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 11.07.C.2); or

3. Where the Work involved is not covered by unit prices contained in the Contract Documents and the parties do not reach mutual agreement to a lump sum, then on the basis of the Cost of the Work (determined as provided in Paragraph 13.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 11.07.C).

C. *Contractor's Fee*: When applicable, the Contractor's fee for overhead and profit will be determined as follows:

1. A mutually acceptable fixed fee; or

2. If a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:

a. For costs incurred under Paragraphs 13.01.B.1 and 13.01.B.2, the Contractor's fee will be 15 percent;

b. For costs incurred under Paragraph 13.01.B.3, the Contractor's fee will be 5 percent;

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c. Where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraphs 11.07.C.2.a and 11.07.C.2.b is that the Contractor's fee will be based on: (1) a fee of 15 percent of the costs incurred under Paragraphs 13.01.B.1 and 13.01.B.2 by the Subcontractor that actually performs the Work, at whatever tier, and (2) with respect to Contractor itself and to any Subcontractors of a tier higher than that of the Subcontractor that actually performs the Work, a fee of 5 percent of the amount (fee plus underlying costs incurred) attributable to the next lower tier Subcontractor; provided, however, that for any such subcontracted Work the maximum total fee to be paid by Owner will be no greater than 27 percent of the costs incurred by the Subcontractor that actually performs the Work;

d. No fee will be payable on the basis of costs itemized under Paragraphs 13.01.B.4, 13.01.B.5, and 13.01.C;

e. The amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in Cost of the Work will be the amount of the actual net decrease in Cost of the Work and a deduction of an additional amount equal to 5 percent of such actual net decrease in Cost of the Work; and

f. When both additions and credits are involved in any one change or Change Proposal, the adjustment in Contractor's fee will be computed by determining the sum of the costs in each of the cost categories in Paragraph 13.01.B (specifically, payroll costs, Paragraph 13.01.B.1; incorporated materials and equipment costs, Paragraph 13.01.B.2; Subcontract costs, Paragraph 13.01.B.3; special consultants costs, Paragraph 13.01.B.4; and other costs, Paragraph 13.01.B.5) and applying to each such cost category sum the appropriate fee from Paragraphs 11.07.C.2.a through 11.07.C.2.e, inclusive.

11.08 *Change of Contract Times*

A. The Contract Times may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Times must comply with the provisions of Paragraph 11.09. Any Claim for an adjustment in the Contract Times must comply with the provisions of Article 12.

B. Delay, disruption, and interference in the Work, and any related changes in Contract Times, are addressed in and governed by Paragraph 4.05.

11.09 *Change Proposals*

A. *Purpose and Content*: Contractor shall submit a Change Proposal to Engineer to request an adjustment in the Contract Times or Contract Price; contest an initial decision by Engineer concerning the requirements of the Contract Documents or relating to the acceptability of the Work under the Contract Documents; challenge a set-off against payment due; or seek other relief under the Contract. The Change Proposal will specify any proposed change in Contract Times or Contract Price, or other proposed relief, and explain the reason for the proposed change, with citations to any governing or applicable provisions of the Contract Documents. Each Change Proposal will address only one issue, or a set of closely related issues.

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B. *Change Proposal Procedures*

1. *Submittal*: Contractor shall submit each Change Proposal to Engineer within 30 days after the start of the event giving rise thereto, or after such initial decision.

2. *Supporting Data*: The Contractor shall submit supporting data, including the proposed change in Contract Price or Contract Time (if any), to the Engineer and Owner within 15 days after the submittal of the Change Proposal.

    a. Change Proposals based on or related to delay, interruption, or interference must comply with the provisions of Paragraphs 4.05.D and 4.05.E.

    b. Change proposals related to a change of Contract Price must include full and detailed accounts of materials incorporated into the Work and labor and equipment used for the subject Work.

    The supporting data must be accompanied by a written statement that the supporting data are accurate and complete, and that any requested time or price adjustment is the entire adjustment to which Contractor believes it is entitled as a result of said event.

3. *Engineer's Initial Review*: Engineer will advise Owner regarding the Change Proposal, and consider any comments or response from Owner regarding the Change Proposal. If in its discretion Engineer concludes that additional supporting data is needed before conducting a full review and making a decision regarding the Change Proposal, then Engineer may request that Contractor submit such additional supporting data by a date specified by Engineer, prior to Engineer beginning its full review of the Change Proposal.

4. *Engineer's Full Review and Action on the Change Proposal*: Upon receipt of Contractor's supporting data (including any additional data requested by Engineer), Engineer will conduct a full review of each Change Proposal and, within 30 days after such receipt of the Contractor's supporting data, either approve the Change Proposal in whole, deny it in whole, or approve it in part and deny it in part. Such actions must be in writing, with a copy provided to Owner and Contractor. If Engineer does not take action on the Change Proposal within 30 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of Engineer's inaction the Change Proposal is deemed denied, thereby commencing the time for appeal of the denial under Article 12.

5. *Binding Decision*: Engineer's decision is final and binding upon Owner and Contractor, unless Owner or Contractor appeals the decision by filing a Claim under Article 12.

C. *Resolution of Certain Change Proposals*: If the Change Proposal does not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters, then Engineer will notify the parties in writing that the Engineer is unable to resolve the Change Proposal. For purposes of further resolution of such a Change Proposal, such notice will be deemed a denial, and Contractor may choose to seek resolution under the terms of Article 12.

D. *Post-Completion*: Contractor shall not submit any Change Proposals after Engineer issues a written recommendation of final payment pursuant to Paragraph 15.06.B.

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11.10 *Notification to Surety*

A. If the provisions of any bond require notice to be given to a surety of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Times), the giving of any such notice will be Contractor's responsibility. The amount of each applicable bond will be adjusted to reflect the effect of any such change.

ARTICLE 12—CLAIMS

12.01 *Claims*

A. *Claims Process*: The following disputes between Owner and Contractor are subject to the Claims process set forth in this article:

1. Appeals by Owner or Contractor of Engineer's decisions regarding Change Proposals;

2. Owner demands for adjustments in the Contract Price or Contract Times, or other relief under the Contract Documents;

3. Disputes that Engineer has been unable to address because they do not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters; and

4. Subject to the waiver provisions of Paragraph 15.07, any dispute arising after Engineer has issued a written recommendation of final payment pursuant to Paragraph 15.06.B.

B. *Submittal of Claim*: The party submitting a Claim shall deliver it directly to the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto; in the case of appeals regarding Change Proposals within 30 days of the decision under appeal. The party submitting the Claim shall also furnish a copy to the Engineer, for its information only. The responsibility to substantiate a Claim rests with the party making the Claim. In the case of a Claim by Contractor seeking an increase in the Contract Times or Contract Price, Contractor shall certify that the Claim is made in good faith, that the supporting data are accurate and complete, and that to the best of Contractor's knowledge and belief the amount of time or money requested accurately reflects the full amount to which Contractor is entitled.

C. *Review and Resolution*: The party receiving a Claim shall review it thoroughly, giving full consideration to its merits. The two parties shall seek to resolve the Claim through the exchange of information and direct negotiations. The parties may extend the time for resolving the Claim by mutual agreement. All actions taken on a Claim will be stated in writing and submitted to the other party, with a copy to Engineer.

D. *Mediation*

1. At any time after initiation of a Claim, Owner and Contractor may mutually agree to mediation of the underlying dispute. The agreement to mediate will stay the Claim submittal and response process.

2. If Owner and Contractor agree to mediation, then after 60 days from such agreement, either Owner or Contractor may unilaterally terminate the mediation process, and the Claim submittal and decision process will resume as of the date of the termination. If the mediation proceeds but is unsuccessful in resolving the dispute, the Claim submittal

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and decision process will resume as of the date of the conclusion of the mediation, as determined by the mediator.

3. Owner and Contractor shall each pay one-half of the mediator's fees and costs.

E. *Partial Approval*: If the party receiving a Claim approves the Claim in part and denies it in part, such action will be final and binding unless within 30 days of such action the other party invokes the procedure set forth in Article 17 for final resolution of disputes.

F. *Denial of Claim*: If efforts to resolve a Claim are not successful, the party receiving the Claim may deny it by giving written notice of denial to the other party. If the receiving party does not take action on the Claim within 90 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of the inaction, the Claim is deemed denied, thereby commencing the time for appeal of the denial. A denial of the Claim will be final and binding unless within 30 days of the denial the other party invokes the procedure set forth in Article 17 for the final resolution of disputes.

G. *Final and Binding Results*: If the parties reach a mutual agreement regarding a Claim, whether through approval of the Claim, direct negotiations, mediation, or otherwise; or if a Claim is approved in part and denied in part, or denied in full, and such actions become final and binding; then the results of the agreement or action on the Claim will be incorporated in a Change Order or other written document to the extent they affect the Contract, including the Work, the Contract Times, or the Contract Price.

ARTICLE 13—COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

13.01 *Cost of the Work*

A. *Purposes for Determination of Cost of the Work*: The term Cost of the Work means the sum of all costs necessary for the proper performance of the Work at issue, as further defined below. The provisions of this Paragraph 13.01 are used for two distinct purposes:

1. To determine Cost of the Work when Cost of the Work is a component of the Contract Price, under cost-plus-fee, time-and-materials, or other cost-based terms; or

2. When needed to determine the value of a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price. When the value of any such adjustment is determined on the basis of Cost of the Work, Contractor is entitled only to those additional or incremental costs required because of the change in the Work or because of the event giving rise to the adjustment.

B. *Costs Included*: Except as otherwise may be agreed to in writing by Owner, costs included in the Cost of the Work will be in amounts no higher than those commonly incurred in the locality of the Project, will not include any of the costs itemized in Paragraph 13.01.C, and will include only the following items:

1. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by Owner and Contractor in advance of the subject Work. Such employees include, without limitation, superintendents, foremen, safety managers, safety representatives, and other personnel employed full time on the Work. Payroll costs for employees not employed full time on the Work will be apportioned on the basis of their time spent on the Work. Payroll costs include, but are not limited to, salaries and wages plus the cost of fringe

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benefits, which include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, sick leave, and vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, will be included in the above to the extent authorized by Owner.

2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts will accrue to Owner. All trade discounts, rebates, and refunds and returns from sale of surplus materials and equipment will accrue to Owner, and Contractor shall make provisions so that they may be obtained.

3. Payments made by Contractor to Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from subcontractors acceptable to Owner and Contractor and shall deliver such bids to Owner, which will then determine, with the advice of Engineer, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee will be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 13.01.

4. Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed or retained for services specifically related to the Work.

5. Other costs consisting of the following:

    a. The proportion of necessary transportation, travel, and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.

    b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, which are consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of Contractor.

        1) In establishing included costs for materials such as scaffolding, plating, or sheeting, consideration will be given to the actual or the estimated life of the material for use on other projects; or rental rates may be established on the basis of purchase or salvage value of such items, whichever is less. Contractor will not be eligible for compensation for such items in an amount that exceeds the purchase cost of such item.

    c. *Construction Equipment Rental*

        1) Rentals of all construction equipment and machinery, and the parts thereof, in accordance with rental agreements approved by Owner as to price (including any surcharge or special rates applicable to overtime use of the construction equipment or machinery), and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs will be in accordance with the terms of said rental agreements. The rental of any such equipment,

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machinery, or parts must cease when the use thereof is no longer necessary for the Work.

2) Costs for equipment and machinery owned by Contractor or a Contractor-related entity will be paid at a rate shown for such equipment in the equipment rental rate book specified in the Supplementary Conditions. An hourly rate will be computed by dividing the monthly rates by 176. These computed rates will include all operating costs.

3) With respect to Work that is the result of a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price ("changed Work"), included costs will be based on the time the equipment or machinery is in use on the changed Work and the costs of transportation, loading, unloading, assembly, dismantling, and removal when directly attributable to the changed Work. The cost of any such equipment or machinery, or parts thereof, must cease to accrue when the use thereof is no longer necessary for the changed Work.

d. Sales, consumer, use, and other similar taxes related to the Work, and for which Contractor is liable, as imposed by Laws and Regulations.

e. Deposits lost for causes other than negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.

f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by Contractor in connection with the performance of the Work (except losses and damages within the deductible amounts of builder's risk or other property insurance established in accordance with Paragraph 6.04), provided such losses and damages have resulted from causes other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses will be included in the Cost of the Work for the purpose of determining Contractor's fee.

g. The cost of utilities, fuel, and sanitary facilities at the Site.

h. Minor expenses such as communication service at the Site, express and courier services, and similar petty cash items in connection with the Work.

i. The costs of premiums for all bonds and insurance that Contractor is required by the Contract Documents to purchase and maintain.

C. *Costs Excluded*: The term Cost of the Work does not include any of the following items:

1. Payroll costs and other compensation of Contractor's officers, executives, principals, general managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expediters, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 13.01.B.1 or specifically covered by Paragraph 13.01.B.4. The payroll costs and other compensation excluded here are to be considered administrative costs covered by the Contractor's fee.

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2. The cost of purchasing, renting, or furnishing small tools and hand tools.

3. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.

4. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.

5. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.

6. Expenses incurred in preparing and advancing Claims.

7. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraph 13.01.B.

D. *Contractor's Fee*

1. When the Work as a whole is performed on the basis of cost-plus-a-fee, then:

a. Contractor's fee for the Work set forth in the Contract Documents as of the Effective Date of the Contract will be determined as set forth in the Agreement.

b. for any Work covered by a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price on the basis of Cost of the Work, Contractor's fee will be determined as follows:

1) When the fee for the Work as a whole is a percentage of the Cost of the Work, the fee will automatically adjust as the Cost of the Work changes.

2) When the fee for the Work as a whole is a fixed fee, the fee for any additions or deletions will be determined in accordance with Paragraph 11.07.C.2.

2. When the Work as a whole is performed on the basis of a stipulated sum, or any other basis other than cost-plus-a-fee, then Contractor's fee for any Work covered by a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price on the basis of Cost of the Work will be determined in accordance with Paragraph 11.07.C.2.

E. *Documentation and Audit*: Whenever the Cost of the Work for any purpose is to be determined pursuant to this Article 13, Contractor and pertinent Subcontractors will establish and maintain records of the costs in accordance with generally accepted accounting practices. Subject to prior written notice, Owner will be afforded reasonable access, during normal business hours, to all Contractor's accounts, records, books, correspondence, instructions, drawings, receipts, vouchers, memoranda, and similar data relating to the Cost of the Work and Contractor's fee. Contractor shall preserve all such documents for a period of three years after the final payment by Owner. Pertinent Subcontractors will afford such access to Owner, and preserve such documents, to the same extent required of Contractor.

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13.02 *Allowances*

A. It is understood that Contractor has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be performed for such sums and by such persons or entities as may be acceptable to Owner and Engineer.

B. *Cash Allowances*: Contractor agrees that:

1. the cash allowances include the cost to Contractor (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and

2. Contractor's costs for unloading and handling on the Site, labor, installation, overhead, profit, and other expenses contemplated for the cash allowances have been included in the Contract Price and not in the allowances, and no demand for additional payment for any of the foregoing will be valid.

C. *Owner's Contingency Allowance*: Contractor agrees that an Owner's contingency allowance, if any, is for the sole use of Owner to cover unanticipated costs.

D. Prior to final payment, an appropriate Change Order will be issued as recommended by Engineer to reflect actual amounts due Contractor for Work covered by allowances, and the Contract Price will be correspondingly adjusted.

13.03 *Unit Price Work*

A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement.

B. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Payments to Contractor for Unit Price Work will be based on actual quantities.

C. Each unit price will be deemed to include an amount considered by Contractor to be adequate to cover Contractor's overhead and profit for each separately identified item.

D. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor. Engineer will review with Contractor the Engineer's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). Engineer's written decision thereon will be final and binding (except as modified by Engineer to reflect changed factual conditions or more accurate data) upon Owner and Contractor, and the final adjustment of Contract Price will be set forth in a Change Order, subject to the provisions of the following paragraph.

E. *Adjustments in Unit Price*

1. Contractor or Owner shall be entitled to an adjustment in the unit price with respect to an item of Unit Price Work if:

a. the quantity of the item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement; and

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b. Contractor's unit costs to perform the item of Unit Price Work have changed materially and significantly as a result of the quantity change.

2. The adjustment in unit price will account for and be coordinated with any related changes in quantities of other items of Work, and in Contractor's costs to perform such other Work, such that the resulting overall change in Contract Price is equitable to Owner and Contractor.

3. Adjusted unit prices will apply to all units of that item.

ARTICLE 14—TESTS AND INSPECTIONS; CORRECTION, REMOVAL, OR ACCEPTANCE OF DEFECTIVE WORK

14.01 *Access to Work*

A. Owner, Engineer, their consultants and other representatives and personnel of Owner, independent testing laboratories, and authorities having jurisdiction have access to the Site and the Work at reasonable times for their observation, inspection, and testing. Contractor shall provide them proper and safe conditions for such access and advise them of Contractor's safety procedures and programs so that they may comply with such procedures and programs as applicable.

14.02 *Tests, Inspections, and Approvals*

A. Contractor shall give Engineer timely notice of readiness of the Work (or specific parts thereof) for all required inspections and tests, and shall cooperate with inspection and testing personnel to facilitate required inspections and tests.

B. Owner shall retain and pay for the services of an independent inspector, testing laboratory, or other qualified individual or entity to perform all inspections and tests expressly required by the Contract Documents to be furnished and paid for by Owner, except that costs incurred in connection with tests or inspections of covered Work will be governed by the provisions of Paragraph 14.05.

C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish Engineer the required certificates of inspection or approval.

D. Contractor shall be responsible for arranging, obtaining, and paying for all inspections and tests required:

1. by the Contract Documents, unless the Contract Documents expressly allocate responsibility for a specific inspection or test to Owner;

2. to attain Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work;

3. by manufacturers of equipment furnished under the Contract Documents;

4. for testing, adjusting, and balancing of mechanical, electrical, and other equipment to be incorporated into the Work; and

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5. for acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work.

Such inspections and tests will be performed by independent inspectors, testing laboratories, or other qualified individuals or entities acceptable to Owner and Engineer.

E. If the Contract Documents require the Work (or part thereof) to be approved by Owner, Engineer, or another designated individual or entity, then Contractor shall assume full responsibility for arranging and obtaining such approvals.

F. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Engineer, Contractor shall, if requested by Engineer, uncover such Work for observation. Such uncovering will be at Contractor's expense unless Contractor had given Engineer timely notice of Contractor's intention to cover the same and Engineer had not acted with reasonable promptness in response to such notice.

14.03 *Defective Work*

A. *Contractor's Obligation*: It is Contractor's obligation to assure that the Work is not defective.

B. *Engineer's Authority*: Engineer has the authority to determine whether Work is defective, and to reject defective Work.

C. *Notice of Defects*: Prompt written notice of all defective Work of which Owner or Engineer has actual knowledge will be given to Contractor.

D. *Correction, or Removal and Replacement*: Promptly after receipt of written notice of defective Work, Contractor shall correct all such defective Work, whether or not fabricated, installed, or completed, or, if Engineer has rejected the defective Work, remove it from the Project and replace it with Work that is not defective.

E. *Preservation of Warranties*: When correcting defective Work, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.

F. *Costs and Damages*: In addition to its correction, removal, and replacement obligations with respect to defective Work, Contractor shall pay all claims, costs, losses, and damages arising out of or relating to defective Work, including but not limited to the cost of the inspection, testing, correction, removal, replacement, or reconstruction of such defective Work, fines levied against Owner by governmental authorities because the Work is defective, and the costs of repair or replacement of work of others resulting from defective Work. Prior to final payment, if Owner and Contractor are unable to agree as to the measure of such claims, costs, losses, and damages resulting from defective Work, then Owner may impose a reasonable set-off against payments due under Article 15.

14.04 *Acceptance of Defective Work*

A. If, instead of requiring correction or removal and replacement of defective Work, Owner prefers to accept it, Owner may do so (subject, if such acceptance occurs prior to final payment, to Engineer's confirmation that such acceptance is in general accord with the design intent and applicable engineering principles, and will not endanger public safety). Contractor shall pay all claims, costs, losses, and damages attributable to Owner's evaluation of and determination to accept such defective Work (such costs to be approved

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by Engineer as to reasonableness), and for the diminished value of the Work to the extent not otherwise paid by Contractor. If any such acceptance occurs prior to final payment, the necessary revisions in the Contract Documents with respect to the Work will be incorporated in a Change Order. If the parties are unable to agree as to the decrease in the Contract Price, reflecting the diminished value of Work so accepted, then Owner may impose a reasonable set-off against payments due under Article 15. If the acceptance of defective Work occurs after final payment, Contractor shall pay an appropriate amount to Owner.

14.05 *Uncovering Work*

A. Engineer has the authority to require additional inspection or testing of the Work, whether or not the Work is fabricated, installed, or completed.

B. If any Work is covered contrary to the written request of Engineer, then Contractor shall, if requested by Engineer, uncover such Work for Engineer's observation, and then replace the covering, all at Contractor's expense.

C. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, then Contractor, at Engineer's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as Engineer may require, that portion of the Work in question, and provide all necessary labor, material, and equipment.

1. If it is found that the uncovered Work is defective, Contractor shall be responsible for all claims, costs, losses, and damages arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and pending Contractor's full discharge of this responsibility the Owner shall be entitled to impose a reasonable set-off against payments due under Article 15.

2. If the uncovered Work is not found to be defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Times, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the amount or extent thereof, then Contractor may submit a Change Proposal within 30 days of the determination that the Work is not defective.

14.06 *Owner May Stop the Work*

A. If the Work is defective, or Contractor fails to supply sufficient skilled workers or suitable materials or equipment, or fails to perform the Work in such a way that the completed Work will conform to the Contract Documents, then Owner may order Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of Owner to stop the Work will not give rise to any duty on the part of Owner to exercise this right for the benefit of Contractor, any Subcontractor, any Supplier, any other individual or entity, or any surety for, or employee or agent of any of them.

14.07 *Owner May Correct Defective Work*

A. If Contractor fails within a reasonable time after written notice from Engineer to correct defective Work, or to remove and replace defective Work as required by Engineer, then

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Owner may, after 7 days' written notice to Contractor, correct or remedy any such deficiency.

B. In exercising the rights and remedies under this Paragraph 14.07, Owner shall proceed expeditiously. In connection with such corrective or remedial action, Owner may exclude Contractor from all or part of the Site, take possession of all or part of the Work and suspend Contractor's services related thereto, and incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere. Contractor shall allow Owner, Owner's representatives, agents and employees, Owner's other contractors, and Engineer and Engineer's consultants access to the Site to enable Owner to exercise the rights and remedies under this paragraph.

C. All claims, costs, losses, and damages incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 14.07 will be charged against Contractor as set-offs against payments due under Article 15. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of Contractor's defective Work.

D. Contractor shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to the exercise by Owner of Owner's rights and remedies under this Paragraph 14.07.

ARTICLE 15—PAYMENTS TO CONTRACTOR; SET-OFFS; COMPLETION; CORRECTION PERIOD

15.01 *Progress Payments*

A. *Basis for Progress Payments*: The Schedule of Values established as provided in Article 2 will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments for Unit Price Work will be based on the number of units completed during the pay period, as determined under the provisions of Paragraph 13.03. Progress payments for cost-based Work will be based on Cost of the Work completed by Contractor during the pay period.

B. *Applications for Payments*

1. At least 20 days before the date established in the Agreement for each progress payment (but not more often than once a month), Contractor shall submit to Engineer for review an Application for Payment filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents.

2. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment must also be accompanied by: (a) a bill of sale, invoice, copies of subcontract or purchase order payments, or other documentation establishing full payment by Contractor for the materials and equipment; (b) at Owner's request, documentation warranting that Owner has received the materials and equipment free and clear of all Liens; and (c) evidence that the materials and equipment are covered by appropriate property insurance, a warehouse bond, or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.

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3. Beginning with the second Application for Payment, each Application must include an affidavit of Contractor stating that all previous progress payments received by Contractor have been applied to discharge Contractor's legitimate obligations associated with prior Applications for Payment.

4. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.

C. *Review of Applications*

1. Engineer will, within 10 days after receipt of each Application for Payment, including each resubmittal, either indicate in writing a recommendation of payment and present the Application to Owner, or return the Application to Contractor indicating in writing Engineer's reasons for refusing to recommend payment. In the latter case, Contractor may make the necessary corrections and resubmit the Application.

2. Engineer's recommendation of any payment requested in an Application for Payment will constitute a representation by Engineer to Owner, based on Engineer's observations of the executed Work as an experienced and qualified design professional, and on Engineer's review of the Application for Payment and the accompanying data and schedules, that to the best of Engineer's knowledge, information and belief:

   a. the Work has progressed to the point indicated;

   b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, the results of any subsequent tests called for in the Contract Documents, a final determination of quantities and classifications for Unit Price Work under Paragraph 13.03, and any other qualifications stated in the recommendation); and

   c. the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe the Work.

3. By recommending any such payment Engineer will not thereby be deemed to have represented that:

   a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in the Contract; or

   b. there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.

4. Neither Engineer's review of Contractor's Work for the purposes of recommending payments nor Engineer's recommendation of any payment, including final payment, will impose responsibility on Engineer:

   a. to supervise, direct, or control the Work;

   b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto;

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c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work;

d. to make any examination to ascertain how or for what purposes Contractor has used the money paid by Owner; or

e. to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.

5. Engineer may refuse to recommend the whole or any part of any payment if, in Engineer's opinion, it would be incorrect to make the representations to Owner stated in Paragraph 15.01.C.2.

6. Engineer will recommend reductions in payment (set-offs) necessary in Engineer's opinion to protect Owner from loss because:

a. the Work is defective, requiring correction or replacement;

b. the Contract Price has been reduced by Change Orders;

c. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;

d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible; or

e. Engineer has actual knowledge of the occurrence of any of the events that would constitute a default by Contractor and therefore justify termination for cause under the Contract Documents.

D. *Payment Becomes Due*

1. Ten days after presentation of the Application for Payment to Owner with Engineer's recommendation, the amount recommended (subject to any Owner set-offs) will become due, and when due will be paid by Owner to Contractor.

E. *Reductions in Payment by Owner*

1. In addition to any reductions in payment (set-offs) recommended by Engineer, Owner is entitled to impose a set-off against payment based on any of the following:

a. Claims have been made against Owner based on Contractor's conduct in the performance or furnishing of the Work, or Owner has incurred costs, losses, or damages resulting from Contractor's conduct in the performance or furnishing of the Work, including but not limited to claims, costs, losses, or damages from workplace injuries, adjacent property damage, non-compliance with Laws and Regulations, and patent infringement;

b. Contractor has failed to take reasonable and customary measures to avoid damage, delay, disruption, and interference with other work at or adjacent to the Site;

c. Contractor has failed to provide and maintain required bonds or insurance;

d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible;

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e. Owner has incurred extra charges or engineering costs related to submittal reviews, evaluations of proposed substitutes, tests and inspections, or return visits to manufacturing or assembly facilities;

f. The Work is defective, requiring correction or replacement;

g. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;

h. The Contract Price has been reduced by Change Orders;

i. An event has occurred that would constitute a default by Contractor and therefore justify a termination for cause;

j. Liquidated or other damages have accrued as a result of Contractor's failure to achieve Milestones, Substantial Completion, or final completion of the Work;

k. Liens have been filed in connection with the Work, except where Contractor has delivered a specific bond satisfactory to Owner to secure the satisfaction and discharge of such Liens; or

l. Other items entitle Owner to a set-off against the amount recommended.

2. If Owner imposes any set-off against payment, whether based on its own knowledge or on the written recommendations of Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action and the specific amount of the reduction, and promptly pay Contractor any amount remaining after deduction of the amount so withheld. Owner shall promptly pay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, if Contractor remedies the reasons for such action. The reduction imposed will be binding on Contractor unless it duly submits a Change Proposal contesting the reduction.

3. Upon a subsequent determination that Owner's refusal of payment was not justified, the amount wrongfully withheld will be treated as an amount due as determined by Paragraph 15.01.D.1 and subject to interest as provided in the Agreement.

15.02 *Contractor's Warranty of Title*

A. Contractor warrants and guarantees that title to all Work, materials, and equipment furnished under the Contract will pass to Owner free and clear of (1) all Liens and other title defects, and (2) all patent, licensing, copyright, or royalty obligations, no later than 7 days after the time of payment by Owner.

15.03 *Substantial Completion*

A. When Contractor considers the entire Work ready for its intended use Contractor shall notify Owner and Engineer in writing that the entire Work is substantially complete and request that Engineer issue a certificate of Substantial Completion. Contractor shall at the same time submit to Owner and Engineer an initial draft of punch list items to be completed or corrected before final payment.

B. Promptly after Contractor's notification, Owner, Contractor, and Engineer shall make an inspection of the Work to determine the status of completion. If Engineer does not consider the Work substantially complete, Engineer will notify Contractor in writing giving the reasons therefor.

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C. If Engineer considers the Work substantially complete, Engineer will deliver to Owner a preliminary certificate of Substantial Completion which will fix the date of Substantial Completion. Engineer shall attach to the certificate a punch list of items to be completed or corrected before final payment. Owner shall have 7 days after receipt of the preliminary certificate during which to make written objection to Engineer as to any provisions of the certificate or attached punch list. If, after considering the objections to the provisions of the preliminary certificate, Engineer concludes that the Work is not substantially complete, Engineer will, within 14 days after submission of the preliminary certificate to Owner, notify Contractor in writing that the Work is not substantially complete, stating the reasons therefor. If Owner does not object to the provisions of the certificate, or if despite consideration of Owner's objections Engineer concludes that the Work is substantially complete, then Engineer will, within said 14 days, execute and deliver to Owner and Contractor a final certificate of Substantial Completion (with a revised punch list of items to be completed or corrected) reflecting such changes from the preliminary certificate as Engineer believes justified after consideration of any objections from Owner.

D. At the time of receipt of the preliminary certificate of Substantial Completion, Owner and Contractor will confer regarding Owner's use or occupancy of the Work following Substantial Completion, review the builder's risk insurance policy with respect to the end of the builder's risk coverage, and confirm the transition to coverage of the Work under a permanent property insurance policy held by Owner. Unless Owner and Contractor agree otherwise in writing, Owner shall bear responsibility for security, operation, protection of the Work, property insurance, maintenance, heat, and utilities upon Owner's use or occupancy of the Work.

E. After Substantial Completion the Contractor shall promptly begin work on the punch list of items to be completed or corrected prior to final payment. In appropriate cases Contractor may submit monthly Applications for Payment for completed punch list items, following the progress payment procedures set forth above.

F. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to remove its property and complete or correct items on the punch list.

15.04 *Partial Use or Occupancy*

A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which Owner, Engineer, and Contractor agree constitutes a separately functioning and usable part of the Work that can be used by Owner for its intended purpose without significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions:

1. At any time, Owner may request in writing that Contractor permit Owner to use or occupy any such part of the Work that Owner believes to be substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor, Owner, and Engineer will follow the procedures of Paragraph 15.03.A through 15.03.E for that part of the Work.

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2. At any time, Contractor may notify Owner and Engineer in writing that Contractor considers any such part of the Work substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.

3. Within a reasonable time after either such request, Owner, Contractor, and Engineer shall make an inspection of that part of the Work to determine its status of completion. If Engineer does not consider that part of the Work to be substantially complete, Engineer will notify Owner and Contractor in writing giving the reasons therefor. If Engineer considers that part of the Work to be substantially complete, the provisions of Paragraph 15.03 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.

4. No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of Paragraph 6.04 regarding builder's risk or other property insurance.

15.05 *Final Inspection*

A. Upon written notice from Contractor that the entire Work or an agreed portion thereof is complete, Engineer will promptly make a final inspection with Owner and Contractor and will notify Contractor in writing of all particulars in which this inspection reveals that the Work, or agreed portion thereof, is incomplete or defective. Contractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

15.06 *Final Payment*

A. *Application for Payment*

1. After Contractor has, in the opinion of Engineer, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance, certificates of inspection, annotated record documents (as provided in Paragraph 7.12), and other documents, Contractor may make application for final payment.

2. The final Application for Payment must be accompanied (except as previously delivered) by:

a. all documentation called for in the Contract Documents;

b. consent of the surety, if any, to final payment;

c. satisfactory evidence that all title issues have been resolved such that title to all Work, materials, and equipment has passed to Owner free and clear of any Liens or other title defects, or will so pass upon final payment.

d. a list of all duly pending Change Proposals and Claims; and

e. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of the Work, and of Liens filed in connection with the Work.

3. In lieu of the releases or waivers of Liens specified in Paragraph 15.06.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (a) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (b) all payrolls, material and equipment

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bills, and other indebtedness connected with the Work for which Owner might in any way be responsible, or which might in any way result in liens or other burdens on Owner's property, have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien, or Owner at its option may issue joint checks payable to Contractor and specified Subcontractors and Suppliers.

B. *Engineer's Review of Final Application and Recommendation of Payment*: If, on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor's other obligations under the Contract have been fulfilled, Engineer will, within 10 days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of final payment and present the final Application for Payment to Owner for payment. Such recommendation will account for any set-offs against payment that are necessary in Engineer's opinion to protect Owner from loss for the reasons stated above with respect to progress payments. Otherwise, Engineer will return the Application for Payment to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application for Payment.

C. *Notice of Acceptability*: In support of its recommendation of payment of the final Application for Payment, Engineer will also give written notice to Owner and Contractor that the Work is acceptable, subject to stated limitations in the notice and to the provisions of Paragraph 15.07.

D. *Completion of Work*: The Work is complete (subject to surviving obligations) when it is ready for final payment as established by the Engineer's written recommendation of final payment and issuance of notice of the acceptability of the Work.

E. *Final Payment Becomes Due*: Upon receipt from Engineer of the final Application for Payment and accompanying documentation, Owner shall set off against the amount recommended by Engineer for final payment any further sum to which Owner is entitled, including but not limited to set-offs for liquidated damages and set-offs allowed under the provisions of this Contract with respect to progress payments. Owner shall pay the resulting balance due to Contractor within 30 days of Owner's receipt of the final Application for Payment from Engineer.

15.07 *Waiver of Claims*

A. By making final payment, Owner waives its claim or right to liquidated damages or other damages for late completion by Contractor, except as set forth in an outstanding Claim, appeal under the provisions of Article 17, set-off, or express reservation of rights by Owner. Owner reserves all other claims or rights after final payment.

B. The acceptance of final payment by Contractor will constitute a waiver by Contractor of all claims and rights against Owner other than those pending matters that have been duly submitted as a Claim, or appealed under the provisions of Article 17.

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15.08 *Correction Period*

A. If within one year after the date of Substantial Completion (or such longer period of time as may be prescribed by the Supplementary Conditions or the terms of any applicable special guarantee required by the Contract Documents), Owner gives Contractor written notice that any Work has been found to be defective, or that Contractor's repair of any damages to the Site or adjacent areas has been found to be defective, then after receipt of such notice of defect Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:

1. correct the defective repairs to the Site or such adjacent areas;
2. correct such defective Work;
3. remove the defective Work from the Project and replace it with Work that is not defective, if the defective Work has been rejected by Owner, and
4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others, or to other land or areas resulting from the corrective measures.

B. Owner shall give any such notice of defect within 60 days of the discovery that such Work or repairs is defective. If such notice is given within such 60 days but after the end of the correction period, the notice will be deemed a notice of defective Work under Paragraph 7.17.B.

C. If, after receipt of a notice of defect within 60 days and within the correction period, Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. Contractor shall pay all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others). Contractor's failure to pay such costs, losses, and damages within 10 days of invoice from Owner will be deemed the start of an event giving rise to a Claim under Paragraph 12.01.B, such that any related Claim must be brought within 30 days of the failure to pay.

D. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications.

E. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this paragraph, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.

F. Contractor's obligations under this paragraph are in addition to all other obligations and warranties. The provisions of this paragraph are not to be construed as a substitute for, or a waiver of, the provisions of any applicable statute of limitation or repose.

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ARTICLE 16—SUSPENSION OF WORK AND TERMINATION

16.01 *Owner May Suspend Work*

A. At any time and without cause, Owner may suspend the Work or any portion thereof for a period of not more than 90 consecutive days by written notice to Contractor and Engineer. Such notice will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be entitled to an adjustment in the Contract Price or an extension of the Contract Times directly attributable to any such suspension. Any Change Proposal seeking such adjustments must be submitted no later than 30 days after the date fixed for resumption of Work.

16.02 *Owner May Terminate for Cause*

A. The occurrence of any one or more of the following events will constitute a default by Contractor and justify termination for cause:

1. Contractor's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment, or failure to adhere to the Progress Schedule);

2. Failure of Contractor to perform or otherwise to comply with a material term of the Contract Documents;

3. Contractor's disregard of Laws or Regulations of any public body having jurisdiction; or

4. Contractor's repeated disregard of the authority of Owner or Engineer.

B. If one or more of the events identified in Paragraph 16.02.A occurs, then after giving Contractor (and any surety) 10 days' written notice that Owner is considering a declaration that Contractor is in default and termination of the Contract, Owner may proceed to:

1. declare Contractor to be in default, and give Contractor (and any surety) written notice that the Contract is terminated; and

2. enforce the rights available to Owner under any applicable performance bond.

C. Subject to the terms and operation of any applicable performance bond, if Owner has terminated the Contract for cause, Owner may exclude Contractor from the Site, take possession of the Work, incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere, and complete the Work as Owner may deem expedient.

D. Owner may not proceed with termination of the Contract under Paragraph 16.02.B if Contractor within 7 days of receipt of notice of intent to terminate begins to correct its failure to perform and proceeds diligently to cure such failure.

E. If Owner proceeds as provided in Paragraph 16.02.B, Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds the cost to complete the Work, including all related claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals) sustained by Owner, such excess will be paid to Contractor. If the cost to complete the Work including such related claims, costs, losses, and damages exceeds such unpaid balance, Contractor shall pay the difference to Owner. Such claims, costs, losses, and damages incurred by Owner will be reviewed by Engineer as

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to their reasonableness and, when so approved by Engineer, incorporated in a Change Order. When exercising any rights or remedies under this paragraph, Owner shall not be required to obtain the lowest price for the Work performed.

F. Where Contractor's services have been so terminated by Owner, the termination will not affect any rights or remedies of Owner against Contractor then existing or which may thereafter accrue, or any rights or remedies of Owner against Contractor or any surety under any payment bond or performance bond. Any retention or payment of money due Contractor by Owner will not release Contractor from liability.

G. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 6.01.A, the provisions of that bond will govern over any inconsistent provisions of Paragraphs 16.02.B and 16.02.D.

16.03 *Owner May Terminate for Convenience*

A. Upon 7 days' written notice to Contractor and Engineer, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid for (without duplication of any items):

1. completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;

2. expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses; and

3. other reasonable expenses directly attributable to termination, including costs incurred to prepare a termination for convenience cost proposal.

B. Contractor shall not be paid for any loss of anticipated profits or revenue, post-termination overhead costs, or other economic loss arising out of or resulting from such termination.

16.04 *Contractor May Stop Work or Terminate*

A. If, through no act or fault of Contractor, (1) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (2) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (3) Owner fails for 30 days to pay Contractor any sum finally determined to be due, then Contractor may, upon 7 days' written notice to Owner and Engineer, and provided Owner or Engineer do not remedy such suspension or failure within that time, terminate the contract and recover from Owner payment on the same terms as provided in Paragraph 16.03.

B. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Engineer has failed to act on an Application for Payment within 30 days after it is submitted, or Owner has failed for 30 days to pay Contractor any sum finally determined to be due, Contractor may, 7 days after written notice to Owner and Engineer, stop the Work until payment is made of all such amounts due Contractor, including interest thereon. The provisions of this paragraph are not intended to preclude Contractor from submitting a Change Proposal for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to Contractor's stopping the Work as permitted by this paragraph.

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ARTICLE 17—FINAL RESOLUTION OF DISPUTES

17.01 *Methods and Procedures*

A. *Disputes Subject to Final Resolution*: The following disputed matters are subject to final resolution under the provisions of this article:

1. A timely appeal of an approval in part and denial in part of a Claim, or of a denial in full, pursuant to Article 12; and

2. Disputes between Owner and Contractor concerning the Work, or obligations under the Contract Documents, that arise after final payment has been made.

B. *Final Resolution of Disputes*: For any dispute subject to resolution under this article, Owner or Contractor may:

1. elect in writing to invoke the dispute resolution process provided for in the Supplementary Conditions;

2. agree with the other party to submit the dispute to another dispute resolution process; or

3. if no dispute resolution process is provided for in the Supplementary Conditions or mutually agreed to, give written notice to the other party of the intent to submit the dispute to a court of competent jurisdiction.

ARTICLE 18—MISCELLANEOUS

18.01 *Giving Notice*

A. Whenever any provision of the Contract requires the giving of written notice to Owner, Engineer, or Contractor, it will be deemed to have been validly given only if delivered:

1. in person, by a commercial courier service or otherwise, to the recipient's place of business;

2. by registered or certified mail, postage prepaid, to the recipient's place of business; or

3. by e-mail to the recipient, with the words "Formal Notice" or similar in the e-mail's subject line.

18.02 *Computation of Times*

A. When any period of time is referred to in the Contract by days, it will be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.

18.03 *Cumulative Remedies*

A. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee, or by other provisions of the Contract. The provisions of this paragraph will be

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as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right, and remedy to which they apply.

18.04 *Limitation of Damages*

A. With respect to any and all Change Proposals, Claims, disputes subject to final resolution, and other matters at issue, neither Owner nor Engineer, nor any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, shall be liable to Contractor for any claims, costs, losses, or damages sustained by Contractor on or in connection with any other project or anticipated project.

18.05 *No Waiver*

A. A party's non-enforcement of any provision will not constitute a waiver of that provision, nor will it affect the enforceability of that provision or of the remainder of this Contract.

18.06 *Survival of Obligations*

A. All representations, indemnifications, warranties, and guarantees made in, required by, or given in accordance with the Contract, as well as all continuing obligations indicated in the Contract, will survive final payment, completion, and acceptance of the Work or termination of the Contract or of the services of Contractor.

18.07 *Controlling Law*

A. This Contract is to be governed by the law of the state in which the Project is located.

18.08 *Assignment of Contract*

A. Unless expressly agreed to elsewhere in the Contract, no assignment by a party to this Contract of any rights under or interests in the Contract will be binding on the other party without the written consent of the party sought to be bound; and, specifically but without limitation, money that may become due and money that is due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract.

18.09 *Successors and Assigns*

A. Owner and Contractor each binds itself, its successors, assigns, and legal representatives to the other party hereto, its successors, assigns, and legal representatives in respect to all covenants, agreements, and obligations contained in the Contract Documents.

18.10 *Headings*

A. Article and paragraph headings are inserted for convenience only and do not constitute parts of these General Conditions.

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SECTION 00800
SUPPLEMENTAL CONDITIONS

AMENDING THE STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT PREPARED BY ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE

(EJCDC NO. C-700, 2018 EDITION)

(Sub) Paragraph No.

ARTICLE 1. DEFINITIONS AND TERMINOLOGY

1.01.A.30

Add the following language to the definition entitled "Owner":

> Also referred to as “awarding authority” or “contracting authority” in applicable statutory provisions which may be used interchangeably and shall have the same meaning.

1.01.A.51

Add the following definition:

> “State” shall mean the Commonwealth of Massachusetts.

ARTICLE 2. PRELIMINARY MATTERS

2.01.C

Delete this paragraph

2.05

Add the following paragraphs immediately after paragraph 2.05.A.4 o which is to read as follows:

> 2.05.A.5 Before any work at the site is started, CONTRACTOR shall deliver to OWNER, with a copy to ENGINEER, certificates of insurance (and other evidence of insurance requested by OWNER) which CONTRACTOR is required to purchase and maintain in accordance with the requirements of Article 6.

> 2.05.A.6 Contractor shall include and identify on the certificate of insurance, indemnification as required by Article 7.18.

ARTICLE 3. DOCUMENTS: INTENT, REQUIREMENTS, REUSE

3.01

Add the following paragraphs immediately after paragraph 3.01.A which is to read as follows:

> 3.01.A.1 Each and every provision of law and clause required by law to be inserted in the Contract shall be deemed to be inserted herein, and the Contract shall be read and enforced as though they were included herein. If through mistake or otherwise any such provision is not

inserted, or is not correctly inserted, then upon the application of either party, the Contract shall forthwith be physically amended to make such insertion.

3.01.A.2 Sections of Division 1 - General Requirements govern the execution of the work of all sections of the specifications.

3.02.A.1

Delete the portion of the paragraph starting at " means" through the end of this sentence and insert the following:

"shall mean the standard, specification, manual, code, or Laws or Regulations in effect and applicable at the time in question, except as may be otherwise specifically stated in the Contract Documents."

3.03.A.3

Delete Paragraph 3.03.A.3 in its entirety and insert the following:

"CONTRACTOR shall be liable to OWNER and/or ENGINEER for failure to report any such conflict, error, ambiguity or discrepancy if Contractor knew or reasonably should have known thereof."

ARTICLE 4. COMMENCEMENT AND PROGRESS OF THE WORK

4.01

Delete paragraph 4.01 in its entirety and insert the following in its place:

4.01.A. The Contract Times will commence to run on the day indicated in the Notice to Proceed.

4.03.A

Add a new paragraph at the end of paragraph 4.03.A which is to read as follows:

"4.03.B ENGINEER may check the lines, elevations, reference marks, batter boards, etc., set by CONTRACTOR, and CONTRACTOR shall correct any errors disclosed by such check. Such a check shall not be considered as approval of CONTRACTOR's work and shall not relieve CONTRACTOR of the responsibility for accurate and satisfactory construction and completion of the entire Work. CONTRACTOR shall furnish personnel to assist ENGINEER in checking lines and grades."

4.05.A

Delete Paragraph 4.05.A in its entirety.

4.05.D.
Delete the second sentence of Paragraph 4.05.D.2.

4.05.E

Delete the first sentence of Paragraph 4.05.E. and replace with the following:

"Contractor shall submit a Change Proposal seeking an increase in Contract Times or Contract Price, which shall be submitted within 30 days of the commencement of the delaying, disrupting, or interfering event, and must be supplemented by supporting data that sets forth in detail the following:"

4.05.H

Add a new Paragraph at the end of Paragraph 4.05G owhich is to be read as follows:

"4.05.H. Delays caused by or within the control of the OWNER: In such event, the CONTRACTOR'S sole remedy shall be an extension of the Contract Time. Notwithstanding anything to the contrary in the Contract Documents, CONTRACTOR shall not be eligible for any increase in the Contract Price on account of any delay in the Work, no matter by whom such delay is caused, and CONTRACTOR shall make no claim for such an increase, whether such claim is styled as a claim for delay damages, acceleration of work, loss of production, or otherwise."

4.05.G

Add the following new paragraphs after paragraph 4.05.H:

"4.06 Liquidated Damages:

A. If the Contractor shall neglect, fail or refuse to complete the work within the time herein specified, or any proper extension thereof granted by the Owner, then the Contractor does hereby agree, as a part consideration for the awarding of this Contract, to pay to the Owner the amount specified in the Contract, not as a penalty but as liquidated damages for such breach of contract as hereinafter set forth, for each and every calendar day that the Contract shall be in default after the time stipulated in the Contract for completing the work. Such damages may be retained from time to time by the Owner from progress payments or any amounts owing to the Contractor, or otherwise collected.

B. The said amount is fixed and agreed upon by and between the Contractor and the Owner because of the impracticability and extreme difficulty of fixing and ascertaining the actual damages the Owner would in such event sustain, and said amount is agreed to be the amount of damages which the Owner would sustain and said amount shall be retained from time to time by the Owner from current periodical estimates.

C. It is further agreed that time is of the essence of each and every portion of this Contract and of the specifications wherein as definite and certain length of times if fixed for the performance of any act whatsoever; and where under the Contract an additional time is allowed for the completion of any work, the new time limit fixed by such extension shall be of the essence of this Contract; provided, that the Contractor shall not be charged with liquidated damages of any excess cost when the Owner determines that the Contractor is without fault and the Contractor's reasons for the time extension are acceptable to the Owner."

ARTICLE 5. AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS

5.01

Add a new paragraph immediately after paragraph 5.01.A which is to read as follows:

> "5.01.A.1 If all lands and rights-of-way are not obtained as herein contemplated before construction begins, CONTRACTOR shall begin the Work upon such land and rights-of-way as OWNER has previously acquired and no claim for damages whatsoever will be allowed by reason of the delay in obtaining the remaining lands and rights-of-way.

5.01.B

Delete Paragraph 5.01.B in its entirety.

5.03.A

In Paragraph 5.03.A.1 insert the words "known to OWNER" after the word "reports".

In Paragraph 5.03.A.2 insert the words "known to OWNER" after the word "reports".

5.03.C

In paragraph 5.03.C insert the word "reasonably" before the word "rely" in the first line and insert the following at the end of the first sentence:

> "; the OWNER does not warrant or guarantee the accuracy or completeness of the information therein, and the CONTRACTOR may not so rely to the extent that the CONTRACTOR knows, or reasonably should have known, of any inaccuracy or omission therein.

5.04

Insert the following paragraph before Paragraph 5.04.A

> "5.04 Differing Subsurface or Physical Conditions
>
> In accordance with Massachusetts General Laws Chapter 30, Section 39N, if, during the progress of the Work, the CONTRACTOR or the OWNER discovers that the actual subsurface or latent physical conditions encountered at the site differ substantially or materially from those shown on the plans or indicated in the Contract Documents either the CONTRACTOR or the OWNER may request an equitable adjustment in the Contract Price applying to work affected by the differing site conditions. A request for such an adjustment shall be in writing and shall be delivered by the party making such request to the other party as soon as possible after such conditions are discovered. Upon receipt of such a request from the CONTRACTOR, or upon its own initiative, the OWNER will make an investigation of such physical conditions, and if they differ substantially or materially from those shown on the plans or indicated in the Contract Documents or from those ordinarily encountered and generally recognized as inherent in work of the character provided for in the plans and Contract Documents and are of such a nature as to cause an increase or decrease in the cost of performance of the Work or a change in the construction methods required for the performance of the Work which results in an increase or decrease in the cost of the Work, the OWNER will make an equitable adjustment in the Contract Price and the Contract shall be modified in writing accordingly."

5.04.D

Add the following at the end of Paragraph 5.04.D:

> "Any determination and instruction to proceed in accordance with this Paragraph shall be communicated in writing by the Engineer to Owner, which shall include the reasons therefor."

5.04.E.1

Delete Paragraph 5.04.E.1 in its entirety.

Add a new paragraph immediately after paragraph 5.04.F which is to read as follows:

> "5.04.G Adjustments resulting from actual subsurface or latent physical conditions from those indicated will be in accordance with Massachusetts General Law, Chapter 30, Section 39N and the applicable provisions of the Contract Documents."

5.05.A

Insert the following new paragraph immediately after Paragraph 5.05.A.5:

> "6. CONTRACTOR's attention is directed to the requirements of Massachusetts General Laws Chapter 82, Section 40, regarding the notification of owners of underground facilities."

5.05.B

Delete the phrase "or was not shown or indicated on the Drawings with reasonable accuracy" following the word "Drawings" in the first sentence of Paragraph 5.05.B.

5.05.E

Add the following at the end of Paragraph 5.05.E:

> "Any determination and instruction to proceed in accordance with this Paragraph shall be communicated in writing by the Engineer to Owner, which shall include the reasons therefor."

5.06.B

Delete Paragraph 5.06.B in its entirety.

5.06.C

Add the following at the end of the first sentence of Paragraph 5.06.C:

> ",or unless CONTRACTOR caused or contributed to such Hazardous Environmental Condition."

5.06.E

Delete the second and third sentences of Paragraph 5.06.E.

5.06.I

Delete Paragraph 5.06.I in its entirety.

5.06.J

Delete the last sentence of Paragraph 5.06.J.

ARTICLE 6. BONDS AND INSURANCE

6.02

Delete Paragraph 6.02.E in its entirety.

Add the new paragraphs immediately after paragraph 6.02.N which is to read as follows:

"O. If OWNER has any objection to the coverage afforded by or other provisions of the insurance required to be purchased and maintained by CONTRACTOR in accordance with this Article 6 on the basis of its not complying with the Contract Documents, OWNER will notify CONTRACTOR in writing thereof within thirty days of the date of delivery of such certificates to OWNER in accordance with paragraph 2.01.B CONTRACTOR will provide such additional information in respect of insurance provided by him as OWNER may reasonably request."

6.03

Contractor shall purchase and maintain the following insurance coverages for not less than the following amounts or greater where required by Laws and Regulations:

Workers' Compensation.

(1)	Worker's Compensation	As required by Massachusetts statute	
(2)	Employer's Liability	$1,000,000	

Comprehensive General Liability including Operations/Premises, Contractor's Protective, Products/Completed Operations, and Personal Injury liabilities:

(1)	Bodily injury:	$1,000,000 $3,000,000	Each occurrence Annual aggregate
(2)	Property damage, including explosion, collapse and underground coverage:	$1,000,000 $3,000,000	Each occurrence Annual aggregate
	Property damage liability insurance shall provide coverage for property in the care, custody and control of the insured.		
(3)	Personal injury, with employment exclusion deleted:	$3,000,000	Annual aggregate

The Contractual Liability -shall provide coverage for not less than the following amounts:

(1)	Bodily injury:	$2,000,000 $3,000,000	Each occurrence Annual aggregate
(2)	Property damage, including explosion, collapse and underground coverage:	$1,000,000 $3,000,000	Each occurrence Annual aggregate
(3)	General Aggregate	$2,000,000	

Comprehensive Automobile Liability including owned, hired and non-owned vehicles:

(1)	Bodily injury:	$1,000,000 $1,000,000	Each person Each accident
(2)	Property damage	$1,000,000	Each occurrence

CONTRACTOR shall purchase and maintain a separate Owner's Protective Liability policy, issued to OWNER at the expense of CONTRACTOR, including OWNER and ENGINEER as named insured. This insurance shall provide coverage for not less than the following amounts:

Bodily Injury:	
Each Occurrence	$1,000,000
Property Damage:	
Each Occurrence	$1,000,000
Annual Aggregate	$1,000,000

6.04

Delete Paragraph 6.04.B in its entirety and insert the following in its place:

"B. CONTRACTOR shall purchase and maintain, until final payment, property insurance upon the Work at the site in an amount equal to the total bid price for the completed construction. This insurance shall include the interests of OWNER, CONTRACTOR, Subcontractors, ENGINEER and ENGINEER's consultants in the Work, shall insure against the perils of fire and extended coverage, shall include "all risk" insurance for physical loss and damage including theft, vandalism and malicious mischief, collapse and water damage, and shall include damages, losses and expenses rising out of or resulting from any insured loss or incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers, architects, attorneys and other professionals). This insurance shall be provided on the completed value form. If not covered under the "all risk" insurance or otherwise provided in these Supplementary Conditions, CONTRACTOR shall purchase and maintain similar property insurance on portions of the Work stored on and off the site or in transit when such portions of the Work are to be included in an Application for Payment."

6.04.C

Delete Paragraph 6.04.C in its entirety.

6.04.D

Delete Paragraph 6.04.D in its entirety and insert the following:

"OWNER may occupy or use a portion of the Work prior to Substantial Completion."

6.04.E

Delete the first sentence of 6.04.E in its entirety and insert the following in its place:

"*Insurance of Other Property*: If the express insurance provisions of the Contract do not require or address the insurance of a property item or interest, such as tools, construction equipment, or other personal property owned by Contractor, a Subcontractor, or an employee of Contractor or a Subcontractor, then the entity or individual owning such property item will be responsible for deciding whether to insure it, and if so in what amount."

6.04.F

Add the following Paragraph after Paragraph 6.04.E:

"F. All the policies of insurance (or the certificates or other evidence thereof) required to be purchased and maintained by CONTRACTOR in accordance with Article 6 will contain a provision or endorsement that the coverage afforded will not be canceled or materially changed or renewal refused until at least thirty days' prior written notice has been given to OWNER by certified mail and will contain waiver provisions in accordance with paragraph 6.05.B."

6.05.A

Delete the first sentence of Paragraph of 6.05.A and insert the following in its place:

"The insurance policies purchased and maintained in accordance with Article 6 (or an installation floater policy if authorized by the Supplementary Conditions), will contain provisions to the effect that in the event of payment of any loss or damage the insurer will have no rights of recovery against any insureds thereunder, or against Engineer or its consultants, or their officers, directors, members, partners, employees, agents, consultants, or subcontractors"

6.05.B

Delete Paragraph 6.05.B in its entirety and insert the following:

"B. OWNER and CONTRACTOR intend that all policies of insurance purchased in accordance with the provisions of Article 6 will protect OWNER, CONTRACTOR, Subcontractors, and ENGINEER, and all other individuals or entities identified in the Supplementary Conditions as loss payees (and officers, director, members, partners, employees, agents, consultants, and subcontractors or each and any of them) in such policies and will, where required to provided such insurance, provide primary coverage for all losses and damages caused by the perils or causes of loss covered thereby."

6.05.D.
Add the following Paragraph after Paragraph 6.05.D:

> "E. The CONTRACTOR shall pay for all costs not covered because of the application of a policy deductible due under any of its insurance policies required hereunder."

6.06

Delete paragraph 6.06.A in its entirety.

Delete paragraph 6.06.B. in its entirety.

Delete paragraph 6.06.C in its entirety.

ARTICLE 7. CONTRACTOR'S RESPONSIBILITIES

7.01.B

Insert the following at the end of Paragraph 7.01.B:

> "Contractor shall not be entitled to any equitable adjustment in Contract Price as a result of such services."

7.05.A

Insert the following at the end of the third sentence of Paragraph 7.05.A:

> ", and in accordance with G.L. c.30, §39M."

Add a new paragraph 7.05..A.1.c immediately after paragraph 7.05.A.1.b, which is to read as follows:

"c. It shall be CONTRACTOR's responsibility to coordinate all submittals to ENGINEER for approval to eliminate any conflicts which might arise due to the use of "or equal" items. Any additional costs incidental to the use of "or equal" items shall be paid by CONTRACTOR."

7.07

Add the following to Paragraph 7.07.A:

> "CONTRACTOR shall not employ any Subcontractor, Supplier or other person or organization, (including those who are to furnish the principal items of materials or equipment), whether initially or as a substitute, against whom OWNER makes reasonable objection. Acceptance of any Subcontractor, other person or organization by OWNER shall not constitute a waiver of any right of OWNER to reject defective Work."

7.07.H.1

Add the following paragraph immediately after paragraph 7.07.H:

1. CONTRACTOR shall make payments to Subcontractors in accordance with Massachusetts General Laws Chapter 30, Section 39F."

Add the following paragraph immediately after paragraph 7.07.I:

"7.07.I.1 OWNER or ENGINEER may furnish to any such Subcontractor, Supplier, or other person or organization, to the extent practicable, information about amounts paid to CONTRACTOR in accordance with CONTRACTOR's Applications for Payment on account of the particular Subcontractor's, Suppliers, other person's, or other organization's Work."

7.07.J

Add the following language at the beginning of paragraph 7.06.J:

"Except as otherwise required by Massachusetts General Law, Chapter 149, Section 44F,"

7.08.A

Delete the second sentence of Paragraph 7.07.A.

7.08.B

Delete this subparagraph.

7.10

Add the following language at the end of paragraph 7.10:

"7.10.A.1 The materials and supplies to be used in the Work under this Contract are exempt from the Sales and Use Tax of the Commonwealth of Massachusetts. Contractor shall obtain the proper certificates, maintain the necessary records, and otherwise comply with all applicable requirements governing the exemption from sales tax."

7.11C

Delete the last sentence of Paragraph 7.11C.

7.12.B – C

Insert the following new paragraphs immediately after Paragraph 7.12.A:

"B. The CONTRACTOR shall return to the ENGINEER one set of the Contract Drawings marked in colored pencil, showing all changes made during construction and including the location, by dimensions and elevations, of installed equipment, and underground facilities that will become concealed or buried by the construction. This shall include ties to all concealed work, etc. measured from permanent structures. Additionally, the CONTRACTOR shall be required to keep marked-up drawings current and on site and to provide mark-ups to the OWNER on a monthly basis.

"C. CONTRACTOR shall comply with all applicable provisions of Chapter 30, Section 39R of the Massachusetts General Laws regarding CONTRACTOR's records."

7.13.D

Delete the text in parentheses in Paragraph 7.13.D.

7.16

Add the following new paragraph immediately after paragraph 7.16.F, which is to read as follows:

> "7.16.G The accuracy of all such information submitted by the Contractor is the responsibility of the Contractor. In reviewing Shop Drawings, Samples, and similar submittals, the Engineer shall be entitled to rely upon the Contractor's representation that such information is correct and accurate."

7.17.F

Add the following new paragraph 7.17.F, immediately after paragraph 7.17.E:

"E. CONTRACTOR shall guarantee all materials and equipment furnished and Work performed for a period of two (2) years from the date of Substantial Completion. CONTRACTOR warrants and guarantees for a period of two (2) years from the date of Substantial Completion that the completed Work is free from all defects due to faulty materials or workmanship and CONTRACTOR shall promptly make such corrections as may be necessary by reason of any such defects including the repairs of any damage to other parts of the Work resulting from such defects. In the event that CONTRACTOR should fail to make such repairs, adjustments, or other work that may be made necessary by such defects, OWNER may do so and charge CONTRACTOR the cost thereby incurred. The Performance Bond shall remain in full force and effect through the guarantee period."

7.18.A

Delete the phrase in parentheses: "(other than the Work itself)" in Paragraph 7.18.A.

Change the phrase "negligent act or omission" to "negligent or willful or wrongful act or omission."

7.18.B

Insert the following at the end of Paragraph 7.18.B:

> "If, through the acts or neglect of CONTRACTOR, any other Contractor or any Subcontractor shall suffer loss or damage on the Work, CONTRACTOR shall settle with such other Contractor or Subcontractor by agreement if such other Contractor or Subcontractor will so settle. If such other Contractor or Subcontractor shall assert any claim against OWNER on account of any damage alleged to have been sustained, OWNER shall notify CONTRACTOR, who shall indemnify and hold harmless OWNER against any such claims."

ARTICLE 8. OTHER WORK AT THE SITE

8.02

Delete Paragraph 8.02 in its entirety.

8.03

Delete paragraph 8.03.C in its entirety, and insert the following in its place:

> "8.03.C Should CONTRACTOR cause damage to the work or property of any separate contractor at the site, or should any claim arising out of CONTRACTOR'S performance of the Work at the site be made by any separate contractor against CONTRACTOR, OWNER, ENGINEER, ENGINEER'S Consultants, or any other person, CONTRACTOR shall promptly attempt to settle with such other contractor by agreement, or to otherwise resolve the dispute by arbitration or at law. CONTRACTOR shall, to the fullest extent permitted by Laws and Regulations, indemnify and hold OWNER, ENGINEER, and ENGINEER'S Consultants, harmless from and against all claims, damages, losses, and expenses (including, but not limited to, fees of engineers, architects, attorneys, and other professionals, and court and arbitration costs) arising directly, indirectly, or consequentially out of any action, legal or equitable, brought by any separate contractor against OWNER, ENGINEER, or ENGINEER'S Consultants, to the extent based on a claim arising out of the CONTRACTOR'S performance of the Work. Should a separate contractor cause damage to the Work or property of CONTRACTOR or should the performance of Work by any separate contractor at the site give rise to any other claim, CONTRACTOR shall not institute any action, legal or equitable, against OWNER, ENGINEER, or ENGINEER'S Consultants or permit any action against any of them to be maintained and continued in its name or for its benefit in any court or before any arbiter which seeks to impose liability on or to recover damages from OWNER, ENGINEER, or ENGINEER'S Consultants, on such action or claim. If CONTRACTOR is delayed at any time in performing or furnishing Work by any act or neglect of a separate contractor and OWNER and CONTRACTOR are unable to agree to the extent of any adjustment in Contract Times attributable thereto, CONTRACTOR may make a claim for an extension of times in accordance with Article 11.02. An extension of the Contract Times shall be CONTRACTOR'S exclusive remedy with respect to OWNER, ENGINEER, and ENGINEER'S Consultants, for any delay, disruption, interference or hindrance caused by any separate contractor. This paragraph does not prevent recovery from OWNER, ENGINEER, or ENGINEER'S Consultant, for activities that are their respective responsibilities."

ARTICLE 9. OWNER'S RESPONSIBILITIES

9.02.A

Delete the phrase "provided Contractor makes no reasonable objection to the replacement engineer" in Paragraph 9.02.A.

9.06

Delete Paragraph 9.06 in its entirety.

9.09

Insert the following after the first sentence of Paragraph 9.09.A:

> "However, the OWNER shall have the right to direct the CONTRACTOR to perform the Work according to any sequence schedule set forth in the Contract Documents or established pursuant thereto."

ARTICLE 10. ENGINEER'S STATUS DURING CONSTRUCTION

10.01

Add a new paragraph 10.01.B after paragraph 10.01.A, which is to read as follows:

"B. Nothing contained in the Contract Documents shall be construed to create a contractual relationship of any kind (1) between the ENGINEER and CONTRACTOR, (2) between the OWNER and a Subcontractor or Subcontractors, or (3) between any person or entities other than the OWNER and CONTRACTOR. The ENGINEER shall, however, be entitled to performance and enforcement of obligations under the CONTRACT DOCUMENTS intended to facilitate performance of the ENGINEER'S duties."

10.02B

Insert the following at the end of Paragraph 10.02.B:

"However, the ENGINEER shall have the right to direct the CONTRACTOR to perform the Work according to any sequence schedule set forth in the Contract Documents or established pursuant thereto."

10.03

Delete the last sentence of Paragraph 10.03.A

10.08.B

Insert the following after the first sentence in Paragraph 10.08.B:

"However, the ENGINEER shall have the right to direct the CONTRACTOR to perform the Work according to any sequence schedule set forth in the Contract Documents or established pursuant thereto."

10.07.F

Add a new paragraph immediately after paragraph 10.07.E which is to read as follows:

"F. ENGINEER'S interpretations will be made in accordance with Massachusetts General Laws Chapter 30, Section 39P."

ARTICLE 11. CHANGES TO THE CONTRACT

11.05

Add a new paragraph immediately after paragraph 11.05.Awhich is to read as follows:

"11.02.A.1 ENGINEER'S interpretations will be made in accordance with Massachusetts General Law, Chapter 30, Section 39P."

11.05.D

Add the following new paragraph immediately after paragraph 11.05.D, which is to read as follows:

> "11.05.D Upon request of the Owner or Engineer, the Contractor shall without cost to the Owner submit to the Engineer, in such form as the Engineer may require, an accurate written estimate of the cost of any such proposed extra Work or change. The estimate shall indicate the quantity and unit cost of each item of materials, and the number of hours of work and hourly rate for each class of labor, as well as the description and amounts of all other costs chargeable under the terms of this Article. Unit labor costs for the installation of each item of materials shall be shown if required by the Engineer. The Contractor shall promptly revise and resubmit such estimate if the Engineer determines that it is not in compliance with the requirements of this Article, or that it contains errors of facts or mathematical errors. If required by the Engineer, in order to establish the exact cost of new Work added or previously required Work omitted, the Contractor shall obtain and furnish to the Engineer bona fide proposals from recognized suppliers for furnishing any material included in such Work, and shall be furnished at Contractor's expense. The Contractor shall state in the estimate any extension of time required for the completion of the Work if the change or extra work is ordered."

11.07

In paragraph 11.07.C.2.a change "15 percent" to "10 percent".

Delete paragraph 11.07.C.2.c

ARTICLE 12. CLAIMS

12.01

Add a new paragraph immediately after paragraph 12.01.D.1 to read as follows:

> "12.01.D.1.a CONTRACTOR shall carry on the Work and maintain the progress schedule during the dispute resolution proceedings unless otherwise agreed in writing by OWNER and CONTRACTOR."

ARTICLE 13. COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

13.01

Add the following to the beginning of paragraph 13.01.B to read as follows:

> "Following the Notice of Award and prior to the execution of the AGREEMENT the OWNER, prospective contractor and, if any, each prospective filed subbid contractor shall agree on what percentage markup shall be used as direct labor costs in determination of extra work costs."

In the second sentence of paragraph 13.01.B.1 delete the word "superintendents".

13.01.B.5

Delete subparagraphs a, d, e, f, g, and h of Paragraph 13.01.B.5.

13.03.E

Delete Paragraph 13.03.E in its entirety.

13.02

Delete paragraph 13.02 in its entirety.

13.03.E

Delete Paragraph 13.03.E in its entirety.

ARTICLE 14. TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK

14.02.F

Delete the remainder of Paragraph 14.02.F after the words "Contractor's expense."

14.05.C.2

Delete Paragraph 14.05.C.2 in its entirety.

14.06.B

Insert the following new paragraph immediately after Paragraph 14.06.A:

"B. If Owner stops Work under paragraph 14.06.A, CONTRACTOR shall not be entitled to any extension of Contract Time or increase in Contract Price."

ARTICLE 15. PAYMENTS TO CONTRACTOR; SET-OFFS; COMPLETION; CORRECTION PERIOD

15.01.B.1

Delete the first phrase prior to the words "Contractor shall" in the first sentence of Paragraph 15.01.B.1 and insert the following:

"On a monthly basis and in accordance with G.L. c.30, §39G,".

Delete paragraph 15.01.B.3 and insert the following in its place:

"15.01.B.3. Retainage with respect to progress payments will be five percent or, if stipulated, the maximum allowed by law."

15.01.B.4

Insert the following new paragraph immediately after Paragraph 15.01.B.4:

"5. CONTRACTOR shall furnish evidence that payment received on the basis of materials and equipment not incorporated and suitably stored, has in fact been paid to the respective supplier(s) within ten (10) days of payment by OWNER. Failure to provide such evidence of payment may result in the withdrawal of previous approval(s) and

removal of the cost of related materials and equipment from the next submitted Application for Payment.

15.01.C.1

Delete Paragraph 15.01C.1 in its entirety and insert the following:

"1. Progress Payments shall be made in accordance with Massachusetts General Laws, Chapter 30, Section 39G."

15.01.D.1

Delete Paragraph 15.01.D.1 in its entirety and insert the following:

"1. Payment shall be made in accordance with G.L. c.30, §39G."

15.01.E.2

Delete the words "immediate" and "promptly" in the first sentence of Paragraph 15.01.E.2.

15.01.E.3

Delete Paragraph 15.01.E.3 in its entirety.

15.02

Insert the following new paragraphs immediately after Paragraph 15.02.A:

"B. No materials or supplies for the Work shall be purchased by CONTRACTOR or Subcontractor subject to any chattel mortgage or under a conditional sale contract or other agreement by which an interest is retained by the seller. CONTRACTOR warrants that CONTRACTOR has good title to all materials and supplies used by CONTRACTOR in the Work, free from all liens, claims or encumbrances."

"C. CONTRACTOR shall indemnify and save OWNER harmless from all claims growing out of the lawful demands of Subcontractors, laborers, workmen, mechanics, materialmen, and furnishers of machinery and parts thereof, equipment, power tools, and all supplies, including commissary, incurred in the furtherance of the performance of this Contract. CONTRACTOR shall, at OWNERS request, furnish satisfactory evidence that all obligations of the nature hereinabove designated have been paid, discharged, or waived. If CONTRACTOR fails to do so, then OWNER may, after having served written notice on the CONTRACTOR, either pay unpaid bills, of which OWNER has written notice, or withhold from the CONTRACTOR's unpaid compensation a sum of money deemed reasonably sufficient to pay any and all such lawful claims until satisfactory evidence is furnished that all liabilities have been fully discharged whereupon payment to CONTRACTOR shall be resumed, in accordance with the terms of this Contract, but in no event shall the provisions of this sentence be construed to impose any obligation upon OWNER to either CONTRACTOR, or CONTRACTOR's Surety. In paying any unpaid bills of the CONTRACTOR, OWNER's payment shall be considered as payment made under the Contract by OWNER to CONTRACTOR and OWNER shall not be liable to CONTRACTOR for any such payment made in good faith."

15.04.A

Delete the phrase "subject to the following conditions" at the end of the first sentence of Paragraph 15.04.A.

Delete Paragraph 15.04.A.2 in its entirety.

15.06

Delete Paragraph 15.06.B.1 and insert the following:

"1. If, on the basis of ENGINEER's observations of the Work during construction and final inspection, and ENGINEER's review of the final Application for Payment and accompanying documentation, all as required by the Contract Documents, ENGINEER is satisfied that the Work has been completed and CONTRACTOR's other obligations under the Contract Documents have been fulfilled, ENGINEER will indicate in writing ENGINEER's recommendation of payment and present the Application for Payment to OWNER for payment. Thereupon ENGINEER will give written notice to OWNER and CONTRACTOR that the Work is acceptable subject to the provisions of paragraph 15.07. Otherwise, ENGINEER will return the Application for Payment to CONTRACTOR, indicating in writing the reasons for refusing to recommend final payment, in which case CONTRACTOR shall make the necessary corrections and resubmit the Application for Payment.

15.06.E

Insert the following at the end of Paragraph 15.06.E:

"Final payment shall be made in accordance with G.L. c.30, §39G."

15.07.A

Delete paragraph 15.07.A in its entirety and insert the following:

"A. The making of final payment will not constitute a waiver by OWNER of claims or rights against CONTRACTOR. OWNER expressly reserves claims and rights arising from unsettled Liens, from defective Work appearing after final inspection pursuant to Paragraph 15.05, from CONTRACTOR'S failure to comply with the Contract Documents or the terms of any special guarantees specified therein, from outstanding Claims by OWNER, or from CONTRACTOR'S continuing obligations under the Contract Documents

ARTICLE 16. SUSPENSION OF WORK AND TERMINATION

16.01.A

Delete Paragraph 16.01.A in its entirety and insert the following:

"A. OWNER may suspend the work or any portion thereof in accordance with G.L. c.30, §39O."

16.02.A.5

Insert new paragraph immediately after Paragraph 16.02.A.4:

"5. If CONTRACTOR abandons the Work, or sublets this Contract or any part thereof, without the previous written consent of OWNER, or if the Contract or any claim thereunder shall be assigned by CONTRACTOR other than as herein specified."

16.03.A.1

Delete the phrase "including fair and reasonable sums for overhead and profit on such Work" in Paragraph 16.03.A.1.

16.03.A.2

Delete the phrase "plus fair and reasonable sums for overhead and profit on such expenses" in Paragraph 16.03.A.2.

16.03.A.3

Delete Paragraph 16.03.A.3 in its entirety.

16.04.B

Delete the last sentence of Paragraph 16.04.B.

ARTICLE 17. FINAL RESOLUTION OF DISPUTES

17.01.C

Insert a new sub-paragraph after Paragraph 17.01.B:

"CONTRACTOR shall be responsible to carry on the Work and maintain the progress schedule during the dispute resolution proceedings."

17.02

Add a new paragraph immediately after Paragraph 17.01 which is to read as follows:

"17.02 Venue

Any legal action relating to this Contract shall be filed in the Superior Court for the County in the Commonwealth of Massachusetts in which the Project is located, unless otherwise agreed by CONTRACTOR and OWNER in writing."

ARTICLE 18. MISCELLANEOUS

18.10

18.10 Headings:

Delete paragraph 18.10.A and replace with the following paragraph:

"18.10.A The headings or titles of any article, paragraph, subparagraph, section, subsection, or part of the Contract Documents shall not be deemed to limit or restrict the article, paragraph, section, or part."

18.11

Insert the following new paragraph:

"18.11 Wage Rates

"A. The requirements and provisions of all applicable laws and any amendments thereof or additions thereto as to employment of labor, and to the schedule of minimum wage rates established in compliance with laws shall be a part of the Contract Documents. If after the Notice of Award, it becomes necessary to employ any person in a trade or occupation not classified in the wage determinations, such person shall be paid at not less than such rates as shall be determined by the officials administering the laws mentioned above."

"B. The schedule of wages referred to above is minimum rates only, and OWNER will not consider any claims for additional compensation made by CONTRACTOR because of payment by CONTRACTOR of any wage in excess of the applicable, required rates."

"C. The said schedules of wages shall continue to be the minimum rates to be paid during the life of this Agreement, unless state laws and regulations require updating the same in which case the Owner shall provide the updated applicable schedule of wages, and a legible copy of said schedules shall be kept posted in a conspicuous place at the site of the work."

§ 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:

(1) General Liability of at least $1,000,000 per incident and $3,000,000 aggregate for Bodily Injury and Property Damage Liability. Products and Completed Operations should be maintained for up to 3 years after the completion of the project.

(2) Automobile Liability (applicable for any contractor who has an automobile operating exposure) of at least $1,000,000 Bodily Injury and Property Damage per accident.

(3) Workers' Compensation Insurance as required by law – (Include Employers Liability Part B).

(4) Property Coverage for materials and supplies is the responsibility of the contractor until the job is completed and turned over to the town (proof of builder's risk or installation floater should be provided).

(5) Umbrella Liability of at least $2,000,000/occurrence, $3,000,000/aggregate.

The Town should be named as an "Additional Insured" on the liability, automobile and umbrella policies and the contractors liability policy should be considered primary/non-contributory.

The selected Bidder must furnish proof of insurance to the Town at the time of award.

SECTION 00850

Incorporation of Applicable Provisions of the
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 Conditions.

DIVISION 0
Attachment A
Massachusetts Prevailing Wage Rates

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

MAURA HEALEY
Governor
KIM DRISCOLL
Lt. Governor

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

LAUREN JONES
Secretary
MICHAEL FLANAGAN
Director

Awarding Authority:	Middleborough - Department of Public Works	**City/Town:**	MIDDLEBOROUGH
Wage Request No:	20260916204902	**Job Location:**	Center St between Railway Hl Rd and Cambridge St, Middleboro
Description of Work:	This project involves constructing a utility bridge over the MBTA to support a new 12-inch insulated water main, and installing the water main along Center Street between Railway Hl Rd and Cambridge St.		
Contract Number:			

§§ 26-27D Construction Project

This Prevailing Wage Schedule establishes the minimum wage rates that employees on this public works construction project must be paid. The project's Wage Request Number is listed above and on all pages of this Schedule. This schedule applies **only** to this specific project.

Awarding Authority Responsibilities

- You must include this Prevailing Wage Schedule (PWS) or an appropriate reference to it in all advertisements and calls for bids.
- The PWS must be incorporated in its entirety into all contracts for this project (G.L. c. 149, § 27).
- The wage rates on this PWS will remain in effect for the duration of the project. **Exception:** You must request an updated schedule for any multi-year construction project no later than 2 weeks before the project's yearly anniversary date.
  - For CM AT RISK projects, the anniversary date is the earlier of the signing date of: (a) the GMP Amendment; or (b) the first amendment to permit procurement of construction services.
  - For all other construction projects, the anniversary date is the date the contract was signed by the Awarding Authority and the General Contractor.
- You must also request an updated PWS if you have not opened bids or selected a contractor within 90 days of the date of issuance on this PWS.
  - For CM AT RISK projects, the earlier of (a) the signing date of the GMP Amendment; or (b) the bid for the first construction scope of work must be within 90 days of the date of issuance on this Schedule.
- You must provide any updated PWS to all contractors working on the project, including general and sub-contractors.
- You must keep the contractors' weekly certified payroll records and Statements of Compliance on file for **3 years.**
- Awarding authorities have other prevailing wage responsibilities not listed above. Learn more at: **[Prevailing wage: for awarding authorities | Mass.gov]** and G.L. c. 149, §§ 26-27D.

Contractor Responsibilities

- You must pay all employees who perform construction work on this project at least the wage rate listed on this PWS. **Warning!** If you do not follow this requirement, you can face civil fines, criminal charges, or private lawsuits.
- You must post this PWS at the worksite where it can be easily seen. (G.L. c. 149, § 27)
- You must file weekly payroll reports and a Statement of Compliance with the awarding authority (**not** DLS). You can file payroll reports by mail or email and must keep them on file for 3 years. Each weekly payroll report must include each employees' name, address, occupational classification(s), hours worked, and wages paid. Find a sample report at: mass.gov/dols/pw.
- You cannot pay any employees at the apprentice rates listed on this PWS unless they are registered with the Massachusetts Division of Apprentice Standards (DAS). Qualifying apprentices must be paid at the applicable step rate and must carry their apprentice ID card during all work hours on the project. Apprentices **not** registered with DAS must be paid at the listed journeyworker's rate, even if they are registered with a different federal/state public agency or private entity. For every week in which apprentice rates are paid, a copy of each apprentice's apprentice ID card issued by DAS shall be attached to the certified payroll records.
- If you don't know what classification or rate applies to the work being performed, you must ask DLS; paying the wrong rate subjects you to enforcement.
- Please contact DLS if you have any questions about the Prevailing Wage Schedule: (617) 626-6953 or **DLS.Feedback@mass.gov**

Employees who are **not** paid the wage listed on the Prevailing Wage Schedule (PWS) may file a complaint with the Attorney General's Fair Labor Division: **www.mass.gov/ago/fld**; **(617) 727-3465.**

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
(2 AXLE) DRIVER - EQUIPMENT TEAMSTERS JOINT COUNCIL NO. 10 TEAMSTERS JOINT COUNCIL NO. 10 ZONE B	6/1/2026	$41.95	$16.17	$21.78	$0.00	$0.00	$79.90
	12/1/2026	$41.95	$16.17	$23.52	$0.00	$0.00	$81.64
	1/1/2027	$41.95	$16.77	$23.52	$0.00	$0.00	$82.24
(3 AXLE) DRIVER - EQUIPMENT TEAMSTERS JOINT COUNCIL NO. 10 TEAMSTERS JOINT COUNCIL NO. 10 ZONE B	6/1/2026	$42.02	$16.17	$21.78	$0.00	$0.00	$79.97
	12/1/2026	$42.02	$16.17	$23.52	$0.00	$0.00	$81.71
	1/1/2027	$42.02	$16.77	$23.52	$0.00	$0.00	$82.31
(4 & 5 AXLE) DRIVER - EQUIPMENT TEAMSTERS JOINT COUNCIL NO. 10 TEAMSTERS JOINT COUNCIL NO. 10 ZONE B	6/1/2026	$42.14	$16.17	$21.78	$0.00	$0.00	$80.09
	12/1/2026	$42.14	$16.17	$23.52	$0.00	$0.00	$81.83
	1/1/2027	$42.14	$16.77	$23.52	$0.00	$0.00	$82.43
ADS/SUBMERSIBLE PILOT PILE DRIVER LOCAL 56 PILE DRIVER LOCAL 56 (ZONE 1) For apprentice rates see "Apprentice- PILE DRIVER"	1/1/2024	$117.16	$10.08	$11.62	$12.67	$0.00	$151.53
AIR TRACK OPERATOR LABORERS LABORERS - ZONE 2	6/1/2026	$42.41	$10.90	$9.75	$9.11	$0.00	$72.17
	12/1/2026	$43.85	$10.90	$9.75	$9.11	$0.00	$73.61
	6/1/2027	$45.30	$10.90	$9.75	$9.11	$0.00	$75.06
	12/1/2027	$46.75	$10.90	$9.75	$9.11	$0.00	$76.51
	6/1/2028	$48.25	$10.90	$9.75	$9.11	$0.00	$78.01
	12/1/2028	$49.75	$10.90	$9.75	$9.11	$0.00	$79.51
For apprentice rates see "Apprentice- LABORER"							
AIR TRACK OPERATOR (HEAVY & HIGHWAY) LABORERS LABORERS - ZONE 2 (HEAVY & HIGHWAY)	6/1/2026	$42.41	$10.90	$9.75	$9.21	$0.00	$72.27
	12/1/2026	$43.85	$10.90	$9.75	$9.21	$0.00	$73.71
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"							
ASBESTOS WORKER (PIPES & TANKS) HEAT & FROST INSULATORS LOCAL 6 HEAT & FROST INSULATORS LOCAL 6 (SOUTHERN MASS)	12/1/2025	$44.80	$14.50	$4.30	$6.75	$0.00	$70.35
ASPHALT RAKER LABORERS LABORERS - ZONE 2	6/1/2026	$41.91	$10.90	$9.75	$9.11	$0.00	$71.67
	12/1/2026	$43.35	$10.90	$9.75	$9.11	$0.00	$73.11
	6/1/2027	$44.80	$10.90	$9.75	$9.11	$0.00	$74.56
	12/1/2027	$46.25	$10.90	$9.75	$9.11	$0.00	$76.01
	6/1/2028	$47.75	$10.90	$9.75	$9.11	$0.00	$77.51
	12/1/2028	$49.25	$10.90	$9.75	$9.11	$0.00	$79.01
For apprentice rates see "Apprentice- LABORER"							
ASPHALT RAKER (HEAVY & HIGHWAY) LABORERS LABORERS - ZONE 2 (HEAVY & HIGHWAY)	6/1/2026	$41.91	$10.90	$9.75	$9.21	$0.00	$71.77
	12/1/2026	$43.35	$10.90	$9.75	$9.21	$0.00	$73.21
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"							
ASPHALT/CONCRETE/CRUSHER PLANT-ON SITE OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS LOCAL 4	6/1/2026	$59.38	$17.05	$13.35	$3.25	$0.00	$93.03
	12/1/2026	$60.83	$17.05	$13.35	$3.25	$0.00	$94.48
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
BACKHOE/FRONT-END LOADER	6/1/2026	$59.38	$17.05	$13.35	$3.25	$0.00	$93.03
OPERATING ENGINEERS LOCAL 4	12/1/2026	$60.83	$17.05	$13.35	$3.25	$0.00	$94.48
OPERATING ENGINEERS LOCAL 4							
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
BARCO-TYPE JUMPING TAMPER	6/1/2026	$41.91	$10.90	$9.75	$9.11	$0.00	$71.67
LABORERS	12/1/2026	$43.35	$10.90	$9.75	$9.11	$0.00	$73.11
LABORERS - ZONE 2	6/1/2027	$44.80	$10.90	$9.75	$9.11	$0.00	$74.56
	12/1/2027	$46.25	$10.90	$9.75	$9.11	$0.00	$76.01
	6/1/2028	$47.75	$10.90	$9.75	$9.11	$0.00	$77.51
	12/1/2028	$49.25	$10.90	$9.75	$9.11	$0.00	$79.01
For apprentice rates see "Apprentice- LABORER"							
BLOCK PAVER, RAMMER / CURB SETTER	6/1/2026	$42.41	$10.90	$9.75	$9.11	$0.00	$72.17
LABORERS	12/1/2026	$43.85	$10.90	$9.75	$9.11	$0.00	$73.61
LABORERS - ZONE 2	6/1/2027	$45.30	$10.90	$9.75	$9.11	$0.00	$75.06
	12/1/2027	$46.75	$10.90	$9.75	$9.11	$0.00	$76.51
	6/1/2028	$48.25	$10.90	$9.75	$9.11	$0.00	$78.01
	12/1/2028	$49.75	$10.90	$9.75	$9.11	$0.00	$79.51
For apprentice rates see "Apprentice- LABORER"							
BLOCK PAVER, RAMMER / CURB SETTER (HEAVY & HIGHWAY)	6/1/2026	$42.41	$10.90	$9.75	$9.21	$0.00	$72.27
LABORERS	12/1/2026	$43.85	$10.90	$9.75	$9.21	$0.00	$73.71
LABORERS - ZONE 2 (HEAVY & HIGHWAY)							
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"							
BOILER MAKER	1/1/2024	$48.12	$7.07	$14.60	$6.00	$0.00	$75.79
BOILERMAKERS LOCAL 29							
BOILERMAKERS LOCAL 29							

Apprentice: BOILER MAKER

Effective Date: 1/1/2024

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	65.00	$31.28	$7.07	$9.32	$3.90	$0.00	$51.57
2	65.00	$31.28	$7.07	$9.32	$3.90	$0.00	$51.57
3	70.00	$33.68	$7.07	$10.03	$4.20	$0.00	$54.98
4	75.00	$36.09	$7.07	$10.74	$4.50	$0.00	$58.40
5	80.00	$38.50	$7.07	$11.45	$4.80	$0.00	$61.82
6	85.00	$40.90	$7.07	$12.18	$5.10	$0.00	$65.25
7	90.00	$43.31	$7.07	$12.88	$5.40	$0.00	$68.66
8	95.00	$45.71	$7.07	$13.62	$5.70	$0.00	$72.10

Apprentice to Journeyworker Ratio: 1:4

BRICK/STONE/ARTIFICIAL MASONRY (INCL. MASONRY WATERPROOFING)	8/1/2026	$70.15	$12.84	$15.57	$8.02	$0.00	$106.58
BRICKLAYERS LOCAL 3	2/1/2027	$71.55	$12.84	$15.57	$8.02	$0.00	$107.98
BRICKLAYERS LOCAL 3 (QUINCY)							

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate

Apprentice: BRICK/STONE/ARTIFICIAL MASONRY (INCL. MASONRY WATERPROOFING)

Effective Date: 8/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	$35.08	$12.84	$15.57	$8.02	$0.00	$71.51
2	60.00	$42.09	$12.84	$15.57	$8.02	$0.00	$78.52
3	70.00	$49.11	$12.84	$15.57	$8.02	$0.00	$85.54
4	80.00	$56.12	$12.84	$15.57	$8.02	$0.00	$92.55
5	90.00	$63.14	$12.84	$15.57	$8.02	$0.00	$99.57

Apprentice: BRICK/STONE/ARTIFICIAL MASONRY (INCL. MASONRY WATERPROOFING)

Effective Date: 2/1/2027

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	$35.78	$12.84	$15.57	$8.02	$0.00	$72.21
2	60.00	$42.93	$12.84	$15.57	$8.02	$0.00	$79.36
3	70.00	$50.09	$12.84	$15.57	$8.02	$0.00	$86.52
4	80.00	$57.24	$12.84	$15.57	$8.02	$0.00	$93.67
5	90.00	$64.40	$12.84	$15.57	$8.02	$0.00	$100.83

Apprentice to Journeyworker Ratio: 1:5

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
BULLDOZER/GRADER/SCRAPER OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS LOCAL 4	6/1/2026	$58.70	$17.05	$13.35	$3.25	$0.00	$92.35
	12/1/2026	$60.14	$17.05	$13.35	$3.25	$0.00	$93.79
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
CAISSON & UNDERPINNING BOTTOM MAN LABORERS LABORERS - FOUNDATION AND MARINE	6/1/2026	$50.40	$10.90	$9.75	$9.80	$0.00	$80.85
	12/1/2026	$51.90	$10.90	$9.75	$9.80	$0.00	$82.35
For apprentice rates see "Apprentice- LABORER"							
CAISSON & UNDERPINNING LABORER LABORERS LABORERS - FOUNDATION AND MARINE	6/1/2026	$49.25	$10.90	$9.75	$9.80	$0.00	$79.70
	12/1/2026	$50.75	$10.90	$9.75	$9.80	$0.00	$81.20
For apprentice rates see "Apprentice- LABORER"							
CAISSON & UNDERPINNING TOP MAN LABORERS LABORERS - FOUNDATION AND MARINE	6/1/2026	$49.58	$10.90	$9.75	$9.80	$0.00	$80.03
	12/1/2026	$51.08	$10.90	$9.75	$9.80	$0.00	$81.53
For apprentice rates see "Apprentice- LABORER"							
CARBIDE CORE DRILL OPERATOR LABORERS LABORERS - ZONE 2	6/1/2026	$41.91	$10.90	$9.75	$9.11	$0.00	$71.67
	12/1/2026	$43.35	$10.90	$9.75	$9.11	$0.00	$73.11
	6/1/2027	$44.80	$10.90	$9.75	$9.11	$0.00	$74.56
	12/1/2027	$46.25	$10.90	$9.75	$9.11	$0.00	$76.01
	6/1/2028	$47.75	$10.90	$9.75	$9.11	$0.00	$77.51
	12/1/2028	$49.25	$10.90	$9.75	$9.11	$0.00	$79.01
For apprentice rates see "Apprentice- LABORER"							

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
CARPENTER	9/1/2026	$52.10	$11.08	$11.47	$8.50	$0.00	$83.15
CARPENTERS	3/1/2027	$53.35	$11.08	$11.47	$8.50	$0.00	$84.40
CARPENTERS -ZONE 2 (Eastern Massachusetts)							

Apprentice: CARPENTER

Effective Date: 9/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	45.00	$23.45	$11.08	$0.00	$1.73	$0.00	$36.26
2	45.00	$23.45	$11.08	$0.00	$1.73	$0.00	$36.26
3	55.00	$28.66	$11.08	$0.00	$3.40	$0.00	$43.14
4	55.00	$28.66	$11.08	$0.00	$3.40	$0.00	$43.14
5	70.00	$36.47	$11.08	$11.41	$5.10	$0.00	$64.06
6	70.00	$36.47	$11.08	$11.41	$5.10	$0.00	$64.06
7	80.00	$41.68	$11.08	$11.44	$6.80	$0.00	$71.00
8	80.00	$41.68	$11.08	$11.44	$6.80	$0.00	$71.00

Apprentice: CARPENTER

Effective Date: 3/1/2027

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	45.00	$24.01	$11.08	$0.00	$1.73	$0.00	$36.82
2	45.00	$24.01	$11.08	$0.00	$1.73	$0.00	$36.82
3	55.00	$29.34	$11.08	$0.00	$3.40	$0.00	$43.82
4	55.00	$29.34	$11.08	$0.00	$3.40	$0.00	$43.82
5	70.00	$37.35	$11.08	$11.41	$5.10	$0.00	$64.94
6	70.00	$37.35	$11.08	$11.41	$5.10	$0.00	$64.94
7	80.00	$42.68	$11.08	$11.44	$6.80	$0.00	$72.00
8	80.00	$42.68	$11.08	$11.44	$6.80	$0.00	$72.00

Apprentice to Journeyworker Ratio: 1:5

CARPENTER WOOD FRAME	10/1/2026	$28.47	$7.38	$4.47	$1.00	$0.00	$41.32
CARPENTERS							
CARPENTERS-ZONE 3 (Wood Frame)							

All Aspects of New Wood Frame Work

Apprentice: CARPENTER WOOD FRAME

Effective Date: 10/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	60.00	$17.08	$7.38	$0.00	$0.00	$0.00	$24.46
2	60.00	$17.08	$7.38	$0.00	$0.00	$0.00	$24.46
3	65.00	$18.51	$7.38	$0.00	$1.00	$0.00	$26.89
4	70.00	$19.93	$7.38	$0.00	$1.00	$0.00	$28.31
5	75.00	$21.35	$7.38	$3.80	$1.00	$0.00	$33.53
6	80.00	$22.78	$7.38	$3.80	$1.00	$0.00	$34.96

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
Apprentice: CARPENTER WOOD FRAME							
Effective Date: 10/1/2026							
Step / Percent		**Apprentice Base Wage**					
7 / 85.00		$24.20	$7.38	$3.80	$1.00	$0.00	$36.38
8 / 90.00		$25.62	$7.38	$3.80	$1.00	$0.00	$37.80
Apprentice to Journeyworker Ratio: 1:5							
CEMENT MASONRY/PLASTERING	7/1/2026	$54.49	$13.35	$16.43	$7.78	$1.80	$93.85
PLASTERERS AND CEMENT MASONS LOCAL 534	1/1/2027	$55.94	$13.35	$16.43	$7.78	$1.80	$95.30
Plasterers and Cement Masons - Zone 1	7/1/2027	$57.29	$13.35	$16.43	$7.78	$1.80	$96.65
	1/1/2028	$58.64	$13.35	$16.43	$7.78	$1.80	$98.00
Apprentice: CEMENT MASONRY/PLASTERING							
Effective Date: 7/1/2026							
Step / Percent		**Apprentice Base Wage**					
1 / 50.00		$27.25	$13.35	$16.43	$0.00	$0.00	$57.03
2 / 60.00		$32.69	$13.35	$16.43	$7.78	$1.80	$72.05
3 / 65.00		$35.42	$13.35	$16.43	$7.78	$1.80	$74.78
4 / 70.00		$38.14	$13.35	$16.43	$7.78	$1.80	$77.50
5 / 75.00		$40.87	$13.35	$16.43	$7.78	$1.80	$80.23
6 / 80.00		$43.59	$13.35	$16.43	$7.78	$1.80	$82.95
7 / 90.00		$49.04	$13.35	$16.43	$7.78	$0.00	$86.60
Apprentice: CEMENT MASONRY/PLASTERING							
Effective Date: 1/1/2027							
Step / Percent		**Apprentice Base Wage**					
1 / 50.00		$27.97	$13.35	$16.43	$0.00	$0.00	$57.75
2 / 60.00		$33.56	$13.35	$16.43	$7.78	$1.80	$72.92
3 / 65.00		$36.36	$13.35	$16.43	$7.78	$1.80	$75.72
4 / 70.00		$39.16	$13.35	$16.43	$7.78	$1.80	$78.52
5 / 75.00		$41.96	$13.35	$16.43	$7.78	$1.80	$81.32
6 / 80.00		$44.75	$13.35	$16.43	$7.78	$1.80	$84.11
7 / 90.00		$50.35	$13.35	$16.43	$0.00	$0.00	$80.13
Apprentice to Journeyworker Ratio: 1:5							
CHAIN SAW OPERATOR	6/1/2026	$41.91	$10.90	$9.75	$9.11	$0.00	$71.67
LABORERS	12/1/2026	$43.35	$10.90	$9.75	$9.11	$0.00	$73.11
LABORERS - ZONE 2	6/1/2027	$44.80	$10.90	$9.75	$9.11	$0.00	$74.56
	12/1/2027	$46.25	$10.90	$9.75	$9.11	$0.00	$76.01
	6/1/2028	$47.75	$10.90	$9.75	$9.11	$0.00	$77.51
	12/1/2028	$49.25	$10.90	$9.75	$9.11	$0.00	$79.01
For apprentice rates see "Apprentice- LABORER"							

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
CLAM SHELLS/SLURRY BUCKETS/HEADING MACHINES	6/1/2026	$60.61	$17.05	$13.35	$3.25	$0.00	$94.26
OPERATING ENGINEERS LOCAL 4	12/1/2026	$62.09	$17.05	$13.35	$3.25	$0.00	$95.74
OPERATING ENGINEERS LOCAL 4							
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
COMPRESSOR OPERATOR	6/1/2026	$37.63	$17.05	$13.35	$3.25	$0.00	$71.28
OPERATING ENGINEERS LOCAL 4	12/1/2026	$38.58	$17.05	$13.35	$3.25	$0.00	$72.23
OPERATING ENGINEERS LOCAL 4							
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
DELEADER (BRIDGE)	1/1/2026	$59.56	$10.35	$12.00	$12.60	$0.00	$94.51
PAINTERS LOCAL 35							
PAINTERS LOCAL 35 - ZONE 2							

Apprentice: DELEADER (BRIDGE)

Effective Date: 1/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	$29.78	$10.35	$0.00	$0.00	$0.00	$40.13
2	55.00	$32.76	$10.35	$0.00	$6.93	$0.00	$50.04
3	60.00	$35.74	$10.35	$0.00	$7.56	$0.00	$53.65
4	65.00	$38.71	$10.35	$0.00	$8.19	$0.00	$57.25
5	70.00	$41.69	$10.35	$12.00	$8.82	$0.00	$72.86
6	75.00	$44.67	$10.35	$12.00	$9.45	$0.00	$76.47
7	80.00	$47.65	$10.35	$12.00	$10.08	$0.00	$80.08
8	90.00	$53.60	$10.35	$12.00	$11.34	$0.00	$87.29

Apprentice to Journeyworker Ratio: 1:1

DEMO: ADZEMAN	6/1/2026	$49.30	$10.90	$9.75	$9.65	$0.00	$79.60
LABORERS	12/7/2026	$50.80	$10.90	$9.75	$9.65	$0.00	$81.10
LABORERS - ZONE 2	6/7/2027	$52.40	$10.90	$9.75	$9.65	$0.00	$82.70
	12/6/2027	$54.00	$10.90	$9.75	$9.65	$0.00	$84.30
	6/5/2028	$55.68	$10.90	$9.75	$9.65	$0.00	$85.98
	12/4/2028	$57.35	$10.90	$9.75	$9.65	$0.00	$87.65
For apprentice rates see "Apprentice- LABORER"							
DEMO: BACKHOE/LOADER/HAMMER OPERATOR	6/1/2026	$50.30	$10.90	$9.75	$9.65	$0.00	$80.60
LABORERS	12/7/2026	$51.80	$10.90	$9.75	$9.65	$0.00	$82.10
LABORERS - ZONE 2	6/7/2027	$53.40	$10.90	$9.75	$9.65	$0.00	$83.70
	12/6/2027	$55.00	$10.90	$9.75	$9.65	$0.00	$85.30
	6/5/2028	$56.68	$10.90	$9.75	$9.65	$0.00	$86.98
	12/4/2028	$58.35	$10.90	$9.75	$9.65	$0.00	$88.65
For apprentice rates see "Apprentice- LABORER"							
DEMO: BURNERS	6/1/2026	$50.05	$10.90	$9.75	$9.65	$0.00	$80.35
LABORERS	12/7/2026	$51.55	$10.90	$9.75	$9.65	$0.00	$81.85
LABORERS - ZONE 2	6/7/2027	$53.15	$10.90	$9.75	$9.65	$0.00	$83.45
	12/6/2027	$54.75	$10.90	$9.75	$9.65	$0.00	$85.05
	6/5/2028	$56.43	$10.90	$9.75	$9.65	$0.00	$86.73
	12/4/2028	$58.10	$10.90	$9.75	$9.65	$0.00	$88.40

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
For apprentice rates see "Apprentice- LABORER"							
DEMO: CONCRETE CUTTER/SAWYER LABORERS LABORERS - ZONE 2	6/1/2026	$50.30	$10.90	$9.75	$9.65	$0.00	$80.60
	12/7/2026	$51.80	$10.90	$9.75	$9.65	$0.00	$82.10
	6/7/2027	$53.40	$10.90	$9.75	$9.65	$0.00	$83.70
	12/6/2027	$55.00	$10.90	$9.75	$9.65	$0.00	$85.30
	6/5/2028	$56.68	$10.90	$9.75	$9.65	$0.00	$86.98
	12/4/2028	$58.35	$10.90	$9.75	$9.65	$0.00	$88.65
For apprentice rates see "Apprentice- LABORER"							
DEMO: JACKHAMMER OPERATOR LABORERS LABORERS - ZONE 2	6/1/2026	$50.05	$10.90	$9.75	$9.65	$0.00	$80.35
	12/7/2026	$51.55	$10.90	$9.75	$9.65	$0.00	$81.85
	6/7/2027	$53.15	$10.90	$9.75	$9.65	$0.00	$83.45
	12/6/2027	$54.75	$10.90	$9.75	$9.65	$0.00	$85.05
	6/5/2028	$56.43	$10.90	$9.75	$9.65	$0.00	$86.73
	12/4/2028	$58.10	$10.90	$9.75	$9.65	$0.00	$88.40
For apprentice rates see "Apprentice- LABORER"							
DEMO: WRECKING LABORER LABORERS LABORERS - ZONE 2	6/1/2026	$49.30	$10.90	$9.75	$9.65	$0.00	$79.60
	12/7/2026	$50.80	$10.90	$9.75	$9.65	$0.00	$81.10
	6/7/2027	$52.40	$10.90	$9.75	$9.65	$0.00	$82.70
	12/6/2027	$54.00	$10.90	$9.75	$9.65	$0.00	$84.30
	6/5/2028	$55.68	$10.90	$9.75	$9.65	$0.00	$85.98
	12/4/2028	$57.35	$10.90	$9.75	$9.65	$0.00	$87.65
For apprentice rates see "Apprentice- LABORER"							
DIRECTIONAL DRILL MACHINE OPERATOR OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS LOCAL 4	6/1/2026	$58.70	$17.05	$13.35	$3.25	$0.00	$92.35
	12/1/2026	$60.14	$17.05	$13.35	$3.25	$0.00	$93.79
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
DIVER PILE DRIVER LOCAL 56 PILE DRIVER LOCAL 56 (ZONE 1)	8/1/2024	$78.11	$10.08	$11.62	$10.04	$0.00	$109.85
as of 8-1-24, Apprentices with diving licenses begin at second year. % of Diver wage 70/80/90 2A $69.83, 3A $91.79,4A $102.14 Total Rate							
DIVER TENDER PILE DRIVER LOCAL 56 PILE DRIVER LOCAL 56 (ZONE 1)	8/1/2024	$55.79	$10.08	$11.62	$12.67	$0.00	$90.16
as of 8-1-24, Apprentices with diving licenses begin at second year. % of Piledriver wage 70/80/90 2A $54.20, 3A $73.93,4A $82.05 Total Rate							
DIVER TENDER (EFFLUENT) PILE DRIVER LOCAL 56 PILE DRIVER LOCAL 56 (ZONE 1)	8/1/2024	$83.69	$10.08	$11.62	$12.67	$0.00	$118.06
For apprentice rates see "Apprentice- PILE DRIVER"							
DIVER/SLURRY (EFFLUENT) PILE DRIVER LOCAL 56 PILE DRIVER LOCAL 56 (ZONE 1)	8/1/2024	$117.16	$10.08	$11.62	$12.67	$0.00	$151.53
For apprentice rates see "Apprentice- PILE DRIVER"							
DRAWBRIDGE OPERATOR (Construction) DRAWBRIDGE - SEIU LOCAL 888	7/1/2020	$26.77	$6.67	$3.93	$0.00	$0.16	$37.53

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
DRAWBRIDGE - SEIU LOCAL 888							
ELECTRICIAN ELECTRICIANS LOCAL 223 ELECTRICIANS LOCAL 223	9/1/2026	$54.72	$12.50	$15.56	$4.00	$0.00	$86.78

Apprentice: ELECTRICIAN

Effective Date: 9/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	40.00	$21.89	$12.50	$0.66	$0.00	$0.00	$35.05
2	45.00	$24.62	$12.50	$0.74	$0.00	$0.00	$37.86
3	50.00	$27.36	$12.50	$0.82	$0.00	$0.00	$40.68
4	55.00	$30.10	$12.50	$6.92	$2.75	$0.00	$52.27
5	60.00	$32.83	$12.50	$7.54	$2.75	$0.00	$55.62
6	65.00	$35.57	$12.50	$8.18	$2.75	$0.00	$59.00
7	70.00	$38.30	$12.50	$8.81	$2.75	$0.00	$62.36
8	75.00	$41.04	$12.50	$9.43	$2.75	$0.00	$65.72

Apprentice to Journeyworker Ratio: 2:3

ELEVATOR CONSTRUCTOR ELEVATOR CONSTRUCTORS LOCAL 4 ELEVATOR CONSTRUCTORS LOCAL 4	1/1/2026	$77.26	$16.38	$11.06	$10.70	$0.00	$115.40
	1/1/2027	$80.55	$16.48	$11.16	$11.00	$0.00	$119.19

Apprentice: ELEVATOR CONSTRUCTOR

Effective Date: 1/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	$38.63	$0.00	$0.00	$0.00	$0.00	$38.63
2	55.00	$42.49	$16.38	$11.06	$10.70	$0.00	$80.63
3	65.00	$50.22	$16.38	$11.06	$10.70	$0.00	$88.36
4	70.00	$54.08	$16.38	$11.06	$10.70	$0.00	$92.22
5	80.00	$61.81	$16.38	$11.06	$10.70	$0.00	$99.95

Apprentice: ELEVATOR CONSTRUCTOR

Effective Date: 1/1/2027

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	$40.28	$0.00	$0.00	$0.00	$0.00	$40.28
2	55.00	$44.30	$16.48	$11.16	$11.00	$0.00	$82.94
3	65.00	$52.36	$16.48	$11.16	$11.00	$0.00	$91.00
4	70.00	$56.39	$16.48	$11.16	$11.00	$0.00	$95.03
5	80.00	$64.44	$16.48	$11.16	$11.00	$0.00	$103.08

Apprentice to Journeyworker Ratio: 1:1

ELEVATOR CONSTRUCTOR HELPER	1/1/2026	$54.08	$16.38	$11.06	$10.07	$0.00	$91.59

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
ELEVATOR CONSTRUCTORS LOCAL 4 ELEVATOR CONSTRUCTORS LOCAL 4	1/1/2027	$56.39	$16.48	$11.16	$11.00	$0.00	$95.03
For apprentice rates see "Apprentice - ELEVATOR CONSTRUCTOR"							
FENCE & GUARD RAIL ERECTOR (HEAVY & HIGHWAY)	6/1/2026	$41.91	$10.90	$9.75	$9.21	$0.00	$71.77
LABORERS LABORERS - ZONE 2 (HEAVY & HIGHWAY)	12/1/2026	$43.35	$10.90	$9.75	$9.21	$0.00	$73.21
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)							
FIELD ENG.INST.PERSON-BLDG,SITE,HVY/HWY	5/1/2026	$54.40	$16.55	$13.35	$3.25	$0.00	$87.55
OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS LOCAL 4	11/1/2026	$55.69	$16.55	$13.35	$3.25	$0.00	$88.84
	5/1/2027	$57.12	$16.55	$13.35	$3.25	$0.00	$90.27
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
FIELD ENG.PARTY CHIEF-BLDG,SITE,HVY/HWY	5/1/2026	$56.02	$16.55	$13.35	$3.25	$0.00	$89.17
OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS LOCAL 4	11/1/2026	$57.32	$16.55	$13.35	$3.25	$0.00	$90.47
	5/1/2027	$58.77	$16.55	$13.35	$3.25	$0.00	$91.92
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
FIELD ENG.ROD PERSON-BLDG,SITE,HVY/HWY	5/1/2026	$26.28	$16.55	$13.35	$3.25	$0.00	$59.43
OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS LOCAL 4	11/1/2026	$27.04	$16.55	$13.35	$3.25	$0.00	$60.19
	5/1/2027	$27.89	$16.55	$13.35	$3.25	$0.00	$61.04
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
FIRE ALARM INSTALLER ELECTRICIANS LOCAL 223 ELECTRICIANS LOCAL 223	9/1/2026	$54.72	$12.50	$15.56	$4.00	$0.00	$86.78
For apprentice rates see "Apprentice- ELECTRICIAN"							
FIRE ALARM REPAIR / MAINTENANCE / COMMISSIONING ELECTRICIANS LOCAL 223 ELECTRICIANS LOCAL 223	9/1/2026	$54.72	$12.50	$15.56	$4.00	$0.00	$86.78
For apprentice rates see "Apprentice- TELECOMMUNICATIONS TECHNICIAN"							
FIREMAN (ASST. ENGINEER)	6/1/2026	$47.55	$17.05	$13.35	$3.25	$0.00	$81.20
OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS LOCAL 4	12/1/2026	$48.73	$17.05	$13.35	$3.25	$0.00	$82.38
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
FLAGGER & SIGNALER (HEAVY & HIGHWAY)	6/1/2026	$29.21	$10.90	$9.75	$9.21	$0.00	$59.07
LABORERS LABORERS - ZONE 2 (HEAVY & HIGHWAY)	12/1/2026	$29.21	$10.90	$9.75	$9.21	$0.00	$59.07
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)							
FLOORCOVERER	9/1/2026	$60.74	$10.33	$11.47	$8.80	$0.00	$91.34
FLOORCOVERERS LOCAL 2168 FLOORCOVERERS LOCAL 2168 ZONE I	3/1/2027	$62.24	$10.33	$11.47	$8.80	$0.00	$92.84

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate

Apprentice: FLOORCOVERER

Effective Date: 9/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	45.00	$27.33	$10.33	$0.00	$1.76	$0.00	$39.42
2	45.00	$27.33	$10.33	$0.00	$1.76	$0.00	$39.42
3	55.00	$33.41	$10.33	$0.00	$3.52	$0.00	$47.26
4	55.00	$33.41	$10.33	$0.00	$3.52	$0.00	$47.26
5	70.00	$42.52	$10.33	$11.47	$5.28	$0.00	$69.60
6	70.00	$42.52	$10.33	$11.47	$5.28	$0.00	$69.60
7	80.00	$48.59	$10.33	$11.47	$7.04	$0.00	$77.43
8	80.00	$48.59	$10.33	$11.47	$7.04	$0.00	$77.43

Apprentice: FLOORCOVERER

Effective Date: 3/1/2027

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	45.00	$28.01	$10.33	$0.00	$1.76	$0.00	$40.10
2	45.00	$28.01	$10.33	$0.00	$1.76	$0.00	$40.10
3	55.00	$34.23	$10.33	$0.00	$3.52	$0.00	$48.08
4	55.00	$34.23	$10.33	$0.00	$3.52	$0.00	$48.08
5	70.00	$43.57	$10.33	$11.47	$5.28	$0.00	$70.65
6	70.00	$43.57	$10.33	$11.47	$5.28	$0.00	$70.65
7	80.00	$49.79	$10.33	$11.47	$7.04	$0.00	$78.63
8	80.00	$49.79	$10.33	$11.47	$7.04	$0.00	$78.63

Apprentice Notes

Steps are 750 hrs.

Apprentice to Journeyworker Ratio: 1:1

FORK LIFT/CHERRY PICKER	6/1/2026	$59.38	$17.05	$13.35	$3.25	$0.00	$93.03
OPERATING ENGINEERS LOCAL 4	12/1/2026	$60.83	$17.05	$13.35	$3.25	$0.00	$94.48
OPERATING ENGINEERS LOCAL 4							
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
GENERATOR/LIGHTING PLANT/HEATERS	6/1/2026	$37.63	$17.05	$13.35	$3.25	$0.00	$71.28
OPERATING ENGINEERS LOCAL 4	12/1/2026	$38.58	$17.05	$13.35	$3.25	$0.00	$72.23
OPERATING ENGINEERS LOCAL 4							
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
GLAZIER (GLASS PLANK/AIR BARRIER/INTERIOR SYSTEMS)	6/1/2026	$44.73	$11.20	$8.40	$6.05	$0.00	$70.38
GLAZIERS LOCAL 1333	6/1/2027	$46.73	$11.60	$8.55	$6.60	$0.00	$73.48
GLAZIERS LOCAL 1333	6/1/2028	$48.73	$12.00	$8.70	$7.20	$0.00	$76.63

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate

Apprentice: GLAZIER (GLASS PLANK/AIR BARRIER/INTERIOR SYSTEMS)

Effective Date: 6/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	$22.37	$11.20	$8.40	$6.05	$0.00	$48.02
2	56.25	$25.16	$11.20	$8.40	$6.05	$0.00	$50.81
3	62.50	$27.96	$11.20	$8.40	$6.05	$0.00	$53.61
4	68.75	$30.75	$11.20	$8.40	$6.05	$0.00	$56.40
5	75.00	$33.55	$11.20	$8.40	$6.05	$0.00	$59.20
6	81.25	$36.34	$11.20	$8.40	$6.05	$0.00	$61.99
7	87.50	$39.14	$11.20	$8.40	$6.05	$0.00	$64.79
8	93.75	$41.93	$11.20	$8.40	$6.05	$0.00	$67.58

Apprentice: GLAZIER (GLASS PLANK/AIR BARRIER/INTERIOR SYSTEMS)

Effective Date: 6/1/2027

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	$23.37	$11.60	$8.55	$6.60	$0.00	$50.12
2	56.25	$26.29	$11.60	$8.55	$6.60	$0.00	$53.04
3	62.50	$29.21	$11.60	$8.55	$6.60	$0.00	$55.96
4	68.75	$32.13	$11.60	$8.55	$6.60	$0.00	$58.88
5	75.00	$35.05	$11.60	$8.55	$6.60	$0.00	$61.80
6	81.25	$37.97	$11.60	$8.55	$6.60	$0.00	$64.72
7	87.50	$40.89	$11.60	$8.55	$6.60	$0.00	$67.64
8	93.75	$43.81	$11.60	$8.55	$6.60	$0.00	$70.56

Apprentice to Journeyworker Ratio: 3:1

HOISTING ENGINEER/CRANES/GRADALLS	6/1/2026	$59.38	$17.05	$13.35	$3.25	$0.00	$93.03
OPERATING ENGINEERS LOCAL 4	12/1/2026	$60.83	$17.05	$13.35	$3.25	$0.00	$94.48
OPERATING ENGINEERS LOCAL 4							

Apprentice: HOISTING ENGINEER/CRANES/GRADALLS

Effective Date: 6/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	55.00	$32.66	$0.00	$0.00	$0.00	$0.00	$32.66
2	60.00	$35.63	$17.05	$13.35	$3.25	$0.00	$69.28
3	65.00	$38.60	$17.05	$13.35	$3.25	$0.00	$72.25
4	70.00	$41.57	$17.05	$13.35	$3.25	$0.00	$75.22
5	75.00	$44.54	$17.05	$13.35	$3.25	$0.00	$78.19
6	80.00	$47.50	$17.05	$13.35	$3.25	$0.00	$81.15
7	85.00	$50.47	$17.05	$13.35	$3.25	$0.00	$84.12
8	90.00	$53.44	$17.05	$13.35	$3.25	$0.00	$87.09

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate

Apprentice: HOISTING ENGINEER/CRANES/GRADALLS

Effective Date: 12/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	55.00	$33.46	$0.00	$0.00	$0.00	$0.00	$33.46
2	60.00	$36.50	$17.05	$13.35	$3.25	$0.00	$70.15
3	65.00	$39.54	$17.05	$13.35	$3.25	$0.00	$73.19
4	70.00	$42.58	$17.05	$13.35	$3.25	$0.00	$76.23
5	75.00	$45.62	$17.05	$13.35	$3.25	$0.00	$79.27
6	80.00	$48.66	$17.05	$13.35	$3.25	$0.00	$82.31
7	85.00	$51.71	$17.05	$13.35	$3.25	$0.00	$85.36
8	90.00	$54.75	$17.05	$13.35	$3.25	$0.00	$88.40

Apprentice to Journeyworker Ratio: 1:6

HVAC (DUCTWORK) SHEETMETAL WORKERS LOCAL 17 SHEETMETAL WORKERS LOCAL 17 - A	2/1/2026	$62.93	$14.91	$18.74	$9.53	$2.98	$109.09
For apprentice rates see "Apprentice- SHEET METAL WORKER"							
HVAC (ELECTRICAL CONTROLS) ELECTRICIANS LOCAL 223 ELECTRICIANS LOCAL 223	9/1/2026	$54.72	$12.50	$15.56	$4.00	$0.00	$86.78
For apprentice rates see "Apprentice- ELECTRICIAN"							
HVAC (TESTING AND BALANCING - AIR) SHEETMETAL WORKERS LOCAL 17 SHEETMETAL WORKERS LOCAL 17 - A	2/1/2026	$62.93	$14.91	$18.74	$9.53	$2.98	$109.09
For apprentice rates see "Apprentice- SHEET METAL WORKER"							
HVAC (TESTING AND BALANCING -WATER) PLUMBERS & PIPEFITTERS LOCAL 51 PLUMBERS & PIPEFITTERS LOCAL 51	8/25/2025	$55.24	$10.80	$16.80	$4.60	$0.00	$87.44
For apprentice rates see "Apprentice- PIPEFITTER" or "PLUMBER/PIPEFITTER"							
HVAC MECHANIC PLUMBERS & PIPEFITTERS LOCAL 51 PLUMBERS & PIPEFITTERS LOCAL 51	8/25/2025	$55.24	$10.80	$16.80	$4.60	$0.00	$87.44
For apprentice rates see "Apprentice- PIPEFITTER" or "PLUMBER/PIPEFITTER"							
HYDRAULIC DRILLS LABORERS LABORERS - ZONE 2	6/1/2026	$42.41	$10.90	$9.75	$9.11	$0.00	$72.17
	12/1/2026	$43.85	$10.90	$9.75	$9.11	$0.00	$73.61
	6/1/2027	$45.30	$10.90	$9.75	$9.11	$0.00	$75.06
	12/1/2027	$46.75	$10.90	$9.75	$9.11	$0.00	$76.51
	6/1/2028	$48.25	$10.90	$9.75	$9.11	$0.00	$78.01
	12/1/2028	$49.75	$10.90	$9.75	$9.11	$0.00	$79.51
For apprentice rates see "Apprentice- LABORER"							
HYDRAULIC DRILLS (HEAVY & HIGHWAY) LABORERS LABORERS - ZONE 2 (HEAVY & HIGHWAY)	6/1/2026	$42.41	$10.90	$9.75	$9.21	$0.00	$72.27
	12/1/2026	$43.85	$10.90	$9.75	$9.21	$0.00	$73.71

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)							
INSULATOR (PIPES & TANKS) HEAT & FROST INSULATORS LOCAL 6 HEAT & FROST INSULATORS LOCAL 6 (SOUTHERN MASS)	9/1/2026	$53.12	$16.15	$11.46	$11.49	$0.00	$92.22

Apprentice: INSULATOR (PIPES & TANKS)

Effective Date: 9/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	$26.56	$16.15	$11.21	$5.75	$0.00	$59.67
2	60.00	$31.87	$16.15	$11.26	$6.89	$0.00	$66.17
3	70.00	$37.18	$16.15	$11.31	$8.04	$0.00	$72.68
4	80.00	$42.50	$16.15	$11.36	$9.19	$0.00	$79.20

Apprentice to Journeyworker Ratio: 1:4

IRONWORKER/WELDER IRONWORKERS LOCAL 37 IRONWORKERS LOCAL 37	3/16/2021	$42.46	$7.70	$12.10	$5.00	$0.00	$67.26

Apprentice: IRONWORKER/WELDER

Effective Date: 3/16/2021

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	70.00	$29.72	$7.70	$12.10	$5.00	$0.00	$54.52
2	75.00	$31.85	$7.70	$12.10	$5.00	$0.00	$56.65
3	80.00	$33.97	$7.70	$12.10	$5.00	$0.00	$58.77
4	85.00	$36.09	$7.70	$12.10	$5.00	$0.00	$60.89
5	90.00	$38.21	$7.70	$12.10	$5.00	$0.00	$63.01
6	95.00	$40.34	$7.70	$12.10	$5.00	$0.00	$65.14

Apprentice to Journeyworker Ratio: 1:4

JACKHAMMER & PAVING BREAKER OPERATOR LABORERS LABORERS - ZONE 2	6/1/2026	$41.91	$10.90	$9.75	$9.11	$0.00	$71.67
	12/1/2026	$43.35	$10.90	$9.75	$9.11	$0.00	$73.11
	6/1/2027	$44.80	$10.90	$9.75	$9.11	$0.00	$74.56
	12/1/2027	$46.25	$10.90	$9.75	$9.11	$0.00	$76.01
	6/1/2028	$47.75	$10.90	$9.75	$9.11	$0.00	$77.51
	12/1/2028	$49.25	$10.90	$9.75	$9.11	$0.00	$79.01
For apprentice rates see "Apprentice- LABORER"							
LABORER LABORERS LABORERS - ZONE 2	6/1/2026	$41.66	$10.90	$9.75	$9.11	$0.00	$71.42
	12/1/2026	$43.10	$10.90	$9.75	$9.11	$0.00	$72.86
	6/1/2027	$44.55	$10.90	$9.75	$9.11	$0.00	$74.31
	12/1/2027	$46.00	$10.90	$9.75	$9.11	$0.00	$75.76
	6/1/2028	$47.50	$10.90	$9.75	$9.11	$0.00	$77.26
	12/1/2028	$49.00	$10.90	$9.75	$9.11	$0.00	$78.76

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate

Apprentice: LABORER

Effective Date: 6/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	60.00	$25.00	$10.90	$9.75	$9.11	$0.00	$54.76
2	70.00	$29.16	$10.90	$9.75	$9.11	$0.00	$58.92
3	80.00	$33.33	$10.90	$9.75	$9.11	$0.00	$63.09
4	90.00	$37.49	$10.90	$9.75	$9.11	$0.00	$67.25

Apprentice: LABORER

Effective Date: 12/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	60.00	$25.86	$10.90	$9.75	$9.11	$0.00	$55.62
2	70.00	$30.17	$10.90	$9.75	$9.11	$0.00	$59.93
3	80.00	$34.48	$10.90	$9.75	$9.11	$0.00	$64.24
4	90.00	$38.79	$10.90	$9.75	$9.11	$0.00	$68.55

Apprentice to Journeyworker Ratio: 1:5

LABORER (HEAVY & HIGHWAY)	6/1/2026	$41.66	$10.90	$9.75	$9.21	$0.00	$71.52
LABORERS LABORERS - ZONE 2 (HEAVY & HIGHWAY)	12/1/2026	$43.10	$10.90	$9.75	$9.21	$0.00	$72.96

Apprentice: LABORER (HEAVY & HIGHWAY)

Effective Date: 6/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	60.00	$25.00	$10.90	$9.75	$9.21	$0.00	$54.86
2	70.00	$29.16	$10.90	$9.75	$9.21	$0.00	$59.02
3	80.00	$33.33	$10.90	$9.75	$9.21	$0.00	$63.19
4	90.00	$37.49	$10.90	$9.75	$9.10	$0.00	$67.24

Apprentice: LABORER (HEAVY & HIGHWAY)

Effective Date: 12/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	60.00	$25.86	$10.90	$9.75	$9.21	$0.00	$55.72
2	70.00	$30.17	$10.90	$9.75	$9.21	$0.00	$60.03
3	80.00	$34.48	$10.90	$9.75	$9.21	$0.00	$64.34
4	90.00	$38.79	$10.90	$9.75	$9.21	$0.00	$68.65

Apprentice to Journeyworker Ratio: 1:5

LABORER: CARPENTER TENDER	6/1/2026	$41.66	$10.90	$9.75	$9.11	$0.00	$71.42

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
LABORERS LABORERS - ZONE 2	12/1/2026	$43.10	$10.90	$9.75	$9.11	$0.00	$72.86
	6/1/2027	$44.55	$10.90	$9.75	$9.11	$0.00	$74.31
	12/1/2027	$46.00	$10.90	$9.75	$9.11	$0.00	$75.76
	6/1/2028	$47.50	$10.90	$9.75	$9.11	$0.00	$77.26
	12/1/2028	$49.00	$10.90	$9.75	$9.11	$0.00	$78.76
For apprentice rates see "Apprentice- LABORER"							
LABORER: CEMENT FINISHER TENDER LABORERS LABORERS - ZONE 2	6/1/2026	$41.66	$10.90	$9.75	$9.11	$0.00	$71.42
	12/1/2026	$43.10	$10.90	$9.75	$9.11	$0.00	$72.86
	6/1/2027	$44.55	$10.90	$9.75	$9.11	$0.00	$74.31
	12/1/2027	$46.00	$10.90	$9.75	$9.11	$0.00	$75.76
	6/1/2028	$47.50	$10.90	$9.75	$9.11	$0.00	$77.26
	12/1/2028	$49.00	$10.90	$9.75	$9.11	$0.00	$78.76
For apprentice rates see "Apprentice- LABORER"							
LABORER: HAZARDOUS WASTE/ASBESTOS REMOVER LABORERS LABORERS - ZONE 2	6/1/2026	$41.75	$10.90	$9.75	$9.65	$0.00	$72.05
	12/7/2026	$43.19	$10.90	$9.75	$9.65	$0.00	$73.49
	6/7/2027	$44.64	$10.90	$9.75	$9.65	$0.00	$74.94
	12/6/2027	$46.09	$10.90	$9.75	$9.65	$0.00	$76.39
	6/5/2028	$47.59	$10.90	$9.75	$9.65	$0.00	$77.89
	12/4/2028	$49.09	$10.90	$9.75	$9.65	$0.00	$79.39
For apprentice rates see "Apprentice- LABORER"							
LABORER: MASON TENDER LABORERS LABORERS - ZONE 2	6/1/2026	$41.91	$10.90	$9.75	$9.11	$0.00	$71.67
	12/1/2026	$43.35	$10.90	$9.75	$9.11	$0.00	$73.11
	6/1/2027	$44.80	$10.90	$9.75	$9.11	$0.00	$74.56
	12/1/2027	$46.25	$10.90	$9.75	$9.11	$0.00	$76.01
	6/1/2028	$47.75	$10.90	$9.75	$9.11	$0.00	$77.51
	12/1/2028	$49.25	$10.90	$9.75	$9.11	$0.00	$79.01
For apprentice rates see "Apprentice- LABORER"							
LABORER: MASON TENDER (HEAVY & HIGHWAY) LABORERS LABORERS - ZONE 2 (HEAVY & HIGHWAY)	6/1/2026	$41.91	$10.90	$9.75	$9.21	$0.00	$71.77
	12/1/2026	$43.35	$10.90	$9.75	$9.21	$0.00	$73.21
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"							
LABORER: MULTI-TRADE TENDER LABORERS LABORERS - ZONE 2	6/1/2026	$41.66	$10.90	$9.75	$9.11	$0.00	$71.42
	12/1/2026	$43.10	$10.90	$9.75	$9.11	$0.00	$72.86
	6/1/2027	$44.55	$10.90	$9.75	$9.11	$0.00	$74.31
	12/1/2027	$46.00	$10.90	$9.75	$9.11	$0.00	$75.76
	6/1/2028	$47.50	$10.90	$9.75	$9.11	$0.00	$77.26
	12/1/2028	$49.00	$10.90	$9.75	$9.11	$0.00	$78.76
For apprentice rates see "Apprentice- LABORER"							
LABORER: TREE REMOVER LABORERS LABORERS - ZONE 2	6/1/2026	$41.66	$10.90	$9.75	$9.11	$0.00	$71.42
	12/1/2026	$43.10	$10.90	$9.75	$9.11	$0.00	$72.86
	6/1/2027	$44.55	$10.90	$9.75	$9.11	$0.00	$74.31
	12/1/2027	$46.00	$10.90	$9.75	$9.11	$0.00	$75.76
	6/1/2028	$47.50	$10.90	$9.75	$9.11	$0.00	$77.26
	12/1/2028	$49.00	$10.90	$9.75	$9.11	$0.00	$78.76
This classification applies to the removal of standing trees, and the trimming and removal of branches and limbs when related to public works construction or site clearance							

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
incidental to construction . For apprentice rates see "Apprentice- LABORER"							
LASER BEAM OPERATOR	6/1/2026	$41.91	$10.90	$9.75	$9.11	$0.00	$71.67
LABORERS LABORERS - ZONE 2	12/1/2026	$43.35	$10.90	$9.75	$9.11	$0.00	$73.11
	6/1/2027	$44.80	$10.90	$9.75	$9.11	$0.00	$74.56
	12/1/2027	$46.25	$10.90	$9.75	$9.11	$0.00	$76.01
	6/1/2028	$47.75	$10.90	$9.75	$9.11	$0.00	$77.51
	12/1/2028	$49.25	$10.90	$9.75	$9.11	$0.00	$79.01
For apprentice rates see "Apprentice- LABORER"							
LASER BEAM OPERATOR (HEAVY & HIGHWAY)	6/1/2026	$41.91	$10.90	$9.75	$9.21	$0.00	$71.77
LABORERS LABORERS - ZONE 2 (HEAVY & HIGHWAY)	12/1/2026	$43.35	$10.90	$9.75	$9.21	$0.00	$73.21
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"							
MARBLE & TILE FINISHERS	8/1/2026	$53.84	$12.84	$15.57	$5.78	$0.00	$88.03
BRICKLAYERS LOCAL 3 BRICKLAYERS LOCAL 3 - MARBLE & TILE	2/1/2027	$54.96	$12.84	$15.57	$5.78	$0.00	$89.15

Apprentice: MARBLE & TILE FINISHERS

Effective Date: 8/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	$26.92	$12.84	$15.57	$5.78	$0.00	$61.11
2	60.00	$32.30	$12.84	$15.57	$5.78	$0.00	$66.49
3	70.00	$37.69	$12.84	$15.57	$5.78	$0.00	$71.88
4	80.00	$43.07	$12.84	$15.57	$5.78	$0.00	$77.26
5	90.00	$48.46	$12.84	$15.57	$5.78	$0.00	$82.65

Apprentice: MARBLE & TILE FINISHERS

Effective Date: 2/1/2027

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	$27.48	$12.84	$15.57	$5.78	$0.00	$61.67
2	60.00	$32.98	$12.84	$15.57	$5.78	$0.00	$67.17
3	70.00	$38.47	$12.84	$15.57	$5.78	$0.00	$72.66
4	80.00	$43.97	$12.84	$15.57	$5.78	$0.00	$78.16
5	90.00	$49.46	$12.84	$15.57	$5.78	$0.00	$83.65

Apprentice to Journeyworker Ratio: 1:5

MARBLE MASONS,TILELAYERS & TERRAZZO MECH	8/1/2026	$70.17	$12.84	$15.57	$7.99	$0.00	$106.57
BRICKLAYERS LOCAL 3 BRICKLAYERS LOCAL 3 - MARBLE & TILE	2/1/2027	$71.57	$12.84	$15.57	$7.99	$0.00	$107.97

Apprentice: MARBLE MASONS,TILELAYERS & TERRAZZO MECH

Effective Date: 8/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate

Apprentice: MARBLE MASONS,TILELAYERS & TERRAZZO MECH

Effective Date: 8/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	$35.09	$12.84	$15.57	$7.99	$0.00	$71.49
2	60.00	$42.10	$12.84	$15.57	$7.99	$0.00	$78.50
3	70.00	$49.12	$12.84	$15.57	$7.99	$0.00	$85.52
4	80.00	$56.14	$12.84	$15.57	$7.99	$0.00	$92.54
5	90.00	$63.15	$12.84	$15.57	$7.99	$0.00	$99.55

Apprentice: MARBLE MASONS,TILELAYERS & TERRAZZO MECH

Effective Date: 2/1/2027

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	$35.79	$12.84	$15.57	$7.99	$0.00	$72.19
2	60.00	$42.94	$12.84	$15.57	$7.99	$0.00	$79.34
3	70.00	$50.10	$12.84	$15.57	$7.99	$0.00	$86.50
4	80.00	$57.26	$12.84	$15.57	$7.99	$0.00	$93.66
5	90.00	$64.41	$12.84	$15.57	$7.99	$0.00	$100.81

Apprentice to Journeyworker Ratio: 1:5

MECH. SWEEPER OPERATOR (ON CONST. SITES) OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS LOCAL 4	6/1/2026 12/1/2026	$58.70 $60.14	$17.05 $17.05	$13.35 $13.35	$3.25 $3.25	$0.00 $0.00	$92.35 $93.79
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
MECHANICS MAINTENANCE OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS LOCAL 4	6/1/2026 12/1/2026	$58.70 $60.14	$17.05 $17.05	$13.35 $13.35	$3.25 $3.25	$0.00 $0.00	$92.35 $93.79
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
MILLWRIGHT (Zone 2) MILLWRIGHTS LOCAL 1121 MILLWRIGHTS LOCAL 1121 - Zone 2	1/5/2026	$46.86	$10.58	$11.47	$10.00	$0.00	$78.91

Apprentice: MILLWRIGHT (Zone 2)

Effective Date: 1/5/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	55.00	$25.77	$10.58	$0.00	$5.50	$0.00	$41.85
2	65.00	$30.46	$10.58	$0.00	$6.50	$0.00	$47.54
3	75.00	$35.15	$10.58	$11.47	$7.50	$0.00	$64.70
4	85.00	$39.83	$10.58	$11.47	$8.50	$0.00	$70.38

Apprentice Notes

Step 1&2 Appr. indentured after 1/6/2020 receive no pension,

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
Apprentice to Journeyworker Ratio: 1:4							
MORTAR MIXER LABORERS LABORERS - ZONE 2	6/1/2026	$41.91	$10.90	$9.75	$9.11	$0.00	$71.67
	12/1/2026	$43.35	$10.90	$9.75	$9.11	$0.00	$73.11
	6/1/2027	$44.80	$10.90	$9.75	$9.11	$0.00	$74.56
	12/1/2027	$46.25	$10.90	$9.75	$9.11	$0.00	$76.01
	6/1/2028	$47.75	$10.90	$9.75	$9.11	$0.00	$77.51
	12/1/2028	$49.25	$10.90	$9.75	$9.11	$0.00	$79.01
For apprentice rates see "Apprentice- LABORER"							
OILER (OTHER THAN TRUCK CRANES,GRADALLS) OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS LOCAL 4	6/1/2026	$25.07	$17.05	$13.35	$3.25	$0.00	$58.72
	12/1/2026	$25.74	$17.05	$13.35	$3.25	$0.00	$59.39
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
OILER (TRUCK CRANES, GRADALLS) OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS LOCAL 4	6/1/2026	$31.17	$17.05	$13.35	$3.25	$0.00	$64.82
	12/1/2026	$31.97	$17.05	$13.35	$3.25	$0.00	$65.62
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
OTHER POWER DRIVEN EQUIPMENT - CLASS II OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS LOCAL 4	6/1/2026	$58.70	$17.05	$13.35	$3.25	$0.00	$92.35
	12/1/2026	$60.14	$17.05	$13.35	$3.25	$0.00	$93.79
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
PAINTER (BRIDGES/TANKS) PAINTERS LOCAL 35 PAINTERS LOCAL 35 - ZONE 2	1/1/2026	$59.56	$10.35	$12.00	$12.50	$0.00	$94.41

Apprentice: PAINTER (BRIDGES/TANKS)

Effective Date: 1/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	$29.78	$10.35	$0.00	$0.00	$0.00	$40.13
2	55.00	$32.76	$10.35	$0.00	$6.93	$0.00	$50.04
3	60.00	$35.74	$10.35	$0.00	$7.56	$0.00	$53.65
4	65.00	$38.71	$10.35	$0.00	$8.19	$0.00	$57.25
5	70.00	$41.69	$10.35	$12.00	$8.82	$0.00	$72.86
6	75.00	$44.67	$10.35	$12.00	$9.45	$0.00	$76.47
7	80.00	$47.65	$10.35	$12.00	$10.08	$0.00	$80.08
8	90.00	$53.60	$10.35	$12.00	$11.34	$0.00	$87.29

Apprentice to Journeyworker Ratio: 1:1							
PAINTER (SPRAY OR SANDBLAST, NEW) * * If 30% or more of surfaces to be painted are new construction, NEW paint rate shall be used. PAINTERS LOCAL 35 PAINTERS LOCAL 35 - ZONE 2	1/1/2026	$50.46	$10.35	$12.00	$12.60	$0.00	$85.41

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate

Apprentice: PAINTER (SPRAY OR SANDBLAST, NEW) *

Effective Date: 1/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	$25.23	$10.35	$0.00	$0.00	$0.00	$35.58
2	55.00	$27.75	$10.35	$0.00	$6.93	$0.00	$45.03
3	60.00	$30.28	$10.35	$0.00	$7.56	$0.00	$48.19
4	65.00	$32.80	$10.35	$0.00	$8.19	$0.00	$51.34
5	70.00	$35.32	$10.35	$12.00	$8.82	$0.00	$66.49
6	75.00	$37.85	$10.35	$12.00	$9.45	$0.00	$69.65
7	80.00	$40.37	$10.35	$12.00	$10.08	$0.00	$72.80
8	90.00	$45.41	$10.35	$12.00	$11.34	$0.00	$79.10

Apprentice to Journeyworker Ratio: 1:1

PAINTER (SPRAY OR SANDBLAST, REPAINT) PAINTERS LOCAL 35 PAINTERS LOCAL 35 - ZONE 2	1/1/2026	$48.52	$10.35	$12.00	$12.60	$0.00	$83.47

Apprentice: PAINTER (SPRAY OR SANDBLAST, REPAINT)

Effective Date: 1/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	$24.26	$10.35	$0.00	$0.00	$0.00	$34.61
2	55.00	$26.69	$10.35	$0.00	$6.93	$0.00	$43.97
3	60.00	$29.11	$10.35	$0.00	$7.56	$0.00	$47.02
4	65.00	$31.54	$10.35	$0.00	$8.19	$0.00	$50.08
5	70.00	$33.96	$10.35	$12.00	$8.82	$0.00	$65.13
6	75.00	$36.39	$10.35	$12.00	$9.45	$0.00	$68.19
7	80.00	$38.82	$10.35	$12.00	$10.08	$0.00	$71.25
8	90.00	$43.67	$10.35	$12.00	$11.34	$0.00	$77.36

Apprentice to Journeyworker Ratio: 1:1

PAINTER / TAPER (BRUSH, NEW) * * If 30% or more of surfaces to be painted are new construction, NEW paint rate shall be used. PAINTERS LOCAL 35 PAINTERS LOCAL 35 - ZONE 2	1/1/2026	$49.06	$10.35	$12.00	$12.60	$0.00	$84.01

Apprentice: PAINTER / TAPER (BRUSH, NEW) *

Effective Date: 1/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	$24.53	$10.35	$0.00	$0.00	$0.00	$34.88
2	55.00	$26.98	$10.35	$0.00	$6.93	$0.00	$44.26
3	60.00	$29.44	$10.35	$0.00	$7.56	$0.00	$47.35

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
Apprentice: PAINTER / TAPER (BRUSH, NEW) *							
Effective Date: 1/1/2026							
Step / Percent		**Apprentice Base Wage**					
4 / 65.00		$31.89	$10.35	$0.00	$8.19	$0.00	$50.43
5 / 70.00		$34.34	$10.35	$12.00	$8.82	$0.00	$65.51
6 / 75.00		$36.80	$10.35	$12.00	$9.45	$0.00	$68.60
7 / 80.00		$39.25	$10.35	$12.00	$10.08	$0.00	$71.68
8 / 90.00		$44.15	$10.35	$12.00	$11.34	$0.00	$77.84
Apprentice to Journeyworker Ratio: 1:1							
PAINTER / TAPER (BRUSH, REPAINT) PAINTERS LOCAL 35 PAINTERS LOCAL 35 - ZONE 2	1/1/2026	$47.12	$10.35	$12.00	$12.60	$0.00	$82.07
Apprentice: PAINTER / TAPER (BRUSH, REPAINT)							
Effective Date: 1/1/2026							
Step / Percent		**Apprentice Base Wage**					
1 / 50.00		$23.56	$10.35	$0.00	$0.00	$0.00	$33.91
2 / 55.00		$25.92	$10.35	$0.00	$6.93	$0.00	$43.20
3 / 60.00		$28.27	$10.35	$0.00	$7.56	$0.00	$46.18
4 / 65.00		$30.63	$10.35	$0.00	$8.19	$0.00	$49.17
5 / 70.00		$32.98	$10.35	$12.00	$8.82	$0.00	$64.15
6 / 75.00		$35.34	$10.35	$12.00	$9.45	$0.00	$67.14
7 / 80.00		$37.70	$10.35	$12.00	$10.08	$0.00	$70.13
8 / 90.00		$42.41	$10.35	$12.00	$11.34	$0.00	$76.10
Apprentice to Journeyworker Ratio: 1:1							
PAINTER TRAFFIC MARKINGS (HEAVY/HIGHWAY) LABORERS LABORERS - ZONE 2 (HEAVY & HIGHWAY)	6/1/2026	$41.66	$10.90	$9.75	$9.21	$0.00	$71.52
	12/1/2026	$43.10	$10.90	$9.75	$9.21	$0.00	$72.96
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)							
PANEL & PICKUP TRUCKS DRIVER TEAMSTERS JOINT COUNCIL NO. 10 TEAMSTERS JOINT COUNCIL NO. 10 ZONE B	6/1/2026	$41.78	$16.17	$21.78	$0.00	$0.00	$79.73
	12/1/2026	$41.78	$16.17	$23.52	$0.00	$0.00	$81.47
	1/1/2027	$41.78	$16.77	$23.52	$0.00	$0.00	$82.07
PIER AND DOCK CONSTRUCTOR (UNDERPINNING AND DECK) PILE DRIVER LOCAL 56 PILE DRIVER LOCAL 56 (ZONE 1)	8/1/2024	$55.79	$10.08	$11.62	$12.67	$0.00	$90.16
For apprentice rates see "Apprentice- PILE DRIVER"							
PILE DRIVER PILE DRIVER LOCAL 56 PILE DRIVER LOCAL 56 (ZONE 1)	8/1/2024	$55.79	$10.08	$11.62	$12.67	$0.00	$90.16

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate

Apprentice: PILE DRIVER

Effective Date: 8/1/2024

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	45.00	$25.11	$10.08	$0.00	$2.53	$0.00	$37.72
2	55.00	$30.68	$10.08	$0.00	$5.07	$0.00	$45.83
3	70.00	$39.05	$10.08	$11.62	$7.60	$0.00	$68.35
4	80.00	$44.63	$10.08	$11.62	$10.14	$0.00	$76.47

Apprentice to Journeyworker Ratio: 1:5

PIPELAYER	6/1/2026	$41.91	$10.90	$9.75	$9.11	$0.00	$71.67
LABORERS	12/1/2026	$43.35	$10.90	$9.75	$9.11	$0.00	$73.11
LABORERS - ZONE 2	6/1/2027	$44.80	$10.90	$9.75	$9.11	$0.00	$74.56
	12/1/2027	$46.25	$10.90	$9.75	$9.11	$0.00	$76.01
	6/1/2028	$47.75	$10.90	$9.75	$9.11	$0.00	$77.51
	12/1/2028	$49.25	$10.90	$9.75	$9.11	$0.00	$79.01

For apprentice rates see "Apprentice- LABORER"

PIPELAYER (HEAVY & HIGHWAY)	6/1/2026	$41.91	$10.90	$9.75	$9.21	$0.00	$71.77
LABORERS	12/1/2026	$43.35	$10.90	$9.75	$9.21	$0.00	$73.21
LABORERS - ZONE 2 (HEAVY & HIGHWAY)							

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

PLUMBER & PIPEFITTER	8/25/2025	$55.24	$10.80	$16.80	$4.60	$0.00	$87.44
PLUMBERS & PIPEFITTERS LOCAL 51							
PLUMBERS & PIPEFITTERS LOCAL 51							

Apprentice: PLUMBER & PIPEFITTER

Effective Date: 8/25/2025

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	40.00	$22.10	$10.15	$2.50	$0.00	$0.00	$34.75
2	50.00	$27.62	$10.15	$2.50	$0.00	$0.00	$40.27
3	60.00	$33.14	$10.15	$8.40	$0.50	$0.00	$52.19
4	70.00	$38.67	$10.15	$13.44	$0.80	$0.00	$63.06
5	80.00	$44.19	$10.15	$16.80	$1.00	$0.00	$72.14

Apprentice to Journeyworker Ratio: 1:3

PNEUMATIC CONTROLS (TEMP.)	8/25/2025	$55.24	$10.80	$16.80	$4.60	$0.00	$87.44
PLUMBERS & PIPEFITTERS LOCAL 51							
PLUMBERS & PIPEFITTERS LOCAL 51							

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

PNEUMATIC DRILL/TOOL OPERATOR	6/1/2026	$41.91	$10.90	$9.75	$9.11	$0.00	$71.67
LABORERS	12/1/2026	$43.35	$10.90	$9.75	$9.11	$0.00	$73.11
LABORERS - ZONE 2	6/1/2027	$44.80	$10.90	$9.75	$9.11	$0.00	$74.56
	12/1/2027	$46.25	$10.90	$9.75	$9.11	$0.00	$76.01

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
	6/1/2028	$47.75	$10.90	$9.75	$9.11	$0.00	$77.51
	12/1/2028	$49.25	$10.90	$9.75	$9.11	$0.00	$79.01
For apprentice rates see "Apprentice- LABORER"							
PNEUMATIC DRILL/TOOL OPERATOR (HEAVY & HIGHWAY)	6/1/2026	$41.91	$10.90	$9.75	$9.21	$0.00	$71.77
LABORERS LABORERS - ZONE 2 (HEAVY & HIGHWAY)	12/1/2026	$43.35	$10.90	$9.75	$9.21	$0.00	$73.21
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"							
POWDERMAN & BLASTER	6/1/2026	$42.66	$10.90	$9.75	$9.11	$0.00	$72.42
LABORERS LABORERS - ZONE 2	12/1/2026	$44.10	$10.90	$9.75	$9.11	$0.00	$73.86
	6/1/2027	$45.55	$10.90	$9.75	$9.11	$0.00	$75.31
	12/1/2027	$47.00	$10.90	$9.75	$9.11	$0.00	$76.76
	6/1/2028	$48.50	$10.90	$9.75	$9.11	$0.00	$78.26
	12/1/2028	$50.00	$10.90	$9.75	$9.11	$0.00	$79.76
For apprentice rates see "Apprentice- LABORER"							
POWDERMAN & BLASTER (HEAVY & HIGHWAY)	6/1/2026	$42.66	$10.90	$9.75	$9.21	$0.00	$72.52
LABORERS LABORERS - ZONE 2 (HEAVY & HIGHWAY)	12/1/2026	$44.10	$10.90	$9.75	$9.21	$0.00	$73.96
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"							
POWER SHOVEL/DERRICK/TRENCHING MACHINE	6/1/2026	$59.38	$17.05	$13.35	$3.25	$0.00	$93.03
OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS LOCAL 4	12/1/2026	$60.83	$17.05	$13.35	$3.25	$0.00	$94.48
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
PUMP OPERATOR (CONCRETE)	6/1/2026	$58.70	$17.05	$13.35	$3.25	$0.00	$92.35
OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS LOCAL 4	12/1/2026	$60.14	$17.05	$13.35	$3.25	$0.00	$93.79
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
PUMP OPERATOR (DEWATERING, OTHER)	6/1/2026	$37.63	$17.05	$13.35	$3.25	$0.00	$71.28
OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS LOCAL 4	12/1/2026	$38.58	$17.05	$13.35	$3.25	$0.00	$72.23
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
READY-MIX CONCRETE DRIVER	8/1/2023	$25.00	$13.91	$6.90	$0.00	$0.00	$45.81
TEAMSTERS 653 TEAMSTERS 653 - Southeastern Concrete (Weymouth)							
RECLAIMERS	6/1/2026	$58.70	$17.05	$13.35	$3.25	$0.00	$92.35
OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS LOCAL 4	12/1/2026	$60.14	$17.05	$13.35	$3.25	$0.00	$93.79
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
RIDE-ON MOTORIZED BUGGY OPERATOR	6/1/2026	$41.91	$10.90	$9.75	$9.11	$0.00	$71.67
LABORERS LABORERS - ZONE 2	12/1/2026	$43.35	$10.90	$9.75	$9.11	$0.00	$73.11
	6/1/2027	$44.80	$10.90	$9.75	$9.11	$0.00	$74.56
	12/1/2027	$46.25	$10.90	$9.75	$9.11	$0.00	$76.01
	6/1/2028	$47.75	$10.90	$9.75	$9.11	$0.00	$77.51
	12/1/2028	$49.25	$10.90	$9.75	$9.11	$0.00	$79.01
For apprentice rates see "Apprentice- LABORER"							

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
ROLLER/SPREADER/MULCHING MACHINE	6/1/2026	$58.70	$17.05	$13.35	$3.25	$0.00	$92.35
OPERATING ENGINEERS LOCAL 4	12/1/2026	$60.14	$17.05	$13.35	$3.25	$0.00	$93.79
OPERATING ENGINEERS LOCAL 4							

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

ROOFER (Inc.Roofer Waterproofng &Roofer Damproofg)	8/1/2026	$55.25	$14.53	$12.67	$9.03	$0.00	$91.48
ROOFERS LOCAL 33	2/1/2027	$57.00	$14.53	$12.67	$9.03	$0.00	$93.23
ROOFERS LOCAL 33	8/1/2027	$58.75	$14.53	$12.67	$9.03	$0.00	$94.98
	2/1/2028	$60.50	$14.53	$12.67	$9.03	$0.00	$96.73
	8/1/2028	$62.25	$14.53	$12.67	$9.03	$0.00	$98.48
	2/1/2029	$64.00	$14.53	$12.67	$9.03	$0.00	$100.23
	8/1/2029	$65.65	$14.53	$12.67	$9.03	$0.00	$101.88
	2/1/2030	$67.40	$14.53	$12.67	$9.03	$0.00	$103.63

Apprentice: ROOFER (Inc.Roofer Waterproofng &Roofer Damproofg)

Effective Date: 8/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	0.00	$0.00	$14.53	$6.34	$0.00	$0.00	$20.87
2	0.00	$0.00	$14.53	$12.67	$9.03	$0.00	$36.23
3	0.00	$0.00	$14.53	$12.67	$9.03	$0.00	$36.23
4	0.00	$0.00	$14.53	$12.67	$9.03	$0.00	$36.23
5	0.00	$0.00	$14.53	$12.67	$9.03	$0.00	$36.23

Apprentice: ROOFER (Inc.Roofer Waterproofng &Roofer Damproofg)

Effective Date: 2/1/2027

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	0.00	$0.00	$14.53	$6.34	$0.00	$0.00	$20.87
2	0.00	$0.00	$14.53	$12.67	$9.03	$0.00	$36.23
3	0.00	$0.00	$14.53	$12.67	$9.03	$0.00	$36.23
4	0.00	$0.00	$14.53	$12.67	$9.03	$0.00	$36.23
5	0.00	$0.00	$14.53	$12.67	$9.03	$0.00	$36.23

Apprentice Notes

** 1:5, 2:6-10, the 1:10; Reroofing: 1:4, then 1:1

Apprentice to Journeyworker Ratio: 1:5

ROOFER SLATE / TILE / PRECAST CONCRETE	8/1/2026	$55.50	$14.53	$12.67	$9.03	$0.00	$91.73
ROOFERS LOCAL 33	2/1/2027	$57.25	$14.53	$12.67	$9.03	$0.00	$93.48
ROOFERS LOCAL 33	8/1/2027	$59.00	$14.53	$12.67	$9.03	$0.00	$95.23
	2/1/2028	$60.75	$14.53	$12.67	$9.03	$0.00	$96.98
	8/1/2028	$62.50	$14.53	$12.67	$9.03	$0.00	$98.73
	2/1/2029	$64.25	$14.53	$12.67	$9.03	$0.00	$100.48
	8/1/2029	$65.90	$14.53	$12.67	$9.03	$0.00	$102.13
	2/1/2030	$67.65	$14.53	$12.67	$9.03	$0.00	$103.88

For apprentice rates see "Apprentice- ROOFER"

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
SHEETMETAL WORKER SHEETMETAL WORKERS LOCAL 17 SHEETMETAL WORKERS LOCAL 17 - A	2/1/2026	$62.93	$14.91	$18.74	$9.53	$2.98	$109.09

Apprentice: SHEETMETAL WORKER

Effective Date: 2/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	42.00	$26.43	$14.91	$6.19	$0.00	$0.00	$47.53
2	42.00	$26.43	$14.91	$6.19	$0.00	$0.00	$47.53
3	47.00	$29.58	$14.91	$10.93	$1.25	$1.62	$58.29
4	47.00	$29.58	$14.91	$10.93	$1.25	$1.62	$58.29
5	52.00	$32.72	$14.91	$11.66	$1.50	$1.74	$62.53
6	52.00	$32.72	$14.91	$11.66	$1.75	$1.75	$62.79
7	60.00	$37.76	$14.91	$12.84	$2.00	$1.93	$69.44
8	65.00	$40.90	$14.91	$13.58	$2.25	$2.04	$73.68
9	75.00	$47.20	$14.91	$15.06	$2.75	$2.28	$82.20
10	85.00	$53.49	$14.91	$16.53	$2.75	$2.49	$90.17

Apprentice to Journeyworker Ratio: 1:4

SPECIALIZED EARTH MOVING EQUIP < 35 TONS TEAMSTERS JOINT COUNCIL NO. 10 TEAMSTERS JOINT COUNCIL NO. 10 ZONE B	6/1/2026	$42.24	$16.17	$21.78	$0.00	$0.00	$80.19
	12/1/2026	$42.24	$16.17	$23.52	$0.00	$0.00	$81.93
	1/1/2027	$42.24	$16.77	$23.52	$0.00	$0.00	$82.53
SPECIALIZED EARTH MOVING EQUIP > 35 TONS TEAMSTERS JOINT COUNCIL NO. 10 TEAMSTERS JOINT COUNCIL NO. 10 ZONE B	6/1/2026	$42.53	$16.17	$21.78	$0.00	$0.00	$80.48
	12/1/2026	$42.53	$16.17	$23.52	$0.00	$0.00	$82.22
	1/1/2027	$42.53	$16.77	$23.52	$0.00	$0.00	$82.82
SPRINKLER FITTER SPRINKLER FITTERS LOCAL 550 SPRINKLER FITTERS LOCAL 550 - (Section A) Zone 1	10/1/2026	$73.30	$13.55	$7.45	$20.30	$0.00	$114.60
	1/1/2027	$73.30	$14.80	$7.50	$19.00	$0.00	$114.60

Apprentice: SPRINKLER FITTER

Effective Date: 10/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	0.00	$25.66	$13.55	$14.56	$0.00	$0.00	$53.77
2	0.00	$29.32	$13.55	$15.57	$0.00	$0.00	$58.44
3	0.00	$32.99	$13.55	$16.59	$0.00	$0.00	$63.13
4	0.00	$36.65	$13.55	$17.60	$0.00	$0.00	$67.80
5	0.00	$40.32	$13.55	$18.62	$2.50	$0.00	$74.99
6	0.00	$43.98	$13.55	$19.63	$4.00	$0.00	$81.16
7	0.00	$47.65	$13.55	$20.65	$4.00	$0.00	$85.85
8	0.00	$51.31	$13.55	$21.66	$4.00	$0.00	$90.52
9	0.00	$54.98	$13.55	$22.68	$4.00	$0.00	$95.21
10	0.00	$58.64	$13.55	$23.69	$4.00	$0.00	$99.88

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
Apprentice: SPRINKLER FITTER							
Effective Date: 1/1/2027							
Step / Percent / Apprentice Base Wage							
1 / 0.00		$25.66	$14.80	$14.16	$2.50	$0.00	$57.12
2 / 0.00		$29.32	$14.80	$15.10	$2.50	$0.00	$61.72
3 / 0.00		$32.99	$14.80	$16.06	$2.50	$0.00	$66.35
4 / 0.00		$36.65	$14.80	$17.00	$2.50	$0.00	$70.95
5 / 0.00		$40.32	$14.80	$17.96	$2.50	$0.00	$75.58
6 / 0.00		$43.98	$14.80	$18.90	$4.00	$0.00	$81.68
7 / 0.00		$47.65	$14.80	$19.86	$4.00	$0.00	$86.31
8 / 0.00		$51.31	$14.80	$20.29	$4.00	$0.00	$90.40
9 / 0.00		$54.98	$14.80	$21.76	$4.00	$0.00	$95.54
10 / 0.00		$58.64	$14.80	$22.70	$4.00	$0.00	$100.14
Apprentice Notes							
Apprentice entered prior 9/30/10:							
Apprentice to Journeyworker Ratio: 1:3							
STEAM BOILER OPERATOR	6/1/2026	$58.70	$17.05	$13.35	$3.25	$0.00	$92.35
OPERATING ENGINEERS LOCAL 4	12/1/2026	$60.14	$17.05	$13.35	$3.25	$0.00	$93.79
OPERATING ENGINEERS LOCAL 4							
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
TAMPERS, SELF-PROPELLED OR TRACTOR DRAWN	6/1/2026	$58.70	$17.05	$13.35	$3.25	$0.00	$92.35
OPERATING ENGINEERS LOCAL 4	12/1/2026	$60.14	$17.05	$13.35	$3.25	$0.00	$93.79
OPERATING ENGINEERS LOCAL 4							
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
TELECOMMUNICATION TECHNICIAN	9/1/2026	$44.41	$12.25	$12.59	$3.50	$0.00	$72.75
TELECOMMUNICATION TECHNICIAN	9/1/2027	$46.51	$12.50	$13.18	$3.75	$0.00	$75.94
ELECTRICIANS LOCAL 223							
ELECTRICIANS LOCAL 223							
For apprentice rates and ratios see "Apprentice- ELECTRICIAN"							
TERRAZZO FINISHERS	8/1/2026	$69.09	$12.84	$15.57	$8.02	$0.00	$105.52
BRICKLAYERS LOCAL 3	2/1/2027	$70.49	$12.84	$15.57	$8.02	$0.00	$106.92
BRICKLAYERS LOCAL 3 - MARBLE & TILE							
Apprentice: TERRAZZO FINISHERS							
Effective Date: 8/1/2026							
Step / Percent / Apprentice Base Wage							
1 / 50.00		$34.55	$12.84	$15.57	$8.02	$0.00	$70.98
2 / 60.00		$41.45	$12.84	$15.57	$8.02	$0.00	$77.88
3 / 70.00		$48.36	$12.84	$15.57	$8.02	$0.00	$84.79
4 / 80.00		$55.27	$12.84	$15.57	$8.02	$0.00	$91.70

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate

Apprentice: TERRAZZO FINISHERS

Effective Date: 8/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
5	90.00	$62.18	$12.84	$15.57	$8.02	$0.00	$98.61

Apprentice: TERRAZZO FINISHERS

Effective Date: 2/1/2027

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	$35.25	$12.84	$15.57	$8.02	$0.00	$71.68
2	60.00	$42.29	$12.84	$15.57	$8.02	$0.00	$78.72
3	70.00	$49.34	$12.84	$15.57	$8.02	$0.00	$85.77
4	80.00	$56.39	$12.84	$15.57	$8.02	$0.00	$92.82
5	90.00	$63.44	$12.84	$15.57	$8.02	$0.00	$99.87

Apprentice to Journeyworker Ratio: 1:5

TEST BORING DRILLER LABORERS LABORERS - FOUNDATION AND MARINE	6/1/2026	$53.25	$10.90	$9.75	$9.80	$0.00	$83.70
	12/1/2026	$54.75	$10.90	$9.75	$9.80	$0.00	$85.20
For apprentice rates see "Apprentice- LABORER"							
TEST BORING DRILLER HELPER LABORERS LABORERS - FOUNDATION AND MARINE	6/1/2026	$49.37	$10.90	$9.75	$9.80	$0.00	$79.82
	12/1/2026	$50.87	$10.90	$9.75	$9.80	$0.00	$81.32
For apprentice rates see "Apprentice- LABORER"							
TEST BORING LABORER LABORERS LABORERS - FOUNDATION AND MARINE	6/1/2026	$49.25	$10.90	$9.75	$9.80	$0.00	$79.70
	12/1/2026	$50.75	$10.90	$9.75	$9.80	$0.00	$81.20
For apprentice rates see "Apprentice- LABORER"							
TRACTORS/PORTABLE STEAM GENERATORS OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS LOCAL 4	6/1/2026	$58.70	$17.05	$13.35	$3.25	$0.00	$92.35
	12/1/2026	$60.14	$17.05	$13.35	$3.25	$0.00	$93.79
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
TRAILERS FOR EARTH MOVING EQUIPMENT TEAMSTERS JOINT COUNCIL NO. 10 TEAMSTERS JOINT COUNCIL NO. 10 ZONE B	6/1/2026	$42.82	$16.17	$21.78	$0.00	$0.00	$80.77
	12/1/2026	$42.82	$16.17	$23.52	$0.00	$0.00	$82.51
	1/1/2027	$42.82	$16.77	$23.52	$0.00	$0.00	$83.11
TUNNEL WORK - COMPRESSED AIR LABORERS LABORERS (COMPRESSED AIR)	6/1/2026	$61.48	$10.90	$9.75	$10.25	$0.00	$92.38
	12/1/2026	$62.98	$10.90	$9.75	$10.25	$0.00	$93.88
For apprentice rates see "Apprentice- LABORER"							
TUNNEL WORK - COMPRESSED AIR (HAZ. WASTE) LABORERS LABORERS (COMPRESSED AIR)	6/1/2026	$63.48	$10.90	$9.75	$10.25	$0.00	$94.38
	12/1/2026	$64.98	$10.90	$9.75	$10.25	$0.00	$95.88

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
For apprentice rates see "Apprentice- LABORER"							
TUNNEL WORK - FREE AIR	6/1/2026	$53.55	$10.90	$9.75	$10.25	$0.00	$84.45
LABORERS	12/1/2026	$55.05	$10.90	$9.75	$10.25	$0.00	$85.95
LABORERS (FREE AIR TUNNEL)							
For apprentice rates see "Apprentice- LABORER"							
TUNNEL WORK - FREE AIR (HAZ. WASTE)	6/1/2026	$55.55	$10.90	$9.75	$10.25	$0.00	$86.45
LABORERS	12/1/2026	$57.05	$10.90	$9.75	$10.25	$0.00	$87.95
LABORERS (FREE AIR TUNNEL)							
For apprentice rates see "Apprentice- LABORER"							
VAC-HAUL	6/1/2026	$42.24	$16.17	$21.78	$0.00	$0.00	$80.19
TEAMSTERS JOINT COUNCIL NO. 10	12/1/2026	$42.24	$16.17	$23.52	$0.00	$0.00	$81.93
TEAMSTERS JOINT COUNCIL NO. 10 ZONE B	1/1/2027	$42.24	$16.77	$23.52	$0.00	$0.00	$82.53
WAGON DRILL OPERATOR	6/1/2026	$41.91	$10.90	$9.75	$9.11	$0.00	$71.67
LABORERS	12/1/2026	$43.35	$10.90	$9.75	$9.11	$0.00	$73.11
LABORERS - ZONE 2	6/1/2027	$44.80	$10.90	$9.75	$9.11	$0.00	$74.56
	12/1/2027	$46.25	$10.90	$9.75	$9.11	$0.00	$76.01
	6/1/2028	$47.75	$10.90	$9.75	$9.11	$0.00	$77.51
	12/1/2028	$49.25	$10.90	$9.75	$9.11	$0.00	$79.01
For apprentice rates see "Apprentice- LABORER"							
WAGON DRILL OPERATOR (HEAVY & HIGHWAY)	6/1/2026	$41.91	$10.90	$9.75	$9.21	$0.00	$71.77
LABORERS	12/1/2026	$43.35	$10.90	$9.75	$9.21	$0.00	$73.21
LABORERS - ZONE 2 (HEAVY & HIGHWAY)							
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"							
WASTE WATER PUMP OPERATOR	6/1/2026	$59.38	$17.05	$13.35	$3.25	$0.00	$93.03
OPERATING ENGINEERS LOCAL 4	12/1/2026	$60.83	$17.05	$13.35	$3.25	$0.00	$94.48
OPERATING ENGINEERS LOCAL 4							
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
WATER METER INSTALLER	8/25/2025	$55.24	$10.80	$16.80	$4.60	$0.00	$87.44
PLUMBERS & PIPEFITTERS LOCAL 51							
PLUMBERS & PIPEFITTERS LOCAL 51							
For apprentice rates see "Apprentice- PLUMBER/PIPEFITTER" or "PLUMBER/GASFITTER"							

Additional Apprentice Information

All apprentices must be registered with the Division of Apprenticeship Training(DAS) in accordance with M.G.L.c. 23, §§ 11E-11L. Minimum wage rates for apprentices employed on public works projects are listed above as a percentage of the hourly prevailing wage rate established by the Commissioner under the provisions of M.G.L.c. 149, §§ 26-27D.

Apprentice ratios are established by DAS pursuant to M.G.L.c. 23, §§ 11E-11L. Ratios are expressed as the allowable number of apprentices to journeymen or fraction thereof, unless otherwise specified. The ratios listed herein have been taken from relevant private collective bargaining agreements(CBAs) and are provided for illustrative purposes only. They have not been independently verified as being accurate or continuing to be accurate.

Parties having questions regarding what ratio to use should contact DAS.

DIVISION 1

SECTION 01010

SUMMARY OF WORK

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Work covered by the Contract, listing of Owner, Project location, Engineer. Sequence requirements, the Contractor's use of the premises and Owner's occupancy requirements.

1.02 WORK COVERED BY CONTRACT DOCUMENTS

A. The Work includes, but is not necessarily limited to the construction of approximately:
   1. **Construction of Center Street Utility Bridge**
   2. **Concrete Abutment Cap Installation**
   3. **Approximately 450 Feet of 12" Water Pipe Installation**
   4. **Installing Steel Pipe Sleeves Under Existing Retaining Walls**
   5. **Earthworks**
   6. **Paving, Curbing, and Site Restoration**
   7. **Traffic Control**
   8. **All related civil/site work**

   all as more particularly indicated, shown or described in the Drawings, Specifications, and other Contract Documents.

1.03 OWNER

A. Town of Middleborough
   Department of Public Works
   65 Sachem Street
   Middleborough, MA 02346
   Telephone: 508-946-2480

1.04 PROJECT LOCATION

A. Center Street in Middleboro, MA between Railway Hl Road and Cambridge Street

1.05 ENGINEER

A. Benesch

   24 Federal Street, 6th Floor
   Boston, MA 02110
   Telephone: 617-288-0900
   Contact: Lawrence McGillicuddy, P.E. lmcgillicuddy@benesch.com

1.06 WORK SEQUENCE

A. In order that Work may be conducted with minimum inconvenience to the public and, work under this Contract may be coordinated with other work which may be under construction or contemplated, and that work under the Contract may conform to conditions which it has been undertaken or conditions attached to a right-of-way or particular location for this work, the Engineer may determine the point or points and time or times when portions of work will commence or be carried on and may issue orders pertaining to the work sequence, relative to the rate of progress on several portions of the work.

1.07 CONTRACTOR USE OF PREMISES

A. The Contractor's use of premises shall be within the limits shown on the Drawings and as defined in Section 00500 – Contract Agreement, for the performance of the Work.

B. The Contractor shall maintain vehicular and pedestrian access across Center Street, Railway Hl Rd, Cambridge Street, and all public roads and sidewalks all times unless a request from the contractor has been submitted to the engineer in writing and thereby approved by the engineer. If access is limited or restricted the contractor shall provide at a minimum of 30 days' notice.

C. The Contractor shall assume full responsibility for security of all materials and equipment on the site, including those of his subcontractor's.

D. If directed by the Owner, the Contractor shall move any stored items that interfere with operations of the Owner.

E. Obtain and pay for use of additional storage or work areas if needed to perform the Work.

F. The Contractor shall maintain access and utilities to the existing water system at all times.

1.08 OWNER OCCUPANCY REQUIREMENTS

A. The existing water main at the limits of the project must remain in full service at all times, throughout the duration of the project.

PART 2 PRODUCTS

NOT USED

PART 3 EXECUTION

NOT USED

END OF SECTION

SECTION 01015

SPECIAL CONDITIONS

PART 1 GENERAL

1.01 SUMMARY

A. Section Includes

1. Supplementary requirements governing temporary bypass systems, work hours, and traffic control.

B. Related sections

1. Section 00700 – General Conditions
2. Section 00800 – Supplementary Conditions
3. Section 01570 – Traffic Regulations

1.02 SCHEDULE

A. Contract Time

1. The total Contract Time to complete the project shall be 365 calendar days starting on or before the date stated in the Notice to Proceed.

2. Contractor shall be aware of the planting seasons for seeding. Planting seasons shall be April 1 to June 1 and September 1 to November 1.

1.03 WORK HOURS

A. Regular working hours are defined as 8 hours per day, Monday through Friday, excluding federal and state holidays, between the hours of 7:30 AM and 3:30 PM. The Contractor shall also abide by work hour restrictions set forth in or required under permits obtained by the Contractor or Owner in connection with the Project. Requests to work other than regular working hours shall be submitted to Engineer not less than 48 hours prior to any proposed weekend work or scheduled extended work weeks.

1.04 TRAFFIC REQUIREMENTS

A. Equipment shall not be stored within the roadway outside of the Contractor's specified work hours. The roadway shall be opened to two lanes of traffic at the end of each workday. The Contractor's equipment and materials shall be stored off site outside of specified work hours.
B. One lane of alternating residential and emergency traffic must be able to pass at all times.
C. Excavated water services must be plated at all times prior to backfilling.
D. Comply with the requirements of Section 01570.

1.05 EXCAVATIONS

1. The Contractor shall furnish and install, as required, temporary excavation support including sheeting, shoring, and bracing of shallow trench excavations as necessary to comply with Applicable Safety Code; to accommodate traffic; to permit access to adjacent occupied properties; to protect adjacent buildings, pavements, structures and all existing utilities; to provide an opening of proper depth and width in which to install the proposed pipes and other underground structures; and to protect his workmen, employees of the Owner and Engineer, State and the public, from death or injury from bank failure, earth collapse or earth movement of any nature whatsoever.

1.06 COORDINATION WITH POLICE & FIRE

1. The Contractor is required to coordinate his work daily with the **Town of Middleborough** Police and Fire Departments.

1.07 COORDINATION WITH MASSDOT

A. The Contractor shall comply with all requirements, provisions, and procedures set forth in Appendix B for the duration of the Project. The Contractor shall be responsible for reviewing and adhering to all applicable Appendix B requirements and shall perform all work in accordance therewith. Coordination with the Massachusetts Department of Transportation (MassDOT) shall be maintained throughout all phases of the Project as identified in Appendix B. The Contractor shall ensure timely communication and coordination with MassDOT regarding project activities, scheduling, traffic impacts, inspections, approvals, and any other matters requiring MassDOT involvement or oversight.

B. Prior to commencing any work associated with the installation of pipe below existing wingwalls, the Contractor shall submit to MassDOT for review and approval a detailed installation plan, shop drawings, and a comprehensive written procedure describing the proposed means and methods of installation. The submittal shall include all information necessary to demonstrate that the work can be completed safely and without adverse impact to the existing structures, roadway, or surrounding facilities. No pipe installation work below existing wingwalls shall begin until written approval of the submitted documents has been received from MassDOT.

1.08 COORDINATION WITH MBTA

A. The Contractor shall comply with all MBTA requirements and shall coordinate with the MBTA throughout all phases of the Project as identified in Appendix C. The Contractor shall be responsible for obtaining all necessary approvals, access authorizations, and right-of-entry permissions required for the performance of the Work within or adjacent to MBTA property. All coordination activities shall be conducted in accordance with the procedures and requirements specified in Appendix C. Where required by the MBTA, the Contractor shall provide and schedule railroad flagging services and shall incorporate all flagging requirements, restrictions, and associated costs into its Work plan and project schedule. The Contractor shall not

commence any work within MBTA jurisdiction until all applicable right-of-entry requirements have been satisfied and any required flag protection has been arranged and authorized by the MBTA.

END OF SECTION

SECTION 01020

ALLOWANCES

PART 1 GENERAL

1.01 SUMMARY

A. Section Includes

1. Contingencies and their respective values, which have been established in the BID as an estimated lump sup to facilitate comparison of bids only.

B. Related sections

1. Section 00300 – Bid Forms
2. Section 01025 – Measurement and Payment

1.02 ALLOWANCES

A. Uniformed Traffic Officers – Bid Item 998.1

1. Coordinate and schedule uniformed traffic officers prior to commencement of work on public ways.

1.03 PAYMENT PROCEDURES

A. Under this item, the Contractor shall be reimbursed for charges for the allowances required and authorized by the Owner and Engineer, as detailed in Section 01025 - Measurement and Payment.
B. The lump-sum price for allowances is established in Section 00300 - Bid Forms as an estimated figure to facilitate comparison of bids only. The actual amount to be paid under this item shall constitute full compensation for services rendered.
C. The Contractor will be paid based on the actual PAID invoiced amount from the authority in question as approved by the Engineer. If the total cost for such charges is greater or less than the allowance amount stated under this item of the BID, a debit or credit of the difference in cost shall be to the Owner.

PART 2 PRODUCTS

NOT USED

PART 3 EXECUTION

NOT USED

END OF SECTION

SECTION 01025

MEASUREMENT AND PAYMENT

PART 1 GENERAL

1.01 SCOPE

A. The purpose of this section is to define the basis of measurement and payment for the unit price or lump sum items listed in SECTION 00300, FORM OF GENERAL BID.

B. Section 9.00 of the Commonwealth of Massachusetts Highway Department (MassDOT) Standard Specifications for Highways and Bridges dated 2026 is hereby included in their entirety.

1.02 PAYMENT ITEMS

A. Work Items of this Project are referenced with Items Numbers and Item Descriptions similar to those currently in use by the MassDOT, Highway Division.

1.03 BASIS OF MEASUREMENT AND PAYMENT

A. Method of Measurement and Basis of Payment for Work Items shall be as called for under the appropriate section of the MassDOT Standard Specifications, unless modified in Section 02500, Special Provisions.

ALLOWANCES

BID ITEM NO. 998.1 UNIFORMED TRAFFIC OFFICERS ALLOWANCE

1. Under this Item the Contractor shall be reimbursed for certain charges for the services rendered of uniformed traffic officers to provide traffic control as specified.

2. The allowance for this item established in the Bid is an estimated figure to facilitate the comparison of bids. The actual amount to be paid under this item shall constitute full compensation for wages paid, premiums on workers' compensation insurance, payment on account of social security and other direct assessments on payroll, and all other costs incidental to the employment of such uniformed officers.

3. Payment will be based on the actual paid invoiced amount from the Police Department without allowance for mark up, overhead or profit.

4. If the total cost for uniformed traffic officers is greater or less than the amount stated in the Bid, a debit or credit of the difference in cost shall be to the Owner.
5. Payment shall be made to the Police department no later than 30 calendar days after the Contractor receives any invoices for Police services rendered.

PRICE ADJUSTMENTS

BID ITEM NO. 999.1 PRICE ADJUSTMENT FOR DIESEL FUEL

1. This adjustment will be based on fuel usage factors for various items of work developed by the Highway Research Board in Circular 158, dated July 1974. These factors will be multiplied by the quantities of work done in each item during each monthly period and further multiplied by the variance in price from the Base Price to the Period Price.

2. The Base Price of Diesel Fuel will be the price as indicated in the Bid. The Period Price will be the average of prices charged to the State, including State Tax for the bulk purchases made during each month, as published on the Massachusetts Department of Transportation's (MassDOT) website.

3. This adjustment will be applicable to excavation eligible for payment, material items furnished through excavation related Items, all measurements as determined by the Engineer and based on a fuel factor of 0.29 gallons per cubic yard.

4. This adjustment will be effected only if the variance from the Base Price is 5% or more for a monthly period. The complete adjustment will be paid in all cases with no deduction of the 5% from either upward or downward adjustments.

5. No adjustment will be paid for work done beyond the extended completion date of the Contract.

6. Any adjustment (increase or decrease) to estimated quantities made to each item at the time of final payment will have the fuel price adjustment figured at the average period price for the entire term of the project for the difference of quantity.

BID ITEM NO. 999.2 PRICE ADJUSTMENT FOR GASOLINE

1. This adjustment will be based on fuel usage factors for various items of work developed by the Highway Research Board in Circular 158, dated July 1974. These factors will be multiplied by the quantities of work done in each Item during each monthly period and further multiplied by the variance in price from the Base Price to the Period Price.

2. The Base Price of Gasoline will be the price as indicated in the Bid. The Period Price will be the average of prices charged to the State, including State Tax for the bulk purchases made during each month, as published on the Massachusetts Department of Transportation's (MassDOT) website.

3. This adjustment will be applicable to excavation eligible for payment, material items furnished through excavation related Items, all measurements as determined by the Engineer and based on a fuel factor of 0.15 gallons per cubic yard.

4. This adjustment will be effected only if the variance from the Base Price is 5% or more for a monthly period. The complete adjustment will be paid in all cases with no deduction of the 5% from either upward or downward adjustments.

5. No adjustment will be paid for work done beyond the extended completion date of the Contract.

6. Any adjustment (increase or decrease) to estimated quantities made to each item at the time of final payment will have the fuel price adjustment figured at the average period price for the entire term of the project for the difference of quantity.

BID ITEM NO. 999.3 PRICE ADJUSTMENT FOR LIQUID ASPHALT

1. The Price Adjustment will be based on the variance in price for the liquid asphalt component only from the Base Price to the Period Price. It shall not include transportation or other charges. This Price Adjustment will occur on a monthly basis.

2. The Base Price of Liquid Asphalt will be the price as indicated in the Bid. The Period Price will be the average of prices charged to the State, including State Tax for the bulk purchases made during each month, as published on the Massachusetts Department of Transportation's (MassDOT) website.

3. This adjustment will be applicable to Bid Items involving the installation of temporary and/or permanent pavement, all measurements as determined by the Engineer by multiplying the number of tons of hot mix asphalt mixtures placed during each monthly period times the liquid asphalt content percentage times the variance in price between Base Price and Period Price of liquid asphalt.

4. In calculating the price adjustment, where temporary and permanent pavement is part of the lump sum Bid Item, the measurement for price adjustment shall be based on actual tonnage slips provided for all pavements installed within the payment limits indicated on the Drawings or as directed by the Engineer.

5. The Contract Price of the hot mix asphalt mixture will be paid under the respective item in the Contract. The price adjustment, as herein provided, upwards or downwards, will be made after the work has been performed, using the monthly period price for the month during which the work was performed.

6. The Price Adjustment applies only to the actual virgin liquid asphalt content in the mixture placed on the job in accordance with the Standard Specifications for Highways and Bridges, Division III, Section M3.11.03.

7. This adjustment will be effected only if the variance from the Base Price is 5% or more for a monthly period. The complete adjustment will be paid in all cases with no deduction of the 5% from either upward or downward adjustments.

8. No adjustment will be paid for work done beyond the extended completion date of the Contract.

BID ITEM NO. 999.4 PRICE ADJUSTMENT FOR PORTLAND CEMENT

1. The Price Adjustment will be based on the variance in price for the Portland cement component only from the Base Price to the Period Price. It shall not include transportation or other charges.

2. The Base Price of Portland Cement will be the price as indicated in the Bid. The Period Price of Portland cement will be determined by using the latest published price, in dollars per ton (U.S.), for Portland cement (Type I) quoted for Boston, U.S.A. in the Construction Economics section of ENR Engineering News-Record magazine, and republished on the Massachusetts Department of Transportation's (MassDOT) website.

3. The price adjustment applies only to the actual Portland cement content in the mix placed on the job in accordance with the Standard Specifications for Highways and Bridges, Division III, Section M4.02.01. No adjustments will be made for any cement replacement materials such as fly ash or ground granulated blast furnace slag.

4. The Contract Price of the Portland cement concrete mix will be paid under the respective item in the Contract. The price adjustment, as herein provided, upwards or downwards, will be made after the work has been performed, using the monthly period price for the month during which the work was performed and determined by multiplying the number of cubic yards of Portland cement concrete placed during each monthly period, as measured by the Engineer, times the Portland cement content percentage times the variance in price between the Base Price and Period Price of Portland cement.

5. This adjustment will be effected only if the variance from the Base Price is 5% or more for a monthly period. The complete adjustment will be paid in all cases with no deduction of the 5% from either upward or downward adjustments.

6. No adjustment will be paid for work done beyond the extended completion date of the Contract.

PART 2 PRODUCTS

NOT USED

PART 3 EXECUTION

NOT USED

END OF SECTION

SECTION 01035

MODIFICATION PROCEDURES

PART 1 GENERAL

1.01 SUMMARY

A. Section Includes

1. Procedures for making modifications to the Contract by change orders or other means.

B. Related Sections

1. Section 00500 - Agreement

1.02 CHANGE ORDERS

A. In general Change Orders will be issued for modification of Contract documents which will incorporate changes in the Contract requirements, including additions or deletions in the Work; for unforeseen field conditions which will necessitate changes in the Work; changes in code provisions or other requirements of federal, state or local authority requiring changes in the Work; changes in the availability of products or for incorporating new products into the work and for changes directed by the Engineer for the benefit of the Owner.

B. Authority to execute Change Orders shall be that of the Engineer and not of the Contractor. Changes Orders will, in general, originate by a “Change Order Proposal Request” or by issuance of a “Construction Change Authorization”.

C. Unless authorized by the Engineer, no work shall be performed that is involved in the change until a formal Change Order is issued.

D. To initiate a Change Order, the Engineer will forward a Change Order proposal request describing the proposed changes and if required, include additional or revised drawings and specifications soliciting a formal quotation of cost and time to complete the proposed Change Order work. Upon reaching mutual agreement on the cost and time, the Engineer will sign his approval of the Change Order and submit it to the Contractor for his full signature of acceptance.

1.03 FIELD ORDERS

A. The Engineer may, to avoid costly removal of, or alterations to, present on-going work, issue a Work Directive Change authorizing the Contractor to proceed, subject to later negotiation of the price of the change.

1.04 PRICE AGREEMENTS

A. Prices agreed upon to cover the Change Orders may be either by mutual acceptance of a lump sum or by unit prices as stated in the Contract bid proposal or actual direct cost plus a percentage for overhead, profit and other expenses consistent with Section 00500 – Contract Agreement.

B. Work done by a subcontractor entitles the General Contractor a percentage of the sum of the actual direct cost, not including the subcontractor's overhead and profit, consistent with Section 00500 – Contract Agreement.

C. Method for computing the cost of the change shall be based on the net additional increase. No overhead and profit shall be deducted from prices for changes deleting work.

D. The Change Order form document shall indicate the net adjustment (+/-) to the total Contract price as a result thereof including extension or reduction of time when applicable.

PART 2 PRODUCTS

NOT USED

PART 3 EXECUTION

NOT USED

END OF SECTION

SECTION 01040

COORDINATION

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Requirements for coordinating the various parts of Work under this Contract.

1.02 REQUIREMENTS

A. Coordinate scheduling, submittals, and Work of the various Sections of specifications to assure efficient and orderly sequence of installation of interdependent construction elements.

B. Coordinate completion and clean up of Work of separate Sections in preparation for Substantial Completion.

C. After Owner occupancy of premises, coordinate access to site for correction of defective Work and Work not in accordance with Contract Documents, to minimize disruption of Owner's activities.

D. Coordinate work with all utility companies necessary for completion of work under this contract.

E. Coordinate with MBTA for work windows and approval of procedures.

PART 2 PRODUCTS

NOT USED

PART 3 EXECUTION NOT USED

END OF SECTION

SECTION 01050

FIELD ENGINEERING

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Survey work and other field engineering responsibilities of the Contractor.

1.02 REQUIREMENTS

A. The Contractor shall be responsible for layout of the work and the establishing of lines and grades.

B. Establish elevations, lines, levels, reference marks, batter boards, etc., required during the progress of the Work. Verify such marks by instrument to confirm accuracy.

C. Locate and protect survey control and reference points.

D. Make, check, and be responsible for all measurements and dimensions necessary for the proper construction of the Work.

E. The Engineer will be permitted to check the lines, elevations, reference marks, batter boards, etc., set by the Contractor. The Contractor shall correct any errors found in lines, elevations, reference marks, batter boards, etc. Such a check shall not be construed as approval of the Contractor's work and shall not relieve or diminish the responsibility of the Contractor for the accurate construction and completion of the Work.

F. Control datum for survey as shown on Drawings.

1.03 QUALITY ASSURANCE

A. Qualifications

1. Employ a Civil Engineer or Land Surveyor registered within the State of Massachusetts, acceptable to the Engineer.

B. Certifications

1. Submit certificate signed by the Contractor’s Engineer or Land Surveyor stating elevations and locations of the Work are in conformance with the Contract Documents.

PART 2 PRODUCTS

NOT USED

PART 3 EXECUTION

NOT USED

END OF SECTION

SECTION 01060

REGULATORY REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Building codes, Mechanical codes, and Electrical codes, Regulations, Permits and Fees applicable to the project.

1.02 PERMITS BY CONTRACTOR

A. The Contractor shall secure all necessary permits from the state, city or town authorities having jurisdiction, for digging of trenches in the streets or highways and all other building and construction operations requiring permits.

B. As a minimum the following permits are required:

1. Excavation and Trench Safety Permit in accordance with M.G.L. c. 82A, and 520 CMR 14.00 – Town of Middleborough, Dept. of Public Works. See **Appendix A.**
2. MassDOT approval for pipe casing/sleeve beneath existing wingwalls, See **Appendix B.**

1.03 CODES

A. The Contractor shall conform to the requirements of and pay all fees imposed by local and State Building Authorities having jurisdiction over the Work. The Contractor is responsible to conform to all building, mechanical, electrical and plumbing code requirements.

B. The Contractor shall conform to the latest requirements of the following codes:

1. Federal, State and Municipal Laws
2. Any prevailing rules and regulations pertaining to adequate protection and/or guarding of any moving parts or otherwise hazardous locations.

1.05 FEES

A. The cost of all permits secured by the Contractor shall be borne by him and shall be considered as having been included in the price or prices stated in the Bid. Copies of all required permits shall be filed with the Engineer prior to starting work for which a permit is required.

1.06 REGULATORY PERMITS

A. The Contractor shall adhere to all requirements within MassDOT State Highway Access Permit No. 5-2025-0680. Refer to **Appendix B.**

B. The Contractor shall adhere to all requirements within Massachusetts Bay Transportation Authority License for Entry Permit 24076. Refer to **Appendix C.**

PART 2 PRODUCTS

NOT USED

PART 3 EXECUTION

NOT USED

END OF SECTION

SECTION 01065

MATERIAL PRICE ADJUSTMENT

PART 1 GENERAL

1.01 SECTION INCLUDES

A. General Provisions
B. MGL Chapter 30 Section 38A
C. Fuel Price Adjustment, (Both Diesel and Gas)
D. Asphalt Price Adjustment
E. Cement Price Adjustment
F. Structural and Reinforcing Steel Price Adjustment

1.02 GENERAL PROVISIONS

A. The herein specified material price adjustments are required in contracts for road, bridge water and sewer projects awarded under Chapter 30, Section 39M of the Massachusetts General Laws.

B. Material price adjustments are not required for contracts awarded under Chapter 149, Section 44A of the Massachusetts General Laws.

1.03 MASSACHUSETTS GENERAL LAW CHAPTER 30 SECTION 38A

A. Section 38A. “Contracts for road and bridge projects awarded as a result of a proposal or invitation for bids under section 39M shall include a price adjustment clause for each of the following materials: fuel, both diesel and gasoline; asphalt; concrete; and steel. Contracts for water and sewer projects awarded as a result of a proposal or invitation for bids under said section 39M shall include a price adjustment clause for fuel, both diesel and gasoline; liquid asphalt; and portland cement contained in cast-in-place concrete. A base price for each material shall be set by the awarding authority or agency and shall be included in the bid documents at the time the project is advertised. The awarding authority or agency shall also identify in the bid documents the price index to be used for each material. The price adjustment clause shall provide for a contract adjustment to be made on a monthly basis when the monthly cost change exceeds plus or minus 5 per cent.”

1.04 FUEL PRICE ADJUSTMENT, (BOTH DIESEL AND GAS)

A. This monthly fuel price adjustment is inserted in this contract because the national and worldwide energy situation has made the future cost of fuel unpredictable. This adjustment will provide for either additional compensation to the Contractor or repayment to the Owner, depending on an increase or decrease in the average price of diesel fuel or gasoline.

B. The fuel adjustment for prices increasing or decreasing 5% or more will be based on the actual number of gallons of diesel and/or gasoline fuel utilized for an individual monthly period as verified through the requirements stated herein, and further multiplied by the variance in price from the Base Price to the Period Price.

C. The Base Price of Diesel Fuel and Gasoline will be the price as indicated in the Massachusetts DOT Highway Division’s web site:

http://www.massdot.state.ma.us/highway/DoingBusinessWithUs/Construction/PriceAdjustments.aspx for the month in which the contract was bid, which included State Tax.

D. The Period Price will be the average of prices charged to the State, including State Tax for the bulk purchases made during each month.

E. This adjustment will be effected only if the variance from the Base Price is 5% or more for a monthly period. The complete adjustment will be paid in all cases with no deduction of the 5% from either upward or downward adjustments.

F. No adjustment will be paid for work done beyond the extended completion date of any contract.

G. Any adjustment (increase or decrease) to estimated quantities made to each item at the time of final payment will have the fuel price adjustment figured at the average period price for the entire term of the project for the difference of quantity.

H. The Contractor shall supply to the Owner a list of equipment, **on a monthly basis,** being utilized on the project that requires diesel and gasoline fuel. The Owner must approve the list prior to any fuel slips being submitted. The Contractor shall supply diesel and gas fuel slips to the Owner, on a monthly basis, for only the equipment specified on the list and approved to have been utilized on the project for that month. The slips must indicate the source (company supplying the fuel), date, project name, whether the fuel is diesel or gasoline, the equipment fueled and the volume of the fuel for that equipment.
Only slips with the aforementioned information will be considered in determining fuel adjustment prices.

I. The Diesel Fuel Base Price for this Contract will be $4.693.

J. The Gasoline Fuel Base Price for this Contract will be $3.341.

1.05 ASPHALT PRICE ADJUSTMENT

A. This provision applies to all projects using greater than 100 tons of hot mix asphalt (HMA) mixtures containing liquid asphalt cement as stipulated in this section.

B. The Price Adjustment will be based on the variance in price for the liquid asphalt component only from the Base Price to the Period Price. It shall not include transportation or other charges. This Price Adjustment will occur on a monthly basis.

C. Base Price

1. The Base Price of liquid asphalt on a project as listed herein, is a fixed price determined at the time of bid by the Department (MassHighway), by using the same method as for the determination of the Period Price detailed below.

D. Period Price

1. Please note that, starting July 19, 2013, only one asphalt period price (formerly called the “New Asphalt Period Price”) will be posted each month on the

MassHighway website:
http://www.massdot.state.ma.us/highway/DoingBusinessWithUs/Construction/PriceAdju stments.aspx

E. New Asphalt Period Price Method (Currently called “Period Price”)

1. The “New Asphalt Period Price Method” is for contracts bid after December 15, 2008 and will show the Period Price of liquid asphalt for each monthly period as determined by MassHighway using the average selling price per standard ton of PG64-28 paving grade (primary binder classification) asphalt, FOB manufacturer's terminal, as listed under the "East Coast Market - New England, Boston, Massachusetts area" section of the Poten & Partners, Inc. "Asphalt Weekly Monitor". This average selling price is listed in the issue having a publication date of the second Friday of the month and will be posted as the Period Price for that month. MassHighway will post this Period Price on this website within two (2) business days following their receipt of the relevant issue of the “Asphalt Weekly Monitor". Poten and Partners has granted MassHighway the right to publish this specific asphalt price information sourced from the Asphalt Weekly Monitor.

F. Old Asphalt Period Price Method (Obsolete)

1. The “Old Asphalt Period Price Method” Period Price will be for contracts bid on or before December 15, 2008 and will contain liquid asphalt prices as determined by the old or previous method. These prices will continue to be posted on MassHighway’s website until all contracts using the “Old Asphalt Period Price Method” Period Price have been closed.

G. New and Old Asphalt Period Price Methods

1. The paragraphs below apply to both the New and the Old Asphalt Period Price Methods.
2. The Contract Price of the hot mix asphalt mixture will be paid under the respective item in the Contract. The price adjustment, as herein provided, upwards or downwards, will be made after the work has been performed, using the monthly period price for the month during which the work was performed.
3. The Price Adjustment applies only to the actual virgin liquid asphalt content in the mixture placed on the job in accordance with the Standard Specifications for Highways and Bridges, Division III, Section M3.11.03.
4. The Price Adjustment will be determined by multiplying the number of tons of hot mix asphalt mixtures placed during each monthly period times the liquid asphalt content percentage times the variance in price between Base Price and Period Price of liquid asphalt.
5. This Price Adjustment will be paid only if the variance from the Base Price is 5% or more for a monthly period. The complete adjustment will be paid in all cases with no deduction of the 5% from either upward or downward adjustments.
6. No Price Adjustment will be allowed beyond the Completion Date of this Contract, unless there is an approved extension of time.

K. The Asphalt Base Price for this Contract will be $712.50.

1.06 CEMENT PRICE ADJUSTMENT

A. This provision applies to all projects using greater than 100 Cubic Yards (76 Cubic Meters) of Portland cement concrete containing Portland cement as stipulated in this section. This Price Adjustment will occur on a monthly basis.

B. The Price Adjustment will be based on the variance in price for the Portland cement component only from the Base Price to the Period Price. It shall not include transportation or other charges.

C. The Base Price of Portland cement on a project is a fixed price determined at the time of bid by the Department by using the same method as for the determination of the Period Price (see below) and found herein.

D. The Period Price of Portland cement will be determined by using the latest published price, in dollars per ton (U.S.), for Portland cement (Type I) quoted for Boston, U.S.A. in the **Construction Economics** section of *ENR Engineering News-Record* magazine or at the ENR website http://www.enr.com/ under **Construction Economics**. The Period Price will be posted on the MassHighway website: http://www.massdot.state.ma.us/highway/DoingBusinessWithUs/Construction/PriceAdjustme nts.aspx
the Wednesday immediately following the publishing of the monthly price in ENR, which is normally the first week of the month.

E. The Contract Price of the Portland cement concrete mix will be paid under the respective item in the Contract. The price adjustment, as herein provided, upwards or downwards, will be made after the work has been performed, using the monthly period price for the month during which the work was performed.

F. The price adjustment applies only to the actual Portland cement content in the mix placed on the job in accordance with the Contract Plans and Specifications. No adjustments will be made for any cement replacement materials such as fly ash or ground granulated blast furnace slag.

G. The Price Adjustment will be determined by multiplying the number of cubic yards of Portland cement concrete placed during each monthly period times the Portland cement content percentage times the variance in price between the Base Price and Period Price of Portland cement.

H. This Price Adjustment will be paid only if the variance from the Base Price is 5% or more for a monthly period. The complete adjustment will be paid in all cases with no deduction of the 5% from either upward or downward adjustments.

I. No Price Adjustment will be allowed beyond the Completion Date of this Contract, unless there is an approved extension of time.

L. The Cement Base Price for this Contract will be $452.13.

1.07 STRUCTURAL AND REINFORCING STEEL PRICE ADJUSTMENT

A. This provision applies to projects containing a price adjustment for structural steel and reinforcing steel as stipulated in this section. It applies to all structural steel as defined below and all reinforcing steel on the project. Compliance with this provision is mandatory, i.e., there are no "opt-in" or "opt-out" clauses. Price adjustments will be handled as described below and shall only apply to unfabricated structural steel material, consisting of rolled shapes, plate steel, sheet piling, pipe piles, steel castings and steel forgings, and unfabricated reinforcing steel bars.

B. Price adjustments will be variances between Base Prices and Period Prices. Base Prices and Period Prices are defined below.

C. Price adjustments will only be made if the variances between Base Prices and Period Prices are 5% or more. A variance can result in the Period Price being either higher or lower than the Base Price. Once the 5% threshold has been achieved, the adjustment will apply to the full variance between the Base Price and the Period Price.

D. Price adjustments will be calculated by multiplying the number of pounds of unfabricated structural steel material or unfabricated reinforcing steel bars subject to a price adjustment by the index factor calculated as shown below under Example of a Period Price Calculation.

E. Price adjustments will ***not*** include the costs of shop drawing preparation, handling, fabrication, coatings, transportation, storage, installation, profit, overhead, fuel costs, fuel surcharges, or other such charges not related to the cost of the unfabricated structural steel and unfabricated reinforcing steel.

F. The weight of steel subject to a price adjustment shall not exceed the final shipping weight of the fabricated part by more than 10%.

G. Base Prices and Period Prices are defined as follows:

1. Base Prices of unfabricated structural steel and unfabricated reinforcing steel on a project are fixed prices determined by the Department (MassHighway) and found herein.
2. The Base Price Date is the month and year in which the Owner opened bids for the project. This date is used to select the Base Price Index.
3. Period Prices of unfabricated structural steel and unfabricated reinforcing steel on a project are variable prices calculated based on the purchase date of the steel (Period Price Date) using an index of steel prices to adjust the Base Price.
4. The Period Price Date is the date the steel was delivered to the fabricator as evidenced by an official bill of lading submitted to the Owner containing a description of the shipped materials, weights of the shipped materials and the date of shipment. This date is used to select the Period Price Index.
5. The index used for the calculation of Period Prices is the U.S. Bureau of Labor Statistics (BLS) Producer Price Index (PPI) Series ID WPU101702 (Not Seasonally Adjusted, Group: Metals and Metal Products, Item: Semi-finished Steel Mill Products.) As this index is subject to revision for a period of up to four (4) months after its original publication, no price adjustments will be made until the index for the period is finalized, i.e., the index is no longer suffixed with a "(P)".

H. Period Prices are determined as follows:

1. Period Price = Base Price X Index Factor
2. Index Factor = Period Price Index / Base Price Index

I. Example of a Period Price Calculation:

1. Calculate the Period Price for December 2009 using a Base Price from March 2009 of
   $0.82/Pound for 1,000 Pounds of ASTM A709 (AASHTO M270) Grade A36 Structural Steel Plate.
2. The Period Price Date is December 2009. From the PPI website*, the Period Price Index
   = 218.0.
3. The Base Price Date is March 2009. From the PPI website*, the Base Price Index =229.4.
4. Index Factor = Period Price Index / Base Price Index = 218.0 / 229.4 =

   0.950 Period Price = Base Price X Index Factor = $0.82/Pound X 0.950 =

   $0.78/Pound Since $0.82 - $0.78 = $0.04 is less than 5% of $0.82, no

   price adjustment is required.

5. If the $0.04 difference shown above was greater than 5% of the Base Price, then the price adjustment would be 1,000 Pounds X $0.04/Pound = $40.00. Since the Period Price of
   $0.78/Pound is less than the Base Price of $0.82/Pound, indicating a drop in the price of steel between the bid and the delivery of material, a credit of $40.00 would be owed to the Owner. When the Period Price is higher than the Base Price, the price adjustment is owed to the Contractor.
6. * To access the PPI website and obtain a Base Price Index or a Period Price Index, go to http://www.bls.gov/PPI/

J. The Contractor will be paid for unfabricated structural steel and unfabricated reinforcing steel under the contract pay items or allowances for all components constructed of either structural steel or reinforced Portland cement concrete under their respective Contract Pay Items.

K. Price adjustments, as herein provided for, will be paid separately for Structural Steel and Reinforcing Steel.

L. No price adjustment will be made for price changes after the Contract Completion Date, unless the Owner has approved an extension of Contract Time for the Contract.

END OF SECTION

SECTION 01069

HEALTH & SAFETY REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Requirements for providing a Health and Safety Plan and maintenance of health and safety while performing the Work.

1.02 PAYMENT PROCEDURES

A. Provision for "Health & Safety Requirements" will not be paid separately, but shall be considered a subsidiary obligation of the Contractor, with costs thereof distributed among the contract unit prices for the other items of work.

1.03 REQUIREMENTS

A. The Contractor is responsible to monitor working conditions at all times during construction and, if it is found to be necessary, to provide appropriate protective clothing, equipment and facilities for his personnel, and to establish workplace procedures to ensure their safety, and to enforce the use of these procedures, equipment and facilities in accordance with the following guidelines:

1. Safety and Health Regulations Promulgated by the U.S. Department of Labor OSHA, 29 CFR 1910 - Occupational Safety and Health Standards, and 29 CFR 1920 - Safety and Health Regulations for Construction.
2. U.S. Environmental Protection Agency Interim Standard Operating Safety Guidelines - Office of Emergency and Remedial Response - Hazardous Response Support Division, Rev. September 1982.
3. U.S. Environmental Protection Agency Medical Monitoring Program Guidelines.

B. The Contractor shall implement a Health and Safety protection program. The procedures for such implementation shall be submitted to the Engineer and Owner for approval. The procedures shall include provisions for stations allowing workers to wash and to put on and remove protective clothing, and stations for vehicles to be cleaned, if necessary, before leaving the site, air monitoring, and evaluation of areas where unsafe levels of gas has accumulated.

C. The Contractor shall comply with all Federal, State, and local safety requirements related to the presence of combustible and nausea-inducing gases.

D. In addition to the above requirements, the Contractor shall comply with the following requirements:

1. All construction equipment on the site shall be equipped with vertical exhaust pipes or a sparkproof exhaust.

2. Smoking shall not be permitted in any area where gases can accumulate, or in areas where geomembrane liners are being installed.

3. Welding or open flames shall not be permitted in enclosed areas. In other areas in which a detectable concentration of methane is found, ground mats shall be used.

4. Toxic gas indicators, a combustible gas indicator, and fire extinguishers shall be available at all times during operations. Periodic monitoring with portable monitoring devices shall be employed in areas susceptible to gas accumulation, with the Contractor furnishing daily to the Engineer, three (3) copies of a certified statement of their findings.

E. During operations, whenever unsafe levels of landfill gases are detected, all work will cease in that area until acceptable levels are reached.

1.04 SHOP DRAWINGS

A. Submit site specific Health and Safety Plan (HASP) that complies with all applicable OSHA requirements to the Engineer for review and acceptance within fifteen (15) working days of the Contractor's Notice to Proceed. Certified Industrial Hygienist must certify the Contractor's plan prior to submittal to and review by the Engineer. The Contractor is not to proceed with any subsurface site work without review and acceptance of the submitted Health and Safety Plan by the Engineer.

1.05 QUALITY ASSURANCE

A. Engage an independent, qualified Health and Safety expert having experience in similar construction conditions, to monitor site conditions and recommend all necessary Health and Safety protection. This person shall be a Certified Industrial Hygienist (CIH). The Contractor shall follow such recommendations and shall provide such protection to his personnel, and personnel of the Owner and Engineer, as may be affected.

1.06 REGULATORY REQUIREMENTS

A. Establish workplace procedures, enforce the use of these procedures, and the associated equipment and facilities in accordance with the following guidelines:

1. Safety and Health Regulations Promulgated by the U.S. Department of Labor OSHA, 29 CFR 1910 - Occupational Safety and Health Standards, and 29 CFR 1920 - Safety and Health Regulations for Construction.

2. Occupational Safety and Health Standards, 29 CFR 1926 - Safety and Health Regulations for Construction.

3. U.S. Environmental Protection Agency Medical Monitoring Program Guidelines.

1.07 SITE CONDITIONS

A. The Contractor's attention is directed to the fact that the work includes connecting new pipelines to the existing water systems in confined spaces.

B. The Contractor is also responsible for reviewing site specific investigation reports included in the Appendix of these specifications.

PART 2 PRODUCTS

NOT USED

PART 3 EXECUTION

3.01 PROTECTION

A. If, at any time, the Owner or the Engineer is apprised of a safety hazard which demands immediate attention because of its high potential for harm to the public travel, persons on or about the work, or public or private property, the Owner or the Engineer shall have the right to order such safeguards to be erected and such precautions to be taken as necessary and the Contractor shall comply with such orders. If, under such circumstances, the Contractor does not or cannot immediately put the work into proper and approved condition, or if the Contractor or his representative is not upon the site so that he can be notified immediately of the insufficiency of safety precautions, then the Owner may put the work into such a condition that is shall be, in his opinion, in all respects safe, and the Contractor shall pay all expenses of such labor materials as may have been used for this purpose by him or by the Owner. The fact that the Owner or the Engineer does not observe a safety hazard or does not order the Contractor to take remedial measures shall in no way relieve the Contractor of the entire responsibility for any costs, loss or damage by any party sustained on account of the insufficiency of the safety precautions taken by him or by the Owner acting under authority of this Section.

B. If the Contractor is alerted to the fact that conditions of high hazard are present or can be present at the site during the performance of the work. It is the responsibility of the Contractor to take appropriate safety precautions to meet whatever conditions of hazard may be present during the performance of the work, whether reasonably foreseeable or not. The safety conditions enumerated in the within Specifications are the minimum permissible and neither the Owner not the Engineer make any representation that the safety standards provided herein will be adequate to meet all eventualities. The Contractor is therefore alerted to the fact that it shall be its responsibility to anticipate and provide such additional safety precautions, facilities, personnel and equipment as shall be necessary to protect life and property from whatsoever conditions of hazard are present or may be present.

END OF SECTION

SECTION 01090

REFERENCE STANDARDS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Reference material, abbreviations, and terms used in the Construction Documents and establishes edition dates and complete titles for standards referenced elsewhere in the Specifications.

1.02 QUALITY ASSURANCE

A. For products or workmanship specified by association, trade, or Federal Standards, comply with requirements of the standard, except when more rigid requirements are specified or are required by applicable codes.

B. Obtain copies of standards when required by Contract Documents.

C. Maintain copy at jobsite during submittals, planning, and progress of the specific work, until Substantial Completion.

D. Should specified reference standards conflict with Contract Documents, request clarification from Architect/Engineer before proceeding.

E. The contractual relationship of the parties to the Contract shall not be altered from the Contract Documents by mention or inference otherwise in any reference document.

1.03 SCHEDULE OF REFERENCES

AA Aluminum Association
818 Connecticut Ave.
N.W. Washington, DC
20006

AASHTO American Association of State Highway and Transportation Officials 444 North Capitol Street, N.W.
Washington, DC 20001

ACI American Concrete
Institute Box 19150
Reford Station
Detroit, MI
48219

AFBMA Anti-Friction Bearing Manufacturers

Association AGC Associated General Contractors of America
1956 E Street, N.W.
Washington, DC
20006

AGM	American Gear Manufacturers Association
AI	Asphalt Institute Asphalt Institute Building College Park, MD 20740
AISC	American Institute of Steel Construction 400 North Michigan Avenue Eighth Floor Chicago, IL 60611
AISI	American Iron and Steel Institute 1000 16th Street, N.W. Washington, DC 20036
AMCA	Air Movement and Control Association 30 West University Drive Arlington Heights, IL 60004
ANS	American National Standard
ANSI	American National Standards Institute 1430 Broadway New York, NY 10018
API	American Petroleum Institute
ARI	Air-Conditioning and Refrigeration Institute 1501 Wilson Boulevard Arlington, VA 22209
ASCE	American Society of Civil Engineers 345 East 47th Street New York, NY 10017
ASHRAE	American Society of Heating, Refrigerating and Air Conditioning Engineers 1791 Tullie Circle, N.E. Atlanta, GA 30329
ASME	American Society of Mechanical Engineers 345 East 47th Street New York, NY 10017
ASPA	American Sod Producers Association 4415 West Harrison Street Hillside, IL 60162

ASTM	American Society for Testing and Materials 1916 Race Street Philadelphia, PA 19103
AWG	American or Brown and Sharpe Wire
Gage AWPA	American Wood-Preservers'
Association	7735 Old Georgetown Road Bethesda, MD 20014
AWS	American Welding Society
AWWA	American Water Works Association 6666 West Quincy Avenue Denver, CO 80235
BIA	Brick Institute of America 11490 Commerce Park Drive Reston, VA 22091
CS	Commercial Standard
EJCDC	Engineers' Joint Contract Document Committee American Consulting Engineers Council 1015 15th Street, N.W. Washington, DC 20005
FM	Factory Mutual System 1151 Boston-Providence Turnpike PO Box 688 Norwood, Massachusetts 02062
Fed Spec.	Federal Specification General Services Administration Specification and Consumer Information Distribution Section (WFSIS) Washington Navy Yard, Bldg. 197 Washington, DC 20407
IBR	Institute of Boiler and Radiator Manufacturers
ICBO	International Conference of Building Officials 5360 S. Workman Mill Road Whittier, CA 90601
IPS	Iron Pipe Size

JIC Joint Industry Conference Standards

MIL Military Specification
Naval Publications and Forms
Center 5801 Tabor Avenue
Philadelphia, PA 19120

NASSCO National Association of Sewer Service
Companies 101 Wymore Road, Suite 521
Altamonte, FL 32714

NBS National Bureau of

Standards NCMA National Concrete

Masonry Association
PO Box 781
Herndon, VA 22070

NCPWB National Certified Pipe Welding Bureau

NEMA National Electrical Manufacturers'

Association
2101 'L' Street, N.W.
Washington, DC 20037

NFPA National Fire Protection
Association Battery March Park
Quincy, MA 02269

NPT National Pipe Thread

OS&Y Outside screw and yoke

PCA Portland Cement
Association 5420 Old
Orchard Road Skokie, IL
60077

SMACNA Sheet Metal and Air Conditioning Contractors' National Assoc.
8224 Old Court House
Road Vienna, VA 22180

Stl. WG U.S. Steel Wire Washburn and Moen, American Steel and
Wire or Roebling Gage

UL Underwriters' Laboratories, Inc.
333 Pfingston Road
Northbrook, IL 60062

USS Gage United States Standard Gage

125-lb. ANS Flange 250-lb. ANS American National Standard for Cast-Iron Pipe Flanges and Fittings, Designation B16.1-1975, for the appropriate class

1.04 EDITION DATES

A. Reference to publications and reference material shall be understood to mean the latest edition, unless stated otherwise.

PART 2 PRODUCTS

NOT USED

PART 3 EXECUTION

NOT USED

END OF SECTION

SECTION 01200

PROJECT MEETINGS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Administrative and procedural requirements for project meetings.

1.02 PRECONSTRUCTION CONFERENCE

A. The Engineer will schedule and administer a pre-construction conference.

B. The pre-construction conference will be scheduled and administered within fourteen (14) calendar days after the dated "Notice to Proceed". The Contractor shall be prepared to address such topics as projected construction schedules, major personnel, critical work areas, construction facilities and shop drawing submittals.

1.03 PROGRESS MEETINGS

A. The Engineer will schedule and administer progress meetings and specially called meetings throughout the duration of the Work at minimum monthly intervals.

B. The time and location of such meetings shall be designated by the Engineer and shall be convenient for all parties involved.

C. The Engineer will, prepare agenda with copies for participants, preside at meetings, record minutes, and distribute copies to participants, and those affected by decisions made.

PART 2 PRODUCTS

NOT USED

PART 3 EXECUTION

NOT USED

END OF SECTION

SECTION 01300

SUBMITTALS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Requirements for submission of schedules and shop drawings.

1.02 PROGRESS SCHEDULE

A. Refer to Section 01310 Construction Progress Schedule for Critical Path Method (CPM) construction scheduling requirements.

B. Special attention is directed to the requirement that the Contractor shall start the Work, as specified under this Contract, no later than thirty (30) calendar days after the execution of the Contract Documents, unless otherwise directed by the Owner. The Contractor shall comply with all pre-construction requirements as specified. The Owner reserves the right to delay the commencement of the Work or any part thereof if the specified requirements as determined by the Engineer have not been satisfied. The Owner further reserves the right to limit or, delay construction, or certain activities thereof, in certain areas of the Contract should the Owner deem it to be in the public's best interest and/or safety to do so.

C. The Contractor shall contact the appropriate town or city authorities concerning any public or semi-public events that may occur during the construction period that may affect construction. The Contractor alone shall be responsible for arranging his construction sequence to conform to any restrictions these events may impose. No claims for extras will be allowed because of any delay, extra materials handling, extra excavation, etc. caused by the imposed restrictions. However, additional time may be granted for completion of the work to compensate for delays caused by said restrictions.

1.03 SHOP DRAWINGS

A. Refer to Section 02500 Special Provisions. Refer to Appendix B and Appendix C for shop drawing submittal requirements to MassDOT and MBTA.

B. Submit electronic copies in PDF format of all shop and working drawings and materials and equipment for which such drawings are required. Submittals are required for pavement job mix formula.

C. A maximum of two (2) submittals of each shop drawing will be reviewed by the Engineer. If more submittals are required due to the Contractor’s neglect or failure to fulfill the requirements of the Contract plans and specifications, or to make corrections or modifications required by the Engineer in the review of the first two submittals, the Engineer will review the submittal and the Contractor will be responsible for the cost of the review, as determined by the Owner based on the Engineer’s documentation of

time and rates for additional services established in the Engineering Agreement between the Owner and the Engineer.

D. If resubmittals on shop and working drawings are required, the Engineer will return shop drawings electronically to the Contractor. When resubmittals are returned to the Engineer, an electronic copy in PDF format of the complete submittal shall again be required.

E. Such drawings shall show the principal dimensions, weight, structural and operating features, space required, clearances, type and/or brand of finish or shop coat, grease fittings, etc., depending on the subject of the drawing. When the dimensions are of particular importance, or when specified, the drawings shall be certified by the manufacturer or fabricator as correct for the Contract.

F. When so specified or if considered by the Engineer to be acceptable, manufacturer's specifications, catalog data, descriptive matter, illustrations, etc., may be submitted in place of shop and working drawings.

G. The Contractor shall be responsible for the prompt and timely submittal of all shop and working drawings to eliminate delay to the Work due to the absence of such drawings. All shop and working drawings must be submitted to the Engineer within thirty (30) calendar days prior to incorporation into the Work, unless otherwise permitted by the Engineer. **Prior to the submittal of any shop drawings, the Contractor shall submit a schedule of proposed shop drawing transmittals.** The schedule shall identify the subject matter of each transmittal, the corresponding specification section number and the proposed date of submission. Prior to and during the progress of the Work the schedule shall be revised and resubmitted as requested by the Engineer.

H. No material or equipment shall be purchased or fabricated for the Contract until the required shop and working drawings have been submitted as hereinabove provided and reviewed for conformance to the Contract requirements. All such materials and equipment and the work involved in their installation or incorporation into the Work shall then be as shown in and represented by said drawings.

I. Until the necessary review has been made, the Contractor shall not proceed with any portion of the Work (such as the construction of foundations) for which review is required.

J. All shop and working drawings shall be submitted to the Engineer by and/or through the Contractor, who shall be responsible for obtaining shop and working drawings from his subcontractors and returning reviewed drawings to them. All shop and working drawings shall be prepared on standard size, 24 inch by 36 inch sheets, except those which are made by changing existing standard shop and working drawings. All drawings shall be clearly marked with the names of the Owner, Contractor, and building, equipment, or structure to which the drawing applies, and shall be suitable numbered. Submitted shop drawings shall be accompanied by a letter of transmittal, completed by the Contractor as approved by the Engineer.

K. Only drawings which have been checked and corrected by the fabricator should be submitted to the Contractor by his subcontractors and vendors. Prior to submitting drawings to the Engineer, the Contractor shall check thoroughly all such drawings to satisfy himself that the subject matter thereof conforms to the Drawings and Specifications in all respects. All drawings which are correct shall be marked with the date, checker's name, and indication of the Contractor's approval, and then shall be submitted to the Engineer; other drawings shall be returned for correction.

L. If a shop drawing shows any deviation from the Contract requirements, the Contractor shall make specific mention of the deviations in his letter of transmittal.

M. The review of shop and working drawings by the Engineer will be general only, and nothing contained in this Section shall relieve, diminish or alter in any respect the responsibilities of the Contractor under the Contract Documents and in particular, the specific responsibility of the Contractor for details of design and dimensions necessary for proper fitting and construction of the work as required by the Contract and for achieving the result and performance as specified. The Contractor shall be responsible for errors and omissions in shop drawings.

N. Should the Contractor submit equipment that requires modifications to the structures, piping, electrical conduit, wires, appurtenances, or layouts etc., either existing or as detailed on the Drawings, he shall also submit details of the proposed modifications. If such equipment and modifications are accepted, the Contractor, at no additional cost to the Owner, shall do the work necessary to make such modifications.

O. The Contractor shall furnish additional copies of shop drawings or catalog cuts when so requested.

PART 2 PRODUCTS

NOT USED

PART 3 EXECUTION

A. Structural steel and reinforcing steel fabrication shall be observed and inspected by the Town of Middleborough or its designated representative.

END OF SECTION

SECTION 01310

CONSTRUCTION PROGRESS SCHEDULE

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Requirements for computer generated Critical Path Method (CPM) construction scheduling and Narrative progress report.
B. No portion of this specification shall take precedence over SECTION 00500 – Contract Agreement.

1.02 SUBMITTALS

A. Submit in accordance with SECTION 01300 – Submittals
   1. Quality Assurance/Control Submittal
      a. Name and version of CPM software proposed for use.
      b. List of construction projects completed on which progress of work was controlled with CPM software.
   2. Schedule
      a. Within 14 days following the execution of the Contract, the Contractor shall submit two color copies of a computer-generated schedule and a list of activities to the Engineer. Following review by the Engineer and Owner the Contractor shall meet with the Engineer and Owner to discuss the review. The Contractor shall incorporate the Engineer's comments into the schedule and submit eight color copies of the revised schedule within 14 days following receipt of the Engineer's comments.

PART 2 PRODUCTS

2.01 SOFTWARE

A. Computer based scheduling software used by the Contractor shall be the product of a recognized commercial computer software producer and shall be capable of meeting the requirements specified herein.

PART 3 PREPARATION

3.01 PREPARATION

A. General

1. The Contractor shall prepare his proposed CPM schedule based on a breakdown of work tasks that he has developed.

2. The construction schedule and updates shall be prepared by the Contractor or the Contractor's qualified consultant.

B. Schedule

1. Each schedule shall be prefaced with the following summary data:
   a. Contract name and number
   b. Contractor's name
   c. Contract duration
   d. The effective or starting date of the schedule
   e. Revision date of the latest schedule.

2. The CPM schedule shall be sequenced by early start date and shall include the following minimum items:
   a. Activity name
   b. Estimated duration
   c. Activity description
   d. Early start date (calendar date)
   e. Early finish date (calendar date)
   f. Latest allowable start date (calendar date)
   g. Latest allowable finish date (calendar date)
   h. Status (whether critical)
   i. Estimated cost of the activity
   j. Float (total and free)
   k. Major milestones

3. Separate milestone shall be included for Notice-to-Proceed and Project Completion Date.

4. Activities shall include major components of the work including submittals that might impact the critical path, subcontractor work, major and critical equipment design, fabrication, testing, delivery and installation times, system/subsystem/component testing, process and facility startup, training, demobilization, project cleanup and closeout. Critical portions of process instrumentation and control system work, shall be defined in detail in a sub schedule.

5. The sum of the costs assigned to the activities shall be equal to the Contract price. Activity costs shall not be assigned to submittals or submittal reviews. Provide a table showing the anticipated monthly percentage of completion, based on the total contract price.

6. Critical activities, predecessors, free float and total float shall be clearly displayed on the schedule in graphical form. Schedules that contain activities showing negative float or that extend beyond the contract completion date will not be approved.

7. Each schedule submittal shall also include a list of activities in the order in which the activities will be performed, along with activity durations, activity predecessors, type of predecessor (finish-start, finish-finish, start-start, lead/lag), and any dependency or required date.

8. The schedule shall be based on a standard 5-day work week with allowance for holidays and adverse weather.

9. Engineer's approval of the CPM schedule is advisory only and shall not relieve the Contractor of responsibility for accomplishing the work prior to the contract

completion date. Omissions and errors in the approved CPM schedule shall not excuse performance less than that required by the Contract. Approval by the Engineer in no way makes the Engineer an insurer of the CPM schedule's success or liable for time or cost overruns flowing from its shortcomings. The Owner hereby disclaims any obligation or liability by reason of approval by its agent, the Engineer, of the CPM schedule.

C. Narrative Progress Report
   1. Include as a minimum:
      a. Summary of work completed during the previous period (since submission of last narrative progress report).
      b. Explanation for variations between actual work completed in previous period and planned work as reported in last period.
      c. Summary of work planned during the next period.
      d. Current and anticipated delaying factors and their estimated impacts on other activities and milestones, both critical and non-critical.
      e. Corrective actions take or proposed.
   2. Narrative Progress Report shall be submitted monthly to the Engineer, at least 5 working days prior to the progress meeting.
   3. At the discretion of the Engineer, the Contractor may be required to submit a revised CPM schedule showing completion to date and any changes to the previous schedule.

3.02 PREPARATION

A. The CPM approved construction schedule shall be used by the Contractor throughout the duration of the project for planning, organizing, and directing the Work, and for reporting progress of the Work.
B. The Contractor is solely responsible for monitoring schedule compliance. When a delay to the critical path occurs, the Contractor shall immediately notify the Engineer in writing. Within one week of the notification, the Contractor shall submit for the Engineer's approval, a description of proposed actions to return the project to schedule.

3.03 MODIFYING SCHEDULE

A. If the Contractor desires to make changes in his method of operating which affect the approved CPM schedule, he shall notify the Engineer in writing stating what changes are proposed and the reason for the change. If the Engineer approves these changes, the Contractor shall revise and submit for approval, without additional cost to the Owner, all of the affected portions of the CPM schedule.

B. It may be necessary for the contract schedule or completion time to be adjusted by the Owner to reflect the effects of job conditions, weather, technical difficulties, strikes, unavoidable delays on the part of the Owner or its representatives and other unforeseeable conditions which may indicate schedule adjustments or completion time extensions. Under such conditions, the Engineer will direct the Contractor to reschedule the work or contract completion time to reflect the changed conditions and the Contractor shall revise his schedule accordingly.

C. Float time is a project resource available to both the Contractor and the Owner to meet contract milestones and completion dates. Use of float suppression techniques such as

preferential sequencing or logic, special lead/lag logic restraints, and extended activity times are prohibited and use of float time disclosed or implied by use of alternate float suppression techniques shall be shared to proportionate benefit of OWNER and CONTRACTOR.

D. If the Contractor provides an accepted schedule with an early completion date, the Owner reserves the right to reduce the Time of Completion to match the early completion date by issuing a deductive Change Order at no change in Contract Price.

END OF SECTION

SECTION 01400

QUALITY CONTROL

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Requirements for Contractor’s quality control of products, suppliers, manufacturers, services, site conditions, and workmanship, to produce Work of specified quality.

1.02 QUALITY ASSURANCE/CONTROL OF INSTALLATION

A. Comply fully with manufacturers' instructions, including each step in sequence.

B. Should manufacturers' instructions conflict with Contract Documents, request clarification from Engineer before proceeding.

C. Comply with specified standards as a minimum quality for the Work except when more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.

D. Perform work by persons qualified to produce workmanship of specified quality.

E. Secure Products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion or disfigurement.

1.03 FIELD SAMPLES

A. Install field samples at the site as required by individual specifications sections for review.

B. Acceptable samples represent a quality level for the Work.

C. Where field sample is specified to be removed, clear area only after field sample has been accepted by the Engineer.

1.04 CERTIFIED WELDERS

A. Structural welds shall be made only by operators who have been qualified by tests, as prescribed in the "Standard Qualification Procedure" of the American Welders Society, to perform the type of work required.

B. Pipe welds shall be made only by operators who have been qualified by the National Certified Pipe Welding Bureau and each operator's qualification record shall be submitted to the Engineer before any work is preformed.

C. Shop welding shall be in accordance with the "Code for Welding in Building Construction".

PART 2 PRODUCTS

NOT USED

PART 3

EXECUTIO

N NOT USED

END OF SECTION

SECTION 01410

TESTING LABORATORY SERVICES

PART 1 GENERAL

1.01 SUMMARY

A. Section Includes

1. Qualification, duties and responsibilities of testing laboratories.
2. Coordination and scheduling responsibilities of the Contractor.

B. Related Sections

1. Section 01600 - Materials and Equipment

1.02 RESPONSIBILITY

A. Contractor is responsible for hiring an Independent Laboratory to conduct sampling and analyses. The Contractor has full responsibility for the scheduling, coordination, and payment.

1.03 REFERENCES

A. American Society for Testing and Materials (ASTM)

1. E329, Agencies Engaged in Construction Inspection and/or Testing

1.04 REQUIREMENTS

A. Work included:

1. Cooperate with the Owner's selected testing agency and all others responsible or testing and inspecting the Work.
2. Provide other testing and inspecting as specified to be furnished by the Contractor in this Section and/or elsewhere in the Contract Documents.
3. Where no testing requirements are described, but the Owner directs testing, the Contractor shall provide testing under the requirements of this Specification.

B. Work not included:

1. Selection of testing laboratory: The Owner will select a qualified independent testing laboratory.

1.05 QUALITY ASSURANCE

A. Qualifications

1. The testing laboratory will be qualified to the Owner's approval in accordance with ASTM E329.

B. Regulatory requirements

1. Testing, when required, will be in accordance with all pertinent codes and regulations and with selected standards of the American Society for Testing and Materials.
2. Regulatory Requirements Inspections and tests required by codes or ordinances, or by a plan approved authority, and which are made by a legally constituted authority, shall be the responsibility of and shall be paid for by the Contractor, unless otherwise provided in the Contract Documents.

1.06 DELIVERY, STORAGE, AND HANDLING

A. Comply with pertinent provisions of Section 01600 - Materials and Equipment.

B. Promptly process and distribute, to the Engineer, required copies of test reports and instructions to assure necessary retesting and replacement of materials with the least possible delay in progress of the Work.

1.07 SCHEDULING

A. Establishing schedule

1. By advance discussion with the testing laboratory selected by the Owner, determine the time required for the laboratory to perform its tests and to issue each of its findings.
2. Provide all required time within the construction schedule.
3. Coordinate testing activity with the appropriate testing laboratory.

B. Revising schedule

1. When changes of construction schedule are necessary during construction, coordinate all such changes with the testing laboratory as required.

C. Adherence to schedule

1. When the testing laboratory is ready to test according to the established schedule, but is prevented from testing or taking specimens due to incompleteness of the Work, all extra charges for testing attributable to the delay may be back-charged to the Contractor and shall not be borne by the Owner.

PART 2 PRODUCTS

NOT USED

PART 3 EXECUTION

3.01 FIELD QUALITY CONTROL

A. Site Tests

1. Representatives of the testing laboratory shall have access to the Work at all times and at all locations where the Work is in progress. Provide facilities for such access to enable the laboratory to perform its functions properly.
2. All specimens and samples for testing, unless otherwise provided in the Contract Documents, shall be taken by the testing personnel. All sampling equipment and personnel will be provided by the testing laboratory. All deliveries of specimens and samples to the testing laboratory will be performed by the testing laboratory.

END OF SECTION

SECTION 01510

TEMPORARY UTILITIES

PART 1 GENERAL

1.01 SECTION INCLUDES

a) Requirements for temporary utilities required during construction.

1.02 GENERAL REQUIREMENTS

The Contractor is responsible for payment of all costs associated with the installation and operation of all temporary utilities necessary for the completion of the work. The Temporary Utilities to be paid by the Contractor include but are not limited to the following: Electricity, Water, Sanitary, Heating, Ventilation, Plumbing and other services required to complete the work.

1.03 TEMPORARY WATER

a) If needed, temporary pipe lines and connections from the permanent service lines, necessary for the use of the Contractor and his Subcontractors shall be installed, protected, and maintained at the expense of the Contractor.
b) Contractor shall provide adequate supply of drinking water from an approved source of acceptable quality, satisfactorily cooled, for his employees and those of his Subcontractors.

1.04 TEMPORARY ELECTRICITY

a. If needed, provide electrical energy required for temporary lighting and power.

b. Contractor shall bare all costs necessary to provide a temporary, separately metered electric service for construction. Electrical work to be done in accordance with applicable codes.

1.05 TEMPORARY SANITARY FACILITIES

a) Provide adequate sanitary facilities for the use of those employed on the Work. Sanitary facilities shall be made available when the first employees arrive on the site of the Work, be properly secluded from public observation, and be maintained during the progress of the Work in suitable numbers.
b) Maintain sanitary facilities in an orderly and sanitary condition at all times and enforce their use. Rigorously prohibit the committing of nuisances on the site of the Work, on the lands of the Owner, or any adjacent property.

PART 2 PRODUCTS

NOT USED

PART 3 EXECUTION

NOT USED

END OF SECTION

SECTION 01560

TEMPORARY CONTROLS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Requirements for cleaning, maintenance of the site, barriers and fences required during construction.

1.02 CLEANING DURING CONSTRUCTION

A. Unless otherwise specified under the various trade Sections of the Specifications, the General Contractor shall perform clean-up operations during construction as herein specified.

1. Control accumulation of waste materials and rubbish; periodically dispose of off-site. Bear all costs, including fees resulting from disposal.
2. Clean interior areas prior to start finish work and maintain areas free of dust and other contaminants during finishing operations.
3. Maintain project in accordance with all local, State and Federal Regulatory Requirements.
4. Store volatile wastes in covered metal containers, and remove from premises.
5. Prevent accumulation of wastes that create hazardous conditions.
6. Provide adequate ventilation during use of volatile or noxious substances

B. Conduct cleaning and disposal operations to comply with local ordinances and anti-pollution laws.

1. Do not burn or bury rubbish and waste materials on site.
2. Do not dispose of volatile wastes such as mineral spirits, oil, or paint thinner in storm or sanitary drains.
3. Do not dispose of wastes into streams or waterways.
4. Use only those materials which will not create hazards to health or property and which will not damage surfaces.
5. Use only those cleaning materials and methods recommended by manufacturer of surface material to be cleaned.
6. Execute cleaning to ensure that the buildings, the sites, and adjacent properties are maintained free from accumulations of waste materials and rubbish and wind blown debris, resulting from construction operations.
7. Provide on-site containers for collection of waste materials, debris, and rubbish.
8. Remove waste materials, debris, and rubbish from the site periodically and dispose of at legal disposal areas off the construction site.

9. Handle material in a controlled manner with as little handling as possible. Do not drop or throw materials from heights.
10. Schedule cleaning operations so that dust and other contaminants resulting from cleaning process will not damage surrounding surfaces.
11. During its progress, the work and the adjacent areas affected thereby shall be kept cleaned up and all rubbish, surplus materials, and unneeded construction equipment shall be removed and all damage repaired so that the public and property owners will be inconvenienced as little as possible.
12. Where material or debris has washed or flowed into or been placed in existing watercourses, ditches, gutters, drains, pipes, structures, work done under this contract, or elsewhere during the course of the Contractor's operations, such material or debris shall be entirely removed and satisfactorily disposed of during the progress of the work, and the ditches, channels, drains, pipes, structures, and work, etc. shall, upon completion of the work, be left in a clean and neat condition.

1.03 DUST CONTROL

A. Provide adequate means for the purpose of preventing dust caused by construction operations throughout the period of the construction contract.

B. This provision does not supersede any specific requirements for methods of construction or applicable general conditions or performance obligations of the General Contractor.

C. B. Regularly assess weather conditions. Provide dust control as necessary to eliminate airborne dust based on wind and exposed soil conditions

D. Provide dust control when so directed by the engineer. Dust control methods are subject to approval of the Engineer.

1.04 EROSION AND SEDIMENT CONTROL

A. Plan and execute construction by methods to control surface drainage from cuts and fills, from borrow and waste disposal areas. Prevent erosion and sedimentation.

B. Minimize amount of bare soil exposed at one time.

C. Provide temporary measures such as berms, dikes, and drains, to prevent water flow.

D. Construct fill and waste areas by selective placement to avoid erosive surface silts for clays.

E. Periodically inspect earthwork to detect evidence of erosion and sedimentation; promptly apply corrective measures.

1.05 NOISE CONTROL

A. 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 which will reduce excess noise.

1. Equip air compressors with Silencers, and power equipment with mufflers.
2. Manage vehicular traffic and scheduling to reduce noise.

1.06 POLLUTION CONTROL

A. Special care shall be taken to prevent contamination or muddying up or interfering in any way with the stream flows, if any along the line of work. No waste matter of any kind will be allowed to discharge into the stream flows or impounded water of any pools or other bodies of water.

1.07 SURFACE WATER CONTROL

A. Take all precautions to prevent damage to the work or equipment by high waters or by storms. The Engineer with the approval of the Owner may prohibit the carrying out of any work at any time when in his judgement, high water or storm conditions are unfavorable or not suitable, or at any time, regardless of the weather, when proper precautions are not being taken to safeguard previously constructed work or work in progress.

B. In case of damage caused by the failure of the Contractor to take adequate precautions, the Contractor shall repair or replace equipment damaged and shall make such repairs or rebuild such parts of the damaged work, as the Engineer may require, at no additional expense to the Owner.

1.08 BARRIERS AND ENCLOSURES

A. Fences and Barricades

1. Provide and maintain temporary fences, barriers, lights, guardrails, and barricades as indicated in the Contract Documents, or as necessary to secure the Work and adjacent property, and protect persons and property.
2. Obtain necessary approvals and permits and provide temporary expedients as necessary to accommodate tasks requiring items mentioned herein.

B. Protection of Trees

1. The Contractor shall take care not to harm trees along the sides of roads or with in the existing facility in which the construction work is to be done or trees on adjacent lands except as indicated on the drawings or with the written permission of the Owner and any other owner of the trees involved. Care shall be taken not to cut tree roots so as to harm the growth of trees to remain.

2. If, in the opinion of the Engineer, any trees damaged during construction can be repaired, the Contractor shall satisfactorily repair same at no further cost to the Owner.
3. If, in the opinion of the Engineer, any tree damaged during construction cannot be repaired and should be removed, the Contractor shall satisfactorily remove and replace, in kind, same at no further cost to the Owner.

PART 2 PRODUCTS

NOT USED

PART 3 EXECUTION

NOT USED

END OF SECTION

SECTION 01570

TRAFFIC REGULATIONS (MASSACHUSETTS)

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Requirements for traffic control for the duration of the Contract.

1.02 REFERENCES

A. Manual of Uniform Traffic Control devices (MUTCD) 2023 Edition including all latest revisions.

B. Contract Plans Temporary Traffic Control sheets.

1.03 PERFORMANCE REQUIREMENTS

A. Contractor shall have the sole responsibility for the maintenance and protection of traffic.

B. An authorized representative of the Contractor shall be available on a 24-hour basis for the duration of the Contract for the purpose of correcting construction related impediments or hazards.

1.04 SHOP DRAWINGS

A. In accordance with SECTION 01300 – SUBMITTALS, submit a traffic plan delineating requirements of this section, the Contract Drawings, and the **Town of Middleborough, MA**.

B. Traffic control plans shall detail all typical work zones and detours.

1.05 SITE CONDITIONS

A. Replace at no cost to the Owner pavement markings, legends and lane arrows removed or damaged by the construction operation.

B. Restore temporary detours to original condition.

C. Replace traffic signal loops damaged during construction with in 72 hours.

1.06 SCHEDULING

A. Traffic shall be maintained during the Contractor's working hours as required by the Town of Middleborough, MA, or as otherwise restricted in the Contract Documents.

B. Keep closing of travel lanes to a minimum.

C. Notify city departments 48 hours prior to construction operations on travel ways.

A. Police Department (508-947-1212)
B. Fire Department (508-946-2461)
C. Department of Public Works (508-946-2480)

PART 2 PRODUCTS

2.01 TRAFFIC CONTROL DEVISES

A. In accordance with the MUTCD.

PART 3 EXECUTION

3.01 INSTALLATION OF TRAFFIC CONTROL DEVISES

A. In accordance with the MUTCD.

3.02 PROTECTION OF TRAFFIC

A. Barricade trenches and roadway excavations at the end of each work period with temporary precast concrete barriers, properly lighted and marked to guide traffic to designated travel lane. Or other means acceptable to the Engineer and approved on the Traffic Plan.

B. Maintain and protect traffic movements for the entire length of the project.

C. Keep one lane of traffic open at all times except for brief stoppages dictated by the construction operation involving safety of vehicles in the travel lanes.

D. Maintain access to business and private ways during construction operations.

E. Furnish sufficient number of signs, temporary precast concrete barriers, warning lights, drums and traffic cones to warn traffic of construction and guide traffic through the construction area in accordance with the MUTCD.

3.03 TRAFFIC MEN

A. Provide service of uniformed traffic men as required to complete construction as required by the Owner.

END OF SECTION

SECTION 01600

MATERIALS AND EQUIPMENT

PART 1 GENERAL

1.01 SUMMARY

A. Section Includes

1. Requirements for delivery, storage, handling and installation of systems, materials, manufactured units, equipment, components, and accessories used in the work.

B. Related Sections

1. Section 01300 - Submittals

1.02 DELIVERY

A. Refer to Specifications' Sections for requirements pertaining to delivery and handling of materials and equipment.

B. Transport products by methods to avoid product damage; deliver in undamaged condition in manufacturers' unopened containers or packaging, dry.

C. Provide equipment and personnel to handle products by methods to prevent soiling or damage.

D. Promptly inspect shipments to assure that products comply with requirements, that quantities are correct, and products are undamaged.

1.03 STORAGE AND PROTECTION

A. Refer to Specifications' Sections for requirements pertaining to storage and protection of materials and equipment.

B. Store products in accordance with manufacturers' instruction, with seals and labels intact and legible. Store sensitive products in weather tight enclosures; maintain within temperature and humidity ranges required by manufacturers' instructions.

C. For exterior storage of fabricated products, place on sloped supports above ground. Cover products subject to deterioration with impervious sheet covering; provide ventilation to avoid condensation.

D. Store loose granular materials on solid surfaces in a well-drained area; prevent mixing with foreign matter.

E. Arrange storage to provide access for inspection. Periodically inspect to assure that products are undamaged, and are maintained under required conditions.

1.04 INSTALLATION STANDARDS

A. Comply with Specifications and referenced standards as minimum requirements.

B. Components required to be supplied in quantity within a Specification Section shall be the same, and shall be interchangeable.

C. Do not use materials and equipment removed from existing structures, except as specifically required, or allowed, by the Contract Documents.

D. Perform work by persons qualified to produce workmanship of specified quality.

E. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, and racking.

F. When work is specified to comply with manufacturers' instructions, submit copies as specified in Section 01300 - Submittals, distribute copies to persons involved, and maintain one set in field office.

G. Perform work in accordance with details of instructions and specified requirements.

PART 2 PRODUCTS

NOT USED

PART 3 EXECUTION

NOT USED

END OF SECTION

SECTION 01700

CONTRACT CLOSE-OUT

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Requirements for specific administrative procedures, record keeping, close-out submittals, and forms used at substantial and final completion of the Work.

B. Contractor shall satisfy all administrative requirements within the Contract Documents and the Requirements listed in this section prior to Contract Close-out.

1.02 FINAL CLEANING

A. On or before the completion of the work, the Contractor shall, unless otherwise especially directed or permitted in writing, tear down and remove all temporary buildings and structures built by him; shall remove all temporary works, tools, and machinery or other construction equipment furnished by him; shall remove all rubbish from any grounds which he has occupied; and shall leave the roads and all parts of the premises and adjacent property affected by his operations in a neat and satisfactory condition.

B. The Contractor shall restore or replace, when and as directed, any public or private property damage by his work, equipment, or employees, to a condition at least equal to that existing immediately prior to the beginning of operations. To this end, the Contractor shall do as required, all necessary highway or driveway, walk and landscaping work. Suitable materials, equipment, and methods shall be used for such restoration. The restoration of existing property or structures shall be done as promptly as practicable as work progresses and shall not be left until the end of the contract period.

C. Unless otherwise specified under the various Sections of the Specifications, the Contractor shall perform final cleaning operations as herein specified prior to final inspection.

D. 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.

E. Cleaning shall include all surfaces, interior and exterior in which the Contractor and all Subcontractors have had access whether existing or new.

F. Refer to Sections of the Specifications for cleaning of specific products or work.

G. Use only those materials which will not create hazards to health or property and which will not damage surfaces.

H. Use only those cleaning materials and methods that are recommended by the manufacturer of surfaces material to be cleaned.

I. Employ experienced workmen, or professional cleaners, for final cleaning operations.

1.03 PROJECT RECORD DOCUMENTS

A. Project Record Documents also referred here as As-Built Drawings shall consist of all the contract drawings.

B. The Contractor and all Subcontractors shall be required to maintain one set of As-Built Drawings, as the work relates to their Sections of the Specifications, at the site.

C. As-Built Drawings shall be stored and maintained in the General Contractor's field office apart from other documents used for construction. The As-Built Drawings shall be maintained in a clean, dry, and legible condition and shall not be used for construction purposes.

D. As-Built Drawings shall be available at all time for inspection by the Engineer. All deficiencies noted shall be promptly corrected.

E. At the end of each month and before payment for materials installed, the Contractor, and his Subcontractors, shall review As-Built Drawings for purpose of payment. If the changes in location of all installed elements are not shown on the as-built drawings and verified in the field, then the material shall not be considered as installed and payment will be withheld.

F. At the completion of the contract, each Subcontractor shall submit to the Contractor a complete set of his respective As-Built Drawings indicating all changes. After checking the above drawings, the Contractor shall certify in writing on the title sheet of the drawings that they are complete and correct and shall submit the As-Built Drawings to the Engineer.

1.04 FINAL INSPECTION

A. The Contractor shall submit written certification that:

1. Project has been inspected for compliance with Contract Documents.
2. Equipment and systems have been tested in the presence of the manufacturer’s representative and are operational and satisfactory.
3. Project is completed, and ready for final inspection.

PART 2 PRODUCTS

NOT USED

PART 3 EXECUTION

NOT USED

END OF SECTION

SECTION 01740

WARRANTIES

PART 1 GENERAL

1.01 SECTION INCLUDES

A. General administrative and procedural requirements for warranties required by the Contract Documents, including manufacturers standard warranties on products and special warranties.

1.02 SUBMITTAL

A. Submit written warranties to the Owner prior to the date fixed by the Engineer for Substantial Completion. If the Certificate of Substantial Completion designates a commencement date for warranties other than a date of Substantial Completion for the Work, or a designed portion of the Work, submit written warranties upon request of the Owner.

B. When a designated portion of the Work is completed and occupied or used by the Owner, by separate agreement with the Contractor during the construction period, submit properly executed warranties to the Owner prior to acceptance of this portion of the Work.

C. Refer to individual Sections of Division 2 through 16 for specific content requirements, and particular requirements for submittal of special warranties.

1.03 WARRANTY REQUIREMENT

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

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

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

D. Owner's Recourse: Written warranties made to the Owner are in addition to implied warranties, and shall not limit the duties, obligations, rights and remedies otherwise

available under the law, nor shall warranty periods be interpreted as limitations on time in which the Owner can enforce such other duties, obligations, rights, or remedies.

E. Rejection of Warranties: The Owner reserves the right to reject warranties and to limit selections to products with warranties not in conflict with requirements of the contract Documents.

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

1.04 DEFINITIONS

A. Standard Product Warranties are preprinted written warranties published by individual manufacturers for particular products and are specifically endorsed by the manufacturer to the Owner.

B. Special Warranties are written warranties required by or incorporated in the Contract Documents, either to extend time limits provided by standard warranties or to provide greater rights for the Owner.

PART 2 PRODUCTS

NOT USED

PART 3 EXECUTION

NOT USED

END OF SECTION

SECTION 01800

MAINTENANCE

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Procedures for maintaining work completed under this Contract.

1.02 MAINTENANCE PERIOD

A. The general maintenance period for all construction or materials under this Contract shall be one (1) year subsequent to the date of the acceptance of the work by the Owner, or as provided by other sections of this Specification.

B. If the Owner puts any structure or equipment to use prior to acceptance of all work under the Contract, the maintenance period for such structures or equipment shall be calculated from the time use begins.

C. Contractor agrees to replace the material which does not conform to the Contract requirements, and to repair any damage of material or work without cost to the Owner, to satisfaction of Engineer, in conformance with Contract Documents provided orders for replacement and/or repairs are received in writing by the Contractor within the one-year period.

D. This Section shall in no way limit the duration of the Contractor's responsibility for the correction of any defect due to workmanship or materials provided by the Contractor which are not in compliance with the Contract Documents.

1.03 ABUSE OF WORK

A. Contractor is not obligated to perform work of replacement or repair that he may prove is required because of abuse by parties other than the Contractor, after the date the Owner puts to continuous use the work requiring replacements or repair, or after date the Owner has approved the Certificate of Completion.

1.04 EMERGENCY REPAIRS

A. If the Owner deems necessary, the Owner shall order replacement or repairs be undertaken within 24 hours.

B. If the Contractor delays or fails to make the ordered replacement or repairs within the time specified, the Owner shall have the right to make such replacements or repairs and the expense shall be deducted from moneys due the Contractor, or moneys of the Contractor retained by the Owner.

PART 2 PRODUCTS

NOT USED

PART 3 EXECUTION

NOT USED

END OF SECTION

DIVISION 2

SECTION 02500

SPECIAL PROVISIONS

TOWN OF MIDDLEBORO

Proposed Center Street Utility Bridge
Over MBTA/CSX Railroad

SPECIAL PROVISIONS

SUPPLEMENTING MASSACHUSETTS HIGHWAY DEPARTMENT
STANDARD SPECIFICATIONS

GENERAL REQUIREMENTS AND COVENANTS

SCOPE OF WORK

The work includes the construction of a utility bridge over the MBTA to carry a 12" insulated water main which utilizes the existing abutment wingwalls of the Center Street Bridge over the MBTA for support. In addition, the work includes providing and installing a 12" water main from along Center Street that begins at the intersection with Railway HI Road and continues eastward over the MBTA and ends at the Center Street intersection with Cambridge Street. The water main crosses under the concrete wingwalls that support the east side of Center Street in order to access the proposed utility bridge. The work also includes pavement saw cutting, excavation, backfill and compaction, installing a steel pipe sleeve under the existing wingwalls, placement of controlled low strength material (CLSM), traffic control during construction and all incidental items necessary to complete the work as shown on the Plans and these Special Provisions.

All work under this Contract shall be done in conformance with the *2025 Standard Specifications for Highways and Bridges*, the *2025 Construction Standard Details*, the *Traffic Management Plans and Detail Drawings*, *MassDOT Work Zone Safety Temporary Traffic Control,* the *1990 Standard Drawings for Signs and Supports*; the *2015 Overhead Signal Structure and Foundation Standard Drawings*, the *2009 Manual on Uniform Traffic Control Devices (MUTCD) with Revisions 1, 2, and 3 and the November 2022 Massachusetts Amendments to the MUTCD*; the *1968 Standard Drawings for Traffic Signals and Highway Lighting*; *The American Standard for Nursery Stock*; the Plans and these Special Provisions.

CONTRACT REQUIREMENTS & DEFINITIONS

"Owner" shall mean Town of Middleboro.

"Department" shall mean Department of Public Works, Town of Middleboro.

The words "municipal" or "municipality" in this document shall mean the Town of Middleboro.

"Engineer" shall mean the person, firm or corporation named by the Owner as their authorized agent to perform the particular duties entrusted.

The Standard Specifications, where referred to, shall mean the Commonwealth of Massachusetts Department of Transportation "Standard Specifications for Highways and Bridges" 2025 Edition. All work items to be performed under this Contract refer to the Standard Specifications items unless otherwise indicated.

SURVEY

The Contractor shall engage the services of a Professional Land Surveyor, registered in the Commonwealth of Massachusetts, to establish and maintain controls which shall include lines, grades and alignment. The Contractor shall replace, thru the services of his or her surveyor, any lost or destroyed controls for the duration of work. The Contractor's cost of said survey shall be considered incidental to the various pay items of work.

All survey costs to establish baseline control, and all other horizontal and vertical control as required to complete the work under this Contract, shall be included in the related unit prices. No additional compensation will be made for survey work required to layout the proposed utility bridge and water mains.

The Contractor shall make, check, and be responsible for all measurements and dimensions necessary for the proper construction of and the prevention of misfitting in the work.

INSPECTION

One or more inspectors may be assigned by the Town to oversee construction of the work shown on the Plans, and shall have the authority to govern the work. The Town or its duly appointed representative shall approve all official orders or directives that increase the cost of the project. All costs associated with inspection shall be borne by the Town.

PROVISIONS FOR ACCESS AT ALL LOCATIONS

The Contractor shall cooperate with the various utility companies, public agencies and the municipality, and provide access through the site if required for their work or to observe work in connection with this project that affects their respective properties, but all official orders and directives to the Contractor will be issued by the Town or its duly appointed representative.

CONFLICTS BETWEEN SPECIFICATIONS

Wherever a conflict exists between the Special Provisions, Plans, Standard Specifications, the conflict shall be resolved in accordance with Subsection 5.04, Division I, of the Standard Specifications.

PUBLIC SAFETY AND CONVENIENCE

The Contractor's attention is directed to his or her responsibility to maintain safe conditions for pedestrians and Contractor's personnel, as well as the motoring public. This responsibility shall be the Contractor's, regardless of his or her compliance with the Plans and these Special Provisions.

Middleborough Police details will be required during the construction period when work infringes on vehicular or pedestrian travel ways in accordance with the Plans or these Special Provisions. The Contractor shall utilize Middleborough Police details to help maintain a safe flow of pedestrian and vehicular traffic within the project limits. The Contractor shall be responsible for the arrangement of police details at the project site for the duration of the project.

If the Contractor fails to cancel any police detail not needed, by the required deadline as set forth by the Police Department, the cost for such detail shall be paid by the Contractor, unless otherwise waived by the Town due to conditions which are beyond the Contractors control.

The Contractor shall keep the roadway under construction open to vehicular traffic for the full length of the project. Suitable access and egress shall be provided at all times for all intersecting driveways and for all abutting properties having legal access.

The Contractor shall refer to the "Traffic Management Plans" in the Contract Documents for proper maintenance of traffic during construction operations. At the end of each day, all equipment and traffic control devices not applicable shall be removed from the work area and roadway. The Contractor shall schedule his or her operations to minimize interruption to the normal flow of traffic at all times during the period of time required for the completion of the work. Only one-half of any roadway may be closed to traffic at any given time unless directed by the Town.

Attention is further directed to the following provision unless otherwise directed by the Town.

1. During the hours of 9:00 AM to 3:30 PM, traffic may be maintained within the construction areas within a one lane bi-directional operation.

2. During other than working hours, all roadway surfaces shall remain available for vehicle travel.

3. No detouring traffic will be allowed without permission of the Town.

Particular care should be taken to establish and maintain methods and procedures that will not create unnecessary or unusual hazards to public safety. Traffic control and safety devices required only during working hour operations shall be removed at the end of each working day.

Construction equipment shall not be parked within any traveled way unless said equipment is adequately lighted and protected by safety devices and vehicular traffic is appropriately detoured in conformance to MUTCD requirements.

The Contractor shall furnish, install and maintain all traffic control devices for the protection of the traveling public, pedestrians and personnel working on this project for the duration of the project.

SAFETY CONTROLS FOR CONSTRUCTION OPERATIONS

Payment for safety controls for construction operations in accordance with the 2025 Standard Specifications, the Traffic Management Plans, these Special Provisions, and as necessary to conform to MUTCD requirements, shall be considered as included under the various traffic management items under this project. This work includes, but is not limited to furnishing and maintaining all traffic management devices, including temporary signing, reflectorized barrels, reflectorized cones, barricades, steel plates, temporary pavement markings (if required), and maintaining safe pedestrian access through the project site for the duration of the contract.

INSURANCE REQUIREMENTS

The Contractor shall provide a Certificate of Insurance for the Project at or prior to the Contract Agreement signing. Failure to do so will warrant termination of the Contract.

The insurance certification form shall have the *Town of Middleboro* and *Alfred Benesch & Associates* listed as additionally insured. Additionally, the insurance policy for the Project shall meet all the insurance requirements set forth in the Standard Specifications, Section 7.05 Insurance Requirements.

NOTICE TO OWNERS OF UTILITIES

Written notice shall be given by the Contractor to all public service corporations or municipal and State officials owning or having charge of publicly or privately owned utilities of the Contractor's intention to commence operations affecting such utilities at least one week in advance of the commencement of such operations. The Contractor shall, at the same time, file a copy of such notice with the Engineer and the Town.

The following are the names of owners of the principal utilities affected, but the Town does not guarantee completeness of this list.

TOWN OF MIDDLEBOROUGH

Contacts: Chris Peck, DPW Director (508) 946-2481
Mike Bumpus, Water Superintendent (508) 946-2482

MIDDLEBOROUGH POLICE DEPARTMENT

350 Wood Street, Middleborough, MA 02346
Contact: Chief Robert Ferreira (508) 947-1009

MIDDLEBOROUGH FIRE DEPARTMENT

125 North Main Street, Middleborough, MA 02346
Contact: Interim Chief Dana Fontaine (508) 946-2461

VERIZON

146 Le land Street
Framingham, MA 01702
Contact: Eric Macleod (508) 820-3524

MASSACHUSETTS ELECTRIC

245 South Main Street
Hopedale, MA 01747
Contact: Roger Martinsen (508) 482-1259

NEW ENGLAND GAS

100 Weybosset Street
Providence, RI 02903
Contact: Albert A. Marsocci, Mgr. of Eng. Design & Planning (401) 525-5697

COMCAST

85 East Belcher Road
Foxboro, MA 02035
Contact: Mark Michaud (508) 543-9022 x-7873

PROTECTION OF UNDERGROUND FACILITIES

Before the Contractor begins any work or operations that might damage any subsurface structures, he or she shall carefully locate all such structures and conduct construction operations so as to avoid any damage to them.

The Contractor shall make his or her own investigation to assure that no damage to existing structures, drainage lines, traffic signal conduits, and other utilities will occur as a result of his operations. The cost of test pits, including excavation, backfill and pavement restoration, if required to safely determine the location of underground utilities, shall be included under item 141.1, Test Pit for Exploration

The Contractor shall notify "DIG SAFE", 72 hours in advance of any digging, and procure a DIG SAFE number for the project location prior to disturbing ground in any way.

"DIG SAFE" Call Center: Telephone 1-800-344-7233

TEMPORARY ACCESS TO AREA ABUTTERS

The Contractor shall provide a safe and ready means of access and egress to all stores and shops, public and private buildings, professional offices and any other business or residence in the project area, both day and night, for the duration of the project.

PROTECTION OF UTILITIES AND PROPERTY

The Contractor, in constructing or installing facilities alongside or near sanitary sewers, storm drains, water or gas pipes, electric or telephone conduits, poles, sidewalks, walls, vaults, or other structures shall, at his or her expense, sustain them securely in place, cooperating with the officers and agents of the various utility companies and municipal departments which control them, so that the services of these structures shall be maintained. The Contractor shall also be responsible for the repair or replacement, at his or her own expense, of any damage to such structure caused by the Contractor's acts or neglect and shall leave them in the same condition as they existed prior to commencement of the work.

In case of damage to utilities, the Contractor shall promptly notify the utility owner and shall, if requested by the Town or its duly appointed representative, furnish labor and equipment to work temporarily under the Town's direction in providing access to the utility. Pipes or other structures damaged by the operation of the Contractor may be repaired by the Town, or by the utility owner that suffers the loss. The cost of such repairs shall be borne by the Contractor, without compensation therefor.

If, as the work progresses, it is found that any of the utility structures are so placed as to render it impracticable, in the judgment of the Town or its duly appointed representative, to do the work called for under this Contract, the Contractor shall protect and maintain the services in such utilities and structures and the Town or its duly appointed representative will, as soon thereafter as

reasonable, cause the position of the utilities to be changed or take such other actions deemed suitable and proper.

If live service connections are interrupted by excavations of any kind, the Contractor shall not break the service until new services are provided. Abandoned services shall be plugged off or otherwise made secure. Operation of all existing water system valves shall be by the Middleborough Water Department or as authorized by the same.

Full compensation for furnishing all labor, materials, tools, equipment and incidentals for doing all the work involved in protecting or repairing property as specified in this section, shall be be considered as included in the unit prices of the items for this project.

The Contract Plans indicate the "approximate" location of existing known utilities in the vicinity of the work. Contractors are cautioned to verify this information, as its accuracy and completeness are not guaranteed in any manner.

MAINTENANCE OF PEDESTRIAN ACCESS

The Contractor shall maintain pedestrian access through the project site at all times for the duration of this project. During construction, pedestrian access shall conform to 521 CMR, the rules and regulations of the Architectural Access Board (AAB) and the Americans with Disabilities Act (ADA).

Additionally, if the Contractor's work requires the temporary closure of pedestrian access, the Contractor shall provide for Police Detail(s) at all temporary street crossing locations. No separate payment will be made for Police Details for pedestrian access maintenance.

SHOP DRAWING SUBMITTAL

Within ten (10) days after receipt of an approved shop drawing for any item, the Contractor shall provide the Design Engineer with written proof that he or she has ordered such approved materials required on the subject Contract and a written confirmation that such order has been approved or released from fabrication, along with the expected delivery schedule for the manufacturer of the item. This delivery schedule shall be appropriate for timely completion of the project.

PROCEDURES FOR SHOP DRAWINGS SUBMITTALS

The following procedure shall be followed when making shop drawing submittals for this project.

1. The Contractor shall submit shop drawings in PDF format electronically directly to the Design Engineer for preliminary review.
2. The Design Engineer will send a written reply, returning shop drawings electronically to the Contractor within 30 calendar days of receipt of the drawings.
3. If the Design Engineer's reply indicates rejection of advises corrections or additions to the drawings, steps 1 and 2 are repeated until the Design Engineer indicates that approval will be given.

4. The Contractor shall take care that every separate document in each set of every submittal shall carry the following identifying information:

	Information Required	Example
a.	Community name of project	Middleborough
b.	Identifying item number from proposal	Item 960.1
c.	Locations where material is proposed to be used, if applicable.	Center Street Over MBTA Railroad
d.	Name of submitting Contractor	Doe Engineering
e.	Personal signature and title of an Official of the Prime Contractor Authorized to make shop drawing submittals	Joe Doe, Pres.
f.	Date of signature or submittal	September 6, 2024
g.	Description of what is on drawing	Structural Steel
I.	A clear, signed Professional Engineer's stamp to be affixed per Specifications.	

The Contractor shall not receive payment for, nor will he be allowed to install any item or materials which require shop drawing approval, unless and until they have received shop drawing approval for that item from the Design Engineer including an approval stamp placed thereon.

"AS BUILT" DRAWINGS

The Design Engineer shall provide a final "As-Built" drawing to the owner.

The Contractor shall furnish to the Design Engineer, a paper marked-up "As Built" drawing, as well as their corresponding electronic files (if available). These "As Built" drawings shall be furnished prior to the date of final acceptance. Upon request, the Design Engineer will make the original drawings available to the Contractor in electronic or hardcopy form for use in preparing the "AS BUILT" drawings.

The "As Built" drawing shall consist of the General Plan revised per the constructed improvements and all field modifications thereto including but not limited to the following details:

- Structural layout and details of the Utility Bridge and Water Main Wall Supports
- Water main installation locations as well as fittings used and installation locations.
- Other key project features as applicable to the water main operation, as depicted on the contract drawings.

All work relative to the above "As Built" Drawing, as required by the Contractor, to complete the work as specified above, shall be included in the unit prices for items included in this project, including all labor, materials, equipment, and incidentals. No additional compensation to the Contractor will be made therefor.

DISPOSITION OF EXISTING MATERIALS

The Town or its duly appointed representative shall determine the disposition of all materials with respect to reuse, disposal, or stacking. It shall be the Contractor's responsibility to obtain from the Town, their determination of disposition of existing materials, prior to performing related construction tasks. Costs associated with removal and disposal of existing materials, including soil, shall be included in the unit price for Item 302.12.

STORAGE OF MATERIALS AND EQUIPMENT

All excavated materials and equipment to be incorporated in the work shall be placed so as not to injure any part of the work or existing facilities and so that free access can be had at all times to all parts of the work and to all public utility installations in the vicinity of the work. Materials and equipment shall be kept neatly piled and compactly stored in such locations as will cause a minimum of inconvenience to public travel and adjoining owners, tenants and occupants. Excessive stockpiling, as determined by the Town or its duly appointed representative, of excavated materials from construction will not be permitted.

MATERIALS REMOVED AND STACKED

All materials owned by the Town of Middleborough and directed to be removed and stacked shall be carefully removed, transported and stacked (on boards) to a location within Town limits, to be determined by the Middleborough Highway Superintendent.

The Contractor shall be held responsible for any damage to the stacked materials if caused by the Contractor's method of handling or stacking.

If the Town deems that any part of the stacked material is unsuitable for reuse, or if other owner decides to abandon part or all of such materials, said materials shall become the property of the Contractor and disposed of legally off-site.

DISPOSAL OF SURPLUS EXCAVATED MATERIALS

Surplus materials obtained from any type of excavation or removal, and not needed for further use as determined by the Town's authorized agent, shall become the property of the Contractor and shall be legally disposed of off-site subject to the regulations and requirements of local authorities governing the disposal of such materials, at no additional compensation.

PROPERTY BOUNDS

The Contractor shall exercise due care when working around all property bounds which are to remain. Should damage or displacement to a bound result from action of the Contractor, the bound shall be replaced and/or reset to it's intended position by a Massachusetts licensed Professional Land Surveyor hired by the Town, which cost shall be the responsibility of the Contractor.

PRECAUTIONS UNDER ELECTRIC LINES

The Contractor's attention is directed to the AASHTO Guide on Occupational Safety on Highway Construction Projects, Subpart N, 1926.550, relating to construction equipment clearances at overhead electric lines, which states in part "...the minimum clearance between the lines and any part of the crane or load must be at least ten feet from lines rated 50 KV or below, and greater distances for higher voltage...".

For the protection of personnel and equipment, the Contractor shall be aware of this regulation, especially during traffic signal equipment installations and during operations using large equipment or vehicles.

MBTA FLAGGING

The Contractor shall provide a minimum two week notice for flagging support for MBTA bridges and railroads. This applies only to bridges and railroads operated by Keolis Commuter Services (KCS). This two week notice does not apply to emergency work, only to routine or scheduled work activities. The contact person for advance request for flagging services is Rich Arnold, MBTA Railroad Operations Department, Phone number (617)-222-3635, email address: rarnold@mbta.com.

MBTA COMMUTER RAIL

Keolis Commuter Service (KCS) operates the commuter rail for the MBTA. All references to MBCR in the provisions will mean Keolis Commuter Service (KCS).

MBTA RAILROAD COORDINATION / ACCESS TO MBTA PROPERTY

The Contractor shall be required to coordinate the work of this Contract with the MBTA and Keolis Commuter Services Co. ("KCS") through the Town's Engineer. A majority of the prerequisites for the Contractor to perform work on or adjacent to MBTA transit lines may be found in the "MBTA Special Instructions" provided herein. The Contractor shall be required to comply with the all applicable requirements of the latest edition of the MBTA Special Instructions available at the time of Contract Award.

The Contractor will have to perform construction related activities on, over, under, within or adjacent to railroad property owned or controlled by the MBTA. Any work that will affect Commuter Rail operations, involve work on, over, under, within or adjacent to the commuter rail right of way must be coordinated with MBTA Railroad Operations and KCS and shall comply with the latest version of the MBTA Railroad Operations Directorate.

An owner or Contractor who wishes permission to enter upon or perform work over, on, under or adjacent to MBTA property shall submit to the offices of the MBTA's designated representative, a request in writing, a minimum of forty-two (42) days prior to the owner or the Contractor's planned commencement of any of the above stated activities.

PIGEON WASTE

The Contractor shall remove and dispose of the pigeon waste and any other debris accumulated on the steel members and bridge seats in areas where work is being performed. Pigeon waste and debris material contaminants will require special handling and disposal in accordance with all Federal, state, and local requirements. No separate payment will be made for removal and disposal of pigeon waste. Cost shall be incidental to the contract pay items.

CONSTRUCTION DETAILS

ITEM 121. CLASS A ROCK EXCAVATION CUBIC YARD

The work to be done under this item shall conform to the relevant provisions of Section 120 of the Standard Specifications and the following:

Included in this item shall be the removal and disposal of masonry blocks at the top of the existing bridge wingwalls as indicated on the plans.

The Contractor shall take all measures necessary to protect pedestrian and vehicular traffic from their construction operations. Materials shall be removed carefully so as to avoid damage to adjacent structures and utilities to remain. Any damage to existing structures or utilities to remain shall be repaired to the satisfaction of the Engineer at the Contractor's expense. During the prosecution of this work, the Engineer may reject the
use of any method or equipment, which causes undue vibration or possible damage to the remaining bridge or any part thereof. No explosives shall be used.

No material shall fall onto the railroad below. Temporary shielding shall be installed as directed by the Engineer to prevent debris and materials from falling onto the railroad below.

Method of Measurement and Basis of Payment

Work under this item shall be measured and paid for at the cubic yard of rock excavated, removed, and disposed of, which includes all labor, materials, temporary shielding, equipment, and all tools necessary to complete the work to the satisfaction of the Engineer and the Town of Middleboro.

ITEM 151.22. GRAVEL BORROW FOR SIDEWALK CUBIC YARD

The work to be done under this item shall conform to the relevant provisions of Section 150 of the Standard Specifications and the following"

This item is intended for the placement of 8" of compacted gravel borrow type b under sidewalks areas that are excavated as needed to install the proposed water main at locations as shown on the plans.

Method of Measurement and Basis of Payment

Work under this item shall be measured and paid for by the contract unit price per cubic yard in place of compacted gravel borrow for sidewalks areas and shall include all labor, materials and equipment required to complete the work.

ITEM 302.12 12 INCH DUCTILE IRON WATER PIPE (RUBBER GASKET) FOOT
ITEM 309. DUCTILE IRON FITTINGS FOR WATER PIPE POUNDS
ITEM 379.075 ¾ INCH AIR RELEASE VALVE EACH

The work to be done under these items shall conform to the relevant provisions of Section 300 of the Standard Specifications and the following:

The work shall include furnishing, laying, joining, and testing ductile-iron pressure pipe, fittings (including special castings), and appurtenant materials and equipment indicated on the Drawings and specified in this Section.

The work shall also include the first 5 feet of excavation depth, backfill of the upper five feet of pipe trench, and appurtenant materials and equipment indicated on the Drawings and specified in this Section.

The work shall also include all work and materials associated with connecting into existing gates on both ends of the project limits.

General

The Contractor shall give at least a 48-hour notice to the Engineer and to the Town of Middleboro Water Works Department before any work is undertaken. The Contractor shall cooperate with the Engineer and the Town of Middleboro Water Department, and shall coordinate all water supply alteration work with them. The Town of Middleboro Water Department will furnish necessary personnel to close or open valves on the water main.

The Contractor shall perform his or her work so as to minimize shutdowns.

Data relative to existing water mains, services, etc., shown on the plans, has been compiled from existing plans, field surveys and information furnished by the Town of Middleboro, but such data is not guaranteed as to the exact location or elevation. The Contractor shall verify the location, size and type of existing pipes at each location involved in the project with test pits if needed.

Approval of Materials

The Contractor shall submit the names of the material suppliers to the Town, and receive approval from the Engineer and Town of Middleboro Water Department prior to ordering any materials.

The Contractor shall submit shop drawings showing the layout of the proposed water mains, including all fittings, pipe supports, pipe and materials necessary to furnish a complete operating water main.

The Middleboro Water Dept. and the Engineer shall be forwarded a copy of this submittal for review and acceptance.

No work shall be performed on the water mains without prior written approval by the Middleboro Water Dept. at least 14 days in advance regarding all water main related activities.

The Contractor shall coordinate with the Town to establish the duration for advance notice required.

All construction work on the water main shall be witnessed by representatives from the Middleboro Water Dept.

Materials

Pipe and Fittings

12-Inch Ductile Iron Water Pipe

12-inch ductile iron water pipe shall be Class 52 - Cement Lined push-on restrained joint pipe manufactured in accordance A21.50 & A21.51. Push-on joints for such pipe shall be in accordance with ANSI/AWWA, C111/A21.11. Pipe shall be U.S. Pipe HDSS or approved equal. 12-inch ductile iron water shall be insulated on the bridge and below grade at either end of the bridge where the pipe has less than 5' of cover.

Fittings for ductile iron water pipe shall be mechanical joint ductile iron, Class 250 minimum, conforming to applicable ANSI, NEWWA, and AWWA specifications. Mechanical fittings shall utilize restrained joints recommended by the manufacturer as suitable for use on bridge crossings.

Pipe and fittings shall have a cement mortar lining and seal coat on the inside and a coal tar enamel coat on the outside in accordance with ANSI A21.4 (AWWA C104) and ANSI A21.6 (AWWA C106), as amended, except that the cement mortar lining shall be 1/8" in thickness for pipe 2" to 12" in diameter. It shall be free of any casing or cracks in the cement lining.

Pipe shall be rubber-ring type push-on joint. Rubber gaskets shall conform to ANSI A21.11. Pipe shall be supplied in lengths not exceeding 20'. Each pipe and fitting shall have the initials of the manufacturer's name and the year cast stamped or cast into the metal.

Valves

Gate valves shall conform to AWWA C500 and shall be rated for 200-psi minimum working pressure and a minimum of 350-psi test pressure. Stuffing boxes shall be of the O-ring type. The operating nut shall be standard AWWA 2" square. Valves shall have mechanical joint only, used with "Megalug" or approved equal retainers. All valves shall open left or counter-clockwise.

All valves shall be ductile iron, bronze mounted, resilient seat seal, non-rising stem type. All ferrous parts of the valves, except finished or bearing surfaces, shall be given two coats of asphalt varnish.

After the valves are assembled and tested, a third coat shall be applied on the exterior.

All valves shall be of a mechanical joint design.

Valves shall be as manufactured by The Mueller Company, The Kennedy Companies, Darling Valve Co., or approved equal.

¾ “ Air Release Valve

Air release valves shall be constructed of cast iron body and cover with shock proof seats for 150 psi pressure. The air release valve shall have a ¾-inch inlet. Air release valves shall be Val-Matic Model No. 25. APCO, Crispin or approved equal.

Valve and Service Boxes

Valve and curb boxes shall be two-section, cast iron, heavy pattern adjustable type, with cast iron cover. The upper sections shall not have a bottom. The bottom section shall enclose the valve stuffing box and operating nut. Boxes shall be of lengths adapted to 5’ pipe cover or more and have a minimum of 6” of overlap in the most extended position. Valve box covers shall have the word "WATER" cast in the top.

Backfill

This item shall include backfill materials for the pipe trench as shown on the contract plans, such as compacted sand and gravel borrow, down to 5 feet below grade. Loam and seed, sidewalk pavement, and roadway pavement shall not be included in this item.

Installation

Excavation and Backfill

Excavation and backfill shall follow the provisions of sections 140 and 150 of the Standard Specifications.

Pipe and Fittings Installation

Laying of pipe and fittings shall be in accordance with the requirements of AWWA Standard Specifications for Installation of Ductile-Iron Water Mains, C600, and as follows:

The Contractor shall make all necessary arrangements with the Town of Middleboro Water and Fire Departments for the necessary shutdowns of service.

Upon testing and acceptance of the new water main, the Town of Middleboro Water Department will establish the time of shutdown for the connection of the new main to the existing mains, including associated services.

Care shall be taken in loading, transporting, and unloading to prevent injury to the pipes or coatings. Pipe and fittings shall not be dropped. All pipe or fittings shall be examined for cracks, defects in coating or lining, and any other evidences of unsuitability before laying, and no piece shall be installed which is found to be defective. Any damage to the pipe coatings shall be repaired as directed by the Engineer. Any pipe found to be defective, before or after laying, shall be satisfactorily removed and replaced with sound pipe at no additional cost to the Owner.

The Contractor shall excavate a minimum amount of trench and shall backfill trench to within 2 lengths of pipe laying. All trenches shall be completely backfilled at night unless otherwise approved by the Engineer.

All pipe and fittings shall be sound and clean before laying and shall be laid on a shaped bedding providing uniform, firm support over the entire length of each section barrel. BLOCKING WILL NOT BE PERMITTED. The select bedding material shall be placed and tamped along the sides of the pipe to complete the bedding.

Acceptable alignment shall be preserved in laying. The deflection at joints shall not exceed 3 degrees, or 12 inches for an 18-foot length of pipe, and shall not exceed that recommended by the manufacturer. Additional fittings shall be provided, as required, in crossing utilities that may be encountered upon opening the trench. Solid sleeves shall be used only where approved by the Engineer.
New pipe shall be laid at a uniform 5' depth to top of pipe below proposed grade except where extra depth is required to clear other utilities and to connect to existing pipes, valves or fittings.

Pipe shall be laid in the dry and at no time shall water in the trench be permitted to flow into the pipe. The Contractor is responsible for the control of all groundwater flow at all times using a suitable method for control approved by the Engineer. When pipe laying is stopped for any length of time, including short periods, the open ends of the pipe and fittings shall be closed with a watertight plug or cap.

The Contractor shall provide a compressible, mechanical, hand tightened temporary plug to be inserted into the open end of each pipe bell during pipe laying operations. The temporary plug shall be left inserted into the open end of the last piece of pipe laid at the end of each work day and on weekends.

Necessary pipe cutting shall be accomplished by power saw and shall leave a smooth cut at right angles to the axis of the pipe. Cut ends of pipe to be used with a push-on bell shall be beveled to conform to the manufactured spigot end. Cement lining shall be undamaged.

Push-on joints shall be made in strict accordance with the manufacturer's instructions. The rubber gasket shall be inserted in the groove of the bell end of the pipe, the joint surfaces cleaned and lubricated. The plain end of the pipe to be entered shall then be inserted in alignment with the bell of the pipe to which it is to be joined and pushed home with a jack or by other means. After jointing the pipe, a metal feeler shall be used to make certain that the rubber gasket is correctly located.

Structural supports on the utility bridge shall be located within 24" of the end of the pipe bell of each segment of pipe. In addition, the contractor shall make provisions for extending each push on joint so as to engage its restraint. This may be accomplished by extending the joints fully during assembly.

Mechanical joints shall be installed in accordance with the "Notes of Method of Installation" of ANSI A2 1.1 l and the instructions of the manufacturer. The Contractor shall thoroughly clean the joint surfaces and rubber gasket with soapy water before tightening the bolts. Bolts shall be tight to the specified torque. Under no condition shall extension wrenches or pipe over handle or ordinary ratchet wrench be used to secure greater leverage.

If ledge, reinforced concrete, Portland cement concrete or boulders are encountered during the course of pipe installation, it shall be the Contractor's responsibility to remove and dispose of all ledge concrete, cement or boulders by blasting or other suitable method approved by the Engineer. Extreme care shall be exercised to ensure that no damage occurs to any other

underground utility or above-ground facility and all adjacent paved surfaces during all removal and backfill operations. Contractor shall use extreme caution not to damage any portion of the existing Center Street Bridge to remain, including but not limited to the abutments, wingwalls, railings, barriers, sidewalks, and deck. Should any such damage occur, it shall be completely repaired or restored to original condition at the Contractor's expense.

The pipe shall then be laid on the trench bedding, and the pipe pushed into place. Assembly of restrained joint pipe shall be in accordance with the manufacturer's instructions and appropriate ASTM Standards. The Contractor shall have on hand for each pipe laying crew, the necessary tools, gauges, pipe cutters, tamping bars, etc., necessary to install the pipe in a workmanlike manner. Pipe laying shall proceed upgrade with spigot ends pointing in the direction of flow.

If inspection of the pipe indicates that the pipe has been properly installed as determined by the Town's Water Superintendent, the Contractor may then refill or backfill the remainder of the trench in accordance with the Standard Specifications and these Special Provisions.

Concrete Thrust Blocks

Concrete thrust blocks shall be installed at all tees, bends, plugs, caps, tapping sleeves and other locations as shown on the plans and as directed by the Engineer in accordance with approved AWWA Standards and the dimensions and details shown on the plans.

The back of thrust blocks shall be placed against undisturbed earth and the sides shall be formed. Felt roofing paper shall be placed to protect pipe joints. Concrete shall not be placed over bolts or nuts, or in a manner that prevents the removal of joints. Concrete shall follow the provisions of section 901 of the Standard Specifications and payment shall be made under Item 903. Installation of the concrete bracing block, including all formwork, handling, materials, and equipment shall be paid for under Item 903.

Valve Installation

Valves shall be installed as nearly as possible in the positions indicated on the drawings consistent with conveniences of operating the hand wheel or wrench. All valves shall be carefully erected and support in their respective positions free from all distortion and strain or appurtenances during handling and installation. All material shall be carefully inspected for defects in workmanship and material, all debris and foreign material cleaned out of valve openings and seats, all operating mechanisms operated to check their proper functioning, and all nuts and bolts checked for tightness. Valves and other equipment, which do not operate easily or are otherwise defective, shall be replaced at the Contractor's expense.

Valves shall not be installed with stems below the horizontal.

Valves shall be set plumb and supported adequately in conformance with the instructions of the manufacturer. Valves shall be installed so as to be easily accessible.

Valves shall be provided with extension stems where required for convenience of operation. Extension stems shall be provided for valves installed underground and elsewhere so that the operating wrench does not exceed 8' in length.

Tests and Disinfection

On completion of the pipeline, it is to be filled with water and tested. Water used for this purpose is to be drawn from the existing water system by the Contractor under the direction of the town's Water Department. The test will be conducted no less than four days after the line is filled. The town will require that the contractor conduct water main testing through a town approved firm. The Contractor shall perform water main testing in accordance with The Town of Middleboro standards and as specified herein.

A pressure test and a leakage test are to be run simultaneously. The pressure for these two tests is to be measured at the lowest part of the line and is to be per current Town of Middleborough regulations. The test is to be conducted for a period of 2 hours or until such time as the town's Water Department indicates acceptance of the pipeline.

Time for Making Test

No pipeline is to be placed under pressure or subjected to hydrostatic pressure until at least 3 days have elapsed after the concrete thrust blocks have been installed. If high early strength concrete is used in the concrete thrust blocks, the hydrostatic pressure can be applied to the main after 2 days have elapsed from time of construction of the thrust blocks.

Procedure

Each section of pipeline to be tested shall be slowly filled with water from the existing system. The operation of connections to the existing system is to be carried out by the Contractor under the direction of the town's Water Department. After the new portion of the line has been brought up to normal operating pressure, all air shall be expelled from the pipeline.

Hydrants and blow-offs are to be used for this purpose insofar as possible. After all air has been expelled, the pressure and leakage test will be started. The pipeline under test is to be raised to the specified pressure (1.5 operating pressure, or 150 psi, whichever is greater). The Contractor will be required to furnish a pump, pipe connections, all necessary apparatus and connections to the new main. The Contractor will furnish all gauges and meters required and will raise the pressure in the new section of main to the specified test pressure by means of the pump, using clean water from the existing water system and will maintain the specified pressure for a period of 2 hours or until the town's Water Department indicates that the pipeline is satisfactory.

Any, cracked or defective pipes, fittings, valves or hydrants discovered in consequence of this pressure test shall be removed and replaced by the Contractor with sound material and the test shall be repeated until satisfactory to Engineer and the town's Water Department.

Leakage Test

The leakage test shall be conducted simultaneously with the pressure test. Leakage is defined as the quantity of water to be supplied into the newly laid pipe, or any valved section thereof, necessary to maintain the specified leakage test pressure after the pipe has been filled with water and the air expelled. The Town of Middleboro Water Department will determine the allowable leakage per linear foot of pipe based on AWWA standards.

Disinfection

The completed pipeline is to be disinfected with a chlorine concentration of approximately 50 ppm prior to being placed in service. The introduction of this chlorine may be accomplished using one of the following methods:

- By sticking calcium hypochlorite tablets to the interior wall of each length of pipe as it is laid.
- By pumping or siphoning a calcium hypochlorite solution into the main during the initial filling operations.

Regardless of the method employed, the chlorinated water is to remain in the new pipeline for a period of 24 hours. During this period, proper precautions are to be taken to prevent this chlorinated water from flowing back into the existing system.

Blowing Out

After all disinfection and testing is completed, the Contractor will be required to blow out the new water mains under the direction of the town's Water Department. Blowing out of the main is to be accomplished at as high a velocity as possible consistent with the ability of the existing system to supply water and the ability of the area around the blow-off point to drain the water off. After clean water substantially free of chlorine (chlorine residual equals abutting chlorine residual) is obtained at the blow-off, the flow of water at reduced rates is to be continued for at least one hour.

After completion of the blowing-off operation, a water sample will be taken by a professional water testing laboratory approved by the Engineer. The testing laboratory shall conduct a standard scan test of the sample including testing for total coliform, as well as other common contaminants found in water. If a total coliform zero count (total and background) is found, the new main is to be placed in service. If the test is positive, the line must be flushed again and re-tested. After the second test, if there is still a positive result, re-chlorination is required and the aforementioned steps will be repeated. All costs, including testing, will be borne by the Contractor.

The Contractor shall properly dispose of all chlorinated wastewater from the disinfection process.

Method of Measurement and Basis Of Payment

Work under the items named above shall be measured and paid for at the contract unit prices indicated, which prices shall include all labor, materials, testing, lab fees, equipment and tools necessary to complete the work to the satisfaction of the Engineer and the Town of Middleborough.

ITEM 325.20 20 INCH STEEL PIPE CASING FOR WATER PIPE FOOT

This item shall include the supply, fabrication, delivery, and installation of the HSS20x0.5 pipe sleeves underneath existing retaining walls as indicated on the plans and specified herein.

Materials

The steel pipe casing shall conform to the requirements of ASTM A500 and shall be coated with coal tar epoxy.

Installation

The installation of the pipe casings shall be done in such as manner as to prevent any damage or settlement to the concrete retaining walls under which they will be installed.

The Contractor shall submit his or her method of sleeve installation operations to the Engineer for review and approval prior to commencing work under this item. The submittal shall be prepared and stamped by a Professional Engineer registered in Massachusetts. The submittal shall show a plan and details of his or her means and methods for installing the sleeves, installing the 12" water main inside the sleeves and sealing the ends of the sleeve as indicated on the plans. This submittal of sleeve installation operations shall be submitted to MassDOT for review and the Contractor shall obtain written approval from MassDOT prior to commencing the work under this item. Contractor shall follow procedures in the 2013 MassDOT Utility Accommodation Policy to obtain approval from MassDOT. If trenchless pipe installation methods are proposed, Contractor shall follow the requirements in the document titled "Application Requirements and Permit Conditions: Trenchless Pipe Installation (MassDOT Application Requirements)" dated 2019.

Method of Measurement and Basis Of Payment

Work under the item shall be measured and paid for at the contract unit price per foot of length installed , which price shall include all labor, materials, installation pit excavation and backfilling, equipment and tools necessary to complete the work as herein described to the satisfaction of the Engineer.

The work under this item shall also include the supply and installation of miscellaneous materials such as pipe centering devices and end closures between the sleeve and the water pipe.

The work under this item shall also include obtaining written approval from MassDOT to install the sleeves. If trenchless pipe installation methods are proposed, all work associated with obtaining a trenchless pipe installation permit from MassDOT, as listed in the 2019 Application Requirements and Permit Conditions: Trenchless Pipe Installation (MassDOT Application Requirements) shall be included in this item.

ITEM 372. ADJUSTABLE DOUBLE PIPE ROLLER SUPPORT ASSEMBLY EACH

This item shall include the supply, fabrication, delivery, and installation of the adjustable steel double pipe roller supports as indicated on the plans and specified herein.

The work under shall include the supply and installation of the rollers and supporting threaded rods and nuts as indicated on the plans.

Contractor shall submit catalog cuts for review and approval by the Engineer, which shall include product technical information, material properties, installation instructions, and any other manufacturers requirements and recommendations.

Method of Measurement and Basis Of Payment

Item 372. will be paid for at the Contract unit price per Each assembly provided and installed, which price shall include all labor, materials, tools, equipment, access, storage, , and incidental costs required to complete the work.

ITEM 373.12 12 INCH WATER PIPE INSULATION FOOT

The work under this item shall be in accordance with the relevant provisions of Section 301 of the Standard Specifications and the following:

Item 373.12 shall include the supply, fabrication, delivery, and installation of the water pipe insulation as indicated on the plans and specified herein.

Materials

Acceptable materials include those in Section 301 of the Standard Specifications and additionally insulation systems with expanded polystyrene or urethane insulation with an HDPE jacket will be accepted.

The HDPE jacket shall be high density polyethylene (HDPE) conforming to ASTM D1248 and ASTM D3350, Type III, Category 5, Class C. HDPE Shall have a minimum of 2% by weight of carbon black and a minimum thickness of 150 mils.
The inner surface of the HDPE jacket shall be oxidized by means of corona treatment, flame treatment, or other approved methods to ensure a secure bond between the jacket and insulation preventing any ingression of water at the jacket/foam interface.

The HDPE jacket shall be seamless. Field joint closures shall be in accordance with manufacturers' recommendation. All water main testing shall be completed prior to completing field joint closures.

Method of Measurement and Basis Of Payment

The length of insulation for water pipe to be paid for shall be measured by the linear foot along the length of insulation actually installed end to end.

The unit price for insulation shall be full compensation for all labor, materials and equipment to supply, fabricate, transport and install the insulation at the required locations. The price shall include all fabrication, installation, and all else in connection with the insulation of water main for which there is no separate pay item.

ITEM 504.2 GRANITE CURB TYPE VA4 – SPLAYED END EA

The work under this item shall conform to the relevant provisions of Subsection 504 of the Standard Specifications and the following:

The work shall include furnishing and installing granite splayed end transition curb (straight or curved) where vertical granite curb transitions to HMA curb.

Materials

Material shall conform to Section M9.04.0. Dimensions and configuration, including radius of curvature, shall conform to the plans.

The splayed end curb shall consist of a single granite curb stone, with a tapered wedge cut from the top front edge, on the left or right as appropriate. The tapered wedge shall present a neat and uniform appearance with the overall stone and shall be formed using the same method (sawcut or split) used to shape the top surface of the original stone. Modifying a common curb stone by hand cutting or chipping will not be accepted.

Method of Measurement and Basis Of Payment

Item 504.2 will be measured for payment by the Each granite splayed transition curb installed, complete in place.

No distinction will be made between curb stones that transition to the left or to the right. No distinction will be made for curved splayed ends of different radii.

Item 504.2 will be paid for at the Contract unit price per Each, which price shall include all labor, materials, equipment, and all incidental costs required to complete the work.

ITEM 767.121 SEDIMENT CONTROL BARRIER FOOT

The work under this item shall conform to the relevant provisions of Subsections 670, 751 and 767 of the Standard Specifications and shall include the furnishing and placement of a sediment control barrier. Sediment control barrier shall be installed prior to disturbing upslope soil.

The purpose of the sediment control barrier is to slow runoff velocity and filter suspended sediments from storm water flow. Sediment barrier may be used to contain stockpile sediments, to break slope length, and to slow or prevent upgradient water or water off road surfaces from flowing into a work zone. Contractor shall be responsible for ensuring that barriers fulfill the intent of adequately controlling siltation and runoff.

Twelve-inch diameter (after installation) compost filter tubes with biodegradable natural fabric (i.e., cotton, jute, burlap) are intended to be the primary sedimentation control barrier. Photo-biodegradable fabric shall not be used.

For small areas of disturbance with minimal slope and slope length, the Engineer may approve the following sediment control methods:

- 9-inch compost filter tubes

No straw wattles may be used. Additional compost filter tubes (adding depth or height) shall be used at specific locations of concentrated flow such as at gully points, steep slopes, or identified failure points in the sediment capture line.

When required by permits, additional sediment barrier shall be stored on-site for emergency use and replacement for the duration of the contract.

Where shown on the plans or when required by permits, sedimentation fence shall be used in addition to compost filter tubes and straw bales and shall be compensated under that item.

Sediment control barriers shall be installed along the length of the project limits at the downslope side of the proposed work, as directed by the Engineer, and as required so that no excavated or disturbed soil can enter mitigation areas or adjacent wetlands or waterways. If necessary to accommodate field conditions and to maximize effectiveness, barrier locations may be shifted with approval from the Engineer. Barriers shall be in place prior to excavation work. No work shall take place outside the barriers.

Materials and Construction

Prior to initial placement of barriers, the Contractor and the Engineer shall review locations of proposed barrier adjust placement to ensure that the placement will provide maximum effectiveness.

Barriers shall be staked, trenched, and/or wedged as specified herein and according to the Manufacturer's instructions. Barriers shall be securely in contact with existing soil such that there is no flow beneath the barrier.

Compost Filter Tube

Compost material inside the filter tube shall meet M1.06.0, except for the following: no peat, manure or bio-solids shall be used; no kiln-dried wood or construction debris shall be allowed; material shall pass through a 2-inch sieve; and the C:N ratio shall be disregarded.

Outer tube fabric shall be made of 100% biodegradable materials (i.e., cotton, hemp or jute) and shall have a knitted mesh with openings that allow for sufficient water flow and effective sediment capture.

Tubes shall be tamped, but not trenched, to ensure good contact with soil. When reinforcement is necessary, tubes shall be stacked as shown on the detail plans.

Sedimentation Fence

Materials and Installation shall be per Section 670.40 and 670.60 of the Standard Specifications and the following:

Sedimentation fence shall only be used if shown on the plans or when specified by Orders of Condition or other permit requirements.

When used with compost filter tubes, the tube shall be placed on a minimum of 8 inches of folded fabric on the upslope side of the fence. Fabric does not need to be trenched.

When used with straw bales, an 8-inch deep and 4-inch wide trench or V-trench shall be dug on the upslope side of the fence line. One foot of fabric shall be placed in the bottom of the trench followed by backfilling with compacted earth or gravel. Stakes shall be on the down slope side of the trench and shall be spaced such that the fence remains vertical and effective.

Width of fabric shall be sufficient to provide a 36-inch high barrier after fabric is folded or trenched. Sagging fabric will require additional staking or other anchoring.

MAINTENANCE

Maintenance of the sediment control barrier shall be per Section 670.60 of the Standard Specifications.

The contractor shall inspect the sediment barrier in accordance with relevant permits. At a minimum, barriers shall be inspected at least once every 7 calendar days and after a rain event resulting in 0.25 inches or more of rainfall. Contractor shall be responsible for ensuring that an effective barrier is in place and working effectively for all phases of the Contract.

Barriers that decompose such that they no longer provide the function required shall be repaired or replaced as directed. If the resulting berm of compost within the fabric tube is sufficiently intact (despite fabric decay) and continues to provide effective water and sediment control, barrier does not necessarily require replacement.

DISMANTLING & REMOVING

Barriers shall be dismantled and/or removed, as required, when construction work is complete and upslope areas have been permanently stabilized and after receiving permission to do so from the Engineer.

Regardless of site context, nonbiodegradable material and components of the sediment barriers, including photo-biodegradable fabric, plastic netting, nylon twine, and sedimentation fence, shall be removed and disposed off-site by the Contractor.

For naturalized areas, biodegradable, natural fabric and material may be left in place to decompose on-site. In urban, residential, or other locations where aesthetics is a concern, the following shall apply:

- Compost filter tube fabric shall be cut and removed, and compost shall be raked to blend evenly (as would be done with a soil amendment or mulch). No more than a 2-inch depth shall be left on soil substrate.
- Sedimentation fence, stakes, and other debris shall be removed and disposed off-site. Site shall be restored to a neat and clean condition.

Method of Measurement and Basis Of Payment

Work under this item shall be measured and paid for at the contract unit price per foot, which prices shall include all labor, materials, testing, lab fees, equipment and tools necessary to complete the work to the satisfaction of the Engineer and the Town of Middleborough.

ITEM 912.5 DRILLED AND GROUTED #5 DOWELS EACH

The work to be done under this Item shall consist of drilling and grouting holes in the existing concrete and stone masonry wingwalls and abutments following concrete removal, and placing #5 steel reinforcing dowels/bars as shown on the Contract Plans or as required by the Engineer.

Materials

The steel dowels/bars shall meet the requirements of AASHTO M31 (ASTM A 615) Grade 60 for reinforcement unless otherwise noted. All steel reinforcement dowels shall be either epoxy coated in accordance with ASTM A 934 or galvanized in accordance with AASHTO M 232 (ASTM A 153). Steel dowels shall be incidental to the work under this Item.

The grout to be used for these dowels shall be a fast-setting, high-strength, non-shrink, non-metallic, cementitious, structural grouting compound, and shall be listed on MassDOT's QCML. Epoxy, vinyl, or polyester resin adhesives shall not be utilized. The Engineer shall confer with the MassDOT QCML regarding which products are approved for use on Massachusetts Department of Transportation bridge projects.

Construction Methods

Drilled dowel holes shall be diamond core drilled. The inner surfaces of the diamond core drilled holes shall be scored to develop sufficient keying action. The method of scoring shall be subject to approval by the Engineer. The hole diameter shall be in accordance with the grout manufacturer's recommendations and results of field testing. The holes shall be clear of any debris and shall have the approval of the Engineer prior to placement of any grout material.

The Contractor shall strictly follow the latest written recommendations of the manufacturer for mixing and placing the grout material prior to the placement of the dowels. Any excessive grout around the hole after placement of the dowel shall be struck off smooth while the grout is still fresh.

The grout, drilled hole diameter, and embedment depth shall conform to the manufacturer's written recommendations and be submitted to the Engineer for approval. These criteria shall also be field tested, as specified below, prior to approval for use on this project.

The dowel embedment must be adequate to fully develop 125% of the yield strength of the bar. Two test dowel bars of each dowel size shall be installed in the existing concrete abutment or existing concrete wingwall and tested by the Contractor for pullout. The pullout force shall correspond to 125% of the yield strength of the bar. If any of the tested bars pull out or if the surrounding concrete shows signs of cracking, the Contractor must adjust the hole diameter, embedment length, and/or grouting material to meet this test requirement. All holes or cracks caused by testing shall be repaired by the Contractor to the satisfaction of the Engineer.

Method of Measurement

Item 912.5 will be measured for payment by Each, installed, complete drilled and grouted #5 dowels and accepted by the Engineer.

Basis of Payment

Item 912.5 will be paid for at the Contract unit price per Each, which price shall include all labor, materials, tools, equipment, staging, access, removals, storage, the cost of all field measurements and survey required, and incidental costs required to complete the work.

ITEM 913.2 CORING AND GROUTING ANCHOR BOLTS EACH

The work to be done under this item includes coring and grouting anchor bolts into existing concrete and stone masonry wingwalls for beam bearing plates and utility support brackets as shown on the plans.

The anchor embedment must be adequate to fully develop 125% of the yield strength of the anchor bolt. The embedment length, the method and equipment used to drill the dowel holes, and the diameter of the drilled hole shall, at a minimum, conform to the recommendations of the manufacturer and be submitted to the Engineer for approval.

Materials

The grout to be used for the anchor bolts and conduit shall be a non-shrink cementitious mortar.

Grouting material that has been tested, approved, and is listed on the MassDOT Approved Products List is acceptable for use on MassDOT bridge projects.

Construction Methods

All anchor bolt holes shall be diamond core drilled with a minimum edge distance of 6 inches. The inner surfaces of diamond core drilled dowel holes shall be scored to develop sufficient keying action. The method of scoring of the hole's inner surfaces shall be subject to the approval of the Engineer. The diameter of the holes shall be as required to suit the product provided. The holes shall be blown clear of any debris and shall have the approval of the Engineer prior to the placement of any grout material.

The coring operation shall be performed without damage to any portion of the structure that is to remain in place. Any damage to any existing portion of the structure that is to remain in place shall be repaired to a condition equal to or better than that existing prior to the beginning of the Contractor's operations, and shall be repaired at the Contractor's expense.

The Contractor shall strictly follow the recommendations of the manufacturer for mixing and placing the grout material prior to the placement of the dowels. The Contractor shall, at a minimum, adhere to the ACI code requirements regarding minimum and maximum temperatures while placing the grout. Any excessive grout around the hole after placement of the dowel shall be struck off smooth while the grout is still fresh.

Two test anchors shall be installed in the existing stone and tested by the Contractor for pull-out. The pull-out force shall correspond to 125% of the yield strength of the anchor. If any of the tested anchors pull out or if the surrounding stone shows signs of cracking, the Contractor must adjust the hole diameter, embedment, length and/or grouting material to meet this test requirement. All testing of the cored and grouted anchors shall be performed by the Contractor and is incidental to the work under this heading. Details of the testing equipment used and the locations and details of the test anchors shall be submitted to the Engineer for approval. The Contractor shall perform this test as soon as possible in order to eliminate delays in construction due to the approval process. Anchors shall not be ordered until the embedment lengths have been approved by the Engineer.

Method of Measurement

Item 913.2 will be measured for payment by Each, installed, complete drilled and grouted anchor bolt and accepted by the Engineer.

Basis of Payment

Item 913.2 will be paid for at the Contract unit price per Each, which price shall include all labor, materials, tools, equipment, staging, access, removals, storage, the cost of all field measurements and survey required, and incidental costs required to complete the work.

ITEM 933.1 PLAIN ELASTOMERIC BEARING PAD W/ ANCHOR BOLTS EACH

The work to be performed under this item shall conform to the relevant provisions of Section M9.14.5 and the following:

Submittals

The Contractor shall submit to the Engineer for approval the following documents:

1. Prior to fabrication:
    a. Written notification in accordance with M9.14.5
    b. Shop drawings for approval in accordance with Section 5.02 of MassDOT's Supplemental Specifications to the Standard Specifications for Highways and Bridges.
        i. Fabrication shall not begin until the Contractor receives written approval from the Department that the submitted shop drawings have been received.
2. Upon delivery of the bearing pads:
    a. A Certificate of Compliance certifying that the elastomeric bearing pads meet the requirements of the contract specifications.
    b. Independent testing results as required below.
    c. Additional one elastomeric bearing pad for testing as required below.

Materials

Elastomer: The elastomeric compound shall be composed of 100% low temperature Grade 3 virgin crystallization resistant polychloroprene (neoprene).

Fabricators

The National Transportation Product Evaluation Program (NTPEP) shall find the bearing pad fabrication plant to be in compliance with the Elastomeric Bridge Bearing Pad Technical Committee Work Plan. Approved fabricators are listed on the MassDOT QCML.

Fabrication

Bearing pads shall be fabricated in conformance with the "Method A" design method outlined in the AASHTO LRFD Bridge Design Specifications.

The bearing dimensions and the design shear modulus of the elastomer shall be as shown on the Plans.

The tolerances on the overall dimensions for the bearings shall be according to Table 2 of AASHTO M 251, except that the tolerance on the overall vertical dimension shall be limited to -0, +1/8" regardless of the design thickness.

Sampling

One additional pad is required for testing purposes in accordance with Subsection M9.14.5 of the Standard Specifications shall be considered as incidental to this item. The testing sample shall be the same size and type as the proposed bearings. The quantities listed only include the number of bearings required for construction and do not include the additional bearings required for conformance and destructive testing as outlined herein.

Independent Testing

Independent testing shall be performed by a nationally recognized testing laboratory approved by the Engineer which shall provide certified test results. One bearing shall be tested at the frequency specified under Section 8.5 of AASHTO M 251. The minimum testing shall be in conformance with Sections 8 and 9 of M 251 as specified below:

1. Materials shall meet Section 4 of M 251.
2. Dimensions per Section 8.4 of M 251.
3. Elastomer per Section 8.6 of M 251.
4. Compressive Strain at maximum dead and live load (service) per Section 8.8.1 of M 251.
    a. The compressive deflection of each bearing shall not exceed 10% of the design effective rubber thickness at a compressive load equal to the maximum design load.
5. Short Duration Compression Test per Section 8.8.2 of M 251.
6. Shear Modulus of the Elastomer per Section 8.9.1 of M 251.
    a. The shear modulus shall be between 0.136 and 0.184 ksi.
7. Tensile Strength, Ultimate Elongation per ASTM D412.
8. Shear Bond Strength per ASTM D429.
9. Heat Resistance per ASTM D573.
10. Compression Set per ASTM D395.
11. Low Temperature Brittleness per ASTM D746 for Elastomer Grades 3.

Packaging, Handling, and Storage

The bearing pads shall be packaged, handled and stored in accordance with Section 18.1.3 of the AASHTO LRFD Bridge Construction Specifications. On the top of each completed bearing it shall be clearly identified and marked in accordance with M 251 Section 7. In addition, a 1/32" deep direction arrow shall be inscribed into the bearing which will allow the bearing to be aligned with the up-station direction. All marks shall be permanent and be visible after the bearing is installed.

Installation

The bearing pads and bridge seat bearing areas shall conform to Section 901.65A(3).

Acceptance

Requirements for providing notification to the Department prior to the start of bearing pad production as well as the provisions for random sampling of the bearings by the Department at the job site for additional destructive testing shall be in accordance with M9.14.5 and this specification. The Department shall use the results of the Independent testing as well as their own testing in the Acceptance of the bearing pads.

Method Of Measurement And Basis Of Payment

Work under this item shall be measured and paid for at the contract unit price per Each bearing installed, which prices shall include all labor, materials (including anchor bolts), testing, lab fees, equipment and tools necessary to complete the work to the satisfaction of the Engineer and the Town of Middleborough.

ITEM 960.1 STRUCTURAL STEEL – COATED STEEL POUND

The work under this item shall conform to the relevant provisions of Subsection 960 of the Standard Specifications and shall include the supply, fabrication, and installation of steel beams, diaphragms, connection plates, bearing/sole plates, wall support bracket angles, plates and anchor bolts and as shown on the plans.

All bolts shall be high strength bolts meeting the requirements of ASTM A325 and ASTM A563 of the appropriate diameters and installed in accordance with the Specifications. Nuts shall conform to ASTM A563 Standard Specification for Carbon and Alloy Steel Nuts. Washers shall conform to ASTM F436 Standard Specification for Hardened Steel Washers.

Welding shall be performed in accordance with AASHTO/AWS/ANSI D1.5.

All structural steel shall be AASHTO M270 Grade 50 and shall be hot dip galvanized.

All Structural Steel plates, shapes, bolts, nuts, washers and anchor bolts shall be hot-dipped galvanized in accordance with the Standard Specifications Division III Section M7.10.0.

All structural steel bridge fabrication for this Project shall be performed by a fabricator currently listed on the Massachusetts Department of Transportation (MassDOT) Approved Fabricator List for the applicable category of bridge work as described in the MassDOT Standard Specifications Division III section M8.06.1. The fabricator shall maintain approved status with MassDOT throughout the duration of the Contract. Evidence of current approval shall be submitted to the Engineer prior to commencement of fabrication. Fabrication performed by firms not approved by MassDOT at the time of fabrication will not be permitted.

Method of Measurement and Basis Of Payment

Work under this item shall be measured and paid for at the contract unit price per pound, which price shall include all labor, materials, testing, lab fees, equipment and tools necessary to complete the work to the satisfaction of the Engineer and the Town of Middleborough.

APPENDIX A

The Commonwealth of Massachusetts

Pursuant to G.L. c. 82A §1 and 520 CMR 14.00 et seq. (as amended)

Town of Middleborough

TRENCH PERMIT APPLICATION

This Section For Official Use Only

Permit Number:_____ Date Issued:_____

Dig Safe Number :_____

SECTION 1 - SITE INFORMATION

1.1 Property Address:

_____
Street Name

_____ Zip Code_____
City / Town

1.3 Description, location and purpose of proposed trench:

_____

1.4 Anticipated Date to Begin Trench Operation

_____

1.2 Map Number_____ **Lot/Parcel Number**_____
Builder's Lot No_____ **Block** _____

1.5 Anticipated Date Conclude Trench Operation

_____

SECTION 2 - PROPERTY OWNERSHIP AND PERMIT HOLDER INFORMATION

2.1 Owner of Record:

_____ _____
Name: (Print) Address :

_____ _____
Signature Telephone:

2.2 Excavator Permit Holder Information:

_____ _____
Name: (Print) Address

_____ _____
Signature: Telephone:/Emergency Contact Number

Massachusetts Hoisting License #_____

License Grade:_____ Expiration Date:_____

2.3 Name and Contact Information of Insurer:

Company Name _____ Telephone _____

Address _____

Insurance Certificate #: _____ Policy Expiration Date _____

BY SIGNING THIS FORM, THE APPLICANT/EXCAVATOR AND OWNER, ACKNOWLEDGE AND CERTIFY THAT THEY ARE FAMILIAR WITH, OR, BEFORE COMMENCEMENT OF THE WORK, WILL BECOME FAMILIAR WITH, ALL LAWS AND REGULATIONS APPLICABLE TO WORK PROPOSED, INCLUDING OSHA REGULATIONS, G.L. c. 82A, 520 CMR 7.00 et seq., AND ANY APPLICABLE MUNICIPAL ORDINANCES, BY-LAWS AND REGULATIONS AND THEY COVENANT AND AGREE THAT ALL WORK DONE UNDER THE PERMIT ISSUED FOR SUCH WORK WILL COMPLY THEREWITH IN ALL RESPECTS AND WITH THE CONDITIONS SET FORTH BELOW.

THE UNDERSIGNED OWNER AUTHORIZES THE APPLICANT/EXCAVATOR TO APPLY FOR THE PERMIT AND THE EXCAVATOR TO UNDERTAKE SUCH WORK ON THE PROPERTY OF THE OWNER, AND ALSO, FOR THE DURATION OF CONSTRUCTION, AUTHORIZES PERSONS DULY APPOINTED BY THE MUNICIPALITY TO ENTER UPON THE PROPERTY TO MONITOR AND INSPECT THE WORK FOR CONFORMITY WITH THE CONDITIONS ATTACHED HERETO AND THE LAWS AND REGULATIONS GOVERING SUCH WORK.

THE UNDERSIGNED APPLICANT/EXCAVATOR AND OWNER AGREE JOINTLY AND SEVERALLY TO REIMBURSE THE MUNICIPALITY FOR ANY AND ALL COSTS AND EXPENSES INCURRED BY THE MUNICIPALITY IN CONNECTION WITH THIS PERMIT AND THE WORK CONDUCTED THEREUNDER, INCLUDING BUT NOT LIMITED TO ENFORCING THE REQUIREMENTS OF STATE LAW AND CONDITIONS OF THIS PERMIT, INSPECTIONS MADE TO ASSURE COMPLIANCE THEREWITH, AND MEASURES TAKEN BY THE MUNICIPALITY TO PROTECT THE PUBLIC WHERE THE APPLICANT OWNER OR EXCAVATOR HAS FAILED TO COMPLY THEREWITH INCLUDING POLICE DETAILS AND OTHER REMEDIAL MEASURES DEEMED NECESSARY BY THE MUNICIPALITY.

THE UNDERSIGNED APPLICANT/EXCAVATOR AND OWNER AGREE JOINTLY AND SEVERALLY TO DEFEND, INDEMNIFY, AND HOLD HARMLESS THE MUNICIPALITY AND ALL OF ITS AGENTS AND EMPLOYEES FROM ANY AND ALL LIABILITY, CAUSES OR ACTION, COSTS, AND EXPENSES RESULTING FROM OR ARISING OUT OF ANY INJURY, DEATH, LOSS, OR DAMAGE TO ANY PERSON OR PROPERTY DURING THE WORK CONDUCTED UNDER THIS PERMIT. .

_____ DATE: _____
EXCAVATOR SIGNATURE

_____ DATE: _____
OWNER'S SIGNATURE (IF DIFFERENT)

For City/Town use -- Do not write in this section

PERMIT APPROVED BY _____

PERMITTING AUTHORITY **Building Commissioner /Inspector of Buildings** ☐ **Date**_____

CONDITIONS AND REQUIREMENTS PURSUANT TO G.L.C.82A AND 520 CMR 14.00 et seq. (as amended)

By signing the application, the applicant/excavator understands and agrees to comply with the following:

i. No trench may be excavated unless the requirements of sections 40 through 40D of chapter 82, and any accompanying regulations, have been met and this permit is invalid unless and until said requirements have been complied with by the excavator applying for the permit including, but not limited to, the establishment of a valid excavation number with the underground plant damage prevention system as said system is defined in section 76D of chapter 164 (DIG SAFE);

ii. Trenches may pose a significant health and safety hazard. Pursuant to Section 1 of Chapter 82 of the General Laws, an excavator shall not leave any open trench unattended without first making every reasonable effort to eliminate any recognized safety hazard that may exist as a result of leaving said open trench unattended. Excavators should consult regulations promulgated by the Department of Public Safety in order to familiarize themselves with the recognized safety hazards associated with excavations and open trenches and the procedures required or recommended by said department in order to make every reasonable effort to eliminate said safety hazards which may include covering, barricading or otherwise protecting open trenches from accidental entry.

iii. Persons engaging in any in any trenching operation shall familiarize themselves with the federal safety standards promulgated by the Occupational Safety and Health Administration on excavations: 29 CFR 1926.650 et.seq., entitled Subpart P "Excavations".

iv. Excavators engaging in any trenching operation who utilize hoisting or other mechanical equipment subject to chapter 146 shall only employ individuals licensed to operate said equipment by the Department of Public Safety pursuant to said chapter and this permit must be presented to said licensed operator before any excavation is commenced;

v. By applying for, accepting and signing this permit, the applicant hereby attests to the following: (1) that they have read and understands the regulations promulgated by the Department of Public Safety with regard to construction related excavations and trench safety; (2) that he has read and understands the federal safety standards promulgated by the Occupational Safety and Health Administration on excavations: 29 CMR 1926.650 et.seq., entitled Subpart P "Excavations" as well as any other excavation requirements established by this municipality; and (3) that he is aware of and has, with regard to the proposed trench excavation on private property or proposed excavation of a city or town public way that forms the basis of the permit application, complied with the requirements of sections 40-40D of chapter 82A.

The permit shall be posted in plain view on the site of the trench.

Summary of Excavation and Trench Safety Regulation (520 CMR 14.00 et seq.)

This summary was prepared by the Massachusetts Department of Public Safety pursuant to G.L.c.82A and does not include all requirements of the 520 CMR 14.00. To view the full regulation and G.L.c.82A, go to www/mass.gov/dps

Pursuant to M.G.L. c. 82, § 1, the Department of Public Safety, jointly with the Division of Occupational Safety, drafted regulations relative to trench safety. The regulation is codified in section 14.00 of title 520 of the Code of Massachusetts Regulations. The regulation requires all excavators to obtain a permit prior to the excavation of a trench made for a construction-related purpose on public or private land or rights-of-way. All municipalities must establish a local permitting authority for the purpose of issuing permits for trenches within their municipality. Trenches on land owned or controlled by a public (state) agency requires a permit to be issued by that public agency unless otherwise designated.

In addition to the permitting requirements mandated by statute, the trench safety regulations require that all excavators, whether public or private, take specific precautions to protect the general public and prevent unauthorized access to unattended trenches. Accordingly, unattended trenches must be covered, barricaded or backfilled. Covers must be road plates at least ¾" thick or equivalent; barricades must be fences at least 6' high with no openings greater than 4" between vertical supports or openings greater than 4" may be protected by solid guards or suitable materials, including plywood or wood planks; backfilling must be sufficient to eliminate the trench. Alternatively, excavators may choose to attend trenches at all times, for instance by hiring a police detail, security guard or other attendant who will be present during times when the trench will be unattended by the excavator.

The regulations further provide that local permitting authorities, the Department of Public Safety, or the Division of Occupational Safety may order an immediate shutdown of a trench in the event of a death or serious injury; the failure to obtain a permit; or the failure to implement or effectively use adequate protections for the general public. The trench shall remain shutdown until re-inspected and authorized to re-open provided, however, the excavators shall have the right to appeal an immediate shutdown. Re-inspection must occur within tow (2) business days of written notifications by the excavator to the Permitting Authority that it has complied with all repairs/corrections ordered. Permitting authorities

are further authorized to suspend or revoke a permit following a hearing. Excavators may also be subject to administrative fines issued by the Department of Public Safety for identified violations.

SUGGESTED CHECKLIST FOR APPLICATION

- ☐ Worker's Compensation Certificate
- ☐ Insurance Binder from Insurance Company
- ☐ Photo Identification of Permit Holder
- ☐ Photo Identification of Person Performing Excavation
- ☐ Dig Safe Number
- ☐ All monies due to the town must be paid (Certificate of Good Standing)

APPENDIX B

5-2025-0680

PERMIT - MIDDLEBOROUGH

Subject to all terms, conditions, and restrictions printed or written below, permission is hereby granted to **MIDDLEBOROUGH DEPARTMENT OF PUBLIC WORKS – ENGINEERING DIVISION**, Michael Ohrenberger, 65 Sachem Street, Middleborough, MA 02346 to enter upon State Highway in the Town of **MIDDLEBOROUGH within the State Highway Layout (SHLO) on the Center Street Bridge over the MBTA/CSX RAILROAD**, for the purpose of installing approximately 100 linear feet of 12" (inch) water main. Work within the State Highway Layout (SHLO) will be performed as follows:

The proposed 12" (inch) water main installation will enter the SHLO along the southerly side of the roadway, on the westerly side of the bridge, at approximate Station 3+79. The installation will proceed easterly within an independent utility bridge to be constructed adjacent to the new Center Street Utility Bridge (M-18-014 (4BX) over MBTA/CSX Railroad to approximate Station 4+39 and will then proceed out of the SHLO. The proposed work will also include the removal and resetting of the existing chain-link fence, modifications to the east and west wingwalls, and the installation of double roller supports to protect the new water main, which will be attached to the existing superstructure.

The Traffic Management Plan (TMP) is approved subject to the addition of the following note on all TMP sheets:

Police details will be provided at all times during construction to safely guide both pedestrians and vehicular traffic through the work zone.

Prior to the issuance of a Notice to Proceed, the Grantee shall submit a detailed work plan, shop drawings, and installation procedures outlining the means and methods for installing the pipe casing/sleeve beneath the existing bridge wingwall. The submittal shall include a step-by-step outline of the installation procedure for review and approval.

All debris and litter remaining from the proposed work shall be removed by the Grantee(s) and the area left clean.

IF ANY DAMAGE TO THE BRIDGE STRUCTURE OCCURS WHILE PERFORMING THE WATER MAIN INSTALLATION WORK, YOU MUST CONTACT THE DISTRICT 5 BRIDGE SECTION IMMEDIATELY AT (857) 368-5149 PRIOR TO THE COMMENCEMENT OF ANY REPAIR WORK. ALSO BE ADVISED THAT ANY DAMAGE TO THE BRIDGE STRUCTURE BY THE GRANTEE(S) DURING THE OPERATION WILL BE REPAIRED AT THE GRANTEE(S) EXPENSE.

The Grantee(s) shall obtain a Performance Bond in the amount of $811,514.00 covering all contracted work associated with this Permit (per the itemized cost estimate total to be submitted), in strict accordance with the standards established by Massachusetts Department of Transportation (MassDOT), Highway Division. A duly executed copy of said bond shall be submitted to the Department by uploading it under the 'Docs' tab in SHAPS for official recordkeeping purposes. The submitted bond may be a Contractor's Bond listing MassDOT as an additional obligee, provided that the total bond value equals or exceeds the specified bonding requirement. The bond shall be deemed released only upon formal acceptance of the completed work.

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The Performance Bond shall be in a form satisfactory to MassDOT, Highway Division, furnished by a surety company incorporated pursuant to M.G.L. chapter 175, section 105 or authorized to do business in the Commonwealth under M.G.L. Chapter 175, section 106 and satisfactory to the awarding authority. The name of the agency or agent writing these bonds shall be identified within the bond.

THIS PERMIT IS BEING ISSUED FOR WORK WITHIN THE SHLO ONLY. AUTHORIZATION TO PERFORM ASSOCIATED WORK OUTSIDE OF SHLO MUST BE GRANTED BY IMPACTED PROPERTY OWNERS.

IF THE ROADWAY PAVEMENT IS IMPACTED BY THIS WORK, THE PAVEMENT REPAIR WILL REQUIRE MILLING AND OVERLAYING WITH 1.75" (INCHES) OF SURFACE COURSE A MINIMUM OF 1’ (FOOT) ON EITHER SIDE OF THE TRENCH. THE PERMANENT REPAIR OF THE TRENCH, INCLUDING THE MILLING AND OVERLAYING, MUST BE DONE AFTER COMPLETION OF THE 90-DAY SETTLEMENT PERIOD AS DESCRIBED IN THIS PERMIT.

FINAL PAVEMENT REPAIR JOINTS MUST BE SQUARE AND PERPENDICULAR TO THE DIRECTION OF TRAVEL.

The permanent trench repair shall be done as indicated below. Please note that the final trench repair must include a minimum of 7.5" (inches) of Hot Mix Asphalt or match the existing thickness of the Hot Mix Asphalt for the roadway, whichever is larger.

1. 8" (inches) of gravel plus 4" (inches) Dense Graded Crushed Stone (DGCS) over it.
2. 3.50" (inch) Intermediate or Base Course
3. 2.25" (inch) Intermediate Course
4. 1.75" (inch) Surface Course
5. Asphalt emulsion tack coat (RS-1H) must be placed between each course.
6. All vertical edges must be coated with hot poured joint sealer.
7. **All damaged pavement markings shall be restriped in kind.**

All openings in paved surfaces must be backfilled and paved with a temporary patch consisting of 3” (inches) of hot mix asphalt at the end of every workday. Exposed gravel will not be permitted within the SHLO.

All pavement compositions must meet MassDOT's latest Standards and Specifications for Highways and Bridges.

PLEASE BE ADVISED THAT MASSDOT, DISTRICT 5 RESERVES THE RIGHT TO REQUEST ADDITIONAL REPAIR IF THE REPAIR AREA IS FOUND TO BE LARGER THAN ANTICIPATED.

All work, including the Traffic Management Plan (TMP), is to be done as described herein and as shown on the approved plans as follows:

- Town of Middleborough, Massachusetts – Contract Drawings for Center Street Utility Bridge over MBTA/CSX Railroad and Water Systems Improvements, as drafted by Benesch, 24 Federal Street, 6th Floor, Boston, MA 02110 01581, and dated March 2026.

- Special Provisions – Town of Middleboro – Proposed Center Street Utility Bridge over MBTA/CSX Railroad.

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PRIOR TO THE COMMENCEMENT OF SAID WORK, THE GRANTEE(S) SHALL CONTACT THE DISTRICT PERMITS ENGINEER AT (857) 368-5230 TO SET UP AT PRECONSTRUCTION CONFERENCE. THE CONFERENCE MUST BE HELD AT LEAST FIVE (5) BUSINESS DAYS PRIOR TO PERFORMING WORK WITHIN THE SHLO.

The Grantee(s) must submit a soft copy of the "as-built" plans of the project in the AutoCAD Program currently in use by the District. A copy of the "as-built" plans must also be submitted/uploaded in SHAPS prior to submitting the Completion of Work Form/Requesting Permit Sign-off.

Request for changes to the terms and conditions described within this Permit must be submitted in writing and approved by MassDOT, Highway Division, by way of an amendment to this Permit or via correspondence to the Grantee(s) prior to the commencement of any proposed changes.

The Grantee(s) may retain the services of a qualified engineering firm to provide for the continuous inspection of the work to be performed under this Permit by a full-time Resident Engineer or a qualified on-site Supervisor. The Grantee(s) shall notify MassDOT, Highway Division in writing as to what consulting firm/Supervisor will be used. Included in this notification, a list of 24-hour emergency contact names and numbers of all pertinent parties responsible for the project, The Resident Engineer/on-site Supervisor must coordinate any design changes and/or problems with the District Highway Director who will assign the proper personnel to expedite these issues.

When the work required under this Permit has been completed, the Grantee(s)/Supervisor shall conduct their own inspection prior to contacting MassDOT, Highway Division to schedule a Final Inspection. Once this pre-inspection has been performed, the Grantee(s) shall submit a Completion of Work Form by requesting a Sign-off using the Action link in the SHAPS dashboard, in order for a final inspection to be performed.

States of Emergencies and Executive Orders

In addition to the conditions and restrictions herein contained, the Grantee is responsible for complying with any relevant Executive Orders or States of Emergencies that may be issued by the Governor's Office while this Permit is active. The Governor may declare a State of Emergency in the event or imminent threat of natural or man-made disasters. A State of Emergency can cover a specific municipality, multiple communities, or the entire Commonwealth.

Detailed Information on States of Emergencies and Executive Orders can be found on the Mass.GOV website. *https://www.mass.gov/service-details/state-of-emergency-infomation* and *https://www.mass.gov/massachusettsexecutive-orders*.

Prior to any work being done within the SHLO, the Grantee(s) must upload/submit a Work Request in the State Highway Access Permit System (SHAPS) to obtain approval for the proposed work schedule. Said form to be completed/uploaded can be found under the Forms and Sample Submission Documents tab and is entitled "Work Request Form D1 - D5". One (1) of these forms must be uploaded by the close of business every Wednesday for the entire duration of the project in order to request approval for the following week's work schedule.

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The Grantee(s) must adhere to 520 CMR 14.00: Excavation and Trench Safety as promulgated by the Department of Public Safety in conjunction with the Division of Occupational Safety pursuant to authority granted by M.G.L. c. 82a § 1. If not already approved, a Trench Permit Rider must be completed and uploaded to SHAPS before any trench work is performed under this Permit.

The Grantee(s) shall be responsible for all litter and debris generated from their property during the work as described herein and/or from all prospective residents, visitors, or patrons of all existing or proposed facilities mentioned herein. This responsibility shall remain in effect for the entirety of all current or future owners of said property. The Grantee(s) shall perform routine inspections and upkeep within the SHLO. If conditions warrant an individual to enter in or within the proximity of a travelled way, the Grantee(s) shall assume all liability and responsibility for the removal of all litter and debris or the hiring of an appropriate party to perform such duties. Significant work within the travelled way may require a police detail. In consideration to all abutters, the Grantee(s) must take notice to the drifting of debris and the removal thereof. If it is found that this requirement is not being fulfilled in a satisfactory manner, MassDOT, Highway Division may decide to clean the area at the Grantee's expense.

MASSDOT, HIGHWAY DIVISION RESERVES THE RIGHT TO RECOMMEND ADDITIONAL CONSTRUCTION CONDITIONS, WHICH SHALL DEPEND ON THE PROJECT AND ROADWAY CONDITIONS AND MAY SUPERSEDE THE REQUIREMENTS DESCRIBED IN THE AGREEMENT. THE EXPECTATION THAT THE RIDING SURFACE BE RESTORED IN A SAFE AND RIDABLE CONDITION SHALL CONTINUE AND BE INCLUDED IN MASSDOT'S SIGN-OFF PROCESS. THE GRANTEE SHALL BE RESPONSIBLE FOR FUTURE SETTLEMENTS RESULTING FROM THE PERMITTED WORK UNTIL THE ROADWAY IS RESURFACED OR RECONSTRUCTED.

THE BACKFILLING METHOD FOR WORK WITHIN THE HARDENED SURFACE WILL BE AS FOLLOWS:

The pavement shall be saw cut in neat, true lines along the length of the trench. The trench shall then be excavated, the utility work performed and backfilled with Controlled Density Fill (CDF – M4.08.0, Type 2E Flowable and Excavatable). The CDF shall flow under and around the pipe or conduit, providing uniform support without leaving voids and placed to a minimum depth of 19.5" (inches) below the finished grade of the existing roadway surface. The 19.5" (inches) of permanent patch shall consist of a minimum of 7.5" (inches) of Hot Mix Asphalt over 4" (inches) of Dense Graded Crushed Stone (DGCS) over 8" (inches) of Gravel.

The trench shall then be SECURELY PLATED AND RAMPED WITH HOT MIX ASPHALT overnight to allow the Controlled Density Fill to cure. The plates may need to be recessed to the finished grade of the roadway as directed by the Engineer. Special attention must be given during the winter months**. PLATES SHALL NOT BE LEFT OVER THE WEEKEND**. All abutting vertical edges of the existing pavement shall then be coated with Bitumen for Tack Coat RS-1 Emulsion immediately prior to the placement of the permanent Hot Mix Asphalt (HMA) patch.

The permanent Hot Mix Asphalt (HMA) patch shall consist of 7.5" (inches) of Hot Mix Asphalt or match the existing pavement thickness, whichever is larger. The 7.5" (inches) must consist of 3.5" (inches) of Hot Mix Asphalt Intermediate or Base Course, 2.25" (inches) of Hot Mix Asphalt Intermediate Course and 1.75" (inches) of Hot Mix Asphalt Surface Course.

The infrared method must be used in conjunction with the permanent patch (for small openings) to create a smooth driving surface consistent with the existing roadway surface. The District Office must be notified two (2) business days prior to starting this work, so that an inspector may be assigned.

All disturbed traffic pavement markings shall be replaced in kind.

The Grantee(s) shall be responsible for the maintenance and repair of this portion of the roadway and shall perform routine inspections for deficiencies such as settling, heaving, cracks, etc. This responsibility shall remain in effect until the resurfacing of this particular portion of roadway is performed by MassDOT, Highway Division.

If it becomes necessary, MassDOT, Highway Division, shall assign an inspector on any project and the inspector will be paid for under a reimbursable account by the Grantee(s).

SIDEWALK RECONSTRUCTION

The sidewalk shall match the existing conditions and shall be reconstructed with a minimum of 8" (inches) of gravel with a 3" (inch) hot mix asphalt surface course laid in two (2) lifts of 1.75" (inches) and 1.25" (inches), respectively, or 4" (inches) of cement concrete. If the cement concrete sidewalk crosses a driveway, the driveway apron shall be constructed with 6" (inches) cement concrete.

The reconstructed sidewalk must be compacted and graded in such a manner that no ponding of water occurs within the Highway Layout. If such ponding results, the Grantee(s) shall be responsible for its correction.

Sidewalks and concrete wheelchair ramps shall be in conformance with the Architectural Access Board (AAB) Regulations within all sidewalk areas located at drives or roadway intersections that may be included in this project.

The Grantee(s) shall be responsible for the maintenance and repair of the portion of the proposed sidewalk located within the State Highway Layout and shall routinely inspect the sidewalk for deficiencies such as settling, heaving, cracks, etc. This responsibility shall remain in effect until MassDOT, Highway Division or the Town reconstructs the sidewalk.

THE BACKFILLING METHOD FOR WORK WITHIN THE SHOULDER AREA WILL BE AS FOLLOWS:

Backfill for conduit or pipe shall be selected from excavation free from large lumps, clods, or rock placed between the pipe and the walls of the trench in layers not exceeding 6" (inches) in depth and thoroughly compacted. Each layer, if dry, shall be moistened and then compacted by rolling or by tamping with mechanical rammers. Special care should be taken to thoroughly compact the fill under the haunches of the pipe or conduit. This method of filling and compacting shall be continued until the material is level with the top of the pipe or conduit. The remainder of the filling shall consist of suitable material placed in successive layers not more than 6" (inches) in depth. Each layer shall be thoroughly compacted as specified above.

The Grantee(s) shall be responsible for the shoulder and roadway areas affected by the proposed work to be performed as described herein and shall routinely inspect said areas for deficiencies such as settling, heaving, cracks, etc. This responsibility shall remain until work is performed at the subject location by MassDOT, Highway Division.

TIME RESTRICTIONS AND NOTIFICATIONS

The 2026 FIFA World Cup will be held at Gillette Stadium in Foxborough, and related events will be held throughout the region. Matches and Fan Fest activities are scheduled from June 11, 2026, through July 19, 2026. MassDOT will impose work restrictions as necessary to minimize traffic impacts during FIFA events when the Contractor's operations could impact vehicular traffic, particularly on interstate highways and major arterials throughout the region and local roads near the event site.

Special attention shall be given when performing work that will impact MassDOT, Highway Division, snow and ice operations.

No work shall be performed in the hardened surface of the roadway between November 15th and April 1st of any year without prior written approval from the District Highway Director.

No pavement shall be laid between November 15th and April 1st of any year without prior written approval from the District Highway Director.

No work shall be performed on this project on Saturdays, Sundays, and Holidays, or on the Friday after a Thursday Holiday. Work is also restricted on the day before and the day after a long Holiday weekend without prior written approval by the District Highway Director.

No equipment, trucks, etc., shall occupy any part of the travelled way except between **the hours of 9:00 a.m. and 3:00 p.m., Monday - Friday.** In no case will operations exceed the specified hours. This includes the placement of traffic control devices, equipment, or anything that restricts the flow of traffic through the construction zone. Any change in work hours will require prior written approval by the District Highway Director. The 12-minute rule will remain in effect for the duration of the permit.

All other work, off the pavement on this project is restricted to a normal 8-hour day, Monday - Friday, with the prime Contractor and all subcontractors working on the same shift. Any change in work hours will require prior written approval by the District Highway Director.

GENERAL TRAFFIC MANAGEMENT AND SAFETY REQUIREMENTS

If required by MassDOT, Highway Division District 5, variable message boards (VMBs) shall be utilized as part of the approved traffic management plan under this Permit which must be properly secured with regards to hacking and unauthorized tampering prevention. The Grantee(s) shall adhere to all appropriate security specifications and take all necessary precautions to mitigate the risk of the boards being hacked. All VMBs shall be stored in a secure area and shall have a lockable, weatherproof enclosure for the operator interface, removable local keyboards which shall be removed whenever possible, and a password protected controller with local administrative passwords changed on a regular basis.

When any portion of the roadway is blocked with equipment to facilitate the proposed work, the Grantee(s) will be required to adhere to the approved Traffic Management Plan (TMP) for this permit. If the approved TMP is not appropriate or requires changes, then the Grantee will submit the requested changes to MassDOT- Highway, to be reviewed and approved by the District prior to working within or impacting the roadway. TMP’s must include information relating to proper signing, traffic control device placement and police details.

If applicable, two-way traffic must be maintained at all times, and operations must be managed to minimize delays to motorists. However, if traffic delays exceed twelve (12) minutes and conditions continue to worsen, the Resident Engineer, Contractor, or Police Detail must suspend operations. Continuously increasing "delays" exceeding twelve (12) minutes shall not to be permitted.

If traffic must be "stopped", the duration shall not be more than five (5) minutes.

Uniformed State/Local Police Officer(s) and their official vehicle(s) may be necessary to provide protection for those installing and removing all temporary traffic warning signs and devices and to perform all traffic management as required.

The Grantee(s) will monitor the flow of traffic during peak traffic volumes and if necessary, shall suspend all operations. Work will resume at the discretion of the Police detail officer and/or to the satisfaction of the supervising MassDOT, Highway Division, Engineer.

In the event of inclement weather or dense fog, which lessens the visibility of advance warning signs, vehicles and workers, the Grantee(s) will suspend all operations so as not to interfere with the safety of the motoring public and the operations of work. In the event of snow or icing conditions, all vehicles and equipment must be removed from the roadway and/or shoulder area so as not to interfere with Snow and Ice Operations.

The Grantee(s) shall provide safe and ready means of access and egress to all public and private roads and drives 24 hours per day. Every effort must be made as not to interfere with or inconvenience all abutters throughout the duration of this project.

Signs and traffic control devices are required for advance notice of the work and within the work area.

The Grantee(s) or Applicant will supply all required signs and traffic warning devices and shall be in accordance with the Massachusetts Manual on Uniform Traffic Control Devices (MUTCD). The number and location of all signs and devices shall be as deemed necessary by the Engineer for the safe and efficient performance of the work and the safety of the travelling public.

All warning devices shall be subject to removal, replacement, and/or repositioning by the applicant as often as deemed necessary by the Engineer.

Cones or non-reflectorized warning devices shall not be left in operating position on the highway when the daytime operations have ceased. If it becomes necessary for MassDOT, Highway Division, to remove the construction warning devices or their appurtenances from the project due to negligence by the applicant, all costs for this work will be charged to the Grantee(s).

All vehicles, except passenger cars, which are assigned to the permitted project, and which operate on the site at speeds of 25 MPH or less, shall have an official SLOW-MOVING VEHICLE emblem displayed. All vehicles and equipment on this project must be equipped with back-up alarms.

All personnel who are working on the travelled way or breakdown lanes shall wear approved safety vests and hard hats.

GENERAL CONDITIONS AND APPROVED PROCEDURES

The Grantee(s) must contact the "Dig Safe" Center at 811 to obtain a "Dig Safe" number prior to starting the proposed excavation for the purpose of identifying the location of underground utilities.

Unless otherwise stated, no hardened surface of the State Highway may be disturbed.

When an opening in the roadway is required and permitted herein, the opening must be as small as possible to perform the proposed work.

If the integrity of any existing sidewalks, catch basins, manholes, or any other underground structures or equipment is compromised, the Grantee(s) will reconstruct and/or replace all items according to MassDOT, Highway Division, Standards at the cost of the Grantee(s) and to the satisfaction of the Engineer.

The Grantee(s) must not disturb or remove any MassDOT, Highway Division, bound(s) (MHB) associated with this project. If so disturbed or missing, the bound(s) must be reset/replaced by a Registered Land Surveyor. All procedures

and materials must be in compliance with Massachusetts Design and Construction Standards. A copy of the paid bill must be submitted to this office upon completion of said work.

All traffic safety lines if disturbed shall be replaced in kind.

DRAINAGE IMPACTS

Note that existing drainage lines are not located/marked out by Dig-Safe, therefore, care should be taken during excavation operations to ensure that drainage components located within the limit(s) of work are not impacted during work to be performed under this Permit. The Grantee(s) may send a request for drainage plans in anticipation of the work to the Highway Maintenance Section. Requests should be sent a minimum of five (5) business days ahead of the proposed work. Be advised that if additional information is needed, the Grantee(s) will be required to perform survey work of the drainage structures to identify the location of the drainage components.

If the work under this Permit includes the installation or relocation of drainage structures or work alters the existing State drainage system, the Grantee(s) shall be responsible for cleaning the drainage system, including any other structure/drainage line/outfall within the project limits to ensure the drainage system works adequately.

The Grantee(s) shall be responsible for any damage that occurs to said drainage components as a result of the work. Should any damage(s) occur, the Grantee(s) must immediately contact the Highway Maintenance Section at (857) 368-5240.

DRAINAGE AND UTILITY CASTINGS

"The use of risers to adjust drainage and utility structures will not be allowed. All adjustment work done to existing or new drainage structures shall conform to Section 220 of MassDOT, Highway Division, Standard Specifications and according to Plates 201.3.0 and 2029.0 o MassDOT, Highway Division, Construction Standards."

ENVIRONMENTAL LIABILITY AND COMPLIANCE

The Grantee(s) assumes all risk associated with any environmental condition within the subject property and shall be solely responsible for all costs associated with evaluating, assessing, and remediating, in accordance with all applicable laws, any environmental contamination (1) discovered during Grantee's work or activities under this Permit to the extent such evaluation, assessment or remediation is required for Grantee's work, or (2) resulting from the Grantee's work or activities under this Permit. The Grantee(s) shall notify MassDOT, Highway Division, of any such assessment and remediation activities.

The Grantee(s) is hereby held solely responsible for obtaining and maintaining any and all environmental compliance permits required by local, state, and federal laws and regulations when regular or emergency work is proposed within, or in close proximity to, any wetland area. These environmental compliance requirements include, but are not limited to, a Negative Determination of Applicability or Order of Conditions from the local Conservation Commission, a Water Quality Certificate from the Department of Environmental Protection, and a Programmatic General Permit from the U.S. Army Corps of Engineers. The Grantee(s) shall forward to MassDOT, Highway Division, a copy of each such environmental compliance permit.

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CLOSING CONDITIONS

ALL OF SAID WORK SHALL COMPLY WITH THE TERMS AND CONDITIONS HEREIN, AND MUST BE DONE AS DIRECTED BY AND TO THE SATISFACTION OF THE ENGINEER.

All work done under this contract shall be in conformance with the Massachusetts Highway Department "2026 Edition of the Standard Specifications for Highways and Bridges". All construction shall conform to the May 2026 edition of the Massachusetts Department of Transportation, Highway Division "Construction Standard Details (English Edition)"; the latest Manual on Uniform Traffic Control Devices with Massachusetts Amendments; the latest edition to the following: the 1996 Construction and Traffic Standard Details (as related to Traffic Standard details only); the 1990 Standard Drawings for Traffic Signs and Supports; the 1968 Standard Drawings for Traffic Signals and Highway Lighting; the latest edition of American Standard for Nursery Stock; the Plans and these Special Provisions. These publications can be accessed from the SHAPS dashboard of from the following link: *https://www.mass.gov/lists/miscellaneous-publications*

The Grantee(s) shall indemnify and save harmless the Commonwealth and MassDOT, Highway Division, against all suits, claims or liability of every name and nature arising at the time out of or in consequence of the acts of the Grantee(s) in the performance of the work covered by this Permit and/or failure to comply with the terms and conditions of this Permit whether by themselves or their employees or subcontractors.

It is noted that the Grantee(s) will be responsible for future corrective actions resulting from defective work under the subject permit. Any damage to roadway and/or shoulder as a result of the permitted work is the Grantee's responsibility and shall be repaired at his/her expense.

THE GRANTEE(S) SHALL SUBMIT A COMPLETION OF WORK FORM, BY REQUESTING A SIGN–OFF USING THE ACTION LINK IN THE SHAPS DASHBOARD, WHEN THE WORK REQUIRED UNDER THIS PERMIT HAS BEEN COMPLETED IN ORDER FOR A FINAL INSPECTION TO BE PERFORMED BY MASSDOT, HIGHWAY DIVISION. THE LIABILITY ASSUMED UNDER THIS PERMIT WILL CONTINUE UNTIL THE WORK HAS BEEN SIGNED OFF AS COMPLETE.

A COPY OF THIS PERMIT MUST BE ON THE JOB SITE AT ALL TIMES FOR INSPECTION. FAILURE TO HAVE THIS PERMIT AVAILABLE AT THE SITE WILL RESULT IN SUSPENSION OF THE RIGHTS GRANTED BY THE PERMIT.

"FOLLOWING CONDITIONS APPLY TO PERMITS"
Conditions Relating Particularly to Permits for the Laying of Pipes, Conduits, etc.

After any pipes, conduits, drains or other underground structures are laid, or any excavation is made in the roadway, the trenches or openings shall be properly backfilled with suitable material, the backfilling shall be thoroughly tamped, and the surface of the road over said structures shall be left even with the adjoining ground. If the work is done in cold weather no frozen material shall be used for backfilling.

Wherever the hardened surface of the roadway, gutters, or any part of the surface of the highway is disturbed it shall be replaced in as good condition as before it was disturbed, and if new materials are required, they shall correspond with those already in place on the road.

Where service pipes are to cross the highway, the connections shall be made without disturbing the hardened surface of the roadway, by driving the pipes under the roadway, or the service pipes shall be carried under and across the road in a larger pipe, unless otherwise ordered by the Director.

The Grantee shall maintain the surface of the roadway over said structures as long as MassDOT may deem necessary, until all signs of the trenches shall have been eliminated.

Conditions Relating Particularly to Permits for the Erection of Poles, Wires, and Overhead Structures, and the Cutting and Trimming of Trees

In the erection of pole lines, unless otherwise herein provided, no trees located within the limits of the State Highway shall be cut or trimmed. No guy wires shall be attached to trees without a special permit from MassDOT, and in no event shall they be so attached as to girdle the trees or in any way interfere with their growth. The wires shall be so protected at all time and places that they shall not interfere with or injure the trees either inside or outside the location of the highway.

Where the cutting or trimming of trees is authorized by this permit, only such cutting and trimming shall be done as may be designated by the Director.

In the construction or reconstruction of pole lines no guy wires shall be erected nearer to the surface of the ground than 6’ (feet); provided, however, that the owners of such lines may maintain such guy wires at a lower elevation than 6’ (feet) from the ground until such time as MassDOT shall notify them to remove said wires or to the elevation first stated.

In order to protect the trees through which any wires may pass, said wires shall be insulated and such other tree guards used as may be directed by the Director.

Where high tension wires are erected under this permit, they shall be so located that, under conditions of maximum severity as regards a coating of ice or snow, there shall be a space of at least 8’ (feet) between such high-tension wires and other wires.

The Grantee shall, within sixty (60) days from the date of completion of the work, file in the office of MassDOT a plan showing the location of each pole erected in accordance with the permit, said plan to be of such size and in such form as MassDOT may direct.

General and Additional Conditions

Whenever the word "MassDOT" is used herein it shall mean the Massachusetts Department of Transportation of the Commonwealth of Massachusetts.

Whenever the word "Director" is used herein it shall mean the District Highway Director or other authorized representative of MassDOT.

Whenever the word "Grantee" is used herein it shall mean the person or persons, corporation, or municipality to whom this permit is granted, or their legal representatives.

During the progress of the work all structures underground and above ground shall be properly protected from damage or injury; such barriers shall be erected and maintained as may be necessary for the protection of the traveling public; the same shall be properly lit at night; and the Grantee shall be responsible for the damages to persons or property due to or resulting from any work done under this permit.

Except as herein authorized, no excavation shall be made, or obstacle placed within the limits of the State Highways in such a manner as to interfere unnecessarily with the travel over said road.

If any grading of sidewalk work done under this permit interferes with the drainage of the State Highway in any way, such catch basins and outlets shall be constructed as may be necessary, in the opinion of the Director, to take proper care of such drainage.

Wherever the hardened surface of the roadway is disturbed, and the Director may consider it necessary or advisable to do so, said surface will be restored by the employees of MassDOT, at such time as MassDOT may direct, and the expense thereof shall be borne by the Grantee, who shall purchase and deliver on the road the materials necessary for said work if and when directed by the Director. All payments to the supplier and to laborers, inspectors, etc., employed by MassDOT for or on account of the work herein contemplated shall be made by said Grantee forthwith on receipt of written orders, payrolls, or vouchers approved by MassDOT.

IF THE GRANTEE DOES ANY WORK CONTRARY TO THE ORDERS OF THE DIRECTOR, AND, AFTER DUE NOTICE, FAILS TO CORRECT SUCH WORK OR TO REMOVE STRUCTURES OR MATERIALS ORDERED TO BE REMOVED, OR FAILS TO COMPLETE WITHIN THE SPECIFIED TIME THE WORK AUTHORIZED BY THIS PERMIT, MASSDOT MAY, WITH OR WITHOUT NOTICE, CORRECT OR COMPLETE SUCH WORK IN WHOLE OR IN PART, OR REMOVE SUCH STRUCTURES OR MATERIALS, AND THE GRANTEE SHALL REIMBURSE MASSDOT FOR ANY EXPENSE INCURRED IN CORRECTING AND/OR COMPLETING THE WORK OR REMOVING THE STRUCTURES OR MATERIALS.

ALL OF THE WORK HEREIN CONTEMPLATED SHALL BE DONE UNDER THE SUPERVISION AND TO THE SATISFACTION OF THE MASSACHUSETTS DEPARTMENT OF TRANSPORTATION, AND THE ENTIRE EXPENSE THEREOF SHALL BE BORNE BY THE GRANTEE.

On the completion of the work herein contemplated all rubbish and debris shall be removed and the roadway and roadsides shall be left neat and presentable and satisfactory to the Director.

MassDOT hereby reserves the right to order the change of location or the removal of any structure(s) authorized by this permit at any time, said change or removal to be made by and at the expense of the Grantee or its / their successors or assigns.

This permit may be modified or revoked at any time by MassDOT without rendering said MassDOT or the Commonwealth of Massachusetts liable in any way. The Grantee shall pay the salary, subsistence and travel expenses of any inspector appointed by MassDOT to supervise the work herein contemplated.

All of the above conditions shall be applicable to the work herein authorized, unless the same is inconsistent with the conditions on the face of the permit, in which case the conditions written or printed on the face of the permit shall apply.

The acceptance of this permit or the doing of any work thereunder shall constitute an agreement by the Grantee to comply with all of the conditions and restrictions printed or written herein.

District 5, 1000 County Street Taunton, MA 02780
Tel: (857) 368-5000, FAX: (508) 880-6102
www.mass.gov/orgs/highway-division

Maura Healey, Governor
Kimberley Driscoll, Lieutenant Governor
Phillip Eng, Interim Secretary & CEO
Jonathan L. Gulliver, Undersecretary & Highway Administrator

5-2025-0680

Approved Signature

Mary-Joe Perry by D.V.
District Highway Director

Date of Issue: July 9, 2026

Permit Expiration: Friday, July 9, 2027

District 5, 1000 County Street Taunton, MA 02780
Tel: (857) 368-5000, FAX: (508) 880-6102
www.mass.gov/orgs/highway-division

APPENDIX C

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MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

LICENSE FOR ENTRY | MBTA – 24076

RAILROAD PROPERTIES

MIDDLEBOROUGH, MASSACHUSETTS

TOWN OF MIDDLEBOROUGH

1. **The License for Entry**

The Massachusetts Bay Transportation Authority, a body politic and corporate and a political subdivision of the Commonwealth of Massachusetts, established and existing pursuant to Chapter 161A of the Massachusetts General Laws, with a usual place of business at 10 Park Plaza, Boston, Massachusetts (the "MBTA"), hereby grants to Town of Middleborough, a Massachusetts municipality, with a usual place of business at 10 Nickerson Avenue, Middleborough, MA 02346 ("Licensee"), the right and privilege to enter onto the Premises (as defined in Section 2.5 below) solely to conduct the Scope of License (as defined in Section 2.6 below), subject to the terms and conditions of this License for Entry.

2. **General Conditions**

Among the terms and conditions of this License for Entry are included the following General Conditions:

2.1 Effective Date: April 29, 2026

2.2 Licensee: Town of Middleborough

2.3 Term: From the Effective Date to April 28, 2027; except that the MBTA may terminate this License for Entry with thirty (30) days written notice.

Holding Over: Per Section 8 of this License, if work (as defined in the Scope of Activity) continues after the expiration or termination of this License for Entry, Licensee shall pay a monthly fee equal to three (3) times the original monthly License Fee (see "Holdover Fee" below), paid in advance, until the License is terminated by either party with thirty (30) days' written notice.

2.4 Fees:

Administrative Fee: $1,000.00 paid with the application for this License for Entry.

License Fee: $1,000.00 to be paid contemporaneously with the execution of the License for Entry.

Design and Construction Plan Review Fee: $1,600.00 paid in accordance with Section 4.1(h) below.

Holdover Fee: $250.00 monthly.

2.5 Premises: Those certain areas along the MBTA's Middleboro Branch right-of-way, located near 606 Center Street in Middleborough, Massachusetts, as more fully described/shown in Exhibit A, attached hereto and incorporated herein, but only to the extent that use of such property is

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reasonably necessary to permit Licensee to conduct the activities described in Section 2.6 below.

2.6 Scope of License: Subject to, and in accordance with, the terms and conditions of this License for Entry, and the plans and/or documentation attached as Exhibit A, Licensee may perform the construction of an independent utility bridge which will carry a 12" ductile iron water main across the MBTA's Middleboro Branch right-of-way The purpose of the proposed utility bridge is to facilitate the extension of the water main across the MBTA's right of way, adjacent to MassDOT-owned Bridge No. M-18-014 (4BX). No other investigations or activities of any kind may be performed on the Premises or any other property of the MBTA. Licensee shall have the right to permit its employees, contractors, and agents to use the Premises as permitted hereunder and acting by and through Licensee, subject to all of the terms and conditions of this License for Entry.

Licensee understands and agrees to the following terms and conditions:

1. Licensee shall adhere to the terms and conditions of the Keolis Commuter Services, LLC's ("KCS") correspondence, dated June 25, 2024, hereto attached as Exhibit C and incorporated herein by reference.

2. Licensee shall adhere to the terms and conditions of the MBTA's Transit-Oriented Development Department's correspondence dated July 3, 2024, hereto attached as Exhibit D and incorporated herein by reference.

3. Licensee shall adhere to the terms and conditions of the MBTA's Safety Department's correspondence dated July 10, 2024, hereto attached as Exhibit E and incorporated herein by reference.

4. Licensee shall adhere to the terms and conditions of the MBTA's Railroad Operations Department's correspondence dated May 27, 2025, hereto attached as Exhibit F and incorporated herein by reference.

In the event of a conflict between the conditions stated in this Section 2.6 and other provisions of this License for Entry, whichever provisions are more restrictive of Licensee or impose a higher standard on Licensee shall control.

2.7 Notices: **The MBTA:**

The MBTA Real Estate Department
Massachusetts Bay Transportation Authority
10 Park Plaza, Suite 5720
Boston, Massachusetts 02116
Attn: Chief of Real Estate and Asset Management

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and

Massachusetts Bay Transportation Authority
10 Park Plaza
Boston, Massachusetts 02116
Attn: General Counsel

and

MBTA Transit-Oriented Development Group
Massachusetts Bay Transportation Authority
10 Park Plaza, Suite 5170
Boston, Massachusetts 02116
Attn: Deputy Chief of Transit-Oriented Development

and

The MBTA Railroad Operations Department
Engineering and Maintenance
32 Cobble Hill Road
Somerville, Massachusetts 02143
Attn: Director of Engineering

and

Keolis Commuter Services, LLC ("KCS")
32 Cobble Hill Road
Somerville, Massachusetts 02143
Attn: John Connors

and

CSX Transportation, Inc. ("CSX")
500 Water Street
Jacksonville, Florida 32202
Attn: Mark E. Austin

and

National Railroad Passenger Corporation ("Amtrak")
30th Street Station, Box 64
2955 Market Street
Philadelphia, Pennsylvania 19104
Attn: Michael Kolonauski

and

Greystone Real Estate Advisory Group
20 Park Plaza, Suite 1120
Boston, Massachusetts 02116

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Attn: MBTA License Management

LICENSEE:

Town of Middleborough
65 Sachem Street
Middleborough, Massachusetts 02346
Attn: Michael Ohrenberger, Town Engineer

3. Consideration

The rights contained in this License for Entry are granted for good and valuable consideration, the sufficiency of which is hereby acknowledged.

4. Terms and Conditions of License for Entry

This License for Entry is subject to the following terms and conditions:

4.1 Scope of Activity

(a) Scope of Activity:

The Scope of Activity is the Scope of License (Section 2.6) as modified by the terms of this License for Entry, including, without limitation, Exhibit B attached hereto and incorporated herein. Licensee shall minimize the disruption to and alteration of the Premises and, as soon as possible after each entry onto the Premises, shall return the Premises to the condition existing immediately prior to the initiation of the Scope of Activity and entry hereunder; except as specifically authorized under the Scope of License.

Except pursuant to an approved Access Plan, defined in Exhibit B, attached hereto and incorporated herein, or in case of emergency, Licensee shall provide at least ten (10) days' prior written notice of its desire to enter the Premises to the MBTA's applicable operations department(s), including MBTA's Railroad Operations, in accordance with this License for Entry at the address(es) noted above and shall also make arrangements at least ten (10) days in advance with the applicable Railroad Companies (as defined below) for access. The MBTA and the Railroad Companies (as defined below) may have an observer present at all times when Licensee is present on the Premises. See Exhibit B for required notice from Licensee when Licensee needs access because of an emergency. Licensee shall do all work in accordance with the Plan described in Exhibit B.

(b) Utilities:

Licensee acknowledges that there may be surface and subsurface utilities on and adjacent to the Premises and agrees to exercise extreme caution in performance of the Scope of Activity. Licensee shall comply with Massachusetts General Laws, Chapter 82, Section 40 (said statute also known as the "Dig Safe" law) and the regulations promulgated pursuant thereto including but not limited to the Code of Massachusetts Regulations, more particularly, 220 CMR 99.00 et seq. To the extent the MBTA, the Railroad Companies (as defined below), or parties acting on behalf of any of them, locate and mark railroad

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utilities in the railroad rights of way and appurtenant thereto, Licensee shall be responsible for payment to such parties for such services which may include, but not be limited to, locating and marking utilities, facilities and appurtenances thereto serving the railroad and transit line(s) or used in connection with services or operations of the MBTA and/or the Railroad Companies (as defined below). Any damage to any utilities on or near the Premises caused by Licensee shall be the sole responsibility of Licensee. If Licensee does not immediately repair any utilities it has damaged, the MBTA, without being under any obligation to do so and without waiving Licensee's obligation hereunder, may repair any utilities damaged by Licensee immediately and without notice in case of emergency. In the event the MBTA exercises such right, Licensee shall pay to the MBTA immediately upon demand all of the MBTA's cost of performing such repairs plus a fee equal to twenty-five percent (25%) of the MBTA's cost of performing such repairs to reimburse the MBTA for its administrative costs.

(c) Subordination to the MBTA's Operating Requirements:
The work permitted hereby shall be subordinate to the requirements of the MBTA in maintaining and operating a transportation system and may be stopped or delayed, at any time, in response to each requirement. The MBTA shall not be responsible for any damages incurred by Licensee as a result of any such work stoppage, delay or required relocation.

(d) Environmental Cooperation:
If for any reason Licensee is not responsible for Hazardous Materials, defined below, on the Premises then Licensee agrees to cooperate with the MBTA in the determination of the party liable for the remediation of the Premises under applicable Federal and/or state law. Such cooperation may include the temporary adjustment of the rights granted to Licensee hereunder. The MBTA shall not be responsible for any damages incurred by Licensee as a result of such temporary adjustment. "Hazardous Materials" shall mean "oil" or "hazardous materials", as those terms are defined in Massachusetts General Laws Chapter 21E ("Chapter 21E") and the regulations promulgated pursuant thereto, the Massachusetts Contingency Plan, 310 CMR 40.0000 et seq. (the "MCP").

(e) Remediation Obligation of Licensee:
Whenever by law or the terms of this License for Entry, Licensee is responsible for remediation of Hazardous Materials on MBTA property, Licensee, upon written demand of the MBTA, shall conduct, at Licensee's sole cost and expense (or, at the MBTA's election, reimburse the MBTA for the cost and expense incurred by the MBTA in connection with the MBTA's conduct of), all response actions required by Chapter 21E and the MCP with respect to the Hazardous Materials (including the hiring of a Licensed Site Professional). Any such response action, if performed by Licensee, shall be performed in accordance with Chapter 21E, the MCP, any other applicable statutes and regulations, and in accordance with plans and specifications approved by the MBTA, shall be completed in a timely manner to the reasonable satisfaction of the MBTA, and shall allow the MBTA to use the Premises, and/or adjacent or contiguous property owned by the MBTA, for its present use and for any future transportation use. Licensee shall also be responsible for the reasonable costs incurred by the MBTA in hiring consultants (including a Licensed Site Professional) to review, supervise and inspect any plans, specifications, proposed method of work, installation, operation and results.

(f) Notice of Project Commencement and Completion:

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Upon commencement and completion of its work, Licensee shall provide written notice to the MBTA and the Railroad Companies (as defined below) at the notice addresses set forth in Section 2.7.

(g) Evidence of Financial Responsibility:
Prior to commencement of Licensee's activities hereunder, Licensee shall provide evidence to the MBTA's reasonable satisfaction that Licensee has sufficient financial resources available to discharge any anticipated obligations hereunder. Such resources may be in the form of Licensee's net worth, insurance coverage, a bond or such other financial security as may be acceptable to the MBTA in form and amount.

(h) Plan Review Costs:
In addition to the Fees allocated in Section 2.4 above, Licensee shall also be responsible for any additional costs that may be incurred by the MBTA for Design and Construction Plan Review within thirty (30) days of being invoiced for same. Such costs and Fees are in addition to the Administrative Fee and the License Fee, and are included within the Licensee's indemnity obligations in Section 4.2(a) below.

(i) Settlement, Heaving or Lateral Movement
Licensee shall be responsible for any settlement, heaving or lateral movement caused to the roadbed, right-of-way and/or tracks, facilities and appurtenances of the MBTA or the Railroad Companies, arising from or as a result of the Scope of License or other Licensee activities at the Premises from the date of completion of the Scope of License, and Licensee agrees to pay the MBTA and/or the Railroad Companies the full cost and expense of repair or restoration to the MBTA's and/or Railroad Companies' facilities, promptly upon receipt of invoices therefore.

4.2 Indemnification and Release of the MBTA

(a) Licensee shall indemnify, defend (at the option of the MBTA) and save the MBTA, KCS, Amtrak, CSX, and any other company operating on the rights-of-way (collectively, except for the MBTA, the "Railroad Companies"; and individually, each a "Railroad Company") harmless from and against any and all liabilities, losses, damages, costs, expenses (including reasonable attorneys' expenses and fees), causes of action, suits, claims, demands or judgments of any nature whatsoever including, without limitation, those related to Hazardous Materials that may be imposed upon, incurred by, or asserted against the MBTA or the Railroad Companies by reason of any of the following occurrences:

(1) the activities of Licensee hereunder or the exercise by Licensee of any rights or privileges hereby granted; or

(2) the presence, discovery or revealing of any pre-existing Hazardous Materials on the Premises (or other property of the MBTA adjacent to the Premises) (i) which discovery is a result of Licensee's activities hereunder; (ii) where said Hazardous Materials are present because of Licensee's previous occupancies of the Premises, whether those occupancies were unauthorized or permitted pursuant to prior agreements between the parties; or (iii) where those pre-existing Hazardous Materials migrated from land now or previously owned, leased, occupied or operated by Licensee or for which Licensee is a potentially responsible party as defined under Chapter 21E; or

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(3) the placement or accidental release of any Hazardous Materials onto the Premises (or other property of the MBTA adjacent to the Premises) by Licensee or its employees, agents, contractors or consultants or by the employees, agents, or consultants of Licensee's contractors or subcontractors; or

(4) any use, condition or occupation of the Premises or any part thereof by Licensee; or

(5) any failure of Licensee to perform or comply with any of the terms hereof, or of any contracts, agreements or restrictions, statutes, laws, ordinances or regulations affecting the activities or any part thereof.

In subsection (2) above, Licensee's previous occupancies of the Premises include occupancies by the predecessors in interest of Licensee.

(b) Licensee has inspected the Premises and decided that the Premises are suitable for the uses Licensee contemplates. Licensee assumes all the risk of entry on to the Premises.

(c) Licensee hereby releases the MBTA and the Railroad Companies from any responsibility for Licensee's losses or damages related to the condition of the Premises, and Licensee covenants and agrees that it will not assert or bring, nor cause any third-party to assert or bring, any claim, demand, lawsuit or cause of action (whether by way of original claim, cross claim, counterclaim, contribution claim, indemnification claim, third-party claim or any other claim) (hereinafter "Claims") against the MBTA or the Railroad Companies, including, without limitation, claims for response actions, response costs, assessments, containment, removal and remedial costs, governmental oversight charges, including any overhead or response action costs incurred or assessed by DEP, fines or penalties, permit and annual compliance fees, reasonable attorney and expert fees, natural resource damages, property damages, including diminution in property value claims, and personal injury damages and damages related to a person's death relating to, or arising from, the condition of the Premises.

Licensee shall obtain a written release of liability similar to the one in this Section 4.2(c) and including the language of Section 4.2(d) in favor of the MBTA and the Railroad Companies from each of Licensee's consultants and contractors before they enter onto the Premises.

(d) In clarification of the above release and covenants of defense and indemnification, and not in limitation of them, Licensee shall indemnify, defend (at the option of the MBTA) and save the MBTA and the Railroad Companies harmless from and against any and all liabilities, losses, damages, costs, expenses (including reasonable attorneys' expenses and fees), causes of action, suits, claims, demands or judgments related to the injury, illness or death of any employee of Licensee or of an employee of Licensee's contractors or consultants; except if the "Claim" arose because of the gross negligence or willful misconduct of the MBTA or the Railroad Companies. It shall not be grossly negligent to allow access to the Premises that are in substantially the condition they were in when Licensee inspected the Premises before accepting this License for Entry.

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(e) Licensee shall be notified, in writing, by the MBTA and each of the affected Railroad Companies of the assertion of any claim against it that Licensee has agreed to indemnify above (the "Indemnified Claim").

(1) If the MBTA decides to itself conduct the defense of an Indemnified Claim against it or to conduct any other response itself, Licensee shall reimburse the MBTA for all costs and expenses (including, without limitation, reasonable attorneys' fees and expenses) incurred by the MBTA in connection with the MBTA's defense of the Indemnified Claim against it and/or the conduct of all response actions, including, without limitation, those required by Chapter 21E and the MCP. The settlement or compromise of any Indemnified Claim shall not include the admission of guilt (or comparable plea), wrongdoing or negligence or the permitting or imposition of civil or criminal penalties or indictments, or the entering of consent decrees or orders of any kind by the MBTA on behalf of Licensee or any other action that would materially prejudice the rights of Licensee without Licensee's express written approval. Licensee shall cooperate fully and promptly with the MBTA in the defense of any Indemnified Claim. This same right of self-defense and the right to Licensee reimbursement shall apply to each of the Railroad Companies that has an Indemnified Claim against it.

(2) If the MBTA decides to have Licensee defend the Indemnified Claim or handle the response action, the MBTA shall notify Licensee of that decision in writing and Licensee shall bear the entire cost thereof and shall have sole control of the defense of any Indemnified Claim and all negotiations for its settlement or compromise provided that the MBTA is fully indemnified by Licensee and provided further that the settlement or compromise shall not include the admission of guilt (or comparable plea), wrongdoing or negligence or the permitting or imposition of civil or criminal penalties or indictments, or the entering of consent decrees or orders of any kind by Licensee on behalf of the MBTA or any other action that would materially prejudice the rights of the MBTA without the MBTA's express written approval. The MBTA shall cooperate with Licensee in the defense of any Indemnified Claim. If any of the Railroad Companies want Licensee to defend it against an Indemnified Claim, then they must agree to this Section 4.2(e)(2).

If any response action due to the presence of Hazardous Material or the threat of release of Hazardous Waste onto the Premises (or other property of the MBTA which abuts the Premises), is performed by Licensee, the response action shall be performed in accordance with Section 4.1(e).

(f) Licensee and contractor shall provide to the MBTA financial assurance guaranteeing Licensee's performance of the obligations of this License for Entry in a form satisfactory to the MBTA.

For purposes of this Section 4, Licensee shall include Licensee and its directors, officers, employees, agents, successors and assigns and the MBTA shall include the MBTA and its directors, officers, employees, agents, successors and assigns.

The provisions of Sections 4.1 and 4.2 shall survive the termination or expiration of this License for Entry.

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4.3 Insurance

Prior to entry hereunder, Licensee and its consultants and contractors shall provide the MBTA, KCS, Amtrak, CSX, and the Railroad Companies with a certificate or certificates of insurance and shall, during the Term hereof, renew and replace any expired certificate, evidencing the insurance of the activities permitted hereunder, and Licensee's covenant of indemnification hereinabove, with companies that are reasonably acceptable to the MBTA, as stated below, in which the MBTA and others hereinafter specified are either additional insureds as their interests may appear or named insureds and which provide minimum liability coverage as follows:

(a) Commercial General Liability Insurance:

Insuring Licensee, the MBTA, the Railroad Companies, the Premises, and all activities of Licensee permitted pursuant to this License for Entry, as well as Licensee's indemnification obligations contained herein, with minimum liability coverage for personal injury, bodily injury and property damage with limits not less than One Million Dollars ($1,000,000) per occurrence and Two Million Dollars ($2,000,000) in aggregate. Such insurance shall be written on an occurrence basis (as opposed to a claims made basis). This policy shall name the MBTA and the Railroad Companies as additional insureds. This policy shall provide coverage on a primary and non-contributory basis for the MBTA and the Railroad Companies. The policy shall contain a clause waiving the right of subrogation in favor of the MBTA and the Railroad Companies. This policy must contain endorsement(s) or language, which must be stated on the certificate of insurance, providing coverage equivalent to the coverage provided by ISO form CG 24 17 10 01.

(b) Workers' Compensation and Employers' Liability Insurance:

Insuring all persons employed by Licensee in connection with any work done on or about the Premises with respect to which claims for death or bodily injury could be asserted against the MBTA, including (i) Workers' Compensation Insurance providing statutory coverage as required by the Commonwealth of Massachusetts, and (ii) Employers' Liability Insurance coverage with limits of not less than One Million Dollars ($1,000,000) per accident. Each of Licensee's contractors, subcontractors, and consultants performing work on or about the Premises shall have similar policies covering their employees. All policies of insurance required by this Section 4.3 (b) must contain a clause waiving the right of subrogation in favor of the MBTA and the Railroad Companies.

(c) Automobile Liability Insurance:

Automobile liability insurance with limits of not less than One Million Dollars ($1,000,000) covering all owned, non-owned, hired, rented or leased vehicles of Licensee, its employees, officers, subcontractors and consultants that are used in the activities permitted hereunder. Such insurance shall be written on an occurrence basis (as opposed to a claims made basis). This policy shall name the MBTA and the Railroad Companies as additional insureds. This policy shall provide coverage on a primary and non-contributory basis for the MBTA and the Railroad Companies. This policy must contain endorsement(s) or language, which must be stated on the certificate of insurance, providing coverage equivalent to the coverage provided by ISO form CA 20 70 10 01.

(d) Umbrella Liability Insurance:

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Umbrella liability insurance with limits of not less than Ten Million Dollars ($10,000,000) providing excess coverage over all limits and coverage noted in paragraph (a) and paragraph (c) above. Such insurance shall be written on an occurrence basis (as opposed to a claims made basis). This policy shall name the MBTA and the Railroad Companies as additional insureds. This policy shall provide coverage on a primary and non-contributory basis for the MBTA and the Railroad Companies. The policy shall contain a clause waiving the right of subrogation in favor of the MBTA and the Railroad Companies. This policy must contain endorsement(s) or language, which must be stated on the certificate of insurance, providing coverage equivalent to the coverage provided by ISO form CU 24 09 03 05.

(e) Insurance during Construction and Installation:
Licensee shall procure or cause to be procured builder's all risk insurance during any period when a construction project is being undertaken by or on behalf of Licensee on the Premises.

(f) Railroad and Transit Protective Liability Insurance:
In the event that any work occurs within fifty (50) feet of an active right-of way or if any work of any kind by Licensee poses a risk to foul an active right-of-way, Licensee shall procure Railroad Protective Liability Insurance insuring the MBTA and the Railroad Companies with limits of not less than Five Million Dollars ($5,000,000) for all damages arising out of bodily injuries to or death of one (1) person, and, subject to that limit for each person, a total limit of Ten Million Dollars ($10,000,000) for all damages arising out of bodily injury to or death of two (2) or more persons in any one (1) accident. The MBTA and the Railroad Companies shall be "first named insureds" on the Railroad Protective Liability Insurance Policy. KCS shall be provided with an original policy of Railroad Protective Liability Insurance and the MBTA and remaining Railroad Companies shall be provided with a certificate of insurance.

The MBTA may require reasonable increases in limits of the above insurance coverages from time to time. The required insurance coverages hereinbefore specified shall be placed with insurance companies licensed by the Massachusetts Division of Insurance to do business in the Commonwealth of Massachusetts and having a Best's rating of A- or better, shall be kept in full force and effect at all times, shall be primary and non-contributory to any insurance or self-insurance maintained by the MBTA and the Railroad Companies, and shall require that the MBTA be given at least thirty (30) days' advance written notice in the event of any cancellation or non-renewal in coverage. All required policies of insurance shall not contain any exclusions for acts of terrorism, and shall fully cover any acts of terrorism. All such insurance as is required of Licensee shall be provided by or on behalf of all contractors, subcontractors and consultants to cover their operations performed. At the inception date of this License for Entry and throughout the term of this License for Entry, the MBTA shall be provided with certificates of insurance evidencing that such insurance policies are in place and provide coverage as required. Licensee shall be held responsible for any modifications, deviations, or omissions in the compliance with these requirements by any contractor, subcontractor or consultant of Licensee.

ALL CERTIFICATES OF INSURANCE PERTAINING TO THIS REQUEST (AS WELL AS RENEWAL CERTIFICATES) SHOULD DESCRIBE THE SITE THAT IS COVERED.

4.4 Compliance with Laws

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Licensee shall comply with, and shall cause all work performed to comply with all federal, state, county, municipal and other governmental statutes, laws, rules, orders, regulations and ordinances.

Licensee shall also be responsible for obtaining any and all federal, state, and/or local permits and/or approvals necessary to carry out the activities permitted hereunder.

4.5 Non-Exclusive Use

The MBTA makes no representations or warranty, express or implied, that Licensee shall have sole or exclusive use of the Premises under this License for Entry. In the event other agreements, licenses, or easements have been or are granted, Licensee shall be responsible for coordinating its work and activities with that of other licensees and parties in interest. The MBTA shall not be liable for delays, obstructions, or like occurrences affecting Licensee, arising out of the work of the MBTA or other licensees or parties in interest.

Licensee's rights herein are granted subject to easements and rights of record and existing leases and licenses.

4.6 No Warranty

Licensee accepts the Premises "As Is" and the MBTA makes no warranty, express or implied, as to the condition of the Premises.

4.7 Termination

At the termination of this License for Entry, Licensee agrees to restore the Premises promptly to the condition it was in at the commencement of the term hereof, and to remove all of Licensee's personal property and debris from the Premises. Should Licensee not perform such restoration at the end of the Term, the MBTA may perform any and all necessary restoration at the sole expense of Licensee. Any personal property not so removed shall, at the option of the MBTA, either become the property of the MBTA or be removed by the MBTA and disposed of without any liability in the MBTA for such removal and disposition, all at the sole expense of Licensee.

4.8 Assignment

Licensee shall not, without the prior written consent of the MBTA, transfer or assign this License for Entry or any part hereof. Such consent may be withheld in the sole discretion of the MBTA. Any assignment made by Licensee without the prior written consent of the MBTA shall be rendered null, void, and of no further force or effect.

5. Notices

All notices, demands, requests, consents, approvals and other instruments required or permitted to be given pursuant to the terms hereof (hereinafter "Notice"), shall be in writing and shall be deemed to have been properly given when deposited in registered or certified United States mail, postage prepaid, return receipt requested, addressed, as described in Section 2.7 or when delivered by messenger or overnight mail service to the correct addressee. Notice shall be deemed received when actually received or when the proffered Notice has been refused by the addressee. The signature of an employee, servant or agent of the addressee shall be determinative on the issue of actual receipt.

Licensee and the MBTA shall, at any time and from time to time, have the right to specify as their proper addresses for purposes of this License for Entry any other address or addresses giving fifteen (15) days' written notice thereof to the other party.

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6. Results

If this License for Entry explicitly allows Licensee to conduct certain investigations on MBTA owned land, then if asked to do so by the MBTA in writing, Licensee agrees to provide to the MBTA, at no cost, a copy of the results of such investigations (including data and analysis) and all other work conducted under this License for Entry in both hard copy form and in a digital format specified by the MBTA regardless of whether the report was prepared by Licensee, its agent, consultant or contractor, or prepared on behalf of Licensee. All results and reports shall be provided to the MBTA within ten (10) days of Licensee's receipt of the written request of the MBTA. Licensee agrees to consult with the MBTA prior to contacting any governmental entity, regarding any information, results of analysis or reports regarding the Premises. Licensee shall give the MBTA a copy of any reports or notifications, including but not limited to release notifications, prior to submitting the same to any governmental entity.

7. Default and Termination

(a) Termination for Non-Payment:

In the event that Licensee shall neglect or fail to pay any sum herein specified to be paid upon the due date hereunder, Licensee shall be in default and the MBTA shall have the right at any time thereafter to terminate this License for Entry by giving Licensee two (2) weeks written notice of the MBTA's decision to terminate for non-payment ("Termination Notice"). Licensee shall not be entitled to cure any such default by tendering payment after the expiration of the two (2) week grace period which starts upon Licensee's, or Licensee's servants, agents or employee's receipt of (or refusal to accept) the MBTA's Termination Notice. Any amount due hereunder that is not paid when due shall be charged to 1.5% per month and 18% per annum.

(b) Default of Terms and Conditions:

Licensee shall also be in default if Licensee:

(1) fails to perform or observe any of the other covenants or agreements contained in this instrument and on its part to be performed or observed, or

(2) makes any assignment for the benefit of creditors or files petition for relief under bankruptcy law, or

(3) has a bankruptcy petition filed against it that is not dismissed within sixty (60) days, or

(4) has its estate taken by process of law, proceeding in bankruptcy or insolvency or otherwise,

and if such defaults continue after two (2) weeks' written notice given by the MBTA to Licensee to cure, the MBTA may terminate this License for Entry by written notice to Licensee and/or deny access to the Premises and expel Licensee and those claiming through or under Licensee and remove Licensee's effects from the Premises without prejudice to any remedies which might otherwise be available for such breach of covenant, and, upon entry as aforesaid, the rights of Licensee created by this License for Entry shall terminate. Notwithstanding the preceding, if Licensee begins to cure a default as soon as possible within said two (2) week period and thereafter continues to pursue a cure with all due diligence, then the MBTA shall not terminate this License for Entry until and unless Licensee ceases to pursue a cure with all due diligence and has not in fact cured said default. Licensee agrees to pay any expense including reasonable attorneys' fees incurred by the MBTA in enforcing any of Licensee's obligations hereunder.

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Notwithstanding the preceding, if the default is one that threatens the safety of the public or the ability of the MBTA or a Railroad Company to operate its transportation system, then it shall be considered an emergency default ("Emergency Default") and if Licensee does not affect an immediate cure, the MBTA may terminate the License for Entry upon reasonable notice and use self-help at the expense of Licensee and Licensee shall be responsible for such expenses as well as for a twenty-five percent (25%) administrative fee above the expenses.

In the event this License for Entry is terminated pursuant to this Section 7, the MBTA shall retain the License Fee as partial damages, without prejudice to its right to claim additional damages as a result of the breach.

8. Holding Over

If Licensee desires to continue the work defined in the Scope of Activity after the expiration or termination of this License for Entry, the resulting license shall be on a month-to-month basis and may be terminated by either party at any time by providing the other party with thirty (30) days prior written notice of termination. During the holding-over period, a monthly fee equal to three (3) times the equivalent monthly License Fee (calculated based on the length of the original term and the original License Fee established hereunder) shall be paid monthly in advance by Licensee to the MBTA. During such holding-over period, Licensee shall be bound by all applicable provisions of this License for Entry.

9. Work in Harmony

Licensee agrees that in any work performed in or about the Premises, it will employ only labor which can work in harmony with all elements of labor being employed by the MBTA or the Railroad Companies.

10. Promotional Material

Licensee shall not, without the prior written approval of the MBTA, refer to the MBTA in any promotional matter or material, including, but not limited to advertising, letterheads, bills, invoices and brochures.

11. Nondiscrimination

With respect to its exercise of all rights and privileges herein granted, Licensee shall undertake affirmative action as required by Federal and state laws, rules and regulations pertinent to Civil Rights and Equal Opportunity unless otherwise exempted therefrom. Licensee agrees that it shall comply with any and all required affirmative action plans submitted pursuant to the directives of any Federal agency and in accordance with applicable federal law and applicable state laws, rules and regulations.

Licensee shall not discriminate against any person, employee or applicant for employment because of race, color, creed, national origin, age, sex, sexual orientation, disability or military veteran status in its activities at the Premises, including without limitation, the hiring and discharging of employees, the provision or use of services and the selection of suppliers, contractors, or subcontractors.

Consistent with the law, Licensee shall use reasonable efforts to contact, encourage and utilize minority and female business enterprises in the procurement of materials and service under this License for Entry.

12. Taxes

Licensee shall be solely responsible for the payment of any taxes, levies, betterments or assessments, fees or charges, whether in existence on the date hereof or becoming applicable during the Term, which may be assessed against Licensee or the MBTA which are directly attributable to Licensee's installations in, or use of, the Premises, or any personal property or fixtures of Licensee located thereon (collectively referred to as "Taxes"). Licensee shall pay all Taxes directly to the taxing authority before delinquency and before any fine,

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interest, or penalty shall become due or be imposed by operation of law for their nonpayment. Such payments shall constitute an additional License Fee hereunder.

Licensee may contest, in good faith for its own account and at its own expense, the validity or amount of any Taxes, provided Licensee shall indemnify the MBTA against any resulting loss, cost and expense. Licensee shall not permit a lien or encumbrance on the Premises by reason of failure to pay any Taxes.

13. No Third-Party Beneficiaries

This License for Entry shall not be construed to create any third-party beneficiary rights in favor of any other parties (except the explicit rights granted to the Railroad Companies) or any right or privilege for the benefit of any other parties.

14. Entire Agreement

This License for Entry contains the entire agreement of the parties hereto with respect to the subject matter hereof, and no representations, inducements, promises, or agreements, oral or otherwise, between the parties hereto with respect to the subject matter hereof not embodied herein shall be of any force or effect.

15. Governing Law

This License for Entry shall be construed and interpreted under and pursuant to the laws of the Commonwealth of Massachusetts, and the Massachusetts and Federal conflict of laws provisions shall not be applied if the result is that other than Massachusetts law shall govern.

16. Successors and Assigns

The provisions of this License for Entry shall be binding on and inure to the benefit of the parties hereto and their respective successors and assigns.

17. Limitation on Damages

The MBTA shall not be liable to Licensee for any loss of business or any indirect, incidental, special, consequential or exemplary damages or lost profits unless specified herein.

18. No Waiver

No failure by the MBTA to insist upon strict performance of any term, covenant or condition hereof, or to exercise any right or remedy consequent upon a breach thereof shall constitute a waiver of any such breach or of any such term, covenant or condition. The acceptance by the MBTA of any amount less than the full amount due to the MBTA hereunder shall not be deemed a waiver by the MBTA of its right to collect the full amount due. The MBTA may deposit checks or drafts that state "final payment", "payment in full" or the like without being deemed to have waived its right to receive all amounts due hereunder. Any waiver by the MBTA of any term, covenant or condition hereof shall not be effective unless such waiver is in writing.

[Signature Page Follows]

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IN WITNESS WHEREOF, the parties hereto have caused this License for Entry to be executed as of the Effective Date.

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY, AS LICENSOR

By: Signed by: 5CF416E6E2AE4E9... _____

Erin McCabe
Chief of Real Estate and Asset Management

TOWN OF MIDDLEBOROUGH, AS LICENSEE

By: Joseph Perkins _____

Name: _____

Title: Interim Town Manager _____
(Duly Authorized Representative)

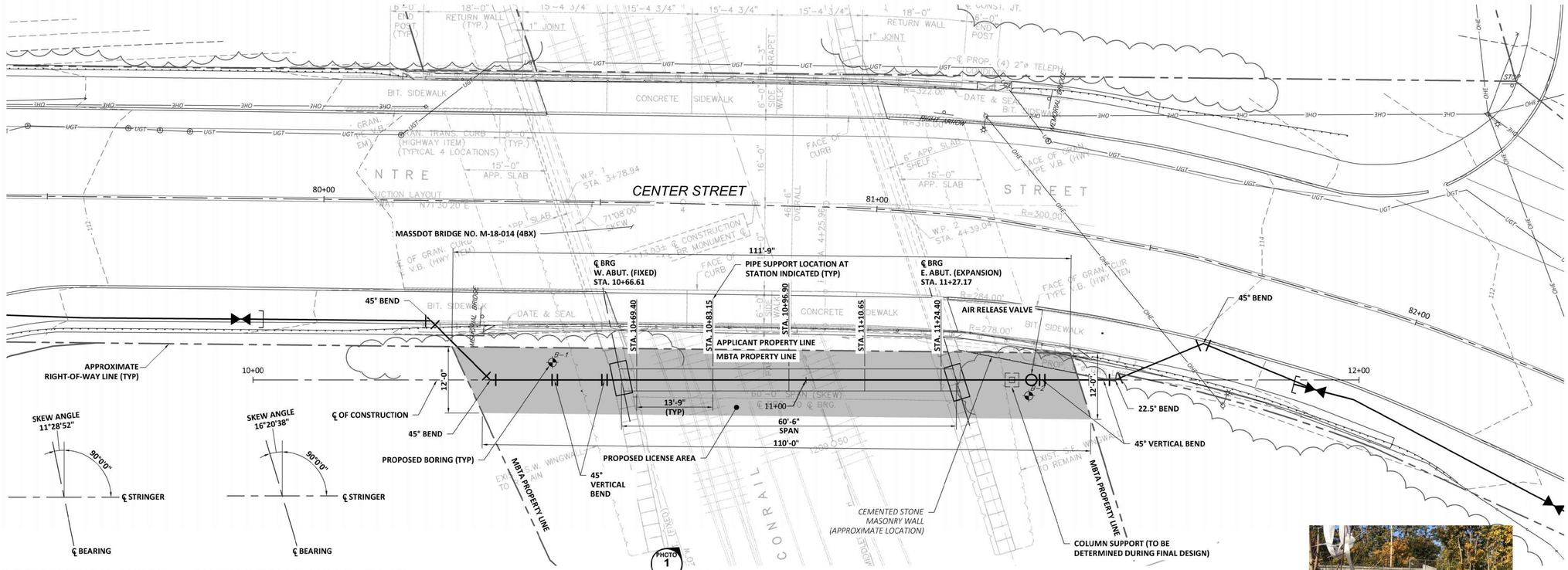
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EXHIBIT A

PLAN OF PREMISES

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LAST SAVED BY: RYAN.QUAGLIERI 4/19/2024 11:23 AM



SKEW DESIGNATION (WEST)
SCALE: NTS

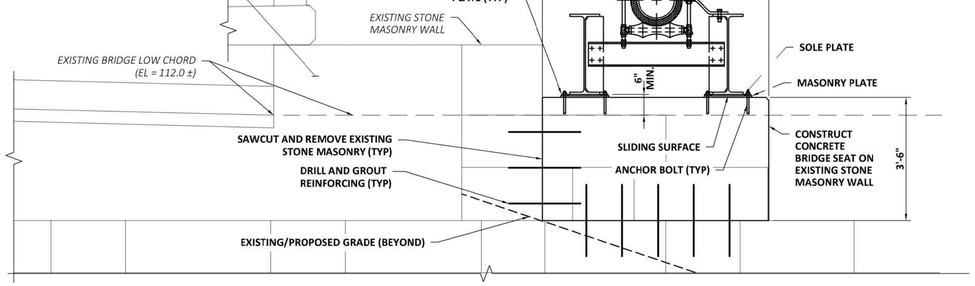
SKEW DESIGNATION (EAST)
SCALE: NTS

PLAN
SCALE: 1"=10'

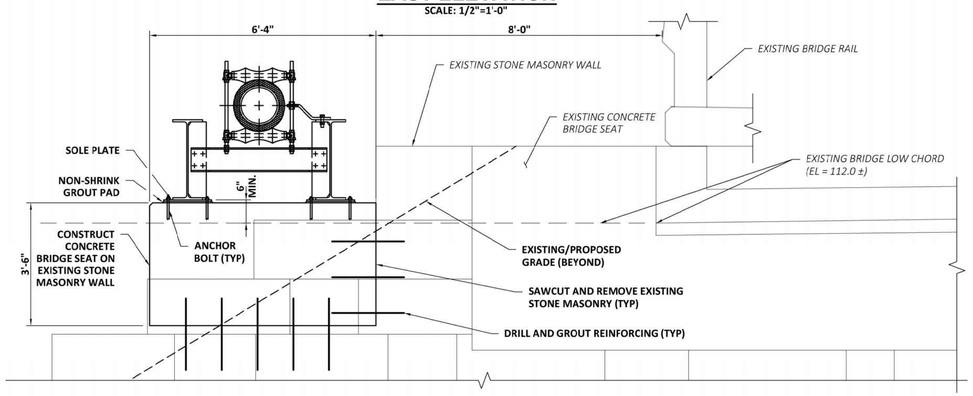
NOTE:
HEIGHT FROM TOP OF RAILS TO BOTTOM OF UTILITY BRIDGE TO BE DETERMINED THROUGH SURVEY. PROPOSED UTILITY BRIDGE IS SET 6-INCHES ABOVE EXISTING ADJACENT BRIDGE LOW CHORD.



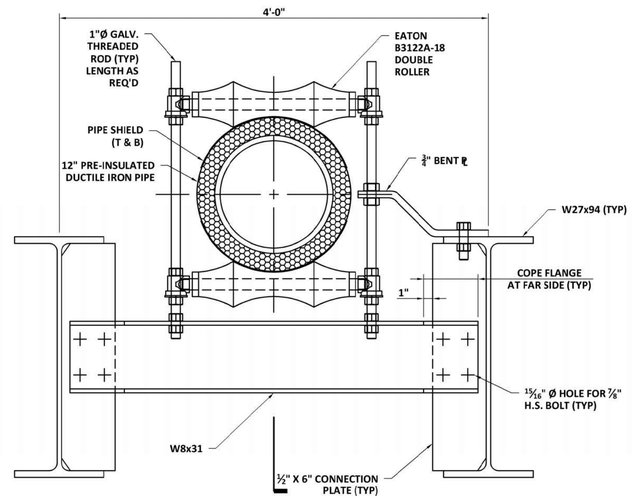
PHOTO 1 — SOUTHEAST ELEVATION



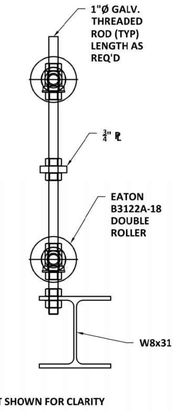
EAST ELEVATION
SCALE: 1/2"=1'-0"



WEST ELEVATION
SCALE: 1/2"=1'-0"



TYPICAL SECTION
SCALE: 1-1/2"=1'-0"



NOTE:
PIPE NOT SHOWN FOR CLARITY

A — SECTION
SCALE: 1 1/2"= 1'-0"

NO	REVISIONS	APP'D	DATE
1			
2			
3			
4			
5			

PROJECT NO: 21442
DESIGNED: W. NUHN
CAD COORD:
CAD: R. QUAGLIERI
CHECKED: J. GALLANT
DATE: DECEMBER 2023
APPROVED: J. GALLANT
DATE: DECEMBER 2023
SUBMISSION: BRIDGE CONCEPT

WRIGHT-PIERCE
978.416.8000 | www.wright-pierce.com
600 FEDERAL ST., ANDOVER, MA 01810

TOWN OF MIDDLEBOROUGH, MASSACHUSETTS
CENTER STREET AND NORTH MAIN STREET WATER SYSTEM IMPROVEMENTS

PLAN, ELEVATIONS AND SECTIONS I

DRAWING
SK-1

J:\ENG\MA\MIDDLEBOROUGH\21442-CENTERSTREETRECOM_DRAWINGS\STR\21442-SS-PLANELEVSECTIONS.DWG | Option 1 | 1:2.5849 | --- | 4/19/2024 11:23:57 AM | RYAN.QUAGLIERI

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EXHIBIT B

SCOPE OF ACTIVITY

Subject to the terms and conditions in this License for Entry Agreement, Licensee, its agents, employees, contractors, subcontractors, and/or representatives are hereby granted a license to enter upon the Premises for the sole purpose as described in Section 2.6.

Licensee shall conduct all activities within the Premises in a safe manner and immediately notify the MBTA and the applicable Railroad Companies if any problem occurs which may result in a safety hazard. If any unsafe situation should occur, Licensee will correct the situation by eliminating any safety hazard immediately or, if the situation cannot be reasonably cured immediately, then in such longer time as is reasonably required, and in all such unsafe situations, the MBTA Railroad Operations Safety Procedures shall be followed.

Licensee shall submit a plan and detailed specifications (including the materials to be used) and the proposed methods of performing the work, or any part thereof (the "Plan") to the MBTA, KCS and other applicable Railroad Companies. Licensee shall not enter the Premises until the Plan has been approved by the MBTA and the applicable Railroad Company or Railroad Companies. Such approval may be withheld in the MBTA's, or the applicable Railroad Company's sole discretion. The Scope of Activity for said construction, installation, maintenance, operation and/or replacement will be more fully defined in the approved Plan, which approved Plan will automatically be incorporated herein by reference and made part of this License for Entry. Licensee shall also provide the MBTA with a detailed schedule of times when Licensee, its employees, contractors, subcontractors, or agents would like to be on the Premises to undertake the Scope of Activity (the "Access Plan"). The MBTA and the applicable Railroad Companies shall have full power to make a final determination of when Licensee may be on the Premises as it is necessary to coordinate the work of all those desiring or having the right to access the Premises.

Unless entry is made pursuant to an Access Plan approved by both the MBTA and the applicable Railroad Companies, Licensee agrees to give, each time it desires entry, at least ten (10) days' prior written notification to the MBTA and the applicable Railroad Companies (except in cases of emergency when notice shall be given to the MBTA and the applicable Railroad Companies as quickly as possible) of its need to access the Premises for all work to be performed under this License for Entry. Licensee understands that the more notice given to the MBTA and the applicable Railroad Companies, the more likely it will be that Licensee can gain access at the times requested. The Licensee shall present evidence of the required insurance coverage before each entry. In the case of an emergency, Licensee shall as soon as possible contact the MBTA Control Center at 617-222-5278.

No activities permitted herein may be performed by Licensee except as approved in writing by the MBTA; and no method of testing, installation or construction shall be used by Licensee except with prior written approvals or written approvals received in the field from the MBTA's representatives at the time the work is performed.

If at any time during the work of installation or connection, either the MBTA or the applicable Railroad Company should, in its sole and absolute discretion, deem flaggers, watchpersons, communications/signaling personnel, electric traction personnel, inspectors assigned to construction crews, and/or other measures, including but not limited to train re-routing, desirable or necessary to protect its operations, its property or its employees or other persons on or near the Premises, the MBTA and/or a Railroad Company shall upon notice to Licensee (where such notice is feasible) have the right to place such personnel, including personnel of the MBTA's or the Railroad Company's agents or to take such measures, at the sole cost and expense of Licensee. Such cost and expense shall include the current wages and fringe benefits due and owing to such personnel in and for the performance of such measures. Licensee hereby covenants and agrees to bear the full cost and expense thereof and to reimburse the MBTA and/or the Railroad Company within thirty (30) days of receiving an itemized, written invoice for such reimbursement. The MBTA's or a Railroad Company's failure to furnish such personnel or take such measures shall

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not relieve Licensee of any obligation or liability it might otherwise have assumed, and shall not give rise to any liability to Licensee on the part of the MBTA or the Railroad Companies. Upon being notified that the personnel or measures referred to in the first sentence of this paragraph have been deemed desirable or necessary by the MBTA and/or a Railroad Company, Licensee shall not commence or continue construction or repair measures, as the case may be, unless and until such personnel or measures are in place.

If Licensee shall deem any requirement for flagging or the like by the MBTA, a Railroad Company, or one of their agents for supervision of the activity hereunder as unreasonable, Licensee shall nevertheless pay for such flagging and the like, but may take exception in writing thereto as an unreasonable requirement in each instance. The parties agree to review such exceptions at the times of billings for such services and attempt to adjust them as the MBTA may deem appropriate. This reimbursement is in addition to the License Fee and Administrative Fee required hereunder.

Licensee shall comply with all applicable MBTA Railroad Operations Directorate requirements including, but not limited to, those entitled: "I - Guidelines and Procedures for Construction on MBTA Railroad and Transit Properties", "II - Maintenance and Protection of Railroad Traffic", "III - Insurance Specifications" dated August 2014 and MBTA Special Instructions dated April 2003. To the extent that there is an irreconcilable conflict between the aforementioned requirements and this License for Entry, the terms and conditions contained in the MBTA Railroad Operations Directorate Procedures shall control, unless the requirements in this License for Entry are more strict.

No individual, including representatives and employees of Licensee, may enter onto the Premises unless that individual has first attended KCS's Roadway Worker Protection ("RWP") class.

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EXHIBIT C

Docusign Envelope ID: 68104478-0884-4CE8-8C18-7AFC274E2884

June 25th, 2024

Mr. Liam Breen Director of
Licensing Massachusetts
Realty Group Park Plaza –
Suite 1120
Boston, MA 02116

SUBJECT: Request from the Town of Middleborough, MA, requesting to perform the construction of an independent utility bridge (this includes survey work and geotechnical borings) which will carry a 12" ductile iron water main across the MBTA's right of way located near 606 Center Street in Middleborough, MA. (Middleboro Main Line MP 34.396). MBTA # 24076

Dear Mr. Breen:

Keolis Commuter Services, LLC ("KCS") has reviewed the utility bridge construction, described in the above-referenced MRG canvass subject and provides the following comments and requirements:

1. Contractor shall adhere to all the Railroad Operations Directorate – Guidelines and Procedures for Construction on MBTA Property.
2. Train protection services will be required for all Contractor-performed work on, over or adjacent to the Massachusetts Bay Transportation Authority (MBTA) property if deemed necessary.
3. KCS shall identify all railroad utilities prior to start of scope or work.
4. KCS will need to be informed in advance of all of Contractor's work related to the project in order to maintain the safety of train operations.
5. Contractor shall possess all applicable, necessary, active, executed licenses prior to start of any work on the project.
6. Prior to the start of any work requiring KCS's services, Contractor will be required to enter into an agreement with KCS, which KCS will provide to Contractor. Amongst other terms and conditions, KCS's agreement shall contain an estimate of KCS's anticipated costs to support the project. KCS's support shall include, but not be limited to, flagging protection if needed, protection of railroad utilities if needed, and project management. Contractor must pay to KCS all estimated, anticipated costs for support of the project in full prior to scheduling any flagging or support personnel. Following the satisfactory completion of all work, KCS shall provide a final billing statement to Contractor based on actual costs.
7. Prior to Contractor performing any work on the project, Contractor personnel working on, over or adjacent to the railroad right of way must be safety trained by KCS. Contractor must contact RWP@keoliscs.com to request and schedule this

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training. All Contractor personnel shall have KCS-issued safety ID's available at all times for KCS's and/or the MBTA's inspection.

8. Contractor shall be required to satisfy all insurance requirements contained in the KCS agreement and to provide proof of all such insurances in advance of Contractor performing any work related to the project.
9. Flagging protection may be scheduled ten (10) business days after execution of KCS's agreement.

If you have any questions or need additional information, please contact me at 617-593-1851 or john.connors@keoliscs.com.

Sincerely,

John Connors
Program Director – Supplemental Work
Engineering Operations

Copies: KCS – James Welch
MBTA – Brian Mellen

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EXHIBIT D

Docusign Envelope ID: 68104478-0884-4CE8-8C18-7AFC274E2884

July 3, 2024

Mr. Liam Breen
Director of Licensing
Greystone Management Solutions
20 Park Plaza, 11th Floor, Suite 1115A
Boston, MA 02116

Re: **GMS Request No. 24076**
Town of Middleborough, Utility Bridge, Middleborough, MA

Dear Mr. Breen,

The MBTA Transit-Oriented Development (TOD) Group has reviewed your May 6, 2024 request from the Town of Middleborough for a license to construct a water main utility bridge next to the Center Street bridge in Middleborough that crosses over the Old Colony Line right-of-way. In addition to the license, the Town is requesting a permanent easement agreement for the utility bridge.

The work will consist of survey, soil borings, the construction of the utility bridge, and the placement of the water main. The bridge will be 60.5-feet-long and consist of two laterally supported I-beams anchored into the existing stone block wingwalls of the Center Street Bridge.

This Department has no objections to the proposed work but requires that the Applicant meet the following conditions:

1. Submit a Work Plan, Schedule, and Site Safety Plan to the TOD Group for review and acceptance at least five weeks prior to the start of work, identifying the means of protecting the trains and tracks.

2. The TOD Group will coordinate MBTA support and agreements and will provide information regarding coordination with Railroad Operations, Keolis, and Safety. The Applicant will be required to coordinate with those departments concerning notifications, scheduling, access times, safety protocols, RWP training, and flagging for which a Keolis PI Agreement shall be established prior to the commencement of work.

3. Plans submitted for review by the MBTA must show all property lines, structures, easements, and the MBTA Zone of Influence (ZOI) and must be stamped by a Massachusetts licensed professional engineer, architect, or land surveyor.

Massachusetts Bay Transportation Authority
Ten Park Plaza, Suite 3910, Boston, MA 02116
www.mbta.com

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4. The ZOI must be physically demarcated on the project site before work begins, unless working in the right-of-way, and may only be removed once all licensed work is completed.

5. Prior to work, submit a Job Hazard Assessment (JHA) identifying potential hazards posed by the project site proximity to the ZOI. This JHA must be signed daily by all site workers.

6. A Worksite Hazard Assessment (WHA) must be conducted on site by Keolis to determine the level of protection and flagging needed prior to starting work.

7. The Applicant must adhere to the Railroad Operations Construction Policy Directive of August 12, 2022.

8. No crane swings, picks, or other work that is within thirty feet of the nearest live railroad track, or that has potential to foul live tracks, shall be made without MBTA authorization, Keolis flag protection, and an MBTA Capital Programs Support Field Staff person present.

9. The horizontal and vertical clearances of the new utility bridge shall conform to Sheets 1015 and 1016 of the current MBTA Railroad Operations Book of Standard Plans, Track and Roadway.

10. No materials shall be stored within 15 feet of the nearest live railroad track without MBTA acceptance of a work plan documenting the location and securement of materials.

11. Any deformation to the track ballast shoulders on the right-of-way caused by the Applicant's equipment shall be restored to a condition acceptable to the MBTA and using Keolis flag protection.

12. The Applicant shall remove any debris that migrates or falls onto the tracks or right-of-way using Keolis flag protection.

13. At the completion of the project, restore the site to a neat and clean condition acceptable to the MBTA.

14. The MBTA shall not be responsible for any contaminated soil found in the course of this project.

15. Agree to the terms and conditions governing access to the MBTA right-of-way and provide assurance that there will be no interruptions to train movements.

16. No work shall be permitted on/or abutting MBTA property without accepted Work Plans.

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17. Any proposed change to the accepted Work Plans and submittals shall be brought to the attention of this office for review and acceptance prior to the work being performed.

18. All MBTA comments to the Work Plans and submittals shall be incorporated into a revised submittal or shall otherwise be resolved in writing to the satisfaction of this department.

19. MBTA reserves the right to stop work at any time if it is determined that the work poses unacceptable risk to MBTA customers, employees, operations, or infrastructure.

20. The Applicant shall bear all costs for MBTA personnel associated with the support of this project and may be required to enter into a Force Account Agreement to cover costs incurred by the MBTA, including MBTA TOD Project Office Staff and oversight by MBTA Capital Programs Support Field Staff.

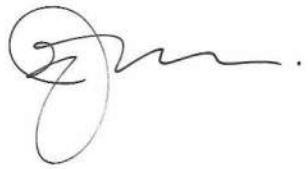
21. The Applicant shall make any repairs to MBTA infrastructure necessitated by activities of the Applicant, which shall be performed by the Applicant at no cost to, and to the satisfaction of, the MBTA.

22. The Applicant will be responsible for any replacement transportation costs associated with any halt to MBTA services due to project activity.

This Department has no objections to this request subject to the conditions stated above. Any conditions that other MBTA Departments may have shall be incorporated with the conditions stated above.

Please feel free to contact me at jmecca@mbta.com with any questions you may have.

Sincerely,



Jennifer Mecca, RA
Deputy Chief of Transit-Oriented Development

Cc: B. Mellen, R. Ortiz, J. Welch, J. Kearney

Docusign Envelope ID: 68104478-0884-4CE8-8C18-7AFC274E2884

EXHIBIT E

Docusign Envelope ID: 68104478-0884-4CE8-8C18-7AFC274E2884

Greystone Management Solutions
20 Park Plaza
Suite 1120
Boston, MA 02116
P: 617.316.1654 | F: 617.316.1655
www.greystonemanagementsolutions.com

GREYSTONE

MEMORANDUM

TO: Robert Ortiz, Safety
Jennifer Mecca, Transit-Oriented Development
Brian Mellen, Railroad Operations
James Welch, Keolis Commuter Services, LLC

FROM: Liam Breen – Director of Licensing

DATE: 05/06/2024

RE: MBTA-24076

Please Respond by 06/05/2024

Please review the attached information from Town of Middleborough, MA, requesting to perform the construction of an independent utility bridge which will carry a 12" ductile iron water main across the MBTA's Middleboro Branch located near 606 Center Street in Middleborough, MA.

The purpose of the proposed utility bridge is to extend a 12" ductile iron water main across the MBTA's right of way adjacent to the MassDOT owned Bridge No. M-18-014 (4BX). The proposed utility bridge's superstructure consists of two (2) rolled steel stringers with diaphragms appropriately spaced to support the water main and of a reinforced concrete bridge seat that ties into the existing southern stone masonry wingwalls of the bridge.

Please note that survey work and geotechnical borings will be required as a part of this project. The proposed new installation will span approximately 110' and will have a clearance of roughly 23' over the MBTA's tracks. **Please note that this request is being canvassed for both a construction license and a permanent easement agreement.**

Please advise us as to your concerns and any special conditions that may apply. Please make sure to reference the file number on all correspondence for tracking purposes.

Cc: Leslie Drayton- Oliver, Ken Belovarac, Eugenia Ross, Christine Bresnahan, Margarita Rodrigues, Rich Arnold, Manny Viera, Robert Proulx, John Connors,

APPROVED: _____

APPROVED WITH CONDITIONS: _____

Docusign Envelope ID: 68104478-0884-4CE8-8C18-7AFC274E2884

NOT APPLICABLE:

_____

DENIED:
(Please provide an explanation)

_____

Docusign Envelope ID: 68104478-0884-4CE8-8C18-7AFC274E2884

MEMORANDUM

To: Robert Ortiz
Director of Construction Safety

From: Robert Scott RO for
System Safety Specialist

Date: July 10, 2024

Subject: MRG # 24076

MBTA Safety has received and reviewed the proposal from the Town of Middleborough, requesting to perform the construction of an independent utility bridge, which will carry a 12" ductile iron water main across the MBTA's Middleboro Branch located near 606 Center Street in Middleborough, MA.

This request was submitted to MBTA Safety via the Massachusetts Realty Group (MRG).

Based on the information submitted, MBTA Safety should deem the request to be "Approved with Conditions." In addition to any and all conditions set forth by Transit-Oriented Development, Railroad Operations, Keolis Commuter Services, LLC, the following conditions shall be met:

1. All personnel working on MBTA property or with the potential to foul the Commuter Rail Right of Way (ROW) must complete Keolis Roadway Worker Protection (RWP) training prior to beginning work. All personnel must have valid Keolis RWP ID cards on their person while working on or near the ROW.
2. All work must be coordinated with MBTA Railroad Operations to ensure proper scheduling and flagging. Based on certain requirements, work may be deemed necessary for non-revenue hours.
3. Transit-Oriented Development or the Office of the Chief Engineer reviews and accepts the design and engineering for the new bridge and supporting structure.
4. Applicant must notify DigSafe (811) prior to work activities.
5. Existing MBTA infrastructure, including underground utilities, must be protected during work.
6. Proper Personal Protective Equipment (PPE) must be worn on MBTA property at all times.
7. All material and equipment utilized during construction activities shall be easily moved to ensure worker safety and to avoid interference with operations, even during non-revenue hours.
8. All precautions must be exercised to ensure the MBTA ROW is not fouled at any time.
9. Applicant must use precautions to avoid dropping any tools/materials onto the MBTA ROW.
10. If pressure testing with air is to be performed, a detailed work plan with a job hazard analysis (JHA) shall be submitted to MBTA safety for review and approval at least two weeks before testing.
11. Any plans for future development not included in this proposal must be submitted to MBTA Safety and all relevant departments for approval.

Docusign Envelope ID: 68104478-0884-4CE8-8C18-7AFC274E2884

12. For any work involving cranes with the potential to foul the MBTA ROW, the following information must be submitted at least two (2) business days prior to any crane activity: scope of work (purpose of work, hours of operation, location, etc.), pick plan (max weight must be under 67% of crane capacity), crane specifications, operator's driver's license, operator's hoisting license, operator's medical certificate, and the most recent annual third party inspection/certification. Cranes are allowed to 'weathervane' over the MBTA ROW, but will be considered fouling if they are actively picking loads.
13. If at any time the MBTA deems the Applicant's activities as unsafe to its operations, infrastructure, customers, employees, or the general public, the Applicant must cease all work until safer conditions are established and approved by MBTA personnel.

Docusign Envelope ID: 68104478-0884-4CE8-8C18-7AFC274E2884

EXHIBIT F

Docusign Envelope ID: 68104478-0884-4CE8-8C18-7AFC274E2884

Massachusetts Bay Transportation Authority

massDOT
Massachusetts Department of Transportation

RE - Licensing & Permitting

Canvassing Request Title: Middleborough_Town of Middleborough_MBTA_24076

Canvassing License #:

Location: 606 Center Street in Middleborough, MA

Scope: requesting to perform the construction of an independent utility bridge which will carry a 12â€? ductile iron water main across the MBTA's Middleboro Branch located near 606 Center Street in Middleborough, MA. The purpose of the proposed utility bridge is to extend a 12" ductile iron water main across the MBTA's right of way adjacent to the MassDOT owned Bridge No. M-18-014 (4BX). The proposed utility bridge's superstructure consists of two (2) rolled steel stringers with diaphragms appropriately spaced to support the water main and of a reinforced concrete bridge seat that ties into the existing southern stone masonry wingwalls of the bridge.

Canvassing Review Comments:

Department / SME	Review Comment(s)	Reviewer Name	Review Date
Railroad Operations	2 of the 3 Tracks are MBTA owned and operated by KEOLIS, The 3rd track is MASS DOT owned and operated by MASS COASTAL RAILROAD. Mass Coastal/Mass Dot should be included in the review. Flagging protection will be required by both railroads simultaneously, neither railroad may provide protection from the other. Common Responses: Fully complies with the MBTA Railroad Operations Directorate Specifications, August 2014 revision, available at mbtarealty.com, and the Commuter Rail Construction Safety Directive, available at mbta.com/engineering/directives.,Obtains approval from MBTA Railroad Operations for any temporary shoring, shielding, scaffolding or equipment that will be installed on or within the MBTA Commuter Rail Right-of-Way.,Obtains Railroad Protective Insurance and indemnifies MBTA, Amtrak, CSX and Keolis.,Removes all debris and restores any/all affected areas to pre-existing condition to the satisfaction of the MBTA.,Requests flagging from Keolis for the duration of any work that has the potential to foul the Commuter Rail ROW.,Requires personnel working within, above, below or adjacent to the commuter rail ROW to attend Keolis Roadway Worker Protection (RWP) training.,The applicant must contact Keolis prior to commencement of the project to obtain required training and to coordinate necessary flagging support.,The MBTA reserves		1/1/0001

Docusign Envelope ID: 68104478-0884-4CE8-8C18-7AFC274E2884

	the right to require the applicant to install track protection devices to protect the rail from damage and the ballast from contamination, if in the opinion of RRO or Keolis that the work being performed may cause damage to railroad property.		

APPENDIX D

MIDDLEBOROUGH
CENTRE STREET

PUB.RD. DIV.NO.	STATE	FED.AID PROJ.NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
1	MASS	BHM-3639(001)X	1996	1	33
RECORD KEY NO. 012100					

TITLE SHEET & INDEX

9232

THE COMMONWEALTH OF MASSACHUSETTS
MASSACHUSETTS HIGHWAY DEPARTMENT

PLAN AND PROFILE OF

CENTRE STREET OVER CONRAIL RAILROAD

BRIDGE RECONSTRUCTION

BRIDGE NO. M-18-14

IN THE TOWN OF

MIDDLEBOROUGH

FEDERAL AID PROJECT NO.
BHM-3639(001)X

THE 1988 STANDARD SPECIFICATIONS, AND THE 1994 SUPPLEMENTAL SPECIFICATIONS DATED NOVEMBER 30, 1994, THE 1977 CONSTRUCTION STANDARDS, THE 1988 "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS", THE 1990 STANDARD DRAWINGS FOR SIGNS AND SUPPORTS, AND THE 1986 EDITION OF THE AMERICAN NURSERY STOCK AND ALL AMENDMENTS WILL GOVERN.

INDEX

SHEET No.	DESCRIPTION:
1	TITLE SHEET AND INDEX
2–3	TYPICAL SECTIONS/CONSTRUCTION DETAILS
4–5	CONSTRUCTION PLAN NO. 1 & 2
6–7	PROFILE NO. 1 & 2
8–9	CURB TIES & GRADING PLAN NO. 1 & 2
10	PAVEMENT MARKINGS AND SIGNS PLAN
11	TRAFFIC MANAGEMENT PLAN
12–26	BRIDGE PLANS
27–33	CROSS SECTIONS

CONVENTIONAL SIGNS

COUNTY, CITY, OR TOWN BOUNDARY

COUNTY, CITY, OR TOWN SIDE LINE

FENCE LINE

BASE LINE OR SURVEY LINE — N63°51'51"E 74 49.99'

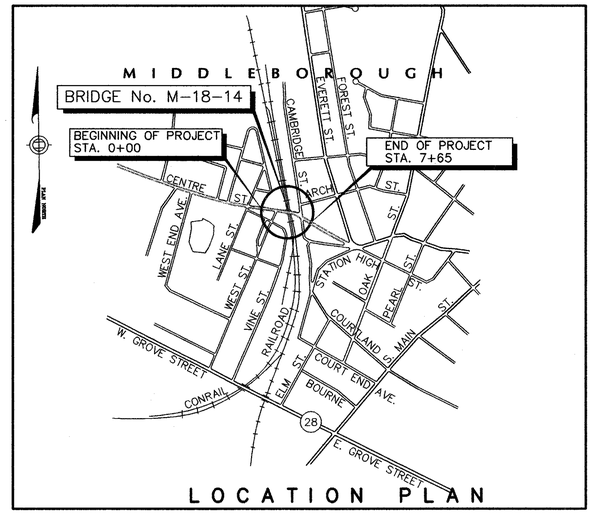
RIGHT OF WAY LINE

PROPERTY LINE

CULVERT

ELEVATIONS — PROPOSED SURFACE / EXIST. SURFACE; PROPOSED 102.67, EXISTING (98.22); 74

POLE



1000 0 500 1000 2000 4000
SCALE IN FEET
1 INCH = 1000 FEET

LENGTH OF PROJECT: 765 FEET = 0.14 MILES

DESIGN DESIGNATION

DESIGN SPEED	=30 MPH
ADT(1994)	=17,500
ADT(2014)	=19,400
K	=8%
D	=50/50
T(PEAK HOUR)	=10%
T(AVG. DAY)	=9%
DHV(1994)	=1,400
DHV(2014)	=1,550

COMMONWEALTH OF MASSACHUSETTS — THOMAS F. BRODERICK — No. 24033 — REGISTERED PROFESSIONAL ENGINEER

PREPARED BY:
COMMONWEALTH
ENGINEERS & CONSULTANTS, INC.
260 WEST EXCHANGE STREET
PROVIDENCE, RI 02903

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED

DIVISION ADMINISTRATOR — DATE

MASS HIGHWAY

MASSACHUSETTS
HIGHWAY DEPARTMENT

RECOMMENDED FOR APPROVAL

Thomas F. Broderick — 2/12/96
CHIEF ENGINEER — DATE

APPROVED

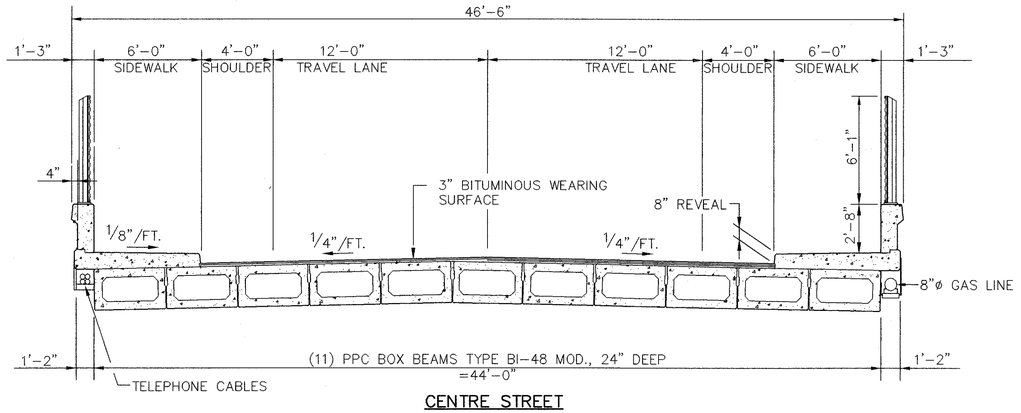
Lawrence G. Reinhold — 2/14/96
MHD COMMISSIONER — DATE

Elaine J. Pullman
for Ken Kah
ASSOCIATE COMMISSIONERS — DATE

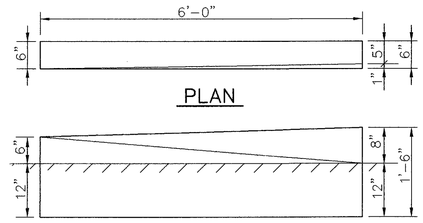
MIDDLEBOROUGH
CENTRE STREET

PUB.RD. DIV.NO.	STATE	FED.AID PROJ.NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
1	MASS	BHM-3639(001)X	1996	2	33
RECORD KEY NO. 012100					

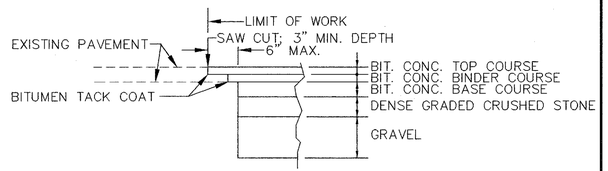
TYPICAL SECTIONS & CONSTRUCTION DETAILS



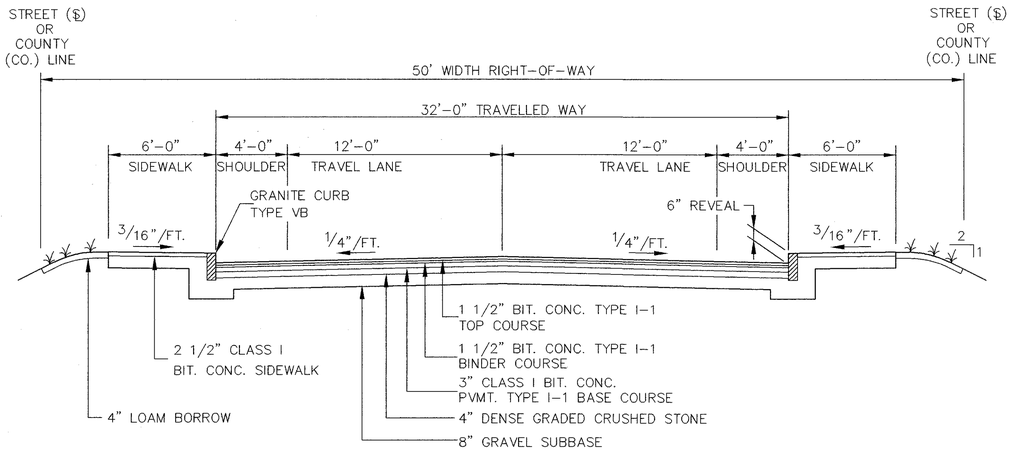
CENTRE STREET
TYPICAL BRIDGE SECTION
SCALE 1/4"=1'-0"



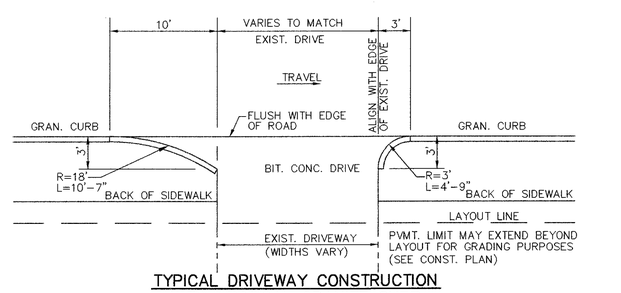
6'-0" GRANITE TRANSITION CURB
TYPE 1 LEFT & RIGHT (RIGHT SHOWN)
SCALE 3/4"=1'-0"



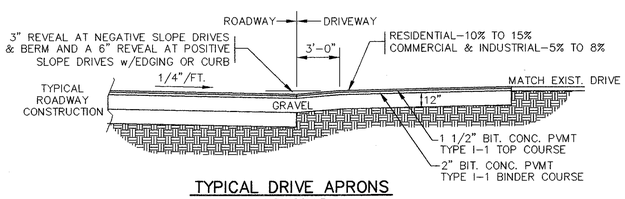
JOINT DETAIL AT PAVING LIMITS
NOT TO SCALE



CENTRE STREET
TYPICAL ROADWAY SECTION
SCALE 1/4"=1'-0"



TYPICAL DRIVEWAY CONSTRUCTION
WITH VERTICAL GRANITE CURB
NOT TO SCALE



TYPICAL DRIVE APRONS
NOT TO SCALE

NOTES:

PAVEMENT FOR CENTRE STREET:
WEST STREET:
CAMBRIDGE STREET:

SURFACE COURSE: 3" CLASS I BIT. CONC. PAVEMENT TYPE I-1, PLACED IN TWO LAYERS; 1 1/2" TOP COURSE OVER 1 1/2" BINDER COURSE.

BASE COURSE: 3" CLASS I BIT. CONC. PAVEMENT TYPE I-1 BASE COURSE

SUBBASE: 12" PLACED IN TWO LAYERS; 4" DENSE GRADED CRUSHED STONE 8" GRAVEL

DRIVEWAYS AND APRONS:

SURFACE COURSE: 3 1/2" CLASS I BIT. CONC. PAVEMENT TYPE I-1, PLACED IN TWO LAYERS; 1 1/2" TOP COURSE OVER 2" BINDER COURSE.

FOUNDATION: GRAVEL (MIN. DEPTH 12")

BITUMINOUS CONCRETE WALK SURFACES:

SURFACE COURSE: 2 1/2" CLASS I BIT. CONC. PAVEMENT TYPE I-1, PLACED IN TWO LAYERS; 1 1/4" DEPTH EACH COURSE.

FOUNDATION: GRAVEL (MIN. DEPTH 8")

CEMENT CONCRETE WALK SURFACES

SURFACE COURSE: 4" CLASS "D" CEMENT CONCRETE

FOUNDATION: 8" GRAVEL

SLOPE AREAS:

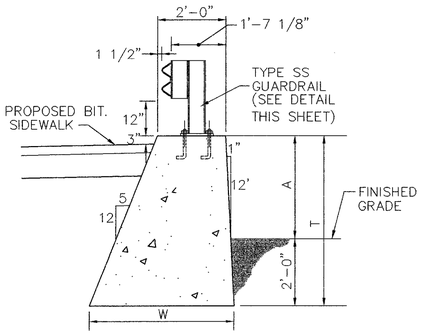
4" LOAM BORROW & SEED OR MULCH WITH SEED FOR EROSION CONTROL.

MIDDLEBOROUGH
CENTRE STREET

PUB.RD. DIV.NO.	STATE	FED.AID PROJ.NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
1	MASS	BHM-3639(001)X	1996	3	33
RECORD KEY NO. 012100					

CONSTRUCTION DETAILS

9237



NOTES:

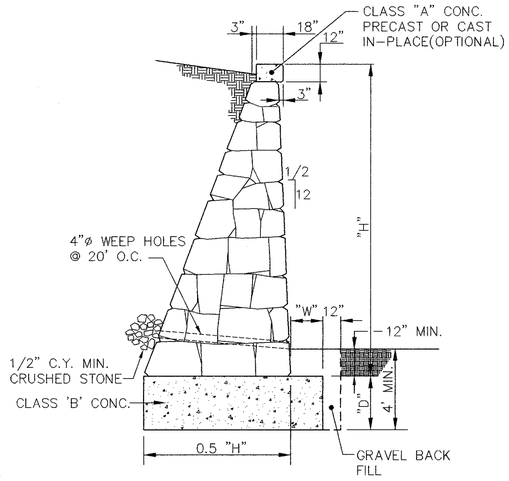
1. 4000 psi 1.5", 565 CEMENT CONCRETE TO BE USED.
2. EXPANSION JOINTS TO BE PLACED 90' O.C. MAXIMUM WITH INTERMEDIATE CONSTRUCTION JOINTS PLACED @ 30' O.C. MAXIMUM.
3. ALL CONCRETE DIMENSIONS SHOWN ARE MINIMUM.
4. PAYMENTS WILL BE BASED ON TABLE BELOW.

HEIGHTS		WIDTH	AREA SQ. FT.	CU. YDS. PER LIN. FT.
A	T	W		
2'-0"	4'-0"	3'-8 1/2"	11.4167	0.423
3'-0"	5'-0"	4'-1 1/2"	15.313	0.567
4'-0"	6'-0"	4'-6 1/2"	19.625	0.727
5'-0"	7'-0"	4'-11 1/2"	24.35	0.902
6'-0"	8'-0"	5'-4 1/2"	29.50	1.0926
8'-0"	10'-0"	6'-3"	41.25	1.528
10'-0"	12'-0"	7'-1"	54.500	2.019

CONCRETE RETAINING WALL

NOT TO SCALE

REFER TO SHEET NO. 3 AND 4 FOR PROPOSED LOCATIONS.

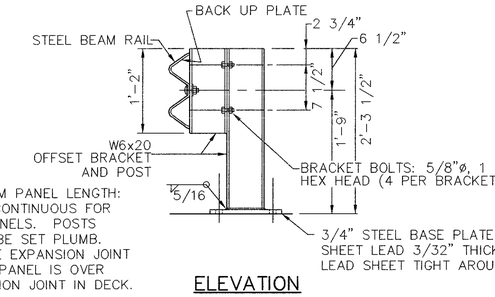


H	W	D	CONC. MASONRY FOOTING		STONE MASONRY EXCLUDING COPING	
			SECTION AREA SQ. FT.	CU.YD. PER LIN. FT.	SECTION AREA SQ. FT.	CU.YD. PER LIN. FT.
5.0	0.75	1.25	4.06	0.150	9.00	0.333
6.0			4.69	0.174	12.38	0.458
8.0	1.00	1.5	7.50	0.278	20.16	0.747
10.0	1.20	2.0	12.40	0.459	29.80	1.104
12.0			14.40	0.533	41.25	1.528
14.0	1.50	2.5	21.25	0.787	54.53	2.020
16.0			23.75	0.880	69.68	2.581
16.5	1.80	3.0	30.15	1.117	73.76	2.732

CEMENTED STONE MASONRY WALL

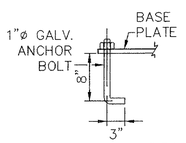
SCALE 1/4"=1'-0"

LOCATION: 1. SOUTHEAST RETURN WALL

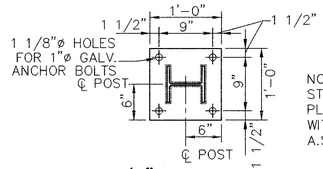


NOTE:
MAXIMUM PANEL LENGTH: 6'-3" CONTINUOUS FOR TWO PANELS. POSTS SHALL BE SET PLUMB. PROVIDE EXPANSION JOINT WHERE PANEL IS OVER EXPANSION JOINT IN DECK.

ELEVATION



ANCHOR BOLT DETAIL

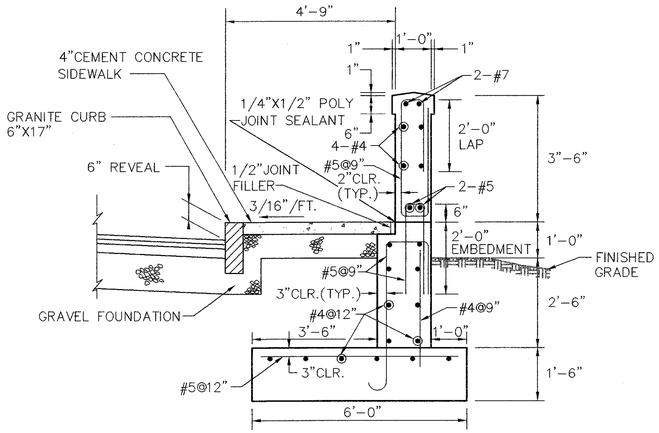


NOTE:
STEEL FOR POSTS AND BASE PLATE TO BE IN ACCORDANCE WITH THE PROVISIONS OF A.S.T.M. A-36.

3/4" STEEL BASE PLATE

METAL GUARDRAIL ON WALL

SCALE 1"=1'-0"



REIN. CONC. RET. WALL & SIDEWALK DETAIL STA. 5+98 lt. to STA. 6+75 lt.

SCALE 1/2"=1'-0"

NOTES:

1. PARAPET TO BE CONSTRUCTED WITH CEM. CONC. MASONRY CLASS "D", 4000 psi, 3/4", 610. WALL STEM AND FOOTING TO BE CONSTRUCTED WITH CEM. CONC. MASONRY CLASS "A", 4000 psi, 1 1/2", 565.
2. FOOTING TO BE FOUND ON SUITABLE, UNDISTURBED SOIL.
3. THE COST OF JOINT FILLER AND SEALANT TO BE INCLUDED IN THE UNIT BID PRICES FOR THE WALL.

MIDDLEBOROUGH
CENTRE STREET

PUB.RD. DIV.NO.	STATE	FED.AID PROJ.NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
1	MASS	BHM-3639(001)X	1996	4	33
RECORD KEY NO. 012100					

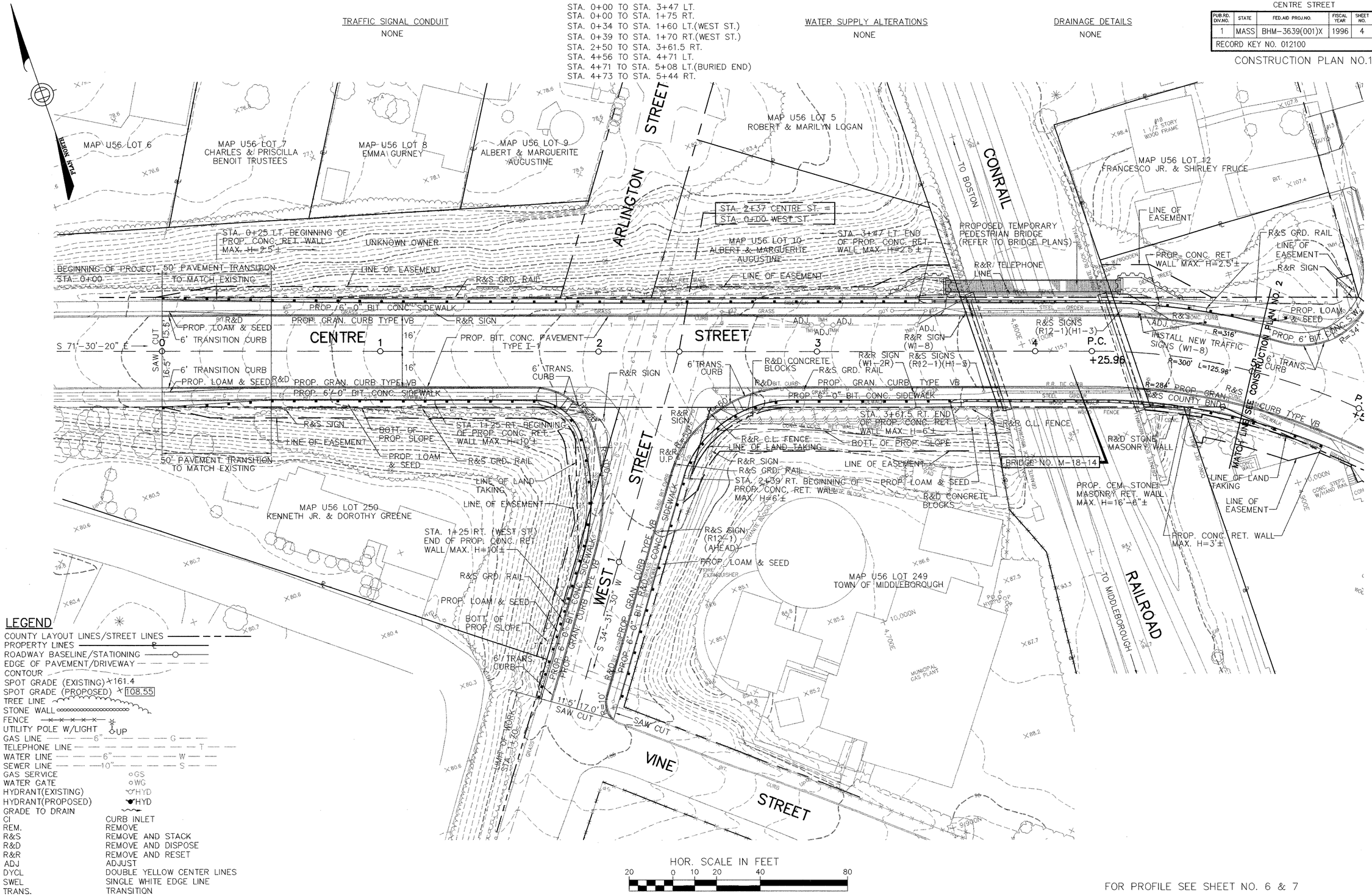
CONSTRUCTION PLAN NO.1

TRAFFIC SIGNAL CONDUIT
NONE

HWY. GUARDRAIL TYPE S-S
STA. 0+00 TO STA. 3+47 LT.
STA. 0+00 TO STA. 1+75 RT.
STA. 0+34 TO STA. 1+60 LT.(WEST ST.)
STA. 0+39 TO STA. 1+70 RT.(WEST ST.)
STA. 2+50 TO STA. 3+61.5 RT.
STA. 4+56 TO STA. 4+71 LT.
STA. 4+71 TO STA. 5+08 LT.(BURIED END)
STA. 4+73 TO STA. 5+44 RT.

WATER SUPPLY ALTERATIONS
NONE

DRAINAGE DETAILS
NONE



LEGEND

COUNTY LAYOUT LINES/STREET LINES	
PROPERTY LINES	
ROADWAY BASELINE/STATIONING	
EDGE OF PAVEMENT/DRIVEWAY	
CONTOUR	
SPOT GRADE (EXISTING)	X 161.4
SPOT GRADE (PROPOSED)	X 108.55
TREE LINE	
STONE WALL	
FENCE	
UTILITY POLE W/LIGHT	UP
GAS LINE	G
TELEPHONE LINE	T
WATER LINE	W
SEWER LINE	S
GAS SERVICE	GS
WATER GATE	WG
HYDRANT(EXISTING)	HYD
HYDRANT(PROPOSED)	HYD
GRADE TO DRAIN	

CI	CURB INLET
REM.	REMOVE
R&S	REMOVE AND STACK
R&D	REMOVE AND DISPOSE
R&R	REMOVE AND RESET
ADJ	ADJUST
DYCL	DOUBLE YELLOW CENTER LINES
SWEL	SINGLE WHITE EDGE LINE
TRANS.	TRANSITION

HOR. SCALE IN FEET
20 0 10 20 40 80

FOR PROFILE SEE SHEET NO. 6 & 7

963-2

MIDDLEBOROUGH
CENTRE STREET

PUB.RD. DIV.NO.	STATE	FED.AID PROJ.NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
1	MASS	BHM-3639(001)X	1996	5	33
RECORD KEY NO. 012100					

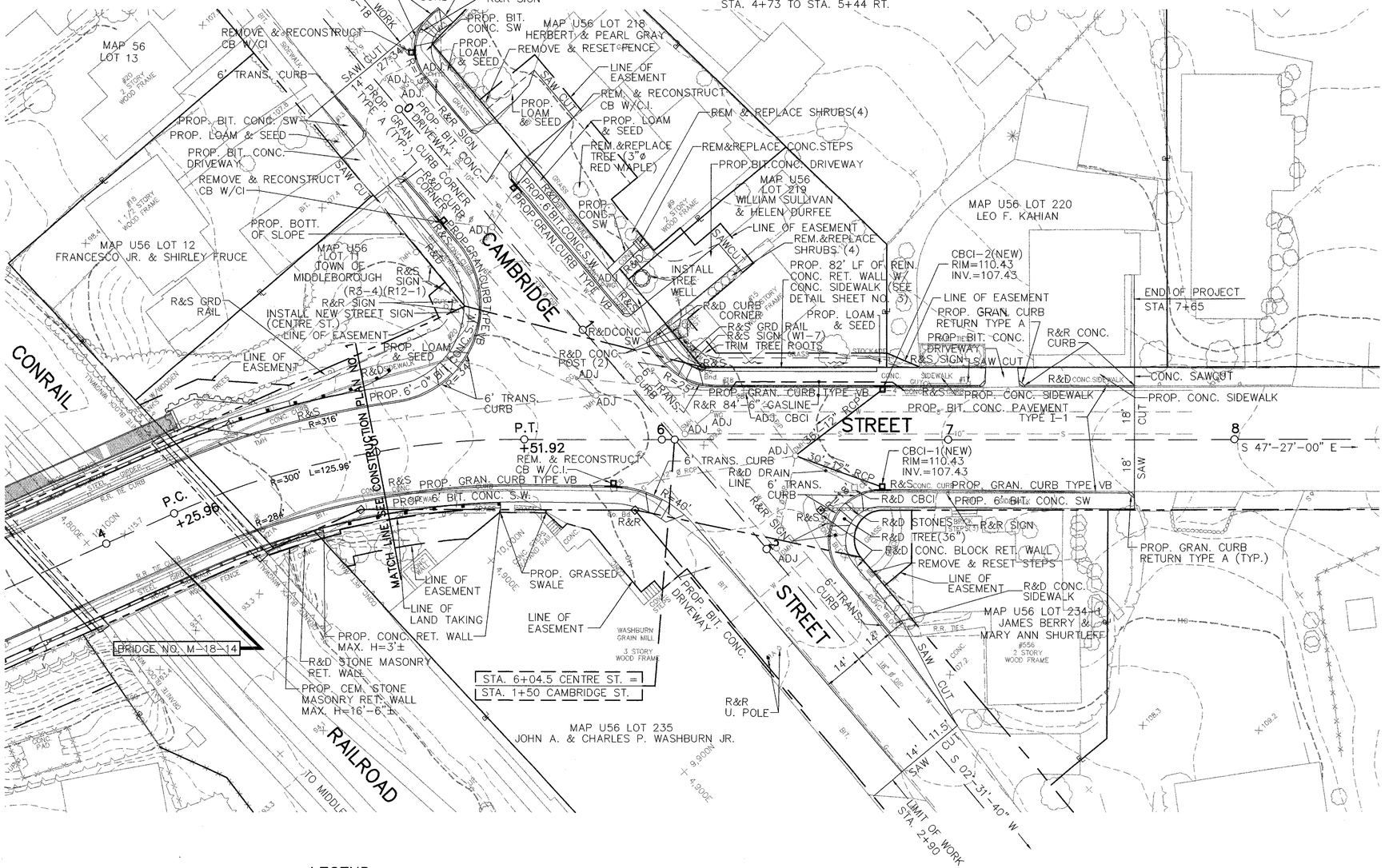
CONSTRUCTION PLAN NO.2

TRAFFIC SIGNAL CONDUIT
NONE

HWY. GUARDRAIL TYPE SS
STA. 4+56 TO STA. 4+71 LT.
STA. 4+71 TO STA. 5+08 LT.(BURIED END)
STA. 4+73 TO STA. 5+44 RT.

WATER SUPPLY ALTERATIONS
SEE BELOW

DRAINAGE DETAILS
SEE BELOW



LEGEND

COUNTY LAYOUT LINES/STREET LINES	
PROPERTY LINES	℄
ROADWAY BASELINE/STATIONING	
EDGE OF PAVEMENT/DRIVEWAY	
CONTOUR	
SPOT GRADE (EXISTING)	×161.4
SPOT GRADE (PROPOSED)	×108.55
TREE LINE	
STONE WALL	
FENCE	
UTILITY POLE W/LIGHT	UP
GAS LINE	G
TELEPHONE LINE	T
WATER LINE	W
SEWER LINE	S

GRADE TO DRAIN	
GAS SERVICE	GS
WATER GATE	WG
HYDRANT(EXISTING)	HYD
HYDRANT(PROPOSED)	HYD
CI	CURB INLET
RCP	REINFORCED CONCRETE PIPE
REM.	REMOVE
R&S	REMOVE AND STACK
R&D	REMOVE AND DISPOSE
R&R	REMOVE AND RESET
ADJ	ADJUST
DYCL	DOUBLE YELLOW CENTER LINES
SWEL	SINGLE WHITE EDGE LINE
TRANS.	TRANSITION

HOR. SCALE IN FEET
20 0 10 20 40 80

FOR PROFILE SEE SHEET NO. 6 & 7

MIDDLEBOROUGH
CENTRE STREET

PUB.RD. DIV.NO.	STATE	FED.AID PROJ.NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
1	MASS	BHM-3639(001)X	1996	6	33
RECORD KEY No. 012100					

PROFILE NO. 1

9232

B.M.:
2+57 LT. 18'
NAIL SET IN U. POLE #23
EL.=110.36 NGVD

B.M.:
4+48 RT. 16.5'
D.H. SET IN CONC. CURB
EL.=115.84 NGVD

LVC=270'
PVI STA = 4+00
PVI EL.=119.80
M = -3.4796'
SSD = 186.56'
K = 26.19

LVC=210'
PVI STA = 6+40
PVI EL. = 109.31
M = 1.7036'
SSD = 183.71'
K = 32.36

WEST STREET

CAMBRIDGE STREET

5.94%

-4.37%

PVC STA 2+65
PVC EL = 111.78

PVCC STA 5+35
PVCC EL = 113.90

SILL WASHBURN GRAIN MILL RT.
EL. = 112.66

PROPOSED SUPERSTRUCTURE
REPLACEMENT - BRIDGE No.
M-18-14

19'-4" PROPOSED MINIMUM CLEARANCE

TO REMAIN

TRACK EL. 94.00±

BOTTOM OF FOOTING
EL. 87± (ASSUMED)

BOTTOM OF FOOTING
EL. 83± (ASSUMED)

MATCH LINE SEE PROFILE NO. 2

ELEVATION IN FEET

120
110
100
90
80

BEGINNING OF PROJECT
STA. 0+00

PROPOSED
(EXISTING)

0+00	1+00	2+00	3+00	4+00	5+00	6+00
96.05 (96.05)	99.02 (98.70)	101.99 (101.30)	104.96 (103.86)	107.92 (106.44)	110.89 (109.05)	113.63 (111.63)
115.45 (114.19)	116.32 (115.46)	116.24 (115.22)	115.20 (113.28)	113.28 (111.02)	111.71 (109.75)	

CENTRE STREET

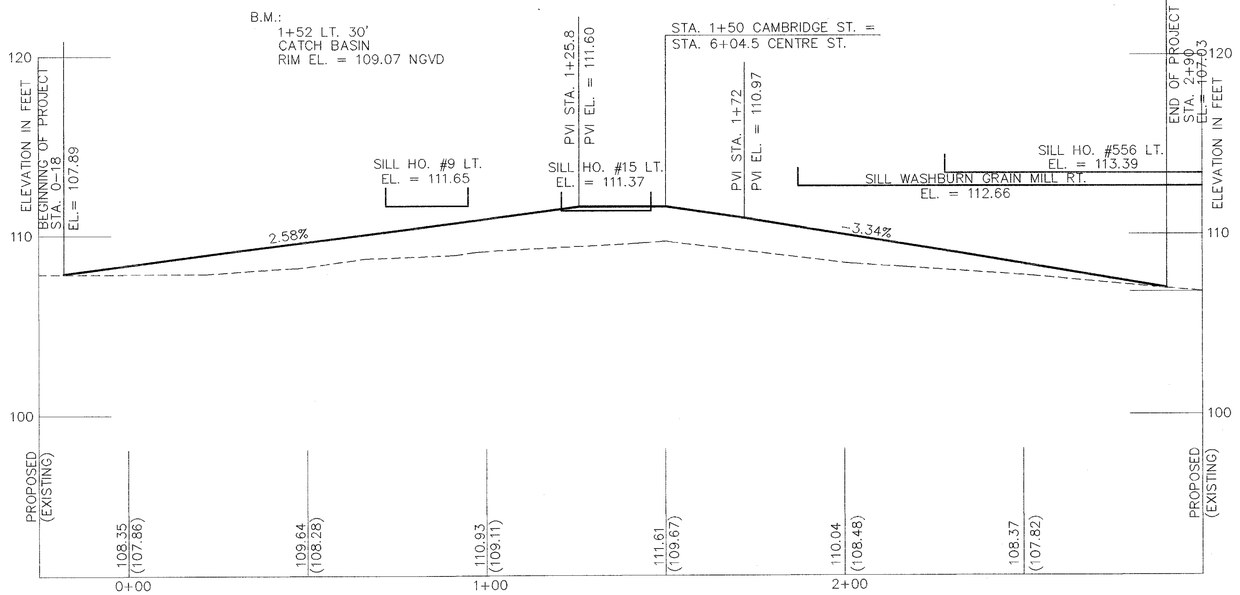
HOR. SCALE IN FEET
0 20 40 60 100
VERT. SCALE IN FEET
0 4 8 12 20

FOR CONSTRUCTION PLAN SEE SHEET NO. 4 & 5

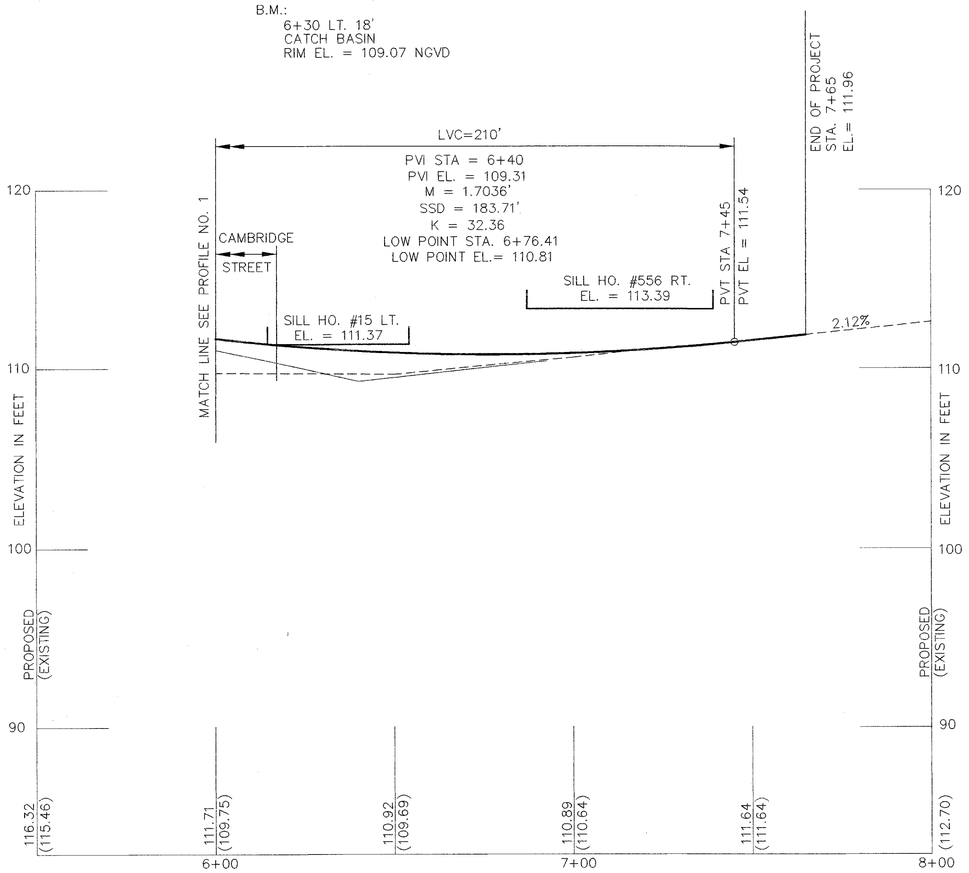
MIDDLEBOROUGH
CENTRE STREET

PUB.RD. DIV.NO.	STATE	FED.AID PROJ.NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
1	MASS	BHM-3639(001)X	1996	7	33
RECORD KEY No. 012100					

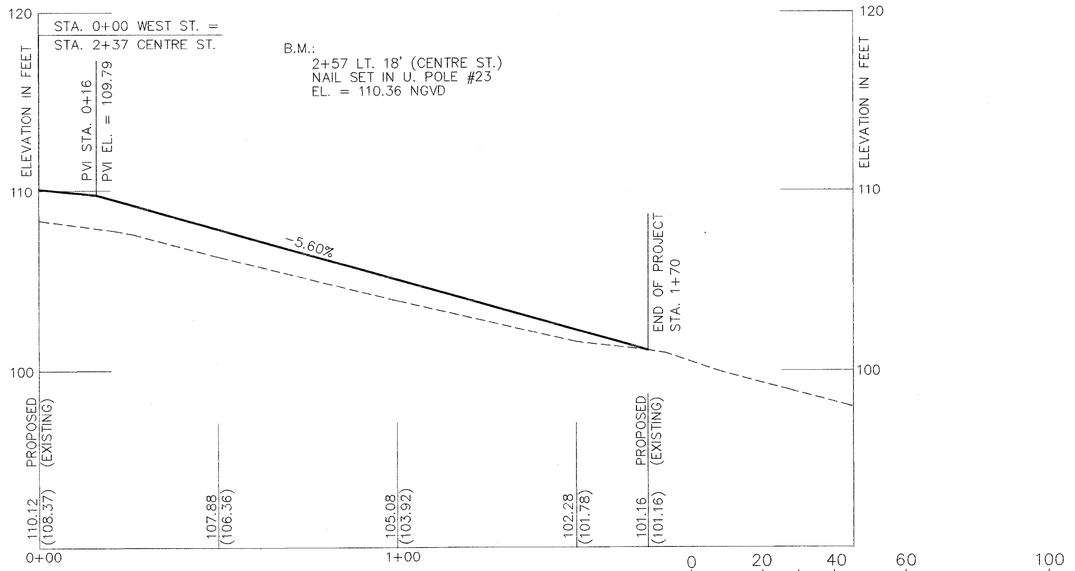
PROFILE NO. 2



CAMBRIDGE STREET



CENTRE STREET



WEST STREET

FOR CONSTRUCTION PLAN SEE SHEET NO. 4 & 5

9327

MIDDLEBOROUGH
CENTRE STREET

PUB.RD. DIV.NO.	STATE	FED.AID PROJ.NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
1	MASS	BHM-3639(001)X	1996	8	33
RECORD KEY NO. 012100					

CURB TIES & GRADING PLAN NO. 1

9432

PLAN NORTH

BEGINNING OF PROJECT
STA. 0+00

STA.0+00-15.5'LT

℄ CONSTRUCTION LAYOUT & ROADWAY

50' PAVEMENT TRANSITION TO MATCH EXISTING

6' TRANSITION CURB

ARLINGTON STREET

STA. 2+37 CENTRE ST. =
STA. 0+00 WEST ST.

6' TRANSITION CURB TYPE 1(RT.)

CONRAIL RAILROAD

BOSTON

PC. CURB STA. 4+25.96-16'LT.
GUTTER ELEV. = 116.06

6' TRANSITION CURB TYPE 1(LT.)

UP#25 — PROP. 6'-0" BIT. CONC. SIDEWALK — UP#24 — UP#23 — UP#22 — NAIL IN UPOLE#21

PROP. GRANITE CURB TYPE VB

NAIL IN UPOLE#25

94.64'

43.12'

NAIL IN UPOLE#24

NAIL IN UPOLE#22

78.58'

33.45'

UP#21

CUT

SAW

0 — CENTRE — 1 — 2 — STREET — 3 — 4 — P.C. — 5

S 71°-30'-20" E

PK NAIL SET STA 1+50

21.58'

106°-01'-50"

PK NAIL SET STA 4+25.96

R=300'

L=125.96'

C5 C6 C7

6' TRANSITION CURB

PROP. GRANITE CURB TYPE VB

PROP. 6'-0" BIT. CONC. SIDEWALK

RR SPIKE SET

C1 C4

PROP. GRAN. CURB TYPE VB

NAIL IN UPOLE#22A

PROP. 6'-0" BIT. CONC. UP#22A SIDEWALK

79.78'

UP#21A

STA.0+00-16.5'RT

50' PAVEMENT TRANSITION TO MATCH EXISTING

PC. CURB STA. 1+69.50-16'RT.
GUTTER ELEV. = 105.78

PT. CURB STA. 2+88.79-16'RT.
GUTTER ELEV. = 112.76

BRIDGE NO. M-18-14

6' TRANSITION CURB

6' TRANSITION CURB TYPE 1(RT.)

C3

STREET

S 34°-31'-30" W

P.C.C. CURB STA. 1+98.34-37.72'RT.
GUTTER ELEV. = 107.50

P.C.C. CURB STA. 2+41.59-38.95'RT.
GUTTER ELEV. = 108.34

6' TRANSITION CURB TYPE 1(LT.)

C2

PC. CURB STA. 2+32.87-56.02'RT.
GUTTER ELEV. = 107.37

MATCH LINE SEE CURB TIES & GRADING PLAN NO. 2

PT. CURB STA. 1+00-11.50'RT.(WEST)
GUTTER ELEV. = 104.84

MIDDLEBOROUGH

CONRAIL RAILROAD

PC. CURB STA. 4+25.96-16'RT.
GUTTER ELEV. = 116.06

WEST

PT. CURB STA. 1+61.10-11.5'LT.(WEST)
GUTTER ELEV. = 101.42

C13

PC. CURB STA. 1+70-17.0'LT.(WEST)
GUTTER ELEV. = 100.18

SAW CUT

6' TRANSITION CURB

STA. 1+70-11.5' RT.

LIMIT OF WORK STA. 1+70

VINE STREET

HOR. SCALE IN FEET
20 0 10 20 40 80

ROADWAY ELEVATIONS

CENTRE STREET

GUTTER ELEVATION	LEFT OFFSET	STATION	RIGHT OFFSET	GUTTER ELEVATION
95.61	15.5'	0+00	16.5'	95.65
98.69	16'	0+50	16'	98.69
101.66	16'	1+00	16'	101.66
104.63	16'	1+50	16'	104.63
107.59	16'	2+00	16'	107.59
110.56	16'	2+50	16'	110.56
113.30	16'	3+00	16'	113.30
115.12	16'	3+50	16'	115.12
115.99	16'	4+00	16'	115.99
115.91	16'	4+50	16'	115.91
114.87	16'	5+00	16'	114.87

ROADWAY ELEVATIONS

WEST STREET

GUTTER ELEVATION	LEFT OFFSET	STATION	RIGHT OFFSET	GUTTER ELEVATION
–	–	0+00	–	–
107.65	11.5'	0+50	11.5'	107.65
104.84	11.5'	1+00	11.5'	104.84
102.04	11.5'	1+50	11.5'	102.04
100.46	11.5'	1+70	12.0'	100.46

CURVE DATA TABLE

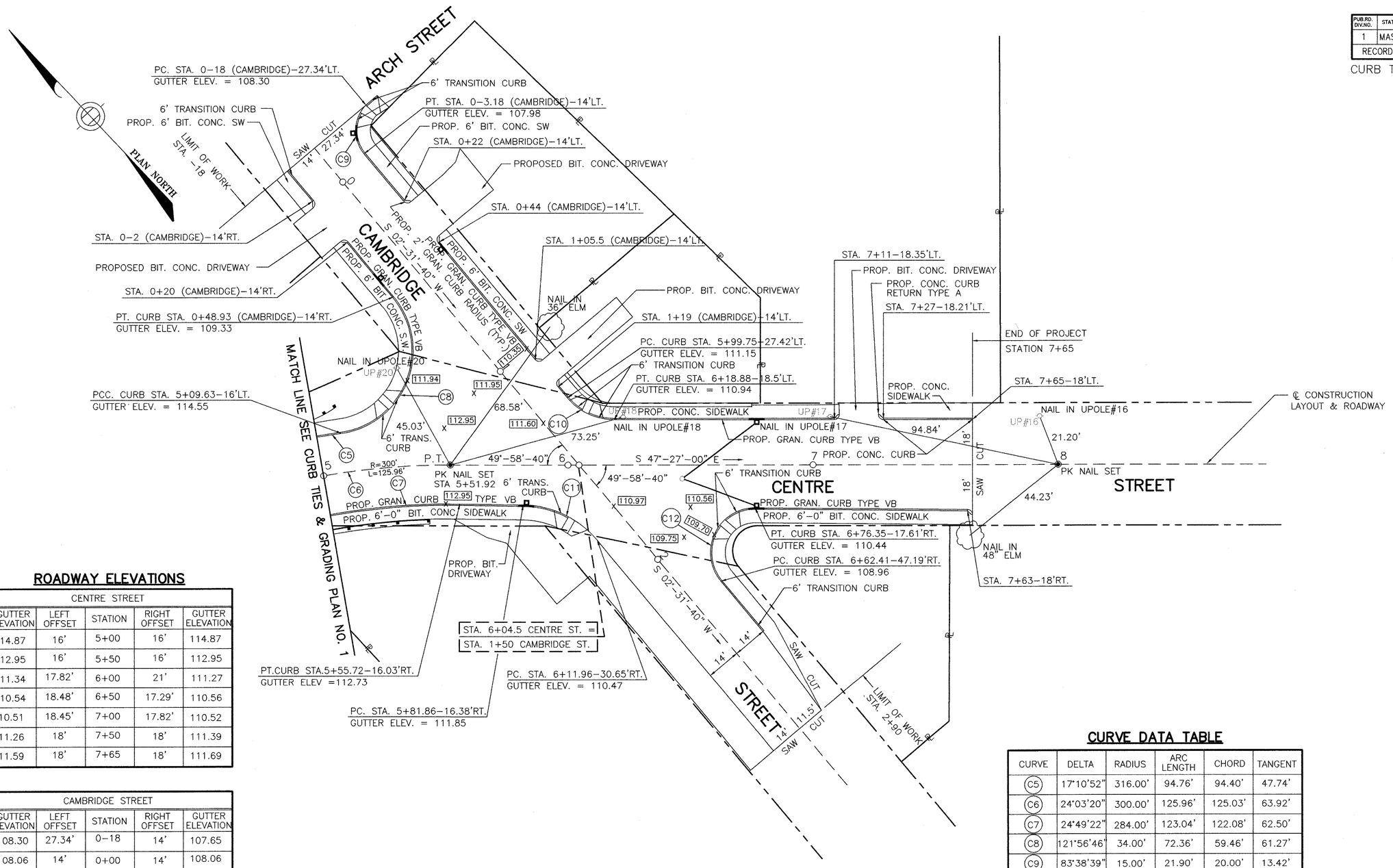
CURVE	DELTA	RADIUS	ARC LENGTH	CHORD	TANGENT
C1	73°58'40"	30.00'	38.73'	36.10'	22.60'
C2	32°03'10"	100.00'	55.94'	55.22'	28.72'
C3	22°05'52"	50.00'	19.28'	19.16'	9.76'
C4	51°52'18"	60.00'	54.32'	52.48'	29.18'
C5	17°10'52"	316.00'	94.76'	94.40'	47.74'
C6	24°03'20"	300.00'	125.96'	125.03'	63.92'
C7	24°49'22"	284.00'	123.04'	122.08'	62.50'
C13	62°55'26"	10.00'	10.98'	10.44'	6.12'

MIDDLEBOROUGH
CENTRE STREET

PUB.RD. DIV.NO.	STATE	FED.AID PROJ.NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
1	MASS	BHM-3639(001)X	1996	9	33
RECORD KEY NO. 012100					

CURB TIES & GRADING PLAN NO. 2

9.3.2



ROADWAY ELEVATIONS

CENTRE STREET				
GUTTER ELEVATION	LEFT OFFSET	STATION	RIGHT OFFSET	GUTTER ELEVATION
114.87	16'	5+00	16'	114.87
112.95	16'	5+50	16'	112.95
111.34	17.82'	6+00	21'	111.27
110.54	18.48'	6+50	17.29'	110.56
110.51	18.45'	7+00	17.82'	110.52
111.26	18'	7+50	18'	111.39
111.59	18'	7+65	18'	111.69

CAMBRIDGE STREET				
GUTTER ELEVATION	LEFT OFFSET	STATION	RIGHT OFFSET	GUTTER ELEVATION
108.30	27.34'	0-18	14'	107.65
108.06	14'	0+00	14'	108.06
109.35	14'	0+50	14.02'	109.35
110.35	14'	1+00	14'	111.95
110.81	28.76'	1+50	25.7'	111.77
109.75	14'	2+00	14'	109.75
108.08	14'	2+50	14'	108.08
106.74	11.5'	2+90	14'	106.54

CURVE DATA TABLE

CURVE	DELTA	RADIUS	ARC LENGTH	CHORD	TANGENT
C5	17°10'52"	316.00'	94.76'	94.40'	47.74'
C6	24°03'20"	300.00'	125.96'	125.03'	63.92'
C7	24°49'22"	284.00'	123.04'	122.08'	62.50'
C8	121°56'46"	34.00'	72.36'	59.46'	61.27'
C9	83°38'39"	15.00'	21.90'	20.00'	13.42'
C10	49°56'29"	25.00'	21.79'	21.11'	11.64'
C11	49°12'39"	40.00'	34.36'	33.31'	18.32'
C12	130°31'54"	18.00'	41.01'	32.70'	39.07'

MIDDLEBOROUGH
CENTRE STREET

PUB.RD. DIV.NO.	STATE	FED.AID PROJ.NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
1	MASS	BHM-3639(001)X	1996	10	33
RECORD KEY NO. 012100					

PAVEMENT MARKINGS AND SIGNS PLAN

913

PLAN NORTH

CONRAIL RAILROAD

R2-1 35 MPH

W1-8

R12-1 6 TONS H1-3

R12-1 6 TONS AHEAD

R3-4

R1-1

ARCH STREET

ARCH ST.

R2-1 30 MPH

CENTRE ST.
CAMBRIDGE ST.

CAMBRIDGE DYCL

12" WHITE STOP LINE

12" WHITE CROSSWALK LINE

W1-7

W8-5

4" SINGLE WHITE PARKING LANE LINE

8' PARKING LANE

DYCL

20'

4' SWEL

MATCH TO EXISTING PAVEMENT MARKINGS (TYP.)

CENTRE STREET

DYCL 12' SWEL 20' 4'

P.C. 4+25.56 R=300'

P.T. 5+51.92

W1-2R

12" WHITE CROSSWALK LINE

12" WHITE STOP LINE

WEST ST.

R1-1

R12-1 6 TONS AHEAD

WEST STREET DYCL

COMM. OF MASS.
◄ DPW
VINE ST. GARAGE

WELCOME TO MIDDLEBOROUGH MUNICIPAL GAS PLANT

BRIDGE NO. M-18-14

12" WHITE CROSSWALK LINE

12" WHITE STOP LINE

4" SINGLE WHITE PARKING LANE LINE

CENTRE ST.
CAMBRIDGE ST.

R1-1

R7-1

NO PARKING HERE TO CORNER

CENTRE STREET

WASHBURN GRAIN MILL

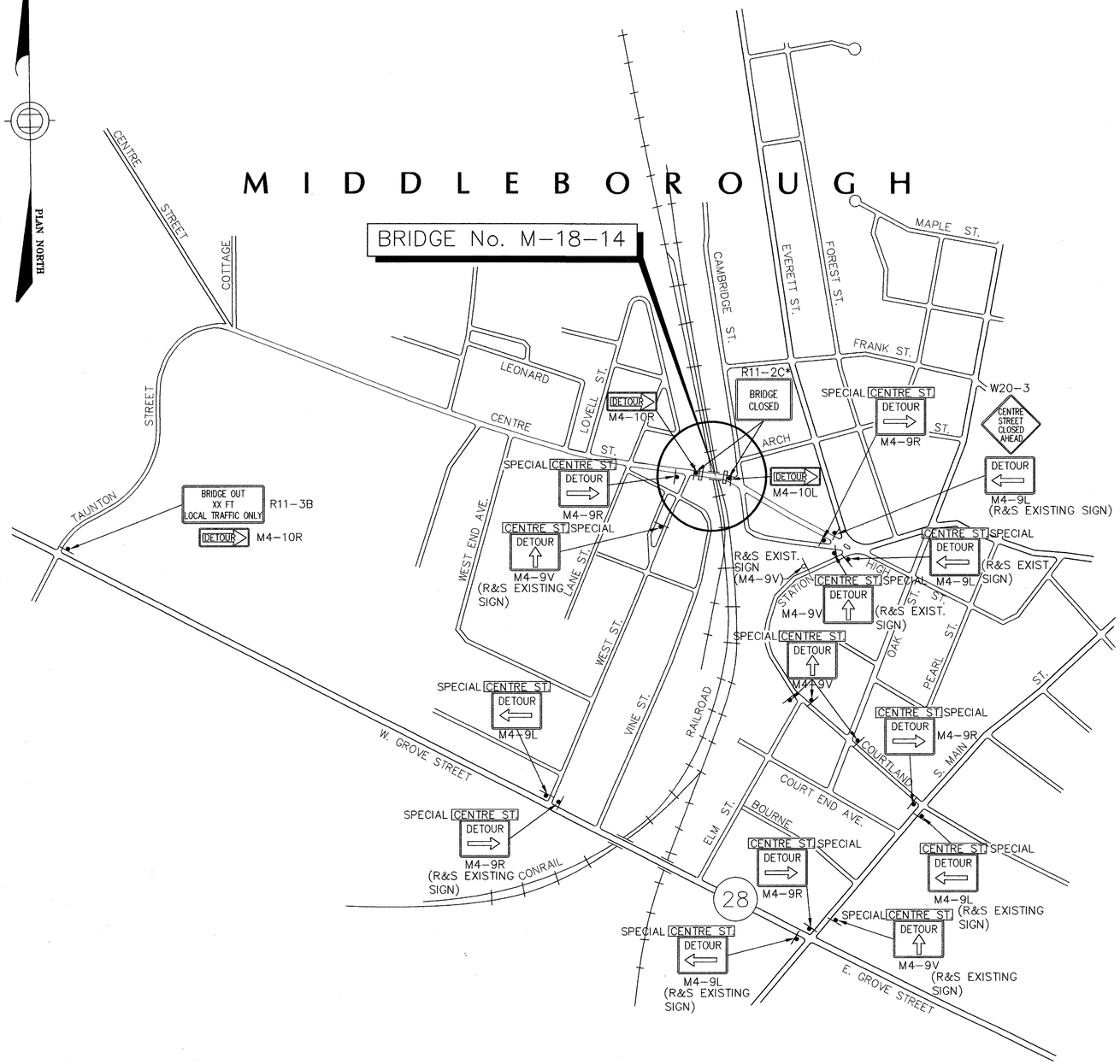
LEGEND

EXISTING REGULATORY, WARNING OR GUIDE SIGN

PROPOSED REGULATORY, WARNING OR GUIDE SIGN

NOTE:
REFER TO SHEET NO. 3 AND 4 TO DETERMINE PROPOSED USE OF EACH EXISTING SIGN.

HOR. SCALE IN FEET
30 0 15 30 60 120



LEGEND

SIGN

TYPE III BARRICADE

* MOUNT ON BARRICADE

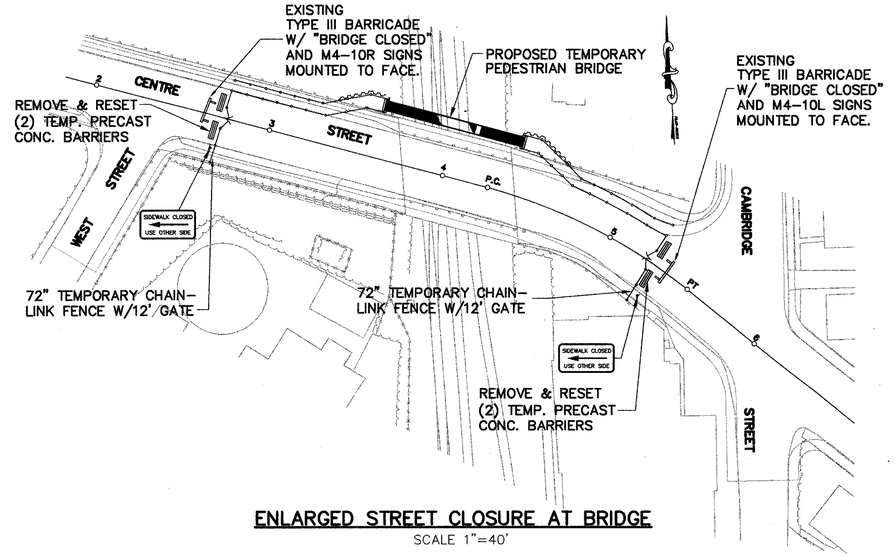
DETOUR PLAN

NOT TO SCALE

TRAFFIC SIGN SUMMARY

IDENTIFICATION NUMBER	SIZE OF SIGN WIDTH	SIZE OF SIGN HEIGHT	TEXT	NUMBER OF SIGNS REQUIRED	POST SIZE AND # REQUIRED	TOTAL AREA IN SQUARE FEET
R11-3B	60"	30"	BRIDGE OUT XX FT LOCAL TRAFFIC ONLY	EXISTING		
R11-2C	48"	30"	BRIDGE CLOSED	2	*	20.0
W20-3	48"	48"	CENTRE STREET CLOSED AHEAD	1	P5 1	16.0
M4-9L	30"	24"	DETOUR	5	P5 5	25.0
M4-9V	30"	24"	DETOUR	4	P5 4	20.0
M4-9R	30"	24"	DETOUR	5	P5 5	25.0
M4-10R	48"	18"	DETOUR	1	P5 2	6.0
M4-10L	48"	18"	DETOUR	EXISTING		
SPECIAL	24"	12"	CENTRE ST.	13	–	26.0
SPECIAL	36"	24"	SIDEWALK CLOSED USE OTHER SIDE	2	MOUNTED ON FENCE	12.0

SEE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, 1988 EDITION FOR LATEST SPECS ON TEXT DIMENSION AND COLOR



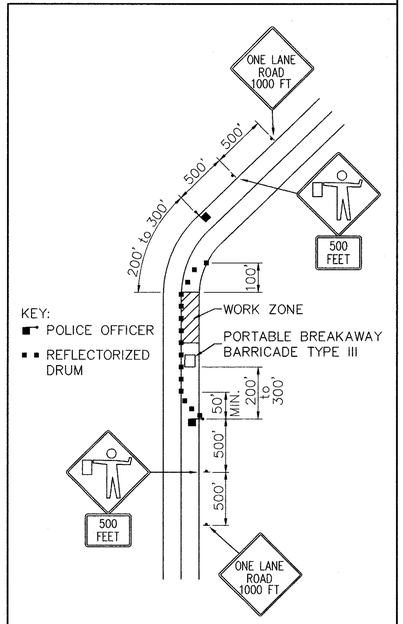
ENLARGED STREET CLOSURE AT BRIDGE

SCALE 1"=40'

MIDDLEBOROUGH
CENTRE STREET

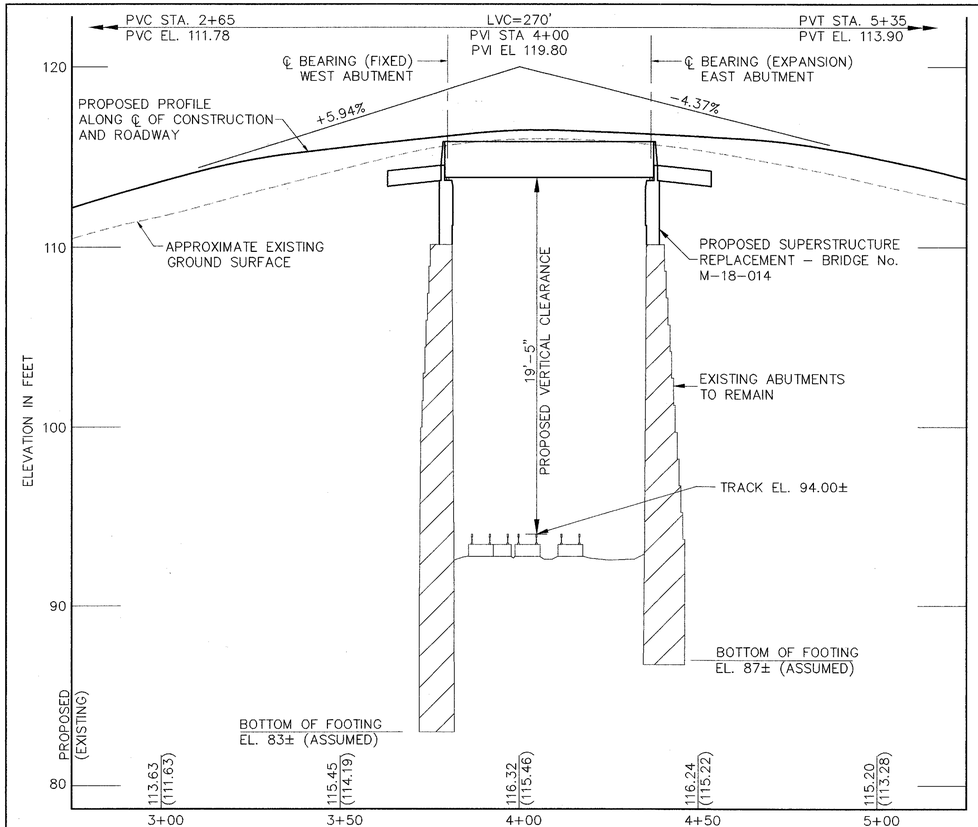
PUB.RD. DIV.NO.	STATE	FED.AID PROJ.NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
1	MASS	BHM-3639(001)X	1996	11	33
RECORD KEY No. 012100					

TRAFFIC MANAGEMENT PLAN

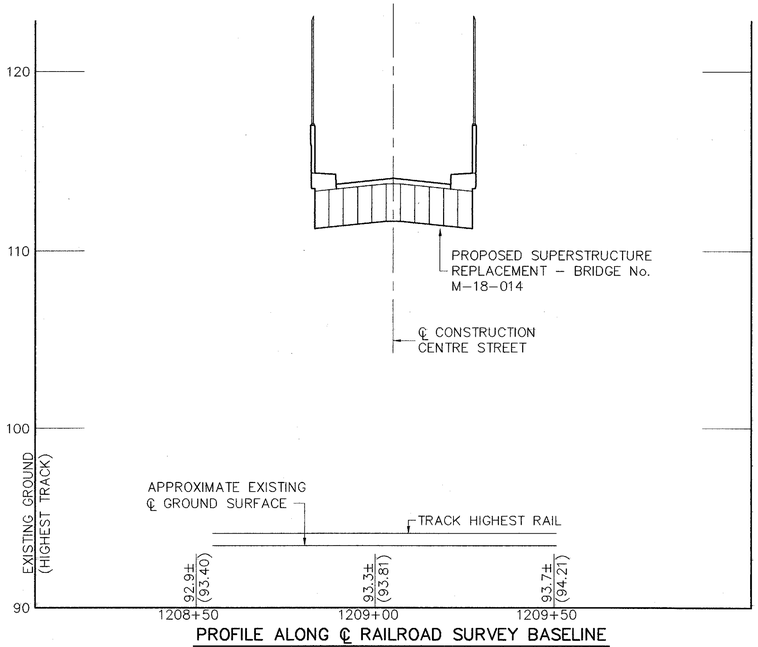


ONE-LANE CLOSURE TRAFFIC MAINTENANCE PLAN

NOT TO SCALE



PROFILE ALONG ℄ CENTRE STREET



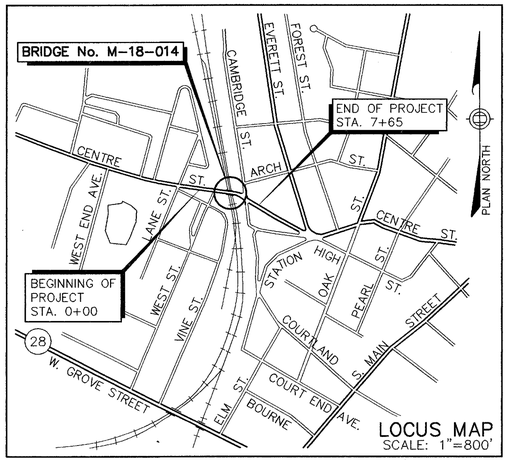
PROFILE ALONG ℄ RAILROAD SURVEY BASELINE

INDEX OF DRAWINGS

SHEET No.	DESCRIPTION
1	TITLE SHEET
2	BORING LOGS
3	TYPICAL SECTIONS & LONGITUDINAL SECTION
4	PLAN & ELEVATION
5	EAST ABUTMENT PLAN
6	WEST ABUTMENT PLAN
7	SUPERSTRUCTURE PLAN, DETAILS & NOTES
8	BEAM DETAILS & NOTES
9	CURTAIN WALLS, RETURN WALLS & DETAILS
10	ENDPOST DETAILS & EXISTING BRIDGE DETAILS
11	SIDEWALK, WALL SECTIONS, AND MISC. DETAILS
12	JOINT DETAILS
13–14	PROTECTIVE SCREEN TYPE II DETAILS

LEGEND

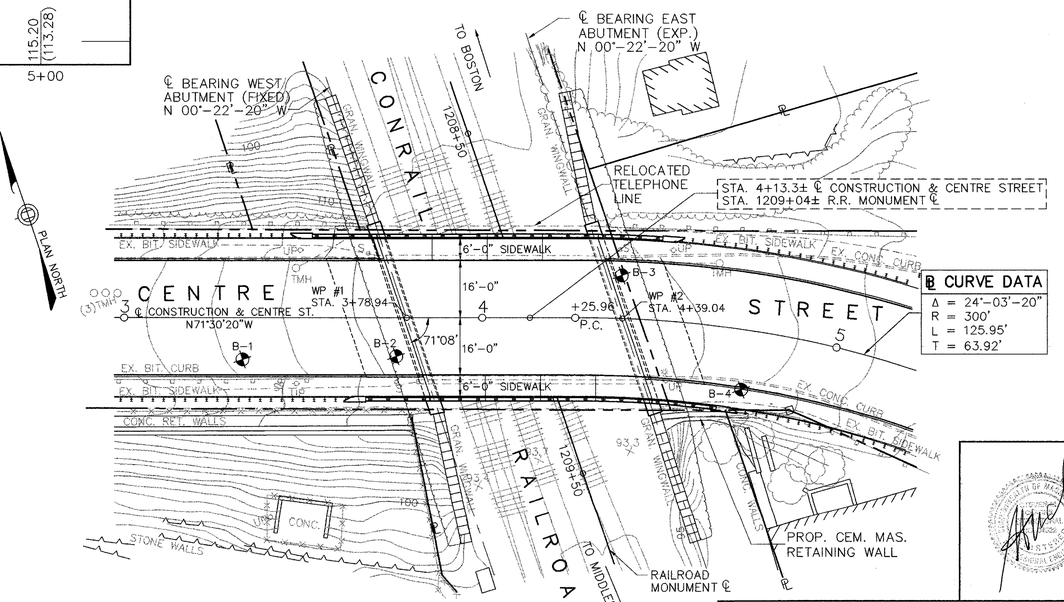
PROPERTY LINES
ROADWAY BASELINE/STATIONING
EDGE OF PAVEMENT/DRIVEWAY
CONTOUR
SPOT GRADE x161.4
TREE LINE
STONE WALL
FENCE
UTILITY POLE W/LIGHT
RELOCATED UTILITY POLE
GAS MAIN
WATER MAIN
GAS SERVICE ○GS
WATER GATE ○WG
HYDRANT HYD
MAILBOX MB
BORE HOLE B–1



LOCUS MAP
SCALE: 1"=800'

ESTIMATED QUANTITIES (NOT GUARANTEED)

DESCRIPTION	UNIT	QUANTITY
DEMOLITION OF SUPERSTRUCTURE BRIDGE No. M–18–014	LS	1
BRIDGE EXCAVATION	CY	60
GRAVEL BORROW FOR BRIDGE FOUNDATIONS	CY	23
CLASS I BIT. CONC. TYPE I–1	TONS	19
CLASS I DENSE BINDER FOR BRIDGES	TONS	48
CEMENT FOR POINTING	LS	1
BRIDGE SUPERSTRUCTURE, BRIDGE No. M–18–014	LS	1



℄ CURVE DATA
Δ = 24°–03'–20"
R = 300'
L = 125.95'
T = 63.92'

HOR. SCALE IN FEET
20 0 10 20 40 80
VER. SCALE IN FEET
4 0 2 4 8 16

KEY PLAN

GENERAL NOTES

1. **DESIGN:**
IN ACCORDANCE WITH THE 1992 SPECIFICATIONS OF THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS INCLUDING INTERIMS THROUGH 1993, FOR HS 20–44 LOADING

2. **EXISTING CONDITIONS:**
ALL DIMENSIONS AND DETAILS SHOWN FOR EXISTING STRUCTURE ARE NOT GUARANTEED. THE CONTRACTOR SHALL DETERMINE AND ESTABLISH ALL DIMENSIONS AND DETAILS NECESSARY FOR COMPLETION OF ALL WORK BY FIELD MEASUREMENTS AND SURVEY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ADEQUACY AND ACCURACY THEREOF AND SHALL NOT ORDER ANY MATERIAL OR COMMENCE ANY FABRICATION UNTIL HE HAS MADE THE REQUIRED MEASUREMENTS ON THE ACTUAL STRUCTURE, AND THE EXTENT OF THE PROPOSED WORK HAS BEEN APPROVED BY THE ENGINEER. EXISTING STRUCTURE IS SHOWN THUS, – – – – – EXCEPT AS NOTED.

3. **SURVEY NOTEBOOKS:**
SURVEY NOTEBOOK No. 141 (COMMONWEALTH ENGINEERS & CONSULTANTS, INC.) USED IN PREPARATION OF THE CONSTRUCTION DRAWINGS.

TOPOGRAPHIC SURVEY PERFORMED BY COL–EAST, INC. OF NORTH ADAMS, MA., FROM AERIAL PHOTOGRAPHS TAKEN IN MARCH 1994. MAPPING HAS FIELD EDITED BY COMMONWEALTH ENGINEERS & CONSULTANTS, INC., WITHIN THE PROJECT LIMITS.

4. **BENCH MARK:**
MASS. HIGHWAY DEPT. DESIGNATION: CHISELCUT D–16
SE CORNER OF SOUTH DOORSILL ON WEST SIDE OF MIDDLEBOROUGH DEPOT OF THE N.Y.N.H.& H. RAILROAD (BOSTON). EL.=100.46.

5. **ELEVATIONS:**
ALL ELEVATIONS REFER TO N.G.V.D. (NATIONAL GEODETIC VERTICAL DATUM), FORMERLY REFERRED TO AS MEAN SEA LEVEL DATUM OF 1929.

6. **DATE AND SEAL:**
TO BE PLACED ON THE INSIDE FACE OF THE NORTHEAST AND SOUTHWEST PARAPETS. A SHEET SHOWING SIZE AND CHARACTER OF THE NUMERALS WILL BE FURNISHED. THE SEAL WILL BE FURNISHED BY THE STATE, AND SET BY THE CONTRACTOR.

FOR CONTINUATION OF GENERAL NOTES, SEE SHEET No. 3.

MIDDLEBOROUGH
CENTRE STREET

STATE	FED. AID. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
MASS	BHM–3639(001)X	1996	12	33
RECORD KEY No. 012100				

TITLE SHEET

TRAFFIC DATA

	ROADWAY OVER	ROADWAY UNDER
DESIGN YEAR	1994	
AVERAGE DAILY TRAFFIC–PRESENT	17,500	
AVERAGE DAILY TRAFFIC–2014	19,400	
DESIGN HOUR VOLUME	1,550	
DIRECTIONAL DISTRIBUTION	50/50	
TRUCK PERCENTAGE–AVERAGE DAY	9%	
TRUCK PERCENTAGE–PEAK HOUR	10%	
DESIGN SPEED	30 MPH.	
DIRECTIONAL DESIGN HOUR VOLUME		

12-30-95 ISSUED FOR CONSTRUCTION

MASS HIGHWAY

PROPOSED BRIDGE REHABILITATION
MIDDLEBOROUGH
CENTRE STREET
OVER CONRAIL RAILROAD

THE COMMONWEALTH OF MASSACHUSETTS
MASSACHUSETTS HIGHWAY DEPARTMENT
10 PARK PLAZA, BOSTON, MASS.

Alexander V. Bardos, P.E. BRIDGE ENGINEER
Bass B. Wallace, P.E. CHIEF ENGINEER

COMMONWEALTH ENGINEERS & CONSULTANTS, INC.
260 WEST EXCHANGE STREET
PROVIDENCE, RI 02903

MIDDLEBOROUGH
CENTRE STREET

STATE	FED. AID. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
MASS	BHM-3639(001)X	1996	13	33
RECORD KEY No. 012100				

BORING LOGS

BORING #B-1

STA. 3+33 – 11.7' RT.
GROUND EL. =112.97

EL. 112.47 — ASPHALT

DRY, VERY DENSE TO LOOSE, BROWN, FINE SAND, SOME COARSE SAND, MEDIUM GRAVEL (FILL)

S#1 FROM 1'–0" TO 2'–6" RECOVERED 8" (75–20–15)
S#2 FROM 5'–0" TO 6'–6" RECOVERED 9" (3–2–3)

EL. 102.97

WET, MEDIUM DENSE TO LOOSE, FINE AND COARSE SAND, SOME FINE TO MEDIUM GRAVEL, TRACE LOAM (FILL)

S#3 FROM 10'–0" TO 11'–6" RECOVERED 7" (1–1–10)
S#4 FROM 15'–0" TO 16'–6" RECOVERED 6" (2–4–3)

EL. 92.97

WET, MEDIUM DENSE, BROWN, FINE AND COARSE SAND, SOME FINE TO MEDIUM GRAVEL, TRACE INORGANIC SILT (FILL?)

S#5 FROM 20'–0" TO 21'–6" RECOVERED 6" (9–9–11)
S#6 FROM 25'–0" TO 26'–6" RECOVERED 6" (11–11–12)

EL. 82.97

WET, MEDIUM DENSE, BROWN, FINE SAND, SOME MEDIUM GRAVEL, TRACE INORGANIC SILT

S#7 FROM 30'–0" TO 31'–6" RECOVERED 10" (11–12–17)
FROM 34'–0" TO 38'–0" BOULDER
S#8 FROM 39'–6" TO 41'–0" RECOVERED 8" (33–38–55)
S#9 FROM 44'–6" TO 46'–0" RECOVERED 12" (35–70–105)

EL. 79.97

WET, VERY DENSE, GRAY, FINE AND COARSE SAND AND FINE TO COARSE GRAVEL, SOME COBBLES, TRACE BOULDERS, INORGANIC SILT

S#10 FROM 49'–6" TO 51'–0" RECOVERED 8" (35–39–44)
S#11 FROM 54'–6" TO 56'–0" RECOVERED 7" (46–55–78)

EL. 47.05

S#12 FROM 64'–6" TO 65'–11" RECOVERED 6" (50–75–120/5")

REFUSAL AT 65'–11"
(120 BLOWS, S.S., 140 LB. WGT., 5" PENETRATION)

WATER LEVEL 35'–0" AT COMPLETION
SIZE OF CASING NW, DEPTH 50'–0"
DRILLER: RENE' DESIMONE, INSPECTORS: M. LEBEAU & B. SOARES
DATE STARTED & COMPLETED: 8–17–94 [9:00 AM], 8–19–94 [2:00 PM]
TOTAL HOURS WORKED: 10 HRS.

BORING #B-2

STA. 3+76 – 10.8' RT.
GROUND EL. =115.15

EL. 114.48 — ASPHALT

DRY, MEDIUM DENSE TO LOOSE, BROWN–YELLOW, FINE SAND, SOME COARSE SAND, MEDIUM GRAVEL (FILL)

S#1 FROM 1'–0" TO 2'–6" RECOVERED 11" (25–18–10)
S#2 FROM 5'–0" TO 6'–6" RECOVERED 8" (2–2–2)
S#3 FROM 10'–0" TO 11'–6" RECOVERED 12" (5–5–4)

EL. 102.65
EL. 102.15 — 9 10 9 10 10 10 9 8 8 8 9 8 7 7 7 7 7 7

ROLLER BITTED IN ABUTMENT
MIN. PER FOOT

RUN 1 FROM 13'–0" TO 15'–0" RECOVERED 18" [75%]
RUN 2 FROM 15'–0" TO 19'–0" RECOVERED 36" [75%]
RUN 3 FROM 19'–0" TO 24'–0" RECOVERED 36" [93.3%]

WHITE–RED–GRAY, COARSE GRAINED, GRANITE (ABUTMENT)

RUN 4 FROM 24'–0" TO 28'–0" RECOVERED 46" [95.8%]
RUN 5 FROM 28'–0" TO 32'–0" RECOVERED 46" [95.8%]

APPROXIMATE BOTTOM OF EXISTING FOOTING (ASSUMED) ELEV. 83.0±

EL. 83.15

S#4 FROM 33'–6" TO 35'–0" RECOVERED 9" (24–33–59)
S#5 FROM 35'–0" TO 36'–6" RECOVERED 8" (36–44–52)
S#6 FROM 40'–0" TO 41'–6" RECOVERED 14" (39–35–37)
S#7 FROM 45'–0" TO 46'–6" RECOVERED 12" (32–35–39)
S#8 FROM 50'–0" TO 51'–6" RECOVERED 10" (22–30–46)
S#9 FROM 55'–0" TO 56'–6" RECOVERED 8" (29–36–50)
S#10 FROM 60'–6" TO 61'–6" RECOVERED 6" (39–37–123)
S#11 FROM 65'–0" TO 66'–6" RECOVERED 10" (28–41–32)

WET, VERY DENSE, GRAY FINE AND COARSE SAND AND FINE TO COARSE GRAVEL, SOME COBBLES, SOME TO TRACE OF INORGANIC SILT

EL. 47.98

S#12 FROM 66'–6" TO 67'–2" RECOVERED 6" (65–120/2")

REFUSAL AT 67'–2"
(120 BLOWS, S.S., 140 LB. WGT., 2" PENETRATION)

WATER LEVEL 37'–6" AT COMPLETION
SIZE OF CASINGS NW & SW, DEPTHS 12'–6" & 40'–0"
DRILLER: RENE' DESIMONE, INSPECTOR: M. LEBEAU
DATE STARTED & COMPLETED: 9–2–94 [8:00 AM], 9–7–94 [2:00 PM]
TOTAL HOURS WORKED: 18 HRS.

BORING #B-3

STA. 4+42 – 12.8' LT.
GROUND EL. =115.28

EL. 114.61 — ASPHALT

DRY, MEDIUM DENSE TO VERY DENSE, BROWN, FINE SAND, SOME FINE TO MEDIUM GRAVEL, TRACE COBBLES, LOAM (FILL)

S#1 FROM 1'–0" TO 2'–6" RECOVERED 10" (7–13–16)
S#2 FROM 5'–0" TO 6'–6" RECOVERED 11" (9–8–15)
S#3 FROM 10'–0" TO 10'–6" RECOVERED 6" (24–120/0")

EL. 101.78
EL. 101.28 — 8 9 10 10 12 10 11 8 8 9 7 7 9 12

ROLLER BITTED IN ABUTMENT
MIN. PER FOOT

RUN 1 FROM 14'–0" TO 19'–0" RECOVERED 60" [100%]
RUN 2 FROM 19'–0" TO 24'–0" RECOVERED 56" [93.3%]

WHITE–RED–GRAY, COARSE GRAINED, GRANITE (ABUTMENT)

RUN 3 FROM 24'–0" TO 28'–0" RECOVERED 15" [41.7%]

APPROXIMATE BOTTOM OF EXISTING FOOTING (ASSUMED) ELEV. 87.0±

EL. 87.28

S#4 FROM 29'–6" TO 31'–0" RECOVERED 12" (28–27–32)
FROM 34'–6" TO 36'–0" BOULDER
S#5 FROM 36'–0" TO 37'–6" RECOVERED 11" (29–37–44)
S#6 FROM 40'–0" TO 41'–6" RECOVERED 14" (20–27–35)
S#7 FROM 45'–0" TO 46'–6" RECOVERED 11" (21–27–32)
S#8 FROM 50'–0" TO 51'–6" RECOVERED 8" (27–32–48)
FROM 54'–6" TO 55'–6" BOULDER
FROM 56'–0" TO 57'–6" BOULDER
S#9 FROM 58'–6" TO 60'–0" RECOVERED 12" (53–77–59)
S#10 FROM 63'–6" TO 64'–6" RECOVERED 7" (45–38–120/0")

WET, VERY DENSE, BROWN–GRAY, FINE SAND, SOME FINE TO COARSE GRAVEL, COBBLES, SOME TO TRACE INORGANIC SILT, TRACE BOULDERS

EL. 49.28

S#11 FROM 65'–6" TO 66'–0" RECOVERED 6"

REFUSAL AT 66'–0"
(120 BLOWS, S.S., 140 LB. WGT., 6" PENETRATION)

WATER LEVEL 37'–0" AT COMPLETION
SIZE OF CASINGS NW & SW, DEPTHS 13'–6" & 35'–0"
SIZE OF ROCK CORE BX, LENGTH DRILLED: 14'–0"
DRILLER: RENE' DESIMONE, INSPECTOR: M. LEBEAU
DATE STARTED & COMPLETED: 8–25–94 [8:00 AM], 9–1–94 [8:00 AM]
TOTAL HOURS WORKED: 30 HRS.

BORING #B-4

STA. 4+75 – 18.7' RT.
GROUND EL. =114.59

EL. 114.34 — ASPHALT

S#1 FROM 0'–6" TO 2'–0" RECOVERED 7" (4–2–5)
S#2 FROM 5'–0" TO 6'–6" RECOVERED 10" (7–8–8)

DRY, LOOSE TO MEDIUM DENSE, BROWN, FINE SAND, SOME FINE TO MEDIUM GRAVEL, TRACE ORGANIC SILT (FILL)

S#3 FROM 10'–0" TO 11'–6" RECOVERED 12" (3–4–6)
S#4 FROM 15'–0" TO 16'–6" RECOVERED 6" (14–11–5)
S#5 FROM 19'–6" TO 21'–0" RECOVERED 8" (10–14–15)

EL. 93.59

S#6 FROM 21'–0" TO 22'–6" RECOVERED 7" (19–20–22)

DRY, DENSE, BROWN, FINE SAND, SOME FINE TO MEDIUM GRAVEL, INORGANIC SILT

EL. 89.59

S#7 FROM 25'–0" TO 26'–0" RECOVERED 10" (45–120)
S#8 FROM 29'–6" TO 30'–1" RECOVERED 7" (44–120/1")
S#9 FROM 34'–6" TO 36'–0" RECOVERED 10" (30–37–29)
S#10 FROM 39'–6" TO 41'–0" RECOVERED 8" (35–40–48)

WET, VERY DENSE, BROWN–GRAY, FINE SAND, SOME FINE TO COARSE GRAVEL, COBBLES, SOME TO TRACE INORGANIC SILT, TRACE BOULDERS

S#11 FROM 44'–6" TO 46'–0" RECOVERED 8" (42–42–80)
S#12 FROM 49'–6" TO 50'–0" RECOVERED 6" (120)
S#13 FROM 54'–6" TO 55'–0" RECOVERED 6" (171)
S#14 FROM 59'–6" TO 59'–8" RECOVERED 2" (120/2")
FROM 61'–0" TO 62'–6" BOULDER

EL. 48.67

S#15 FROM 65'–0" TO 65'–11" RECOVERED 7" (25–120/5")

REFUSAL AT 65'–11"
(120 BLOWS, S.S., 140 LB. WGT., 5" PENETRATION)

WATER LEVEL 36'–0" AT COMPLETION
SIZE OF CASINGS HW & NW, DEPTHS 27'–0" & 61'–0"
DRILLER: RENE' DESIMONE, INSPECTOR: M. LEBEAU
DATE STARTED & COMPLETED: 8–22–94 [8:00 AM], 8–24–94 [2:00 PM]
TOTAL HOURS WORKED: 18 HRS.

INSTALLED OBSERVATION WELL (2" PVC PIPE, 10'–0" SLOTTED, 40'–0" SOLID, NO CUT–OFF), 50'–0" BELOW GROUND SURFACE, INCLUDING ROADWAY BOX.

BORING LOGS

BORING NOTES:

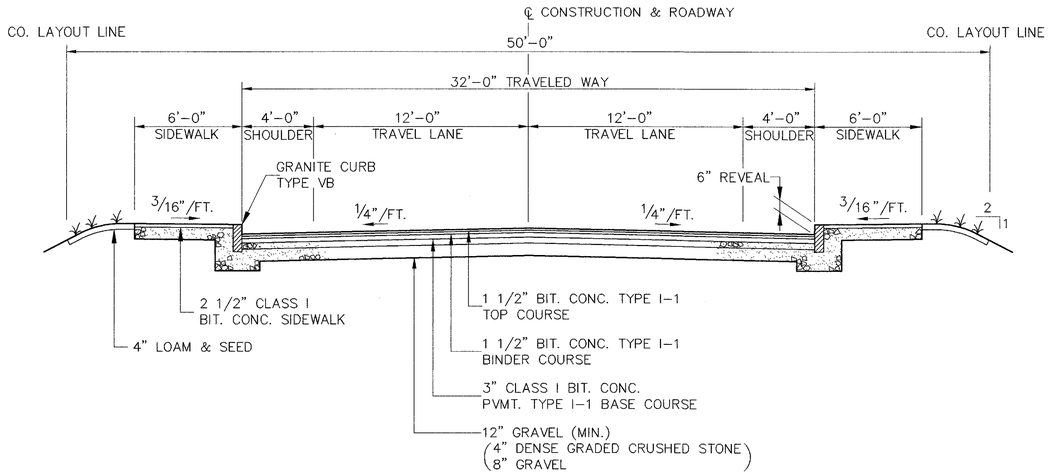
1. LOCATION OF BORINGS SHOWN ON THE PLAN THUS: ⊕ B–1
2. BORINGS ARE TAKEN FOR PURPOSE OF DESIGN, AND SHOW CONDITIONS AT BORING POINTS ONLY, BUT DO NOT NECESSARILY SHOW THE NATURE OF THE MATERIALS TO BE ENCOUNTERED DURING CONSTRUCTION.
3. WATER LEVELS SHOWN ON THE BORING LOGS WERE OBSERVED AT THE TIME OF TAKING BORINGS, AND DO NOT NECESSARILY SHOW THE TRUE GROUND WATER ELEVATION.
4. FIGURES AT THE OUTER RIGHT SIDE OF EACH BORING LOG INDICATE THE NUMBER OF BLOWS REQUIRED TO DRIVE A 2" O.D. SPLIT SPOON SAMPLER 6" WITH A 140 POUND WEIGHT FALLING 30 INCHES, UNLESS OTHERWISE NOTED.
5. FIGURES TO THE LEFT OF THE COLUMNS INDICATE DEPTH BELOW SURFACE AT BORING POINT.
6. ALL BORINGS WERE TAKEN IN AUGUST AND SEPTEMBER, 1994.
7. BORINGS WERE MADE BY: CARR–DEE CORP., 37 LINDEN STREET, P.O. BOX 67, MEDFORD, MA 02156–0001
8. MEAN SEA LEVEL DATUM (N.G.V.D. 1929) IS USED THROUGHOUT.
9. THE DEPTHS AS SHOWN ON THE ORIGINAL BORING LOGS HAVE BEEN CONVERTED TO ELEVATIONS BY THE ENGINEER.

12-30-95	ISSUED FOR CONSTRUCTION
DATE	DESCRIPTION
USE ONLY PRINTS OF LATEST DATE	

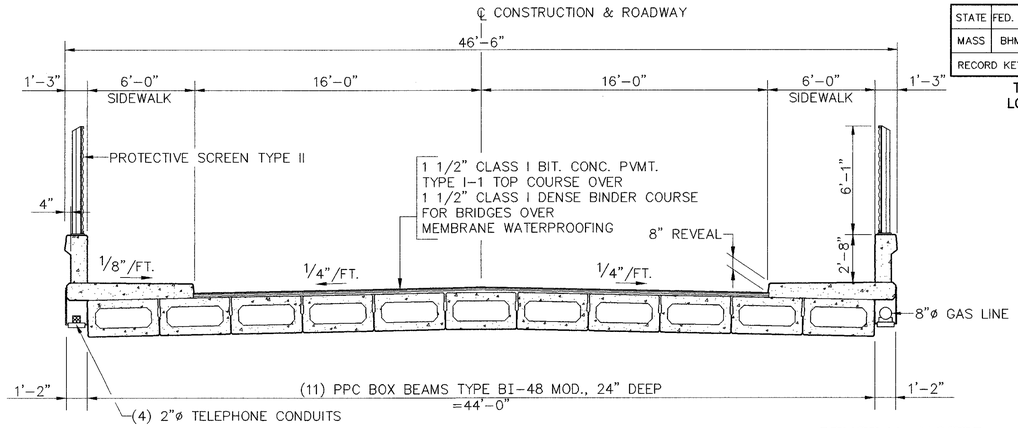
MIDDLEBOROUGH
CENTRE STREET

STATE	FED. AID. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
MASS	BHM-3639(001)X	1996	14	33
RECORD KEY No. 012100				

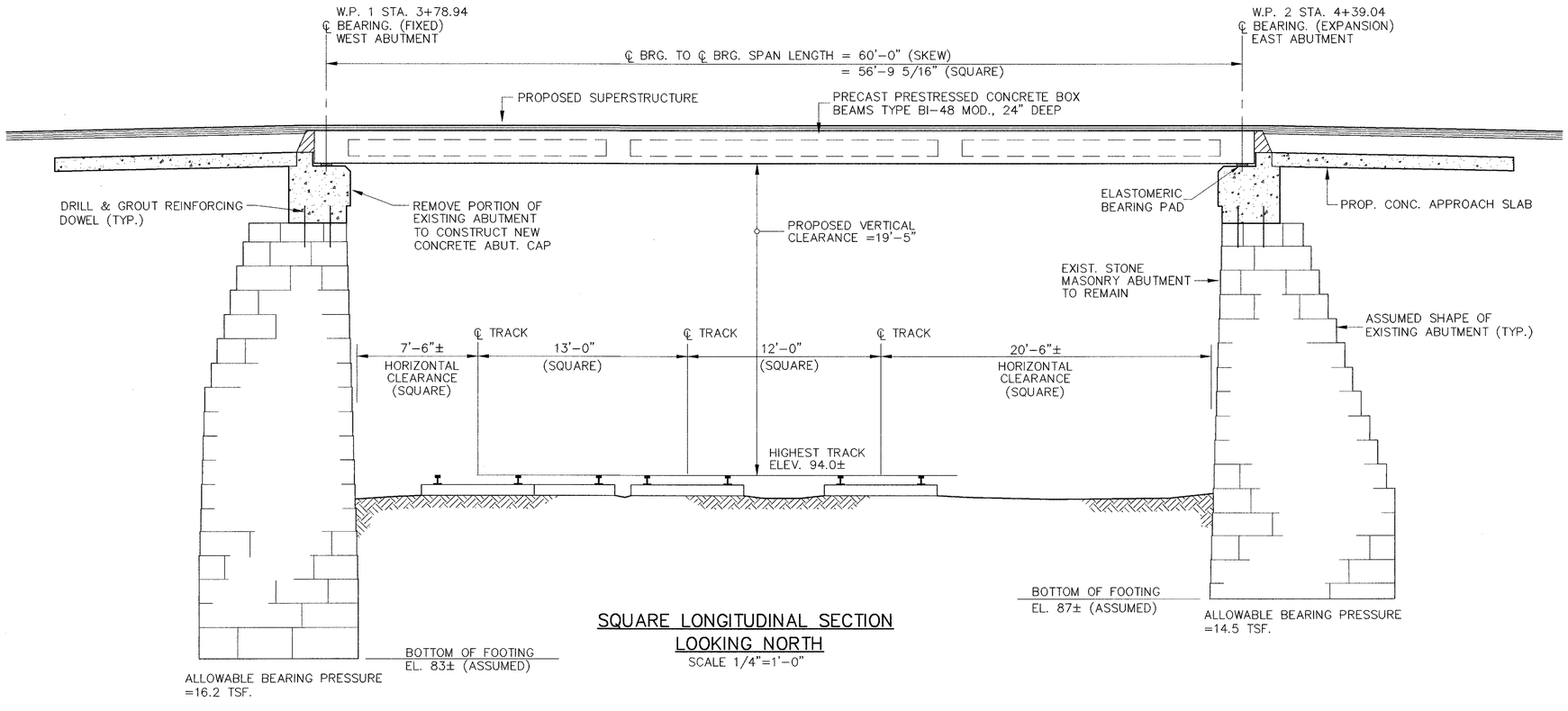
TYPICAL SECTIONS & LONGITUDINAL SECTION



CENTRE STREET
TYPICAL APPROACH SECTION
SCALE 1/4"=1'-0"



TYPICAL BRIDGE SECTION
SCALE 1/4"=1'-0"



SQUARE LONGITUDINAL SECTION
LOOKING NORTH
SCALE 1/4"=1'-0"

GENERAL NOTES
(CONTINUED FROM SHEET No. 1)

7. **FOUNDATIONS:**
THE FOUNDATIONS MAY BE ALTERED IF NECESSARY TO SUIT CONDITIONS ENCOUNTERED DURING CONSTRUCTION WITH THE APPROVAL OF THE ENGINEER.

8. **UNSUITABLE MATERIAL:**
ALL UNSUITABLE MATERIAL SHALL BE REMOVED WITHIN THE LIMITS OF THE STRUCTURE EXCAVATIONS AS DIRECTED BY THE ENGINEER.

9. **REINFORCEMENT:**
ALL BARS SHALL CONFORM TO ASTM SPECIFICATIONS FOR ASTM A 615 GRADE 60, UNLESS OTHERWISE SHOWN ON THE PLANS. ALL #4 BARS SHALL BE LAPPED 24" INCHES, AND ALL #5 BARS SHALL BE LAPPED 30" INCHES. FOR HORIZONTAL BARS WITH 12 INCHES OR MORE OF CONCRETE BELOW THE BAR, THE LAP LENGTHS SHALL BE 33 INCHES FOR #4 BARS, AND 41 INCHES FOR #5 BARS. IF THE ABOVE BARS ARE SPACED 6 INCHES OR MORE ON CENTER, THE LAP LENGTH SHALL BE 80% OF THAT GIVEN ABOVE. ALL OTHER BARS SHALL BE LAPPED AS SHOWN ON THE PLANS.

10. **EPOXY COATING:**
ALL REINFORCING BARS AND SUPPORTING DEVICES SHALL BE EPOXY COATED, EXCEPT FOR APPROACH SLAB REINFORCEMENT.

11. **SCALES:**
SCALES NOTED ON THE PLANS ARE NOT APPLICABLE TO REDUCED SIZE PRINTS. DIVIDE SCALES BY 2 FOR 1/4 SIZE PRINTS (11"x 18").

12. **CONCRETE MIX:**

	(1)	(2)	(3)
CLASS 'A' DENOTES:	4000	1 1/2	565
CLASS 'D' DENOTES:	4000	3/4	610
*CEM. CONC. MASONRY	5000	3/4	635

*MODIFIED WITH SILICA FUME ADDITIVE

(1) 28 DAY COMPRESSIVE STRENGTH (p.s.i.)
(2) MAXIMUM AGGREGATE SIZE (inches)
(3) CEMENT CONTENT (lb./cu. yd.)

13. **UTILITIES:**
THE CONTRACTOR SHALL LOCATE AND PROTECT FROM DAMAGE ALL EXISTING UTILITIES.

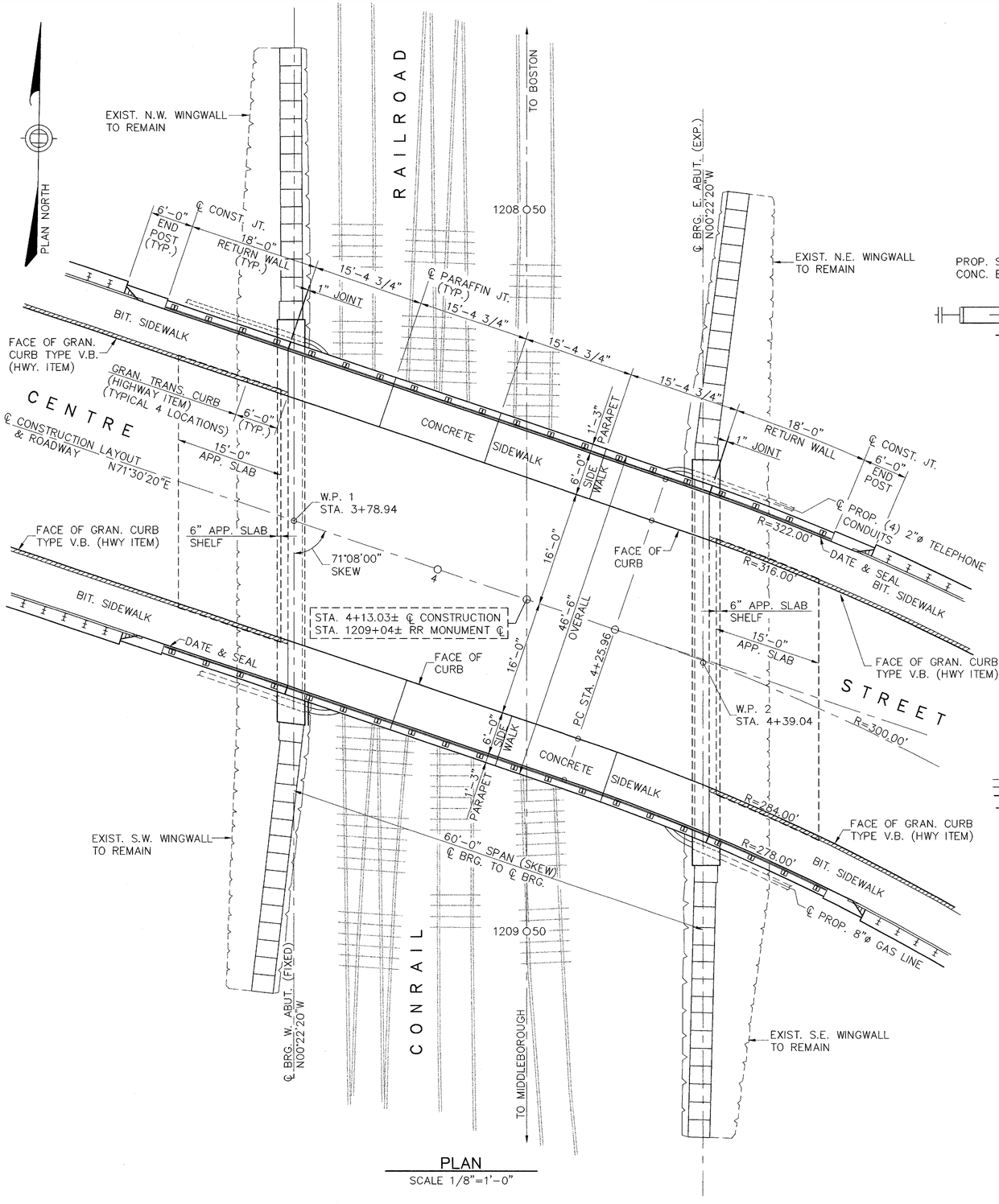
14. **TRAFFIC:**
THE ROADWAY IS PRESENTLY CLOSED. THE ROADWAY WILL REMAIN CLOSED AND THE TRAFFIC DETOURED DURING THE DEMOLITION AND RECONSTRUCTION PHASES.

12-30-95	ISSUED FOR CONSTRUCTION
DATE	DESCRIPTION
USE ONLY PRINTS OF LATEST DATE	

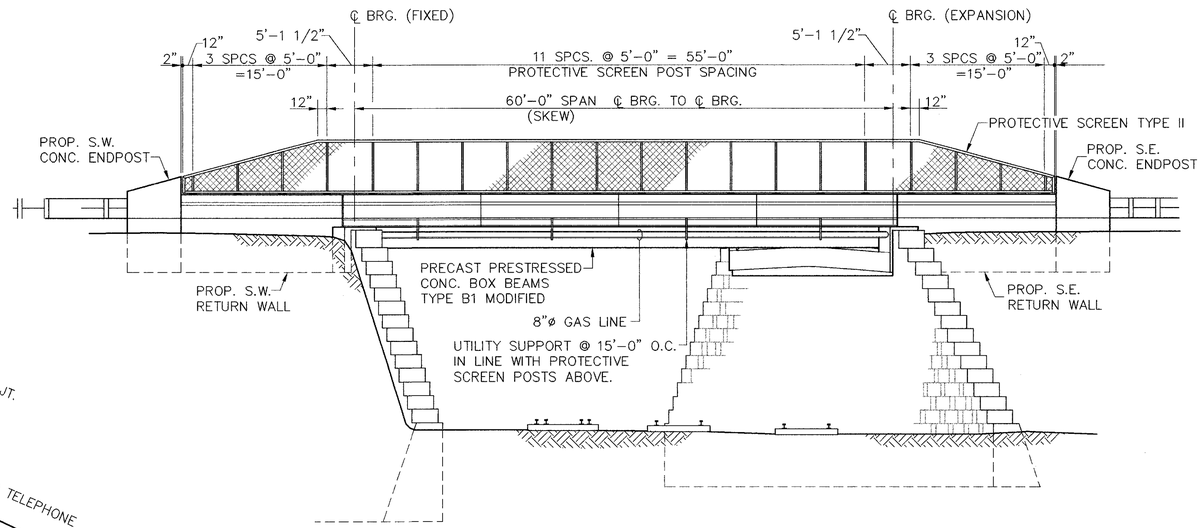
MIDDLEBOROUGH
CENTRE STREET

STATE	FED. AID. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
MASS	BHM-3639(001)X	1996	15	33
RECORD KEY No. 012100				

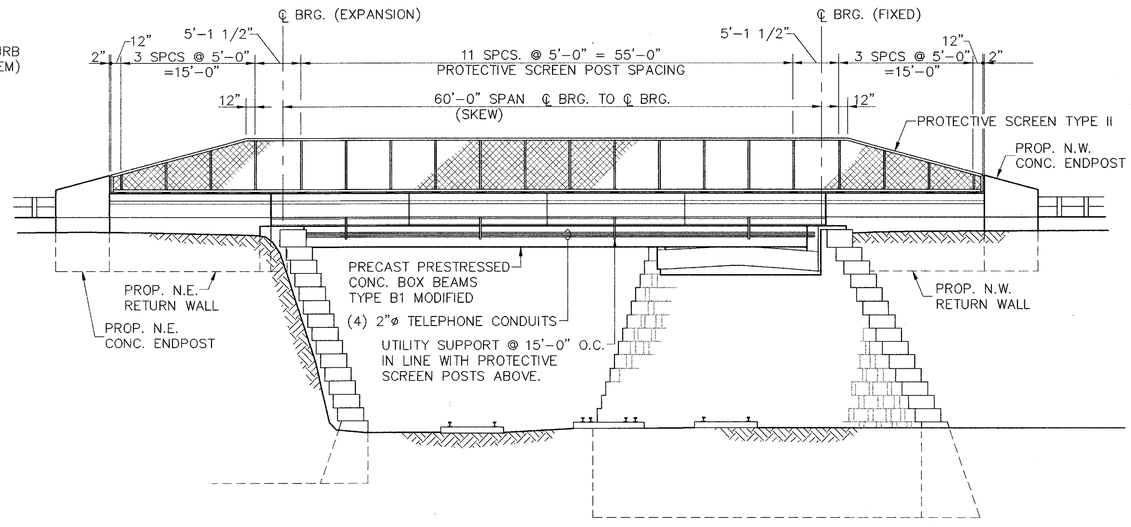
PLAN & ELEVATION



PLAN
SCALE 1/8"=1'-0"



SOUTH ELEVATION
SCALE 1/8"=1'-0"



NORTH ELEVATION
SCALE 1/8"=1'-0"

NOTES:

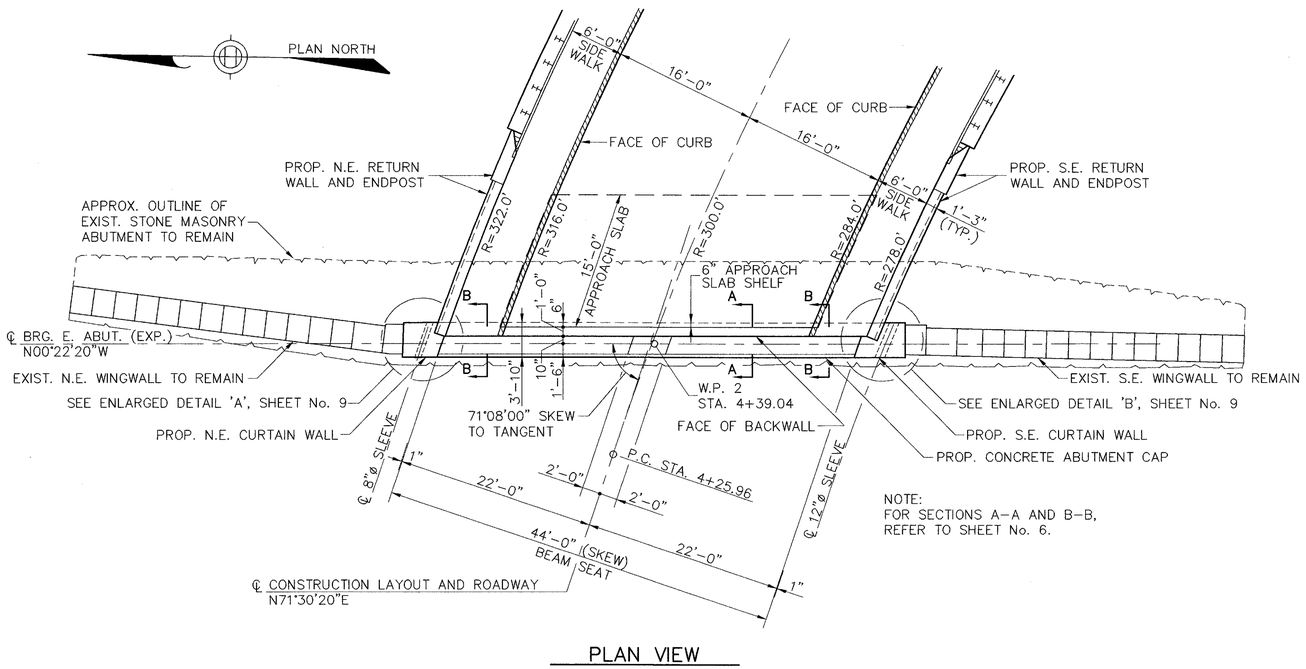
1. A PORTION OF THE EAST AND WEST ABUTMENTS ARE TO BE REMOVED AND REBUILT TO THE LIMITS SHOWN ON SHEET No's 5 & 6.
2. REFER TO HIGHWAY PLANS FOR TIES TO THE CENTERLINE OF CONSTRUCTION LAYOUT AND ROADWAY.
3. REFER TO SHEET No's 13 & 14 FOR DETAILS OF BRIDGE RAILING PROTECTIVE SCREEN TYPE II.

12-30-95	ISSUED FOR CONSTRUCTION
DATE	DESCRIPTION
USE ONLY PRINTS OF LATEST DATE	

MIDDLEBOROUGH
CENTRE STREET

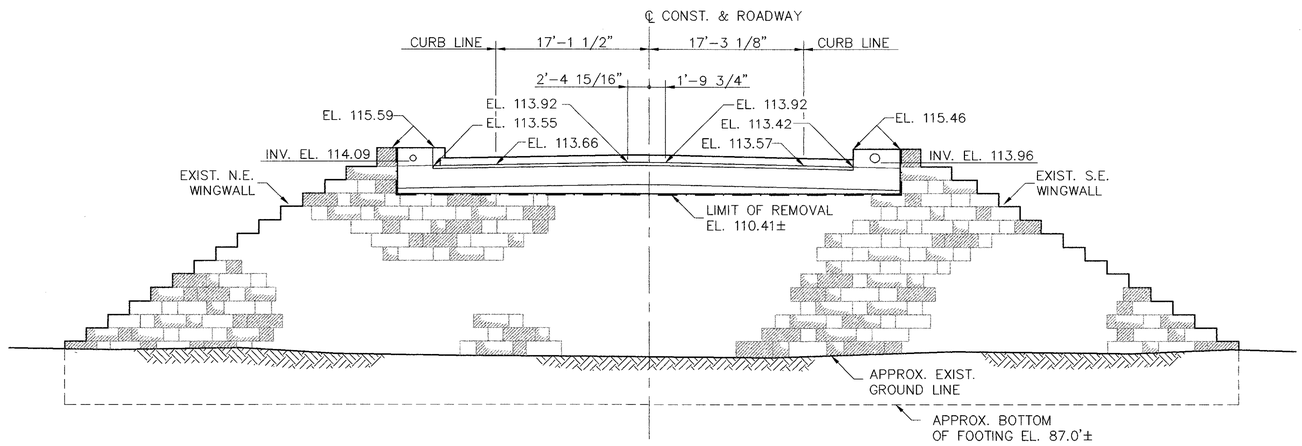
STATE	FED. AID. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
MASS	BHM-3639(001)X	1996	16	33
RECORD KEY No. 012100				

EAST ABUTMENT PLAN



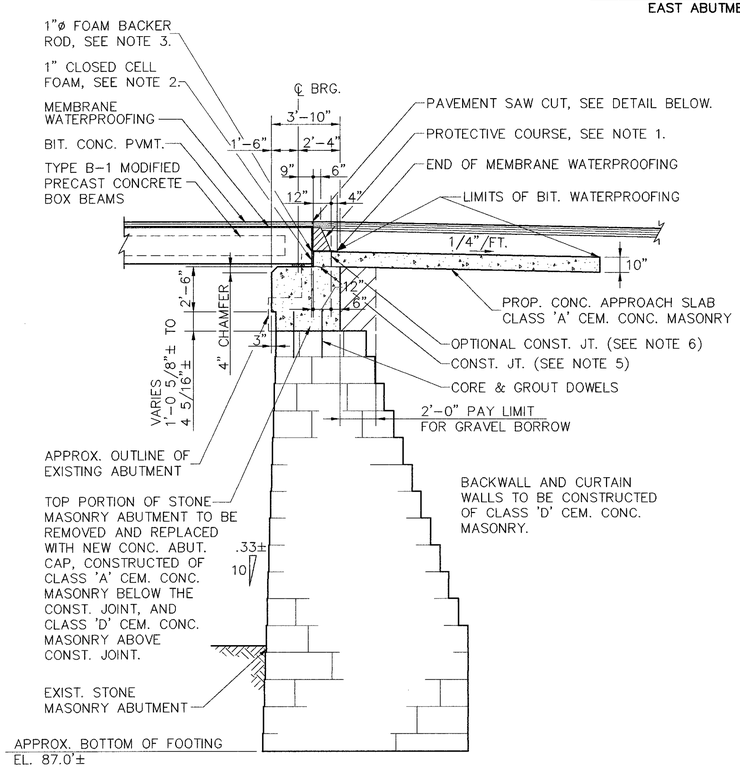
NOTE:
FOR SECTIONS A-A AND B-B, REFER TO SHEET No. 6.

PLAN VIEW
SCALE 1/8"=1'-0"

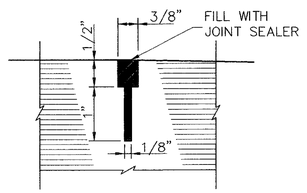


ELEVATION
SCALE 1/8"=1'-0"

NOTES:
1. FOR RETURN WALL SECTIONS, REFER TO SHEET No. 11.
2. FOR RETURN WALL ELEVATIONS, REFER TO SHEET No. 9.
3. FOR ENDPOST DETAILS, REFER TO SHEET No. 10.
4. FOR ENLARGED CURTAIN WALL DETAILS 'A' & 'B', REFER TO SHEET No. 9.



TYPICAL SECTION THROUGH EAST ABUTMENT
SCALE 1/4"=1'-0"



PAVEMENT SAW CUT DETAIL
3/4 SCALE

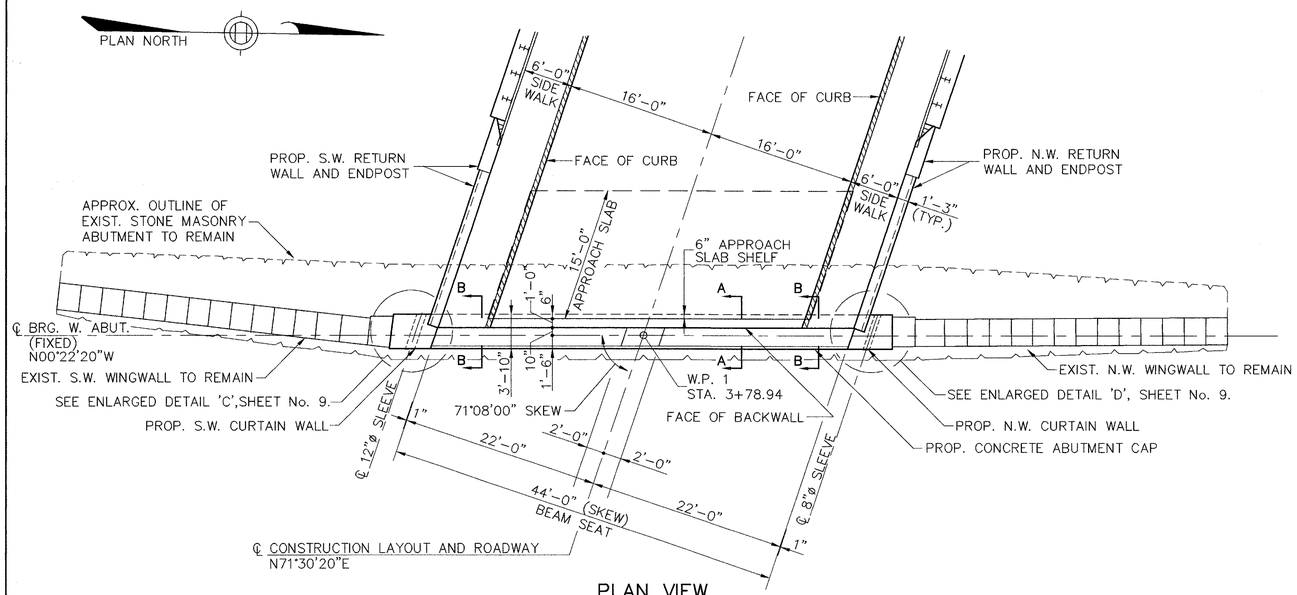
NOTES:
1. PROTECTIVE COURSE TO BE CLASS I DENSE BINDER COURSE FOR BRIDGES, PLACED IN 2" LAYERS, AND COMPACTED WITH A MECHANICAL, HANDGUIDED TAMPER WITHIN 12 HOURS AFTER PLACING MEMBRANE WATERPROOFING.
2. ATTACH CLOSED CELL FOAM TO BACK OF PRECAST BEAM WITH ADHESIVE.
3. DRAPE MEMBRANE WATERPROOFING OVER CLOSED CELL FOAM BACKER ROD.
4. CONCRETE PENETRANT SEALER TO BE APPLIED TO ALL EXPOSED SURFACES OF BEAM SEAT.
5. ALL CONCRETE ABOVE THE CONSTRUCTION JOINT LOCATED AT THE ABUTMENT CAP SHALL BE 4000 PSI., 3/4", 610 CEM. CONC. MAS. AND SHALL BE PLACED AFTER ALL BEAMS HAVE BEEN ERECTED. THE CONCRETE BELOW THE BACKWALL AT THE CONSTRUCTION JOINT SHALL BE FINISHED WITH A ROUGHENED SURFACE OF 1/4" AMPLITUDE.
6. IF THE APPROACH SLAB IS POURED MONOLITHICALLY WITH THE BACKWALLS, MAKE A 2" DEEP BY 1/8" WIDE SAW CUT IN THE TOP OF THE SLAB AT THE OPTIONAL CONSTRUCTION JOINT. FILL SAW CUT WITH CONCRETE JOINT SEALER.

12-30-95	ISSUED FOR CONSTRUCTION
DATE	DESCRIPTION
USE ONLY PRINTS OF LATEST DATE	

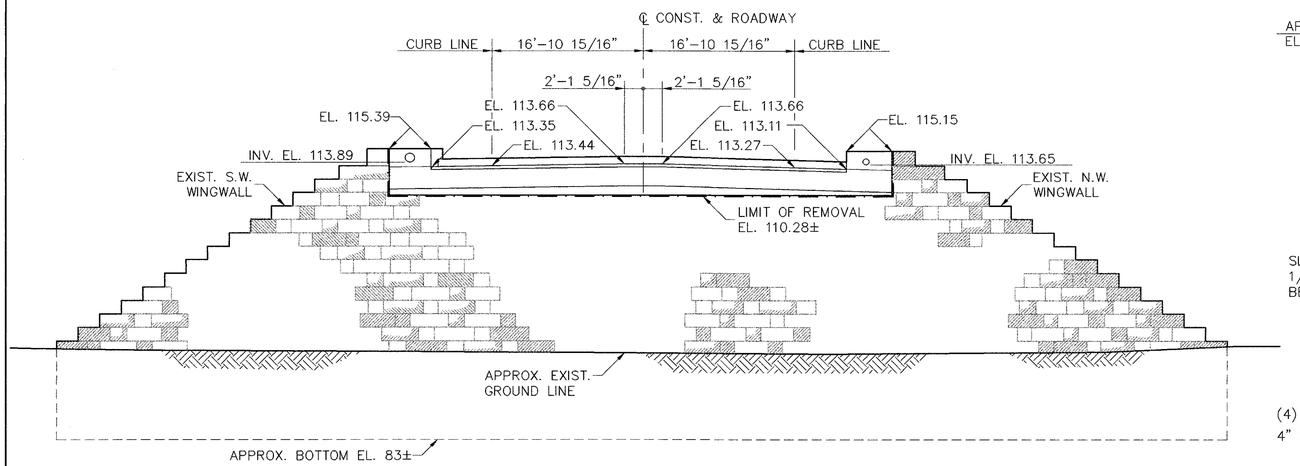
MIDDLEBOROUGH
CENTRE STREET

STATE	FED. AID. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
MASS	BHM-3639(001)X	1996	17	33
RECORD KEY No. 012100				

WEST ABUTMENT PLAN

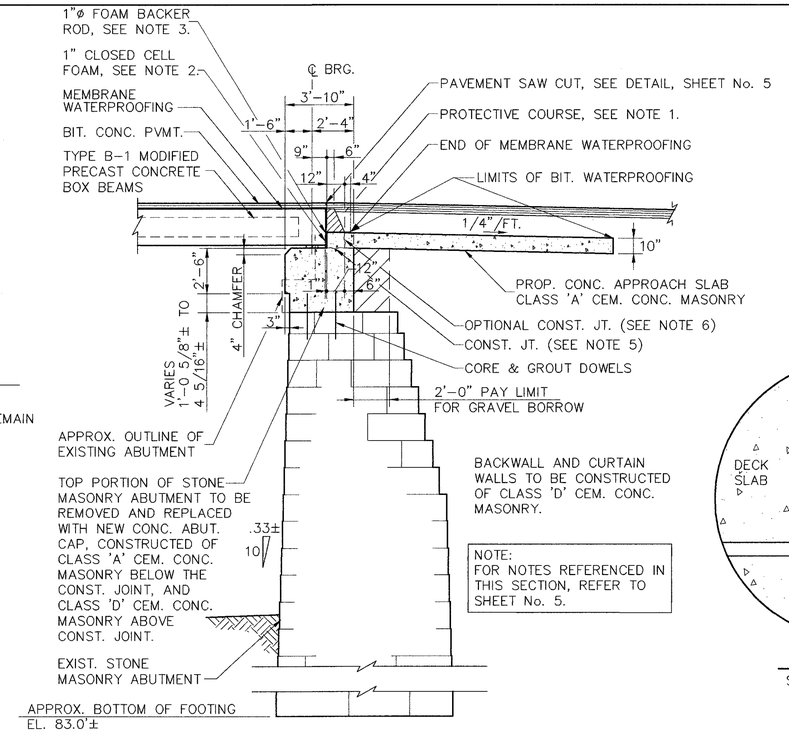


PLAN VIEW
SCALE 1/8"=1'-0"

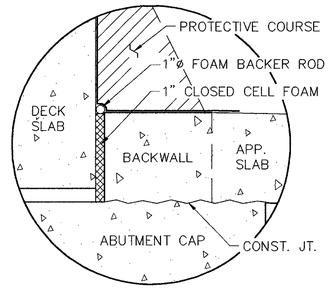


ELEVATION
SCALE 1/8"=1'-0"

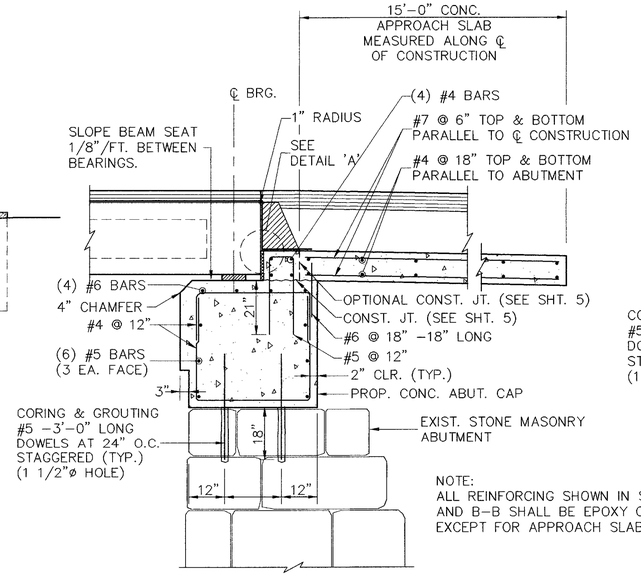
NOTES:
1. FOR RETURN WALL SECTIONS, REFER TO SHEET No. 11.
2. FOR RETURN WALL ELEVATIONS, REFER TO SHEET No. 9.
3. FOR ENDPOST DETAILS, REFER TO SHEET No. 10.
4. FOR ENLARGED CURTAIN WALL DETAILS 'C' & 'D', REFER TO SHEET No. 9.



TYPICAL SECTION THROUGH WEST ABUTMENT
SCALE 1/4"=1'-0"

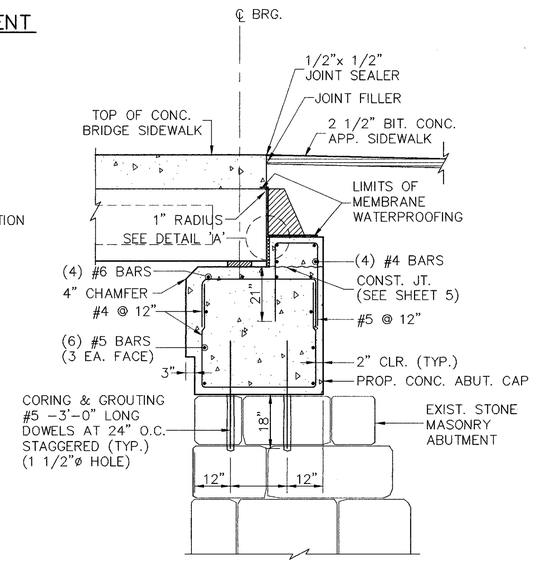


DETAIL A
SCALE 1 1/2"=1'-0"



SECTION A-A
SCALE 1/2"=1'-0"

NOTE:
ALL REINFORCING SHOWN IN SECTION A-A AND B-B SHALL BE EPOXY COATED BARS, EXCEPT FOR APPROACH SLAB REINFORCEMENT.



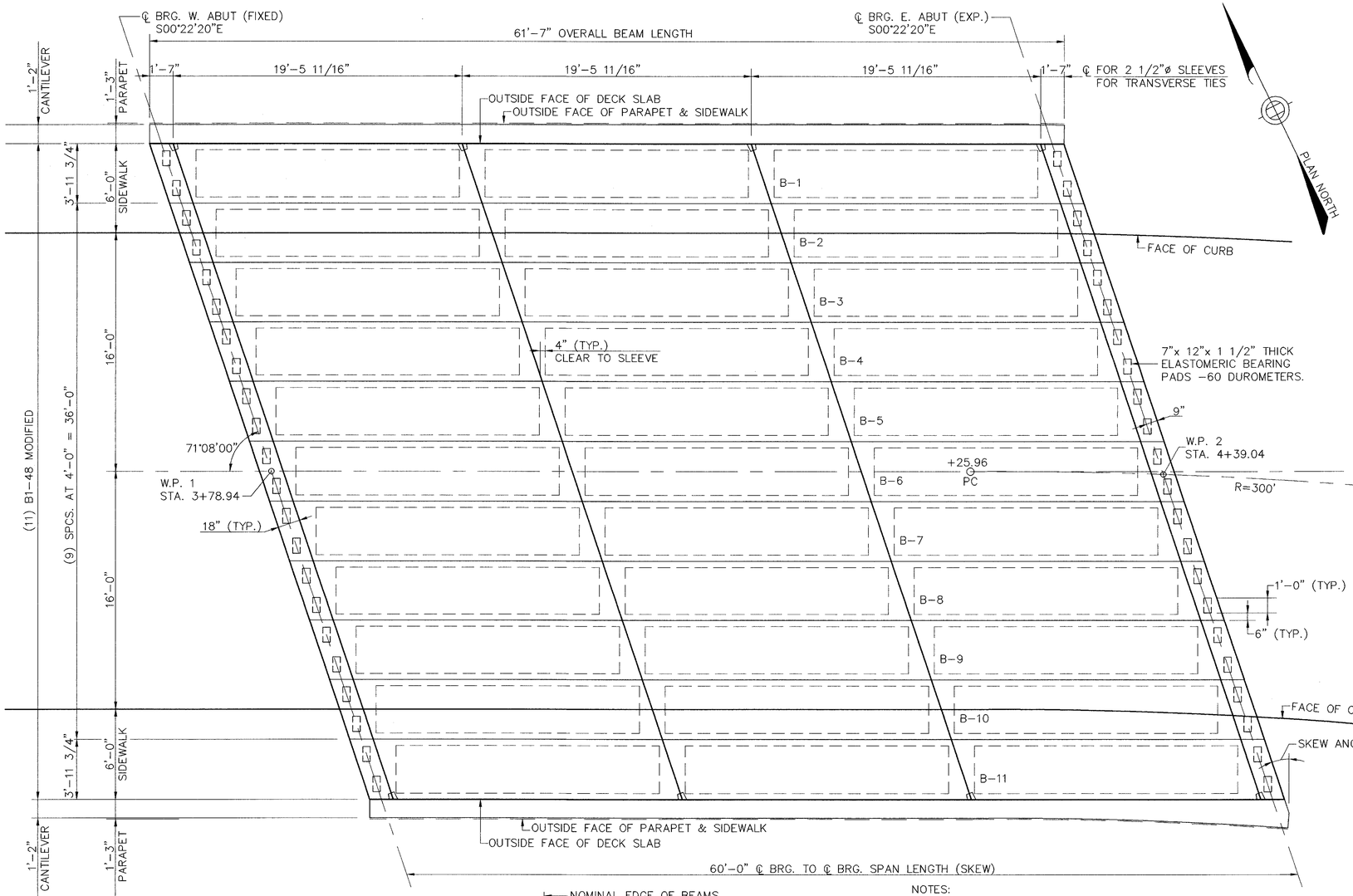
SECTION B-B
SCALE 1/2"=1'-0"

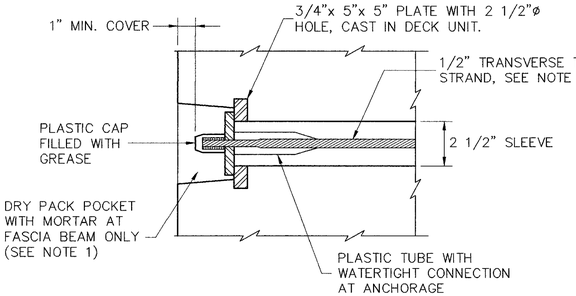
DATE	DESCRIPTION
12-30-95	ISSUED FOR CONSTRUCTION
USE ONLY PRINTS OF LATEST DATE	

MIDDLEBOROUGH
CENTRE STREET

STATE	FED. AID. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
MASS	BHM-3639(001)X	1996	18	33
RECORD KEY No. 012100				

SUPERSTRUCTURE PLAN, DETAILS, & NOTES

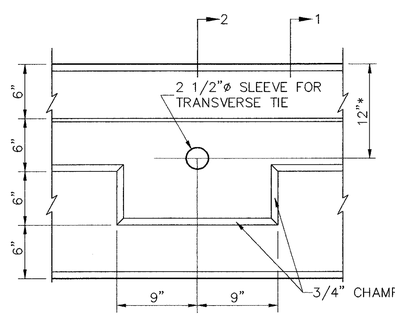




NOTES:
1. MORTAR FOR EXTERIOR POCKETS SHALL CONFORM TO M4.02.15 AND SHALL BE THE SAME COLOR AND TEXTURE AS THE BEAM CONCRETE.
2. OTHER ANCHORAGE SYSTEMS MAY BE SUBSTITUTED WITH THE APPROVAL OF THE ENGINEER. ALTERNATE ANCHORAGE SYSTEMS SHALL BE WATERTIGHT AND CORROSION PROOF.
3. TRANSVERSE TIES SHALL BE COVERED BY A SEAMLESS POLYPROPYLENE SHEATH (WITH CORROSION INHIBITING GREASE BETWEEN THE STRAND AND SHEATH) FOR THE FULL LENGTH OF THE STRAND EXCEPT AT THE ANCHORAGE LOCATION.

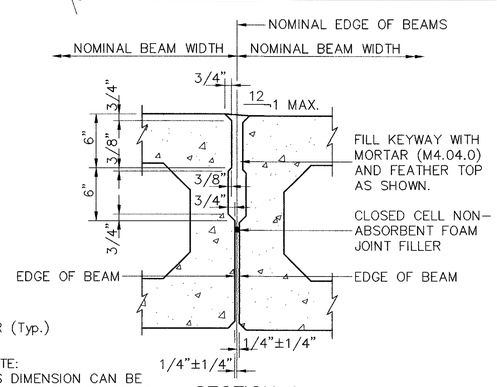
TRANSVERSE TIE POCKET DETAIL
SCALE 3"=1'-0"

TRANSVERSE TIE TENSIONING NOTES:
1. AFTER ALL BEAMS HAVE BEEN ERECTED, TENSION EACH TRANSVERSE TIE TO 5,000 POUNDS.
2. FILL ALL KEYWAYS WITH MORTAR (M4.04.0). IF THE KEYWAYS ARE NOT FILLED WITHIN FIVE DAYS AFTER THE BEAMS HAVE BEEN ERECTED, THE CONTRACTOR SHALL COVER AND PROTECT THE KEYWAYS FROM THE WEATHER AND DEBRIS UNTIL THEY ARE FILLED.
3. AFTER THE MORTAR HAD CURED, TENSION EACH TRANSVERSE TIE TO 30,000 POUNDS. NO TRAFFIC OR HEAVY EQUIPMENT WILL BE PERMITTED ON THE BEAMS UNTIL ALL TIES HAVE BEEN PROPERLY TENSIONED.
4. CONCRETE FOR SIDEWALK, CURB, AND/OR BARRIER SECTIONS SHALL BE PLACED AFTER THE TRANSVERSE TIES HAVE BEEN FULLY TENSIONED.



TYPICAL BEAM ELEVATION AT TRANSVERSE TIE LOCATIONS
SCALE 1 1/2"=1'-0"

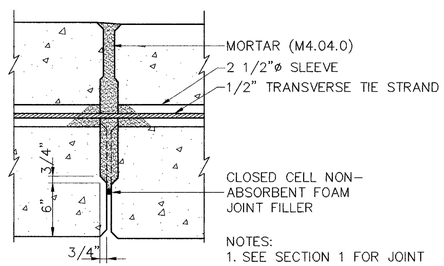
*NOTE:
THIS DIMENSION CAN BE ADJUSTED SO AS NOT TO INTERFERE WITH STRANDS.



SECTION 1
SCALE 1 1/2"=1'-0"

FRAMING PLAN
SCALE 1/4"=1'-0"

NOTES:
1. SEE SPECIAL PROVISIONS FOR BEAM LAYOUT
2. FOR BEAM SECTIONS, REFER TO SHEET No. 8.
3. FOR PRESTRESSED CONCRETE NOTES, REFER TO SHEET No. 8.



SECTION 2
SCALE 1 1/2"=1'-0"

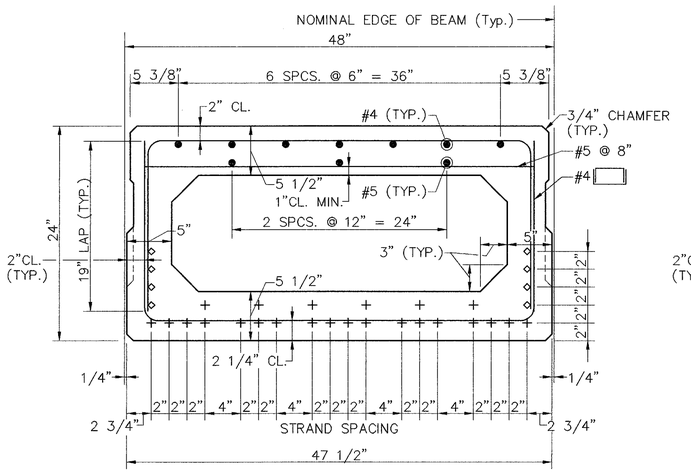
NOTES:
1. SEE SECTION 1 FOR JOINT DETAILS NOT SHOWN HERE.
2. SEE TRANSVERSE TIE TENSIONING NOTES FOR THE TENSIONING PROCEDURE.

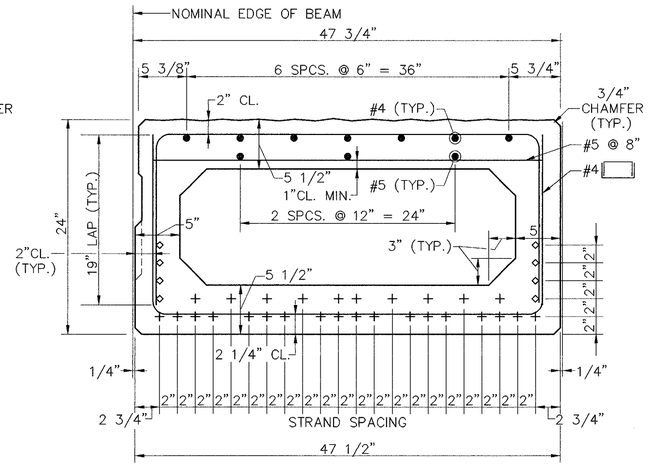
DECK GRADES

INCREASING STATIONS	LEFT GUTTERLINE			℄ CENTRE STREET			RIGHT GUTTERLINE		
	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
℄ BRG. W. ABUT.	115.40	115.65	–	115.78	116.07	–	115.57	115.82	–
1/4 POINT	115.53	115.87	0.03	115.87	116.26	0.03	115.63	115.99	0.03
1/2 POINT	115.66	116.01	0.06	115.98	116.38	0.06	115.70	116.06	0.06
3/4 POINT	115.73	116.07	0.03	116.01	116.40	0.03	115.69	116.05	0.03
℄ BRG. E. ABUT.	115.79	116.04	–	116.05	116.34	–	115.70	115.95	–

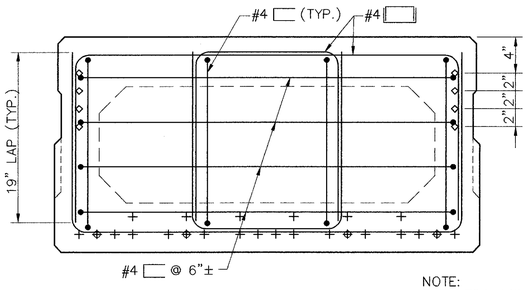
(1) TOP OF CONCRETE DECK SLAB PRIOR TO PLACEMENT OF SDL.
(2) PAVEMENT FINISH GRADE
(3) THEORETICAL DEFLECTION DUE TO SDL. (FEET)

12-30-95	ISSUED FOR CONSTRUCTION
DATE	DESCRIPTION
USE ONLY PRINTS OF LATEST DATE	





MIDSPAN SECTION

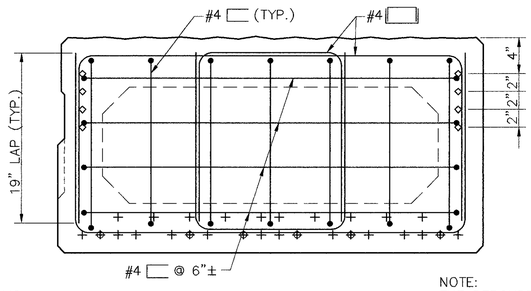


END OF BEAM SECTION DECK BEAM TYPE BI–48 FOR BEAMS 2 TO 10

SCALE 1 1/2"=1'–0"

NOTE:
THE DEBONDED STRANDS FOR BEAMS 2 TO 10 SHALL BE SHIELDED 40 INCHES FROM THE END OF THE BEAM.

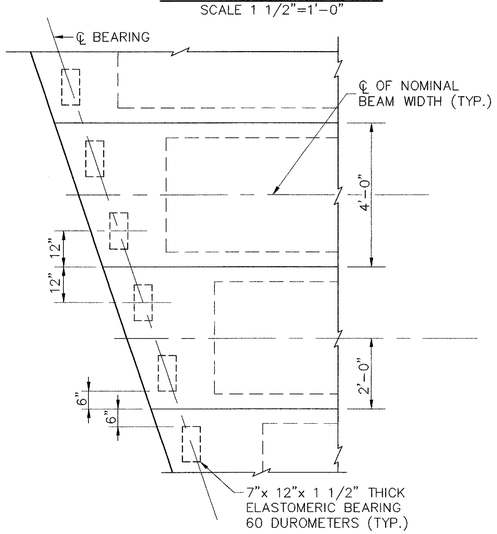
MIDSPAN SECTION



END OF BEAM SECTION DECK BEAM TYPE BI–48 FOR BEAMS 1 & 11

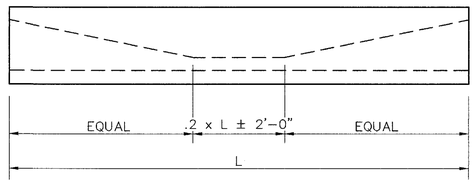
SCALE 1 1/2"=1'–0"

NOTE:
THE DEBONDED STRANDS FOR BEAMS 1 AND 11 SHALL BE SHIELDED 54 INCHES FROM THE END OF THE BEAM.



LAYOUT OF BEARINGS

SCALE 1/2"=1'–0"

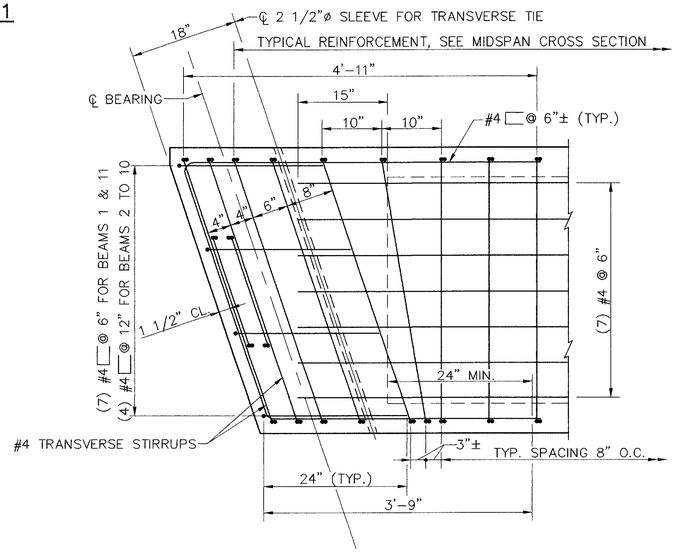


HOLD DOWN POINTS FOR DRAPED STRANDS

NOT TO SCALE

BEAM NOTES:

1. ┼ DENOTES STRAIGHT STRANDS
2. ◇ DENOTES DRAPED STRANDS
3. ⊕ DENOTES DEBONDED STRANDS
4. ● DENOTES STANDARD DEFORMED GR. 60 REINFORCING BARS.
5. SEE SHEAR KEY DETAIL ON SHEET No. 7.
6. 1"ø DRAIN PLACED AT LOW POINT OF VOID.



END OF BEAM PLAN

SCALE 1"=1'–0"

MIDDLEBOROUGH
CENTRE STREET

STATE	FED. AID. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
MASS	BHM–3639(001)X	1996	19	33
RECORD KEY No. 012100				

BEAM DETAILS & NOTES

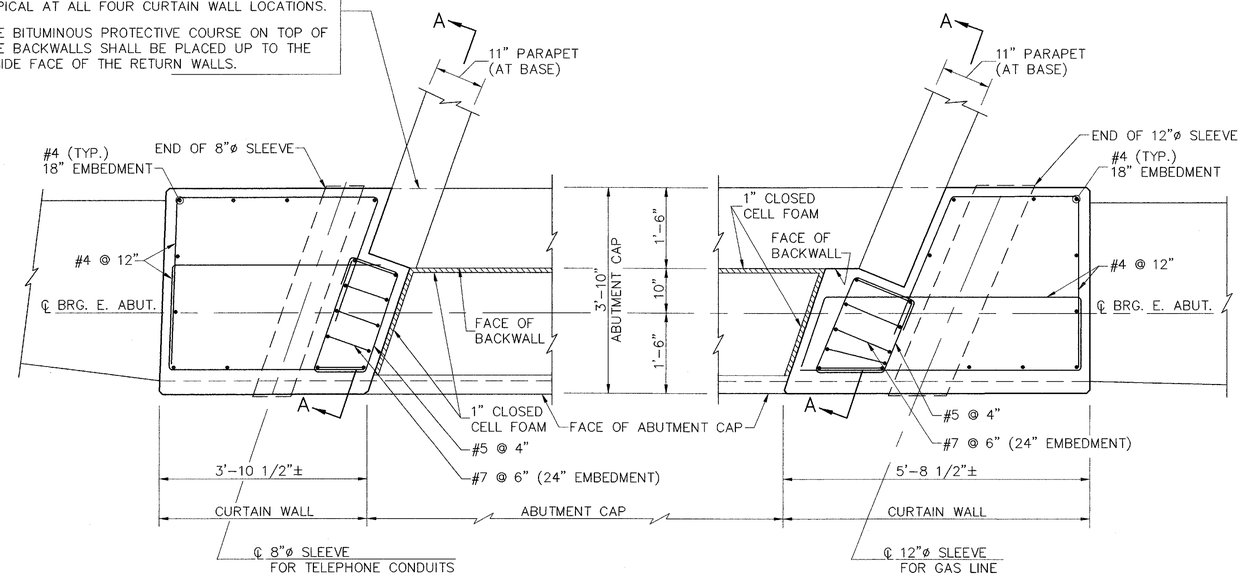
PRESTRESSED CONCRETE NOTES

1. THE DESIGN IS IN ACCORDANCE WITH STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, AASHTO 1992 AND INTERIM SPECS. 1993, FOR HS20–44 LOADING, AND LATEST REVISIONS TO THE MHD BRIDGE MANUAL
2. THE CONCRETE SHALL HAVE A MINIMUM 28–DAY COMPRESSIVE STRENGTH OF 6000 PSI (POUNDS PER SQUARE INCH), AND A MINIMUM COMPRESSIVE STRENGTH AT TRANSFER, SHOWN BY A CYLINDER TEST, SHALL BE 4000 P.S.I.
3. PRESTRESSING STRANDS SHALL CONSIST OF HIGH STRENGTH 7–WIRE UNCOATED, STRESS RELIEVED, LOW RELAXATION STEEL STRANDS HAVING A NOMINAL 1/2" DIAMETER CONFORMING TO (AASHTO M 203) ASTM A 416 GRADE 270, AND HAVING A MINIMUM ULTIMATE STRENGTH OF 270,000 P.S.I. THE TENSILE FORCE APPLIED TO EACH STRAND SHALL BE 30,980 POUNDS.
4. LATERAL TIES SHALL CONSIST OF PRESTRESSING STRANDS AS DESCRIBED ABOVE. LATERAL TIES SHALL BE INCLUDED IN THE UNIT PRICE FOR PRESTRESSED CONCRETE DECK UNITS. DO NOT BURN OFF STRAND LESS THAN 1 1/4" FROM THE END OF THE CHUCK.
5. NON–PRESTRESSED REINFORCEMENT SHALL BE EPOXY COATED GRADE 60 CONFORMING TO TO ASTM A615, "DEFORMED BILLET STEEL BARS FOR CONCRETE REINFORCEMENT".
6. ALL EXPOSED CORNERS SHALL BE CHAMFERED 3/4 INCH.
7. ANY STRUCTURAL MEMBERS DAMAGED TO THE DEGREE OF REDUCING THEIR STRUCTURAL CAPACITY SHALL BE REJECTED AND REPLACED AT THE CONTRACTOR'S EXPENSE. ALL CRACKED MEMBERS, DUE TO FABRICATION, TRANSPORTATION OR ERECTION, SHALL BE REJECTED AND REPLACED.
8. IN HANDLING, THE BEAMS MUST BE MAINTAINED IN AN UPRIGHT POSITION AT ALL TIMES, AND MUST BE PICKED UP ONLY BY MEANS OF APPROVED LIFTING DEVICES AT THEIR SUPPORT POINTS.
9. DIMENSIONAL TOLERANCES SHALL NOT EXCEED THOSE RECOMMENDED IN THE LATEST EDITION OF THE PCI MANUAL FOR QUALITY CONTROL FOR PLANTS AND PRODUCTION OF PRECAST PRESTRESSED CONCRETE PRODUCTS.
10. ALL SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER IN SUFFICIENT TIME TO PERMIT CAREFUL CHECKING.
11. ALL PRESTRESSING STEEL AND REINFORCING BARS SHALL BE SECURELY TIED TO PREVENT DISLOCATION.
12. THE PRECASTING FABRICATOR SHALL BE RESPONSIBLE FOR DESIGNING, FURNISHING, AND INSTALLING ALL INSERTS, ANCHORS, AND ITEMS REQUIRED TO BE CAST INTO THE PRECAST PRESTRESSED UNITS. ALL ITEMS SHALL BE SHOWN ON THE FABRICATION DRAWINGS. PRECAST UNITS SHALL NOT BE FIRED OR DRILLED INTO FOR ATTACHMENT PURPOSES. THE FABRICATOR SHALL BE FULLY RESPONSIBLE FOR THE DESIGN OF THE LIFTING DEVICES WHICH SHALL BE ADEQUATE FOR THE SAFETY FACTORS REQUIRED BY THE ERECTION PROCESS.
13. MORTAR FOR LONGITUDINAL BUTT JOINTS OF PRESTRESSED CONCRETE DECK BEAMS SHALL CONFORM TO SECTION M4.04.0 OF THE MASSACHUSETTS STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGES, 1988.
14. SIDEWALK SECTIONS SHALL NOT BE POURED UNTIL AFTER THE LONGITUDINAL JOINTS HAVE BEEN MORTARED AND THE MORTAR HAS SET.
15. KEYS SHALL BE OMITTED FROM EXTERIOR FACES OF OUTSIDE BEAMS.
16. THE TOP OF BEAMS B–1 & B–11 SHALL RECEIVE A RAKED FINISH IN THE AREAS UNDER THE SIDEWALK. THE TOP OF ALL OTHER BEAMS SHALL BE GIVEN A SMOOTH FINISH.
17. FOR SIDEWALK REINFORCEMENT IN BEAMS B–1, B–2, B–10, AND B–11, REFER TO SHEET No. 11.
18. FOR LOCATION OF 3/4"ø CONCRETE INSERTS ON BEAMS B–1 AND B–11, REFER TO SHEET No. 11.

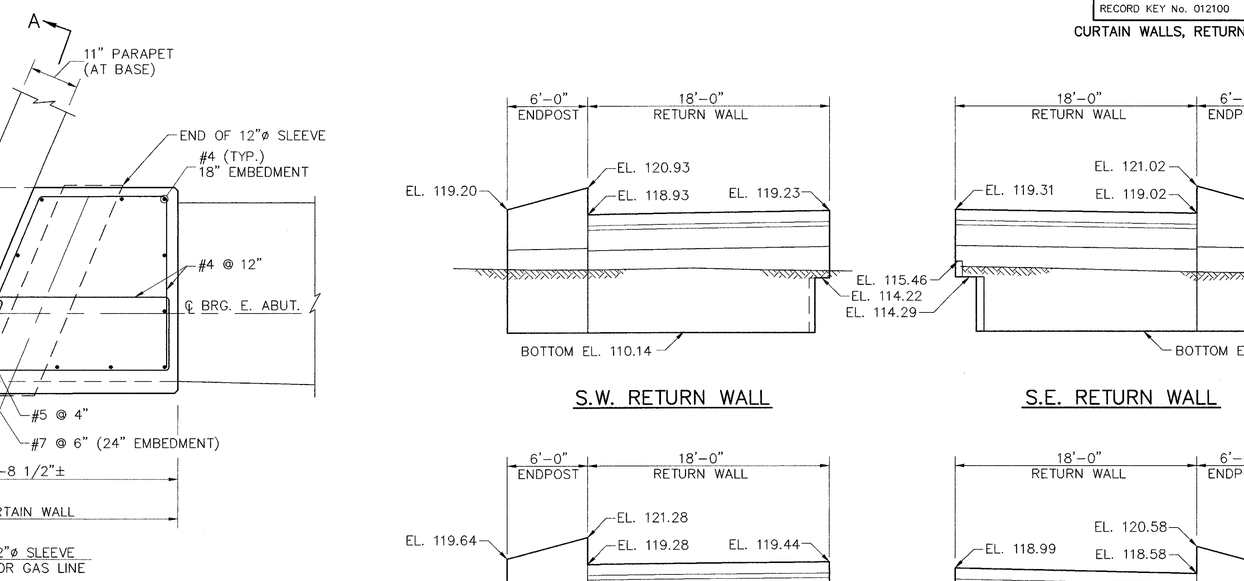
12-30-95	ISSUED FOR CONSTRUCTION
DATE	DESCRIPTION
USE ONLY PRINTS OF LATEST DATE	

THE CONCRETE BACKWALL SHALL CONTINUE UNDERNEATH THE RETURN WALL, AND SHALL BE CAST AGAINST THE CURTAIN WALLS. THIS IS TYPICAL AT ALL FOUR CURTAIN WALL LOCATIONS.

THE BITUMINOUS PROTECTIVE COURSE ON TOP OF THE BACKWALLS SHALL BE PLACED UP TO THE INSIDE FACE OF THE RETURN WALLS.

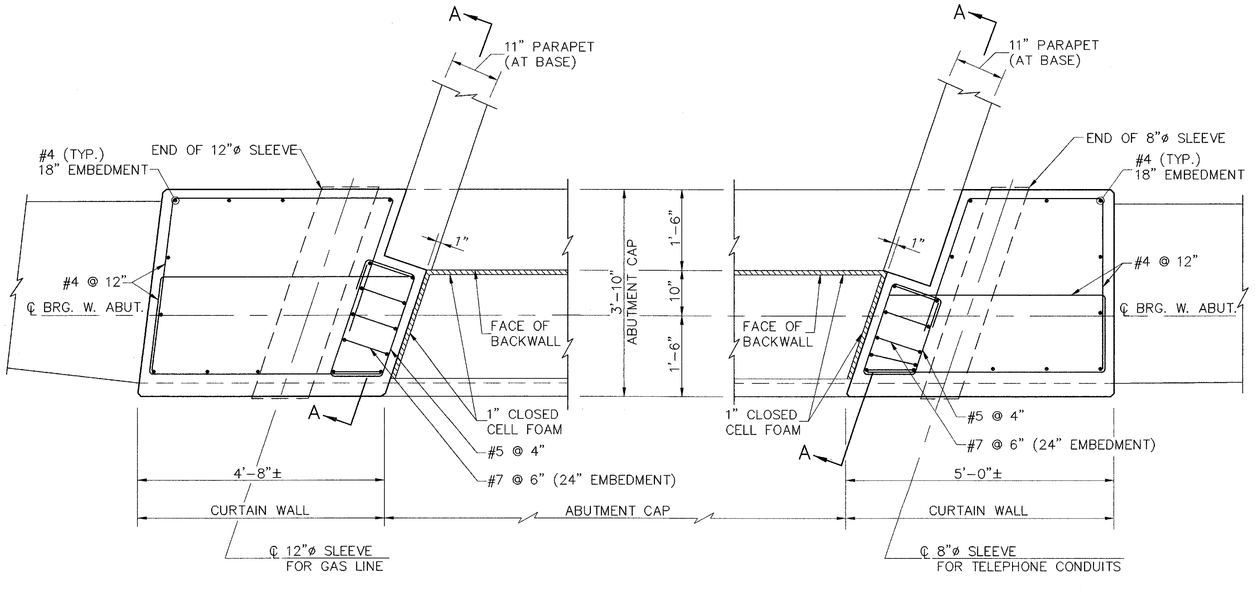


ENLARGED DETAIL 'A'
N.E. CORNER

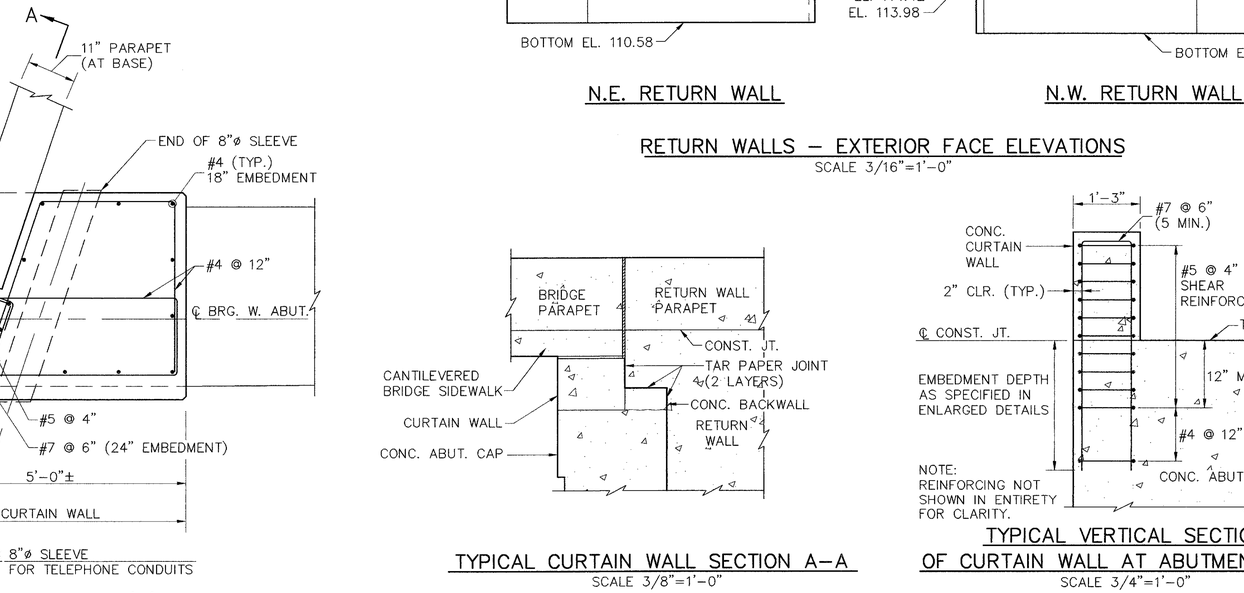


ENLARGED DETAIL 'B'
S.E. CORNER

EAST ABUTMENT



ENLARGED DETAIL 'C'
S.W. CORNER



ENLARGED DETAIL 'D'
N.W. CORNER

WEST ABUTMENT

CURTAIN WALL DETAILS
SCALE 3/4"=1'-0"

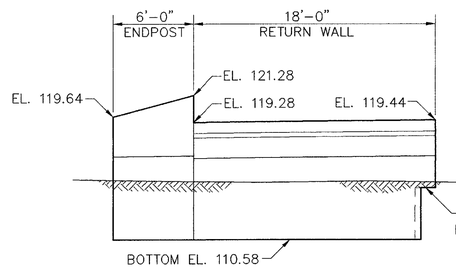
MIDDLEBOROUGH
CENTRE STREET

STATE	FED. AID. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
MASS	BHM-3639(001)X	1996	20	33
RECORD KEY No. 012100				

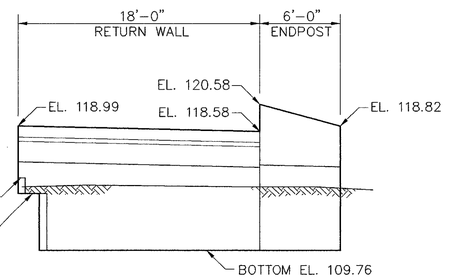
CURTAIN WALLS, RETURN WALLS, & DETAILS

S.W. RETURN WALL

S.E. RETURN WALL



N.E. RETURN WALL



N.W. RETURN WALL

RETURN WALLS – EXTERIOR FACE ELEVATIONS
SCALE 3/16"=1'-0"

TYPICAL CURTAIN WALL SECTION A–A
SCALE 3/8"=1'-0"

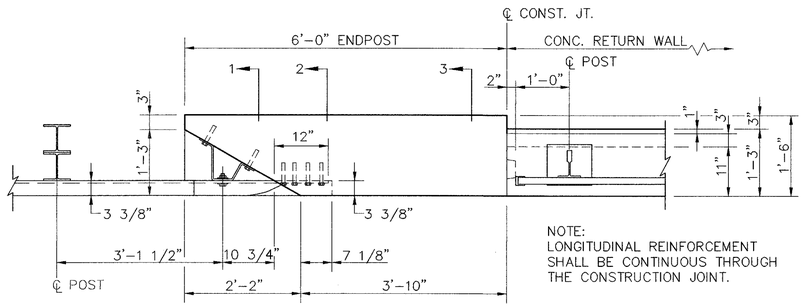
TYPICAL VERTICAL SECTION
OF CURTAIN WALL AT ABUTMENT ENDS
SCALE 3/4"=1'-0"

DATE	DESCRIPTION
12-30-95	ISSUED FOR CONSTRUCTION
USE ONLY PRINTS OF LATEST DATE	

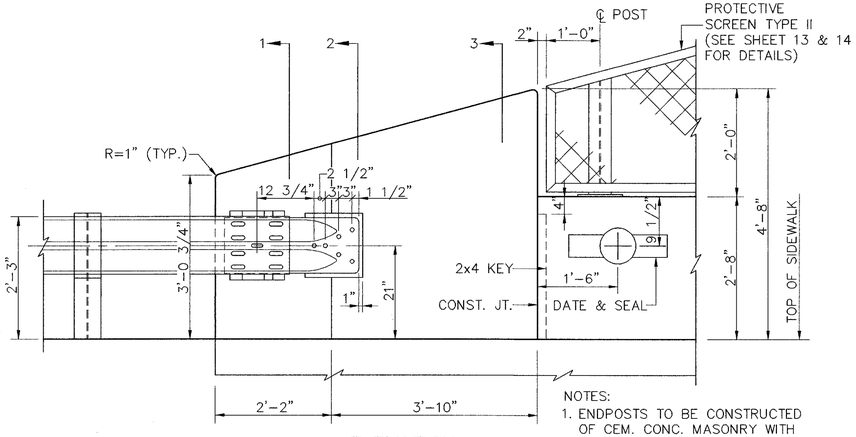
MIDDLEBOROUGH
CENTRE STREET

STATE	FED. AID. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
MASS	BHM-3639(001)X	1996	21	33
RECORD KEY No. 012100				

ENDPOST DETAILS & EXISTING BRIDGE DETAILS

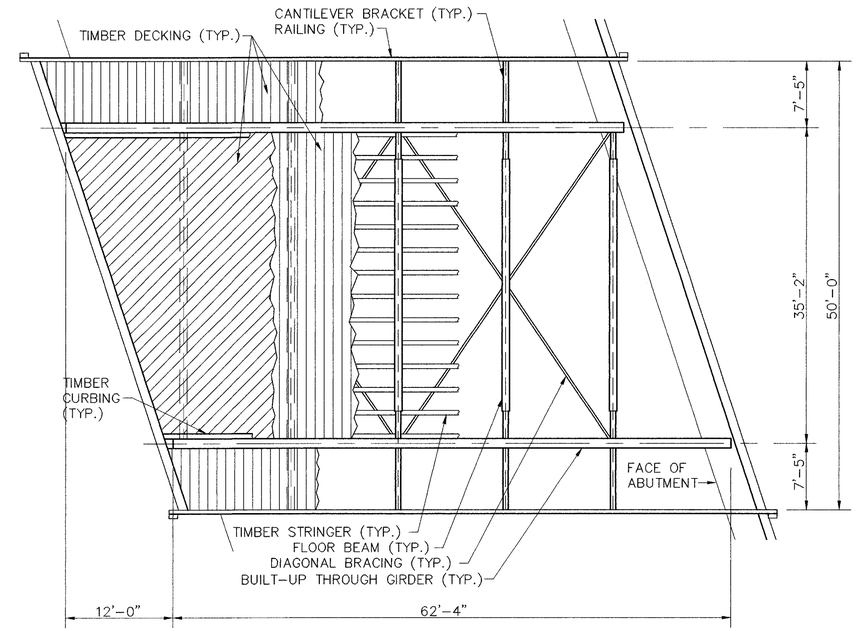


PLAN

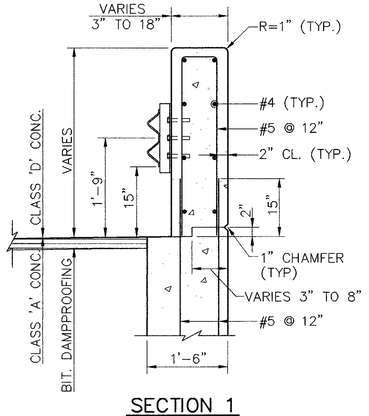


NOTES:
1. ENDPOSTS TO BE CONSTRUCTED OF CEM. CONC. MASONRY WITH SILICA FUME ADDITIVE.
2. FOR DETAIL OF ENDPOST WALL, REFER TO SHEET No. 11.

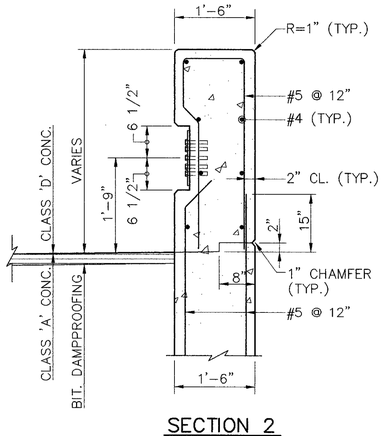
ELEVATION



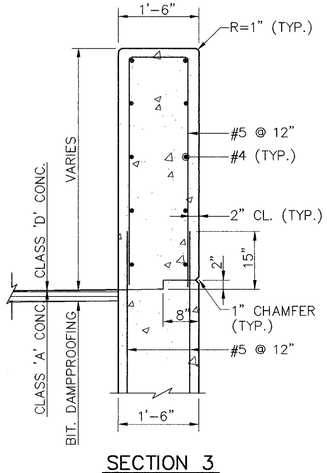
PLAN VIEW – EXISTING BRIDGE
SCALE 1/8"=1'-0"



SECTION 1

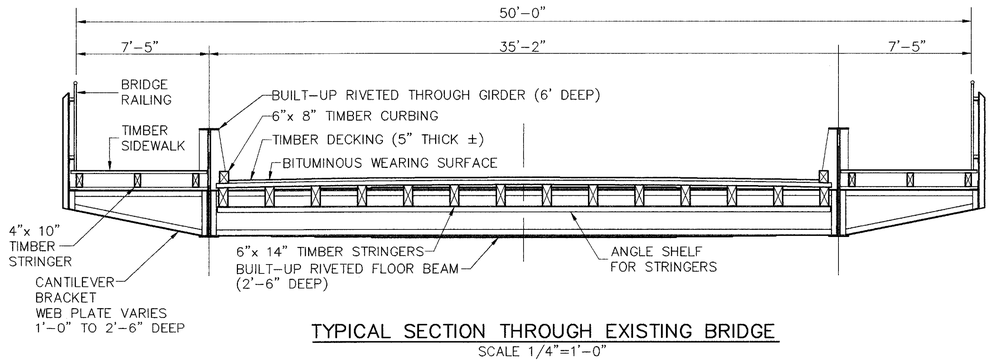


SECTION 2



SECTION 3

END POST DETAIL
TRANSITION FROM HIGHWAY GUARDRAIL
TO PARAPET
SCALE 3/4"=1'-0"



TYPICAL SECTION THROUGH EXISTING BRIDGE
SCALE 1/4"=1'-0"

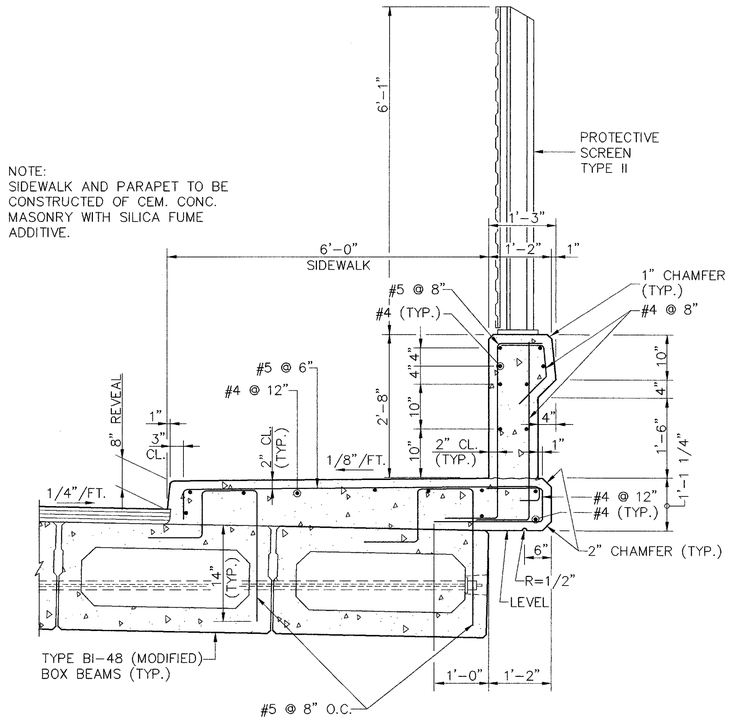
NOTE:
EXISTING SUPERSTRUCTURE PLANS ARE
AVAILABLE UPON REQUEST.

DATE	DESCRIPTION
12-30-95	ISSUED FOR CONSTRUCTION
USE ONLY PRINTS OF LATEST DATE	

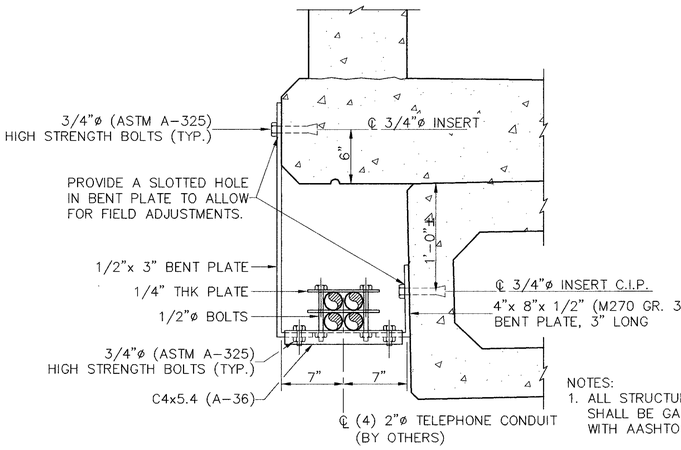
MIDDLEBOROUGH
CENTRE STREET

STATE	FED. AID. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
MASS	BHM-3639(001)X	1996	22	33
RECORD KEY No. 012100				

SIDEWALK SECTION, WALL SECTIONS, AND MISC. DETAILS



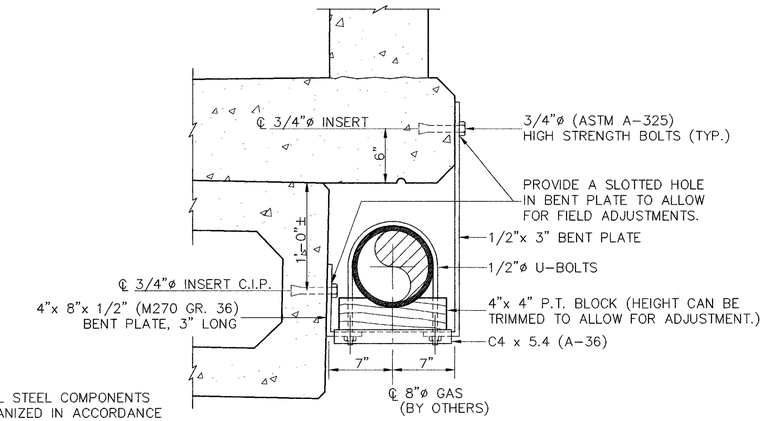
SECTION THROUGH SIDEWALK
SCALE 3/4"=1'-0"



NORTH SIDE OF BRIDGE

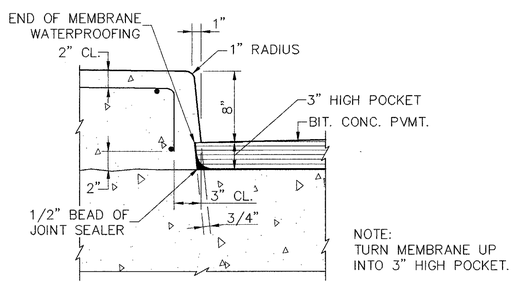
NOTES:
1. ALL STRUCTURAL STEEL COMPONENTS SHALL BE GALVANIZED IN ACCORDANCE WITH AASHTO M111 AND M232.
2. FOR LOCATION OF UTILITY SUPPORTS, REFER TO THE ELEVATION ON SHEET No. 4.

UTILITY SUPPORT DETAILS
SCALE 1 1/2"=1'-0"

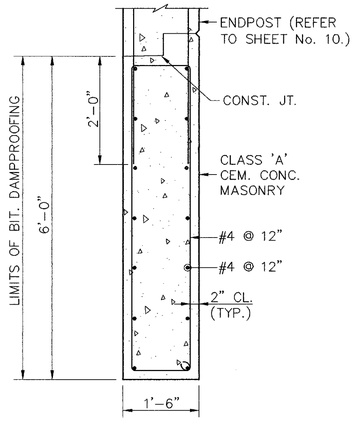


SOUTH SIDE OF BRIDGE

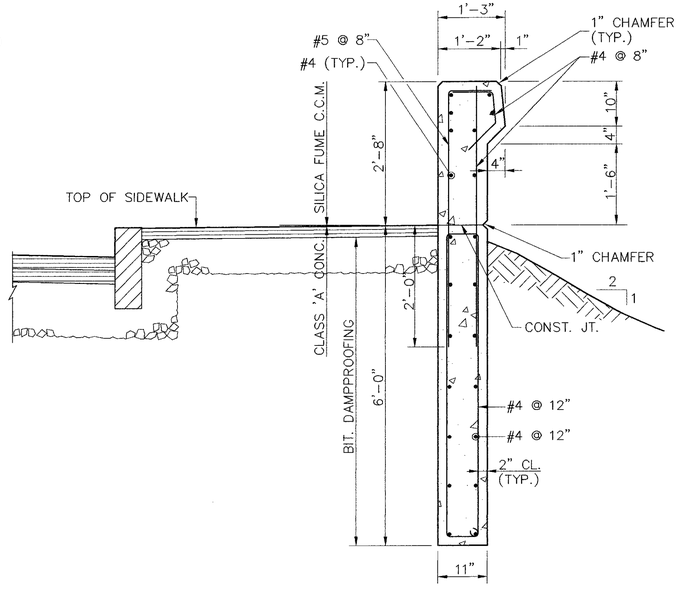
NOTE:
THE LOCATION OF THE 3/4"ø INSERT CAN VARY TO AVOID INTERFERENCE WITH PRESTRESSING STRANDS.



SIDEWALK CURB DETAIL
SCALE 1 1/2"=1'-0"



TYPICAL ENDPOST WALL SECTION
SCALE 3/4"=1'-0"

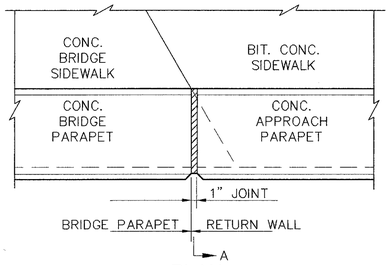


TYPICAL RETURN WALL SECTION
SCALE 3/4"=1'-0"

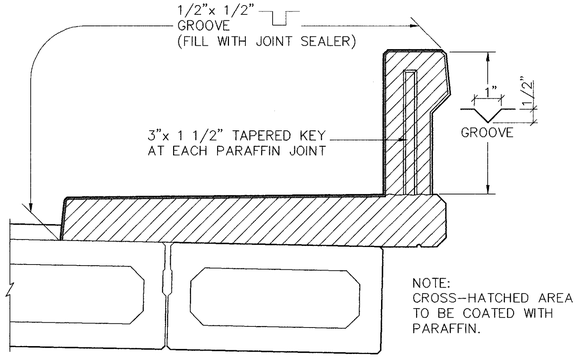
12-30-95	ISSUED FOR CONSTRUCTION
DATE	DESCRIPTION
USE ONLY PRINTS OF LATEST DATE	

STATE	FED. AID. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
MASS	BHM-3639(001)X	1996	23	33
RECORD KEY No. 012100				

JOINT DETAILS



PLAN

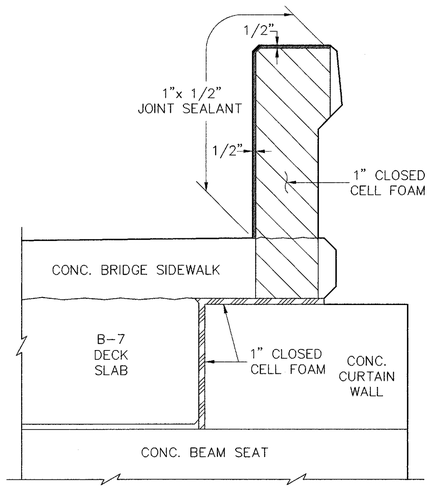


PARAFFIN JOINT DETAIL AT SIDEWALK

SCALE 3/4"=1'-0"

NOTES:

1. ALL CONCRETE CONSTRUCTION ABOVE THE DECK SLABS SHALL BE POURED IN ALTERNATE SECTIONS, AND SHALL HAVE A CURING PERIOD OF NOT LESS THAN 3 DAYS BETWEEN POURS.
2. END OF REINFORCING BARS TO BE 2" CLEAR OF JOINT
3. DO NOT CARRY LONGITUDINAL BARS THROUGH THE PARAFFIN JOINTS.
4. JOINT SEALER TO BE THE SAME COLOR AS THE CONCRETE.
5. JOINT TO BE SQUARE TO FACE OF COPING OR CURB.



SECTION A

TYPICAL JOINT DETAIL AT BRIDGE PARAPET

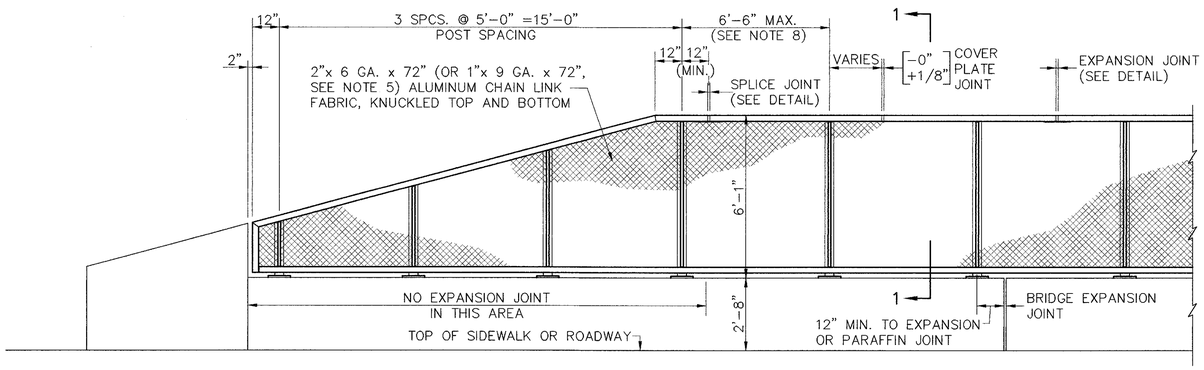
SCALE 1"=1'-0"

12-30-95	ISSUED FOR CONSTRUCTION
DATE	DESCRIPTION
USE ONLY PRINTS OF LATEST DATE	

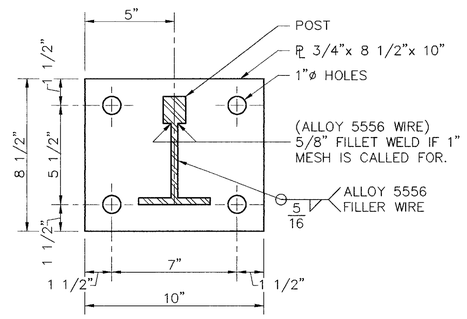
MIDDLEBOROUGH
CENTRE STREET

STATE	FED. AID. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
MASS	BHM-3639(001)X	1996	24	33
RECORD KEY No. 012100				

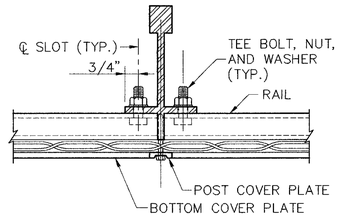
PROTECTIVE SCREEN TYPE II DETAILS



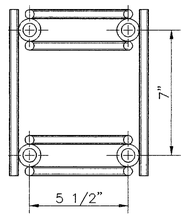
PROTECTIVE SCREEN ELEVATION
TAPERED END TO ENDPOST
SCALE 3/8"=1'-0"



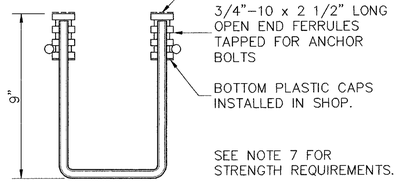
BASE PLATE DETAIL
SCALE 3"=1'-0"



SECTION 2-2
SCALE 3"=1'-0"



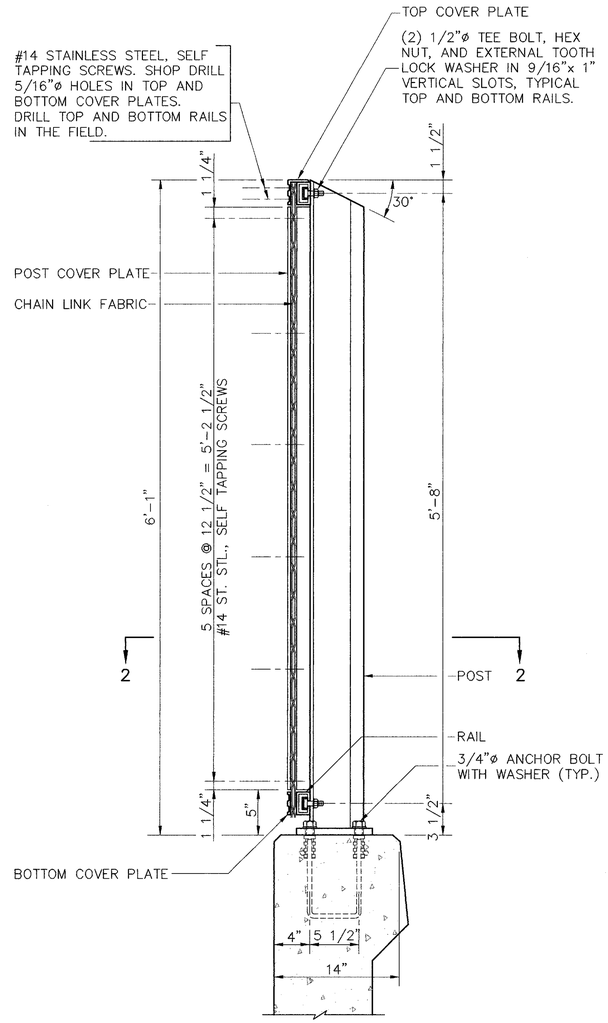
PLAN



GALVANIZED OR ELECTROPLATE FINISH

ELEVATION

ANCHOR CAGE
SCALE 3"=1'-0"



SECTION 1-1
SCALE 1 1/2"=1'-0"

GENERAL NOTES:

1. RAILS SHALL BE CONTINUOUS OVER A MINIMUM OF FOUR POSTS, IF POSSIBLE.
2. RAILS SHALL HAVE AN EXPANSION JOINT IN THE PANEL OVER A BRIDGE EXPANSION JOINT.
3. THE BOTTOM OF POST BASE PLATE IS TO BE SET ON A BED OF ALUMINUM IMPREGNATED CAULKING COMPOUND, AND SEALED AROUND THE EDGES.
4. THE CHAIN LINK FABRIC SHALL BE CUT TO MATCH TAPER. THE INTEGRITY OF THE FABRIC SHALL BE SECURED BY KNUCKLING TOGETHER THE CUT ENDS OF THE FABRIC WIRE IN A MANNER SIMILAR TO THE ORIGINALLY MANUFACTURED END.
5. THE SCREEN END TREATMENT TO BE USED, AND CHAIN LINK FABRIC SIZE, ARE SPECIFIED ELSEWHERE ON THE CONSTRUCTION DRAWINGS.
6. WHERE THE R.O.W. FENCE MUST MEET THE SCREEN, USE THE NON-TAPERED END DETAIL AND OMIT END POST.
7. THE ANCHOR CAGE SHALL BE PREQUALIFIED BY THE MANUFACTURER AS CAPABLE OF DEVELOPING 40,000 POUNDS OF TENSION ON TWO BOLTS AND 20,000 POUNDS SHEAR FORCE ON FOUR BOLTS IN 4,000 PSI CONCRETE WITH 3" MIN. EDGE DISTANCE.
8. POST SPACING SHALL BE UNIFORM BETWEEN TAPERED ENDS.
9. SET POSTS PERPENDICULAR TO GRADE FOR GRADES UP TO 1.5%. SET POSTS PLUMB FOR GRADES GREATER THAN 1.5%.

FINISHES

POSTS, RAILS, COVER PLATES AND SPLICE PLATES SHALL RECEIVE A DARK BRONZE ANODIZED FINISH.

CHAIN LINK FABRIC SHALL RECEIVE A 4±1 MIL POLYESTER POWDER COAT FINISH. COLOR SHALL MATCH EXTRUSION ANODIZING.

#14 SCREWS TO BE COLORED TO MATCH THE ANODIZED EXTRUSIONS.

MATERIALS

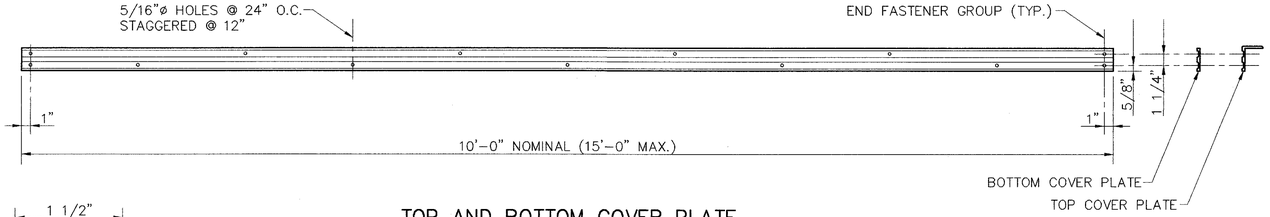
EXTRUSIONS & PLATES:	ASTM B 221, ALLOY 6061-T6
CHAIN LINK FABRIC:	ASTM B 221, ALLOY 6061-T94
SELF-TAPPING SCREWS:	TYPE 302 OR 304 STAINLESS STEEL
ANCHOR BOLTS:	ASTM A 325 GALVANIZED
TEE BOLTS:	ASTM A 307 GALVANIZED OR TYPE 304 STAINLESS STEEL

12-30-95	ISSUED FOR CONSTRUCTION
DATE	DESCRIPTION
USE ONLY PRINTS OF LATEST DATE	

MIDDLEBOROUGH
CENTRE STREET

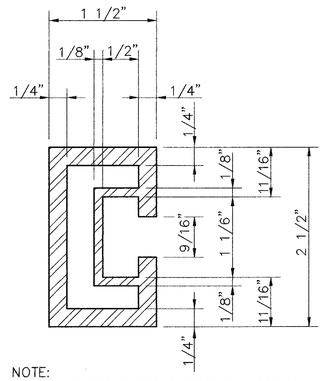
STATE	FED. AID. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
MASS	BHM-3639(001)X	1996	25	33
RECORD KEY No. 012100				

PROTECTIVE SCREEN TYPE II DETAILS



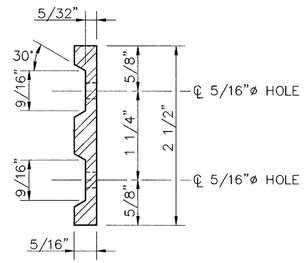
TOP AND BOTTOM COVER PLATE
SCALE 1 1/2"=1'-0"

COVER PLATE NOTES:
1. COVER PLATES MAY BE CONTINUOUS OVER A RAIL SPLICE. COVER PLATES SHALL BE FIELD CUT AS REQUIRED TO CLEAR THE EXPANSION JOINT. SEE EXPANSION JOINT DETAIL.
2. IF THE FIELD CUT END OF A COVER PLATE IS WITHIN 3" FROM AN EXISTING 5/16"ø HOLE, FIELD DRILL A COMPLIMENTARY 5/16"ø HOLE TO FORM THE END FASTENER GROUP. OTHERWISE FIELD DRILL BOTH 5/16"ø HOLES OF THE END FASTENER GROUP.
3. FIELD PAINT THE FIELD CUT ENDS OF THE COVER PLATES TO MATCH THE ANODIZED COLOR.

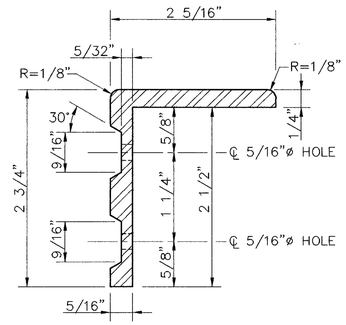


NOTE:
OTHER CONFIGURATIONS OF THE INTERNAL WALLS OF THE RAIL EXTRUSION MAY BE SUBMITTED FOR APPROVAL.

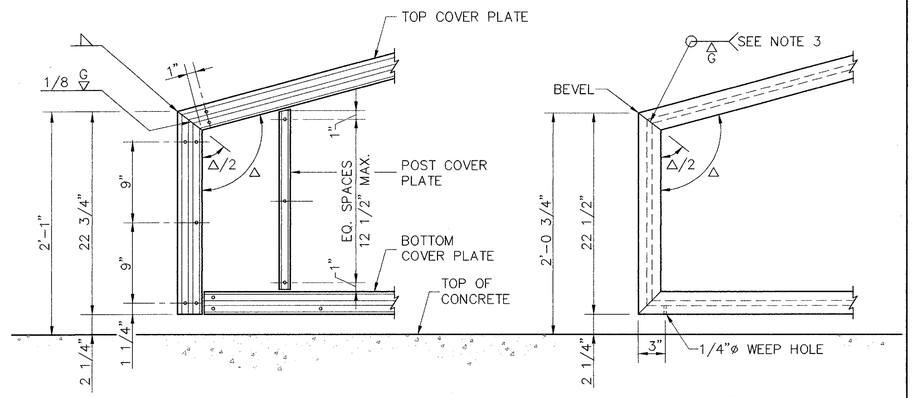
RAIL EXTRUSION
FULL SCALE



BOTTOM COVER PLATE EXTRUSION
FULL SCALE



TOP COVER PLATE EXTRUSION
FULL SCALE

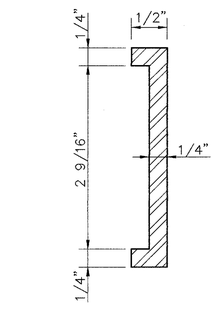


COVER PLATE DETAILS

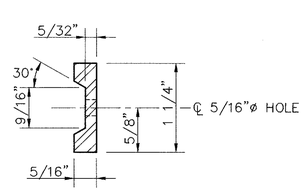
RAIL DETAILS

NOTES:
1. WELDING OF TOP COVER PLATE AND RAILS OF NON-TAPERED END IS SIMILAR.
2. WELDS AND MITERING TYPICAL FOR ALL ANGLED CORNERS.
3. WELD TYPICAL FOR TOP AND BOTTOM END CORNERS OF RAIL. INTERRUPT WELD AT SLOT IN BACK OF RAIL.

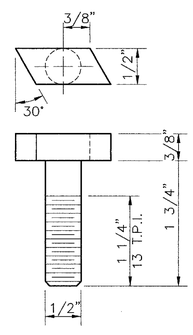
TAPERED END DETAILS
SCALE 1 1/2"=1'-0"



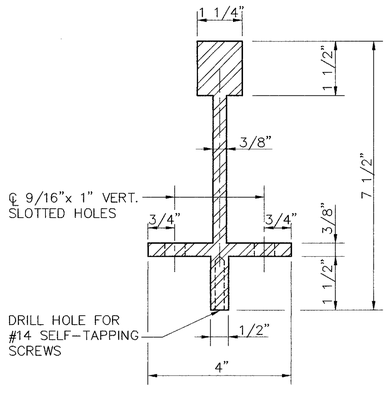
SPLICE PLATE EXTRUSION
FULL SCALE



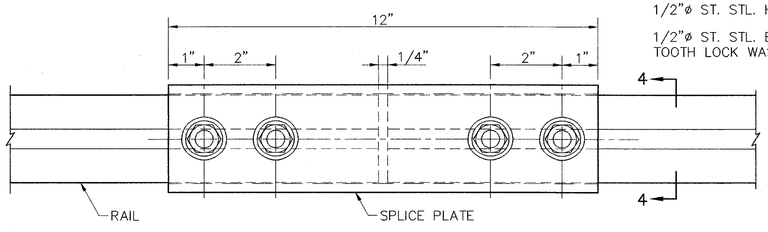
POST COVER PLATE EXTRUSION
FULL SCALE



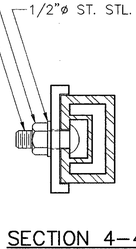
TEE BOLT
FULL SCALE



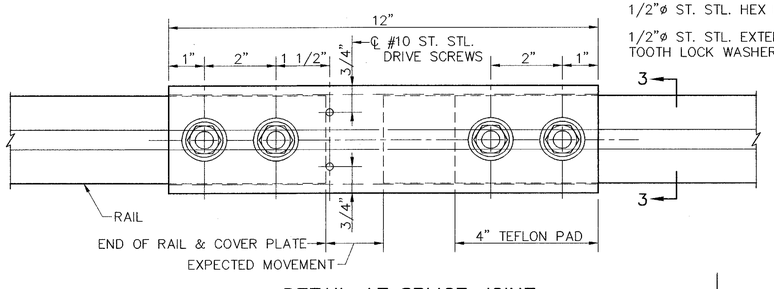
POST EXTRUSION
HALF SCALE



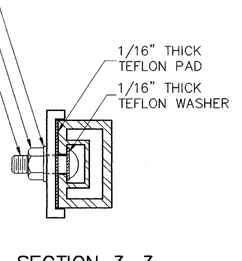
DETAIL AT SPLICE JOINT
HALF SCALE



SECTION 4-4



DETAIL AT SPLICE JOINT
HALF SCALE

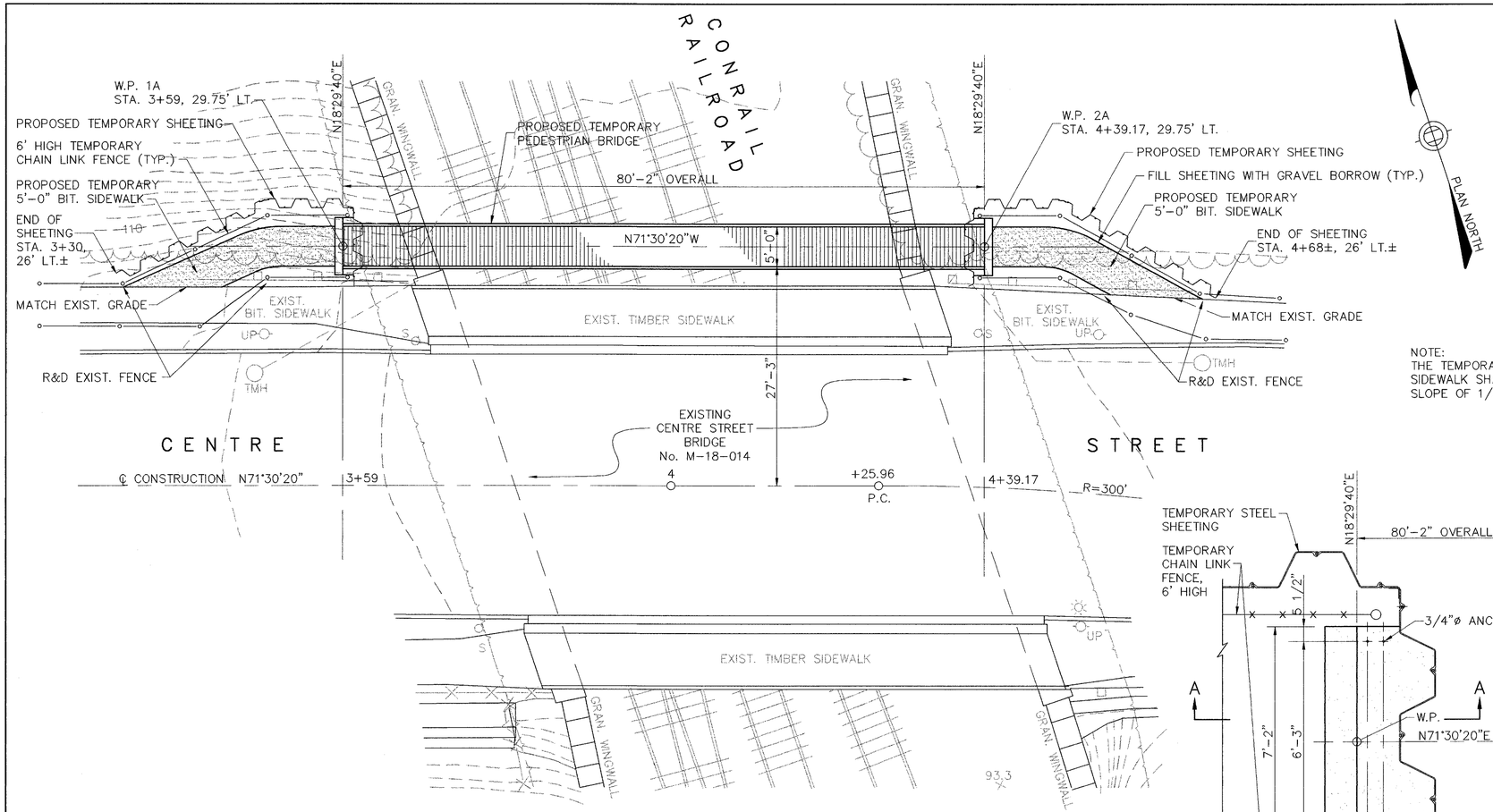


SECTION 3-3

DATE	DESCRIPTION
12-30-95	ISSUED FOR CONSTRUCTION
USE ONLY PRINTS OF LATEST DATE	

MIDDLEBOROUGH
CENTRE STREET

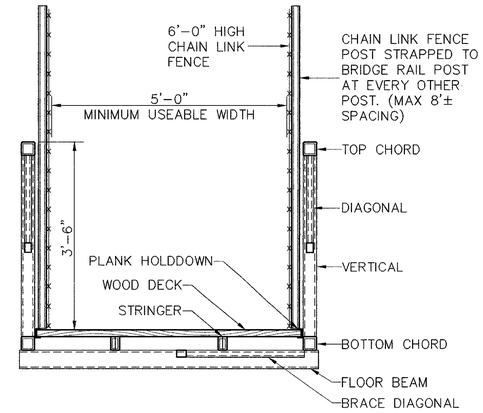
STATE	FED. AID. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
MASS	BHM-3639(001)X	1996	26	33
RECORD KEY No. 012100				



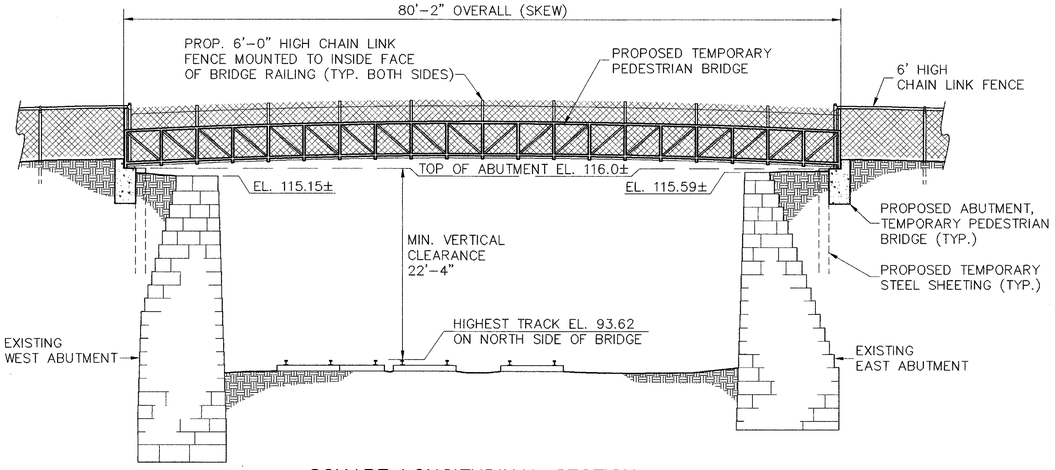
PLAN VIEW
SCALE 1/8"=1'-0"

NOTE:
THE TEMPORARY BITUMINOUS SIDEWALK SHALL HAVE A MAXIMUM SLOPE OF 1/20.

TEMPORARY PEDESTRIAN BRIDGE

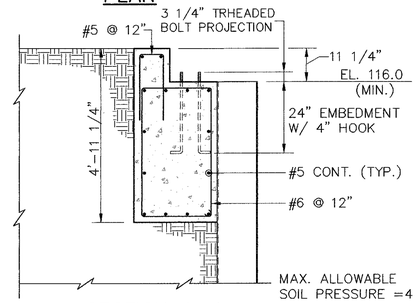


TYPICAL TEMPORARY PEDESTRIAN BRIDGE SECTION
SCALE 3/4"=1'-0"



SQUARE LONGITUDINAL SECTION
SCALE 1/8"=1'-0"

PLAN



SECTION A-A

TYPICAL ABUTMENT DETAILS
SCALE 1/2"=1'-0"

DESIGN NOTES:

1. PEDESTRIAN LIVE LOAD =85 PSF.
2. THE STRUCTURE SHALL, AS A MINIMUM, BE CAMBERED FOR DEAD LOAD AND LIVE LOAD.
3. THE TEMPORARY BRIDGE SHALL HAVE A MINIMUM USEABLE WIDTH OF 5'-0" TO MEET HANDICAPPED ACCESSIBILITY REQUIREMENTS.

GENERAL NOTES:

1. THE BRIDGE SKETCH SHOWN IS SCHEMATIC ONLY FOR A SPECIFIC BRIDGE TYPE. THE CONTRACTOR SHALL SUBMIT HIS/HER RECOMMENDED DESIGN FOR APPROVAL BY THE ENGINEER.
2. REFER TO ITEM CODE 995.99, TEMPORARY PEDESTRIAN BRIDGE, FOR JOB SPECIFICS.
3. REFER TO THE TRAFFIC MANAGEMENT PLAN SHEET FOR COORDINATION OF ROADWAY CLOSURE.

CONSTRUCTION SEQUENCE:

1. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR THE TEMP. STEEL SHEET AND TEMP. PEDESTRIAN BRIDGE TO THE ENGINEER FOR APPROVAL.
2. UPON APPROVAL, THE CONTRACTOR MAY PROCEED WITH THE ROADWAY CLOSURE AND INSTALLATION OF TEMPORARY FENCING TO SECURE THE BRIDGE SITE.
3. THE EXISTING VEGETATION AND FENCE SHALL BE REMOVED AS NEEDED TO INSTALL THE TEMPORARY STEEL SHEETING. THE RELOCATION OF OVER-HEAD UTILITIES SHALL BE COORDINATED WITH THE UTILITY COMPANIES.
4. THE CONTRACTOR SHALL DRIVE THE SHEETING, BACKFILL WITH GRAVEL BORROW, AND INSTALL CONCRETE ABUTMENTS.
5. THE TEMPORARY PEDESTRIAN BRIDGE IS TO BE SET ON THE ABUTMENTS AND SECURED TO FOUNDATIONS.
6. COMPLETE THE REMAINING CHAIN LINK FENCE AND BIT. SIDEWALKS TO THE TEMPORARY BRIDGE APPROACHES TO PROVIDE SAFE PEDESTRIAN ACCESS THROUGH THE CONSTRUCTION SITE.
7. THE CONTRACTOR SHALL PROCEED WITH THE BRIDGE REPLACEMENT AS DETAILED IN THE PLANS.
8. UPON COMPLETION OF THE NEW BRIDGE AND REMOVAL OF THE TEMPORARY FENCING, THE CONTRACTOR SHALL REMOVE THE TEMPORARY STEEL SHEETING, THE TEMPORARY PEDESTRIAN BRIDGE, CONCRETE ABUTMENTS, AND GRAVEL FILL.
9. THE SITE, INCLUDING SLOPES, SHALL BE RESTORED TO ITS ORIGINAL CONDITION.

12-30-95	ISSUED FOR CONSTRUCTION
DATE	DESCRIPTION
USE ONLY PRINTS OF LATEST DATE	

STRUCTURES INSPECTION FIELD REPORT

ROUTINE INSPECTION

2-DIST	B.I.N.	BR. DEPT. NO.
05	4BX	M-18-014

CITY/TOWN	8.-STRUCTURE NO.	11-Kilo. POINT	41-STATUS	90-ROUTINE INSP. DATE
MIDDLEBOROUGH	M18014-4BX-DOT-634	000.000	A:OPEN	JAN 9, 2025

07-FACILITY CARRIED	MEMORIAL NAME/LOCAL NAME	27-YR BUILT	106-YR REBUILT	YR REHAB'D (NON 106)
HWY CENTER ST	SGT WILLIAM M. SMITH	1899	1997	0000

06-FEATURES INTERSECTED	26-FUNCTIONAL CLASS	DIST. BRIDGE INSPECTION ENGINEER
RR MBTA/CSX	Urban Minor Arterial	G. Simpson

43-STRUCTURE TYPE	22-OWNER	21-MAINTAINER	TEAM LEADER
505 : Prestressed Concrete Box Beam or Girders - Multiple	State Highway Agency	State Highway Agency	J. Spiezio

107-DECK TYPE	WEATHER	TEMP. (air)	TEAM MEMBERS
2 : Concrete Precast Panels	Overcast	-5°C	A. DOWNING

ITEM 58 — DECK — 7

		DEF
1.Wearing surface	6	M-P
2.Deck Condition	7	M-P
3.Stay in Place Forms	N	-
4.Curbs	N	-
5.Median	N	-
6.Sidewalks	7	M-P
7.Parapets	7	M-P
8.Railing	N	-
9.Anti Missile Fence	6	M-P
10.Drainage System	N	-
11.Lighting Standards	N	-
12.Utilities	7	-
13.Deck Joints	N	-
14.	N	-
15.	N	-
16.	N	-

CURB REVEAL (In millimeters)	N	S
	196	190

APPROACHES

		DEF
a. Appr. pavement condition	6	S-A
b. Appr. Roadway Settlement	6	M-P
c. Appr. Sidewalk Settlement	5	S-P
d.	N	-

OVERHEAD SIGNS (Attached to bridge) (Y/N) N

		DEF
a. Condition of Welds	N	-
b. Condition of Bolts	N	-
c. Condition of Signs	N	-

ITEM 59 — SUPERSTRUCTURE — 7

		DEF
1.Stringers	N	-
2.Floorbeams	N	-
3.Floor System Bracing	N	-
4.Girders or Beams	7	M-P
5.Trusses - General	N	-
a. Upper Chords	N	-
b. Lower Chords	N	-
c. Web Members	N	-
d. Lateral Bracing	N	-
e. Sway Bracings	N	-
f. Portals	N	-
g. End Posts	N	-
6.Pin & Hangers	N	-
7.Conn Plt's, Gussets & Angles	N	-
8.Cover Plates	N	-
9.Bearing Devices	H	-
10.Diaphragms/Cross Frames	N	-
11.Rivets & Bolts	N	-
12.Welds	N	-
13.Member Alignment	7	-
14.Paint/Coating	N	-
15.	N	-

Year Painted	N

COLLISION DAMAGE: *Please explain*
None (X) Minor ( ) Moderate ( ) Severe ( )

LOAD DEFLECTION: *Please explain*
None (X) Minor ( ) Moderate ( ) Severe ( )

LOAD VIBRATION: *Please explain*
None (X) Minor ( ) Moderate ( ) Severe ( )

Any Fracture Critical Member: **(Y/N)** N

Any Cracks: **(Y/N)** N

ITEM 60 — SUBSTRUCTURE — 7

	Dive	Cur		DEF
1. Abutments			7	
a. Pedestals	N	N		-
b. Bridge Seats	N	H		-
c. Backwalls	N	H		-
d. Breastwalls	N	7		-
e. Wingwalls	N	7		M-P
f. Slope Paving/Rip-Rap	N	N		-
g. Pointing	N	7		-
h. Footings	N	H		-
i. Piles	N	N		-
j. Scour	N	N		-
k. Settlement	N	7		-
l.	N	N		-
m.	N	N		-
2. Piers or Bents			N	
a. Pedestals	N	N		-
b. Caps	N	N		-
c. Columns	N	N		-
d. Stems/Webs/Pierwalls	N	N		-
e. Pointing	N	N		-
f. Footing	N	N		-
g. Piles	N	N		-
h. Scour	N	N		-
i. Settlement	N	N		-
j.	N	N		-
k.	N	N		-
3. Pile Bents			N	
a. Pile Caps	N	N		-
b. Piles	N	N		-
c. Diagonal Bracing	N	N		-
d. Horizontal Bracing	N	N		-
e. Fasteners	N	N		-

UNDERMINING (Y/N) If YES please explain N

COLLISION DAMAGE:
None (X) Minor ( ) Moderate ( ) Severe ( )

SCOUR: *Please explain*
None (X) Minor ( ) Moderate ( ) Severe ( )

I-60 (Dive Report): N *I-60 (This Report):* 7

93B-U/W (DIVE) Insp 00/00/0000

X=UNKNOWN N=NOT APPLICABLE H=HIDDEN/INACCESSIBLE R=REMOVED

CITY/TOWN	B.I.N.	BR. DEPT. NO.	8.-STRUCTURE NO.	INSPECTION DATE
MIDDLEBOROUGH	**4BX**	**M-18-014**	**M18014-4BX-DOT-634**	**JAN 9, 2025**

ITEM 61 — CHANNEL & CHANNEL PROTECTION

N

	Dive	Cur	DEF
1.Channel Scour	N	N	-
2.Embankment Erosion	N	N	-
3.Debris	N	N	-
4.Vegetation	N	N	-
5.Utilities	N	N	-
6.Rip-Rap/Slope Protection	N	N	-
7.Aggradation	N	N	-
8.Fender System	N	N	-

STREAM FLOW VELOCITY:

Tidal ( ) High ( ) Moderate ( ) Low ( ) None (**X**)

ITEM 61 (Dive Report): **N** ***ITEM 61 (This Report):*** **N**

93b-U/W INSP. DATE: 00/00/0000

ITEM 36 — *TRAFFIC SAFETY*

	36	COND	DEF
A. Bridge Railing	1	7	M-P
B. Transitions	0	7	-
C. Approach Guardrail	0	7	-
D. Approach Guardrail Ends	0	7	-

WEIGHT POSTING

Not Applicable **X**

	H	3	3S2	Single
Actual Posting	N	N	N	N
Recommended Posting	N	N	N	N

Waived Date: 00/00/0000 **EJDMT Date:** 00/00/0000

Signs In Place (Y=Yes,N=No, NR=NotRequired) **Legibility/ Visibility**	At bridge E	At bridge W	Other Advance E	Other Advance W

CLEARANCE POSTING

Not **X**

Actual Field Measurement

Posted Clearance

	N ft	N in	S ft	S in	meter
Actual Field Measurement	20	1	20	0	6.09
Posted Clearance		0		0	

Signs In Place (Y=Yes,N=No, NR=Not Required) **Legibility/ Visibility**	At bridge N	At bridge S	Advance N	Advance S

ACCESSIBILITY (Y/N/P)

	Needed	Used
Lift Bucket	N	N
Ladder	P	Y
Boat	N	N
Waders	N	N
Inspector 50	N	N
Rigging	N	N
Staging	N	N
Traffic Control	N	N
RR Flagger	Y	Y
Police	N	N
Other:		
	N	N

TOTAL HOURS 24

PLANS (Y/N): **Y**

(V.C.R.) (Y/N): **N**

TAPE#: _____

List of field tests performed:

Visual and Tactile.

RATING

Rating Report (Y/N): **Y**

Date: 04/01/2001

Inspection data at time of existing rating

I 58: **9** I 59: **9** I 60: **8** Date : 11/02/1999

Recommend for Rating or Rerating (Y/N): **N**

If YES please give priority: HIGH ( ) MEDIUM ( ) LOW ( )

REASON: _____

CONDITION RATING GUIDE

(For Items 58, 59, 60 and 61)

	CODE	CONDITION	DEFECTS
	N	NOT APPLICABLE	
G	9	EXCELLENT	Excellent condition.
G	8	VERY GOOD	No problem noted.
G	7	GOOD	Some minor problems.
F	6	SATISFACTORY	Structural elements show some minor deterioration.
F	5	FAIR	All primary structural elements are sound but may have minor section loss, cracking, spalling or scour.
P	4	POOR	Advanced section loss, deterioration, spalling or scour.
P	3	SERIOUS	Loss of section, deterioration, spalling or scour have seriously affected primary structural components. Local failures are possible. Fatigue cracks in steel or shear cracks in concrete may be present.
C	2	CRITICAL	Advanced deterioration of primary structural elements. Fatigue cracks in steel or shear cracks in concrete may be present or scour may have removed substructure support. Unless closely monitored it may be necessary to close the bridge until corrective action is taken.
C	1	"IMMINENT" FAILURE	Major deterioration or section loss present in critical structural components or obvious vertical or horizontal movement affecting structure stablility. Bridge is closed to traffic but corrective action may put it back in light service.
	0	FAILED	Out of service - beyond corrective action.

DEFICIENCY REPORTING GUIDE

DEFICIENCY: A defect in a structure that requires corrective action.

CATEGORIES OF DEFICIENCIES:

M= Minor Deficiency Deficiencies which are minor in nature, generally do not impact the structural integrity of the bridge and could easily be repaired. Examples include but are not limited to: Spalled concrete, Minor pot holes, Minor corrosion of steel, Minor scouring, Clogged drainage, etc.

S= Severe/Major Deficiency Deficiencies which are more extensive in nature and need more planning and effort to repair. Examples include but are not limited to: Moderate to major deterioration in concrete, Exposed and corroded rebars, Considerable settlement, Considerable scouring or undermining, Moderate to extensive corrosion to structural steel with measurable loss of section, etc.

C-S= Critical Structural Deficiency A deficiency in a structural element of a bridge that poses an extreme unsafe condition due to the failure or imminent failure of the element which will affect the structural integrity of the bridge.

C-H= Critical Hazard Deficiency A deficiency in a component or element of a bridge that poses an extreme hazard or unsafe condition to the public, but does not impair the structural integrity of the bridge. Examples include but are not limited to: Loose concrete hanging down over traffic or pedestrians, A hole in a sidewalk that may cause injuries to pedestrians, Missing section of bridge railing, etc.

URGENCY OF REPAIR:

I = Immediate- [Inspector(s) immediately contact District Bridge Inspection Engineer (DBIE) to report the Deficiency and to receive further instruction from him/her].

A = ASAP- [Action/Repair should be initiated by District Maintenance Engineer or the Responsible Party (if not a State owned bridge) upon receipt of the Inspection Report].

P = Prioritize- [Shall be prioritized by District Maintenance Engineer or the Responsible Party (if not a State owned bridge) and repairs made when funds and/or manpower is available].

CITY/TOWN	B.I.N.	BR. DEPT. NO.	8.-STRUCTURE NO.	INSPECTION DATE
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REMARKS

BRIDGE ORIENTATION

Orientation as follows:
- Center Street over the MBTA/CSX Railroad has east/west abutments.

- Bridge is located at RR mile marker 34.396.

- Beams numbered 1 - 11 from the north, see sketch 1.

GENERAL REMARKS

ACCESS

Vehicle staging along the SE embankment and underside access at end of SE fence with protection provided by Keolis RR flagger. Topside inspection performed from the safety of the sidewalks.

VERTICAL CLEARANCES

See sketch 1.

ITEM 58 - DECK

Item 58.1 - Wearing surface

Deficiencies as follows:
• Both lanes, FL x up to 1/4"W unsealed longitudinal reflective cracking with 1/8"W intermittent longitudinal cracking in the shoulders and along the centerline, see photo 1.

• FL x 6"W resonates hollow along both curbs when sounded.

• Rutting in the wheel paths, and minor road/sand debris accumulation along both curbs, see photo 1 and 2.

Item 58.2 - Deck Condition

See item 59.4 - Girders or Beams.

Item 58.6 - Sidewalks

Deficiencies as follows:

TOPSIDE

• Fine hairline - 1/16"W map cracking throughout both sidewalks.
• South sidewalk, hairline - 1/16"W diagonal (East End) and scattered transverse cracking, see photo 2.

• North sidewalk east end, an isolated diagonal hairline - 1/16"W crack.

UNDERSIDE

• Scattered minor hairline transverse cracks with efflorescence.

Item 58.7 - Parapets

Deficiencies as follows:
- Over the abutments, minor - moderate misalignment of bridge parapet in relation to the approach parapets at all 4 corners over the abutments with failed/separated/dried sealant, field measurements as follows:
- SE = 1-1/8", see photo 2.

- NE = 1".

- SW = 1".

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REMARKS

- NW = 15/16".

- Both parapets, scattered FL multiple hairline - 1/16"W vertical cracks with efflorescence and some graffiti at the SE exterior surface, see photo 7 as example and overview.

Item 58.9 - Anti Missile Fence
Deficiencies as follows:
- South fence over east abutment, detached top horizontal cover plate is protruding over the sidewalk.

- South fence near east abutment between 1st & 2nd posts from the east, 12" diameter hole, see photo 2.

- Both fences, several zip tie repairs at failed fastener locations throughout cover plates along both fences.

APPROACHES

Approaches a - Appr. pavement condition
Both approaches display deficiencies as follows:
• Away from the abutments both lanes, unsealed longitudinal, transverse, diagonal and irregular cracking up to 1/4"W, see photos 3 and 5 as examples and overviews.

• Over and away from the abutments, minor - moderate rutting in the wheel paths and minor road/sand debris accumulation along both curbs, see photos 3 and 5 as examples and overviews.

• S/A - Over both abutments, curb to curb debris impacted unsealed transverse cracking/impending potholes up to 4"W x 4"D exposing top of beams. Cracks are widest near the shoulders, see photos 1, 4 and 6 for examples and overviews.

• S/A, evidence of active moderate - heavy leakage, predominantly below curbs and over both abutments, see photos 7 - 12 and 14.

Approaches b - Appr. Roadway Settlement
Some minor settlement along both approaches leading on and off the bridge.

Approaches c - Appr. Sidewalk Settlement
Deficiencies as follows:
Settlement at all approach sidewalks:
SE = 2-1/2"D, see photo 2 for worst example.

NE = 1"H, see photo 4.

NW = 1-1/2"H.

SW = 1"H, photo 6.

ITEM 59 - SUPERSTRUCTURE

Item 59.4 - Girders or Beams
See photo 8 for general underside, deficiencies as follows:
• All beams soffits display longitudinal FL x .001"W- .009"W disjointed cracking, with a few isolated beams exhibiting cracks up to .016"W and predominantly near the ends of the fascia beams, see photos 9 and 11.

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REMARKS

• Beam 1 north vertical face at the west abutment FH x .005"W vertical/horizontal crack stemming from the beam soffit, see photo 12, Beam 9 over the east abutment displays a similar cracking pattern, see photo 13.

• Beam 2, soffit near west end, longitudinal .005"W cracks emanating at a previous patch.

• Beam 5 - 9 near the west end exhibit some graffiti, see photo 8 as example and overview.

• Scattered staining at the ends and between beams and active leakage, predominantly along the interface of beams 9 and 10 and over the abutments, see photos 8 and 9 - 12.

• Beams 10 and 11 soffit at east abutment, .005"W diagonal and longitudinal cracking, see photo 9 as example and overview.

• Beam 10 lower north edge at east abutment, 2'L x 7"W x 3"D spall with 1 exposed/debonded strand, see photo 11.

Item 59.9 - Bearing Devices
Mostly hidden.

ITEM 60 - SUBSTRUCTURE

Item 60.1 - Abutments
Item 60.1.b - Bridge Seats
Mostly hidden.

Item 60.1.c - Backwalls
Mostly hidden.

Item 60.1.d - Breastwalls
Deficiencies as follows:
- Previously reported "West breastwall is obstructed by the staged train on the west tracks" was no where in sight at the time of this inspection, see photo 7.

- Both abutment caps, scattered FH x hairline vertical cracks, see photos 12 and 14 as examples and overviews.

- Both abutments exhibit graffiti, east abutment 7th granite block course from the top has a cracked granite block, see photo 14.

- Evidence of moderate - heavy active leakage, predominantly below the both curbs and over the abutments, see photos 7 - 12 and 14.

Item 60.1.e - Wingwalls
NE and SE wingwalls, large trees growing along top course.

TRAFFIC SAFETY

Item 36a - Bridge Railing
CP-PL2 barrier, standard.
See item 58.7 - Parapets for deficiencies.

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REMARKS

Item 36b - Transitions
Transitions are smoothly attached to endposts with double mat panels, however, improper post spacing is non standard.

Item 36c - Approach Guardrail
Steel type W panels attached to steel posts via steel spacers, non standard.

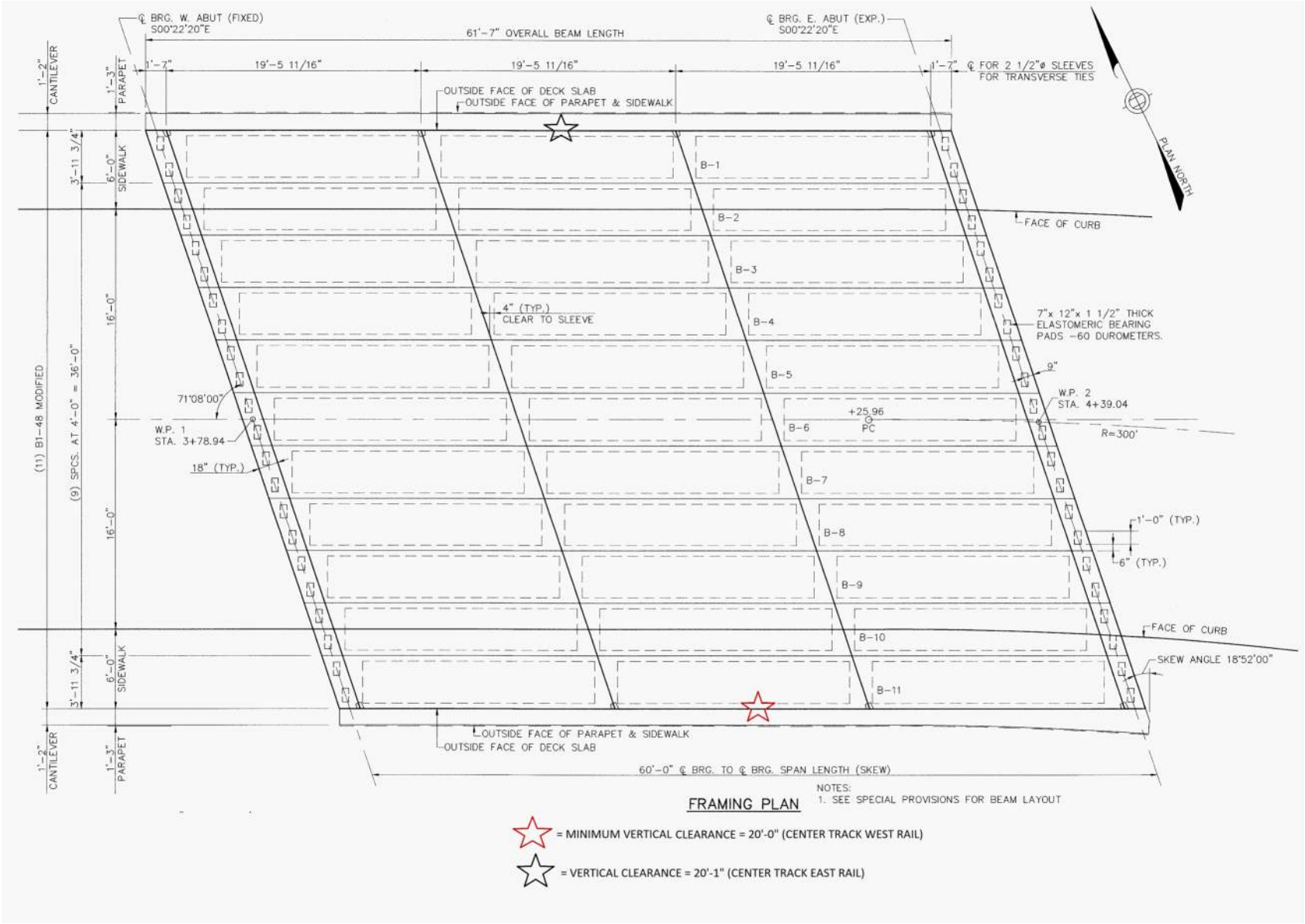
Item 36d - Approach Guardrail Ends
NE is buried (Photo 3), SE is flared & gloved, non standard.
Both west ends are beyond bridge limits (Photo 5).

Sketch / Photo Log

Sketch 1 : Framing Plan.
Photo 1 : Looking east over wearing surface, longitudinal unsealed cracks.
Photo 2 : Looking SW at SE corner, sidewalk/curb settlement, parapet rotation/gap/vertical cracks and hole in fence.
Photo 3 : East approach near/away from the abutment, transverse/longitudinal unsealed cracks and vertical/horizontal roadway alignments.
Photo 4 : Looking North over east abutment, wide curb to curb unsealed cracking, NE curb/sidewalk settlement and parapet gap/rotation.
Photo 5 : West approach near/away from the abutment, transverse/longitudinal unsealed cracks and vertical roadway alignment.
Photo 6 : Looking South over west abutment, wide curb to curb unsealed cracking, SW curb/sidewalk settlement and parapet gap/rotation.
Photo 7 : South elevation, parapet cracks with light efflorescence and graffiti.
Photo 8 : Looking east general underside/framing, graffiti and isolated leakage.
Photo 9 : Looking west to east along deck beams soffit, close up common longitudinal cracks, Beam 11 shown worst case.
Photo 10 : Looking east at east abutment, cap cracks/leakage staining and north edge beam 10 active spall with exposed/debonded strand.
Photo 11 : Looking east, close up of previous photo, beam 10 active spall and continued longitudinal cracks.
Photo 12 : Looking at NF beam 1 west end, patch and vertical/diagonal cracking with additional common cracks along the soffit.
Photo 13 : Looking at SF beam 9 east end, vertical cracking with additional common cracks along the soffit.
Photo 14 : View east abutment, graffiti, cap cracks/staining and isolated cracked granite block.

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SKETCHES



Sketch 1: Framing Plan.

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PHOTOS



Photo 1: **Looking east over wearing surface, longitudinal unsealed cracks.**



Photo 2: **Looking SW at SE corner, sidewalk/curb settlement, parapet rotation/ gap/vertical cracks and hole in fence.**

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PHOTOS



Photo 3: **East approach near/away from the abutment, transverse/longitudinal unsealed cracks and vertical/horizontal roadway alignments.**



Photo 4: **Looking North over east abutment, wide curb to curb unsealed cracking, NE curb/sidewalk settlement and parapet gap/rotation.**

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PHOTOS



Photo 5: **West approach near/away from the abutment, transverse/longitudinal unsealed cracks and vertical roadway alignment.**



Photo 6: **Looking South over west abutment, wide curb to curb unsealed cracking, SW curb/sidewalk settlement and parapet gap/rotation.**

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PHOTOS



Photo 7: South elevation, parapet cracks with light efflorescence and graffiti.



Photo 8: Looking east general underside/framing, graffiti and isolated leakage.

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PHOTOS



Photo 9: **Looking west to east along deck beams soffit, close up common longitudinal cracks, Beam 11 shown worst case.**



Photo 10: **Looking east at east abutment, cap cracks/leakage staining and north edge beam 10 active spall with exposed/debonded strand.**

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PHOTOS



Photo 11: **Looking east, close up of previous photo, beam 10 active spall and continued longitudinal cracks.**



Photo 12: **Looking at NF beam 1 west end, patch and vertical/diagonal cracking with additional common cracks along the soffit.**

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PHOTOS



Photo 13: Looking at SF beam 9 east end, vertical cracking with additional common cracks along the soffit.



Photo 14: View east abutment, graffiti, cap cracks/staining and isolated cracked granite block.

National Bridge Element Inspection

BDEPT# **M-18-014**
B.I.N. **4BX**
Item 8 **M18014-4BX-DOT-634**
Span Group **1**
Town **Middleborough**
District **5**

Date **01/09/2025**
District Bridge Inspection Eng'r **Grant Simpson**
Inspecting Agency **Mass. Highway Dept.**
Team Leader **John Spiezio**
Team Member(s) **Alexander Downing**

El #	Element Name	Units	Env.	Total Q.	% or Q	State 1	State 2	State 3	State 4
15	**Pre Concrete Top Flange**	sq feet	2	2,772.000	☐ %	2,772.000			
Notes :									
> 510	Wearing Surfaces	sq feet	2	2,016.000	☐ %	1,216.000	800.000		
Notes :									
> > 3220	*Crack (Wearing Surface)*	sq feet	2	300.000	☐ %		300.000		
Notes :									
> > 3230	*Effectiveness (Wearing Surface)*	sq feet	2	500.000	☐ %		500.000		
Notes :									
104	**Pre Clsd Box Girder**	feet	2	677.416	☐ %	527.416	150.000		
Notes :									
> 1110	*Cracking (PSC)*	feet	2	150.000	☐ %		150.000		
Notes :									
217	**Masonry Abutment**	feet	2	218.000	☐ %	168.000	50.000		
Notes :									
> 1610	*Mortar Breakdown (Masonry)*	feet	2	50.000	☐ %		50.000		
Notes :									
310	**Elastomeric Bearing**	each	2	44	☐ %	44			
Notes :									
331	**Re Conc Bridge Railing**	feet	2	126.000	☐ %	96.000	30.000		
Notes :									
> 1130	*Cracking (RC and Other)*	feet	2	30.000	☐ %		30.000		
Notes :									

APPENDIX E

Regular Supervision Fee $ 100.00

ROAD OPENING PERMIT_____
DIG SAFE_____

TOWN OF MIDDLEBOROUGH
ROAD OPENING PERMIT

Subject to all of the terms, conditions and restrictions printed or written below, and on the attached hereof, permission is hereby granted to _____
_____
to do the described work_____
at_____

The Grantees shall indemnify and save harmless the Town of Middleborough against all suits, claims or liability of every name and nature arising any time out of or in consequence of the acts of the Grantees in the performance of the work covered by this permit whether by themselves or their employees or subcontractors.

The following Town Officials and Departments shall be notified before the above work is started in accordance with Section 40, Chapter 82, of the Massachusetts General Laws: Electric Department, Gas Department, Water and Sewer Division, Highway Division, Fire Department and Cablevision.

All of the above Departments will be notified seventy-two (72) hours in advance of any road opening. In case of any emergency, all Departments shall be notified immediately. No road opening permit will be issued on Saturdays, Sundays or Holidays, unless for an emergency and said emergencies to be determined by the Town Manager, Highway Superintendent, Water Superintendent, Wastewater Superintendent or Gas Engineer. For Saturdays, Sundays and Holidays work, a Town Inspector shall be compensated for a full days salary at his regular rate of pay for that day.

This permit shall be effective from _____to _____ unless sooner revoked by the Town of Middleborough.

When the existing pavement is to be disturbed, it shall be cut in neat, true lines by mechanical means along the length of the trench. The trench shall then be excavated and the utility installed and excavatable controlled density fill, (CDF) Type 1E or Type 2E, placed to within four inches (4") of the finished grade of the roadway surface. The trench shall then be plated securely and ramped with temporary cold patch overnight to allow the controlled density fill to cure.

The Grantee must then place a permanent patch which shall consist of 2 ½" of bituminous concrete Base Type I-1 and 1 ½" of bituminous concrete top Type I-1.

All abutting edges of the existing pavement shall be painted with RS-1 immediately prior to the placement of the finished top course.

All materials used must conform to the Massachusetts Highway Department's 1995 Standard Specifications for Highways and Bridges M4.08.0.

A true finished surface within ¼" of existing pavement will be required.

All trenches shall be maintained by the Grantee at all times from inception until (1) year from the permitted date.

The Grantee will be responsible for the setting up of Construction and Men Working, Warning Signs, Traffic Control devised and any other means necessary to safely allow pedestrian or motor vehicle traffic to circumvent or proceed through the construction area. The Grantee will provide all devices necessary at his expense. Uniformed Police Officers shall be provided and compensated by the Grantee and shall be in attendance to direct traffic and for safety of the public and workers unless otherwise directed by the Police Chief or his designated representative.

A copy of this permit must be on the job site at all times for inspection. Failure to have this permit available at such site will result in suspension of the rights granted by this permit.

No Road Opening Permits will be issued from **November 15th through March 15th** without approval of the D. P. W. Director.

Permits are issued only to applicants who first present a **Certificate of Insurance.** Applications may be picked up at the Middleboro Highway Department during normal working hours, Monday through Friday, 7:00 A. M. – 3:30 P. M.

Each Road Opening Permit will require a **Performance Bond of $2,500.00**.

I shall take full responsibility for this permit.

_____

NAME (Signature)

_____

ADDRESS

_____

TELEPHONE

FOR THE BOARD OF SELECTMEN

_____

D. P. W. DIRECTOR
MIDDLEBOROUGH, MA