

COMMONWEALTH OF MASSACHUSETTS



CONTRACT DOCUMENTS AND SPECIAL PROVISIONS

PROPOSAL NO.	612514-130933
P.V. =	\$7,593,000.00
PLANS	YES

FOR

**Federal Aid Project No. HIP(NGB)-003S(828)
Bridge Preservation, C-21-002, Route 9 over Westfield River**

in the Town of

CUMMINGTON

In accordance with the STANDARD SPECIFICATIONS
for HIGHWAYS and BRIDGES dated 2025

This Proposal to be opened and read:

TUESDAY, JULY 29, 2025 at 2:00 P.M.

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DOCUMENT 00010

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DOCUMENT 00104

**NOTICE TO CONTRACTORS**

Electronic proposals for the following project will be received through the internet using www.bidx.com until the date and time stated below and will be posted on www.bidx.com forthwith after the bid submission deadline. No paper copies of bids will be accepted. All Bidders must have a valid vendor code issued by MassDOT in order to bid on projects. Bidders need to apply for a Digital ID at least 14 days prior to a scheduled bid opening date with www.bidx.com.

TUESDAY, JULY 29, 2025 at 2:00 P.M. **

CUMMINGTON

Federal Aid Project No. HIP(NGB)-003S(828)

Bridge Preservation, C-21-002, Route 9 over Westfield River

****Date Subject to Change**

PROJECT VALUE = \$7,593,000.00

Bidders must be pre-qualified by the Department in the BRIDGE - CONSTRUCTION category to bid on the above project. An award will not be made to a Contractor who is not pre-qualified by the Department prior to the opening of Proposals.

All prospective Bidders who intend to bid on this project must obtain "Request Proposal Form (R109)". The blank "Request Proposal Form (R109)" can be obtained at:
<https://www.mass.gov/prequalification-of-horizontal-construction-firms>.

All prospective Bidders must complete and e-mail an electronic copy of "Request Proposal Form (R109)" to the MassDOT Director of Prequalification for approval:
prequal.r109@dot.state.ma.us.

Proposal documents for official bidders are posted on www.bidx.com. Other interested parties may receive informational Contract Documents containing the Plans and Special Provisions, free of charge.

Bids will be considered, and the contract awarded in accordance with statutes governing such contracts in accordance with Massachusetts General Laws Chapter 30 § 39M.

The Project Bids File Attachments folder for proposals at www.bidx.com shall be used for submitting at the time of bid required information such as the Bid Bond required document, and other documents that may be requested in the proposal.

NOTICE TO CONTRACTORS (Continued)

All parties who wish to have access to information plans and specification must send a "Request for Informational Documents" to MassDOTBidDocuments@dot.state.ma.us.

A Proposal Guaranty in the amount of 5% of the value of the bid is required.

This project is subject to the schedule of prevailing wage rates as determined by the Commissioner of the Massachusetts Department of Labor and Workforce Development, and the Division of Occupational Safety, and the United States Department of Labor.

The Massachusetts Department of Transportation, in accordance with Title VI of the Civil Rights Act of 1964 (78 Stat. 252, 42 U.S.C. §§ 2000d to 2000d-4) and the Regulations, hereby affirmatively ensures that for any contract entered into pursuant to this advertisement, all bidders, including disadvantaged business enterprises, will be afforded full and fair opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, national origin in consideration for an Award.

This Proposal contains the "STANDARD FEDERAL EQUAL EMPLOYMENT OPPORTUNITY CONTRACT SPECIFICATIONS (EXECUTIVE ORDER 11246)". The goals and timetables applicable to this proposal for minority and female participation, expressed in percentage terms for the Contractor's aggregate work force in each trade on all work, are contained in Appendices A and B-80 of the above specifications.

The Contractor (hereinafter includes consultants) will comply with the Acts and Regulations relative to Non-discrimination in Federally-assisted programs of the U.S. Department of Transportation, Federal Highway Administration (FHWA), as they may be amended from time to time, which are herein incorporated by reference and made a part of this Contract as contained in Appendices C and D of the above specifications.

NOTICE TO CONTRACTORS (Continued)**PRICE ADJUSTMENTS**

This Contract contains price adjustments for hot mix asphalt and Portland cement mixtures, diesel fuel, and gasoline. For reference the base prices are as follows: liquid asphalt \$635.00 per ton, Portland cement \$425.13 per ton, diesel fuel \$2.766 per gallon, and gasoline \$2.453 per gallon, and Steel Base Price Index 340.6. MassDOT posts the **Price Adjustments** on their Highway Division's website at

<https://www.mass.gov/massdot-contract-price-adjustments>

This Contract contains Price Adjustments for steel. See Document 00813 - PRICE ADJUSTMENT FOR STRUCTURAL STEEL AND REINFORCING STEEL for their application and base prices.

MassDOT projects are subject to the rules and regulations of the Architectural Access Board (521 CMR 1.00 et seq.)

Prospective bidders and interested parties can access this information and more via the internet at WWW.COMMBUYS.COM.

BY: Monica G. Tibbits-Nutt, Secretary and CEO, MassDOT
Jonathan L. Gulliver, Administrator, MassDOT Highway Division
SATURDAY, JUNE 28, 2025

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DOCUMENT 00210

REQUIREMENTS OF MASSACHUSETTS GENERAL LAWS
CHAPTER 30, SECTION 39R;
CHAPTER 30, SECTION 39O

July 1, 1981, updated October 2016

M.G.L. c. 30, § 39R. Award of Contracts; Accounting Statements; Annual Financial Statements; Definitions.

(a) The words defined herein shall have the meaning stated below whenever they appear in this section:

- (1) "Contractor" means any person, corporation, partnership, joint venture, sole proprietorship, or other entity awarded a contract pursuant to sections thirty-eight A1/2 to thirty-eight O, inclusive, of chapter seven and any contract awarded or executed pursuant to section eleven C of chapter twenty-five A, section thirty-nine M of chapter thirty, or sections forty-four A to forty-four H, inclusive, of chapter one hundred and forty-nine, which is for an amount or estimated amount greater than one hundred thousand dollars.
- (2) "Contract" means any contract awarded or executed pursuant to sections thirty-eight A1/2 to thirty-eight O, inclusive, of chapter seven and any contract awarded or executed pursuant to section eleven C of chapter twenty-five A, section thirty-nine M of chapter thirty, or sections forty-four A through forty-four H, inclusive, of chapter one hundred and forty-nine, which is for amount or estimated amount greater than one hundred thousand dollars.
- (3) "Records" means books of original entry, accounts, checks, bank statements and all other banking documents, correspondence, memoranda, invoices, computer printouts, tapes, discs, papers and other documents or transcribed information of any type, whether expressed in ordinary or machine language.
- (4) "Independent Certified Public Accountant" means a person duly registered in good standing and entitled to practice as a certified public accountant under the laws of the place of his residence or principal office and who is in fact independent. In determining whether an accountant is independent with respect to a particular person, appropriate consideration should be given to all relationships between the accountant and that person or any affiliate thereof. Determination of an accountant's independence shall not be confined to the relationships existing in connection with the filing of reports with the awarding authority.
- (5) "Audit", when used in regard to financial statements, means an examination of records by an independent certified public accountant in accordance with generally accepted accounting principles and auditing standards for the purpose of expressing a certified opinion thereon, or, in the alternative, a qualified opinion or a declination to express an opinion for stated reasons.
- (6) "Accountant's Report", when used in regard to financial statements, means a document in which an independent certified public accountant indicates the scope of the audit which he has made and sets forth his opinion regarding the financial statements taken as a whole with a listing of noted exceptions and qualifications, or an assertion to the effect that an overall opinion cannot be expressed. When an overall opinion cannot be expressed the reason therefor shall be stated. An accountant's report shall include as a part thereof a signed statement by the responsible corporate officer attesting that management has fully disclosed all material facts to the independent certified public accountant, and that the audited financial statement is a true and complete statement of the financial condition of the contractor.
- (7) "Management", when used herein, means the chief executive officers, partners, principals or other person or persons primarily responsible for the financial and operational policies and practices of the contractor.
- (8) Accounting terms, unless otherwise defined herein, shall have a meaning in accordance with generally accepted accounting principles and auditing standards.

(b) Subsection (a)(2) hereof notwithstanding, every agreement or contract awarded or executed pursuant to sections thirty-eight A 1/2 to thirty-eight O, inclusive, of chapter seven, or eleven C of chapter twenty-five A, and pursuant to section thirty-nine M of chapter thirty or to section forty-four A through H, inclusive, of chapter one hundred and forty-nine, shall provide that:

- (1) The contractor shall make, and keep for at least six years after final payment, books, records, and accounts which in reasonable detail accurately and fairly reflect the transactions and dispositions of the contractor, and
- (2) Until the expiration of six years after final payment, the office of inspector general, and the commissioner of capital asset management and maintenance shall have the right to examine any books, documents, papers or records of the contractor or of his subcontractors that directly pertain to, and involve transactions relating to, the contractor or his subcontractors, and
- (3) If the agreement is a contract as defined herein, the contractor shall describe any change in the method of maintaining records or recording transactions which materially affect any statements filed with the awarding authority, including in his description the date of the change and reasons therefor, and shall accompany said description with a letter from the contractor's independent certified public accountant approving or otherwise commenting on the changes, and
- (4) If the agreement is a contract as defined herein, the contractor has filed a statement of management on internal accounting controls as set forth in paragraph (c) below prior to the execution of the contract, and
- (5) If the agreement is a contract as defined herein, the contractor has filed prior to the execution of the contracts and will continue to file annually, an audited financial statement for the most recent completed fiscal year as set forth in paragraph (d) below.

(c) Every contractor awarded a contract shall file with the awarding authority a statement of management as to whether the system of internal accounting controls of the contractor and its subsidiaries reasonably assures that:

- (1) transactions are executed in accordance with management's general and specific authorization;
- (2) transactions are recorded as necessary
 - i. to permit preparation of financial statements in conformity with generally accepted accounting principles, and
 - ii. to maintain accountability for assets;
- (3) access to assets is permitted only in accordance with management's general or specific authorization; and
- (4) the recorded accountability for assets is compared with the existing assets at reasonable intervals and appropriate action was taken with respect to any difference.

Every contractor awarded a contract shall also file with the awarding authority a statement prepared and signed by an independent certified public accountant, stating that he has examined the statement of management on internal accounting controls, and expressing an opinion as to:

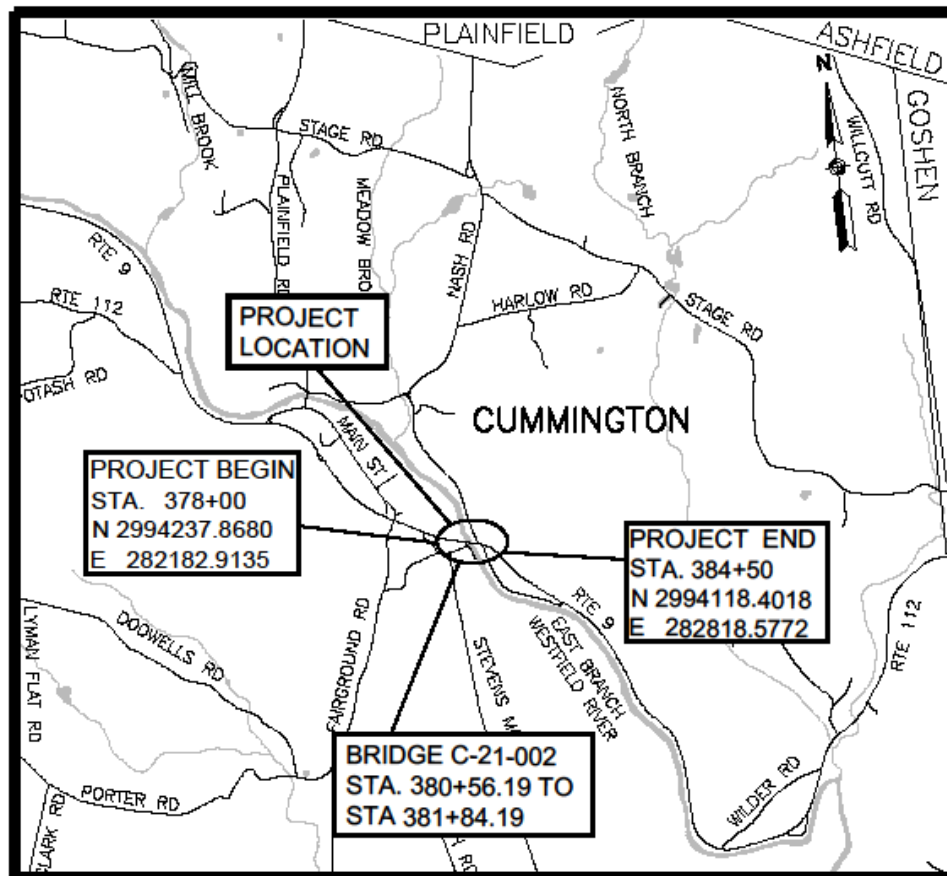
- (1) whether the representations of management in response to this paragraph and paragraph (b) above are consistent with the result of management's evaluation of the system of internal accounting controls; and
- (2) whether such representations of management are, in addition, reasonable with respect to transactions and assets in amounts which would be material when measured in relation to the applicant's financial statements.

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DOCUMENT 00331

LOCUS MAP**CUMMINGTON**

**Federal Aid Project No. HIP(NGB)-003S(828)
Bridge Preservation, C-21-002, Route 9 over Westfield River**



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Final Report ☐Interim Report ☐**CONTRACTOR PROJECT EVALUATION FORM***For instructions on using this form, see Engineering Directive E-10-002, Dated 4/20/2010*

Date: _____

City/Town: _____

Contractor: _____

Project: _____

Address: _____

F.A. No. _____

Contract Number: _____

Bid Price: _____

Notice to Proceed: _____

Funds: State: _____ Fed Aid: _____

Current Contract Completion Date: _____

Date Work Started: _____

Date Work Completed*: _____

Contractor's Superintendent: _____

Division: (indicates class of work) Highway: _____ Bridge: _____ Maintenance: _____

*If work was NOT completed within specified time (including extensions) give reasons on following page.

	Excellent 10	Very Good 9	Average 8	7	Fair 6	5	Poor 4	% Rating
1. Workmanship								x 2=
2. Safety								x 2=
3. Schedule								x 1.5=
4. Home Office Support								x 1=
5. Subcontractors Performance								x 1=
6. Field Supervision/ Superintendent								x 1=
7. Contract Compliance								x 0.5=
8. Equipment								x 0.5=
9. Payment of Accounts								x 0.5=
(use back for additional comments)								
							Overall Rating:	

*(Give explanation of items 1 through 9 on the following page in numerical order if overall rating is below 80%. Use additional sheets if necessary.)*_____
District Construction Engineer's Signature/Date_____
Resident Engineer's Signature/Date_____
Contractor's Signature Acknowledging Report/DateContractor Requests Meeting with the District: No ☐Yes ☐

Date Meeting Held: _____

Contractor's Comments/Meeting Notes (extra sheets may be added to this form and noted here if needed): __________



DOCUMENT 00440

Final Report ☐Interim Report ☐**SUBCONTRACTOR PROJECT EVALUATION FORM***For instructions on using this form, see Engineering Directive E-10-002, Dated 4/20/2010*

Date: _____

City/Town: _____

Subcontractor: _____

Project: _____

Address: _____

F.A. No.: _____

Contract Number: _____

Prime Contractor _____

Current Contract Completion Date: _____

Date Work Started: _____

Date Work Completed*: _____

Subcontractor's Superintendent: _____

Type of Work Performed by Subcontractor: _____

*If work was NOT completed within specified time (including extensions) give reasons on following page.

	Excellent 10	Very Good 9	Average 8	7	Fair 6	5	Poor 4	% Rating
1. Workmanship								x 2=
2. Safety								x 2=
3. Schedule								x 1.5=
4. Home Office Support								x 1.5=
5. Field Supervision/ Superintendent								x 1=
6. Contract Compliance								x 1=
7. Equipment								x 0.5=
8. Payment of Accounts								x 0.5=
(use back for additional comments)							Overall Rating:	

(Give explanation of items 1 through 8 on the following page in numerical order if overall rating is below 80%. Use additional sheets if necessary.)

District Construction Engineer's Signature/Date _____

Resident Engineer's Signature/Date _____

Contractor Signature Acknowledging Report/Date _____

Subcontractor Signature Acknowledging Report/Date _____

Subcontractor Requests Meeting with the District: No ☐ Yes ☐ Date Meeting Held: _____

Subcontractor's Comments / Meeting Notes (extra sheets may be added to this form and noted here if needed): _____

Contractor's Comments: _____

SUBCONTRACTOR PROJECT EVALUATION FORM (Continued)

Date: _____ Contract Number: _____

INFORMATION FOR DISTRICT HIGHWAY DIRECTORS RELATING TO PREQUALIFICATION

A deduction shall be recommended for unsatisfactory performance if computed overall rating is under 80%.

A deduction may be recommended for this project being completed late due to the Contractor's fault.

RECOMMENDATIONS FOR DEDUCTIONS FROM CONTRACTORS' ASSIGNED FACTOR

(Write Yes or No in space provided)

I recommend a deduction for Contractor's unsatisfactory performance: _____

I recommend a deduction for project completed late: _____

Signed: _____
District Highway Director

EXPLANATION OF RATINGS 1 – 8: _____

[illegible]

WORK NOT COMPLETED WITHIN SPECIFIED TIME:

Revised: 04/28/17

*** END OF DOCUMENT ***

DOCUMENT 00710
GENERAL CONTRACT PROVISIONS
Revised: 04-16-25

NOTICE OF AVAILABILITY

The STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES dated 2025, the SUPPLEMENTAL SPECIFICATIONS, the 1990 STANDARD DRAWINGS FOR SIGNS AND SUPPORTS; the 1968 STANDARD DRAWINGS FOR TRAFFIC SIGNALS AND HIGHWAY LIGHTING and the CONSTRUCTION STANDARD DETAILS are available online at <https://www.mass.gov/massdot-highway-division-manuals-and-publications>

SPECIAL PROVISIONS FOR RIGHT-TO-KNOW ACT REQUIREMENTS

The Contractor's attention is directed to Massachusetts General Laws, Chapter 111F, commonly known as the Right-To-Know Act, and to the regulations promulgated pursuant thereto. Among the provisions of the Right-To-Know Act is a requirement that employers make available to employees Materials Safety Data Sheets (MSDS) for any substance on the Massachusetts Substance List (MSL) to which employees are, have been, or may be exposed.

To ensure prompt compliance with these regulations and legislation, the Contractor shall:

1. Deliver to the Department, prior to the start of any work under this contract, copies of MSDS for all MSL substances to be used, stored, processed or manufactured at the worksite by the Contractor.
2. Train employees of the Department, who may be exposed to MSL substances as a result of the Contractor's work under this contract, with regard to those specific substances in accordance with requirements of the Right-To-Know Act.
3. Observe all safety precautions recommended on the MSDS for any MSL substance to be used, stored, processed, or manufactured at the worksite by the Contractor.
4. Inform the Department in writing regarding specific protective equipment recommended in the MSDS for MSL substances to which employees of the Department may be exposed as a result of the Contractor's work under this contract.

The Department shall not be liable for any delay or suspension of work caused by the refusal of its employees to perform any work due to the Contractor's failure to comply with the Right-To-Know Act. The Contractor agrees to hold the Department or the Commissioner of the Department harmless and fully indemnified for any and all claims, demands, fines, actions, complaints, and causes of action resulting from or arising out of the Contractor's failure to comply with the requirements of the Right-To-Know Act.

ALTERNATIVE DISPUTE RESOLUTION

Forum, Choice of Law and Mediations:

Any actions arising out of a contract shall be governed by the laws of Massachusetts and shall be brought and maintained in a State or federal court in Massachusetts which shall have exclusive jurisdiction thereof. MassDOT and the Contractor may both agree to mediation of any claim and will share the costs of such mediation pro rata based on the number of parties involved.

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DOCUMENT 00715



SUPPLEMENTAL SPECIFICATIONS

MARCH 31, 2025

The 2025 *Standard Specifications for Highways and Bridges* are amended by the following modifications, additions and deletions. These Supplemental Specifications prevail over those published in the Standard Specifications.

The Specifications Committee has issued these Supplemental Specifications for inclusion into each proposal until such time as they are updated or incorporated into the next Standard Specifications.

Contractors are cautioned that these Supplemental Specifications are dated and will change as they are updated.

DIVISION I

GENERAL REQUIREMENTS AND COVENANTS

SECTION 2.00: PROPOSAL REQUIREMENTS AND CONDITIONS

Subsection 2.09: Rejection of Proposals

Replace bullet (i) in the third paragraph with the following:

- (i.) award of the contract would result in the Bidder exceeding the Aggregate Bonding Capacity or the Single Bonding Capacity established by its Surety Company, or the Bidder's Proposal exceeds its Single Contract Limit, or the Bidder was not prequalified in the specified class of work on or before the time of bid opening; or

SECTION 7.00: LEGAL RELATIONS AND RESPONSIBILITY TO PPUBLIC

Subsection 7.05: Insurance Requirements

Change the title of paragraph A to Workers' Compensation Insurance

Subsection 7.22: Labor, Lodging, Board, Maximum Hours of Employment, Weekly Payment, Keeping of Payroll Records.

In the second paragraph replace the word "workman" to "worker" and the word "workmen" to "workers".

Replace the third paragraph with the following:

Attention of Bidders is called to MGL Chapter 149, Section 148 requiring the weekly payment of employee wages.

SECTION 9.00: MEASUREMENT AND PAYMENT

Subsection 9.03: Payment for Extra Work

Replace paragraph B, first paragraph, numbers (2) and (3) with the following.

- (2) Plus 13 percent of direct labor, for the estimated costs of Federal Insurance Contribution Act (FICA) including Medicare; Federal Unemployment Tax Act (FUTA); State Unemployment Tax Act (SUTA), which includes Unemployment Insurance, the Workforce Training Fund Program, Employer Medical Assistance Contribution, and COVID-19 Recovery Assessment; Earned Sick Time (EST) Law (940 CMR 33.00); and Paid Family and Medical Leave (PFML) Act (458 CMR 2.00);

or, as an alternative to the above 13 percent, the Contractor may elect to use actual rates for FICA, FUTA, SUTA, EST and PFML provided the actual rates are supported with verifiable documentation and shall be subject to review by MassDOT Audit Operations.

- (3) Plus the estimated cost of Workers' Compensation and Liability Insurance, Health, Welfare and Pension benefits, and such additional fringe benefits which the Contractor is required to pay as a result of Union Labor Agreements and/or is required by authorized governmental agencies;

In paragraph B., second paragraph, number (3), replace the word "Workmen's" with "Workers".

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DOCUMENT 00719

(Revised September 14, 2023 – for all Federally Aided Projects)

**SPECIAL PROVISIONS FOR PARTICIPATION BY
DISADVANTAGED BUSINESS ENTERPRISES**
(IMPLEMENTING TITLE 49 OF THE CODE OF FEDERAL REGULATIONS, PART 26)

Section:

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POLICY

The Massachusetts Department of Transportation (MassDOT) receives Federal financial assistance from the Federal Highway Administration (FHWA), United States Department of Transportation (U.S. DOT), and as a condition of receiving this assistance, has signed an assurance that it will comply with 49 CFR Part 26 (Participation By Disadvantaged Business Enterprises In Department Of Transportation Financial Assistance Programs). The U.S. DOT Disadvantaged Business Enterprise Program is authorized by the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (“SAFETEA-LU”), as amended, at Title 23, United States Code, § 1101.

Accordingly, MassDOT has established a Disadvantaged Business Enterprise (DBE) Program in accordance with 49 CFR Part 26. It is the policy of MassDOT to ensure that DBEs have an equal opportunity to receive and participate in U.S. DOT assisted Contracts, without regard to race, color, national origin, or sex. To this end, MassDOT shall not directly, or through contractual or other arrangements, use criteria or methods of administration that have the effect of defeating or substantially impairing accomplishment of the program objectives stated below:

- ◆ To ensure nondiscrimination in the award and administration of U.S. DOT assisted Contracts;
- ◆ To create a level playing field on which DBEs can compete fairly for U.S. DOT assisted Contracts;
- ◆ To ensure that the DBE Program is narrowly tailored in accordance with applicable law;
- ◆ To ensure that only firms that fully meet 49 CFR Part 26 eligibility standards are permitted to participate as DBEs;
- ◆ To help remove barriers to the participation of DBEs in U.S. DOT assisted Contracts; and
- ◆ To assist the development of firms that can compete successfully in the market place outside the DBE Program.

The Director of Civil Rights of MassDOT has been designated as the DBE Liaison Officer. The DBE Liaison Officer is responsible for implementing all aspects of the DBE Program. Other MassDOT employees are responsible for assisting the Office of Civil Rights in carrying out this obligation. Implementation of the DBE Program is accorded the same priority as compliance with all other legal obligations incurred by MassDOT in its financial assistance agreements with each operating administration of the U.S. DOT. Information on the Federal requirements and MassDOT’s policies and information can be found at:

<i>Type of Info</i>	<i>Website</i>	<i>Description</i>
MassDOT Highway Division Policies and Info	https://www.mass.gov/disadvantaged-business-enterprise-goals-2019-2022	MassDOT– Highway Div’n Page
For copies of the Code of Federal Regulations	http://www.gpo.gov/fdsys/browse/collectionCfr.action?collectionCode=CFR	FDsys – US Gov’t Printing Office
For information about the U.S.DOT DBE Program	https://www.transportation.gov/civil-rights/disadvantaged-business-enterprise	U.S. DOT/ FHWA page

1. DEFINITIONS

As used in these provisions, the terms set out below are defined as follows:

“Broker”, for purposes of these provisions, shall mean a DBE Entity that has entered into a legally binding relationship to provide goods or services delivered or performed by a third party. A broker may be a DBE Entity that arranges or expedites transactions but performs no work or installation services.

“Contractor”, “General” or “Prime” Contractor, “Bidder,” and “DB Entity” shall mean a person, firm, or other entity that has contracted directly with MassDOT to provide contracted work or services.

“Contract” shall mean the Contract for work between the Contractor and MassDOT.

“DBB” or “Design-Bid-Build” shall mean the traditional design, bid and project delivery method consisting of separate contracts between awarding authority and a designer resulting in a fully designed project; and a separate bidding process and Contract with a construction Contractor or Bidder.

“DB” or “Design-Build” shall mean an accelerated design, bid and project delivery method consisting of a single contract between the awarding authority and a DB Entity, consisting of design and construction companies that will bring a project to full design and construction.

“Disadvantaged Business Enterprise” or “DBE” shall mean a for-profit, small business concern:

- (a) that is at least fifty-one (51%) percent owned by one or more individuals who are both socially and economically disadvantaged, or, in the case of any corporation, in which at least fifty-one (51%) percent of the stock is owned by one or more such individuals; and
- (b) where the management and daily business operations are controlled by one or more of the socially and economically disadvantaged individuals who own it.

“FHWA” shall mean the Federal Highway Administration,” an agency within U.S. DOT that supports State and local governments in the design, and maintenance of the Nation’s highway system (Federal Aid Highway Program).

“Good faith efforts” shall mean efforts to achieve a DBE participation goal or other requirement of these Special Provisions that, by their scope, intensity, and appropriateness to the objective, can reasonably be expected to fulfill the program requirement. Such efforts must be deemed acceptable by MassDOT.

“Joint Venture” shall mean an association of a DBE firm and one or more other firms to carry out a single, for-profit business enterprise, for which the parties combine their property, capital, efforts, skills and knowledge, and in which the DBE is responsible for a distinct, clearly defined portion of the work of the Contract and whose share in the capital contribution, control, management, risks, and profits of the joint venture are commensurate with its ownership interest.

“Approved Joint Venture” shall mean a joint venture, as defined above, which has been approved by MassDOT’s Prequalification Office and Office of Civil Rights for DBE participation on a particular Contract.

"Manufacturer" shall mean a firm that operates or maintains a factory or establishment that produces, on the premises, the materials, supplies, articles or equipment required under the contract and of the general character described by the specifications.

"Regular Dealer" shall mean a DBE firm that owns, operates, or maintains a store, warehouse, or other establishment in which materials, supplies, articles or equipment of the general character described by the specifications and required under the Contract are bought, kept in stock, and regularly sold or leased to the public in the usual course of business.

- (a) To be a regular dealer, the firm must be an established, regular business that engages, as its principal business, and under its own name, in the purchase and sale of the products in question.
- (b) A person may be a regular dealer in such bulk items as petroleum products, steel, cement, gravel, stone, or asphalt without owning, operating, or maintaining a place of business as provided above if the person both owns and operates distribution equipment for the products. Any supplementing of regular dealers' own distribution equipment shall be by long term lease agreement and not on an ad hoc or contract by contract basis.
- (c) Packagers, brokers, manufacturers' representatives, or other persons who arrange or expedite transactions are not regular dealers within the meaning of this definition.

"Responsive" and "Responsible" refers to the bidder's submittal meeting all of the requirements of the advertised request for proposal. The term responsible refers to the ability of the Contractor to perform the work. This ability can be determined prior to bid invitations.

"Small Business or Small Business Concern" shall mean a small business concern or company as defined in Section 3 of the Small Business Act and SBA regulations implementing it (13 CFR Part 121); and is a business that does not exceed the cap on annual average gross receipts established by the U.S. Secretary of Transportation pursuant to 49 CFR Part 26.65; see also 49 CFR Part 26.39.

"SDO" shall mean the Massachusetts Supplier Diversity Office, formerly known as the State Office of Minority and Women Business Assistance (SOMWBA). In 2010, SOMWBA was abolished and the SDO was established. See St. 2010, c. 56. The SDO has assumed all the functions of SOWMBA. SDO is an agency within the Commonwealth of Massachusetts Executive office of Administration and Finance (ANF) Operational Services Division (OSD). The SDO mandate is to help promote the development of business enterprises and non-profit organizations owned and operated by minorities and women.

"Socially and economically disadvantaged individuals" shall mean individuals who are citizens of the United States (or lawfully admitted permanent residents) and who are:

- (a) Individuals found by SDO to be socially and economically disadvantaged individuals on a case by case basis.
- (b) Individuals in the following groups, members of which are rebuttably presumed to be socially and economically disadvantaged:

- (1) "Black Americans" which includes persons having origin in any of the Black racial groups of Africa; (2) "Hispanic Americans" which include persons of Mexican, Puerto Rican, Cuban, Dominican, Central or South American, or other Spanish or Portuguese culture or origin, regardless of race; (3) "Native Americans" which include persons who are American Indians, Eskimos, Aleuts, or Native Hawaiians; (4) "Asian Pacific Americans" which includes persons whose origins are from Japan, China, Taiwan, Korea, Burma (Myanmar), Vietnam, Laos, Cambodia (Kampuchea), Thailand, Malaysia, Indonesia, the Philippines, Brunei, Samoa, Guam, the U.S. Trust Territories of the Pacific Islands (Republic of Palau), the Commonwealth of the Northern Marianas Islands, Macao, Fiji, Tonga, Kiribati, Tuvalu, Nauru, Federated States of Micronesia, or Hong Kong; (5) "Subcontinent Asian Americans" which includes persons whose origins are from India, Pakistan, Bangladesh, Bhutan, the Maldives Islands, Nepal or Sri Lanka; (6) Women; or (7) Any additional groups whose members are designated as socially and economically disadvantaged by the Small Business Administration (SBA), at such time as the SBA designation becomes effective.

Other terms and definitions applicable to the U.S. DOT DBE Program may be found at 49 CFR Part 26 and related appendices and guidance pages.

2. DBE PARTICIPATION

a. Goal

On this Contract, MassDOT has established the following goal(s) for participation by firms owned and controlled by socially and economically disadvantaged persons. At least half of the goal must be met in the form of DBE Subcontractor construction activity as opposed to material supplies or other services. The applicable goal remains in effect throughout the life of the contract regardless of whether pre-identified DBE Subcontractors remain on the Project or under Contract.

☒ Design-Bid-Build Projects: DBE Participation Goal 4 %
(One half of this goal shall be met in the form of Subcontractor construction activity)

☐ Design-Build Projects: DBE Design Participation Goal ____% and DBE Construction Participation Goal ____%
(One half of the Construction Goal shall be met in the form of Subcontractor construction activity)

b. Bidders List

Pursuant to the provisions of 49 CFR Part 26.11(c), Recipients such as MassDOT, must collect from all Bidders who seek work on Federally assisted Contracts the firm full company name(s), addresses and telephone numbers of all firms that have submitted bids or quotes to the Bidders in connection with this Project. All bidders should refer to the Special Provision Document "A00801" of the Project proposal for this requirement.

In addition, MassDOT must provide to U.S. DOT, information concerning contractors firm status as a DBE or non-DBE, the age of the firm, and the annual gross receipts of the firm within a series of brackets (e.g., less than \$500,000; \$500,000–\$1 million; \$1–2 million; \$2–5 million, etc.). The status, firm age, and annual gross receipt information will be sought by MassDOT regularly prior to setting its DBE participation goal for submission to U.S. DOT. MassDOT will survey each individual firm for this information directly.

Failure to comply with a written request for this information within fifteen (15) business days may result in the suspension of bidding privileges or other such sanctions, as provided for in Section 9 of this provision, until the information is received.

3. CONTRACTOR ASSURANCES

No Contractor or any Subcontractor shall discriminate on the basis of race color, national origin, or sex in the performance of this contract. The Contractor shall carry out applicable requirements of 49 CFR Part 26 in all respects and as applicable prior to, or subsequent to, award of U.S. DOT assisted Contracts. The Contractor agrees to affirmatively seek out and consider DBE firms as Contractors, Subcontractors, and/or suppliers of materials and services for this Contract. No Contract will be approved until MassDOT has reviewed Bidders'/Contractors' affirmative actions concerning DBEs. Failure to carry out these requirements is a material breach of this Contract which may result in the termination of the Contract or such other remedy as MassDOT or FHWA deem appropriate.

4. REQUIRED SUBCONTRACT PROVISIONS

The Prime Contractor shall include the provisions of Section 3 above in every subcontract, making those provisions binding on each Subcontractor; in addition, the Prime Contractor shall include a copy of this Special Provision, in its entirety, in every subcontract with a DBE firm which is, or may be, submitted for credit toward the Contract participation goal.

5. ELIGIBILITY OF DBES

Only firms that have been certified by SDO and confirmed by MassDOT as eligible in accordance with 49 CFR Part 26 to participate as DBEs on federally aided MassDOT Contracts may be used on this Contract for credit toward the DBE participation goal.

a. Massachusetts DBE Directory

MassDOT makes available to all bidders the most current Massachusetts Disadvantaged Business Enterprise Directory. This directory is made available for Contractors' convenience and is informational only. The Directory lists those firms that have been certified as eligible in accordance with the criteria of 49 CFR Part 26 to participate as DBEs on federally aided MassDOT contracts. The Directory also lists the kinds of work each firm is certified to perform but does not constitute an endorsement of the quality of performance of any business and does not represent MassDOT Subcontractor approval.

Contractors are encouraged to make use of the DBE Directory maintained by SDO on the Internet. This listing is updated daily and may be accessed at the SDO's website at:

<https://www.diversitycertification.mass.gov/BusinessDirectory/BusinessDirectorySearch.aspx>

b. DBE Certification

A firm must apply to SDO, currently acting as certification agent for MassDOT, for DBE certification to participate on federally aided MassDOT Contracts. A DBE application may be made in conjunction with a firm's application to SDO for certification to participate in state-funded minority and women business enterprise programs or may be for DBE certification only. An applicant for DBE certification must identify the area(s) of work it seeks to perform on U.S. DOT funded projects.

c. Joint Venture Approval

To obtain recognition as an approved DBE Joint Venture, the parties to the joint venture must provide to MassDOT's Office of Civil Rights and Prequalification Office, at least fourteen (14) business days before the bid opening date, an Affidavit of DBE/Non-DBE Joint Venture in the form attached hereto, and including, but not limited to the following:

1. a copy of the Joint Venture Agreement;
2. a description of the distinct, clearly defined portion of the contract work that the DBE will perform with its own forces; and,
3. all such additional information as may be requested by MassDOT for the purpose of determining whether the joint venture is eligible.

6. COUNTING DBE PARTICIPATION TOWARDS DBE PARTICIPATION GOALS

In order for DBE participation to count toward the Contract participation goal, the DBE(s) must have served a commercially useful function in the performance of the Contract and must have been paid in full for acceptable performance.

a. Commercially Useful Function

- (1) In general, a DBE performs a commercially useful function when it is responsible for execution of the work of the contract and is carrying out its responsibilities by actually performing, managing, and supervising the work involved. With respect to materials and supplies used on the Contract, the DBE must be responsible for negotiating price, determining quality and quantity, ordering the material, installing (where applicable) and paying for the material itself.
- (2) To determine whether a DBE is performing a commercially useful function, MassDOT will evaluate the amount of work subcontracted, industry practices, whether the amount the firm is to be paid under the Contract is commensurate with the work it is actually performing and the DBE credit claimed for its performance of the work, and other relevant factors.
- (3) A DBE does not perform a commercially useful function if its role is limited to that of an extra participant in a transaction, contract, or project through which funds are passed in order to obtain the appearance of DBE participation. In determining whether a DBE is such an extra participant, MassDOT will examine similar transactions, particularly those in which DBEs do not participate.

b. Counting Participation Toward The Contract Participation Goal

DBE participation which serves a commercially useful function shall be counted toward the DBE participation goal in accordance with the Provisions of 49 CFR Part 26.55(a) to (h), as follows:

- (1) When a DBE participates in a construction Contract, MassDOT will count the value of the work performed by the DBE's own forces. MassDOT will count the cost of supplies and materials obtained by the DBE for the work of its contract, including supplies purchased or equipment leased by the DBE. Supplies, labor, or equipment the DBE Subcontractor uses, purchases, or leases from the Prime Contractor or any affiliate of the Prime Contractor will not be counted.

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- (2) MassDOT will count the entire amount of fees or commissions charged by a DBE firm for providing bona fide services, such as professional, technical, consultant, or managerial services, or for providing bonds or insurance specifically required for the performance of a U.S. DOT assisted Contract, toward DBE participation goals, provided it is determined that the fee is reasonable and not excessive as compared with fees customarily allowed for similar services.
 - (3) When a DBE performs as a participant in a joint venture, MassDOT will count toward DBE participation goals a portion of the total dollar value of the contract that is equal to the distinct, clearly defined portion of the work of the Contract that the DBE performs with its own forces.
 - (4) MassDOT will use the following factors in determining whether a DBE trucking company is performing a commercially useful function:
 - (i) the DBE must be responsible for the management and supervision of the entire trucking operation for which it is responsible on a particular contract; there cannot be a contrived arrangement for the purpose of meeting DBE participation goals.
 - (ii) the DBE must itself own and operate at least one fully licensed, insured, and operational truck used on the Contract.
 - (iii) the Contractor will receive DBE credit for the total value of the transportation services the DBE provides on the Contract using trucks owned, insured, and operated by the DBE itself and using drivers the DBE employs alone.
 - (iv) the DBE may lease trucks from another DBE firm, including an owner-operator who is certified as a DBE. The Contractor who has a contract with a DBE who leases trucks from another DBE will receive credit for the total value of the transportation services of the lease.
 - (v) the DBE may also lease trucks from a non-DBE firm, including an owner-operator. The Contractor who has a Contract with a DBE who leases trucks from a non-DBE is entitled to credit for the total value of the transportation services provided by non-DBE lessees not to exceed the value of transportation services provided by DBE-owned trucks on the Contract. Additional participation by non-DBE lessees receives credit only for the fee or commission it receives as a result of the lease arrangement, fee or commission it receives as a result of the lease arrangement. The DBE does not receive credit for the total value of the transportation services provided by the lessee, since these services are not provided by a DBE.
 - (vi) the lease must indicate that the DBE has exclusive use of, and control over, the truck. This does not preclude the leased truck from working for others during the term of the lease with the consent of the DBE, so long as the lease gives the DBE absolute priority for use of the leased truck. Leased trucks must display the name and identification number of the DBE.
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- (5) MassDOT will count the Prime Contractor's expenditures with DBEs for materials or supplies toward DBE participation goals as follows:
- (i) if the materials or supplies are obtained from a DBE manufacturer, as defined in Section 1 above, MassDOT will count one hundred (100%) percent of the cost of the materials or supplies toward DBE participation goals, provided the DBE meets the other requirements of the regulations.
 - (ii) if the materials or supplies are purchased from a DBE regular dealer, as defined in Section 1 above, MassDOT will count sixty (60%) percent of the cost of the materials or supplies toward the Contract participation goal, provided the DBE meets the other requirements of the regulations.
 - (iii) for materials or supplies purchased from a DBE which is neither a manufacturer nor a regular dealer, MassDOT will count the entire amount of fees or commissions charged for assistance in the procurement of the materials and supplies, or fees or transportation charges for the delivery of materials or supplies required on a job site toward the Contract participation goal, provided that MassDOT determines the fees to be reasonable and not excessive as compared with fees customarily allowed for similar services; the cost of the materials and supplies themselves will not be counted; and provided the DBE meets the other requirements of the regulations.

c. Joint Check Policy

MassDOT recognizes that the use of joint checks may be a business practice required by material suppliers and vendors in the construction industry. A joint check is a two-party check issued by a/the Prime Contractor to a DBE third party such as a regular dealer of material or supplies. The Prime Contractor issues the check as payor to the DBE and the third party jointly as payees to guarantee payment to the third party for materials or supplies obtained or to be used by the DBE. FHWA has established criteria to ensure that DBEs are in fact performing a commercially useful function ("CUF") while using a joint check arrangement. Contractors and DBEs must meet and conform to these conditions and criteria governing the use of joint checks.

In the event that a Contractor or DBE Subcontractor desires to use a joint check, MassDOT will require prior notice and will closely monitor the arrangement for compliance with FHWA regulations and guidance. MassDOT may allow a joint check arrangement and give credit to a Contractor for use of the DBE where one or more of the following conditions exist:

- The use of a joint check is in fact required by this type of vendor or supplier as a standard industry practice that applies to all Contractors (DBEs and non-DBEs); or is required by a specific vendor or supplier;
- Payment for supplies or materials would be delayed for an unreasonably extended period without the joint check arrangement;
- The DBE (or any of its Subcontractors) has a pattern or history of not paying a vendor or supplier within a reasonable time or has not established enough of a credit history with the supplier or vendor; and/or
- The presence of severe adverse economic conditions, where credit resources may be limited and such practices may be necessary or required to effect timely payments.

Other factors MassDOT may consider:

- Whether there is a requirement by the Prime Contractor that a DBE should use a specific vendor or supplier to meet their Subcontractor specifications;
- Whether there is a requirement that a DBE use the Prime Contractor's negotiated price;
- The independence of the DBE;
- Whether approval has been sought prior to use of a joint check arrangement; and
- Whether any approved joint check arrangement has exceeded a reasonable period of use;
- The operation of the joint check arrangement; and
- Whether the DBE has made an effort to establish alternate arrangements for following periods (i.e., the DBE must show it can, or has, or why it has not, established or increased a credit line with the vendor or supplier).

Even with the use of a Joint Check, both the Contractor and DBE remain responsible for compliance with all other elements under 49 CFR § 26.55 (c) (1), and must still be able to prove that a commercially useful function is being performed for the Contractor.

d. Joint Check Procedure(s)

- The DBE advises its General or Prime Contractor that it will have to use a Joint Check and provide proof of such requirement.
- The General or the Prime Contractor submits a request for approval to MassDOT, using MassDOT's approved Joint Check Request form (Document B00855) and by notification on the DBE Letter of Intent (Document B00854), and any other relevant documents. Requests that are not initiated during the bid process should be made in writing and comply with the procedure.
- The MassDOT Office of Civil Rights will review the request and render a decision as part of the approval process for DBE Schedules and Letters of Intent.
- Review and Approval will be project specific and relevant documents will be made part of the project Contract file.
- Payments should be made in the name of both the DBE and vendor or supplier. Payments should be issued and signed by the Contractor as only the guarantor for prompt payment of purchases to the vendor or supplier. The payment to the vendor or supplier should be handled by the DBE (i.e. if possible, funds or the joint check should be processed by the DBE and sent by the DBE to the vendor or supplier).
- MassDOT may request copies of cancelled checks (front and back) and transmittal information to verify any payments made to the DBE and vendor or supplier.
- MassDOT may request other information and documents, and may ask questions of the Contractor, Subcontractor and vendor or supplier prior to, during, and after the project performance to ascertain whether the Subcontractor is performing a commercially useful function and all parties are complying with DBE Program policies and procedures as part of the Subcontractor approval process.

7. AWARD DOCUMENTATION AND PROCEDURES

- a. The two lowest bidders/the two bidders with the lowest price per quality score point, shall submit, by the close of business on the third (3rd) business day after the bid opening, a completed Schedule of Participation by DBEs (Document B00853) which shall list:
- (1) The full company name, address and telephone number of each DBE with whom the bidder intends to make a commitment.
 - (2) The contract item(s), by number(s) and quantity(ies), if applicable, or specific description of other business activity to be performed by each DBE as set forth in the Letters of Intent. The Bidder shall list only firms which have the capacity to perform, manage and supervise the work proposed in accordance with the requirements of 49 CFR Part 26 and Section **6.b** of these Special Provisions.
 - (3) The total dollar amount to be paid to each DBE. (Bidders are cautioned that at least one half of the participation goal must be met with construction activity work.)
 - (4) The total dollar amount to be paid to each DBE that is eligible for credit toward the DBE participation goal under the counting rules set out in Section **6.b**.
 - (5) The total creditable DBE participation as a percentage of the total bid price.
- b. All firms listed on the Schedule must be currently certified.
- c. The two lowest bidders/the two bidders with the lowest price per quality score point, shall each submit, with their Schedules of Participation, fully completed, signed Letters of Intent (Document B00854) from each of the DBEs listed on the Schedule. The Letters of Intent shall be in the form attached and shall identify specifically the contract activity the DBE proposes to perform, expressed as contract item number, if applicable, description of the activity, NAICS code, quantity, unit price and total price. In the event of discrepancy between the Schedule and the Letter of Intent, the Letter of Intent shall govern.
- d. Evidence of good faith efforts will be evaluated by MassDOT in the selection of the lowest responsible bidder.

All information requested by MassDOT for the purpose of evaluating the Contractor's efforts to achieve the participation goal must be provided within three (3) calendar days and must be accurate and complete in every detail. The apparent low bidder's attainment of the DBE participation goal or a satisfactory demonstration of good faith efforts is a prerequisite for award of the Contract.

- e. Failure to meet, or to demonstrate good faith efforts to meet, the requirements of these Special Provisions shall render a bid non-responsive. Therefore, in order to be eligible for award, the bidder (1) must list all DBE's it plans to employ on the Schedule of Participation; and provide the required Letters of Intent for, DBE participation which meets or exceeds the Contract goal in accordance with the terms of these Special Provisions or (2) must demonstrate, to the satisfaction of MassDOT, that good faith efforts were made to achieve the participation goal. MassDOT will adhere to the guidance provided in Appendix A to 49 CFR Part 26 on the determination of a Contractor's good faith efforts to meet the DBE participation goal(s) set forth in Section 2 herein.

- f. If MassDOT finds that the percentage of DBE participation submitted by the bidder on its Schedule does not meet the Contract participation goal, or that Schedule and Letters of Intent were not timely filed, and that the bidder has not demonstrated good faith efforts to comply with these requirements, it shall propose that the bidder be declared ineligible for award. In that case, the bidder may request administrative reconsideration. Such requests must be sent in writing within three (3) calendar days of receiving notice of proposed ineligibility to: The Office of the General Counsel, Massachusetts Department of Transportation, 10 Park Plaza, Boston, MA, 02116.
- g. If, after administrative reconsideration, MassDOT finds that the bidder has not shown that sufficient good faith efforts were made to comply with the requirements of these Special Provisions, it shall reject the bidder's proposal and may retain the proposal guaranty.
- h. Actions which constitute evidence of good faith efforts to meet a DBE participation goal include, but are not limited to, the following examples, which are set forth in 49 CFR Part 26, Appendix A:
- (1) Soliciting through all reasonable and available means (e.g., attendance at pre-bid meetings, advertising and/or written notices) the interest of all certified DBEs who have the capability to perform the work of the Contract. The bidder must solicit this interest within sufficient time to allow the DBEs to respond to the solicitation. The bidder must determine with certainty if the DBEs are interested by taking appropriate steps to follow up initial solicitations.
 - (2) Selecting portions of the work to be performed by DBEs in order to increase the likelihood that the DBE participation goal will be achieved. This includes, where appropriate, breaking out contract work items into economically feasible units to facilitate DBE participation, even when the Prime Contractor might otherwise prefer to perform these work items with its own forces.
 - (3) Providing interested DBEs with adequate information about the plans, specifications, and requirements of the contract in a timely manner to assist them in responding to a solicitation.
 - (4) Negotiating in good faith with interested DBEs. It is the bidder's responsibility to make a portion of the work available to DBE Subcontractors and suppliers and to select those portions of the work or material needs consistent with the available DBE Subcontractors and suppliers, so as to facilitate DBE participation. Evidence of such negotiation includes the names, addresses, and telephone number of DBEs that were considered; a description of the information provided regarding the plans and specifications for the work selected for subcontracting; and evidence as to why additional agreements could not be reached for DBEs to perform the work.

A bidder using good business judgment would consider a number of factors in negotiating with Subcontractors, including DBE Subcontractors, and would take a firm's price and capabilities as well as Contract participation goals into consideration. However, the fact that there may be some additional costs involved in finding and using DBEs is not in itself sufficient reason for a bidder's failure to meet the Contract DBE participation goal, as long as such costs are reasonable. Also, the ability or desire of a Prime Contractor to perform the work of a Contract with its own organization does not relieve the bidder of the responsibility to make good faith efforts. Prime Contractors are not, however, required to accept higher quotes from DBEs if the price difference is excessive or unreasonable.

- (5) Not rejecting DBEs as being unqualified without sound reasons based on a thorough investigation of their capabilities. Contractors should be careful of adding additional requirements of performance that would in effect limit participation by DBEs or any small business. The Contractor's standing within its industry, membership in specific groups, organizations, or associations and political or social affiliations (for example union vs. nonunion employee status) are not legitimate causes for the rejection or non-solicitation of bids in the Contractor's efforts to meet the Contract participation goal.
- (6) Making efforts to assist interested DBEs in obtaining bonding, lines of credit, or insurance as required by the recipient or contractor.
- (7) Making efforts to assist interested DBEs in obtaining necessary equipment, supplies, materials, or related assistance or services.
- (8) Effectively using the services of available minority/women community organizations; minority/women contractors' groups; local, state, and federal minority/women business assistance offices; and other organizations as allowed on a case by case basis to provide assistance in the recruitment and placement of DBEs.

8. COMPLIANCE

- a. All activity performed by a DBE for credit toward the Contract participation goal must be performed, managed and supervised by the DBE in accordance with all commercially useful function requirements of 49 CFR Part 26. The Prime Contractor shall not enter into, or condone, any other arrangement.
- b. The Prime Contractor shall not perform with its own organization, or assign to any other business, an activity designated for the DBE(s) named on the Schedule(s) submitted by the Prime Contractor under Section 7 or under paragraph 8.f of this section, without the approval of MassDOT in accordance with the requirements of paragraphs 8.f and 8.j of this section.
- c. MassDOT may suspend payment for any activity that was not performed by the DBE to whom the activity was committed on the approved Schedule of Participation, or that was not performed in accordance with the requirements of Section 6.
- d. MassDOT retains the right to approve or disapprove of any or all Subcontractors. Requests by the Prime Contractor for approval of participation by a DBE Subcontractor for credit toward the Contract participation goal must include, in addition to any other requirements for Subcontractor approval, the following:
 - (1) A copy of the proposed subcontract. The subcontract must be for at least the dollar amount, and for the work described, in the Bidder's Schedule of Participation.
 - (2) A resume stating the qualifications and experience of the DBE Superintendent and/or foreperson who will supervise the on-site work. A new resume will be required for any change in supervisory personnel during the progress of the work.
 - (3) A Schedule of Operations indicating when the DBE is expected to perform the work.
 - (4) A list of (1) equipment owned by the DBE to be used on the Project, and (2) equipment to be leased by the DBE for use on the Project.

- (5) A list of: (1) all projects (public and private) which the DBE is currently performing; (2) all projects (public and private) to which the DBE is committed; and (3) all projects (public and private) to which the DBE intends to make a commitment. For each Contract, list the contracting organization, the name and telephone number of a contact person for the contracting organization, the dollar value of the work, a description of the work, and the DBE's work schedule for each project.
- e. If, pursuant to the Subcontractor approval process, MassDOT finds that a DBE Subcontractor does not have sufficient experience or resources to perform, manage and supervise work of the kind proposed in accordance with the requirements of 49 CFR Part 26, approval of the DBE Subcontractor may be denied. In the event of such denial, the Prime Contractor shall proceed in accordance with the requirements paragraphs **8.f** and **8.j** of this section.
- f. If, for reasons beyond its control, the Prime Contractor cannot comply with its DBE participation commitment in accordance with the Schedule of Participation submitted under Section 7, the Prime Contractor shall submit to MassDOT the reasons for its inability to comply with its obligations and shall submit, and request approval for, a revised Schedule of Participation. If approved by MassDOT, the revised Schedule shall govern the Prime Contractor's performance in meeting its obligations under these Special Provisions.
- g. A Prime Contractor's compliance with the participation goal in Section 2 shall be determined by reference to the established percentage of the total contract price, provided, however, that no decrease in the dollar amount of a bidder's commitment to any DBE shall be allowed without the approval of MassDOT.
- h. If the contract amount is increased, the Prime Contractor may be required to submit a revised Schedule of Participation in accordance with paragraphs **8.f** and **8.j** of this section.
- i. In the event of the decertification of a DBE scheduled to participate on the Contract for credit toward the participation goal, but not under subcontract, the Contractor shall proceed in accordance with paragraphs **8.f** and **8.j** of this section.
- j. The Prime Contractor shall notify MassDOT immediately of any facts that come to its attention indicating that it may or will be unable to comply with any aspect of its DBE obligation under this Contract.
- k. Any notice required by these Special Provisions shall be given in writing to: (1) the Resident Engineer; (2) the District designated Compliance Officer; and (3) the DBE Liaison Officer, MassDOT Office of Civil Rights, 10 Park Plaza, – 3rd Floor - West, Boston, MA, 02116 and cc'd to the Deputy Chief of External Programs.
- l. The Prime Contractor and its Subcontractors shall comply with MassDOT's Electronic Reporting System Requirements (MassDOT Document 00821) and submit all information required by MassDOT related to the DBE Special Provisions through the Equitable Business Opportunity Solution ("EBO"). MassDOT reserves the right to request reports in the format it deems necessary anytime during the performance of the Contract.
- m. Termination of DBE by Prime Contractor
- (1) A Prime Contractor shall not terminate a DBE Subcontractor or an approved substitute DBE firm without the prior written consent of MassDOT. This includes, but is not limited to, instances in which a Prime Contractor seeks to perform work originally designated for a DBE Subcontractor with its own forces or those of an affiliate, a non-DBE firm, or with another DBE firm.

- (2) MassDOT may provide such written consent only if MassDOT agrees, for reasons stated in its concurrence document, that the Prime Contractor has good cause to terminate the DBE firm.
- (3) For purposes of this paragraph, good cause includes the following circumstances:
 - (i) The DBE Subcontractor fails or refuses to execute a written contract;
 - (ii) The DBE Subcontractor fails or refuses to perform the work of its subcontract in a way consistent with normal industry standards. Good cause, however, does not exist if the failure or refusal of the DBE Subcontractor to perform its work on the subcontract results from the bad faith or discriminatory action of the Prime Contractor;
 - (iii) The DBE Subcontractor fails or refuses to meet the Prime Contractor's reasonable, nondiscriminatory bond requirements.
 - (iv) The DBE Subcontractor becomes bankrupt, insolvent, or exhibits credit unworthiness;
 - (v) The DBE Subcontractor is ineligible to work on public works projects because of suspension and debarment proceedings pursuant 2 CFR Parts 180, 215 and 1,200 or applicable State law;
 - (vi) (vii) MassDOT has determined that the listed DBE Subcontractor is not a responsible contractor;
 - (vii) The listed DBE Subcontractor voluntarily withdraws from the Project and provides written notice of its withdrawal;
 - (viii) The listed DBE is ineligible to receive DBE credit for the type of work required;
 - (ix) A DBE owner dies or becomes disabled with the result that the listed DBE Contractor is unable to complete its work on the Contract;
 - (x) Other documented good cause that MassDOT determines compels the termination of the DBE Subcontractor. Good cause, however, does not exist if the Prime Contractor seeks to terminate a DBE it relied upon to obtain the Contract so that the Prime Contractor can self-perform the DBE work or substitute another DBE or non-DBE Contractor after Contract Award.
- (4) Before transmitting to MassDOT a request to terminate and/or substitute a DBE Subcontractor, the Prime Contractor must give notice in writing to the DBE Subcontractor, with a copy to MassDOT, of its intent to request to terminate and/or substitute, and the reason for the request.
- (5) The Prime Contractor must give the DBE five (5) business days to respond to the Prime Contractor's notice. The DBE must advise MassDOT and the Contractor of the reasons, if any, why it objects to the proposed termination of its subcontract and why MassDOT should not approve the Prime Contractor's action. If required in a particular case as a matter of public necessity (e.g., safety), MassDOT may provide a response period shorter than five (5) business days.
- (6) In addition to post-award terminations, the provisions of this section apply to pre-award deletions of or substitutions for DBE firms.

n. Prompt Payment.

Contractors are required to promptly pay Subcontractors under this Prime Contract within ten (10) business days from the receipt of each payment the Prime Contractor receives from MassDOT. Failure to comply with this requirement may result in the withholding of payment to the Prime Contractor until such time as all payments due under this provision have been received by the Subcontractor(s) and/or referral to the Prequalification Committee for action which may affect the Contractor's prequalification status.

9. SANCTIONS

If the Prime Contractor does not comply with the terms of these Special Provisions and cannot demonstrate to the satisfaction of MassDOT that good faith efforts were made to achieve such compliance, MassDOT may, in addition to any other remedy provided for in the Contract, and notwithstanding any other provision in the Contract:

- a.** Retain, in connection with final acceptance and final payment processing, an amount determined by multiplying the total contract amount by the percentage in Section 2, less the amount paid to approved DBE(s) for work performed under the Contract in accordance with the provisions of Section 8.
- b.** Suspend, terminate or cancel this Contract, in whole or in part, and call upon the Prime Contractor's surety to perform all terms and conditions in the Contract.
- c.** In accordance with 720 CMR 5.05(1)(f), modify or revoke the Prime Contractor's Prequalification status or recommend that the Prime Contractor not receive award of a pending Contract. The Prime Contractor may appeal the determination of the Prequalification Committee in accordance with the provisions of 720 CMR 5.06.
- d.** Initiate debarment proceedings pursuant to M.G.L. c. 29 §29F and, as applicable, 2 CFR Parts 180, 215 and 1,200.
- e.** Refer the matter to the Massachusetts Attorney General for review and prosecution, if appropriate, of any false claim or pursuant to M.G.L. c. 12, §§ 5A to 5O (the Massachusetts False Claim Act).
- f.** Refer the matter to the U.S. DOT's Office of the Inspector General or other agencies for prosecution under Title 18, U.S.C. § 1001, 49 CFR Parts 29 and 31, and other applicable laws and regulations.

10. FURTHER INFORMATION; ENFORCEMENT, COOPERATION AND CONFIDENTIALITY.

- a.** Any proposed DBE, bidder, or Contractor shall provide such information as is necessary in the judgment of MassDOT to ascertain its compliance with the terms of this Special Provision. Further, pursuant to 49 CFR, Part 26.107:

- (1) If you are a firm that does not meet the eligibility criteria of 49 CFR, Parts 26.61 to 26.73 (“subpart D”), that attempts to participate in a DOT- assisted program as a DBE on the basis of false, fraudulent, or deceitful statements or representations or under circumstances indicating a serious lack of business integrity or honesty, MassDOT or FHWA may initiate suspension or debarment proceedings against you under 49 CFR Part 29.
 - (2) If you are a firm that, in order to meet DBE Contract participation goals or other DBE Program requirements, uses or attempts to use, on the basis of false, fraudulent or deceitful statements or representations or under circumstances indicating a serious lack of business integrity or honesty, another firm that does not meet the eligibility criteria of subpart D, FHWA may initiate suspension or debarment proceedings against you under 49 CFR Part 29.
 - (3) In a suspension or debarment proceeding brought either under subparagraph a.(1) or b.(2) of this section, the concerned operating administration may consider the fact that a purported DBE has been certified by a recipient. Such certification does not preclude FHWA from determining that the purported DBE, or another firm that has used or attempted to use it to meet DBE participation goals, should be suspended or debarred.
 - (4) FHWA may take enforcement action under 49 CFR Part 31, Program Fraud and Civil Remedies, against any participant in the DBE Program whose conduct is subject to such action under 49 CFR Part 31.
 - (5) FHWA may refer to the Department of Justice, for prosecution under 18 U.S.C. 1001 or other applicable provisions of law, any person who makes a false or fraudulent statement in connection with participation of a DBE in any DOT-assisted program or otherwise violates applicable Federal statutes.
- b. Pursuant to 49 CFR Part 26.109, the rules governing information, confidentiality, cooperation, and intimidation or retaliation are as follows:
- (1) Availability of records.
 - (i) In responding to requests for information concerning any aspect of the DBE Program, FHWA complies with provisions of the Federal Freedom of Information and Privacy Acts (5 U.S.C. 552 and 552a). FHWA may make available to the public any information concerning the DBE Program release of which is not prohibited by Federal law.
 - (ii) MassDOT shall safeguard from disclosure to unauthorized persons information that may reasonably be considered as confidential business information, consistent with Federal and Massachusetts General Law (M.G.L. c. 66, § 10, M.G.L. c. 4, §7 (26), 950 CMR 32.00).
 - (2) Confidentiality of information on complainants. Notwithstanding the provisions of subparagraph b.(1) of this section, the identity of complainants shall be kept confidential, at their election. If such confidentiality will hinder the investigation, proceeding or hearing, or result in a denial of appropriate administrative due process to other parties, the complainant must be advised for the purpose of waiving the privilege. Complainants are advised that, in some circumstances, failure to waive the privilege may result in the closure of the investigation or dismissal of the proceeding or hearing.

- (3) Cooperation. All participants in FHWA's DBE Program (including, but not limited to, recipients, DBE firms and applicants for DBE certification, complainants and appellants, and Contractors using DBE firms to meet Contract participation goals) are required to cooperate fully and promptly with U.S. DOT and recipient compliance reviews, certification reviews, investigations, and other requests for information. Failure to do so shall be a ground for appropriate action against the party involved (e.g., with respect to recipients, a finding of noncompliance; with respect to DBE firms, denial of certification or removal of eligibility and/or suspension and debarment; with respect to a complainant or appellant, dismissal of the complaint or appeal; with respect to a Contractor which uses DBE firms to meet participation goals, findings of non-responsibility for future Contracts and/or suspension and debarment).
- (4) Intimidation and retaliation. No recipient, Contractor, or any other participant in the program, may intimidate, threaten, coerce, or discriminate against any individual or firm for the purpose of interfering with any right or privilege secured by this part or because the individual or firm has made a complaint, testified, assisted, or participated in any manner in an investigation, proceeding, or hearing under this part. If any recipient or contractor violates this prohibition, that entity is in noncompliance with this 49 CFR Part 26.

11. LIST OF ADDITIONAL DOCUMENTS.

- a. The following documents shall be completed and signed by the bidder and designated DBEs in accordance with Section 7 - Award Documentation and Procedures. These documents must be returned by the bidder to MassDOT's Bid Document Distribution Center:
- ☐ Schedule of DBE Participation (Document B00853)
 - ☐ Letter of Intent (Document B00854)
 - ☐ DBE Joint Check Arrangement Approval Form (Document B00855), if Contractor and DBE plan, or if DBE is required to use a Joint Check
- b. The following document shall be signed and returned by Contractor and Subcontractors/DBEs to the MassDOT District Office overseeing the Project, as applicable:
- ☐ Contractor/Subcontractor Certification Form (Document No. 00859) (a checklist of other documents to be included with every subcontract (DBEs and non-DBEs alike)).
- c. The following document shall be provided to MassDOT's Office of Civil Rights and Prequalification Office at least fourteen (14) business days before the bid opening date, if applicable:
- ☐ Affidavit of DBE/Non-DBE Joint Venture (Document B00856)
- d. The following document shall be provided to MassDOT's District Office of Civil Rights within 30 calendar days after the work of the DBE is completed, or no later than 30 calendar days after the work of the DBE is on a completed and processed CQE. This document shall be completed and submitted by the Prime Contractor:
- ☐ Certificate of Completion by a Minority/Women or Disadvantaged Business Enterprise (M/W/DBE) (Form No. CSD-100)

REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS

- I. General
- II. Nondiscrimination
- III. Non-segregated Facilities
- IV. Davis-Bacon and Related Act Provisions
- V. Contract Work Hours and Safety Standards Act Provisions
- VI. Subletting or Assigning the Contract
- VII. Safety: Accident Prevention
- VIII. False Statements Concerning Highway Projects
- IX. Implementation of Clean Air Act and Federal Water Pollution Control Act
- X. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion
- XI. Certification Regarding Use of Contract Funds for Lobbying
- XII. Use of United States-Flag Vessels:

ATTACHMENTS

A. Employment and Materials Preference for Appalachian Development Highway System or Appalachian Local Access Road Contracts (included in Appalachian contracts only)

I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under title 23, United States Code, as required in 23 CFR 633.102(b) (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services). 23 CFR 633.102(e).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider. 23 CFR 633.102(e).

Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services) in accordance with 23 CFR 633.102. The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in solicitation-for-bids or request-for-proposals documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract). 23 CFR 633.102(b).

2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work

performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract. 23 CFR 633.102(d).

3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. 23 U.S.C. 114(b). The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors. 23 U.S.C. 101(a).

II. NONDISCRIMINATION (23 CFR 230.107(a); 23 CFR Part 230, Subpart A, Appendix A; EO 11246)

The provisions of this section related to 23 CFR Part 230, Subpart A, Appendix A are applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR Part 60, 29 CFR Parts 1625-1627, 23 U.S.C. 140, Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d et seq.), and related regulations including 49 CFR Parts 21, 26, and 27; and 23 CFR Parts 200, 230, and 633.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding \$10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR Part 60, and 29 CFR Parts 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with 23 U.S.C. 140, Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), and Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d et seq.), and related regulations including 49 CFR Parts 21, 26, and 27; and 23 CFR Parts 200, 230, and 633.

The following provision is adopted from 23 CFR Part 230, Subpart A, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

1. Equal Employment Opportunity: Equal Employment Opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (see 28 CFR Part 35, 29 CFR Part 1630, 29 CFR Parts 1625-1627, 41 CFR Part 60 and 49 CFR Part 27) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140, shall constitute the EEO and specific affirmative action standards for the contractor's project activities under this contract. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR Part 35 and 29 CFR Part 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract. 23 CFR 230.409 (g)(4) & (5).

b. The contractor will accept as its operating policy the following statement:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, sexual orientation, gender identity, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, pre-apprenticeship, and/or on-the-job training."

2. EEO Officer: The contractor will designate and make known to the contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active EEO program and who must be assigned adequate authority and responsibility to do so.

3. Dissemination of Policy: All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action or are substantially involved in such action, will be made fully cognizant of and will implement the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer or other knowledgeable company official.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minorities and women.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

4. Recruitment: When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minorities and women in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees and establish with such identified sources procedures whereby minority and women applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.

c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such applicants will be discussed with employees.

5. Personnel Actions: Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to ensure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action

within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of their avenues of appeal.

6. Training and Promotion:

a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs (i.e., apprenticeship and on-the-job training programs for the geographical area of contract performance). In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of employees who are minorities and women and will encourage eligible employees to apply for such training and promotion.

7. Unions: If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. 23 CFR 230.409. Actions by the contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:

a. The contractor will use good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.

b. The contractor will use good faith efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, sexual orientation, gender identity, national origin, age, or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the contracting agency and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, age, or disability; making full efforts to obtain qualified and/or qualifiable minorities and women. The failure of a union to provide

sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the contracting agency.

8. Reasonable Accommodation for Applicants /

Employees with Disabilities: The contractor must be familiar with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established thereunder. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.

9. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment:

The contractor shall not discriminate on the grounds of race, color, religion, sex, sexual orientation, gender identity, national origin, age, or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.

a. The contractor shall notify all potential subcontractors, suppliers, and lessors of their EEO obligations under this contract.

b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.

10. Assurances Required:

a. The requirements of 49 CFR Part 26 and the State DOT's FHWA-approved Disadvantaged Business Enterprise (DBE) program are incorporated by reference.

b. The contractor, subrecipient or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the recipient deems appropriate, which may include, but is not limited to:

- (1) Withholding monthly progress payments;
- (2) Assessing sanctions;
- (3) Liquidated damages; and/or
- (4) Disqualifying the contractor from future bidding as non-responsible.

c. The Title VI and nondiscrimination provisions of U.S. DOT Order 1050.2A at Appendixes A and E are incorporated by reference. 49 CFR Part 21.

11. Records and Reports: The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number and work hours of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women; and

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women.

b. The contractors and subcontractors will submit an annual report to the contracting agency each July for the duration of the project indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on [Form FHWA-1391](#). The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of more than \$10,000. 41 CFR 60-1.5.

As prescribed by 41 CFR 60-1.8, the contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, sexual orientation, gender identity, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location under the contractor's control where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

IV. DAVIS-BACON AND RELATED ACT PROVISIONS

This section is applicable to all Federal-aid construction projects exceeding \$2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size), in accordance with 29 CFR 5.5. The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. 23 U.S.C. 113. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. 23 U.S.C. 101. Where applicable law requires that projects be treated as a project on a Federal-aid highway, the provisions of this subpart will apply regardless of the location of the project. Examples include: Surface Transportation Block Grant Program projects funded under 23 U.S.C. 133 [excluding recreational trails projects], the Nationally Significant Freight and Highway

Projects funded under 23 U.S.C. 117, and National Highway Freight Program projects funded under 23 U.S.C. 167.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 "Contract provisions and related matters" with minor revisions to conform to the FHWA-1273 format and FHWA program requirements.

1. Minimum wages (29 CFR 5.5)

a. *Wage rates and fringe benefits.* All laborers and mechanics employed or working upon the site of the work (or otherwise working in construction or development of the project under a development statute), will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act ([29 CFR part 3](#))), the full amount of basic hourly wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics. As provided in paragraphs (d) and (e) of 29 CFR 5.5, the appropriate wage determinations are effective by operation of law even if they have not been attached to the contract. Contributions made or costs reasonably anticipated for bona fide fringe benefits under the Davis-Bacon Act ([40 U.S.C. 3141\(2\)\(B\)](#)) on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph 1.e. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics must be paid the appropriate wage rate and fringe benefits on the wage determination for the classification(s) of work actually performed, without regard to skill, except as provided in paragraph 4. of this section. Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: *Provided*, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classifications and wage rates conformed under paragraph 1.c. of this section) and the Davis-Bacon poster (WH-1321) must be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

b. *Frequently recurring classifications.* (1) In addition to wage and fringe benefit rates that have been determined to be prevailing under the procedures set forth in [29 CFR part 1](#), a wage determination may contain, pursuant to § 1.3(f), wage and fringe benefit rates for classifications of laborers and mechanics for which conformance requests are regularly submitted pursuant to paragraph 1.c. of this section, provided that:

(i) The work performed by the classification is not performed by a classification in the wage determination for which a prevailing wage rate has been determined;

(ii) The classification is used in the area by the construction industry; and

(iii) The wage rate for the classification bears a reasonable relationship to the prevailing wage rates contained in the wage determination.

(2) The Administrator will establish wage rates for such classifications in accordance with paragraph 1.c.(1)(iii) of this section. Work performed in such a classification must be paid at no less than the wage and fringe benefit rate listed on the wage determination for such classification.

c. *Conformance.* (1) The contracting officer must require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract be classified in conformance with the wage determination. Conformance of an additional classification and wage rate and fringe benefits is appropriate only when the following criteria have been met:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(ii) The classification is used in the area by the construction industry; and

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) The conformance process may not be used to split, subdivide, or otherwise avoid application of classifications listed in the wage determination.

(3) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken will be sent by the contracting officer by email to DBAconformance@dol.gov. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(4) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer will, by email to DBAconformance@dol.gov, refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(5) The contracting officer must promptly notify the contractor of the action taken by the Wage and Hour Division

under paragraphs 1.c.(3) and (4) of this section. The contractor must furnish a written copy of such determination to each affected worker or it must be posted as a part of the wage determination. The wage rate (including fringe benefits where appropriate) determined pursuant to paragraph 1.c.(3) or (4) of this section must be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

d. *Fringe benefits not expressed as an hourly rate.* Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor may either pay the benefit as stated in the wage determination or may pay another bona fide fringe benefit or an hourly cash equivalent thereof.

e. *Unfunded plans.* If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, *Provided*, That the Secretary of Labor has found, upon the written request of the contractor, in accordance with the criteria set forth in § 5.28, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

f. *Interest.* In the event of a failure to pay all or part of the wages required by the contract, the contractor will be required to pay interest on any underpayment of wages.

2. Withholding (29 CFR 5.5)

a. *Withholding requirements.* The contracting agency may, upon its own action, or must, upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor so much of the accrued payments or advances as may be considered necessary to satisfy the liabilities of the prime contractor or any subcontractor for the full amount of wages and monetary relief, including interest, required by the clauses set forth in this section for violations of this contract, or to satisfy any such liabilities required by any other Federal contract, or federally assisted contract subject to Davis-Bacon labor standards, that is held by the same prime contractor (as defined in § 5.2). The necessary funds may be withheld from the contractor under this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract that is subject to Davis-Bacon labor standards requirements and is held by the same prime contractor, regardless of whether the other contract was awarded or assisted by the same agency, and such funds may be used to satisfy the contractor liability for which the funds were withheld. In the event of a contractor's failure to pay any laborer or mechanic, including any apprentice or helper working on the site of the work all or part of the wages required by the contract, or upon the contractor's failure to submit the required records as discussed in paragraph 3.d. of this section, the contracting agency may on its own initiative and after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

b. *Priority to withheld funds.* The Department has priority to funds withheld or to be withheld in accordance with paragraph

2.a. of this section or Section V, paragraph 3.a., or both, over claims to those funds by:

- (1) A contractor's surety(ies), including without limitation performance bond sureties and payment bond sureties;
- (2) A contracting agency for its procurement costs;
- (3) A trustee(s) (either a court-appointed trustee or a U.S. trustee, or both) in bankruptcy of a contractor, or a contractor's bankruptcy estate;
- (4) A contractor's assignee(s);
- (5) A contractor's successor(s); or
- (6) A claim asserted under the Prompt Payment Act, [31 U.S.C. 3901](#)–3907.

3. Records and certified payrolls (29 CFR 5.5)

a. Basic record requirements (1) Length of record retention. All regular payrolls and other basic records must be maintained by the contractor and any subcontractor during the course of the work and preserved for all laborers and mechanics working at the site of the work (or otherwise working in construction or development of the project under a development statute) for a period of at least 3 years after all the work on the prime contract is completed.

(2) Information required. Such records must contain the name; Social Security number; last known address, telephone number, and email address of each such worker; each worker's correct classification(s) of work actually performed; hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in [40 U.S.C. 3141\(2\)\(B\)](#) of the Davis-Bacon Act); daily and weekly number of hours actually worked in total and on each covered contract; deductions made; and actual wages paid.

(3) Additional records relating to fringe benefits. Whenever the Secretary of Labor has found under paragraph 1.e. of this section that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in [40 U.S.C. 3141\(2\)\(B\)](#) of the Davis-Bacon Act, the contractor must maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits.

(4) Additional records relating to apprenticeship. Contractors with apprentices working under approved programs must maintain written evidence of the registration of apprenticeship programs, the registration of the apprentices, and the ratios and wage rates prescribed in the applicable programs.

b. Certified payroll requirements (1) Frequency and method of submission. The contractor or subcontractor must submit weekly, for each week in which any DBA- or Related Acts-covered work is performed, certified payrolls to the contracting

agency. The prime contractor is responsible for the submission of all certified payrolls by all subcontractors. A contracting agency or prime contractor may permit or require contractors to submit certified payrolls through an electronic system, as long as the electronic system requires a legally valid electronic signature; the system allows the contractor, the contracting agency, and the Department of Labor to access the certified payrolls upon request for at least 3 years after the work on the prime contract has been completed; and the contracting agency or prime contractor permits other methods of submission in situations where the contractor is unable or limited in its ability to use or access the electronic system.

(2) Information required. The certified payrolls submitted must set out accurately and completely all of the information required to be maintained under paragraph 3.a.(2) of this section, except that full Social Security numbers and last known addresses, telephone numbers, and email addresses must not be included on weekly transmittals. Instead, the certified payrolls need only include an individually identifying number for each worker (e.g., the last four digits of the worker's Social Security number). The required weekly certified payroll information may be submitted using Optional Form WH-347 or in any other format desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division website at <https://www.dol.gov/sites/dolgov/files/WHDL/legacy/files/wh347.pdf> or its successor website. It is not a violation of this section for a prime contractor to require a subcontractor to provide full Social Security numbers and last known addresses, telephone numbers, and email addresses to the prime contractor for its own records, without weekly submission by the subcontractor to the contracting agency.

(3) Statement of Compliance. Each certified payroll submitted must be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor, or the contractor's or subcontractor's agent who pays or supervises the payment of the persons working on the contract, and must certify the following:

(i) That the certified payroll for the payroll period contains the information required to be provided under paragraph 3.b. of this section, the appropriate information and basic records are being maintained under paragraph 3.a. of this section, and such information and records are correct and complete;

(ii) That each laborer or mechanic (including each helper and apprentice) working on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in [29 CFR part 3](#); and

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification(s) of work actually performed, as specified in the applicable wage determination incorporated into the contract.

(4) Use of Optional Form WH-347. The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 will satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 3.b.(3) of this section.

(5) *Signature.* The signature by the contractor, subcontractor, or the contractor's or subcontractor's agent must be an original handwritten signature or a legally valid electronic signature.

(6) *Falsification.* The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under [18 U.S.C. 1001](#) and [31 U.S.C. 3729](#).

(7) *Length of certified payroll retention.* The contractor or subcontractor must preserve all certified payrolls during the course of the work and for a period of 3 years after all the work on the prime contract is completed.

c. *Contracts, subcontracts, and related documents.* The contractor or subcontractor must maintain this contract or subcontract and related documents including, without limitation, bids, proposals, amendments, modifications, and extensions. The contractor or subcontractor must preserve these contracts, subcontracts, and related documents during the course of the work and for a period of 3 years after all the work on the prime contract is completed.

d. *Required disclosures and access* (1) *Required record disclosures and access to workers.* The contractor or subcontractor must make the records required under paragraphs 3.a. through 3.c. of this section, and any other documents that the contracting agency, the State DOT, the FHWA, or the Department of Labor deems necessary to determine compliance with the labor standards provisions of any of the applicable statutes referenced by § 5.1, available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and must permit such representatives to interview workers during working hours on the job.

(2) *Sanctions for non-compliance with records and worker access requirements.* If the contractor or subcontractor fails to submit the required records or to make them available, or refuses to permit worker interviews during working hours on the job, the Federal agency may, after written notice to the contractor, sponsor, applicant, owner, or other entity, as the case may be, that maintains such records or that employs such workers, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available, or to permit worker interviews during working hours on the job, may be grounds for debarment action pursuant to § 5.12. In addition, any contractor or other person that fails to submit the required records or make those records available to WHD within the time WHD requests that the records be produced will be precluded from introducing as evidence in an administrative proceeding under [29 CFR part 6](#) any of the required records that were not provided or made available to WHD. WHD will take into consideration a reasonable request from the contractor or person for an extension of the time for submission of records. WHD will determine the reasonableness of the request and may consider, among other things, the location of the records and the volume of production.

(3) *Required information disclosures.* Contractors and subcontractors must maintain the full Social Security number and last known address, telephone number, and email address

of each covered worker, and must provide them upon request to the contracting agency, the State DOT, the FHWA, the contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or other compliance action.

4. Apprentices and equal employment opportunity (29 CFR 5.5)

a. *Apprentices* (1) *Rate of pay.* Apprentices will be permitted to work at less than the predetermined rate for the work they perform when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship (OA), or with a State Apprenticeship Agency recognized by the OA. A person who is not individually registered in the program, but who has been certified by the OA or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice, will be permitted to work at less than the predetermined rate for the work they perform in the first 90 days of probationary employment as an apprentice in such a program. In the event the OA or a State Apprenticeship Agency recognized by the OA withdraws approval of an apprenticeship program, the contractor will no longer be permitted to use apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(2) *Fringe benefits.* Apprentices must be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringe benefits must be paid in accordance with that determination.

(3) *Apprenticeship ratio.* The allowable ratio of apprentices to journeyworkers on the job site in any craft classification must not be greater than the ratio permitted to the contractor as to the entire work force under the registered program or the ratio applicable to the locality of the project pursuant to paragraph 4.a.(4) of this section. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated in paragraph 4.a.(1) of this section, must be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under this section must be paid not less than the applicable wage rate on the wage determination for the work actually performed.

(4) *Reciprocity of ratios and wage rates.* Where a contractor is performing construction on a project in a locality other than the locality in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyworker's hourly rate) applicable within the locality in which the construction is being performed must be observed. If there is no applicable ratio or wage rate for the locality of the project, the ratio and wage rate specified in the contractor's registered program must be observed.

b. *Equal employment opportunity.* The use of apprentices and journeyworkers under this part must be in conformity with

the equal employment opportunity requirements of Executive Order 11246, as amended, and [29 CFR part 30](#).

c. Apprentices and Trainees (programs of the U.S. DOT).

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. 23 CFR 230.111(e)(2). The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeyworkers shall not be greater than permitted by the terms of the particular program.

5. Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract as provided in 29 CFR 5.5.

6. Subcontracts. The contractor or subcontractor must insert FHWA-1273 in any subcontracts, along with the applicable wage determination(s) and such other clauses or contract modifications as the contracting agency may by appropriate instructions require, and a clause requiring the subcontractors to include these clauses and wage determination(s) in any lower tier subcontracts. The prime contractor is responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in this section. In the event of any violations of these clauses, the prime contractor and any subcontractor(s) responsible will be liable for any unpaid wages and monetary relief, including interest from the date of the underpayment or loss, due to any workers of lower-tier subcontractors, and may be subject to debarment, as appropriate. 29 CFR 5.5.

7. Contract termination: debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract as provided in 29 CFR 5.5.

9. Disputes concerning labor standards. As provided in 29 CFR 5.5, disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10. Certification of eligibility. a. By entering into this contract, the contractor certifies that neither it nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of [40 U.S.C. 3144\(b\)](#) or § 5.12(a).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of [40 U.S.C. 3144\(b\)](#) or § 5.12(a).

c. The penalty for making false statements is prescribed in the U.S. Code, Title 18 Crimes and Criminal Procedure, [18 U.S.C. 1001](#).

11. Anti-retaliation. It is unlawful for any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, or to cause any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, any worker or job applicant for:

a. Notifying any contractor of any conduct which the worker reasonably believes constitutes a violation of the DBA, Related Acts, this part, or [29 CFR part 1](#) or [3](#);

b. Filing any complaint, initiating or causing to be initiated any proceeding, or otherwise asserting or seeking to assert on behalf of themselves or others any right or protection under the DBA, Related Acts, this part, or [29 CFR part 1](#) or [3](#);

c. Cooperating in any investigation or other compliance action, or testifying in any proceeding under the DBA, Related Acts, this part, or [29 CFR part 1](#) or [3](#); or

d. Informing any other person about their rights under the DBA, Related Acts, this part, or [29 CFR part 1](#) or [3](#).

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

Pursuant to 29 CFR 5.5(b), the following clauses apply to any Federal-aid construction contract in an amount in excess of \$100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchpersons and guards.

1. Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek. 29 CFR 5.5.

2. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph 1. of this section the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages and interest from the date of the underpayment. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or

mechanic, including watchpersons and guards, employed in violation of the clause set forth in paragraph 1. of this section, in the sum currently provided in 29 CFR 5.5(b)(2)* for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph 1. of this section.

* \$31 as of January 15, 2023 (See 88 FR 88 FR 2210) as may be adjusted annually by the Department of Labor, pursuant to the Federal Civil Penalties Inflation Adjustment Act of 1990.

3. Withholding for unpaid wages and liquidated damages

a. *Withholding process.* The FHWA or the contracting agency may, upon its own action, or must, upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor so much of the accrued payments or advances as may be considered necessary to satisfy the liabilities of the prime contractor or any subcontractor for any unpaid wages; monetary relief, including interest; and liquidated damages required by the clauses set forth in this section on this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract subject to the Contract Work Hours and Safety Standards Act that is held by the same prime contractor (as defined in § 5.2). The necessary funds may be withheld from the contractor under this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract that is subject to the Contract Work Hours and Safety Standards Act and is held by the same prime contractor, regardless of whether the other contract was awarded or assisted by the same agency, and such funds may be used to satisfy the contractor liability for which the funds were withheld.

b. *Priority to withheld funds.* The Department has priority to funds withheld or to be withheld in accordance with Section IV paragraph 2.a. or paragraph 3.a. of this section, or both, over claims to those funds by:

- (1) A contractor's surety(ies), including without limitation performance bond sureties and payment bond sureties;
- (2) A contracting agency for its procurement costs;
- (3) A trustee(s) (either a court-appointed trustee or a U.S. trustee, or both) in bankruptcy of a contractor, or a contractor's bankruptcy estate;
- (4) A contractor's assignee(s);
- (5) A contractor's successor(s); or
- (6) A claim asserted under the Prompt Payment Act, [31 U.S.C. 3901](#)–3907.

4. Subcontracts. The contractor or subcontractor must insert in any subcontracts the clauses set forth in paragraphs 1. through 5. of this section and a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor is responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs 1. through 5. In the

event of any violations of these clauses, the prime contractor and any subcontractor(s) responsible will be liable for any unpaid wages and monetary relief, including interest from the date of the underpayment or loss, due to any workers of lower-tier subcontractors, and associated liquidated damages and may be subject to debarment, as appropriate.

5. Anti-retaliation. It is unlawful for any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, or to cause any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, any worker or job applicant for:

- a. Notifying any contractor of any conduct which the worker reasonably believes constitutes a violation of the Contract Work Hours and Safety Standards Act (CWHSSA) or its implementing regulations in this part;
- b. Filing any complaint, initiating or causing to be initiated any proceeding, or otherwise asserting or seeking to assert on behalf of themselves or others any right or protection under CWHSSA or this part;
- c. Cooperating in any investigation or other compliance action, or testifying in any proceeding under CWHSSA or this part; or
- d. Informing any other person about their rights under CWHSSA or this part.

VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System pursuant to 23 CFR 635.116.

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the contracting agency. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635.116).

a. The term "perform work with its own organization" in paragraph 1 of Section VI refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions: (based on longstanding interpretation)

- (1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;
- (2) the prime contractor remains responsible for the quality of the work of the leased employees;

(3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and
 (4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract. 23 CFR 635.102.

2. Pursuant to 23 CFR 635.116(a), the contract amount upon which the requirements set forth in paragraph (1) of Section VI is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. Pursuant to 23 CFR 635.116(c), the contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the contracting agency has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract. (based on long-standing interpretation of 23 CFR 635.116).

5. The 30-percent self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements. 23 CFR 635.116(d).

VII. SAFETY: ACCIDENT PREVENTION

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR Part 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract. 23 CFR 635.108.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and

health standards (29 CFR Part 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704). 29 CFR 1926.10.

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).

VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, Form FHWA-1022 shall be posted on each Federal-aid highway project (23 CFR Part 635) in one or more places where it is readily available to all persons concerned with the project:

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 11, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined under this title or imprisoned not more than 5 years or both."

IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT (42 U.S.C. 7606; 2 CFR 200.88; EO 11738)

This provision is applicable to all Federal-aid construction contracts in excess of \$150,000 and to all related subcontracts. 48 CFR 2.101; 2 CFR 200.327.

By submission of this bid/proposal or the execution of this contract or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, subcontractor, supplier, or vendor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401-7671q) and the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251-1387). Violations must be reported to the Federal Highway Administration and the Regional Office of the Environmental Protection Agency. 2 CFR Part 200, Appendix II.

The contractor agrees to include or cause to be included the requirements of this Section in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements. 2 CFR 200.327.

X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost \$25,000 or more – as defined in 2 CFR Parts 180 and 1200. 2 CFR 180.220 and 1200.220.

1. Instructions for Certification – First Tier Participants:

a. By signing and submitting this proposal, the prospective first tier participant is providing the certification set out below.

b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective first tier participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective first tier participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction. 2 CFR 180.320.

c. The certification in this clause is a material representation of fact upon which reliance was placed when the contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default. 2 CFR 180.325.

d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances. 2 CFR 180.345 and 180.350.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180, Subpart I, 180.900-180.1020, and 1200. "First Tier Covered Transactions" refers to any covered transaction between a recipient or subrecipient of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a recipient or subrecipient of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

f. The prospective first tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction. 2 CFR 180.330.

g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold. 2 CFR 180.220 and 180.300.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. 2 CFR 180.300; 180.320, and 180.325. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. 2 CFR 180.335. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the System for Award Management website (<https://www.sam.gov/>). 2 CFR 180.300, 180.320, and 180.325.

i. Nothing contained in the foregoing shall be construed to require the establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of the prospective participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph (f) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default. 2 CFR 180.325.

2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:

a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:

(1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency, 2 CFR 180.335;.

(2) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property, 2 CFR 180.800;

(3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (a)(2) of this certification, 2 CFR 180.700 and 180.800; and

(4) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default. 2 CFR 180.335(d).

(5) Are not a corporation that has been convicted of a felony violation under any Federal law within the two-year period preceding this proposal (USDOT Order 4200.6 implementing appropriations act requirements); and

(6) Are not a corporation with any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability (USDOT Order 4200.6 implementing appropriations act requirements).

b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant should attach an explanation to this proposal. 2 CFR 180.335 and 180.340.

3. Instructions for Certification - Lower Tier Participants:

(Applicable to all subcontracts, purchase orders, and other lower tier transactions requiring prior FHWA approval or estimated to cost \$25,000 or more - 2 CFR Parts 180 and 1200). 2 CFR 180.220 and 1200.220.

a. By signing and submitting this proposal, the prospective lower tier participant is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which

this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances. 2 CFR 180.365.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180, Subpart I, 180.900 – 180.1020, and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. "First Tier Covered Transactions" refers to any covered transaction between a recipient or subrecipient of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a recipient or subrecipient of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated. 2 CFR 1200.220 and 1200.332.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold. 2 CFR 180.220 and 1200.220.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the System for Award Management website (<https://www.sam.gov/>), which is compiled by the General Services Administration. 2 CFR 180.300, 180.320, 180.330, and 180.335.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily

excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment. 2 CFR 180.325.

* * * * *

4. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Participants:

a. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals:

(1) is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency, 2 CFR 180.355;

(2) is a corporation that has been convicted of a felony violation under any Federal law within the two-year period preceding this proposal (USDOT Order 4200.6 implementing appropriations act requirements); and

(3) is a corporation with any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability. (USDOT Order 4200.6 implementing appropriations act requirements)

b. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant should attach an explanation to this proposal.

* * * * *

XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts which exceed \$100,000. 49 CFR Part 20, App. A.

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or

cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

3. The prospective participant also agrees by submitting its bid or proposal that the participant shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such recipients shall certify and disclose accordingly.

XII. USE OF UNITED STATES-FLAG VESSELS:

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, or any other covered transaction. 46 CFR Part 381.

This requirement applies to material or equipment that is acquired for a specific Federal-aid highway project. 46 CFR 381.7. It is not applicable to goods or materials that come into inventories independent of an FHWA funded-contract.

When oceanic shipments (or shipments across the Great Lakes) are necessary for materials or equipment acquired for a specific Federal-aid construction project, the bidder, proposer, contractor, subcontractor, or vendor agrees:

1. To utilize privately owned United States-flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) involved, whenever shipping any equipment, material, or commodities pursuant to this contract, to the extent such vessels are available at fair and reasonable rates for United States-flag commercial vessels. 46 CFR 381.7.

2. To furnish within 20 days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, 'on-board' commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph (b)(1) of this section to both the Contracting Officer (through the prime contractor in the case of subcontractor bills-of-lading) and to the Office of Cargo and Commercial Sealift (MAR-620), Maritime Administration, Washington, DC 20590. (MARAD requires copies of the ocean carrier's (master) bills of lading, certified onboard, dated, with rates and charges. These bills of lading may contain business sensitive information and therefore may be submitted directly to MARAD by the Ocean Transportation Intermediary on behalf of the contractor). 46 CFR 381.7.

**ATTACHMENT A - EMPLOYMENT AND MATERIALS
PREFERENCE FOR APPALACHIAN DEVELOPMENT
HIGHWAY SYSTEM OR APPALACHIAN LOCAL ACCESS
ROAD CONTRACTS (23 CFR 633, Subpart B, Appendix B)**

This provision is applicable to all Federal-aid projects funded under the Appalachian Regional Development Act of 1965.

1. During the performance of this contract, the contractor undertaking to do work which is, or reasonably may be, done as on-site work, shall give preference to qualified persons who regularly reside in the labor area as designated by the DOL wherein the contract work is situated, or the subregion, or the Appalachian counties of the State wherein the contract work is situated, except:

a. To the extent that qualified persons regularly residing in the area are not available.

b. For the reasonable needs of the contractor to employ supervisory or specially experienced personnel necessary to assure an efficient execution of the contract work.

c. For the obligation of the contractor to offer employment to present or former employees as the result of a lawful collective bargaining contract, provided that the number of nonresident persons employed under this subparagraph (1c) shall not exceed 20 percent of the total number of employees employed by the contractor on the contract work, except as provided in subparagraph (4) below.

2. The contractor shall place a job order with the State Employment Service indicating (a) the classifications of the laborers, mechanics and other employees required to perform the contract work, (b) the number of employees required in each classification, (c) the date on which the participant estimates such employees will be required, and (d) any other pertinent information required by the State Employment Service to complete the job order form. The job order may be placed with the State Employment Service in writing or by telephone. If during the course of the contract work, the information submitted by the contractor in the original job order is substantially modified, the participant shall promptly notify the State Employment Service.

3. The contractor shall give full consideration to all qualified job applicants referred to him by the State Employment Service. The contractor is not required to grant employment to any job applicants who, in his opinion, are not qualified to perform the classification of work required.

4. If, within one week following the placing of a job order by the contractor with the State Employment Service, the State Employment Service is unable to refer any qualified job applicants to the contractor, or less than the number requested, the State Employment Service will forward a certificate to the contractor indicating the unavailability of applicants. Such certificate shall be made a part of the contractor's permanent project records. Upon receipt of this certificate, the contractor may employ persons who do not normally reside in the labor area to fill positions covered by the certificate, notwithstanding the provisions of subparagraph (1c) above.

5. The provisions of 23 CFR 633.207(e) allow the contracting agency to provide a contractual preference for the use of mineral resource materials native to the Appalachian region.

6. The contractor shall include the provisions of Sections 1 through 4 of this Attachment A in every subcontract for work which is, or reasonably may be, done as on-site work.

DOCUMENT 00811

SPECIAL PROVISIONS
MONTHLY PRICE ADJUSTMENT FOR HOT MIX ASPHALT (HMA) MIXTURES
Revised: 02/03/2023

This provision applies to all projects using greater than 100 tons of hot mix asphalt (HMA) mixtures containing liquid asphalt cement as stipulated in the Notice to Contractors section of the bid documents.

Price Adjustments will be based on the variance in price, for the liquid asphalt component only, between the Base Price and the Period Price. They shall not include transportation or other charges. Price Adjustments will occur on a monthly basis.

Base Price

The Base Price of liquid asphalt on a project as listed in the Notice to Contractors section of the bid documents is a fixed price determined by the Department at the time of the bid using the same method as the determination of the Period Price detailed below. The Base Price shall be used in all bids.

Period Price

The Period Price is the price of liquid asphalt for each monthly period as determined by the Department 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. The Department will post this Period Price on its website at <https://www.mass.gov/service-details/massdot-current-contract-price-adjustments> following its receipt of the relevant issue of the "Asphalt Weekly Monitor". Poten and Partners has granted the Department the right to publish this specific asphalt price information sourced from the Asphalt Weekly Monitor.

Price Adjustment Determination, Calculation and Payment

The Contract Price of the HMA mixture will be paid under the respective item in the Contract. Price Adjustments, as herein provided, either 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.

Price Adjustments 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.

The Price Adjustment applies only to the actual virgin liquid asphalt content in the mixture placed on the job in accordance with the approved Job Mix Formula.

Price Adjustments will be separate payment items. The pay item numbers are 999.401 for a positive price adjustment (a payment) and 999.402 for a negative price adjustment (a deduction). Price Adjustments will be calculated using the following equation:

Price Adjustment = Tons of HMA Placed X Liquid Asphalt Content % X RAP Factor X (Period Price - Base Price)

No Price Adjustment will be allowed beyond the Completion Date of this Contract, unless there is a Department-approved extension of time.

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DOCUMENT 00812

SPECIAL PROVISIONS
MONTHLY PRICE ADJUSTMENT FOR DIESEL FUEL AND GASOLINE –
ENGLISH UNITS
Revised: 02/01/2021

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 Commonwealth, depending on an increase or decrease in the average price of diesel fuel or gasoline.

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.

The Base Price of Diesel Fuel and Gasoline will be the price as indicated in the Department's web site <https://www.mass.gov/service-details/massdot-current-contract-price-adjustments> for the month in which the contract was bid, which includes State Tax.

The Period Price will be the average of prices charged to the State, including State Tax for the bulk purchases made during each month.

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.

No adjustment will be paid for work done beyond the extended completion date of any contract.

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.

The fuel price adjustment will apply only to the following items of work at the fuel factors shown:

ITEMS COVERED	FUEL FACTORS	
	Diesel	Gasoline
Excavation: and Borrow Work: Items 120, 120.1, 121, 123, 124, 125, 127, 129.3, 140, 140.1, 141, 142, 143, 144, 150, 150.1, 151 and 151.1 (Both Factors used)	0.29 Gallons / CY.	0.15 Gallons / CY
Surfacing Work: All Items containing Hot Mix Asphalt	2.90 Gallons / Ton	Does Not Apply

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DOCUMENT 00813

SPECIAL PROVISIONS

PRICE ADJUSTMENTS FOR STRUCTURAL STEEL AND REINFORCING STEEL

June 18, 2025

This special provision applies to all projects containing the use of structural steel and/or reinforcing steel as specified elsewhere in the Contract work. It applies to all structural steel and all reinforcing steel, as defined below, 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 reinforcing steel bars and unfabricated structural steel material, consisting of rolled shapes, plate steel, sheet piling, pipe piles, steel castings and steel forgings.

Price adjustments will be variances between Base Prices and Period Prices. Base Prices and Period Prices are defined below.

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.

Price adjustments will be calculated by multiplying the number of pounds of unfabricated structural steel material or unfabricated reinforcing steel bars on a project by the index factor calculated as shown below under Example of a Period Price Calculation.

Price adjustments will not include guardrail panels or 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.

The weight of steel subject to a price adjustment shall not exceed the final shipping weight of the fabricated part by more than 10%.

Base Prices and Period Prices are defined as follows:

Base Prices of unfabricated structural steel and unfabricated reinforcing steel on a project are fixed prices determined by the Department and found in the table below. While it is the intention of the Department to make this table comprehensive, some of a project’s unfabricated structural steel and/or unfabricated reinforcing steel may be inadvertently omitted. Should this occur, the Contractor shall bring the omission to the Department’s attention so that a contract alteration may be processed that adds the missing steel to the table and its price adjustments to the Contract.

The Base Price Date is the month and year of the most recent finalized period price index at the time that MassDOT opened bids for the project. The Base Price Index for this contract is the Steel PPI listed in the Notice to Contractors.

Period Prices of unfabricated structural steel and unfabricated reinforcing steel on a project are variable prices that have been calculated using the Period Price Date and an index of steel prices to adjust the Base Price.

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 Department 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.

The index used for the calculation of Period Prices is the U.S. Department of Labor Bureau of Labor Statistics 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)”.

Period Prices are determined as follows:

Period Price = Base Price X Index Factor

Index Factor = Period Price Index / Base Price Index

Example of a Period Price Calculation:

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.

The Period Price Date is December 2009. From the PPI website*, the Period Price Index = 218.0.

The Base Price Date is March 2009. From the PPI website*, the Base Price Index = 229.4.

Index Factor = Period Price Index / Base Price Index = $218.0 / 229.4 = 0.950$

Period Price = Base Price X Index Factor = $\$0.82/\text{Pound} \times 0.950 = \$0.78/\text{Pound}$

Since $\$0.82 - \$0.78 = \$0.04$ is less than 5% of \$0.82, no price adjustment is required.

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 MassDOT. When the Period Price is higher than the Base Price, the price adjustment is owed to the Contractor.

* To access the PPI website and obtain a Base Price Index or a Period Price Index, go to

<http://data.bls.gov/cgi-bin/srgate>

End of example.

The Contractor will be paid for unfabricated structural steel and unfabricated reinforcing steel under the respective contract pay items for all components constructed of either structural steel or reinforced Portland cement concrete under their respective Contract Pay Items.

Price adjustments, as herein provided for, will be paid separately as follows:

Structural Steel

Pay Item Number 999.449 for positive (+) pay adjustments (payments to the Contractor)

Pay Item Number 999.457 for negative (-) pay adjustments (credits to MassDOT Highway Division)

Reinforcing Steel

Pay Item Number 999.466 for positive (+) pay adjustments (payments to the Contractor)

Pay Item Number 999.467 for negative (-) pay adjustments (credits to MassDOT Highway Division)

No price adjustment will be made for price changes after the Contract Completion Date, unless the MassDOT Highway Division has approved an extension of Contract Time for the Contract.

TABLE

Steel Type		Price per Pound
1	ASTM A615/A615M Grade 60 (AASHTO M31 Grade 60 or 420) Reinforcing Steel	\$0.52
2	ASTM A27 (AASHTO M103) Steel Castings, H-Pile Points & Pipe Pile Shoes (See Note below.)	\$0.73
3	ASTM A668 / A668M (AASHTO M102) Steel Forgings	\$0.73
4	ASTM A108 (AASHTO M169) Steel Forgings for Shear Studs	\$0.75
5	ASTM A709/A709M Grade 36 / AASHTO M270M/M270 Grade 36 or 250 Structural Steel Plate	\$0.79
6	ASTM A709/A709M Grade 36 / AASHTO M270M/M270 Grade 36 or 250 Structural Steel Shapes	\$0.74
7	ASTM A709/A709M Grade 50 / AASHTO M270M/M270 Grade 50 or 345 Structural Steel Plate	\$0.79
8	ASTM A709/A709M Grade 50 / AASHTO M270M/M270 Grade 50 or 345 Structural Steel Shapes	\$0.74
9	ASTM A709/A709M Grade 50WT / AASHTO M270M/M270 Grade 50WT or 345WT Structural Steel Plate	\$0.82
10	ASTM A709/A709M Grade 50WT / AASHTO M270M/M270 Grade 50WT or 345WT Structural Steel Shapes	\$0.75
11	ASTM A709/A709M Grade 50W / AASHTO M270M/M270 Grade 50W 345W Structural Steel Plate	\$0.82
12	ASTM A709/A709M Grade 50W / AASHTO M270M/M270 Grade 50W or 345W Structural Steel Shapes	\$0.75
13	ASTM A709/A709M Grade HPS 50W / AASHTO M270M/M270 Grade HPS 50W or 345W Structural Steel Plate	\$0.86
14	ASTM A709/A709M Grade HPS 70W / AASHTO M270M/M270 Grade HPS 70W or 485W Structural Steel Plate	\$0.92
15	ASTM A514/A514M-05 Grade HPS 100W / AASHTO M270M/M270 Grade HPS 100W or 690W Structural Steel Plate	\$1.41
16	ASTM A992/A992M Grade 50S / AASHTO M270M/M270 Grade 50S or 345S Structural Steel Plate	\$0.82
17	ASTM A992/A992M Grade 50S / AASHTO M270M/M270 Grade 50S or 345S Structural Steel Shapes	\$0.75
18	ASTM A276 Type 316 Stainless Steel	\$4.24
19	ASTM A240 Type 316 Stainless Steel	\$4.24
20	ASTM A148 Grade 80/50 Steel Castings (See Note below.)	\$1.46
21	ASTM A53 Grade B Structural Steel Pipe	\$0.92
22	ASTM A500 Grades A, B, 36 & 50 Structural Steel Pipe	\$0.92
23	ASTM A252, Grades 240 (36 KSI) & 414 (60 KSI) Pipe Pile	\$0.73
24	ASTM 252, Grade 2 Permanent Steel Casing	\$0.73
25	ASTM A36 (AASHTO M183) for H-piles, steel supports and sign supports	\$0.77
26	ASTM A328 / A328M, Grade 50 (AASHTO M202) Steel Sheetpiling	\$1.39
27	ASTM A572 / A572M, Grade 50 Sheetpiling	\$1.39
28	ASTM A36/36M, Grade 50	\$0.79
29	ASTM A570, Grade 50	\$0.77
30	ASTM A572 (AASHTO M223), Grade 50 H-Piles	\$0.79
31	ASTM A1085 Grade A (50 KSI) Steel Hollow Structural Sections (HSS), heat-treated per ASTM A1085 Supplement S1	\$0.92
32	AREA 140 LB Rail and Track Accessories	\$0.48

NOTE: Steel Castings are generally used only on moveable bridges. Cast iron frames, grates and pipe are not "steel" castings and will not be considered for price adjustments.

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DOCUMENT 00814

SPECIAL PROVISIONS
PRICE ADJUSTMENT FOR PORTLAND CEMENT CONCRETE MIXES

January 12, 2009

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 the Notice to Contractors section of the Bid Documents. This Price Adjustment will occur on a monthly basis.

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.

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 in the Notice to Contractors.

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 MassDOT website the Wednesday immediately following the publishing of the monthly price in ENR, which is normally the first week of the month.

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.

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.

The Price Adjustment will be a separate payment item. It 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.

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.

No Price Adjustment will be allowed beyond the Completion Date of this Contract, unless there is a Department-approved extension of time.

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DOCUMENT 00820

**THE COMMONWEALTH OF MASSACHUSETTS
SUPPLEMENTAL EQUAL EMPLOYMENT OPPORTUNITY,
NON-DISCRIMINATION AND AFFIRMATIVE ACTION PROGRAM**

I. Definitions

For purposes of this contract,

"Minority" means a person who meets one or more of the following definitions:

- (a) American Indian or Native American means: all persons having origins in any of the original peoples of North America and who are recognized as an Indian by a tribe or tribal organization.
- (b) Asian means: All persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian sub-continent, or the Pacific Islands, including, but Not limited to China, Japan, Korea, Samoa, India, and the Philippine Islands.
- (c) Black means: All persons having origins in any of the Black racial groups of Africa, including, but not limited to, African-Americans, and all persons having origins in any of the original peoples of the Cape Verdean Islands.
- (d) Eskimo or Aleut means: All persons having origins in any of the peoples of Northern Canada, Greenland, Alaska, and Eastern Siberia.
- (e) Hispanic means: All persons having their origins in any of the Spanish-speaking peoples of Mexico, Puerto Rico, Cuba, Central or South America, or the Caribbean Islands.

"State construction contract" means a contract for the construction, reconstruction, installation, demolition, maintenance or repair of a building or capital facility, or a contract for the construction, reconstruction, alteration, remodeling or repair of a public work undertaken by a department, agency, board, or commission of the commonwealth.

"State assisted construction contract" means a contract for the construction, reconstruction, installation, demolition, maintenance or repair of a building or capital facility undertaken by a political subdivision of the commonwealth, or two or more political subdivisions thereof, an authority, or other instrumentality and whose costs of the contract are paid for, reimbursed, grant funded, or otherwise supported, in whole or in part, by the commonwealth.

II. Equal Opportunity, Non-Discrimination and Affirmative Action

During the performance of this Contract, the Contractor and all subcontractors (hereinafter collectively referred to as "the Contractor") for a state construction contract or a state assisted construction contract, for him/herself, his/her assignees and successors in interest, agree to comply with all applicable equal employment opportunity, non-discrimination and affirmative action requirements, including but not limited to the following:

In connection with the performance of work under this contract, the Contractor shall not discriminate against any employee or applicant for employment because of race, color, religious creed, national origin, sex, sexual orientation, genetic information, military service, age, ancestry or disability, shall not discriminate in the selection or retention of subcontractors, and shall not discriminate in the procurement of materials and rentals of equipment.

The aforesaid provision shall include, but not be limited to, the following: employment upgrading, demotion, or transfer; recruitment advertising, layoff or termination; rates of pay or other forms of compensation; conditions or privileges of employment; and selection for apprenticeship or on-the-job training opportunity. The Contractor shall comply with the provisions of chapter 151B of the Massachusetts General Laws, as amended, and all other applicable anti-discrimination and equal opportunity laws, all of which are herein incorporated by reference and made a part of this Contract.

The Contractor shall post hereafter in conspicuous places, available for employees and applicants for employment, notices to be provided by the Massachusetts Commission Against Discrimination setting forth the provisions of the Fair Employment Practices Law of the Commonwealth (Massachusetts General Laws Chapter 151 B).

In connection with the performance of work under this contract, the Contractor shall undertake, in good faith, affirmative action measures to eliminate any discriminatory barriers in the terms and conditions of employment on the grounds of race, color, religious creed, national origin, sex, sexual orientation, genetic information, military service, age, ancestry or disability. Such affirmative action measures shall entail positive and aggressive measures to ensure nondiscrimination and to promote equal opportunity in the areas of hiring, upgrading, demotion or transfer, recruitment, layoff or termination, rate of compensation, apprenticeship and on-the-job training programs. A list of positive and aggressive measures shall include, but not be limited to, advertising employment opportunities in minority and other community news media; notifying minority, women and other community-based organizations of employment opportunities; validating all job specifications, selection requirements, and tests; maintaining a file of names and addresses of each worker referred to the Contractor and what action was taken concerning such worker; and notifying the administering agency in writing when a union with whom the Contractor has a collective bargaining agreement has failed to refer a minority or woman worker. These and other affirmative action measures shall include all actions required to guarantee equal employment opportunity for all persons, regardless of race, color, religious creed, national origin, sex, sexual orientation, genetic information, military service, age, ancestry or disability. One purpose of this provision is to ensure to the fullest extent possible an adequate supply of skilled tradesmen for this and future Commonwealth public construction projects.

III. Minority and Women Workforce Participation

Pursuant to his/her obligations under the preceding section, the Contractor shall strive to achieve on this project the labor participation goals contained herein. Said participation goals shall apply in each job category on this project including but not limited to bricklayers, carpenters, cement masons, electricians, ironworkers, operating engineers and those classes of work enumerated in Section 44F of Chapter 149 of the Massachusetts General Laws. The participation goals for this project shall be 15.3% for minorities and 6.9% for women. The participation goals, as set forth herein, shall not be construed as quotas or set-asides; rather, such participation goals will be used to measure the progress of the Commonwealth's equal opportunity, non-discrimination and affirmative action program. Additionally, the participation goals contained herein should not be seen or treated as a floor or as a ceiling for the employment of particular individuals or group of individuals.

IV. Liaison Committee

At the discretion of the agency that administers the contract for the construction project there may be established for the life of the contract a body to be known as the Liaison Committee. The Liaison Committee shall be composed of one representative each from the agency or agencies administering the contract for the construction project, hereinafter called the administering agency, a representative from the Office of Affirmative action, and such other representatives as may be designated by the administering agency. The Contractor (or his/her agent, if any, designated by him/her as the on-site equal employment opportunity officer) shall recognize the Liaison Committee as an affirmative action body, and shall establish a continuing working relationship with the Liaison Committee, consulting with the Liaison Committee on all matters related to minority recruitment, referral, employment and training.

V. Reports and Records

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

The Contractor shall prepare weekly reports in a form approved by the administering agency, unless information required is required to be reported electronically by the administering agency, the number of hours worked in each trade by each employee, identified as woman, minority, or non-minority. Copies of these shall be provided at the end of each such week to the administering agency and the Liaison Committee.

Records of employment referral orders, prepared by the Contractor, shall be made available to the administering agency on request.

The Contractor will provide all information and reports required by the administering agency on instructions issued by the administering agency and will permit access to its facilities and any books, records, accounts and other sources of information which may be determined by the administering agency to effect the employment of personnel. This provision shall apply only to information pertinent to the Commonwealth's supplementary non-discrimination, equal opportunity and access and opportunity contract requirements. Where information required is in the exclusive possession of another who fails or refuses to furnish this information, the Contractor shall so certify to the administering agency and shall set forth what efforts he has made to obtain the information.

VI. Access to Work Site

A designee of the administering agency and a designee of the Liaison Committee shall each have a right to access the work site.

VII. Solicitations for Subcontracts, and for the Procurement of Materials and Equipment

In all solicitations either by competitive bidding or negotiation made by the Contractor either for work to be performed under a subcontract or for the procurement of materials or equipment, each potential subcontractor or supplier shall be notified in writing by the Contractor of the Contractor's obligations under this contract relative to non-discrimination and equal opportunity.

VIII. Sanctions

Whenever the administering agency believes the General or Prime Contractor or any subcontractor may not be operating in compliance with the provisions of the Fair Employment Practices Law of the Commonwealth (Massachusetts General Laws Chapter 151B), the administering agency may refer the matter to the Massachusetts Commission Against Discrimination ("Commission") for investigation.

Following the referral of a matter by the administering agency to the Massachusetts Commission Against Discrimination, and while the matter is pending before the MCAD, the administering agency may withhold payments from contractors and subcontractors when it has documentation that the contractor or subcontractor has violated the Fair Employment Practices Law with respect to its activities on the Project, or if the administering agency determines that the contractor has materially failed to comply with its obligations and the requirements of this Section. The amount withheld shall not exceed a withhold of payment to the General or Prime Contractor of 1/100 or 1% of the contract award price or \$5,000, whichever sum is greater, or, if a subcontractor is in non-compliance, a withhold by the administering agency from the General Contractor, to be assessed by the General Contractor as a charge against the subcontractor, of 1/100 or 1% of the subcontractor price, or \$1,000 whichever sum is greater, for each violation of the applicable law or contract requirements. The total withheld from anyone General or Prime Contractor or subcontractor on a Project shall not exceed \$20,000 overall. No withhold of payments or investigation by the Commission or its agent shall be initiated without the administering agency providing prior notice to the Contractor.

If, after investigation, the Massachusetts Commission Against Discrimination finds that a General or Prime Contractor or subcontractor, in commission of a state construction contract or state-assisted construction contract, violated the provisions of the Fair Employment Practices Law, the administering agency may convert the amount withheld as set forth above into a permanent sanction, as a permanent deduct from payments to the General or Prime Contractor or subcontractor, which sanction will be in addition to any such sanctions, fines or penalties imposed by the Massachusetts Commission Against Discrimination.

No sanction enumerated under this Section shall be imposed by the administering agency except after notice to the General or Prime Contractor or subcontractor and an adjudicatory proceeding, as that term is used, under Massachusetts General Laws Chapter 30A, has been conducted.

IX. Severability

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

X. Contractor's Certification

After award and prior to the execution of any contract for a state construction contract or a state assisted construction contract, the Prime or General Contractor shall certify that it will comply with all provisions of this Document 00820 Supplemental Equal Employment Opportunity, Non-Discrimination and Affirmative Action Program, by executing Document 00859 Contractor/Subcontractor Certification Form.

XI. Subcontractor Requirements

Prior to the award of any subcontract for a state construction contract or a state assisted construction contract, the Prime or General Contractor shall provide all prospective subcontractors with a complete copy of this Document 00820 entitled "Supplemental Equal Employment Opportunity, Non-Discrimination and Affirmative Action Program" and will incorporate the provisions of this Document 00820 into any and all contracts or work orders for all subcontractors providing work on the Project. In order to ensure that the said subcontractor's certification becomes a part of all subcontracts under the prime contract, the Prime or General Contractor shall certify in writing to the administering agency that it has complied with the requirements as set forth in the preceeding paragraph by executing Document 00859 Contractor/Subcontractor Certification Form.

Rev'd 03/07/14

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DOCUMENT 00821

**ELECTRONIC REPORTING REQUIREMENTS
CIVIL RIGHTS PROGRAMS AND CERTIFIED PAYROLL**

Implemented on March 2, 2009

Revised June 04, 2019

The Massachusetts Department Of Transportation (MassDOT) has replaced the CHAMP reporting system with Equitable Business Opportunity Solution (EBO), a new web-based civil rights reporting software system. This system is capable of handling both civil rights reporting requirements and certified payrolls. The program's functions include the administration of Equal Employment Opportunity (EEO) requirements, On-The-Job Training requirements (OJT), Disadvantage Business Enterprise (DBE) and/or Minority / Women's Business Enterprise (M/WBE) subcontracting requirements, and the electronic collection of certified payrolls associated with MassDOT projects. In addition, this system is used to generate various data required as part of the American Recovery and Reinvestment Act (ARRA). Contractors are responsible for all coordination with all sub-contractors to ensure timely and accurate electronic submission of all required data.

Contractor and Sub-Contractor EBO User Certification

All contractors and sub-contractors must use the EBO software system. The software vendor, Internet Government Solutions (IGS), has developed an online EBO Training Module that is available to contractors and sub-contractors. This module is a self-tutorial which allows all users in the company to access the training, complete the tutorial, and become certified as EBO users for a one time fee of \$75.00. This is the only cost to contractors and sub-contractors associated with the EBO software system. The online EBO Training Module can be accessed at www.ebotraining.com. Click the "Register My Company" button on the login page to begin your training registration. Questions regarding EBO online training should be directed to Gerry Anguilano, IGS at (440) 238-1684.

MassDOT will track contractors and sub-contractors who have successfully completed the on-line training module. All persons performing civil rights program and/or certified payroll functions should be EBO certified.

Vetting of Firms and Designated Firm Individuals

Contractors must authorize a Primary Log-In ID Holder who has completed EBO on-line training to have access to the EBO system by completing and submitting the "Request For EBO System Log-In/Password Form" located on the MassDOT website at: <https://www.mass.gov/how-to/how-to-get-an-ebo-login>. Contractors must also agree to comply with the EBO system user agreement located on the MassDOT website.

All subcontracts entered into on a project must include language that identifies the submission and training requirements that the sub-contractor must perform. Sub-contractors will be approved by the respective District Office of MassDOT through the existing approval process. When new sub-contractors, who have not previously worked for MassDOT, are initially selected by a general contractor, the new sub-contractor must be approved by the District before taking the EBO on-line training module.

Interim Reporting Requirements

Until MassDOT is satisfied that the EBO system is fully operational and functioning as designed, contractors and sub-contractors will be required to submit certified payrolls manually. There will be a transition period where dual reporting, through manual and electronic submission, will be required. MassDOT, however, will notify contractors and sub-contractors when they may cease manual submission of certified payrolls.

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DOCUMENT 00859

CONTRACTOR/SUBCONTRACTOR CERTIFICATION FORM ‡*The contractor shall submit this completed document 00859 to MassDOT for each subcontract.*_____
(Contractor) Date: __________
(Subcontractor) ☐ District Approved SubcontractorContract No: 130933 Project No. 612514 Federal Aid No.: HIP(NGB)-003S(828)Location: CUMMINGTONProject Description: Bridge Preservation, C-21-002, Route 9 over Westfield River

PART 1 CONTRACTOR CERTIFICATION: I hereby certify, as an authorized official of this company, that to the best of my knowledge, information and belief, the company is in compliance with all applicable federal and state laws, rules, and regulations governing fair labor and employment practices, that the company will not discriminate in their employment practices, that the company will make good faith efforts to comply with the minority employee and women employee workforce participation ratio goals and specific affirmative action steps contained in Contract Document 00820 The Commonwealth of Massachusetts Supplemental Equal Employment Opportunity, Non-Discrimination and Affirmative Action Program, and that the company will comply with the special provisions and documentation indicated below (as checked).

I further hereby certify, as an authorized official of this company, that the special provisions and documentation indicated below (as checked) have been or are included in, and made part of, the Subcontractor Agreement entered into with the firm named above.

☐ **This is not a Federally-aided construction project****Document #**

- ☐ 00718 –Participation By Minority Or Women's Business Enterprises and SDVOBE†
- ☐ 00761 –Certification Regarding Debarment, Suspension, Ineligibility, and Voluntary Exclusion
- ☐ 00820 – MA Supplemental Equal Employment Opportunity, Non-Discrimination, and Affirmative Action Program
- ☐ 00821 – Electronic Reporting Requirements, Civil Rights Programs, and Certified Payroll
- ☐ 00859 – Contractor/Subcontractor Certification Form (this document)
- ☐ 00860 – MA Employment Laws
- ☐ 00861 – Applicable State Wage Rates in the Contract Proposal**
- ☐ B00842 – MA Schedule of Participation By Minority or Women Business Enterprises (M/WBEs)†
- ☐ B00843 – MA Letter of Intent – M/WBEs†
 - ** Does not apply to Material Suppliers, unless performing work on-site
 - † Applies only if Subcontractor is a M/WBE; only include these forms for the particular M/WBE Entity
- ☐ B00844 - Schedule of Participation By SDVOBE
- ☐ B00845 - Letter of Intent – SDVOBE
- ☐ B00846 – M/WBE or SDVOBE Joint Check Arrangement Approval Form
- ☐ B00847 – Joint Venture Affidavit

☐ **This is a Federally-aided construction project (Federal Aid Number is present)****Document #**

- ☐ 00719 – Special Provisions for Participation by Disadvantaged Business Enterprises†
- ☐ 00760 - Form FHWA 1273 - Required Contract Provisions for Federal-Aid Construction Contracts
- ☐ 00820 – MA Supplemental Equal Employment Opportunity, Non-Discrimination and Affirmative Action Program
- ☐ 00821 – Electronic Reporting Requirements, Civil Rights Programs and Certified Payroll
- ☐ 00859 – Contractor/Subcontractor Certification Form (this document)
- ☐ 00860 – MA Employment Laws
- ☐ 00870 – Standard Federal Equal Employment Opportunity Construction Contract Specifications Executive Order 11246, (41 CFR Parts 60-4.2 and 60-4.3 (Solicitations and Equal Opportunity Clauses))*
- ☐ 00875 – Federal Trainee Special Provisions

- ☐ B00853 – Schedule of Participation by Disadvantaged Business Enterprise†
☐ B00854 – Letter of Intent – DBEs†
☐ B00855 – DBE Joint Check Arrangement Approval Form
☐ B00856 – Joint Venture Affidavit
☐ 00861/00880 - Applicable state and federal wage rates from Contract Proposal**

*Applicable only to Contracts or Subcontracts in excess of \$10,000

**Does not apply to Material Suppliers, unless performing work on-site

† Applies only if Subcontractor is a DBE; only include these forms for the particular DBE Entity

Signed this _____ Day of _____, 20____ Under The Pains And Penalties Of Perjury.

 (Print Name and Title)

 (Authorized Signature)

PART 2

PART 2. SUBCONTRACTOR CERTIFICATION: I hereby certify, as an authorized official of this company, that the required documents in Part 1 above were physically incorporated in our Agreement/Subcontract with the Contractor and give assurance that this company will fully comply or make every good faith effort to comply with the same. I further certify that:

1. This company recognizes that if this is a Federal-Aid Project, then this Contract is covered by the equal employment opportunity laws administered and enforced by the United States Department of Labor ("USDOL"), Office of Federal Contract Compliance Programs ("OFCCP"). By signing below, we acknowledge that this company has certain reporting obligations to the OFCCP, as specified by 41 CFR Part 60-4.2.
2. This company further acknowledges that any contractor with fifty (50) or more employees on a Federal-aid Contract with a value of fifty-thousand (\$50,000) dollars or more must annually file an EEO-1 Report (SF 100) to the EEOC, Joint Reporting Committee, on or before September 30th, each year, as specified by 41 CFR Part 60-1.7a.
3. For more information regarding the federal reporting requirements, please contact the USDOL, OFCCP Regional Office, at 1-646-264-3170 or EEO-1, Joint Reporting Committee at 1-866-286-6440. You may also find guidance at: <http://www.dol.gov/ofccp/TAguides/consttag.pdf> or <http://www.wdol.gov/dba.aspx#0>.
4. This company ☐ has, ☐ has not, participated in a previous contract or subcontract subject to the Equal Opportunity clauses set forth in 41 CFR Part 60-4 and Executive Order 11246, and where required, has filed with the Joint Reporting Committee, the Director of the Office of Federal Contract Compliance Programs or the EEO Commission all reports due under the applicable filing requirements.
5. This company is in full compliance with applicable Federal and Commonwealth of Massachusetts laws, rules, and regulations and is not currently debarred or disqualified from bidding on or participating in construction contracts in any jurisdiction of the United States. See : <https://www.mass.gov/service-details/contractors-and-vendors-suspended-or-debarred-by-massdot>
6. This company is properly registered and in good standing with the Office of the Secretary of the Commonwealth.

Signed this _____ Day of _____, 20____, Under The Pains And Penalties Of Perjury.

Firm: _____

Address: _____

 (Print Name and Title)

Telephone Number: _____

Federal I.D. Number: _____

Estimated Start Date: _____

Estimated Completion Date: _____

Estimated Dollar Amount: _____

 (Authorized Signature)

 (Date)

DOCUMENT 00860

COMMONWEALTH OF MASSACHUSETTS PUBLIC EMPLOYMENT LAWS

Revised February 20, 2019

The Contractor's attention is directed to Massachusetts General Laws, Chapter 149, Sections 26 through 27H, and 150A. This contract is considered to fall within the ambit of that law, which provides that in general, the Prevailing Rate or Total Rate must be paid to employees working on projects funded by the Commonwealth of Massachusetts or any political subdivision including Massachusetts Department of Transportation (MassDOT).

A Federal Aid project is also subject to the Federal Minimum Wage Rate law for construction. When comparing a state minimum wage rate, monitored by the Massachusetts Attorney General, versus federal minimum wage rate, monitored by the U.S. Department of Labor Wage and Hour Division, for a particular job classification the higher wage is at all times to be paid to the affected employee.

Every contractor or subcontractor engaged in this contract to which sections twenty-seven and twenty-seven A apply will keep a true and accurate record of all mechanics and apprentices, teamsters, chauffeurs and laborers employed thereon, showing the name, address and occupational classification of each such employee on this contract, and the hours worked by, and the wages paid to, each such employee, and shall furnish to the MassDOT's Resident Engineer, on a weekly basis, a copy of said record, in a form approved by MassDOT and in accordance with M.G.L. c. 149, § 27B, signed by the employer or his/her authorized agent under the penalties of perjury.

Each such contractor or subcontractor shall preserve its payroll records for a period of three years from the date of completion of the contract.

The Prevailing Wage Rate generally includes the following:

Minimum Hourly Wage + Employer Contributions to Benefit Plans = Prevailing Wage Rate or Total Rate

Any employer who does not make contributions to Benefit Plans must pay the total Prevailing Wage Rate directly to the employee.

Any deduction from the Prevailing Wage Rate or Total Rate for contributions to benefit plans can only be for a Health & Welfare, Pension, or Supplementary Unemployment plan meeting the requirements of the Employee Retirement Income Security Act (ERISA) of 1974. The maximum allowable deduction for these benefits from the prevailing wage rate cannot be greater than the amount allowed by Executive Office of Labor (EOL) for the specified benefits. Any additional expense of providing benefits to the employees is to be borne by the employer and cannot be deducted from the Minimum Hourly Wage. If the employer's benefit expense is less than that so provided by EOL the difference will be paid directly to the employee. The rate established must be paid to all employees who perform work on the project.

When an employer makes deductions from the Minimum Hourly Wage for an employee's contribution to social security, state taxes, federal taxes, and/or other contribution programs, allowed by law, the employer shall furnish each employee a suitable pay slip, check stub or envelope notifying the employee of the amount of the deductions.

No contractor or subcontractor contracting for any part of the contract week shall require or permit any laborer or mechanic to be employed on such work in excess of forty hours in any workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times his basic rate of pay for all hours worked in excess of forty hours in such workweek, whichever is the greater number of overtime hours.

Apprentice Rates are permitted only when there is an Apprentice Agreement registered with the Massachusetts Division of Apprentice Training in accordance with M.G.L. c. 23, § 11E-11L.

The Prevailing Wage Rates issued for each project shall be the rates paid for the entire project. The Prevailing Wage Rates must be posted on the job site at all times and be visible from a public way.

In addition, each such contractor and subcontractor shall furnish to the MassDOT's Resident Engineer, within fifteen days after completion of its portion of the work, a statement, executed by the contractor or subcontractor or by any authorized officer or employee of the contractor or subcontractor who supervises the payment of wages, in the following form:

STATEMENT OF COMPLIANCE

Date: _____

I, _____ do hereby state:
(Name of signatory party) (Title)

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

(Contractor or Subcontractor)

on the _____
(MassDOT Project Location and Contract Number)

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

Signature _____

Title _____

The above-mentioned copies of payroll records and statements of compliance shall be available for inspection by any interested party filing a written request to the MassDOT's Resident Engineer for such inspection and copying.

Massachusetts General Laws c. 149, §27, requires annual updates to prevailing wage schedules for all public construction contracts lasting longer than one year. MassDOT will request the required updates and furnish them to the Contractor. The Contractor is required to pay no less than the wage rates indicated on the annual updated wage schedules.

MassDOT will request the updates no later than two weeks before the anniversary of the Notice to Proceed date of the contract to allow for adequate processing by the Department of Labor Standards (DLS). The effective date for the new rates will be the anniversary date of the contract (i.e. the notice to proceed date), regardless of the date of issuance on the schedule from DLS.

All bidders are cautioned that the aforementioned laws require that employers pay to covered employees no less than the applicable minimum wages. In addition, the same laws require that the applicable prevailing wages become incorporated as part of this contract. The prevailing minimum wage law establishes serious civil and criminal penalties for violations, including imprisonment and exclusion from future public contracts. Bidders are cautioned to carefully read the relevant sections of the Massachusetts General Laws.

*** END OF DOCUMENT ***

DOCUMENT 00861

STATE PREVAILING WAGE RATES

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**THE COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF LABOR AND WORKFORCE DEVELOPMENT
DEPARTMENT OF LABOR STANDARDS
Prevailing Wage Rates**

MAURA HEALY
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:	MassDOT Highway	City/Town:	CUMMINGTON
Contract Number:	130933		
Description of Work:	CUMMINGTON – FAP No. HIP(NGB)-003S(828) Bridge Preservation, C-21-002, Route 9 over Westfield River		
Job Location:	Route 8 over Westfield River		

Information about Prevailing Wage Schedules for Awarding Authorities and Contractors

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

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
(2 AXLE) DRIVER - EQUIPMENT	6/1/2025	\$40.95	\$15.57	\$20.17	\$0.00	\$0.00	\$76.69
TEAMSTERS JOINT COUNCIL NO. 10	12/1/2025	\$40.95	\$15.57	\$21.78	\$0.00	\$0.00	\$78.30
TEAMSTERS JOINT COUNCIL NO. 10 ZONE B	1/1/2026	\$40.95	\$16.17	\$21.78	\$0.00	\$0.00	\$78.90
	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	6/1/2025	\$41.02	\$15.57	\$20.17	\$0.00	\$0.00	\$76.76
TEAMSTERS JOINT COUNCIL NO. 10	12/1/2025	\$41.02	\$15.57	\$21.78	\$0.00	\$0.00	\$78.37
TEAMSTERS JOINT COUNCIL NO. 10 ZONE B	1/1/2026	\$41.02	\$16.17	\$21.78	\$0.00	\$0.00	\$78.97
	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	6/1/2025	\$41.14	\$15.57	\$20.17	\$0.00	\$0.00	\$76.88
TEAMSTERS JOINT COUNCIL NO. 10	12/1/2025	\$41.14	\$15.57	\$21.78	\$0.00	\$0.00	\$78.49
TEAMSTERS JOINT COUNCIL NO. 10 ZONE B	1/1/2026	\$41.14	\$16.17	\$21.78	\$0.00	\$0.00	\$79.09
	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 3) For apprentice rates see "Apprentice- PILE DRIVER"	8/1/2024	\$117.16	\$10.08	\$11.62	\$12.67	\$0.00	\$151.53
AIR TRACK OPERATOR LABORERS LABORERS - ZONE 4 (BUILDING & SITE) For apprentice rates see "Apprentice- LABORER"	12/1/2024	\$32.29	\$9.90	\$9.25	\$5.53	\$0.00	\$56.97
AIR TRACK OPERATOR (HEAVY & HIGHWAY) LABORERS LABORERS - ZONE 4 (HEAVY & HIGHWAY)	6/1/2025	\$35.98	\$9.90	\$9.25	\$6.60	\$0.00	\$61.73
	12/1/2025	\$37.21	\$9.90	\$9.25	\$6.60	\$0.00	\$62.96
	6/1/2026	\$39.25	\$9.90	\$9.25	\$6.60	\$0.00	\$65.00
	12/1/2026	\$40.54	\$9.90	\$9.25	\$6.60	\$0.00	\$66.29
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"							
ASBESTOS WORKER (PIPES & TANKS)	6/1/2025	\$39.42	\$14.50	\$4.30	\$6.25	\$0.00	\$64.47
HEAT & FROST INSULATORS LOCAL 6	12/1/2025	\$40.32	\$14.50	\$4.30	\$6.25	\$0.00	\$65.37
HEAT & FROST INSULATORS LOCAL 6 (SPRINGFIELD)							
ASPHALT RAKER LABORERS LABORERS - ZONE 4 (BUILDING & SITE) For apprentice rates see "Apprentice- LABORER"	12/1/2024	\$31.79	\$9.90	\$9.25	\$5.53	\$0.00	\$56.47
ASPHALT RAKER (HEAVY & HIGHWAY) LABORERS LABORERS - ZONE 4 (HEAVY & HIGHWAY)	6/1/2025	\$35.48	\$9.90	\$9.25	\$6.60	\$0.00	\$61.23
	12/1/2025	\$36.71	\$9.90	\$9.25	\$6.60	\$0.00	\$62.46
	6/1/2026	\$38.75	\$9.90	\$9.25	\$6.60	\$0.00	\$64.50
	12/1/2026	\$40.04	\$9.90	\$9.25	\$6.60	\$0.00	\$65.79
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"							

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
AUTOMATIC GRADER-EXCAVATOR (RECLAIMER) OPERATING ENGINEERS LOCAL 98 OPERATING ENGINEERS LOCAL 98	12/1/2023	\$39.56	\$13.78	\$12.15	\$3.00	\$0.00	\$68.49
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
BACKHOE/FRONT-END LOADER OPERATOR OPERATING ENGINEERS LOCAL 98 OPERATING ENGINEERS LOCAL 98	12/1/2023	\$39.56	\$13.78	\$12.15	\$3.00	\$0.00	\$68.49
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
BARCO-TYPE JUMPING TAMPER LABORERS LABORERS - ZONE 4 (BUILDING & SITE)	12/1/2024	\$31.79	\$9.90	\$9.25	\$5.53	\$0.00	\$56.47
For apprentice rates see "Apprentice- LABORER"							
BATCH/CEMENT PLANT - ON SITE OPERATING ENGINEERS LOCAL 98 OPERATING ENGINEERS LOCAL 98	12/1/2023	\$39.03	\$13.78	\$12.15	\$3.00	\$0.00	\$67.96
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
BLOCK PAVER, RAMMER / CURB SETTER LABORERS LABORERS - ZONE 4 (BUILDING & SITE)	12/1/2024	\$32.29	\$9.90	\$9.25	\$5.53	\$0.00	\$56.97
For apprentice rates see "Apprentice- LABORER"							
BLOCK PAVER, RAMMER / CURB SETTER (HEAVY & HIGHWAY)	6/1/2025	\$35.98	\$9.90	\$9.25	\$6.60	\$0.00	\$61.73
LABORERS	12/1/2025	\$37.21	\$9.90	\$9.25	\$6.60	\$0.00	\$62.96
LABORERS - ZONE 4 (HEAVY & HIGHWAY)	6/1/2026	\$39.25	\$9.90	\$9.25	\$6.60	\$0.00	\$65.00
	12/1/2026	\$40.54	\$9.90	\$9.25	\$6.60	\$0.00	\$66.29
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"							
BOILER MAKER BOILERMAKERS LOCAL 29 BOILERMAKERS LOCAL 29	1/1/2024	\$48.12	\$7.07	\$14.60	\$6.00	\$0.00	\$75.79

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

BRICK/STONE/ARTIFICIAL MASONRY (INCL. MASONRY WATERPROOFING)	2/1/2025	\$54.21	\$11.49	\$15.57	\$5.89	\$0.00	\$87.16
BRICKLAYERS LOCAL 3	8/1/2025	\$56.36	\$11.49	\$15.57	\$5.89	\$0.00	\$89.31
	2/1/2026	\$57.71	\$11.49	\$15.57	\$5.89	\$0.00	\$90.66

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
BRICKLAYERS LOCAL 3 (SPRINGFIELD/PITTSFIELD)	8/1/2026	\$59.91	\$11.49	\$15.57	\$5.89	\$0.00	\$92.86
	2/1/2027	\$61.31	\$11.49	\$15.57	\$5.89	\$0.00	\$94.26

Apprentice: BRICK/STONE/ARTIFICIAL MASONRY (INCL. MASONRY WATERPROOFING)**Effective Date: 2/1/2025**

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$27.11	\$11.49	\$15.57	\$5.89	\$0.00	\$60.06
2	60.00	\$32.53	\$11.49	\$15.57	\$5.89	\$0.00	\$65.48
3	70.00	\$37.95	\$11.49	\$15.57	\$5.89	\$0.00	\$70.90
4	80.00	\$43.37	\$11.49	\$15.57	\$5.89	\$0.00	\$76.32
5	90.00	\$48.79	\$11.49	\$15.57	\$5.89	\$0.00	\$81.74

Apprentice: BRICK/STONE/ARTIFICIAL MASONRY (INCL. MASONRY WATERPROOFING)**Effective Date: 8/1/2025**

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$28.18	\$11.49	\$15.57	\$5.89	\$0.00	\$61.13
2	60.00	\$33.82	\$11.49	\$15.57	\$5.89	\$0.00	\$66.77
3	70.00	\$39.45	\$11.49	\$15.57	\$5.89	\$0.00	\$72.40
4	80.00	\$45.09	\$11.49	\$15.57	\$5.89	\$0.00	\$78.04
5	90.00	\$50.72	\$11.49	\$15.57	\$5.89	\$0.00	\$83.67

BULLDOZER/POWER SHOVEL/TREE SHREDDER /CLAM SHELL OPERATING ENGINEERS LOCAL 98 OPERATING ENGINEERS LOCAL 98	12/1/2023	\$39.56	\$13.78	\$12.15	\$3.00	\$0.00	\$68.49
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For apprentice rates see "Apprentice- OPERATING ENGINEERS"

CAISSON & UNDERPINNING BOTTOM MAN LABORERS	6/1/2025	\$48.85	\$9.90	\$9.25	\$9.80	\$0.00	\$77.80
LABORERS - FOUNDATION AND MARINE	12/1/2025	\$50.35	\$9.90	\$9.25	\$9.80	\$0.00	\$79.30
	6/1/2026	\$51.90	\$9.90	\$9.25	\$9.80	\$0.00	\$80.85
	12/1/2026	\$53.40	\$9.90	\$9.25	\$9.80	\$0.00	\$82.35

For apprentice rates see "Apprentice- LABORER"

CAISSON & UNDERPINNING LABORER LABORERS	6/1/2025	\$47.70	\$9.90	\$9.25	\$9.80	\$0.00	\$76.65
LABORERS - FOUNDATION AND MARINE	12/1/2025	\$49.20	\$9.90	\$9.25	\$9.80	\$0.00	\$78.15
	6/1/2026	\$50.75	\$9.90	\$9.25	\$9.80	\$0.00	\$79.70
	12/1/2026	\$52.25	\$9.90	\$9.25	\$9.80	\$0.00	\$81.20

For apprentice rates see "Apprentice- LABORER"

CAISSON & UNDERPINNING TOP MAN LABORERS	6/1/2025	\$48.03	\$9.90	\$9.25	\$9.80	\$0.00	\$76.98
LABORERS - FOUNDATION AND MARINE	12/1/2025	\$49.53	\$9.90	\$9.25	\$9.80	\$0.00	\$78.48
	6/1/2026	\$51.08	\$9.90	\$9.25	\$9.80	\$0.00	\$80.03
	12/1/2026	\$52.58	\$9.90	\$9.25	\$9.80	\$0.00	\$81.53

For apprentice rates see "Apprentice- LABORER"

CARBIDE CORE DRILL OPERATOR	12/1/2024	\$31.79	\$9.90	\$9.25	\$5.53	\$0.00	\$56.47
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Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
LABORERS							
LABORERS - ZONE 4 (BUILDING & SITE)							
For apprentice rates see "Apprentice- LABORER"							

CARPENTER	3/1/2025	\$43.26	\$7.91	\$11.25	\$6.90	\$0.00	\$69.32
CARPENTERS	9/1/2025	\$44.21	\$7.91	\$11.25	\$6.90	\$0.00	\$70.27
CARPENTERS LOCAL 336 - HAMPDEN HAMPSHIRE	3/1/2026	\$45.11	\$7.91	\$11.25	\$6.90	\$0.00	\$71.17
FRANKLIN	9/1/2026	\$46.06	\$7.91	\$11.25	\$6.90	\$0.00	\$72.12
	3/1/2027	\$46.96	\$7.91	\$11.25	\$6.90	\$0.00	\$73.02

Apprentice: CARPENTER**Effective Date: 3/1/2025**

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	45.00	\$19.47	\$7.91	\$0.00	\$1.40	\$0.00	\$28.78
2	45.00	\$19.47	\$7.91	\$0.00	\$1.40	\$0.00	\$28.78
3	55.00	\$23.79	\$7.91	\$0.00	\$2.76	\$0.00	\$34.46
4	55.00	\$23.79	\$7.91	\$0.00	\$2.76	\$0.00	\$34.46
5	70.00	\$30.28	\$7.91	\$11.25	\$4.14	\$0.00	\$53.58
6	70.00	\$30.28	\$7.91	\$11.25	\$4.14	\$0.00	\$53.58
7	80.00	\$34.61	\$7.91	\$11.25	\$5.52	\$0.00	\$59.29
8	80.00	\$34.61	\$7.91	\$11.25	\$5.52	\$0.00	\$59.29

Apprentice: CARPENTER**Effective Date: 9/1/2025**

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	45.00	\$19.89	\$7.91	\$0.00	\$1.38	\$0.00	\$29.18
2	45.00	\$19.89	\$7.91	\$0.00	\$1.38	\$0.00	\$29.18
3	55.00	\$24.32	\$7.91	\$0.00	\$2.76	\$0.00	\$34.99
4	55.00	\$24.32	\$7.91	\$0.00	\$2.76	\$0.00	\$34.99
5	70.00	\$30.95	\$7.91	\$11.25	\$4.14	\$0.00	\$54.25
6	70.00	\$30.95	\$7.91	\$11.25	\$4.14	\$0.00	\$54.25
7	80.00	\$35.37	\$7.91	\$11.25	\$5.52	\$0.00	\$60.05
8	80.00	\$35.37	\$7.91	\$11.25	\$5.52	\$0.00	\$60.05

CARPENTER WOOD FRAME	10/1/2024	\$26.65	\$7.02	\$3.80	\$1.00	\$0.00	\$38.47
CARPENTERS	10/1/2025	\$27.75	\$7.02	\$3.80	\$1.00	\$0.00	\$39.57
CARPENTERS-ZONE 3 (Wood Frame)	10/1/2026	\$28.85	\$7.02	\$3.80	\$1.00	\$0.00	\$40.67

All Aspects of New Wood Frame Work

Apprentice: CARPENTER WOOD FRAME**Effective Date: 10/1/2024**

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	60.00	\$15.99	\$7.02	\$0.00	\$0.00	\$0.00	\$23.01

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
Apprentice: CARPENTER WOOD FRAME							
Effective Date: 10/1/2024							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
2	60.00	\$15.99	\$7.02	\$0.00	\$0.00	\$0.00	\$23.01
3	65.00	\$17.32	\$7.02	\$0.00	\$1.00	\$0.00	\$25.34
4	70.00	\$18.66	\$7.02	\$0.00	\$1.00	\$0.00	\$26.68
5	75.00	\$19.99	\$7.02	\$3.80	\$1.00	\$0.00	\$31.81
6	80.00	\$21.32	\$7.02	\$3.80	\$1.00	\$0.00	\$33.14
7	85.00	\$22.65	\$7.02	\$3.80	\$1.00	\$0.00	\$34.47
8	90.00	\$23.99	\$7.02	\$3.80	\$1.00	\$0.00	\$35.81

Apprentice: CARPENTER WOOD FRAME							
Effective Date: 10/1/2025							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	60.00	\$16.65	\$7.02	\$0.00	\$0.00	\$0.00	\$23.67
2	60.00	\$16.65	\$7.02	\$0.00	\$0.00	\$0.00	\$23.67
3	65.00	\$18.04	\$7.02	\$0.00	\$1.00	\$0.00	\$26.06
4	70.00	\$19.43	\$7.02	\$0.00	\$1.00	\$0.00	\$27.45
5	75.00	\$20.81	\$7.02	\$3.80	\$1.00	\$0.00	\$32.63
6	80.00	\$22.20	\$7.02	\$3.80	\$1.00	\$0.00	\$34.02
7	85.00	\$23.59	\$7.02	\$3.80	\$1.00	\$0.00	\$35.41
8	90.00	\$24.98	\$7.02	\$3.80	\$1.00	\$0.00	\$36.80

CEMENT MASONRY/PLASTERING	7/1/2024	\$44.56	\$13.20	\$16.30	\$2.93	\$1.69	\$78.68
BRICKLAYERS LOCAL 3							
BRICKLAYERS LOCAL 3 (SPRINGFIELD/PITTSFIELD)							

Apprentice: CEMENT MASONRY/PLASTERING							
Effective Date: 7/1/2024							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$22.28	\$13.20	\$16.30	\$0.00	\$0.00	\$51.78
2	60.00	\$26.74	\$13.20	\$16.30	\$2.93	\$1.69	\$60.86
3	65.00	\$28.96	\$13.20	\$16.30	\$2.93	\$1.69	\$63.08
4	70.00	\$31.19	\$13.20	\$16.30	\$2.93	\$1.69	\$65.31
5	75.00	\$33.42	\$13.20	\$16.30	\$2.93	\$1.69	\$67.54
6	80.00	\$35.65	\$13.20	\$16.30	\$2.93	\$1.69	\$69.77
7	90.00	\$40.10	\$13.20	\$16.30	\$2.93	\$1.69	\$74.22

CHAIN SAW OPERATOR	12/1/2024	\$31.79	\$9.90	\$9.25	\$5.53	\$0.00	\$56.47
LABORERS							
LABORERS - ZONE 4 (BUILDING & SITE)							
For apprentice rates see "Apprentice- LABORER"							

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
COMPRESSOR OPERATOR OPERATING ENGINEERS LOCAL 98 OPERATING ENGINEERS LOCAL 98	12/1/2023	\$39.03	\$13.78	\$12.15	\$3.00	\$0.00	\$67.96

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

CRANE OPERATOR OPERATING ENGINEERS LOCAL 98 OPERATING ENGINEERS LOCAL 98	12/1/2023	\$43.06	\$13.78	\$12.15	\$3.00	\$0.00	\$71.99
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For apprentice rates see "Apprentice- OPERATING ENGINEERS"

DELEADER (BRIDGE) PAINTERS LOCAL 35 PAINTERS LOCAL 35 - ZONE 3	1/1/2025	\$58.46	\$9.95	\$11.85	\$12.10	\$0.00	\$92.36
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Apprentice: DELEADER (BRIDGE)**Effective Date: 1/1/2025**

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$29.23	\$9.95	\$0.00	\$0.00	\$0.00	\$39.18
2	55.00	\$32.15	\$9.95	\$0.00	\$6.66	\$0.00	\$48.76
3	60.00	\$35.08	\$9.95	\$0.00	\$7.26	\$0.00	\$52.29
4	65.00	\$38.00	\$9.95	\$0.00	\$7.87	\$0.00	\$55.82
5	70.00	\$40.92	\$9.95	\$11.85	\$8.47	\$0.00	\$71.19
6	75.00	\$43.85	\$9.95	\$11.85	\$9.08	\$0.00	\$74.73
7	80.00	\$46.77	\$9.95	\$11.85	\$9.68	\$0.00	\$78.25
8	90.00	\$52.61	\$9.95	\$11.85	\$10.89	\$0.00	\$85.30

DEMO: ADZEMAN LABORERS	6/2/2025	\$47.75	\$9.90	\$9.25	\$9.65	\$0.00	\$76.55
LABORERS - ZONE 4 (BUILDING & SITE)	12/1/2025	\$49.25	\$9.90	\$9.25	\$9.65	\$0.00	\$78.05
	6/1/2026	\$50.80	\$9.90	\$9.25	\$9.65	\$0.00	\$79.60
	12/7/2026	\$52.30	\$9.90	\$9.25	\$9.65	\$0.00	\$81.10
	6/7/2027	\$53.90	\$9.90	\$9.25	\$9.65	\$0.00	\$82.70
	12/6/2027	\$55.50	\$9.90	\$9.25	\$9.65	\$0.00	\$84.30
	6/5/2028	\$57.18	\$9.90	\$9.25	\$9.65	\$0.00	\$85.98
	12/4/2028	\$58.85	\$9.90	\$9.25	\$9.65	\$0.00	\$87.65

For apprentice rates see "Apprentice- LABORER"

DEMO: BACKHOE/LOADER/HAMMER OPERATOR LABORERS	6/2/2025	\$48.75	\$9.90	\$9.25	\$9.65	\$0.00	\$77.55
LABORERS - ZONE 4 (BUILDING & SITE)	12/1/2025	\$50.25	\$9.90	\$9.25	\$9.65	\$0.00	\$79.05
	6/1/2026	\$51.80	\$9.90	\$9.25	\$9.65	\$0.00	\$80.60
	12/7/2026	\$53.30	\$9.90	\$9.25	\$9.65	\$0.00	\$82.10
	6/7/2027	\$54.90	\$9.90	\$9.25	\$9.65	\$0.00	\$83.70
	12/6/2027	\$56.50	\$9.90	\$9.25	\$9.65	\$0.00	\$85.30
	6/5/2028	\$58.18	\$9.90	\$9.25	\$9.65	\$0.00	\$86.98
	12/4/2028	\$59.85	\$9.90	\$9.25	\$9.65	\$0.00	\$88.65

For apprentice rates see "Apprentice- LABORER"

DEMO: BURNERS LABORERS	6/2/2025	\$48.50	\$9.90	\$9.25	\$9.65	\$0.00	\$77.30
LABORERS - ZONE 4 (BUILDING & SITE)	12/1/2025	\$50.00	\$9.90	\$9.25	\$9.65	\$0.00	\$78.80
	6/1/2026	\$51.55	\$9.90	\$9.25	\$9.65	\$0.00	\$80.35

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
	12/7/2026	\$53.05	\$9.90	\$9.25	\$9.65	\$0.00	\$81.85
	6/7/2027	\$54.65	\$9.90	\$9.25	\$9.65	\$0.00	\$83.45
	12/6/2027	\$56.25	\$9.90	\$9.25	\$9.65	\$0.00	\$85.05
	6/5/2028	\$57.93	\$9.90	\$9.25	\$9.65	\$0.00	\$86.73
	12/4/2028	\$59.60	\$9.90	\$9.25	\$9.65	\$0.00	\$88.40

For apprentice rates see "Apprentice- LABORER"

DEMO: CONCRETE CUTTER/SAWYER	6/2/2025	\$48.75	\$9.90	\$9.25	\$9.65	\$0.00	\$77.55
LABORERS	12/1/2025	\$50.25	\$9.90	\$9.25	\$9.65	\$0.00	\$79.05
LABORERS - ZONE 4 (BUILDING & SITE)	6/1/2026	\$51.80	\$9.90	\$9.25	\$9.65	\$0.00	\$80.60
	12/7/2026	\$53.30	\$9.90	\$9.25	\$9.65	\$0.00	\$82.10
	6/7/2027	\$54.90	\$9.90	\$9.25	\$9.65	\$0.00	\$83.70
	12/6/2027	\$56.50	\$9.90	\$9.25	\$9.65	\$0.00	\$85.30
	6/5/2028	\$58.18	\$9.90	\$9.25	\$9.65	\$0.00	\$86.98
	12/4/2028	\$59.85	\$9.90	\$9.25	\$9.65	\$0.00	\$88.65

For apprentice rates see "Apprentice- LABORER"

DEMO: JACKHAMMER OPERATOR	6/2/2025	\$48.50	\$9.90	\$9.25	\$9.65	\$0.00	\$77.30
LABORERS	12/1/2025	\$50.00	\$9.90	\$9.25	\$9.65	\$0.00	\$78.80
LABORERS - ZONE 4 (BUILDING & SITE)	6/1/2026	\$51.55	\$9.90	\$9.25	\$9.65	\$0.00	\$80.35
	12/7/2026	\$53.05	\$9.90	\$9.25	\$9.65	\$0.00	\$81.85
	6/7/2027	\$54.65	\$9.90	\$9.25	\$9.65	\$0.00	\$83.45
	12/6/2027	\$56.25	\$9.90	\$9.25	\$9.65	\$0.00	\$85.05
	6/5/2028	\$57.93	\$9.90	\$9.25	\$9.65	\$0.00	\$86.73
	12/4/2028	\$59.60	\$9.90	\$9.25	\$9.65	\$0.00	\$88.40

For apprentice rates see "Apprentice- LABORER"

DEMO: WRECKING LABORER	6/2/2025	\$47.75	\$9.90	\$9.25	\$9.65	\$0.00	\$76.55
LABORERS	12/1/2025	\$49.25	\$9.90	\$9.25	\$9.65	\$0.00	\$78.05
LABORERS - ZONE 4 (BUILDING & SITE)	6/1/2026	\$50.80	\$9.90	\$9.25	\$9.65	\$0.00	\$79.60
	12/7/2026	\$52.30	\$9.90	\$9.25	\$9.65	\$0.00	\$81.10
	6/7/2027	\$53.90	\$9.90	\$9.25	\$9.65	\$0.00	\$82.70
	12/6/2027	\$55.50	\$9.90	\$9.25	\$9.65	\$0.00	\$84.30
	6/5/2028	\$57.18	\$9.90	\$9.25	\$9.65	\$0.00	\$85.98
	12/4/2028	\$58.85	\$9.90	\$9.25	\$9.65	\$0.00	\$87.65

For apprentice rates see "Apprentice- LABORER"

DIVER	8/1/2024	\$78.11	\$10.08	\$11.62	\$12.67	\$0.00	\$112.48
PILE DRIVER LOCAL 56							
PILE DRIVER LOCAL 56 (ZONE 3)							

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	8/1/2024	\$49.19	\$10.08	\$11.62	\$12.67	\$0.00	\$83.56
PILE DRIVER LOCAL 56							
PILE DRIVER LOCAL 56 (ZONE 3)							

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)	8/1/2024	\$83.69	\$10.08	\$11.62	\$12.67	\$0.00	\$118.06
PILE DRIVER LOCAL 56							
PILE DRIVER LOCAL 56 (ZONE 3)							

For apprentice rates see "Apprentice- PILE DRIVER"

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
DIVER/SLURRY (EFFLUENT)	8/1/2024	\$117.16	\$10.08	\$11.62	\$12.67	\$0.00	\$151.53
PILE DRIVER LOCAL 56							
PILE DRIVER LOCAL 56 (ZONE 3)							
For apprentice rates see "Apprentice- PILE DRIVER"							

DRAWBRIDGE OPERATOR (Construction)	7/1/2020	\$26.77	\$6.67	\$3.93	\$0.00	\$0.16	\$37.53
DRAWBRIDGE - SEIU LOCAL 888							
DRAWBRIDGE - SEIU LOCAL 888							

ELECTRICIAN (Including Core Drilling)	12/29/2024	\$51.06	\$13.25	\$8.23	\$6.83	\$0.00	\$79.37
ELECTRICIANS LOCAL 7	6/29/2025	\$52.16	\$13.50	\$8.31	\$6.90	\$0.00	\$80.87
ELECTRICIANS LOCAL 7	12/28/2025	\$53.26	\$13.75	\$8.40	\$6.96	\$0.00	\$82.37
	6/28/2026	\$54.41	\$14.00	\$8.43	\$7.03	\$0.00	\$83.87
	1/3/2027	\$55.56	\$14.25	\$8.47	\$7.09	\$0.00	\$85.37

Apprentice: ELECTRICIAN (Including Core Drilling)**Effective Date: 12/29/2024**

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	40.00	\$20.42	\$7.35	\$0.61	\$0.00	\$0.00	\$28.38
2	45.00	\$22.98	\$7.35	\$0.69	\$0.00	\$0.00	\$31.02
3	50.00	\$25.53	\$13.25	\$7.47	\$0.00	\$0.00	\$46.25
4	55.00	\$28.08	\$13.25	\$7.54	\$0.00	\$0.00	\$48.87
5	65.00	\$33.19	\$13.25	\$9.74	\$0.00	\$0.00	\$56.18
6	70.00	\$35.74	\$13.25	\$11.19	\$0.00	\$0.00	\$60.18

Apprentice: ELECTRICIAN (Including Core Drilling)**Effective Date: 6/29/2025**

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	40.00	\$20.86	\$7.50	\$0.63	\$0.00	\$0.00	\$28.99
2	45.00	\$23.47	\$7.50	\$0.70	\$0.00	\$0.00	\$31.67
3	50.00	\$26.08	\$13.50	\$7.53	\$0.00	\$0.00	\$47.11
4	55.00	\$28.69	\$13.50	\$7.61	\$0.00	\$0.00	\$49.80
5	65.00	\$33.90	\$13.50	\$9.84	\$0.00	\$0.00	\$57.24
6	70.00	\$36.51	\$13.50	\$11.30	\$0.00	\$0.00	\$61.31

ELEVATOR CONSTRUCTOR	1/1/2025	\$62.83	\$16.28	\$10.96	\$10.40	\$0.00	\$100.47
ELEVATOR CONSTRUCTORS LOCAL 41	1/1/2026	\$63.68	\$16.38	\$11.06	\$10.70	\$0.00	\$101.82
ELEVATOR CONSTRUCTORS LOCAL 41	1/1/2027	\$64.53	\$16.48	\$11.16	\$11.00	\$0.00	\$103.17

Apprentice: ELEVATOR CONSTRUCTOR**Effective Date: 1/1/2025**

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$31.42	\$16.28	\$0.00	\$0.00	\$0.00	\$47.70

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate																																																
<div>Apprentice: ELEVATOR CONSTRUCTOR</div> <div>Effective Date: 1/1/2025</div> <table><thead><tr><th>Step</th><th>Percent</th><th>Apprentice Base Wage</th><th>Health</th><th>Pension</th><th>Annuity</th><th>Supplemental Unemployment</th><th>Total Rate</th></tr></thead><tbody><tr><td>2</td><td>55.00</td><td>\$34.56</td><td>\$16.28</td><td>\$10.96</td><td>\$10.40</td><td>\$0.00</td><td>\$72.20</td></tr><tr><td>3</td><td>65.00</td><td>\$40.84</td><td>\$16.28</td><td>\$10.96</td><td>\$10.40</td><td>\$0.00</td><td>\$78.48</td></tr><tr><td>4</td><td>70.00</td><td>\$43.98</td><td>\$16.28</td><td>\$10.96</td><td>\$10.40</td><td>\$0.00</td><td>\$81.62</td></tr><tr><td>5</td><td>80.00</td><td>\$50.26</td><td>\$16.28</td><td>\$10.96</td><td>\$10.40</td><td>\$0.00</td><td>\$87.90</td></tr></tbody></table>								Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate	2	55.00	\$34.56	\$16.28	\$10.96	\$10.40	\$0.00	\$72.20	3	65.00	\$40.84	\$16.28	\$10.96	\$10.40	\$0.00	\$78.48	4	70.00	\$43.98	\$16.28	\$10.96	\$10.40	\$0.00	\$81.62	5	80.00	\$50.26	\$16.28	\$10.96	\$10.40	\$0.00	\$87.90								
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate																																																
2	55.00	\$34.56	\$16.28	\$10.96	\$10.40	\$0.00	\$72.20																																																
3	65.00	\$40.84	\$16.28	\$10.96	\$10.40	\$0.00	\$78.48																																																
4	70.00	\$43.98	\$16.28	\$10.96	\$10.40	\$0.00	\$81.62																																																
5	80.00	\$50.26	\$16.28	\$10.96	\$10.40	\$0.00	\$87.90																																																
<div>Apprentice: ELEVATOR CONSTRUCTOR</div> <div>Effective Date: 1/1/2026</div> <table><thead><tr><th>Step</th><th>Percent</th><th>Apprentice Base Wage</th><th>Health</th><th>Pension</th><th>Annuity</th><th>Supplemental Unemployment</th><th>Total Rate</th></tr></thead><tbody><tr><td>1</td><td>50.00</td><td>\$31.84</td><td>\$16.38</td><td>\$0.00</td><td>\$0.00</td><td>\$0.00</td><td>\$48.22</td></tr><tr><td>2</td><td>55.00</td><td>\$35.02</td><td>\$16.38</td><td>\$11.06</td><td>\$10.70</td><td>\$0.00</td><td>\$73.16</td></tr><tr><td>3</td><td>65.00</td><td>\$41.39</td><td>\$16.38</td><td>\$11.06</td><td>\$10.70</td><td>\$0.00</td><td>\$79.53</td></tr><tr><td>4</td><td>70.00</td><td>\$44.58</td><td>\$16.38</td><td>\$11.06</td><td>\$10.70</td><td>\$0.00</td><td>\$82.72</td></tr><tr><td>5</td><td>80.00</td><td>\$50.94</td><td>\$16.38</td><td>\$11.06</td><td>\$10.70</td><td>\$0.00</td><td>\$89.08</td></tr></tbody></table>								Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate	1	50.00	\$31.84	\$16.38	\$0.00	\$0.00	\$0.00	\$48.22	2	55.00	\$35.02	\$16.38	\$11.06	\$10.70	\$0.00	\$73.16	3	65.00	\$41.39	\$16.38	\$11.06	\$10.70	\$0.00	\$79.53	4	70.00	\$44.58	\$16.38	\$11.06	\$10.70	\$0.00	\$82.72	5	80.00	\$50.94	\$16.38	\$11.06	\$10.70	\$0.00	\$89.08
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate																																																
1	50.00	\$31.84	\$16.38	\$0.00	\$0.00	\$0.00	\$48.22																																																
2	55.00	\$35.02	\$16.38	\$11.06	\$10.70	\$0.00	\$73.16																																																
3	65.00	\$41.39	\$16.38	\$11.06	\$10.70	\$0.00	\$79.53																																																
4	70.00	\$44.58	\$16.38	\$11.06	\$10.70	\$0.00	\$82.72																																																
5	80.00	\$50.94	\$16.38	\$11.06	\$10.70	\$0.00	\$89.08																																																
ELEVATOR CONSTRUCTOR HELPER	1/1/2025	\$43.98	\$16.28	\$10.96	\$10.40	\$0.00	\$81.62																																																
ELEVATOR CONSTRUCTORS LOCAL 41	1/1/2026	\$44.58	\$16.38	\$11.06	\$10.70	\$0.00	\$82.72																																																
ELEVATOR CONSTRUCTORS LOCAL 41	1/1/2027	\$45.17	\$16.48	\$11.16	\$11.00	\$0.00	\$83.81																																																
For apprentice rates see "Apprentice - ELEVATOR CONSTRUCTOR"																																																							
FENCE & BEAM RAIL ERECTOR	12/1/2024	\$31.79	\$9.90	\$9.25	\$5.53	\$0.00	\$56.47																																																
LABORERS																																																							
LABORERS - ZONE 4 (BUILDING & SITE)																																																							
For apprentice rates see "Apprentice- LABORER"																																																							
FENCE & GUARD RAIL ERECTOR (HEAVY & HIGHWAY)	6/1/2025	\$35.48	\$9.90	\$9.25	\$6.60	\$0.00	\$61.23																																																
LABORERS	12/1/2025	\$36.71	\$9.90	\$9.25	\$6.60	\$0.00	\$62.46																																																
LABORERS - ZONE 4 (HEAVY & HIGHWAY)	6/1/2026	\$38.75	\$9.90	\$9.25	\$6.60	\$0.00	\$64.50																																																
	12/1/2026	\$40.04	\$9.90	\$9.25	\$6.60	\$0.00	\$65.79																																																
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"																																																							
FIELD ENG.INST/ROD-BLDG,SITE,HVY/HWY	6/1/1999	\$18.84	\$4.80	\$4.10	\$0.00	\$0.00	\$27.74																																																
OPERATING ENGINEERS LOCAL 98																																																							
OPERATING ENGINEERS LOCAL 98																																																							
FIELD ENG.PARTY CHIEF:BLDG,SITE,HVY/HWY	6/1/1999	\$21.33	\$4.80	\$4.10	\$0.00	\$0.00	\$30.23																																																
OPERATING ENGINEERS LOCAL 98																																																							
OPERATING ENGINEERS LOCAL 98																																																							
FIELD ENG.SURVEY CHIEF-BLDG,SITE,HVY/HWY	6/1/1999	\$22.33	\$4.80	\$4.10	\$0.00	\$0.00	\$31.23																																																
OPERATING ENGINEERS LOCAL 98																																																							
OPERATING ENGINEERS LOCAL 98																																																							
FIRE ALARM INSTALLER	12/29/2024	\$51.06	\$13.25	\$8.23	\$6.83	\$0.00	\$79.37																																																
ELECTRICIANS LOCAL 7	6/29/2025	\$52.16	\$13.50	\$8.31	\$6.90	\$0.00	\$80.87																																																

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
ELECTRICIANS LOCAL 7	12/28/2025	\$53.26	\$13.75	\$8.40	\$6.96	\$0.00	\$82.37
	6/28/2026	\$54.41	\$14.00	\$8.43	\$7.03	\$0.00	\$83.87
	1/3/2027	\$55.56	\$14.25	\$8.47	\$7.09	\$0.00	\$85.37

For apprentice rates see "Apprentice- ELECTRICIAN"

FIRE ALARM REPAIR / MAINTENANCE	12/29/2024	\$51.06	\$13.25	\$8.23	\$6.83	\$0.00	\$79.37
/ COMMISSIONING	6/29/2025	\$52.16	\$13.50	\$8.31	\$6.90	\$0.00	\$80.87
ELECTRICIANS LOCAL 7	12/28/2025	\$53.26	\$13.75	\$8.40	\$6.96	\$0.00	\$82.37
ELECTRICIANS LOCAL 7	6/28/2026	\$54.41	\$14.00	\$8.43	\$7.03	\$0.00	\$83.87
	1/3/2027	\$55.56	\$14.25	\$8.47	\$7.09	\$0.00	\$85.37

For apprentice rates see "Apprentice- TELECOMMUNICATIONS TECHNICIAN"

FIREMAN	12/1/2023	\$39.03	\$13.78	\$12.15	\$3.00	\$0.00	\$67.96
OPERATING ENGINEERS LOCAL 98							
OPERATING ENGINEERS LOCAL 98							

Apprentice: FIREMAN**Effective Date: 12/1/2023**

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	60.00	\$23.42	\$13.78	\$12.15	\$3.00	\$0.00	\$52.35
2	70.00	\$27.32	\$13.78	\$12.15	\$3.00	\$0.00	\$56.25
3	80.00	\$31.22	\$13.78	\$12.15	\$3.00	\$0.00	\$60.15
4	90.00	\$35.13	\$13.78	\$12.15	\$3.00	\$0.00	\$64.06

FLAGGER & SIGNALER (HEAVY & HIGHWAY)	6/1/2025	\$28.09	\$9.90	\$9.25	\$6.60	\$0.00	\$53.84
LABORERS	12/1/2025	\$28.09	\$9.90	\$9.25	\$6.60	\$0.00	\$53.84
LABORERS - ZONE 4 (HEAVY & HIGHWAY)	6/1/2026	\$29.21	\$9.90	\$9.25	\$6.60	\$0.00	\$54.96
	12/1/2026	\$29.21	\$9.90	\$9.25	\$6.60	\$0.00	\$54.96

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

FLOORCOVERER	3/1/2025	\$43.26	\$7.91	\$11.25	\$6.90	\$0.00	\$69.32
FLOORCOVERERS LOCAL 2168	9/1/2025	\$44.21	\$7.91	\$11.25	\$6.90	\$0.00	\$70.27
FLOORCOVERERS LOCAL 2168 ZONE III	3/1/2026	\$45.11	\$7.91	\$11.25	\$6.90	\$0.00	\$71.17
	9/1/2026	\$46.06	\$7.91	\$11.25	\$6.90	\$0.00	\$72.12
	3/1/2027	\$46.96	\$7.91	\$11.25	\$6.90	\$0.00	\$73.02

Apprentice: FLOORCOVERER**Effective Date: 3/1/2025**

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	45.00	\$19.47	\$7.91	\$0.00	\$1.38	\$0.00	\$28.76
2	45.00	\$19.47	\$7.91	\$0.00	\$1.38	\$0.00	\$28.76
3	55.00	\$23.79	\$7.91	\$0.00	\$2.76	\$0.00	\$34.46
4	55.00	\$23.79	\$7.91	\$0.00	\$2.76	\$0.00	\$34.46
5	70.00	\$30.28	\$7.91	\$11.25	\$4.14	\$0.00	\$53.58
6	70.00	\$30.28	\$7.91	\$11.25	\$4.14	\$0.00	\$53.58
7	80.00	\$34.61	\$7.91	\$11.25	\$5.52	\$0.00	\$59.29

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate																																																																								
<div>Apprentice: FLOORCOVERER</div> <div>Effective Date: 3/1/2025</div> <table><thead><tr><th>Step</th><th>Percent</th><th>Apprentice Base Wage</th><th>Health</th><th>Pension</th><th>Annuity</th><th>Supplemental Unemployment</th><th>Total Rate</th></tr></thead><tbody><tr><td>8</td><td>80.00</td><td>\$34.61</td><td>\$7.91</td><td>\$11.25</td><td>\$5.52</td><td>\$0.00</td><td>\$59.29</td></tr></tbody></table>								Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate	8	80.00	\$34.61	\$7.91	\$11.25	\$5.52	\$0.00	\$59.29																																																								
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate																																																																								
8	80.00	\$34.61	\$7.91	\$11.25	\$5.52	\$0.00	\$59.29																																																																								
<div>Apprentice: FLOORCOVERER</div> <div>Effective Date: 9/1/2025</div> <table><thead><tr><th>Step</th><th>Percent</th><th>Apprentice Base Wage</th><th>Health</th><th>Pension</th><th>Annuity</th><th>Supplemental Unemployment</th><th>Total Rate</th></tr></thead><tbody><tr><td>1</td><td>45.00</td><td>\$19.89</td><td>\$7.91</td><td>\$0.00</td><td>\$1.38</td><td>\$0.00</td><td>\$29.18</td></tr><tr><td>2</td><td>45.00</td><td>\$19.89</td><td>\$7.91</td><td>\$0.00</td><td>\$1.38</td><td>\$0.00</td><td>\$29.18</td></tr><tr><td>3</td><td>55.00</td><td>\$24.32</td><td>\$7.91</td><td>\$0.00</td><td>\$2.76</td><td>\$0.00</td><td>\$34.99</td></tr><tr><td>4</td><td>55.00</td><td>\$24.32</td><td>\$7.91</td><td>\$0.00</td><td>\$2.76</td><td>\$0.00</td><td>\$34.99</td></tr><tr><td>5</td><td>70.00</td><td>\$30.95</td><td>\$7.91</td><td>\$11.25</td><td>\$4.14</td><td>\$0.00</td><td>\$54.25</td></tr><tr><td>6</td><td>70.00</td><td>\$30.95</td><td>\$7.91</td><td>\$11.25</td><td>\$4.14</td><td>\$0.00</td><td>\$54.25</td></tr><tr><td>7</td><td>80.00</td><td>\$35.37</td><td>\$7.91</td><td>\$11.25</td><td>\$5.52</td><td>\$0.00</td><td>\$60.05</td></tr><tr><td>8</td><td>80.00</td><td>\$35.37</td><td>\$7.91</td><td>\$11.25</td><td>\$5.52</td><td>\$0.00</td><td>\$60.05</td></tr></tbody></table>								Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate	1	45.00	\$19.89	\$7.91	\$0.00	\$1.38	\$0.00	\$29.18	2	45.00	\$19.89	\$7.91	\$0.00	\$1.38	\$0.00	\$29.18	3	55.00	\$24.32	\$7.91	\$0.00	\$2.76	\$0.00	\$34.99	4	55.00	\$24.32	\$7.91	\$0.00	\$2.76	\$0.00	\$34.99	5	70.00	\$30.95	\$7.91	\$11.25	\$4.14	\$0.00	\$54.25	6	70.00	\$30.95	\$7.91	\$11.25	\$4.14	\$0.00	\$54.25	7	80.00	\$35.37	\$7.91	\$11.25	\$5.52	\$0.00	\$60.05	8	80.00	\$35.37	\$7.91	\$11.25	\$5.52	\$0.00	\$60.05
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate																																																																								
1	45.00	\$19.89	\$7.91	\$0.00	\$1.38	\$0.00	\$29.18																																																																								
2	45.00	\$19.89	\$7.91	\$0.00	\$1.38	\$0.00	\$29.18																																																																								
3	55.00	\$24.32	\$7.91	\$0.00	\$2.76	\$0.00	\$34.99																																																																								
4	55.00	\$24.32	\$7.91	\$0.00	\$2.76	\$0.00	\$34.99																																																																								
5	70.00	\$30.95	\$7.91	\$11.25	\$4.14	\$0.00	\$54.25																																																																								
6	70.00	\$30.95	\$7.91	\$11.25	\$4.14	\$0.00	\$54.25																																																																								
7	80.00	\$35.37	\$7.91	\$11.25	\$5.52	\$0.00	\$60.05																																																																								
8	80.00	\$35.37	\$7.91	\$11.25	\$5.52	\$0.00	\$60.05																																																																								
FORK LIFT OPERATING ENGINEERS LOCAL 98 OPERATING ENGINEERS LOCAL 98 For apprentice rates see "Apprentice- OPERATING ENGINEERS"	12/1/2023	\$39.25	\$13.78	\$12.15	\$3.00	\$0.00	\$68.18																																																																								
GENERATORS/LIGHTING PLANTS OPERATING ENGINEERS LOCAL 98 OPERATING ENGINEERS LOCAL 98 For apprentice rates see "Apprentice- OPERATING ENGINEERS"	12/1/2023	\$35.80	\$13.78	\$12.15	\$3.00	\$0.00	\$64.73																																																																								
GLAZIER (GLASS PLANK/AIR BARRIER/INTERIOR SYSTEMS) GLAZIERS LOCAL 1333 GLAZIERS LOCAL 1333	6/1/2020	\$39.18	\$10.80	\$6.70	\$3.75	\$0.00	\$60.43																																																																								
<div>Apprentice: GLAZIER (GLASS PLANK/AIR BARRIER/INTERIOR SYSTEMS)</div> <div>Effective Date: 6/1/2020</div> <table><thead><tr><th>Step</th><th>Percent</th><th>Apprentice Base Wage</th><th>Health</th><th>Pension</th><th>Annuity</th><th>Supplemental Unemployment</th><th>Total Rate</th></tr></thead><tbody><tr><td>1</td><td>50.00</td><td>\$19.59</td><td>\$10.80</td><td>\$1.50</td><td>\$0.30</td><td>\$0.00</td><td>\$32.19</td></tr><tr><td>2</td><td>56.25</td><td>\$22.04</td><td>\$10.80</td><td>\$1.50</td><td>\$0.30</td><td>\$0.00</td><td>\$34.64</td></tr><tr><td>3</td><td>62.50</td><td>\$24.49</td><td>\$10.80</td><td>\$1.95</td><td>\$0.50</td><td>\$0.00</td><td>\$37.74</td></tr><tr><td>4</td><td>68.75</td><td>\$26.94</td><td>\$10.80</td><td>\$1.95</td><td>\$0.50</td><td>\$0.00</td><td>\$40.19</td></tr><tr><td>5</td><td>75.00</td><td>\$29.39</td><td>\$10.80</td><td>\$2.50</td><td>\$0.65</td><td>\$0.00</td><td>\$43.34</td></tr><tr><td>6</td><td>81.25</td><td>\$31.83</td><td>\$10.80</td><td>\$2.50</td><td>\$0.65</td><td>\$0.00</td><td>\$45.78</td></tr><tr><td>7</td><td>87.50</td><td>\$34.28</td><td>\$10.80</td><td>\$6.70</td><td>\$3.75</td><td>\$0.00</td><td>\$55.53</td></tr><tr><td>8</td><td>93.75</td><td>\$36.73</td><td>\$10.80</td><td>\$6.70</td><td>\$3.75</td><td>\$0.00</td><td>\$57.98</td></tr></tbody></table>								Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate	1	50.00	\$19.59	\$10.80	\$1.50	\$0.30	\$0.00	\$32.19	2	56.25	\$22.04	\$10.80	\$1.50	\$0.30	\$0.00	\$34.64	3	62.50	\$24.49	\$10.80	\$1.95	\$0.50	\$0.00	\$37.74	4	68.75	\$26.94	\$10.80	\$1.95	\$0.50	\$0.00	\$40.19	5	75.00	\$29.39	\$10.80	\$2.50	\$0.65	\$0.00	\$43.34	6	81.25	\$31.83	\$10.80	\$2.50	\$0.65	\$0.00	\$45.78	7	87.50	\$34.28	\$10.80	\$6.70	\$3.75	\$0.00	\$55.53	8	93.75	\$36.73	\$10.80	\$6.70	\$3.75	\$0.00	\$57.98
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate																																																																								
1	50.00	\$19.59	\$10.80	\$1.50	\$0.30	\$0.00	\$32.19																																																																								
2	56.25	\$22.04	\$10.80	\$1.50	\$0.30	\$0.00	\$34.64																																																																								
3	62.50	\$24.49	\$10.80	\$1.95	\$0.50	\$0.00	\$37.74																																																																								
4	68.75	\$26.94	\$10.80	\$1.95	\$0.50	\$0.00	\$40.19																																																																								
5	75.00	\$29.39	\$10.80	\$2.50	\$0.65	\$0.00	\$43.34																																																																								
6	81.25	\$31.83	\$10.80	\$2.50	\$0.65	\$0.00	\$45.78																																																																								
7	87.50	\$34.28	\$10.80	\$6.70	\$3.75	\$0.00	\$55.53																																																																								
8	93.75	\$36.73	\$10.80	\$6.70	\$3.75	\$0.00	\$57.98																																																																								
GRADER/TRENCHING MACHINE/DERRICK	12/1/2023	\$39.56	\$13.78	\$12.15	\$3.00	\$0.00	\$68.49																																																																								

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
OPERATING ENGINEERS LOCAL 98							
OPERATING ENGINEERS LOCAL 98							
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
HVAC (DUCTWORK)	1/1/2025	\$42.23	\$12.20	\$10.79	\$7.95	\$2.13	\$75.30
SHEETMETAL WORKERS LOCAL 63							
SHEETMETAL WORKERS LOCAL 63							
For apprentice rates see "Apprentice- SHEET METAL WORKER"							
HVAC (ELECTRICAL CONTROLS)	12/29/2024	\$51.06	\$13.25	\$8.23	\$6.83	\$0.00	\$79.37
ELECTRICIANS LOCAL 7	6/29/2025	\$52.16	\$13.50	\$8.31	\$6.90	\$0.00	\$80.87
ELECTRICIANS LOCAL 7	12/28/2025	\$53.26	\$13.75	\$8.40	\$6.96	\$0.00	\$82.37
	6/28/2026	\$54.41	\$14.00	\$8.43	\$7.03	\$0.00	\$83.87
	1/3/2027	\$55.56	\$14.25	\$8.47	\$7.09	\$0.00	\$85.37
For apprentice rates see "Apprentice- ELECTRICIAN"							
HVAC (TESTING AND BALANCING - AIR)	1/1/2025	\$42.23	\$12.20	\$10.79	\$7.95	\$2.13	\$75.30
SHEETMETAL WORKERS LOCAL 63							
SHEETMETAL WORKERS LOCAL 63							
For apprentice rates see "Apprentice- SHEET METAL WORKER"							
HVAC (TESTING AND BALANCING -WATER)	3/17/2024	\$49.21	\$9.55	\$10.10	\$7.00	\$0.00	\$75.86
PLUMBERS & PIPEFITTERS LOCAL 104							
PLUMBERS & PIPEFITTERS LOCAL 104							
For apprentice rates see "Apprentice- PIPEFITTER" or "PLUMBER/PIPEFITTER"							
HVAC MECHANIC	3/17/2024	\$49.21	\$9.55	\$10.10	\$7.00	\$0.00	\$75.86
PLUMBERS & PIPEFITTERS LOCAL 104							
PLUMBERS & PIPEFITTERS LOCAL 104							
For apprentice rates see "Apprentice- PIPEFITTER" or "PLUMBER/PIPEFITTER"							
HYDRAULIC DRILLS (HEAVY & HIGHWAY)	6/1/2025	\$35.98	\$9.90	\$9.25	\$6.60	\$0.00	\$61.73
LABORERS	12/1/2025	\$37.21	\$9.90	\$9.25	\$6.60	\$0.00	\$62.96
LABORERS - ZONE 4 (HEAVY & HIGHWAY)	6/1/2026	\$39.25	\$9.90	\$9.25	\$6.60	\$0.00	\$65.00
	12/1/2026	\$40.54	\$9.90	\$9.25	\$6.60	\$0.00	\$66.29
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"							
INSULATOR (PIPES & TANKS)	9/1/2024	\$45.54	\$14.75	\$9.52	\$10.09	\$0.00	\$79.90
HEAT & FROST INSULATORS LOCAL 6	9/1/2025	\$48.27	\$14.75	\$9.52	\$10.09	\$0.00	\$82.63
HEAT & FROST INSULATORS LOCAL 6 (SPRINGFIELD)	9/1/2026	\$51.01	\$14.75	\$9.52	\$10.09	\$0.00	\$85.37

Apprentice: INSULATOR (PIPES & TANKS)							
Effective Date: 9/1/2024							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$22.77	\$14.75	\$9.27	\$5.05	\$0.00	\$51.84
2	60.00	\$27.32	\$14.75	\$9.32	\$6.05	\$0.00	\$57.44
3	70.00	\$31.88	\$14.75	\$9.37	\$7.06	\$0.00	\$63.06
4	80.00	\$36.43	\$14.75	\$9.42	\$8.07	\$0.00	\$68.67

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
Apprentice: INSULATOR (PIPES & TANKS) Effective Date: 9/1/2025							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$24.14	\$14.75	\$9.27	\$5.05	\$0.00	\$53.21
2	60.00	\$28.96	\$14.75	\$9.32	\$6.05	\$0.00	\$59.08
3	70.00	\$33.79	\$14.75	\$9.37	\$7.06	\$0.00	\$64.97
4	80.00	\$38.62	\$14.75	\$9.42	\$8.07	\$0.00	\$70.86
<hr/>							
IRONWORKER/WELDER IRONWORKERS LOCAL 7 IRONWORKERS LOCAL 7 (SPRINGFIELD AREA)	3/16/2024	\$40.66	\$8.25	\$12.70	\$10.00	\$0.00	\$71.61
<hr/>							
Apprentice: IRONWORKER/WELDER Effective Date: 3/16/2024							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	60.00	\$24.40	\$8.25	\$12.70	\$10.00	\$0.00	\$55.35
2	70.00	\$28.46	\$8.25	\$12.70	\$10.00	\$0.00	\$59.41
3	75.00	\$30.50	\$8.25	\$12.70	\$10.00	\$0.00	\$61.45
4	80.00	\$32.53	\$8.25	\$12.70	\$10.00	\$0.00	\$63.48
5	85.00	\$34.56	\$8.25	\$12.70	\$10.00	\$0.00	\$65.51
6	90.00	\$36.59	\$8.25	\$12.70	\$10.00	\$0.00	\$67.54
<hr/>							
JACKHAMMER & PAVING BREAKER OPERATOR LABORERS LABORERS - ZONE 4 (BUILDING & SITE) For apprentice rates see "Apprentice- LABORER"	12/1/2024	\$31.79	\$9.90	\$9.25	\$5.53	\$0.00	\$56.47
<hr/>							
LABORER LABORERS LABORERS - ZONE 4 (BUILDING & SITE)	12/1/2024	\$31.54	\$9.90	\$9.25	\$5.53	\$0.00	\$56.22
<hr/>							
Apprentice: LABORER Effective Date: 12/1/2024							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	60.00	\$18.92	\$9.90	\$9.25	\$5.53	\$0.00	\$43.60
2	70.00	\$22.08	\$9.90	\$9.25	\$5.53	\$0.00	\$46.76
3	80.00	\$25.23	\$9.90	\$9.25	\$5.53	\$0.00	\$49.91
4	90.00	\$28.39	\$9.90	\$9.25	\$5.53	\$0.00	\$53.07
<hr/>							
LABORER (HEAVY & HIGHWAY) LABORERS LABORERS - ZONE 4 (HEAVY & HIGHWAY)	6/1/2025	\$35.23	\$9.90	\$9.25	\$6.60	\$0.00	\$60.98
	12/1/2025	\$36.46	\$9.90	\$9.25	\$6.60	\$0.00	\$62.21
	6/1/2026	\$38.50	\$9.90	\$9.25	\$6.60	\$0.00	\$64.25
	12/1/2026	\$39.79	\$9.90	\$9.25	\$6.60	\$0.00	\$65.54

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
Apprentice: LABORER (HEAVY & HIGHWAY) Effective Date: 6/1/2025							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	60.00	\$21.14	\$9.90	\$9.25	\$6.60	\$0.00	\$46.89
2	70.00	\$24.66	\$9.90	\$9.25	\$6.60	\$0.00	\$50.41
3	80.00	\$28.18	\$9.90	\$9.25	\$6.60	\$0.00	\$53.93
4	90.00	\$31.71	\$9.90	\$9.25	\$6.60	\$0.00	\$57.46
Apprentice: LABORER (HEAVY & HIGHWAY) Effective Date: 12/1/2025							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	60.00	\$21.88	\$9.90	\$9.25	\$6.60	\$0.00	\$47.63
2	70.00	\$25.52	\$9.90	\$9.25	\$6.60	\$0.00	\$51.27
3	80.00	\$29.17	\$9.90	\$9.25	\$6.60	\$0.00	\$54.92
4	90.00	\$32.81	\$9.90	\$9.25	\$6.60	\$0.00	\$58.56
LABORER: CARPENTER TENDER LABORERS LABORERS - ZONE 4 (BUILDING & SITE) For apprentice rates see "Apprentice- LABORER"							
	12/1/2024	\$31.54	\$9.90	\$9.25	\$5.53	\$0.00	\$56.22
LABORER: CEMENT FINISHER TENDER LABORERS LABORERS - ZONE 4 (BUILDING & SITE) For apprentice rates see "Apprentice- LABORER"							
	12/1/2024	\$31.54	\$9.90	\$9.25	\$5.53	\$0.00	\$56.22
LABORER: HAZARDOUS WASTE/ASBESTOS REMOVER LABORERS LABORERS - ZONE 4 (BUILDING & SITE)							
	6/1/2025	\$34.40	\$9.65	\$9.00	\$5.41	\$0.00	\$58.46
	12/1/2025	\$35.63	\$9.65	\$9.00	\$5.41	\$0.00	\$59.69
	6/1/2026	\$37.67	\$9.65	\$9.00	\$5.41	\$0.00	\$61.73
	12/1/2026	\$38.96	\$9.65	\$9.00	\$5.41	\$0.00	\$63.02
	6/1/2027	\$40.26	\$9.65	\$9.00	\$5.41	\$0.00	\$64.32
	12/1/2027	\$41.56	\$9.65	\$9.00	\$5.41	\$0.00	\$65.62
	6/5/2028	\$42.91	\$9.65	\$9.00	\$5.41	\$0.00	\$66.97
	12/4/2028	\$44.26	\$9.65	\$9.00	\$5.41	\$0.00	\$68.32
For apprentice rates see "Apprentice- LABORER"							
LABORER: MASON TENDER LABORERS LABORERS - ZONE 4 (BUILDING & SITE) For apprentice rates see "Apprentice- LABORER"							
	12/1/2024	\$33.54	\$9.90	\$9.25	\$5.53	\$0.00	\$58.22
LABORER: MASON TENDER (HEAVY & HIGHWAY) LABORERS LABORERS - ZONE 4 (HEAVY & HIGHWAY)							
	6/1/2025	\$35.48	\$9.90	\$9.25	\$6.60	\$0.00	\$61.23
	12/1/2025	\$36.71	\$9.90	\$9.25	\$6.60	\$0.00	\$62.46
	6/1/2026	\$38.75	\$9.90	\$9.25	\$6.60	\$0.00	\$64.50
	12/1/2026	\$40.04	\$9.90	\$9.25	\$6.60	\$0.00	\$65.79
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"							

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
LABORER: MULTI-TRADE TENDER LABORERS LABORERS - ZONE 4 (BUILDING & SITE) For apprentice rates see "Apprentice- LABORER"	12/1/2024	\$31.54	\$9.90	\$9.25	\$5.53	\$0.00	\$56.22
LABORER: TREE REMOVER LABORERS LABORERS - ZONE 4 (BUILDING & SITE) This classification applies to the removal of standing trees, and the trimming and removal of branches and limbs when related to public works construction or site clearance incidental to construction . For apprentice rates see "Apprentice- LABORER"	12/1/2024	\$31.54	\$9.90	\$9.25	\$5.53	\$0.00	\$56.22
LASER BEAM OPERATOR LABORERS LABORERS - ZONE 4 (BUILDING & SITE) For apprentice rates see "Apprentice- LABORER"	12/1/2024	\$31.79	\$9.90	\$9.25	\$5.53	\$0.00	\$56.47
LASER BEAM OPERATOR (HEAVY & HIGHWAY) LABORERS LABORERS - ZONE 4 (HEAVY & HIGHWAY)	6/1/2025	\$35.48	\$9.90	\$9.25	\$6.60	\$0.00	\$61.23
	12/1/2025	\$36.71	\$9.90	\$9.25	\$6.60	\$0.00	\$62.46
	6/1/2026	\$38.75	\$9.90	\$9.25	\$6.60	\$0.00	\$64.50
	12/1/2026	\$40.04	\$9.90	\$9.25	\$6.60	\$0.00	\$65.79
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"							
MARBLE & TILE FINISHERS BRICKLAYERS LOCAL 3 BRICKLAYERS LOCAL 3 (SPR/PITT) - MARBLE & TILE	2/1/2025	\$43.84	\$11.49	\$15.10	\$5.68	\$0.00	\$76.11
	8/1/2025	\$44.75	\$11.49	\$15.10	\$5.68	\$0.00	\$77.02
	2/1/2026	\$45.83	\$11.49	\$15.10	\$5.68	\$0.00	\$78.10
	8/1/2026	\$47.59	\$11.49	\$15.10	\$5.68	\$0.00	\$79.86
	2/1/2027	\$48.71	\$11.49	\$15.10	\$5.68	\$0.00	\$80.98

Apprentice: MARBLE & TILE FINISHERS
Effective Date: 2/1/2025

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$21.92	\$11.49	\$15.10	\$5.68	\$0.00	\$54.19
2	60.00	\$26.30	\$11.49	\$15.10	\$5.68	\$0.00	\$58.57
3	70.00	\$30.69	\$11.49	\$15.10	\$5.68	\$0.00	\$62.96
4	80.00	\$35.07	\$11.49	\$15.10	\$5.68	\$0.00	\$67.34
5	90.00	\$39.46	\$11.49	\$15.10	\$5.68	\$0.00	\$71.73

Apprentice: MARBLE & TILE FINISHERS
Effective Date: 8/1/2025

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$22.38	\$11.49	\$15.10	\$5.68	\$0.00	\$54.65
2	60.00	\$26.85	\$11.49	\$15.10	\$5.68	\$0.00	\$59.12
3	70.00	\$31.33	\$11.49	\$15.10	\$5.68	\$0.00	\$63.60
4	80.00	\$35.80	\$11.49	\$15.10	\$5.68	\$0.00	\$68.07
5	90.00	\$40.28	\$11.49	\$15.10	\$5.68	\$0.00	\$72.55

MECH. SWEEPER OPERATOR (ON CONST. SITES)	12/1/2023	\$39.56	\$13.78	\$12.15	\$3.00	\$0.00	\$68.49
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Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
OPERATING ENGINEERS LOCAL 98							
OPERATING ENGINEERS LOCAL 98							
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
MECHANIC/WELDER/BOOM TRUCK	12/1/2023	\$39.03	\$13.78	\$12.15	\$3.00	\$0.00	\$67.96
OPERATING ENGINEERS LOCAL 98							
OPERATING ENGINEERS LOCAL 98							
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
MILLWRIGHT (Zone 3)	1/6/2025	\$43.48	\$10.08	\$11.47	\$9.75	\$0.00	\$74.78
MILLWRIGHTS LOCAL 1121	1/5/2026	\$45.76	\$10.08	\$11.47	\$9.75	\$0.00	\$77.06
MILLWRIGHTS LOCAL 1121 - Zone 3							

Apprentice: MILLWRIGHT (Zone 3)**Effective Date: 1/6/2025**

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	55.00	\$23.91	\$10.08	\$0.00	\$5.36	\$0.00	\$39.35
2	65.00	\$28.26	\$10.08	\$0.00	\$6.34	\$0.00	\$44.68
3	75.00	\$32.61	\$10.08	\$11.47	\$7.31	\$0.00	\$61.47
4	85.00	\$36.96	\$10.08	\$11.47	\$8.29	\$0.00	\$66.80

Apprentice: MILLWRIGHT (Zone 3)**Effective Date: 1/5/2026**

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	55.00	\$25.17	\$10.08	\$0.00	\$5.36	\$0.00	\$40.61
2	65.00	\$29.74	\$10.08	\$0.00	\$6.34	\$0.00	\$46.16
3	75.00	\$34.32	\$10.08	\$11.47	\$7.31	\$0.00	\$63.18
4	85.00	\$38.90	\$10.08	\$11.47	\$8.29	\$0.00	\$68.74

MORTAR MIXER	12/1/2024	\$31.79	\$9.90	\$9.25	\$5.53	\$0.00	\$56.47
LABORERS							
LABORERS - ZONE 4 (BUILDING & SITE)							

For apprentice rates see "Apprentice- LABORER"

OILER	12/1/2023	\$35.02	\$13.78	\$12.15	\$3.00	\$0.00	\$63.95
OPERATING ENGINEERS LOCAL 98							
OPERATING ENGINEERS LOCAL 98							

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

OTHER POWER DRIVEN EQUIPMENT - CLASS VI	12/1/2023	\$32.74	\$13.78	\$12.15	\$3.00	\$0.00	\$61.67
OPERATING ENGINEERS LOCAL 98							
OPERATING ENGINEERS LOCAL 98							

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

PAINTER (BRIDGES/TANKS)	1/1/2025	\$58.46	\$9.95	\$11.85	\$12.10	\$0.00	\$92.36
PAINTERS LOCAL 35							
PAINTERS LOCAL 35 - ZONE 3							

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
Apprentice: PAINTER (BRIDGES/TANKS)							
Effective Date: 1/1/2025							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$29.23	\$9.95	\$0.00	\$0.00	\$0.00	\$39.18
2	55.00	\$32.15	\$9.95	\$0.00	\$6.66	\$0.00	\$48.76
3	60.00	\$35.08	\$9.95	\$0.00	\$7.26	\$0.00	\$52.29
4	65.00	\$38.00	\$9.95	\$0.00	\$7.87	\$0.00	\$55.82
5	70.00	\$40.92	\$9.95	\$11.85	\$8.47	\$0.00	\$71.19
6	75.00	\$43.85	\$9.95	\$11.85	\$9.08	\$0.00	\$74.73
7	80.00	\$46.77	\$9.95	\$11.85	\$9.68	\$0.00	\$78.25
8	90.00	\$52.61	\$9.95	\$11.85	\$10.89	\$0.00	\$85.30

PAINTER (SPRAY OR SANDBLAST, NEW) * 1/1/2025 \$41.23 \$9.65 \$11.85 \$8.05 \$0.00 \$70.78

* 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 3

Apprentice: PAINTER (SPRAY OR SANDBLAST, NEW) *							
Effective Date: 1/1/2025							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$20.62	\$9.95	\$0.00	\$0.00	\$0.00	\$30.57
2	55.00	\$22.68	\$9.95	\$0.00	\$4.43	\$0.00	\$37.06
3	60.00	\$24.74	\$9.95	\$0.00	\$4.83	\$0.00	\$39.52
4	65.00	\$26.80	\$9.95	\$0.00	\$5.23	\$0.00	\$41.98
5	70.00	\$28.86	\$9.95	\$11.85	\$5.64	\$0.00	\$56.30
6	75.00	\$30.92	\$9.95	\$11.85	\$6.04	\$0.00	\$58.76
7	80.00	\$32.98	\$9.95	\$11.85	\$6.44	\$0.00	\$61.22
8	90.00	\$37.11	\$9.95	\$11.85	\$7.25	\$0.00	\$66.16

PAINTER (SPRAY OR SANDBLAST, REPAINT) 1/1/2025 \$38.55 \$9.95 \$11.85 \$8.05 \$0.00 \$68.40

PAINTERS LOCAL 35

PAINTERS LOCAL 35 - ZONE 3

Apprentice: PAINTER (SPRAY OR SANDBLAST, REPAINT)							
Effective Date: 1/1/2025							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$19.28	\$9.95	\$0.00	\$0.00	\$0.00	\$29.23
2	55.00	\$21.20	\$9.95	\$0.00	\$4.43	\$0.00	\$35.58
3	60.00	\$23.13	\$9.95	\$0.00	\$4.83	\$0.00	\$37.91
4	65.00	\$25.06	\$9.95	\$0.00	\$5.23	\$0.00	\$40.24
5	70.00	\$26.99	\$9.95	\$11.85	\$5.64	\$0.00	\$54.43
6	75.00	\$28.91	\$9.95	\$11.85	\$6.04	\$0.00	\$56.75

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
Apprentice: PAINTER (SPRAY OR SANDBLAST, REPAINT) Effective Date: 1/1/2025							
		Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
7	80.00	\$30.84	\$9.95	\$11.85	\$6.44	\$0.00	\$59.08
8	90.00	\$34.70	\$9.95	\$11.85	\$7.25	\$0.00	\$63.75
<hr/>							
PAINTER / TAPER (BRUSH, NEW) *	1/1/2025	\$39.83	\$9.95	\$11.85	\$8.05	\$0.00	\$69.68
* 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 3							
Apprentice: PAINTER / TAPER (BRUSH, NEW) * Effective Date: 1/1/2025							
		Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$19.92	\$9.95	\$0.00	\$0.00	\$0.00	\$29.87
2	55.00	\$21.91	\$9.95	\$0.00	\$4.43	\$0.00	\$36.29
3	60.00	\$23.90	\$9.95	\$0.00	\$4.83	\$0.00	\$38.68
4	65.00	\$25.89	\$9.95	\$0.00	\$5.23	\$0.00	\$41.07
5	70.00	\$27.88	\$9.95	\$11.85	\$5.64	\$0.00	\$55.32
6	75.00	\$29.87	\$9.95	\$11.85	\$6.04	\$0.00	\$57.71
7	80.00	\$31.86	\$9.95	\$11.85	\$6.44	\$0.00	\$60.10
8	90.00	\$35.85	\$9.95	\$11.85	\$7.25	\$0.00	\$64.90
<hr/>							
PAINTER / TAPER (BRUSH, REPAINT)	1/1/2025	\$37.15	\$9.95	\$11.85	\$8.05	\$0.00	\$67.00
PAINTERS LOCAL 35 PAINTERS LOCAL 35 - ZONE 3							
Apprentice: PAINTER / TAPER (BRUSH, REPAINT) Effective Date: 1/1/2025							
		Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$18.58	\$9.95	\$0.00	\$0.00	\$0.00	\$28.53
2	55.00	\$20.43	\$9.95	\$0.00	\$4.43	\$0.00	\$34.81
3	60.00	\$22.29	\$9.95	\$0.00	\$4.83	\$0.00	\$37.07
4	65.00	\$24.15	\$9.95	\$0.00	\$5.23	\$0.00	\$39.33
5	70.00	\$26.01	\$9.95	\$11.85	\$5.64	\$0.00	\$53.45
6	75.00	\$27.86	\$9.95	\$11.85	\$6.04	\$0.00	\$55.70
7	80.00	\$29.72	\$9.95	\$11.85	\$6.44	\$0.00	\$57.96
8	90.00	\$33.44	\$9.95	\$11.85	\$7.25	\$0.00	\$62.49
<hr/>							
PAINTER TRAFFIC MARKINGS (HEAVY/HIGHWAY)	6/1/2025	\$35.23	\$9.90	\$9.25	\$6.60	\$0.00	\$60.98
LABORERS	12/1/2025	\$36.46	\$9.90	\$9.25	\$6.60	\$0.00	\$62.21
LABORERS - ZONE 4 (HEAVY & HIGHWAY)	6/1/2026	\$38.50	\$9.90	\$9.25	\$6.60	\$0.00	\$64.25
	12/1/2026	\$39.79	\$9.90	\$9.25	\$6.60	\$0.00	\$65.54

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)							
PANEL & PICKUP TRUCKS DRIVER	6/1/2025	\$40.78	\$15.57	\$20.17	\$0.00	\$0.00	\$76.52
TEAMSTERS JOINT COUNCIL NO. 10	12/1/2025	\$40.78	\$15.57	\$21.78	\$0.00	\$0.00	\$78.13
TEAMSTERS JOINT COUNCIL NO. 10 ZONE B	1/1/2026	\$40.78	\$16.17	\$21.78	\$0.00	\$0.00	\$78.73
	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)	8/1/2024	\$49.19	\$10.08	\$11.62	\$12.67	\$0.00	\$83.56
PILE DRIVER LOCAL 56							
PILE DRIVER LOCAL 56 (ZONE 3)							
For apprentice rates see "Apprentice- PILE DRIVER"							
PILE DRIVER	8/1/2024	\$49.19	\$10.08	\$11.62	\$12.67	\$0.00	\$83.56
PILE DRIVER LOCAL 56							
PILE DRIVER LOCAL 56 (ZONE 3)							

Apprentice: PILE DRIVER							
Effective Date: 8/1/2024							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	45.00	\$22.14	\$10.08	\$0.00	\$2.53	\$0.00	\$34.75
2	55.00	\$27.05	\$10.08	\$0.00	\$5.07	\$0.00	\$42.20
3	70.00	\$34.43	\$10.08	\$11.62	\$7.60	\$0.00	\$63.73
4	80.00	\$39.35	\$10.08	\$11.62	\$10.14	\$0.00	\$71.19

PIPELAYER	12/1/2024	\$31.79	\$9.90	\$9.25	\$5.53	\$0.00	\$56.47
LABORERS							
LABORERS - ZONE 4 (BUILDING & SITE)							
For apprentice rates see "Apprentice- LABORER"							
PIPELAYER (HEAVY & HIGHWAY)	6/1/2025	\$35.48	\$9.90	\$9.25	\$6.60	\$0.00	\$61.23
LABORERS	12/1/2025	\$36.71	\$9.90	\$9.25	\$6.60	\$0.00	\$62.46
LABORERS - ZONE 4 (HEAVY & HIGHWAY)	6/1/2026	\$38.75	\$9.90	\$9.25	\$6.60	\$0.00	\$64.50
	12/1/2026	\$40.04	\$9.90	\$9.25	\$6.60	\$0.00	\$65.79
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)							
PLUMBER & PIPEFITTER	3/17/2024	\$49.21	\$9.55	\$10.10	\$7.00	\$0.00	\$75.86
PLUMBERS & PIPEFITTERS LOCAL 104							
PLUMBERS & PIPEFITTERS LOCAL 104							

Apprentice: PLUMBER & PIPEFITTER							
Effective Date: 3/17/2024							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	45.00	\$22.14	\$9.55	\$10.10	\$0.00	\$0.00	\$41.79
2	50.00	\$24.61	\$9.55	\$10.10	\$0.00	\$0.00	\$44.26

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate																																																																								
Apprentice: PLUMBER & PIPEFITTER Effective Date: 3/17/2024 <table> <tr> <th>Step</th><th>Percent</th><th>Apprentice Base Wage</th><th>Health</th><th>Pension</th><th>Annuity</th><th>Supplemental Unemployment</th><th>Total Rate</th></tr> <tr><td>3</td><td>55.00</td><td>\$27.07</td><td>\$9.55</td><td>\$10.10</td><td>\$0.00</td><td>\$0.00</td><td>\$46.72</td></tr> <tr><td>4</td><td>60.00</td><td>\$29.53</td><td>\$9.55</td><td>\$10.10</td><td>\$0.00</td><td>\$0.00</td><td>\$49.18</td></tr> <tr><td>5</td><td>65.00</td><td>\$31.99</td><td>\$9.55</td><td>\$10.10</td><td>\$0.00</td><td>\$0.00</td><td>\$51.64</td></tr> <tr><td>6</td><td>70.00</td><td>\$34.45</td><td>\$9.55</td><td>\$10.10</td><td>\$0.00</td><td>\$0.00</td><td>\$54.10</td></tr> <tr><td>7</td><td>75.00</td><td>\$36.91</td><td>\$9.55</td><td>\$10.10</td><td>\$0.00</td><td>\$0.00</td><td>\$56.56</td></tr> <tr><td>8</td><td>80.00</td><td>\$39.37</td><td>\$9.55</td><td>\$10.10</td><td>\$0.00</td><td>\$0.00</td><td>\$59.02</td></tr> <tr><td>9</td><td>80.00</td><td>\$39.37</td><td>\$9.55</td><td>\$10.10</td><td>\$7.00</td><td>\$0.00</td><td>\$66.02</td></tr> <tr><td>10</td><td>80.00</td><td>\$39.37</td><td>\$9.55</td><td>\$10.10</td><td>\$7.00</td><td>\$0.00</td><td>\$66.02</td></tr> </table>								Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate	3	55.00	\$27.07	\$9.55	\$10.10	\$0.00	\$0.00	\$46.72	4	60.00	\$29.53	\$9.55	\$10.10	\$0.00	\$0.00	\$49.18	5	65.00	\$31.99	\$9.55	\$10.10	\$0.00	\$0.00	\$51.64	6	70.00	\$34.45	\$9.55	\$10.10	\$0.00	\$0.00	\$54.10	7	75.00	\$36.91	\$9.55	\$10.10	\$0.00	\$0.00	\$56.56	8	80.00	\$39.37	\$9.55	\$10.10	\$0.00	\$0.00	\$59.02	9	80.00	\$39.37	\$9.55	\$10.10	\$7.00	\$0.00	\$66.02	10	80.00	\$39.37	\$9.55	\$10.10	\$7.00	\$0.00	\$66.02
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate																																																																								
3	55.00	\$27.07	\$9.55	\$10.10	\$0.00	\$0.00	\$46.72																																																																								
4	60.00	\$29.53	\$9.55	\$10.10	\$0.00	\$0.00	\$49.18																																																																								
5	65.00	\$31.99	\$9.55	\$10.10	\$0.00	\$0.00	\$51.64																																																																								
6	70.00	\$34.45	\$9.55	\$10.10	\$0.00	\$0.00	\$54.10																																																																								
7	75.00	\$36.91	\$9.55	\$10.10	\$0.00	\$0.00	\$56.56																																																																								
8	80.00	\$39.37	\$9.55	\$10.10	\$0.00	\$0.00	\$59.02																																																																								
9	80.00	\$39.37	\$9.55	\$10.10	\$7.00	\$0.00	\$66.02																																																																								
10	80.00	\$39.37	\$9.55	\$10.10	\$7.00	\$0.00	\$66.02																																																																								
PNEUMATIC CONTROLS (TEMP.) PLUMBERS & PIPEFITTERS LOCAL 104 PLUMBERS & PIPEFITTERS LOCAL 104	3/17/2024	\$49.21	\$9.55	\$10.10	\$7.00	\$0.00	\$75.86																																																																								
For apprentice rates see "Apprentice- PIPEFITTER" or "PLUMBER/PIPEFITTER"																																																																															
PNEUMATIC DRILL/TOOL OPERATOR (HEAVY & HIGHWAY) LABORERS	6/1/2025	\$35.48	\$9.90	\$9.25	\$6.60	\$0.00	\$61.23																																																																								
LABORERS - ZONE 4 (HEAVY & HIGHWAY)	12/1/2025	\$36.71	\$9.90	\$9.25	\$6.60	\$0.00	\$62.46																																																																								
	6/1/2026	\$38.75	\$9.90	\$9.25	\$6.60	\$0.00	\$64.50																																																																								
	12/1/2026	\$40.04	\$9.90	\$9.25	\$6.60	\$0.00	\$65.79																																																																								
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)																																																																															
POWDERMAN & BLASTER LABORERS LABORERS - ZONE 4 (BUILDING & SITE)	12/1/2024	\$32.54	\$9.90	\$9.25	\$5.53	\$0.00	\$57.22																																																																								
For apprentice rates see "Apprentice- LABORER"																																																																															
POWDERMAN & BLASTER (HEAVY & HIGHWAY) LABORERS	6/1/2025	\$36.23	\$9.90	\$9.25	\$6.19	\$0.00	\$61.57																																																																								
LABORERS - ZONE 4 (HEAVY & HIGHWAY)	12/1/2025	\$37.46	\$9.90	\$9.25	\$6.19	\$0.00	\$62.80																																																																								
	6/1/2026	\$39.50	\$9.90	\$9.25	\$6.19	\$0.00	\$64.84																																																																								
	12/1/2026	\$40.79	\$9.90	\$9.25	\$6.19	\$0.00	\$66.13																																																																								
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)																																																																															
PUMP OPERATOR (CONCRETE) OPERATING ENGINEERS LOCAL 98 OPERATING ENGINEERS LOCAL 98	12/1/2023	\$39.56	\$13.78	\$12.15	\$3.00	\$0.00	\$68.49																																																																								
For apprentice rates see "Apprentice- OPERATING ENGINEERS"																																																																															
PUMP OPERATOR (DEWATERING, OTHER) OPERATING ENGINEERS LOCAL 98 OPERATING ENGINEERS LOCAL 98	12/1/2023	\$39.03	\$13.78	\$12.15	\$3.00	\$0.00	\$67.96																																																																								
For apprentice rates see "Apprentice- OPERATING ENGINEERS"																																																																															
READY-MIX CONCRETE DRIVER TEAMSTERS 404 - Construction Service (Northampton) TEAMSTERS 404 - Construction Service (Northampton)	5/1/2024	\$26.14	\$11.82	\$7.25	\$0.00	\$0.00	\$45.21																																																																								
RIDE-ON MOTORIZED BUGGY OPERATOR LABORERS	12/1/2024	\$31.79	\$9.90	\$9.25	\$5.53	\$0.00	\$56.47																																																																								

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
LABORERS - ZONE 4 (BUILDING & SITE)							
For apprentice rates see "Apprentice- LABORER"							
ROLLER OPERATOR	12/1/2023	\$38.42	\$13.78	\$12.15	\$3.00	\$0.00	\$67.35
OPERATING ENGINEERS LOCAL 98							
OPERATING ENGINEERS LOCAL 98							
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
ROOFER (Coal tar pitch)	10/2/2024	\$42.38	\$10.35	\$8.70	\$9.30	\$0.00	\$70.73
ROOFERS LOCAL 248	7/16/2025	\$43.88	\$10.35	\$8.70	\$9.30	\$0.00	\$72.23
ROOFERS LOCAL 248	10/2/2025	\$44.88	\$10.35	\$8.70	\$9.30	\$0.00	\$73.23
	7/16/2026	\$46.88	\$10.35	\$8.70	\$9.30	\$0.00	\$75.23
For apprentice rates see "Apprentice- ROOFER"							
ROOFER (Inc.Roofing Waterproofing &Roofing Damproofg)	10/2/2024	\$41.88	\$10.35	\$8.70	\$9.30	\$0.00	\$70.23
ROOFERS LOCAL 248	7/16/2025	\$43.38	\$10.35	\$8.70	\$9.30	\$0.00	\$71.73
ROOFERS LOCAL 248	10/2/2025	\$44.38	\$10.35	\$8.70	\$9.30	\$0.00	\$72.73
	7/16/2026	\$46.38	\$10.35	\$8.70	\$9.30	\$0.00	\$74.73

Apprentice: ROOFER (Inc.Roofing Waterproofing &Roofing Damproofg)

Effective Date: 10/2/2024

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	60.00	\$25.13	\$10.35	\$0.00	\$0.00	\$0.00	\$35.48
2	65.00	\$27.22	\$10.35	\$8.70	\$9.30	\$0.00	\$55.57
3	70.00	\$29.32	\$10.35	\$8.70	\$9.30	\$0.00	\$57.67
4	75.00	\$31.41	\$10.35	\$8.70	\$9.30	\$0.00	\$59.76
5	80.00	\$33.50	\$10.35	\$8.70	\$9.30	\$0.00	\$61.85
6	85.00	\$35.60	\$10.35	\$8.70	\$9.30	\$0.00	\$63.95
7	90.00	\$37.69	\$10.35	\$8.70	\$9.30	\$0.00	\$66.04
8	95.00	\$39.79	\$10.35	\$8.70	\$9.30	\$0.00	\$68.14

ROOFER SLATE / TILE / PRECAST CONCRETE	10/2/2024	\$42.38	\$10.35	\$8.70	\$9.30	\$0.00	\$70.73
ROOFERS LOCAL 248	7/16/2025	\$43.88	\$10.35	\$8.70	\$9.30	\$0.00	\$72.23
ROOFERS LOCAL 248	10/2/2025	\$44.88	\$10.35	\$8.70	\$9.30	\$0.00	\$73.23
	7/16/2026	\$46.88	\$10.35	\$8.70	\$9.30	\$0.00	\$75.23
For apprentice rates see "Apprentice- ROOFER"							
SCRAPER	12/1/2023	\$39.03	\$13.78	\$12.15	\$3.00	\$0.00	\$67.96
OPERATING ENGINEERS LOCAL 98							
OPERATING ENGINEERS LOCAL 98							
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
SELF-POWERED ROLLERS AND COMPACTORS (TAMPERS)	12/1/2023	\$38.42	\$13.78	\$12.15	\$3.00	\$0.00	\$67.35
OPERATING ENGINEERS LOCAL 98							
OPERATING ENGINEERS LOCAL 98							
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
SELF-PROPELLED POWER BROOM	12/1/2023	\$35.80	\$13.78	\$12.15	\$3.00	\$0.00	\$64.73
OPERATING ENGINEERS LOCAL 98							

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
OPERATING ENGINEERS LOCAL 98							
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
SHEETMETAL WORKER	1/1/2025	\$42.23	\$12.20	\$10.79	\$7.95	\$2.13	\$75.30
SHEETMETAL WORKERS LOCAL 63							
SHEETMETAL WORKERS LOCAL 63							

Apprentice: SHEETMETAL WORKER**Effective Date: 1/1/2025**

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	45.00	\$19.00	\$5.49	\$4.86	\$0.00	\$0.85	\$30.20
2	50.00	\$21.12	\$6.10	\$5.40	\$0.00	\$0.94	\$33.56
3	55.00	\$23.23	\$6.71	\$9.71	\$0.00	\$1.15	\$40.80
4	60.00	\$25.34	\$7.32	\$9.71	\$0.00	\$1.23	\$43.60
5	65.00	\$27.45	\$7.93	\$9.71	\$0.00	\$1.31	\$46.40
6	70.00	\$29.56	\$8.54	\$9.71	\$0.00	\$1.39	\$49.20
7	75.00	\$31.67	\$9.15	\$9.71	\$0.00	\$1.47	\$52.00
8	80.00	\$33.78	\$9.76	\$9.71	\$7.95	\$1.78	\$62.98
9	85.00	\$35.90	\$10.37	\$9.71	\$7.95	\$1.86	\$65.79
10	90.00	\$38.01	\$10.98	\$9.71	\$7.95	\$1.94	\$68.59

SPECIALIZED EARTH MOVING EQUIP < 35 TONS	6/1/2025	\$41.24	\$15.57	\$20.17	\$0.00	\$0.00	\$76.98
TEAMSTERS JOINT COUNCIL NO. 10	12/1/2025	\$41.24	\$15.57	\$21.78	\$0.00	\$0.00	\$78.59
TEAMSTERS JOINT COUNCIL NO. 10 ZONE B	1/1/2026	\$41.24	\$16.17	\$21.78	\$0.00	\$0.00	\$79.19
	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	6/1/2025	\$41.53	\$15.57	\$20.17	\$0.00	\$0.00	\$77.27
TEAMSTERS JOINT COUNCIL NO. 10	12/1/2025	\$41.53	\$15.57	\$21.78	\$0.00	\$0.00	\$78.88
TEAMSTERS JOINT COUNCIL NO. 10 ZONE B	1/1/2026	\$41.53	\$16.17	\$21.78	\$0.00	\$0.00	\$79.48
	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	4/1/2023	\$47.43	\$11.45	\$7.20	\$9.41	\$0.00	\$75.49
SPRINKLER FITTERS LOCAL 669							
SPRINKLER FITTERS LOCAL 669							

Apprentice: SPRINKLER FITTER**Effective Date: 4/1/2023**

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	45.00	\$21.34	\$8.22	\$0.00	\$0.00	\$0.00	\$29.56
2	50.00	\$23.72	\$8.22	\$0.00	\$0.00	\$0.00	\$31.94
3	55.00	\$26.09	\$11.45	\$7.20	\$0.00	\$0.00	\$44.74
4	60.00	\$28.46	\$11.45	\$7.20	\$1.15	\$0.00	\$48.26

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
Apprentice: SPRINKLER FITTER Effective Date: 4/1/2023							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
5	65.00	\$30.83	\$11.45	\$7.20	\$1.15	\$0.00	\$50.63
6	70.00	\$33.20	\$11.45	\$7.20	\$1.40	\$0.00	\$53.25
7	75.00	\$35.57	\$11.45	\$7.20	\$1.40	\$0.00	\$55.62
8	80.00	\$37.94	\$11.45	\$7.20	\$1.40	\$0.00	\$57.99
9	85.00	\$40.32	\$11.45	\$7.20	\$1.40	\$0.00	\$60.37
10	90.00	\$42.69	\$11.45	\$7.20	\$1.40	\$0.00	\$62.74
TELECOMMUNICATION TECHNICIAN	12/29/2024	\$51.06	\$13.25	\$8.23	\$6.83	\$0.00	\$79.37
ELECTRICIANS LOCAL 7	6/29/2025	\$52.16	\$13.50	\$8.31	\$6.90	\$0.00	\$80.87
ELECTRICIANS LOCAL 7	12/28/2025	\$53.26	\$13.75	\$8.40	\$6.96	\$0.00	\$82.37
	6/28/2026	\$54.41	\$14.00	\$8.43	\$7.03	\$0.00	\$83.87
	1/3/2027	\$55.56	\$14.25	\$8.47	\$7.09	\$0.00	\$85.37
Apprentice: TELECOMMUNICATION TECHNICIAN Effective Date: 12/29/2024							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	40.00	\$20.42	\$7.35	\$0.61	\$0.00	\$0.00	\$28.38
2	45.00	\$22.98	\$7.35	\$0.69	\$0.00	\$0.00	\$31.02
3	50.00	\$25.53	\$13.25	\$7.47	\$0.00	\$0.00	\$46.25
4	55.00	\$28.08	\$13.25	\$7.54	\$0.00	\$0.00	\$48.87
5	65.00	\$33.19	\$13.25	\$9.74	\$0.00	\$0.00	\$56.18
6	70.00	\$35.74	\$13.25	\$11.19	\$0.00	\$0.00	\$60.18
Apprentice: TELECOMMUNICATION TECHNICIAN Effective Date: 6/29/2025							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	40.00	\$20.86	\$7.50	\$0.63	\$0.00	\$0.00	\$28.99
2	45.00	\$23.47	\$7.50	\$0.70	\$0.00	\$0.00	\$31.67
3	50.00	\$26.08	\$13.50	\$7.53	\$0.00	\$0.00	\$47.11
4	55.00	\$28.69	\$13.50	\$7.61	\$0.00	\$0.00	\$49.80
5	65.00	\$33.90	\$13.50	\$9.84	\$0.00	\$0.00	\$57.24
6	70.00	\$36.51	\$13.50	\$11.30	\$0.00	\$0.00	\$61.31
TERRAZZO FINISHERS	2/1/2025	\$64.74	\$11.49	\$15.57	\$8.02	\$0.00	\$99.82
BRICKLAYERS LOCAL 3	8/1/2025	\$66.89	\$11.49	\$15.57	\$8.02	\$0.00	\$101.97
BRICKLAYERS LOCAL 3 (SPR/PITT) - MARBLE & TILE	2/10/2026	\$68.24	\$11.49	\$15.57	\$8.02	\$0.00	\$103.32
	8/1/2026	\$70.44	\$11.49	\$15.57	\$8.02	\$0.00	\$105.52
	2/1/2027	\$71.84	\$11.49	\$15.57	\$8.02	\$0.00	\$106.92

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
Apprentice: TERRAZZO FINISHERS Effective Date: 2/1/2025							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$32.37	\$11.49	\$15.57	\$8.02	\$0.00	\$67.45
2	60.00	\$38.84	\$11.49	\$15.57	\$8.02	\$0.00	\$73.92
3	70.00	\$45.32	\$11.49	\$15.57	\$8.02	\$0.00	\$80.40
4	80.00	\$51.79	\$11.49	\$15.57	\$8.02	\$0.00	\$86.87
5	90.00	\$58.27	\$11.49	\$15.57	\$8.02	\$0.00	\$93.35
Apprentice: TERRAZZO FINISHERS Effective Date: 8/1/2025							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$33.45	\$11.49	\$15.57	\$8.02	\$0.00	\$68.53
2	60.00	\$40.13	\$11.49	\$15.57	\$8.02	\$0.00	\$75.21
3	70.00	\$46.82	\$11.49	\$15.57	\$8.02	\$0.00	\$81.90
4	80.00	\$53.51	\$11.49	\$15.57	\$8.02	\$0.00	\$88.59
5	90.00	\$60.20	\$11.49	\$15.57	\$8.02	\$0.00	\$95.28
TERRAZZO MECHANIC	2/1/2025	\$65.82	\$11.49	\$15.57	\$7.99	\$0.00	\$100.87
BRICKLAYERS LOCAL 3	8/1/2025	\$67.97	\$11.49	\$15.57	\$7.99	\$0.00	\$103.02
BRICKLAYERS LOCAL 3 (SPR/PITT) - MARBLE & TILE	2/1/2026	\$69.32	\$11.49	\$15.57	\$7.99	\$0.00	\$104.37
	8/1/2026	\$71.52	\$11.49	\$15.57	\$7.99	\$0.00	\$106.57
	2/1/2027	\$72.92	\$11.49	\$15.57	\$7.99	\$0.00	\$107.97
Apprentice: TERRAZZO MECHANIC Effective Date: 2/1/2025							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$32.91	\$11.49	\$15.57	\$7.99	\$0.00	\$67.96
2	60.00	\$39.49	\$11.49	\$15.57	\$7.99	\$0.00	\$74.54
3	70.00	\$46.07	\$11.49	\$15.57	\$7.99	\$0.00	\$81.12
4	80.00	\$52.66	\$11.49	\$15.57	\$7.99	\$0.00	\$87.71
5	90.00	\$59.24	\$11.49	\$15.57	\$7.99	\$0.00	\$94.29
Apprentice: TERRAZZO MECHANIC Effective Date: 8/1/2025							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$33.99	\$11.49	\$15.57	\$7.99	\$0.00	\$69.04
2	60.00	\$40.78	\$11.49	\$15.57	\$7.99	\$0.00	\$75.83
3	70.00	\$47.58	\$11.49	\$15.57	\$7.99	\$0.00	\$82.63

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate																								
<div>Apprentice: TERRAZZO MECHANIC</div> <div>Effective Date: 8/1/2025</div> <table><thead><tr><th>Step</th><th>Percent</th><th>Apprentice Base Wage</th><th>Health</th><th>Pension</th><th>Annuity</th><th>Supplemental Unemployment</th><th>Total Rate</th></tr></thead><tbody><tr><td>4</td><td>80.00</td><td>\$54.38</td><td>\$11.49</td><td>\$15.57</td><td>\$7.99</td><td>\$0.00</td><td>\$89.43</td></tr><tr><td>5</td><td>90.00</td><td>\$61.17</td><td>\$11.49</td><td>\$15.57</td><td>\$7.99</td><td>\$0.00</td><td>\$96.22</td></tr></tbody></table>								Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate	4	80.00	\$54.38	\$11.49	\$15.57	\$7.99	\$0.00	\$89.43	5	90.00	\$61.17	\$11.49	\$15.57	\$7.99	\$0.00	\$96.22
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate																								
4	80.00	\$54.38	\$11.49	\$15.57	\$7.99	\$0.00	\$89.43																								
5	90.00	\$61.17	\$11.49	\$15.57	\$7.99	\$0.00	\$96.22																								
TEST BORING DRILLER	6/1/2025	\$51.70	\$9.90	\$9.25	\$9.80	\$0.00	\$80.65																								
LABORERS	12/1/2025	\$53.20	\$9.90	\$9.25	\$9.80	\$0.00	\$82.15																								
LABORERS - FOUNDATION AND MARINE	6/1/2026	\$54.75	\$9.90	\$9.25	\$9.80	\$0.00	\$83.70																								
	12/1/2026	\$56.25	\$9.90	\$9.25	\$9.80	\$0.00	\$85.20																								
For apprentice rates see "Apprentice- LABORER"																															
TEST BORING DRILLER HELPER	6/1/2025	\$47.82	\$9.90	\$9.25	\$9.80	\$0.00	\$76.77																								
LABORERS	12/1/2025	\$49.32	\$9.90	\$9.25	\$9.80	\$0.00	\$78.27																								
LABORERS - FOUNDATION AND MARINE	6/1/2026	\$50.87	\$9.90	\$9.25	\$9.80	\$0.00	\$79.82																								
	12/1/2026	\$52.37	\$9.90	\$9.25	\$9.80	\$0.00	\$81.32																								
For apprentice rates see "Apprentice- LABORER"																															
TEST BORING LABORER	6/1/2025	\$47.70	\$9.90	\$9.25	\$9.80	\$0.00	\$76.65																								
LABORERS	12/1/2025	\$49.20	\$9.90	\$9.25	\$9.80	\$0.00	\$78.15																								
LABORERS - FOUNDATION AND MARINE	6/1/2026	\$50.75	\$9.90	\$9.25	\$9.80	\$0.00	\$79.70																								
	12/1/2026	\$52.25	\$9.90	\$9.25	\$9.80	\$0.00	\$81.20																								
For apprentice rates see "Apprentice- LABORER"																															
TRACTORS	12/1/2023	\$38.42	\$13.78	\$12.15	\$3.00	\$0.00	\$67.35																								
OPERATING ENGINEERS LOCAL 98																															
OPERATING ENGINEERS LOCAL 98																															
For apprentice rates see "Apprentice- OPERATING ENGINEERS"																															
TRAILERS FOR EARTH MOVING EQUIPMENT	6/1/2025	\$41.82	\$15.57	\$20.17	\$0.00	\$0.00	\$77.56																								
TEAMSTERS JOINT COUNCIL NO. 10	12/1/2025	\$41.82	\$15.57	\$21.78	\$0.00	\$0.00	\$79.17																								
TEAMSTERS JOINT COUNCIL NO. 10 ZONE B	1/1/2026	\$41.82	\$16.17	\$21.78	\$0.00	\$0.00	\$79.77																								
	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	6/1/2025	\$59.93	\$9.90	\$9.25	\$10.25	\$0.00	\$89.33																								
LABORERS	12/1/2025	\$61.43	\$9.90	\$9.25	\$10.25	\$0.00	\$90.83																								
LABORERS (COMPRESSED AIR)	6/1/2026	\$62.98	\$9.90	\$9.25	\$10.25	\$0.00	\$92.38																								
	12/1/2026	\$64.48	\$9.90	\$9.25	\$10.25	\$0.00	\$93.88																								
For apprentice rates see "Apprentice- LABORER"																															
TUNNEL WORK - COMPRESSED AIR (HAZ. WASTE)	6/1/2025	\$61.93	\$9.90	\$9.25	\$10.25	\$0.00	\$91.33																								
LABORERS	12/1/2025	\$63.43	\$9.90	\$9.25	\$10.25	\$0.00	\$92.83																								
LABORERS (COMPRESSED AIR)	6/1/2026	\$64.98	\$9.90	\$9.25	\$10.25	\$0.00	\$94.38																								
	12/1/2026	\$66.48	\$9.90	\$9.25	\$10.25	\$0.00	\$95.88																								
For apprentice rates see "Apprentice- LABORER"																															

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
TUNNEL WORK - FREE AIR LABORERS	6/1/2025	\$52.00	\$9.90	\$9.25	\$10.25	\$0.00	\$81.40
LABORERS (FREE AIR TUNNEL)	12/1/2025	\$53.50	\$9.90	\$9.25	\$10.25	\$0.00	\$82.90
	6/1/2026	\$55.05	\$9.90	\$9.25	\$10.25	\$0.00	\$84.45
	12/1/2026	\$56.55	\$9.90	\$9.25	\$10.25	\$0.00	\$85.95
For apprentice rates see "Apprentice- LABORER"							
TUNNEL WORK - FREE AIR (HAZ. WASTE) LABORERS	6/1/2025	\$54.00	\$9.90	\$9.25	\$10.25	\$0.00	\$83.40
LABORERS (FREE AIR TUNNEL)	12/1/2025	\$55.50	\$9.90	\$9.25	\$10.25	\$0.00	\$84.90
	6/1/2026	\$57.05	\$9.90	\$9.25	\$10.25	\$0.00	\$86.45
	12/1/2026	\$58.55	\$9.90	\$9.25	\$10.25	\$0.00	\$87.95
For apprentice rates see "Apprentice- LABORER"							
VAC-HAUL TEAMSTERS JOINT COUNCIL NO. 10	6/1/2025	\$41.24	\$15.57	\$20.17	\$0.00	\$0.00	\$76.98
TEAMSTERS JOINT COUNCIL NO. 10 ZONE B	12/1/2025	\$41.24	\$15.57	\$21.78	\$0.00	\$0.00	\$78.59
	1/1/2026	\$41.24	\$16.17	\$21.78	\$0.00	\$0.00	\$79.19
	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
WAGON DRILL OPERATOR (HEAVY & HIGHWAY) LABORERS	6/1/2025	\$35.48	\$9.90	\$9.25	\$6.60	\$0.00	\$61.23
LABORERS - ZONE 4 (HEAVY & HIGHWAY)	12/1/2025	\$36.71	\$9.90	\$9.25	\$6.60	\$0.00	\$62.46
	6/1/2026	\$38.75	\$9.90	\$9.25	\$6.60	\$0.00	\$64.50
	12/1/2026	\$40.04	\$9.90	\$9.25	\$6.60	\$0.00	\$65.79
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"							
WATER METER INSTALLER PLUMBERS & PIPEFITTERS LOCAL 104	3/17/2024	\$49.21	\$9.55	\$10.10	\$7.00	\$0.00	\$75.86
PLUMBERS & PIPEFITTERS LOCAL 104							
For apprentice rates see "Apprentice- PLUMBER/PIPEFITTER" or "PLUMBER/GASFITTER"							

Marine Drilling

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
BLASTER MARINE DRILLING MARINE DRILLING	1/1/2018	\$41.82	\$7.63	\$2.35	\$1.25	\$0.00	\$53.05
BOAT CAPTAIN MARINE DRILLING MARINE DRILLING	1/1/2018	\$33.87	\$7.63	\$2.35	\$0.95	\$0.00	\$44.80
BOAT CAPTAIN / Over 1,000 hp MARINE DRILLING MARINE DRILLING	1/1/2018	\$38.06	\$7.63	\$2.35	\$1.25	\$0.00	\$49.29
CORE DRILLER MARINE DRILLING MARINE DRILLING	1/1/2018	\$31.43	\$7.63	\$2.25	\$0.65	\$0.00	\$41.96
CORE DRILLER HELPER MARINE DRILLING MARINE DRILLING	1/1/2018	\$28.47	\$7.63	\$2.35	\$0.65	\$0.00	\$39.10
DRILLER MARINE DRILLING MARINE DRILLING	1/1/2018	\$39.70	\$7.63	\$2.35	\$1.25	\$0.00	\$50.93
ENGINEER MARINE DRILLING MARINE DRILLING	1/1/2018	\$39.69	\$7.63	\$2.25	\$1.25	\$0.00	\$50.82
HELPER MARINE DRILLING MARINE DRILLING	1/1/2018	\$34.24	\$7.63	\$2.35	\$0.65	\$0.00	\$44.87
MACHINIST MARINE DRILLING MARINE DRILLING	1/1/2018	\$38.88	\$7.63	\$2.35	\$0.95	\$0.00	\$49.81
OILER - MARINE DRILLING MARINE DRILLING MARINE DRILLING	1/1/2018	\$34.24	\$7.63	\$2.35	\$0.65	\$0.00	\$44.87
TUG DECKHAND MARINE DRILLING MARINE DRILLING	1/1/2018	\$27.61	\$7.63	\$2.35	\$0.65	\$0.00	\$38.24
WELDER MARINE DRILLING MARINE DRILLING	1/1/2018	\$38.88	\$7.63	\$2.35	\$0.95	\$0.00	\$49.81

Op Eng Marine (Dredging Work)

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
BOAT OPERATOR OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS - MARINE DIVISION	10/1/2017	\$29.26	\$7.63	\$2.35	\$0.95	\$0.00	\$40.19
CERTIFIED WELDER OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS - MARINE DIVISION	10/1/2017	\$31.09	\$7.63	\$2.35	\$1.25	\$0.00	\$42.32
CHIEF WELDER/ CHIEF MATE OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS - MARINE DIVISION	10/1/2017	\$33.02	\$7.63	\$2.35	\$1.25	\$0.00	\$44.25
DERRICK / SPIDER / SPILLBARGE OPERATOR OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS - MARINE DIVISION	10/1/2017	\$33.02	\$7.63	\$2.35	\$1.25	\$0.00	\$44.25
DRAG BARGE OPERATOR / WELDER / MATE OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS - MARINE DIVISION	10/1/2017	\$30.24	\$7.63	\$2.35	\$0.95	\$0.00	\$41.17
ENGINEER / ELECTRICIAN OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS - MARINE DIVISION	10/1/2017	\$33.02	\$7.63	\$2.35	\$1.25	\$0.00	\$44.25
LICENSED BOAT OPERATOR OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS - MARINE DIVISION	10/1/2017	\$33.02	\$7.63	\$2.35	\$1.25	\$0.00	\$44.25
LICENSED TUG OPERATOR OVER 1000HP OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS - MARINE DIVISION	10/1/2017	\$38.18	\$7.63	\$2.35	\$1.25	\$0.00	\$49.41
MAINTENANCE ENGINEER OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS - MARINE DIVISION	10/1/2017	\$33.03	\$7.63	\$2.35	\$1.25	\$0.00	\$44.26
OILER - MARINE DIVISION OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS - MARINE DIVISION	10/1/2017	\$24.30	\$7.63	\$2.35	\$0.65	\$0.00	\$34.93
OPERATOR / LEVERMAN OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS - MARINE DIVISION	10/1/2017	\$38.18	\$7.63	\$2.35	\$1.25	\$0.00	\$49.41
RODMAN / SCOWMAN OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS - MARINE DIVISION	10/1/2017	\$24.30	\$7.63	\$2.35	\$0.65	\$0.00	\$34.93
SHOREMAN / DECKHAND OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS - MARINE DIVISION	10/1/2017	\$24.30	\$7.63	\$2.35	\$0.65	\$0.00	\$34.93

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.

DOCUMENT 00870

STANDARD FEDERAL EQUAL EMPLOYMENT OPPORTUNITY CONSTRUCTION CONTRACT
SPECIFICATIONS
(EXECUTIVE ORDER 11246)
Revised April 9, 2019

1. As used in these specifications:
 - a. "Covered area" means the geographical area described in the solicitation from which this contract resulted:
 - b. "Director" means Director, Office of Federal Contract Compliance Programs, United States Department of Labor, or any person to whom the Director delegates authority.
 - c. "Employer identification number" means the Federal Social Security number used on the Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941.
 - d. "Minority" includes:
 - (i) Black (all persons having origins in any of the black African racial groups not of Hispanic origin);
 - (ii) Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish Culture or origin, regardless of race);
 - (iii) Asian and Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands); and
 - (iv) American Indian or Alaskan Native (all persons having origins in any of the original peoples of North America and maintaining identifiable tribal affiliations through membership and participation or community identification).
2. Whenever the Contractor, or any Subcontractor at any tier, subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract in excess of \$ 10,000 the provisions of the specifications and the Notice which contains the applicable goals for minority and female participation and which is set forth in the solicitations from which this contract resulted.
3. If the Contractor is participating (pursuant to 41 CFR 60-4.5) in a Hometown Plan approved by the U.S. Department of Labor in the covered area either individually or through an association, its affirmative action obligations on all work in the Plan area (including goals and timetables) shall be in accordance with that Plan for those trades which have unions participating in the Plan. Contractors must be able to demonstrate their participation in and compliance with the provisions of any such Hometown Plan. Each Contractor or Subcontractor participating in an approved Plan is individually required to comply with its obligations under the EEO clause, and to make a good faith effort to achieve each goal under the plan in each trade in which it has employees. The overall good faith performance by other Contractors or Subcontractors toward a goal in an approved Plan does not excuse any covered Contractor's or Subcontractor's failure to take good faith efforts to achieve the Plan goals and timetables.
4. The Contractor shall implement the specific affirmative action standards provided in Paragraphs 7a through p of these specifications. The goals set forth in the solicitation from which this contract resulted are expressed as percentages of the total hours of employment and training of minority and female utilization the Contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area. The Contractor is expected to make substantially uniform progress toward its goals in each craft during the period specified.
5. Neither the provisions of any collective bargaining agreement, nor the failure by a union with whom the Contractor has a collective bargaining agreement, to refer either minorities or women shall excuse the Contractor's obligations under these specifications, Executive Order 11246, or the regulations promulgated pursuant thereto.

6. In order for the nonworking training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees must be employed by the Contractor during the training period, and the Contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the U.S. Department of Labor.
7. The Contractor shall take specific affirmative actions to ensure equal employment opportunity. The evaluation of the Contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its actions. The Contractor shall document these efforts fully, and shall implement affirmative action steps at least as extensive as the following:
 - a. Ensure and maintain a working environment free of harassment, intimidation, and coercion at all sites, and all facilities at which the Contractor's employees are assigned to work. The Contractor, where possible, will assign two or more women to each construction project. The Contractor shall specifically ensure that all foremen, superintendents, and other on-site supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at such sites or in such facilities.
 - b. Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority and female recruitment sources and to community organizations when the Contractor or its unions have employment opportunities available, and maintain a record of the organizations' responses.
 - c. Maintain a current file of the names, addresses and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment source or community organization and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the Contractor by the union or, if referred, not employed by the Contractor, this shall be documented in the file with the reason therefor, along with whatever additional actions the Contractor may have taken.
 - d. Provide immediate written notification to the Director when the union or unions with which the Contractor has a collective bargaining agreement has not referred to the Contractor a minority person or woman sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the Contractor's efforts to meet its obligations.
 - e. Develop on-the-job training opportunities and/or participate in training programs for the area which expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the Department of Labor. The Contractor shall provide notice of these programs to the sources compiled under 7b above.
 - f. Disseminate the Contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the Contractor in meeting its EEO obligations; by including it in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc; by specific review of the policy with all management personnel and with all minority and female employees at least once a year; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.
 - g. Review, at least annually, the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination or other employment decisions including specific review of these items with on-site supervisory personnel such as Superintendents, General Foremen, etc., prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.
 - h. Disseminate the Contractor's EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing the Contractor's EEO policy with other Contractors and Subcontractors with whom the Contractor does or anticipates doing business.

- i. Direct its recruitment efforts both oral and written, to minority, female and community organizations, to schools with minority and female students and to minority and female recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later than one month prior to the date for the acceptance of applications for apprenticeship or other training by any recruitment source, the Contractor shall send written notification to organizations such as the above, describing the openings, screening procedures, and tests to be used in the selection process.
 - j. Encourage present minority and female employees to recruit other minority persons and women and, where reasonable, provide after school, summer and vacation employment to minority and female youth both on the site and in other areas of a Contractor's work force.
 - k. Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR Part 60-3.
 - l. Conduct, at least annually, an inventory and evaluation at least of all minority and female personnel for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc., such opportunities.
 - m. Ensure that seniority practices, job classifications, work assignments and other personnel practices, do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the EEO policy and the Contractor's obligations under these specifications are being carried out.
 - n. Ensure that all facilities and company activities are nonsegregated except that separate or single-user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.
 - o. Document and maintain a record of all solicitations of offers for subcontracts from minority and female construction contractors and suppliers, including circulation of solicitations to minority and female contractor associations and other business associations.
 - p. Conduct a review, at least annually, of all supervisor's adherence to and performance under the Contractor's EEO policies and affirmative action obligations.
8. Contractors are encouraged to participate in voluntary associations which assist in fulfilling one or more of their affirmative action obligations (7a through p). The efforts of a contractor association, joint contractor-union, contractor-community, or other similar group of which the contractor is a member and participant, may be asserted as fulfilling any one or more of its obligations under 7a through p of these Specifications provided that the Contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program are reflected in the Contractor's minority and female work force participation, makes a good faith effort to meet its individual goals and timetables, and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the Contractor. The obligation to comply, however, is the Contractor's and failure of such a group to fulfill an obligation shall not be a defense for the Contractor's noncompliance.
 9. A single goal for minorities and a separate single goal for women have been established. The Contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and non-minority. Consequently, the Contractor may be in violation of the Executive Order if a particular group is employed in a substantially disparate manner (for example, even though the Contractor has achieved its goals for women generally, the Contractor may be in violation of the Executive Order if a specific minority group of women is underutilized).
 10. The Contractor shall not use the goals and timetables of affirmative action standards to discriminate against any person because of race, color, religion, sex, or national origin.
 11. The Contractor shall not enter into any Subcontract with any person or firm debarred from Government contracts pursuant to Executive Order 11246.

12. The Contractor shall carry out such sanctions and penalties for violation of these specifications and of the Equal Opportunity Clause, including suspension, termination and cancellation of existing subcontracts as may be imposed or ordered pursuant to Executive Order 11246, as amended, and its implementing regulations, by the Office of Federal Contract Compliance programs. Any Contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and Executive Order 11246, as amended.
13. The Contractor, in fulfilling its obligations under these specifications, shall implement specific affirmative action steps, at least as extensive as those standards prescribed in paragraph 7 of these specifications so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the Contractor fails to comply with the requirements of the Executive Order, the implementing regulations, or these specifications, the Director shall proceed in accordance with 41 CFR 60-4.8.
14. The Contractor shall designate a responsible official to monitor all employment related activity to ensure that the company EEO policy is being carried out, to submit reports relating to the provisions hereof as many be required by the Government and keep records. Records shall at least include for each employee the name, address, telephone numbers, construction trade, union affiliation if any, employee identification number when assigned, social security number, race, sex, status (e.g., mechanic, apprentice, trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, contractors shall not be required to maintain separate records.
15. Nothing herein provided shall be construed as a limitation upon the application of other laws which establish different standards of compliance or upon the application of requirements for the hiring of local or other area residents (e.g., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).

APPENDIX A

The following goals and timetables for female utilization shall be included in all Federal and federally assisted construction contracts and subcontracts in excess of \$ 10,000. The goals are applicable to the Contractor's aggregate on-site construction workforce whether or not part of that workforce is performing work on a Federal or federally-assisted construction contract or subcontract.

Area covered: Goal for Women apply nationwide

Goals and TimetablesTimetableGoals (percent)

From Apr. 1, 1980 until further notice

6.9

APPENDIX B-80

Until further notice, the following goals for minority utilization in each construction craft and trade shall included in all Federal or federally assisted construction contracts and subcontracts in excess of \$ 10,000 to be performed in the respective geographical areas. The goals are applicable to each nonexempt contractor's total on- site construction workforce, regardless of whether or not part of that workforce is performing work on a Federal, federally assisted or nonfederally related project, contract or subcontract.

Construction contractors participating in an approved Hometown Plan (see 41 CFR 6-4.5) are required to comply with the goals of the Hometown Plan with regard to construction work they perform in the area covered by the Hometown Plan. With regard to all their other covered construction work, such contractors are required to comply with the applicable SMSA or EA goal contained in this Appendix B-80.

Economic AreasSTATE:Goals (percent)

MASSACHUSETTS

004 Boston MA:

SMSA Counties:

1123 Boston-Lowell-Brockton-Lawrence-Haverhill, MA-NH

4.0

MA Essex, MA Middlesex, MA Norfolk, MA Plymouth,
MA Suffolk, NH Rockingham.

5403 Fall River- New Bedford MA, Bristol

1.6

9243 Worcester-Fitchburg-Leominster, MA

1.6

6323 Springfield-Chicopee-Holyoke MA-CT

4.8

MA Hampden, MA Hampshire

Non-SMSA Counties: MA Barnstable, MA Dukes, MA Nantucket

3.6

Non-SMSA Counties: MA Franklin

5.9

APPENDIX C

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the “contractor”) agrees as follows:

1. **Compliance with Regulations:** The contractor (hereinafter includes consultants) will comply with the Acts and Regulations relative to Non-discrimination in Federally-assisted programs of the U.S. Department of Transportation, Federal Highway Administration (FHWA), as they may be amended from time to time, which are herein incorporated by reference and made a part of this contract.
2. **Non-discrimination:** The contractor, with regard to the work performed by it during the contract, will not discriminate on the grounds of race, color, national origin (including limited English proficiency), age, sex, disability, or low-income status in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor will not participate directly or indirectly in the discrimination prohibited by the Acts and the Regulations, including employment practices when the contract covers any activity, project, or program set forth in Appendix B of 49 CFR Part 21.
3. **Solicitations for Subcontractors, including Procurements of Materials and Equipment:** In all solicitations, either by competitive bidding, or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials, or leases of equipment, each potential subcontractor or supplier will be notified by the contractor of the contractor’s obligations under this contract and the Acts and the Regulations relative to nondiscrimination on the grounds of race, color, national origin (including limited English proficiency), age, sex, disability, or low-income status.
4. **Information and Reports:** The contractor will provide all information and reports required by the Acts, the Regulations, and directives issued pursuant thereto, and will permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the Massachusetts Department of Transportation (MassDOT) or FHWA to be pertinent to ascertain compliance with such Acts, Regulations, and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish this information, the contractor will so certify to MassDOT or FHWA, as appropriate, and will set forth what efforts it has made to obtain the information.
5. **Sanctions for Noncompliance:** In the event of a contractor’s noncompliance with the Nondiscrimination provisions of this contract, MassDOT will impose such contract sanctions as it or FHWA may determine to be appropriate, including, but not limited to:
 - a. withholding payments to the contractor under the contract until the contractor complies; and/or
 - b. cancelling, terminating, or suspending a contract, in whole or in part.
6. **Incorporation of Provisions:** The contractor will include the provisions of paragraphs one through six in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations, and directives issued pursuant thereto. The contractor will take action with respect to any subcontract or procurement as MassDOT or FHWA may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if the contractor becomes involved in, or is threatened with litigation by a subcontractor, or supplier because of such direction, the contractor may request MassDOT to enter into any litigation to protect the interests of MassDOT. In addition, the contractor may request the United States to enter into the litigation to protect the interests of the United States.

APPENDIX D

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the “contractor,” which includes consultants) agrees to comply with the following non-discrimination statutes and authorities; including but not limited to:

PERTINENT NON-DISCRIMINATION AUTHORITIES:

- Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d *et seq.*, 78 stat. 252) (prohibits discrimination on the basis of race, color, national origin); and 49 CFR Part 21
- The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (42 U.S.C. § 4601) (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-Aid programs and projects)
- Federal-Aid Highway Act of 1973 (23 U.S.C. § 324 *et seq.*) (prohibits discrimination on the basis of sex)
- Section 504 of the Rehabilitation Act of 1973 (29 U.S.C. § 794 *et seq.*), as amended (prohibits discrimination on the basis of disability) and 49 CFR Part 27
- The Age Discrimination Act of 1975, as amended (42 U.S.C. § 6101 *et seq.*) (prohibits discrimination on the basis of age)
- Airport and Airway Improvement Act of 1982 (49 U.S.C. § 471, Section 47123), as amended (prohibits discrimination based on race, creed, color, national origin, or sex)
- The Civil Rights Restoration Act of 1987 (PL 100-209) (broadened the scope, coverage, and applicability of Title VI of the Civil Rights Act of 1964, the Age Discrimination Act of 1975, and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms “programs or activities” to include all of the programs or activities of Federal-Aid recipients, sub-recipients, and contractors, whether such programs or activities are Federally funded or not)
- Titles II and III of the Americans with Disabilities Act (42 U.S.C. §§ 12131-12189), as implemented by Department of Transportation regulations at 49 CFR parts 37 and 38 (prohibits discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities)
- The Federal Aviation Administration’s Non-Discrimination Statute (49 U.S.C. § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex)
- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (ensures discrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations)
- Executive Order 13166, Improving Access to Services for People with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to ensure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100)
- Title IX of the Education Amendments Act of 1972, as amended (20 U.S.C. 1681 *et seq.*) (prohibits discrimination on the basis of sex in education programs or activities)

*** END OF DOCUMENT ***

DOCUMENT 00880

Revised January 12, 2022



DEPARTMENT OF LABOR

Employment Standards Administration

MINIMUM WAGES FOR FEDERAL AND FEDERALLY ASSISTED CONTRACTS

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"General Decision Number: MA20250020 05/16/2025

Superseded General Decision Number: MA20240020

State: Massachusetts

Construction Type: Highway

County: Hampshire County in Massachusetts.

HIGHWAY CONSTRUCTION PROJECTS

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658. Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(1).

If the contract is entered into on or after January 30, 2022, or the contract is renewed or extended (e.g., an option is exercised) on or after January 30, 2022: 	. Executive Order 14026 generally applies to the contract. . The contractor must pay all covered workers at least \$17.75 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in 2025.
If the contract was awarded on or between January 1, 2015 and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022: 	. Executive Order 13658 generally applies to the contract. . The contractor must pay all covered workers at least \$13.30 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2025.

The applicable Executive Order minimum wage rate will be adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a conformance request.

Additional information on contractor requirements and worker protections under the Executive Orders is available at <http://www.dol.gov/whd/govcontracts>.

Modification Number	Publication Date
0	01/03/2025
1	04/11/2025
2	05/16/2025

ENGI0004-019 12/01/2024

	Rates	Fringes
POWER EQUIPMENT OPERATOR		
Group 1.....	\$ 57.03	33.20
Group 2.....	\$ 56.40	33.20

FOOTNOTE FOR POWER EQUIPMENT OPERATORS:

A. PAID HOLIDAYS: New Year's Day, Washington's Birthday, Labor Day, Memorial Day, Independence Day, Patriot's Day, Columbus Day, Veteran's Day, Thanksgiving Day, Christmas Day

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

Group 1: Broom/Sweeper; Crane; Gradall; Post Driver (Guardrail/Fences)
 Group 2: Bulldozer; Grader/Blade

 * ENGI0098-010 12/01/2024

	Rates	Fringes
POWER EQUIPMENT OPERATOR		
Group 1.....	\$ 42.88	31.04+A
Group 2.....	\$ 42.57	31.04+A
Group 4.....	\$ 39.12	31.04+A

Footnote:

A. Paid Holidays: New year's Day, Washington's Birthday, Memorial Day, Independence Day, Labor Day, Columbus Day, Veterans Day, Thanksgiving Day and Christmas Day

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

Group 1: Backhoe/Excavator/Trackhoe; Bobcat/Skid Steer/Skid
Loader; LoaderGroup 2: Milling Machine; Paver (Asphalt, Aggregate, and
Concrete)

Group 4: Roller

IRON0007-027 03/16/2024

	Rates	Fringes
IRONWORKER (ORNAMENTAL AND STRUCTURAL)	\$ 39.51	32.98

LABO0596-008 12/01/2021

	Rates	Fringes
LABORER (Traffic Control: Flagger)	\$ 24.50	23.96

LABO0999-003 12/02/2024

	Rates	Fringes
LABORER		
Common or General	\$ 35.00	28.87
Landscape	\$ 35.00	28.87

PAIN0035-023 07/01/2024

	Rates	Fringes
PAINTER (Steel)	\$ 56.76	36.00

SUMA2014-010 01/11/2017

	Rates	Fringes
CARPENTER, Includes Form Work....	\$ 40.64	20.80
CEMENT MASON/CONCRETE FINISHER...	\$ 52.13	20.89
ELECTRICIAN.....	\$ 47.13	13.41
IRONWORKER, REINFORCING.....	\$ 46.21	21.27
LABORER: Asphalt, Includes Raker, Shoveler, Spreader and Distributor.....	\$ 33.10	18.09
LABORER: Concrete Saw (Hand Held/Walk Behind).....	\$ 44.43	14.18
OPERATOR: Forklift.....	\$ 51.63	0.00
OPERATOR: Mechanic.....	\$ 48.14	17.02
OPERATOR: Piledriver.....	\$ 43.87	18.04
PAINTER: Spray (Linestriping)....	\$ 37.50	18.83
TRAFFIC CONTROL: Laborer-Cones/ Barricades/Barrels - Setter/Mover/Sweeper.....	\$ 43.73	15.06
TRUCK DRIVER: Concrete Truck....	\$ 33.69	15.79
TRUCK DRIVER: Dump Truck.....	\$ 30.00	18.18
TRUCK DRIVER: Flatbed Truck....	\$ 48.53	0.00

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.		

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Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at <https://www.dol.gov/agencies/whd/government-contracts>.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (iii)).

The body of each wage determination lists the classifications and wage rates that have been found to be prevailing for the type(s) of construction and geographic area covered by the wage determination. The classifications are listed in alphabetical order under rate identifiers indicating whether the particular rate is a union rate (current union negotiated rate), a survey rate, a weighted union average rate, a state adopted rate, or a supplemental classification rate.

Union Rate Identifiers

A four-letter identifier beginning with characters other than ""SU"", ""UAVG"", ?SA?, or ?SC? denotes that a union rate was prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2024. PLUM is an identifier of the union whose collectively bargained rate prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. The date, 07/01/2024 in the example, is the effective date of the most current negotiated rate.

Union prevailing wage rates are updated to reflect all changes over time that are reported to WHD in the rates in the collective bargaining agreement (CBA) governing the classification.

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The UAVG identifier indicates that no single rate prevailed for those classifications, but that 100% of the data reported for the classifications reflected union rates. EXAMPLE: UAVG-OH-0010 01/01/2024. UAVG indicates that the rate is a weighted union average rate. OH indicates the State of Ohio. The next number, 0010 in the example, is an internal number used in producing the wage determination. The date, 01/01/2024 in the example, indicates the date the wage determination was updated to reflect the most current union average rate.

A UAVG rate will be updated once a year, usually in January, to reflect a weighted average of the current rates in the collective bargaining agreements on which the rate is based.

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?SU? wage rates typically remain in effect until a new survey is conducted. However, the Wage and Hour Division (WHD) has the discretion to update such rates under 29 CFR 1.6(c)(1).

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WAGE DETERMINATION APPEALS PROCESS

1) Has there been an initial decision in the matter? This can be:

- a) a survey underlying a wage determination
- b) an existing published wage determination
- c) an initial WHD letter setting forth a position on a wage determination matter
- d) an initial conformance (additional classification and rate) determination

On survey related matters, initial contact, including requests for summaries of surveys, should be directed to the WHD Branch of Wage Surveys. Requests can be submitted via email to davisbaconinfo@dol.gov or by mail to:

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Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

Regarding any other wage determination matter such as conformance decisions, requests for initial decisions should be directed to the WHD Branch of Construction Wage Determinations. Requests can be submitted via email to BCWD-Office@dol.gov or by mail to:

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2) If an initial decision has been issued, then any interested party (those affected by the action) that disagrees with the decision can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Requests for review and reconsideration can be submitted via email to dba.reconsideration@dol.gov or by mail to:

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The request should be accompanied by a full statement of the interested party's position and any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

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U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210.

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END OF GENERAL DECISION"

"General Decision Number: MA20250010 05/16/2025

Superseded General Decision Number: MA20240010

State: Massachusetts

Construction Types: Heavy (Heavy and Marine)

Counties: Berkshire, Franklin, Hampden and Hampshire Counties in Massachusetts.

HEAVY CONSTRUCTION PROJECTS; AND MARINE CONSTRUCTION PROJECTS

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658. Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(1).

If the contract is entered into on or after January 30, 2022, or the contract is renewed or extended (e.g., an option is exercised) on or after January 30, 2022: 	. Executive Order 14026 generally applies to the contract. . The contractor must pay all covered workers at least \$17.75 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in 2025.
If the contract was awarded on or between January 1, 2015 and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022: 	. Executive Order 13658 generally applies to the contract. . The contractor must pay all covered workers at least \$13.30 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2025.

The applicable Executive Order minimum wage rate will be adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a conformance request.

Additional information on contractor requirements and worker protections under the Executive Orders is available at <http://www.dol.gov/whd/govcontracts>.

Modification Number	Publication Date
0	01/03/2025
1	03/07/2025
2	03/14/2025
3	03/21/2025
4	03/28/2025
5	05/16/2025

BOIL0029-001 01/01/2025

	Rates	Fringes
BOILERMAKER.....	\$ 50.62	28.82

BRMA0001-005 08/01/2023

SPRINGFIELD CHAPTER

	Rates	Fringes
BRICKLAYER		
BRICKLAYERS; CEMENT		
MASONS; PLASTERERS; STONE		
MASONS; MARBLE, TILE &		
TERRAZZO WORKERS.....	\$ 50.81	32.27

BRMA0001-007 08/01/2023

SPRINGFIELD/PITTSFIELD CHAPTER
BERKSHIRE COUNTY

	Rates	Fringes
BRICKLAYER		
BRICKLAYERS; CEMENT		
MASONS; PLASTERERS; STONE		
MASONS; MARBLE, TILE &		
TERRAZZO WORKERS.....	\$ 50.81	32.27

CARP0056-004 08/01/2024

	Rates	Fringes
DIVER TENDER.....	\$ 61.70	35.47
DIVER.....	\$ 78.11	35.47

CARP0056-009 08/01/2024

	Rates	Fringes
PILEDRIVERMAN.....	\$ 51.97	35.47

CARP0336-005 03/01/2025

FRANKLIN COUNTY (Erving, Orange, North Orange, and Warwick)

	Rates	Fringes
CARPENTER.....	\$ 42.59	27.61

CARP0336-010 03/01/2025

BERKSHIRE

	Rates	Fringes
CARPENTER.....	\$ 42.59	27.61

CARP0336-012 03/01/2025

HAMPDEN; HAMPSHIRE; AND FRANKLIN (Remainder of County)

	Rates	Fringes
CARPENTER.....	\$ 42.59	27.61

CARP1121-004 01/06/2025		

	Rates	Fringes
MILLWRIGHT.....	\$ 43.42	33.00

ELEC0007-002 12/29/2024		

HAMPDEN (Except Chester & Holyoke); HAMPSHIRE (Belchertown, Ware)

	Rates	Fringes
ELECTRICIAN.....	\$ 51.06	28.16

ELEC0007-003 12/29/2024		

BERKSHIRE; FRANKLIN; HAMPDEN (Chester, Holyoke); HAMPSHIRE (Except Belchertown, Ware)

	Rates	Fringes
ELECTRICIAN.....	\$ 51.06	28.16

* ENGI0098-007 12/01/2024		

	Rates	Fringes
Power equipment operators:		
Group 1.....	\$ 42.88	31.04+A
Group 2.....	\$ 42.57	31.04+A
Group 3.....	\$ 42.35	31.04+A
Group 4.....	\$ 39.12	31.04+A
Group 5.....	\$ 38.00	31.04+A
Group 6.....	\$ 36.06	31.04+A
Group 7.....	\$ 54.38	31.04+A
Group 8.....	\$ 44.06	31.04+A
Group 9.....	\$ 44.37	31.04+A
Group 10.....	\$ 46.38	31.04+A
Group 11.....	\$ 47.38	31.04+A

Group 12.....	\$ 48.88	31.04+A
Group 13.....	\$ 49.88	31.04+A
Group 14.....	\$ 50.88	31.04+A
Group 15.....	\$ 52.38	31.04+A

HAZARDOUS WASTE PREMIUM \$2.00

FOOTNOTE FOR POWER EQUIPMENT OPERATORS:

Group 8 and Group 9 are per day wages.

A. Paid Holidays: New year's Day, Washington's Birthday, Memorial Day, Independence Day, Labor Day, Columbus Day, Veterans Day, Thanksgiving Day and Christmas Day

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

Group 1: Shovels; crawlers and truck cranes including all tower; self-propelled hydraulic cranes 10 tons and over; draglines; clam shells; cableways; shaft hoists; mucking machines derricks; backhoes; bulldozers; gradalls; elevating graders; pile drivers; concrete pavers; trenching machines; front end loaders- 5 1/2 cu yds and over; dual drum paver; automatic grader-excavator(C.M.I. or equal); scrapers towing pan or wagon; tandem dozers or push cats(2 units in tandem); shotcrete machine; tunnel boring machine; combination backhoe/loader 3/4 cu yd hoe or over; jet engine dryer; tree shredder; post hole digger; post hole hammer; post extractor; truck mounted concrete pump with boom; roto-mill; Grader; Horizontal Drilling Machine; John Henry Rock Drill and similar equipment.

Group 2: Rotary drill with mounted compressor; compressor house (3 to 6 compressors); rock and earth boring machines (excluding McCarthy and similar drills); front end loaders 4 cu yds to 5 1/2 cu yds); forklifts-7 ft lift and over 3 ton capacity; scraper 21 yds and over (struck load); sonic hammer console; reclaimers road planer/milling machine; cal tracks; ballast regulators; rail anchor machines; switch tampers, asphalt pavers; mechanic; welder and transfer machine.

Group 3: Combination backhoe/loader up to 3/4 cu yd; scrapers up to 21 cu yd (struck load, self propelled or tractor drawn); tireman; front end loaders up to 4 yds; well drillers; engineer or fireman on high pressure boiler; self-loading batch plant; well point operators electric pumps used in well point system; pumps, 16 inches and over (total discharge); compressor, one or two 900 cu ft and over; powered grease truck; tunnel locomotives and dingys; grout pumps; hydraulic jacks; boom truck; hydraulic cranes-up to 10 ton.

Group 4: Asphalt rollers; self-powered rollers and compactors; tractor without blade drawing sheepsfoot roller; rubber tire roller; vibratory roller or other type of compactors including machines for pulverizing and aerating soil; york rake.

Group 5: Hoists; conveyors; power pavement breakers; self-powered concrete pavement finishing machines; two bag mixers with skip; McCarthy and similar drills; batch plants (not self loading); bulk cement plants; self-propelled material spreaders; three or more 10 KW light plants; 30 KW or more generators; power broom.

Group 6: Compressor (one or two) 315 cu ft to 900 cu ft; pumps 4 inches to 16 inches (total discharge).

Group 7: Compressors up to 315 cu ft; small mixers with skip; pumps up to 4 inches; power heaters; oiler; A-frame trucks; forklifts-up to 7 ft. lift and up to 3 ton capacity; hydro broom; stud welder.

Group 8: Truck crane crews

Group 9: Oiler

Group 10: Master Mechanic

Group 11: Boom lengths over 150 feet including jib

Group 12: Boom lengths over 200 feet including jib

Group 13: Boom lengths over 250 feet including jib

Group 14: Boom lengths over 300 feet including jib

Group 15: Boom lengths over 350 feet including jib

IRON0007-014 03/16/2024

BERKSHIRE (Becket, East Otis, Hinsdale, Monterey, New Marlboro, North Otis, Otis, Peru, Sandisfield, Savoy, Sheffield, Washington, Windsor); FRANKLIN; HAMPDEN; HAMPSHIRE

	Rates	Fringes
IRONWORKER.....	\$ 39.51	32.98

IRON0012-003 07/01/2024

BERKSHIRE (Lee)

	Rates	Fringes
IRONWORKER.....	\$ 38.50	28.46

IRON0012-004 07/01/2024

BERKSHIRE (Remainder of County)

	Rates	Fringes
Ironworkers:		
Sheeter.....	\$ 38.75	28.46
Structural, Ornamental, Reinforcing, Fence Erector, Machinery Mover, Rigger, Rodman, Stone Derrickman.....	\$ 38.50	28.46

LABO0022-002 12/01/2024

FRANKLIN (Orange, Warwick)

	Rates	Fringes
Laborers:		
GROUP 1.....	\$ 38.95	29.70
GROUP 2.....	\$ 39.20	29.70
GROUP 3.....	\$ 39.70	29.70
GROUP 4.....	\$ 39.95	29.70
GROUP 5.....	\$ 39.70	29.70
GROUP 6.....	\$ 40.95	29.70

LABORERS CLASSIFICATIONS

GROUP 1: Laborers; carpenter tenders; cement finisher
tenders, plasterer tendersGROUP 2: Asphalt raker; fence and guard rail erector; laser
beam operator; mason tender; pipelayer; pneumatic drill
operator; pneumatic tool operator; wagon drill operator
jackhammer operator, pavement breaker, carbide core
drilling machine, chain saw operator, barco type jumping
tamper, concrete pump, motorized mortar miner, ride-on
motorized buggyGROUP 3: Air track operator; block paver; rammer; curb
setter, hydraulic and similar self-powered drills

GROUP 4: Blaster; powderman

GROUP 5: Precast floor and roof, plank erector

GROUP 6: Asbestos Abatement, Toxic and Hazardous waste laborers

LABO0473-005 12/01/2024

FRANKLIN (Except Orange and Warrick); HAMPDEN and HAMPSHIRE COUNTIES (with the exception of Chesterfield, Cummington, Goshen, Middlefield, Plainfield, and Worthington)

	Rates	Fringes
Laborers:		
Group 1.....	\$ 35.00	29.70
Group 2.....	\$ 35.00	29.70
Group 3.....	\$ 35.00	29.70
Group 4.....	\$ 35.00	29.70
Group 5.....	\$ 27.01	29.70
Group 6.....	\$ 35.00	29.70

LABORERS CLASSIFICATIONS

Group 1: Carpenter tenders, cement finisher tenders, laborers, wrecking laborers

Group 2: Asphalt rakers, fence and guard rail erectors, laser beam operator, mason tender, pipelayer, pneumatic drill operator, pneumatic tool operator, wagon drill operator

Group 3: Air track operator, block pavers, rammers, curb setters

Group 4: Blasters, powdermen

Group 5: Flaggers

Group 6: Asbestos abatement, toxic and Hazardous waste laborers

LABO0473-006 12/01/2024

BERKSHIRE; HAMPSHIRE COUNTIES (the towns of Chesterfield, Cummington, Goshen, Middlefield, Plainfield, and Worthington only)

	Rates	Fringes
Laborers:		
Group 1.....	\$ 33.99	26.65
Group 2.....	\$ 33.99	26.65
Group 3.....	\$ 33.99	26.65
Group 4.....	\$ 33.99	26.65
Group 5.....	\$ 27.01	26.65
Group 6.....	\$ 33.99	26.65

LABORERS CLASSIFICATIONS

Group 1: Carpenter tenders, cement finisher tenders, laborers, wrecking laborers

Group 2: Asphalt rakers, fence and guard rail erectors, laser beam operator, mason tender, pipelayer, pneumatic drill operator, pneumatic tool operator, wagon drill operator

Group 3: Air track operator, block pavers, rammers, curb setters

Group 4: Blasters, powdermen

Group 5: Flaggers

Group 6: Asbestos abatement, toxic and Hazardous waste laborers

LABO1421-002 12/02/2024

	Rates	Fringes
Laborers:		
Group 1.....	\$ 46.25	29.70
Group 2.....	\$ 47.00	29.70
Group 3.....	\$ 47.25	29.70
Group 4.....	\$ 42.25	29.70
Group 5.....	\$ 45.35	29.70
Group 6.....	\$ 46.25	29.70

Group 1: Adzeman, Wrecking Laborer.

Group 2: Burners, Jackhammers.

Group 3: Small Backhoes, Loaders on tracks, Bobcat Type
Loaders, Hydraulic "Brock" Type Hammer Operators, Concrete
Cutting Saws.

Group 4: Yardman (Salvage Yard Only).

Group 5: Yardman, Burners, Sawyers.

Group 6: Asbestos, Lead Paint, Toxic and Hazardous Waste.

PAIN0035-010 07/01/2024

	Rates	Fringes
PAINTER		
NEW CONSTRUCTION:		
Brush, Taper.....	\$ 38.78	31.85
Spray, Sandblast.....	\$ 39.48	31.85
REPAINT:		
Bridge.....	\$ 56.76	31.85
Brush, Taper.....	\$ 35.40	31.85
Spray, Sandblast.....	\$ 36.80	31.85

PLUM0004-003 03/01/2025

FRANKLIN (Orange)

	Rates	Fringes
Plumber and Steamfitter.....	\$ 55.00	30.17

PLUM0104-004 03/17/2025

BERKSHIRE (Becket, Otis, Sandisfield); FRANKLIN (Except Monroe, Rowe, and the Western part of Charlemont); HAMPDEN; HAMPSHIRE

	Rates	Fringes
Plumbers and Pipefitters.....	\$ 51.26	29.85

FOOTNOTE:

A. Two paid holidays, Independence Day and Labor Day, provided the employee has been employed seven days prior to the holiday by the same employer

PLUM0104-009 03/17/2025

BERKSHIRE (Except Otis, Becket, Sandisfield); FRANKLIN (Monroe, Rowe and the Western part of Charlemont)

	Rates	Fringes
Plumber and Steamfitter.....	\$ 51.26	29.85

FOOTNOTE FOR PLUMBERS & STEAMFITTERS:

A. Paid holidays: Independence Day and Labor Day, provided the employee has been employed seven days prior to the holiday by the same employer.

TEAM0379-001 06/01/2024

	Rates	Fringes
Truck drivers:		
Group 1.....	\$ 39.78	35.24+a+b
Group 2.....	\$ 39.95	35.24+a+b
Group 3.....	\$ 40.02	35.24+a+b
Group 4.....	\$ 40.14	35.24+a+b
Group 5.....	\$ 40.24	35.24+a+b
Group 6.....	\$ 40.53	35.24+a+b
Group 7.....	\$ 40.82	35.24+a+b

POWER TRUCKS \$.25 DIFFERENTIAL BY AXLE

TUNNEL WORK (UNDERGROUND ONLY) \$.40 DIFFERENTIAL BY AXLE

HAZARDOUS MATERIALS (IN HOT ZONE ONLY) \$2.00 PREMIUM

TRUCK DRIVERS CLASSIFICATIONS

Group 1: Station wagons; panel trucks; and pickup trucks

Group 2: Two axle equipment; & forklift operator

Group 3: Three axle equipment and tireman

Group 4: Four and Five Axle equipment

Group 5: Specialized earth moving equipment under 35 tons
 other than conventional type trucks; low bed; vachual;
 mechanics, paving restoration equipment

Group 6: Specialized earth moving equipment over 35 tons

Group 7: Trailers for earth moving equipment (double hookup)

FOOTNOTES:

A. PAID HOLIDAYS: New Year's Day, Washington's Birthday, Memorial Day, Independence Day, Labor Day, Patriot's Day, Columbus Day, Veteran's Day, Thanksgiving Day and Christmas Day

B. PAID VACATION: Employees with 4 months to 1 year of service receive 1/2 day's pay per month; 1 week vacation for 1 - 5 years of service; 2 weeks vacation for 5 - 10 years of service; and 3 weeks vacation for more than 10 years of service

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at <https://www.dol.gov/agencies/whd/government-contracts>.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (iii)).

The body of each wage determination lists the classifications and wage rates that have been found to be prevailing for the type(s) of construction and geographic area covered by the wage determination. The classifications are listed in alphabetical order under rate identifiers indicating whether the particular rate is a union rate (current union negotiated rate), a survey rate, a weighted union average rate, a state adopted rate, or a supplemental classification rate.

Union Rate Identifiers

A four-letter identifier beginning with characters other than "SU", "UAVG", ?SA?, or ?SC? denotes that a union rate was prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2024. PLUM is an identifier of the union whose collectively bargained rate prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. The date, 07/01/2024 in the example, is the effective date of the most current negotiated rate.

Union prevailing wage rates are updated to reflect all changes over time that are reported to WHD in the rates in the collective bargaining agreement (CBA) governing the classification.

Union Average Rate Identifiers

The UAVG identifier indicates that no single rate prevailed for those classifications, but that 100% of the data reported for the classifications reflected union rates. EXAMPLE: UAVG-OH-0010 01/01/2024. UAVG indicates that the rate is a weighted union average rate. OH indicates the State of Ohio. The next number, 0010 in the example, is an internal number used in producing the wage determination. The date, 01/01/2024 in the example, indicates the date the wage determination was updated to reflect the most current union average rate.

A UAVG rate will be updated once a year, usually in January, to reflect a weighted average of the current rates in the collective bargaining agreements on which the rate is based.

Survey Rate Identifiers

The ""SU"" identifier indicates that either a single non-union rate prevailed (as defined in 29 CFR 1.2) for this classification in the survey or that the rate was derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As a weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SUFL2022-007 6/27/2024. SU indicates the rate is a single non-union prevailing rate or a weighted average of survey data for that classification. FL indicates the State of Florida. 2022 is the year of the survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. The date, 6/27/2024 in the example, indicates the survey completion date for the classifications and rates under that identifier.

?SU? wage rates typically remain in effect until a new survey is conducted. However, the Wage and Hour Division (WHD) has the discretion to update such rates under 29 CFR 1.6(c)(1).

State Adopted Rate Identifiers

The ""SA"" identifier indicates that the classifications and prevailing wage rates set by a state (or local) government were adopted under 29 C.F.R 1.3(g)-(h). Example: SAME2023-007 01/03/2024. SA reflects that the rates are state adopted. ME refers to the State of Maine. 2023 is the year during which the state completed the survey on which the listed classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. The date, 01/03/2024 in the example, reflects the date on which the classifications and rates under the ?SA? identifier took effect under state law in the state from which the rates were adopted.

WAGE DETERMINATION APPEALS PROCESS

1) Has there been an initial decision in the matter? This can be:

- a) a survey underlying a wage determination
- b) an existing published wage determination
- c) an initial WHD letter setting forth a position on a wage determination matter
- d) an initial conformance (additional classification and rate) determination

On survey related matters, initial contact, including requests for summaries of surveys, should be directed to the WHD Branch of Wage Surveys. Requests can be submitted via email to davisbaconinfo@dol.gov or by mail to:

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Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

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2) If an initial decision has been issued, then any interested party (those affected by the action) that disagrees with the decision can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Requests for review and reconsideration can be submitted via email to dba.reconsideration@dol.gov or by mail to:

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The request should be accompanied by a full statement of the interested party's position and any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

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U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210.

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END OF GENERAL DECISION"

"General Decision Number: MA20250006 02/21/2025

Superseded General Decision Number: MA20240006

State: Massachusetts

Construction Type: Heavy Dredging

Counties: Massachusetts Statewide.
STATEWIDE

Massachusetts All Dredging, except self-propelled hopper dredges, on the Atlantic Coast & tributary waters emptying into the Atlantic Ocean.

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658. Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(1).

If the contract is entered into on or after January 30, 2022, or the contract is renewed or extended (e.g., an option is exercised) on or after January 30, 2022: 	. Executive Order 14026 generally applies to the contract. . The contractor must pay all covered workers at least \$17.75 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in 2025.
If the contract was awarded on or between January 1, 2015 and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022: 	. Executive Order 13658 generally applies to the contract. . The contractor must pay all covered workers at least \$13.30 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2025.

The applicable Executive Order minimum wage rate will be adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a conformance request.

Additional information on contractor requirements and worker protections under the Executive Orders is available at <http://www.dol.gov/whd/govcontracts>.

Modification Number	Publication Date
0	01/03/2025
1	02/21/2025

* ENGI0025-001 10/01/2024

STATEWIDE

	Rates	Fringes
Dredging:		
CLASS A1.....	\$ 47.07	15.34+a+b
CLASS A2.....	\$ 41.94	14.99+a+b
CLASS B1.....	\$ 40.71	14.90+a+b
CLASS B2.....	\$ 38.31	14.73+a+b
CLASS C1.....	\$ 37.26	14.66+a+b
CLASS C2.....	\$ 36.07	14.57+a+b
CLASS D.....	\$ 29.96	14.15+a+b

CLASSIFICATIONS:

CLASS A1: Deck Captain; Mechanical Dredge Operator, Leverman, Licensed Tug Operator over 1000 HP.

CLASS A2: Crane Operator (360 swing).

CLASS B1: Derrick Operator (180 swing), Spider/Spill Barge Operator, Engineer, Electrician, Chief Welder, Chief Mate, Fill Placer, Operator II, Maintenance Engineer, Licensed Boat Operator, Licensed Crew Boat Operator.

CLASS B2: Certified Welder.

CLASS C1: Mate, Drag Barge Operator, Assistant Fill Placer, Welder, Steward.

CLASS C2: Boat Operator.

CLASS D: Oiler, Deckhand, Shoreman, Rodman, Scowman, Cook, Messman, Porter/Janitor.

INCENTIVE PAY: (Add to Hourly Rate)

Operator (NCCCO License/Certification) \$1.80 Licensed Tug
Operator over 1000 HP (Assigned as Master) (USCG licensed
Master of Towing Vessels (MOTV) \$1.80; Licensed Boat
Operator (Assigned as lead boat captain) USCG licensed
boat operator \$1.30; Engineer (QMED and Tankerman
endorsement or licensed engineer (USCG) \$1.80
Oiler (QMED and Tankerman endorsement (USCG) \$1.80; All
classifications (Tankerman endorsement only) USCG \$1.55;
Deckhand or Mate (AB with Lifeboatman endorsement (USCG)
\$1.80; All classifications (lifeboatman endorsement only
(USCG) \$1.55; Welder (ABS certification) \$1.55

FOOTNOTES APPLICABLE TO ABOVE CRAFTS:

- a. PAID HOLIDAYS: New Year's Day, Martin Luther King, Jr.'s
Birthday, Memorial Day, Good Friday, Independence Day,
Labor Day, Veterans' Day, Thanksgiving Day and Christmas Day
- b. VACATION: Eight percent (8%) of the straight time rate,
multiplied by the total hours worked.

WELDERS - Receive rate prescribed for craft performing
operation to which welding is incidental.

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Note: Executive Order (EO) 13706, Establishing Paid Sick Leave
for Federal Contractors applies to all contracts subject to the
Davis-Bacon Act for which the contract is awarded (and any
solicitation was issued) on or after January 1, 2017. If this
contract is covered by the EO, the contractor must provide
employees with 1 hour of paid sick leave for every 30 hours
they work, up to 56 hours of paid sick leave each year.
Employees must be permitted to use paid sick leave for their
own illness, injury or other health-related needs, including
preventive care; to assist a family member (or person who is
like family to the employee) who is ill, injured, or has other
health-related needs, including preventive care; or for reasons
resulting from, or to assist a family member (or person who is
like family to the employee) who is a victim of, domestic
violence, sexual assault, or stalking. Additional information
on contractor requirements and worker protections under the EO
is available at
<https://www.dol.gov/agencies/whd/government-contracts>.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (iii)).

The body of each wage determination lists the classifications and wage rates that have been found to be prevailing for the type(s) of construction and geographic area covered by the wage determination. The classifications are listed in alphabetical order under rate identifiers indicating whether the particular rate is a union rate (current union negotiated rate), a survey rate, a weighted union average rate, a state adopted rate, or a supplemental classification rate.

Union Rate Identifiers

A four-letter identifier beginning with characters other than "SU", "UAVG", ?SA?, or ?SC? denotes that a union rate was prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2024. PLUM is an identifier of the union whose collectively bargained rate prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. The date, 07/01/2024 in the example, is the effective date of the most current negotiated rate.

Union prevailing wage rates are updated to reflect all changes over time that are reported to WHD in the rates in the collective bargaining agreement (CBA) governing the classification.

Union Average Rate Identifiers

The UAVG identifier indicates that no single rate prevailed for those classifications, but that 100% of the data reported for the classifications reflected union rates. EXAMPLE:

UAVG-OH-0010 01/01/2024. UAVG indicates that the rate is a weighted union average rate. OH indicates the State of Ohio. The next number, 0010 in the example, is an internal number used in producing the wage determination. The date, 01/01/2024 in the example, indicates the date the wage determination was updated to reflect the most current union average rate.

A UAVG rate will be updated once a year, usually in January, to reflect a weighted average of the current rates in the collective bargaining agreements on which the rate is based.

Survey Rate Identifiers

The ""SU"" identifier indicates that either a single non-union rate prevailed (as defined in 29 CFR 1.2) for this classification in the survey or that the rate was derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As a weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SUFL2022-007 6/27/2024. SU indicates the rate is a single non-union prevailing rate or a weighted average of survey data for that classification. FL indicates the State of Florida. 2022 is the year of the survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. The date, 6/27/2024 in the example, indicates the survey completion date for the classifications and rates under that identifier.

?SU? wage rates typically remain in effect until a new survey is conducted. However, the Wage and Hour Division (WHD) has the discretion to update such rates under 29 CFR 1.6(c)(1).

State Adopted Rate Identifiers

The ""SA"" identifier indicates that the classifications and prevailing wage rates set by a state (or local) government were adopted under 29 C.F.R 1.3(g)-(h). Example: SAME2023-007 01/03/2024. SA reflects that the rates are state adopted. ME refers to the State of Maine. 2023 is the year during which the state completed the survey on which the listed classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. The date, 01/03/2024 in the example, reflects the date on which the classifications and rates under the ?SA? identifier took effect under state law in the state from which the rates were adopted.

WAGE DETERMINATION APPEALS PROCESS

1) Has there been an initial decision in the matter? This can be:

- a) a survey underlying a wage determination
- b) an existing published wage determination
- c) an initial WHD letter setting forth a position on a wage determination matter
- d) an initial conformance (additional classification and rate) determination

On survey related matters, initial contact, including requests for summaries of surveys, should be directed to the WHD Branch of Wage Surveys. Requests can be submitted via email to davisbaconinfo@dol.gov or by mail to:

Branch of Wage Surveys
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

Regarding any other wage determination matter such as conformance decisions, requests for initial decisions should be directed to the WHD Branch of Construction Wage Determinations. Requests can be submitted via email to BCWD-Office@dol.gov or by mail to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2) If an initial decision has been issued, then any interested party (those affected by the action) that disagrees with the decision can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Requests for review and reconsideration can be submitted via email to dba.reconsideration@dol.gov or by mail to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210.

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END OF GENERAL DECISION"

DOCUMENT A00801

SPECIAL PROVISIONS**CUMMINGTON****Federal Aid Project No. HIP(NGB)-003S(828)
Bridge Preservation, C-21-002, Route 9 over Westfield River**

Labor participation goals for this Project shall be 15.3% for minorities and 6.9% for women for each job category. The goals are applicable to both Contractor's and Subcontractor's on-site construction workforce. Refer to Document 00820 for details.

SCOPE OF WORK

All work under this Contract shall be done in conformance with the *2025 Standard Specifications for Highways and Bridges*, the *Supplemental Specifications* contained in this book, the *Construction Standard Details* in effect as of June, 2025, 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 latest edition of *The American Standard for Nursery Stock*, the Plans and these Special Provisions.

All work shall be performed within, and accessed by, existing State, City or Town roadway layouts. No rights to enter on, or occupy, private property have been acquired for this project.

The work to be done under this Contract consists of furnishing all necessary labor, materials, and equipment required for the preservation of Bridge No. C-21-002, which carries Berkshire Trail (Routes 9 & 112) over the Westfield River and as shown on the plans.

Included as part of the work is the replacement of the existing concrete deck, steel safety curbs, concrete filled grid sidewalk and several steel stringers; strengthening of steel floorbeams; installation of new wheel guards; replacement of existing ornamental rail; substructure concrete repairs; cleaning and re-painting of existing structural steel; reconstruction of approach roadways; furnishing and installing guardrail; furnishing and installing loam and seed; maintaining construction safety controls, and other incidentals required to complete the work as shown on the drawings, as listed in the proposal, as specified herein, and as required by the Engineer.

SUBSECTION 7.05 INSURANCE REQUIREMENTS**B. Public Liability Insurance**

The insurance requirements set forth in this subsection are in addition to the requirements of the Standard Specifications and supersede all other requirements.

Paragraphs 1 and 2

The Massachusetts Department of Transportation and applicable railroads shall be named as additional insureds.

CONTRACTOR QUESTIONS AND ADDENDUM ACKNOWLEDGEMENTS

Prospective bidders are required to submit all questions to the Construction Contracts Engineer by 3:00 P.M. on the Tuesday of the previous week before the scheduled bid opening date. Any questions received after this time will not be considered for review by the Department.

Contractors should email questions and addendum acknowledgements to the following email address massdotSpecifications@dot.state.ma.us The MassDOT proposal number and municipality is to be placed in the subject line.

BIDDERS LIST

Pursuant to the provisions of 49 CFR Part 26.11 all official bidders will be required to report the names, addresses and telephone numbers of all firms that submitted bids or quotes in connection with this project. Failure to comply with a written request for this information within 15 business days may result in a recommendation to the Prequalification Committee that prequalification status be suspended until the information is received.

The Department will survey all firms that have submitted bids or quotes during the previous year prior to setting the annual goal and shall request that each firm report its age and gross receipts for the year.

EQUIVALENT SINGLE AXLE LOADS (ESALS)

The estimated traffic level to be used for SUPERPAVE HMA mixture designs for this contract, expressed in Equivalent Single Axle Loads (ESALs) for the design travel lane over a 20-year period, is 0.5 Million 18-kip (80-kn) ESALs.

LIMITATIONS OF OPERATIONS

(Supplementing Subsection 8.06)

1. For landscaping/planting, Work allowed from April 1 to June 1 and August 15th to October 15.
2. Winter weather sensitive work: concrete work, soil compaction, etc. Work allowed from March 16 to November 30.
3. Winter Work of Hot Mix Asphalt (HMA) Base Paving. Work allowed from April 1 to November 15.
4. NW- Night work, Work hours are 7:00PM to 5:30AM Monday night through Friday morning.
5. Weekend work calendar, with hours from Saturday night at 1AM to Monday Morning at 5AM, with prior approval.
6. The Contractor shall provide access to various utility companies for performance of their work.

WORK SCHEDULE

The work schedule shall conform to the relevant provisions of Subsection 7.09 of the Standard Specification and shall be subject to the approval of the Engineer.

The work on this project is allowed to be done between 7:00 am to 3:30 pm, Monday through Friday, with the Prime Contractor and all Subcontractors working on the same shift. Set-up and removal of all equipment and materials for construction and / or traffic maintenance shall be done only during working hours for the particular work being done. The roadway shall be free of the Contractor's personnel and operations during non-work hours. Work at night will be allowed with the prior written permission and approval of the Engineer and RE, and shall be done between 7:00 pm and 5:30 am, Monday night through Friday morning.

No work shall be done on this contract on Sundays, or Holidays without prior approval by the Engineer. See Section 7.09 for work restriction on Holidays.

The Contractor shall give notice to the Engineer at least 48 hours in advance of beginning any work affecting maintenance to traffic, where work affects any street in use by the public. The Contractor shall not proceed with surfacing operations without specific notice to and approval of the Engineer.

The Contractor is advised that for certain specific activities, their work hours will be restricted to low-volume time periods. These specific activities may include but not be limited to: steel stringer delivery and installation; crane picks; certain demolition operations such as deck slab removals; and beam erection. The Contractor shall provide to the Engineer at least 1 week in advance a written request specifying the specific construction activity and specific low-volume time periods for the restricted activity. The time periods may take place during weekends or overnight, and shall be reflected in the Contractor's Schedule of Operations.

The duration of work for this contract was developed with the inclusion of various items of work continuing through the winter months. For cold weather construction requirements please refer to the Standard Specifications.

HOLIDAY WORK RESTRICTIONS

(Supplementing Subsection 7.09)

The District Highway Director (DHD) may authorize work to continue during these specified time periods if it is determined by the District that the work will not negatively impact the traveling public. DHD may allow work in those areas on a case by case basis and where work is behind barrier and will not impact traffic

Below are the holiday work restrictions:

New Years Day (Federal Holiday)

No work on major arterial roadways from 5:00 AM on the day before until the normal start of business on the next subsequent business day. No work on local roadways on the holiday without permission by the DHD and the local police chief.

Martin Luther King's Birthday (Federal Holiday)

No work restrictions due to traffic concerns, however work on local roadways requires permission by the DHD and local police chief.

President's Day (Federal Holiday)

No work restrictions due to traffic concerns, however work on local roadways requires permission by the DHD and local police chief.

Evacuation Day (Suffolk County State Holiday)

No work restrictions due to traffic concerns.

Patriot's Day (State Holiday)

Work restrictions will be in place for Districts 3 and 6 along the entire Boston Marathon route and any other locations that the DHD in those districts determine are warranted so as to not to impact the marathon. All other districts work restrictions will be as per DHD.

Mother's Day

No work on Western Turnpike and Metropolitan Highway System from 5:00 AM on the Friday before, until the normal start of business on the following day.

HOLIDAY WORK RESTRICTIONS (Continued)**Memorial Day (Federal Holiday)**

No work on major arterial roadways from 5:00 AM on the Friday before, until the normal start of business on the following day.

Bunker Hill Day (Suffolk County State Holiday)

No work restrictions due to traffic concerns.

Juneteenth

No work restrictions due to traffic concerns, however work on local roadways requires permission by the DHD and local police chief.

Independence Day (Federal Holiday)

No work on major arterial roadways from 5:00 AM on the day before until the normal start of business on the next subsequent business day. No work on local roadways on the holiday without permission by the DHD and the local police chief.

Labor Day (Federal Holiday)

No work on major arterial roadways from 5:00 AM on the Friday before, until the normal start of business on the following day.

Columbus Day (Federal Holiday)

No work on major arterials from 5:00 AM on the Friday before, until the normal start of business on the following day

Veterans' Day (Federal Holiday)

No work restrictions due to traffic concerns.

Thanksgiving Day (Federal Holiday)

No work on major arterials from 5:00 AM two days before until the normal start of business on the following Monday.

Christmas Day (Federal Holiday)

No work on major arterial roadways from 5:00 AM on the day before until the normal start of business on the next subsequent business day.

PROVISIONS FOR TRAVEL AND PROSECUTION OF WORK

The Contractor shall furnish and install proper shielding under the bridge structure to prevent any debris from falling to the river below.

The Contractor shall close off the bridge construction area completely by using temporary chain-link fence. The fence shall have gates to permit the Contractor's personnel and equipment access to the site. Should the Contractor provide openings for access/egress to the work area through sections of temporary concrete barrier runs, the Contractor shall be responsible to ensure that no barrier or fence blunt ends are exposed to vehicular traffic unless temporary impact attenuation, approved by the Engineer, has been provided to protect the traveling public from said blunt ends.

At the end of each work day, the Contractor shall verify that no openings in the fence are present, and that all gates are chained and padlocked. In the event that the fence is vandalized or damaged by any means, the Contractor shall be responsible for replacing such by end of same workday, to the Engineer's satisfaction.

Roadways not affected by the bridge construction shall remain open to traffic at all times during the period of time required for the completion of work, unless otherwise shown on the Plans or required by the Engineer.

The Contractor shall order all materials and service required for the work immediately after the NTP. Within 15 days after receipt of approved shop drawings for any item, the Contractor shall provide the Department written proof that the approved materials have been ordered. The Contractor shall not start an operation until all materials required for that operation are at the site or until the Engineer is satisfied that the materials will be delivered in such order that there will be no interruption to the continuous and efficient progress for that operation.

NOTICE TO OWNERS OF UTILITIES

(Supplementing Subsection 7.13)

The Contractor shall perform work concurrently and in conjunction with the utility companies involved with project so as to provide for all possible cooperation towards the satisfactory completion of the work with minimum delay and inconvenience. Certain utility companies may incur considerable work; schemes involving such work will be coordinated with the Contractor by the utility companies prior to start of construction.

The Contractor shall be responsible for maintenance of flow in all water courses, sewers, drains and other pipes in the way of the proposed work, or for any conveyance of the flow to a suitable point of discharge in such a manner that there will be no flow upon or hindrance to other work, or cause nuisance of any kind.

The Contractor shall provide written notice to all utilities at least one week in advance of beginning any work within the project limits. This notice shall include a work schedule identifying the sequence of construction. The Contractor shall, at the same time, file a copy of such notice with the Engineer.

A list of public and private utilities can be found on the MassDOT website at:

<https://www.mass.gov/info-details/utility-contacts-by-district-and-municipality>

Select District 1

Select the Town of CUMMINGTON and then locate the utility

Notification of Public Officials

Town officials are shown at website <https://www.mass.gov/lists/massachusetts-cities-and-towns> and select the required City/Town website.

State Police are shown at website <https://www.mass.gov/info-details/massachusetts-state-police-troop-boundaries>. Select the area of jurisdiction to find the local station.

MassDOT District Utility and Constructability Engineer (District 1)

Mark Page Mark.Page@dot.state.ma.us

Telephone No. (857) 368-1033

NOTICE TO OWNERS OF UTILITIES (Continued)

The following are the names and owners and representatives of the principal utilities, as well as City Department contacts:

Alan Taylor, Superintendent
Cummington Highway Department
P.O. Box 20
Cummington, MA 01026
(413) 634-8818

Adam Dragon, Fire Chief
Cummington Fire Department
8 Fairgrounds Rd
Cummington, MA 01026
(413) 634-0333

Nicholas Langone
Eversource Electric West
300 Cadwell Drive
Springfield, MA 01104
(413) 787-9022

Karen Mealey
Verizon
385 Myles Standish Blvd.
Taunton, MA 02780
(774) 409-3160

Todd Emerson, Chairperson
Cummington Water Commission
P.O. Box 128
Cummington, MA 01026
(413) 634-5354

Mike Lee
Westfield Gas-Elect. – Fiber
P.O. Box 990
Westfield, MA 01086
(413)-485-1207

Jason Wing
Local Linx
30 Elmview Circle
Dover, NH 03820
(403) 538-4545

Liz Glidden
Verizon Wireless Small Cell
20 Alexander Drive
Wallingford, CT 06492

Michael Perkins II, Police Chief
Cummington Police Department
P.O. Box 98
Cummington, MA 01026
(413) 634-0056

Note: This list is for guidance only and is not guaranteed to be complete or up to date.

EVERSOURCE EMERGENCY TELEPHONE NUMBERS**ELECTRIC:**

Outage/ Emergency: 800-592-2000 or 844-726-7562

New Service: 1-888-633-3797 (1-888-need pwr)

Customer Support: 1-800-340-9822

BUILD AMERICA BUY AMERICA PREFERENCE

On Federally-aid projects the Buy America (23.CFR § 635.410) and Build America, Buy America Act. requires the following,

- (1) all iron and steel used in the project are produced in the United States--this means all manufacturing processes, from the initial melting stage through the application of coatings, must occur in the United States. Foreign steel and iron can be used if the cost of the materials does not exceed 0.1% of the total Contract cost or \$2,500, whichever is greater. The action of applying a coating to a covered material (i.e., steel and iron) is deemed a manufacturing process subject to Buy America. Coating includes epoxy coating, galvanizing, painting and any other coating that protects or enhances the value of a material subject to requirements of Build America, Buy America. Steel used for temporary support of excavation, including H piles, soldier piles, and sheeting when the steel is required to be left in place is subject to requirements of Build America, Buy America. Temporary steel, shall remain in place when it falls within the influence zone of the soil supporting any structure or railroad tracks.
- (2) all manufactured products used in the project are produced in the United States—this means the manufactured product was manufactured in the United States and
- (3) all construction materials are manufactured in the United States—this means that all manufacturing processes for the construction material occurred in the United States. “Construction materials” includes an article, material, or supply—other than an item of primarily iron or steel; a manufactured product; cement and cementitious materials; aggregates such as stone, sand, or gravel; or aggregate binding agents or additives—that is or consists primarily of:
 - non-ferrous metals,
 - plastic and polymer-based products (including polyvinylchloride, composite building materials, and polymers used in fiber optic cables),
 - glass (including optic glass),
 - lumber; or
 - drywall.

The Buy America preference only applies to articles, materials, and supplies that are consumed in, incorporated into, or affixed to an infrastructure project. As such, it does not apply to tools, equipment, and supplies, such as temporary scaffolding, brought to the construction site and removed at or before the completion of the infrastructure project. Nor does a Buy America preference apply to equipment and furnishings, such as movable chairs, desks, and portable computer equipment, that are used at or within the finished infrastructure project but are not an integral part of the structure or permanently affixed to the infrastructure project.

All articles, materials, and supplies should be classified as an iron or steel product, a manufactured product, or another product as specified by law or in 2 CFR part 184 (such other products specified by law or in 2 CFR part 184 include “excluded materials” and “construction materials”); an article, material, or supply must not be considered to fall into multiple categories.

NOTE: The requirements for manufactured products indicated in paragraph (2) above are not in effect for this contract.

COMPLIANCE WITH THE NATIONAL DEFENSE AUTHORIZATION ACT**(Supplementing Subsection 7.01)**

On all projects, the “Prohibition on Certain Telecommunications and Video Surveillance Services or Equipment” Regulation (2 CFR 200.216) prohibits the Contractor from using or furnishing the following telecommunications equipment or services:

- Telecommunications equipment produced by Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities).
- For the purpose of public safety, security of government facilities, physical security surveillance of critical infrastructure, and other national security purposes, video surveillance and telecommunications equipment produced by Hytera Communications Corporation, Hangzhou Hikvision Digital Technology Company, or Dahua Technology Company (or any subsidiary or affiliate of such entities).
- Telecommunications or video surveillance services provided by such entities or using such equipment.
- Telecommunications or video surveillance equipment or services produced or provided by an entity that the Secretary of Defense, in consultation with the Director of the National Intelligence or the Director of the Federal Bureau of Investigation, reasonably believes to be an entity owned or controlled by, or otherwise connected to, the government of a covered foreign country.

This prohibition applies to all products manufactured by the aforementioned companies, including any individual components or parts.

By submitting a bid on a project, the Contractor certifies that all work will be in compliance with the terms of 2 CFR 200.216. The Contractor shall submit a COC indicating compliance with the above provisions for all telecommunications equipment or services included in the Contract.

Payment for the item in which the materials are incorporated may be withheld until these COCs are received. Any cost involved in furnishing the certificate(s) shall be borne by the Contractor.

EMERALD ASH BORER ADVISORY

To the extent possible, all trees and brush shall be disposed on site, typically chipped and spread in place. When trees or brush must be removed, such as in urban, or otherwise populated areas, Contractor shall identify proposed location for disposal, and provide written notification to the Engineer for approval. Disposal shall be in city or town of project, or at minimum, within county, of construction operations.

SOIL STOCKPILING DIRECTIVE P-22-001

Any stockpiling of soil must be performed in compliance with Policy Directive P-22-001, Off-Site Stockpiling of Soil from MassDOT Construction Projects. This directive limits the allowable locations for off-site stockpiling of soil generated during MassDOT projects and includes various requirements that must be satisfied by the contractor prior to off-site stockpiling. The Contractor is responsible for identifying a suitable stockpile location.

CONTAMINATED SOIL

Soil to be removed from the project area shall not be assumed to be uncontaminated and must be evaluated prior to off-site management for potential contamination with hazardous materials. No soil may be disposed of off-site without proper assessment by the contractor and approval from the Resident Engineer (RE), District Environmental Engineer (DEE), or the project designee.

ENVIRONMENTAL PERMITTING

The proposed work occurs in jurisdictional wetland resources subject to section 401 and section 404 of the Clean Water Act; therefore, a Water Quality Certification from the Massachusetts Department of Environmental Protection and authorization from the US Army Corps of Engineers has been obtained. The Contractor is advised that all terms and conditions within said permits shall be strictly adhered to. The proposed work qualifies for the bridge exemption authorized in the Transportation Bond Bill and is therefore not subject to the Massachusetts Wetlands Protection Act, the Massachusetts Public Waterfront Act (Chapter 91), or the Massachusetts Environmental Policy Act.

If field conditions and/or Contractor-proposed erection, demolition, staging, or other procedures require work to occur in or otherwise impact water or wetland resource areas, the Contractor is advised that no associated work can occur until all required environmental permits have been obtained allowing such work. The Contractor must notify the District 1 Highway Director and Resident Engineer in writing at least 60 days prior to desire commencement of the proposed activity. All environmental submittals, including any Contract with Local, State, or Federal environmental agencies, must be coordinated with the District 1 Environmental Engineer. The Contractor is expected to fully cooperate with requests for information and provide same in a timely manner. The Contractor is further advised that the Department will not entertain a delay claim due to the time required to obtain the environmental permits.

DEP - WATER QUALITY CERTIFICATE

This project is subject to the Massachusetts Clean Water Act, M.G.L.c.21, §§ 26 through 53 and has been issued a Water Quality Certificate ("WQC") by the Department of Environmental Protection. The WQC and Application are to be considered part of this Contract and a copy of the WQC and all plans/attachments shall be on-site while activities regulated by the WQC are being performed. The Contractor's attention is directed to the fact that special conditions and other requirements are associated with this WQC and Application. It is the Contractor's responsibility to be aware of and comply with these conditions and requirements and plan his or her work and schedule accordingly. **The Contractor is hereby notified that he or she will be responsible and held accountable for performing any and all work necessary to satisfy and comply with the entire WQC and Application.** If the Contractor initiates any changes or modifications to the WQC, he or she shall be responsible for obtaining any amended or additional environmental permits. MassDOT will not be responsible for any time delays or monetary claims associated with permit modifications initiated by the Contractor. The Contractor is advised that no additional compensation will be allowed for work required to establish, achieve, and maintain compliance with the WQC and Application, as payment for the work shall be included in the various bid items. This work may include, but is not limited to, the following: the hiring and paying for the services of a Professional Biologist, Botanist, Wetland Scientist, Engineer, Landscape Architect, etc.; preparation and submission of as-built plans; wetland flagging; wetland replication monitoring reports, etc.

ARMY CORPS OF ENGINEERS PERMIT

This project is subject to Section 401 of the federal Clean Water Act, 33 U.S.C. 1251 *et seq* and has been issued a General Permit (GP) by the Army Corps of Engineers. The GP and the respective Application are to be considered part of this contract and a copy of the GP and all plans/attachments shall be on-site while activities regulated by the GP are being performed. The Contractor's attention is directed to the fact that specific time restrictions for work in water and other conditions/requirements may be associated with the GP and Application. It is the Contractor's responsibility to be aware of and comply with these restrictions and requirements and plan his/her work and schedule accordingly. **The Contractor is hereby notified that he/she will be responsible and held accountable for performing any/all work necessary to satisfy and comply with the entire GP and respective Application.** Arrangements to view the GP and/or Application can be made by calling the District #1 Environmental Section at (857) 368-1035. If the Contractor wishes to obtain copies, s/he shall do so at his own expense. For a Self Verification (SV) Projects, Appendix C must be completed and submitted as required. For Pre-Construction Notification (PCN) Projects, The Work-Start Notification Form and the Compliance Certification Form (both provided with the PCN authorization Letter) shall be completed and returned to the Corps. The Contractor is advised that no additional compensation will be allowed for work required to establish, achieve, and maintain compliance with the GP and Application, as payment for the work shall be included in the various bid items, unless specified elsewhere. This work may include, but is not limited to, the following: preparation and submission of as-built plans; wetland replication monitoring reports, etc.; preparation and submission of as-built plans; wetland flagging; wetland replication monitoring reports, etc.

NORTHERN LONG-EARED BAT AND TRICOLORED BAT PROTECTION

The northern long-eared bat (*Myotis septentrionalis*; NLEB) and tricolored bat (*Perimyotis subflavus*; TCB) are listed as federally endangered or proposed endangered, respectfully, under the Endangered Species Act (ESA). The U.S. Fish and Wildlife Service (USFWS) developed this guidance to address ESA compliance and promote conservation of NLEB and TCB. MassDOT, on behalf of FHWA, submitted a Northern Long-eared Bat and Tricolored Bat Range-wide Determination Key Consultation through Information for Planning and Consultation (IPaC) and generated a May Affect, Not Likely to Adversely Affect (NLAA) determination (see Document A00881). Subsequently, the project has completed Section 7 consultation under the ESA.

In advance of the uplisting of the TCB to endangered under the ESA, the following Avoidance and Minimization Measures (AMMs) must be strictly adhered to in order to protect NLEB and TCB and to be in compliance with the ESA. Contact MassDOT Environmental Services - Wildlife Unit Supervisor for questions about project limits, restrictions, or conservation measures.

General AMMs

- The Contractor shall ensure all personnel working in on the project site are aware of all environmental commitments related to NLEB and TCB, including all applicable AMMs. NLEB and TCB information (<https://www.fws.gov/midwest/endangered/mammals/nleb/> and <https://www.fws.gov/species/tricolored-bat-perimyotis-subflavus>) shall be made available to all personnel.
- On 7/25/2024, MassDOT Highway Division Environmental Services conducted a northern long-eared bat summer presence/absence survey, in accordance with the 2024 survey guidelines. The survey did confirm the presence of NLEB and/or TCB. If work is proposed by the Contractor past 7/25/2029, additional review is required by the MassDOT Highway Division's Environmental Services Section, and additional review and restrictions may be required by the USFWS.

Lighting AMMs

- Direct temporary lighting away from suitable habitat during the active season: **April 15 to October 31**
- When installing new or replacing existing permanent lights, use downward-facing, full cut-off lens lights (with same intensity or less for replacement lighting); or for those transportation agencies using the BUG system developed by the Illuminating Engineering Society, be as close to 0 for all three ratings with a priority of "uplight" of 0 and "backlight" as low as practicable.

NORTHERN LONG-EARED BAT AND TRICOLORED BAT PROTECTION (Continued)**Tree Removal AMMs**

- *If additional cutting is proposed by the Contractor that is outside the scope of this contract, additional review is required by the MassDOT Highway Division's Environmental Services Section, and additional review and restrictions may be required by the USFWS.*
- Ensure tree removal is limited to that specified in project plans and ensure that contractors understand clearing limits and how they are marked in the field (e.g., install bright colored flagging/fencing prior to any tree clearing to ensure contractors stay within clearing limits).
- No tree cutting, trimming, or removal of trees and/or woody vegetation >3-inch in diameter shall be conducted between: **June 1 - August 15**
- The Contractor shall ensure all personnel working in on the project site are aware of all environmental commitments related to NLEB and/or TCB, including the **TOY** restriction. If this restriction needs to be waived at any location(s) the Resident Engineer shall send a locus map of the proposed work to MassDOT Highway Division's Environmental Services Section for review and a determination if the restriction can be waived.

Bridge AMMs

- On 7/10/2024, MassDOT Highway Division Environmental Services, conducted a northern long-eared bat bridge/structure bat assessment, in accordance with the USFWS guidelines. The assessment did not find presence of, or evidence of use by bats, and as stated within the guidelines, the assessment is valid for two years. If bridge work is not complete before 7/10/2026, assessment of the bridge for the presence of, or evidence of use by, bats shall be completed by the MassDOT Wildlife Unit prior to continuing bridge work. The Contractor shall notify the MassDOT Wildlife Unit no later than fourteen (14) days prior to 7/10/2026 to provide adequate time for inspection. If bats are found to be present, or, if there is evidence of bat usage, work at the bridge shall not commence until after the MassDOT Wildlife Unit has completed coordination with the US Fish and Wildlife Service to determine the appropriate follow up or mitigation actions.

TRUCK SAFETY DEVICES

(Supplementing Subsection 7.04: Motor Vehicles)

All motor vehicles subject to Section 7 of Chapter 90 to be operated under this Contract shall be equipped with safety devices as provided therein and in 540 CMR 4.00.

By December 31, 2025, the Contractor shall certify to the Registry of Motor Vehicles, in a manner prescribed by the Registrar, that all applicable vehicles are equipped with Lateral Protective Devices, Convex Mirrors, Cross Over Mirror(s) and Back Up Cameras in accordance with the requirements of 540 CMR 4.00.

The Contractor shall provide evidence satisfactory to the Department to demonstrate compliance with the above certification requirement for all applicable vehicles operated under this Contract by the Contractor and its subcontractors and vendors in a manner set forth by the Department. Thereafter, the Contractor shall have an affirmative obligation to continue to provide such evidence of compliance on an ongoing basis and no later than 7 days after certification with the Registry of Motor Vehicles of any additional vehicles operated under this Contract by the Contractor and its subcontractors and vendors.

Non-compliance with respect to a vehicle that is subject to 540 CMR 4.00 may subject the Contractor to statutory fines as established in M.G.L. c. 90, § 7 and/or contractual remedies up to and including termination of the Contract.

MATERIAL OPTIONS

The Contractor shall inform the Engineer of his option prior to the installation of the material. Once the option is designated, all material for the option item(s) shall remain the same throughout the job.

<u>OPTIONS</u>		
<u>Item Number</u>	<u>Item Description</u>	<u>Unit</u>
234.12	12 Inch Drainage Pipe - Option	Foot
235.12	12 Inch Drainage Pipe Flared End - Option	Each

Pipe Options
Reinforced Concrete Pipe Class III
Corrugated Plastic (Polyethylene) Pipe
Corrugated Plastic (Polypropylene) Pipe

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.

**GENERAL REQUIREMENTS FOR DEMOLITION AND
WORK INVOLVING PAINTED STEEL**

(02/06/2020)

Demolition and work involving painted steel shall conform to the requirements of Subsection 961 of the Standard Specifications.

Work Involving Painted Steel

Hazardous materials shall be removed in the immediate area of any intended welding, heating, saw cutting or burning of steel. Hazardous material removal is required to allow the demolition of structural steel, railings, drainage systems, utility supports, steel lamp posts, etc.

The contractor shall assume that the coatings on the steel contain lead (Pb), unless otherwise determined by testing. The contractor shall certify in writing to the Engineer the results of all testing, and shall also certify that any lead (Pb) coated steel removed from the project was not reused or buried, but was sent to a scrap metal recycling facility.

Implement and maintain programs and procedures, which comply with the requirements of this specification and all applicable standards and regulations. Comply with all applicable regulations even if the regulation is not specifically referenced herein. If a state or local regulation is more restrictive than the regulation of this specification, follow the more restrictive requirements.

This requirement is intended only for the demolition and preparation prior to repair and does not include provisions for recoating of steel.

Environmental

All applicable portions of Subsections 961.65 “Worker Protection” and 961.66 “Environmental Protection and Monitoring” shall be followed when performing this work.

During chemical stripping a hand washing facility may be used in lieu of a decontamination/changing facility.

Hazardous material shall be collected during the disassembly and disposed of as outlined in Subsection 961.68 “Handling of Hazardous Waste and Reporting Release Programs”.

The applicable submittals shall be according to Subsection 961.69 “Submittals”.

**GENERAL REQUIREMENTS FOR DEMOLITION AND
WORK INVOLVING PAINTED STEEL** (Continued)**Cleaning/Removal****Cutting Or Burning Of Steel**

All surfaces to be welded, heated, saw cut or burned shall be cleaned so as to remove all contaminants and/or hazardous materials, which could be discharged to the environment as a function of the subsequent operations.

Lead paint shall be removed in its entirety in an area prescribed by a 6 inch (15 cm) minimum offset from the required work. The paint removal operation may be dry abrasive blasting, wet abrasive blasting or chemical stripping.

Proper level of containment shall be used when performing this work in accordance with Subsection 961.67 "Containment". Full containment is not required during chemical stripping operation however; the Contractor shall install proper shielding and/or tarpaulins under the chemical stripping operations in order to catch all debris generated during this procedure. A cleaned area must be inspected and approved before the demolition operations are started.

During cleaning operations the Contractor shall be required to furnish and erect temporary floodlights illuminating the steel surface at a minimum of 30-foot candles. This lighting shall be used in areas where there is insufficient lighting for proper cleaning operations and inspection. The Contractor shall supply electrical power.

The Contractor shall provide support for interim and final inspection of the bridge during cleaning operations. This support shall include the necessary traffic controls and safe access to the work.

Mechanical Disassembly Of Steel

All surfaces to be mechanically disassembled by shear cutting or removing bolts or rivets shall not require deleading. When shear cutting or removing bolts or rivets, the Contractor shall not use any method that will cause dust and/or particles to be emitted and/or dispersed into the environment to an extent that would expose the workers above the Action Levels of $30\mu\text{g}/\text{m}^3$.

For purposes of limiting the lead (Pb) dust, the Contractor will be required to dampen the lead paint work areas.

The contractor shall install a proper shielding and/or tarpaulins under all lead-paint-coated surfaces to be shear cut or bolts or rivets ordered removed in order to catch any loose lead paint chips, dust or particles.

VALUE ENGINEERING CHANGE PROPOSAL

This Subsection defines the conditions and requirements which apply to Value Engineering Change Proposals (“VECPs”). The purpose of this provision is to encourage the Contractor to propose changes in certain project requirements that will maintain the project’s functional requirements at a savings in contract time, contract price, or both. The net savings obtained by using a VECP that meets the conditions and requirements set forth here will be shared by the Contractor and MassDOT.

VECP’s under this provision are to be initiated, developed and submitted to MassDOT by the Contractor. The VECP must show the contemplated changes to the Drawings, Specifications and other requirements in the Contract. When a VECP submitted pursuant to this section is fully accepted by MassDOT, the VECP will be implemented by the Contractor and paid using the current cost and resource loaded schedule. Contractor shall demonstrate that the VECP is equal to, or better than, the original design or material; that there is an interest in public safety within the VECP; that there is a life-cycle cost benefit; and/or that end users will benefit from the shortened schedule. VECPs shall be consistent with the MassHighway/MassDOT Standard Specifications for Highways and Bridges and other applicable reference documents and directives. Any proposed deviation from these documents will need to be clearly identified in the VECP Proposal Documents, and must be approved by MassDOT’s Chief Engineer before accepting this VECP.

A. In order to be considered for MassDOT review each VECP shall:

1. Be clearly labeled pursuant to this Subsection;
2. Yield a net savings at least two hundred and fifty thousand (250,000.00) Dollars and/or a net saving of contract completion duration of at least three (3) months;
3. The proposed changes to contract items must:
 - a. maintain the specified items’ required functions (service life, reliability);
 - b. meet applicable safety regulations and codes;
 - c. material substitutions must be in accordance with DOT prequalified/preapproved products and must be tested in accordance with standard material specs/testing methods (and considering all relevant environmental, load, and other relevant factors);
 - d. show economy of operation, ease of maintenance, ease of construction, and necessary standardized features and appearance; and
4. Shall not require an extension of Contract Time or Contract Milestones, with the exception of cases when there are anticipated significant cost saving.

VALUE ENGINEERING CHANGE PROPOSAL (Continued)

The thresholds above are considered to be a general guideline. MassDOT will consider VECPs outside of these thresholds if a significant benefit is demonstrated. Additionally, notwithstanding this VECP process, MassDOT will consider minor revisions in the form of a Contract Modification.

Further, any VECP submitted shall be in sufficient detail to clearly define the proposed change. The Contractor's failure to provide information of the type, detail and in a format to facilitate the MassDOT's review, may be grounds for rejection of the VECP. Additionally, the Contractor will not be entitled to any equitable adjustment or increased Time, due to any aspect of any of the proposed VECP including permitting, right of way, utility coordination or delayed responses by MassDOT. If, after the progression of the work associated with the executed Contract Modification for the VECP, any additional costs are realized by the Contractor or any of the sub-consultants, sub-contractors, or suppliers, the Contractor shall be obligated to pay for any and all costs.

B. The following initial items shall be provided by the Contractor for MassDOT's review. *Items 1-6 need to be submitted prior to the start of MassDOT's review of the VECP and item 7 is an important consideration for the pricing of the VECP and the timeline of the proposed VECP schedule.*

1. **VECP Description:** A description of the difference between the existing and the proposed Contract requirements, and the comparative advantages and disadvantages of each;
2. **VECP Change Listing:** A listing of the Contract requirements that will need to be changed, modified, or reviewed as well as the proposed Contract document changes in the Instructions to Bidders, Contract, Standard Specifications, General Requirements and Special Provisions required by the VECP.
3. **Construction Schedule Update:** Any changes in the Contract Time(s) or Contract Milestone(s), that will result from acceptance of the VECP, shall be accompanied by a contemporaneous schedule analysis (*i.e., the Contractor's baseline schedule submission, all past/required monthly schedule updates, a detailed assessment of all past delays, and a resource loaded Critical Path Method schedule as specified in Section 8.0 / Subsection 8.02 of this Contract*) of the projected Work that remains including the proposed VECP related schedule changes (*inclusive of the timeline to review accept the VECP and the timeline for implementing the design changes*) in the remaining work. This shall be submitted in the form of a Proposal Schedule until the VECP has been formally accepted. Note: All of this information is to be updated, recertified, and formally accepted by MassDOT before final acceptance of this this VECP is issued.

VALUE ENGINEERING CHANGE PROPOSAL (Continued)

4. ***Date for MassDOT's Acceptance:*** A statement that clearly justifies the date by which the VECP must be accepted to obtain the maximum price reduction, noting any effect upon the Contract Time(s) and/or Contract Milestone(s). This statement must include a narrative that demonstrates the most recent construction schedule has been utilized to justify that proposed acceptance date (*e.g. "in order to start to fabricate critical materials, authorization must be provided to work on the shop drawings by no later than [date]"*). The Contractor should allow for at least sixty (60) to ninety (90) days for acceptance by MassDOT once all of the VECP documentation has been provided. Acceptance shall mean that MassDOT has received a finalized and executed contract modification. However, this is a proposed Contract change.

The Contractor is fully obligated to progress the Work of the original Contract and MassDOT is not liable for any delays or costs that may occur in the review phase of any VECP proposal.

5. ***Cost and Savings Estimates:*** A detailed estimate of the anticipated net savings, calculated as follows:
- a. ***Original Scope:*** Isolate the cost of performing the original contract construction activities, in accordance with the original Contract Documents, as originally bid by the Contractor, that are anticipated to be superseded by the VECP. *This cost is to include any original contract scope that is anticipated to be altered or eliminated by the VECP such as, shop drawing preparation, inspection work, testing, maintenance of traffic, or any other original contract costs, that have yet to have been performed at the time of this VECP submission.*
 - b. ***New VECP Scope:*** Calculate the cost of performing the comparable construction activities associated with the VECP.
 - c. ***Contractor's Engineer & Inspection:*** Calculate the cost of engineering, inspection, and design work by the Contractor's Engineer/Designer. This should be a realistic estimate of the costs of any required engineering, design and review work by the Contractor's Engineer.
 - d. ***MassDOT's Costs:*** MassDOT's estimate of costs to perform engineering/design reviews, cost estimate reviews, schedule reviews, and any other administrative costs to review and recommend implementation of the proposed VECP. (*including all anticipated increased costs to MassDOT on other Contracts and all anticipated follow-on increased costs to MassDOT, if any*) as provided by MassDOT. MassDOT's estimated costs must be included the VECP calculation and will be provided by MassDOT in support of the VECP evaluation process.
 - e. ***Other Costs:*** Estimated costs associated with any revisions to other project related costs, such as Environmental Permits or Right of Way acquisitions, including other agency or municipality costs, as provided by MassDOT.

VALUE ENGINEERING CHANGE PROPOSAL (Continued)**Net Savings:**

The net savings to be split between MassDOT and the Contractor shall be calculated using the items above as follows: $a - (b+c+d+e) = \text{net savings}$

6. *The Contractor shall also provide:*

- a. A proposed Change Order, which explains and justifies any required Equitable Adjustment in the Contract Price.
- b. The Contractor's actual costs expended for developing the VECP as of the date of the VECP submission;

7. *Design Changes and Drawings:* The costs that are outlined above should be inclusive of the following design and engineering responsibilities.

- a. Design changes shall be prepared and stamped by the Contractor's professional designer and/or engineer. In addition, in the development of the VECP; the Contractor is responsible for anticipating and managing all aspects associated with any VECP design work that must be performed by a licensed Engineer.
- b. The Contractor's engineer must analyze and stamp all components of any aspect of the project that has been redesigned, changed, or altered as a result of this VECP.
- c. The Contractor's engineer shall provide all calculations and supporting design/engineering documentation that was utilized to develop the changes and stamped drawings. These will be used by MassDOT's Designer-of-Record to review the VECP changes. The Contractor is limited to selecting only those engineer's that have been pre-qualified by MassDOT's A&E Board.
- d. MassDOT's Designer-of-Record will review and respond to all completed design submissions related to this VECP within thirty (30) calendar days, unless determined to be a non-critical path item.
- e. MassDOT will be responsible for estimating and managing MassDOT's Designer-of-Record during the VECP review and implementation. Should any significant conflicts arise, between the Contractor's Engineer and MassDOT's Designer-of-Record, the DOT and the Contractor will work expeditiously to resolve the conflict. Should this type of conflict continue for greater than five (5) days, the Contractor is to bear all financial and time related impacts of such delay and must seek to resolve the design conflict, in an acceptable manner to MassDOT. The resolution of this conflict will be funded at the Contractor's expense – exclusive of the net saving that was agreed to at the execution of the contract modification for this VECP.

VALUE ENGINEERING CHANGE PROPOSAL (Continued)

- f. The Contractor's Engineer may also be required to inspect the construction work. The Contractor is to include such anticipated inspection costs in the initial VECP.
 - g. MassDOT's Designer of Record will remain the Designer-of-Record for the entire Project. Any costs incurred in the use of MassDOT's Designer-of-Record by MassDOT or Contractor associated with the review of a VECP are to be included in the calculated net savings.
- C. Approval of the VECP shall not occur until a Contract Modification, incorporating the VECP, is issued by MassDOT and properly executed by the Contractor. MassDOT may accept or reject part or all of any VECP at any time prior to an executed Contract Modification for the applicable VECP. The decision of MassDOT, concerning acceptance or rejection of any VECP, shall be final and shall not be subject to dispute resolution.

It is expected that several weeks may go by before the final VECP documentation has been executed with a Contract Modification. Therefore, MassDOT intends to make certain that the initial cost estimate information has not changed before entering into a Contract Modification. As the VECP evaluation process is finalized, and prior to the signed Contract Modification for the VECP, the Contractor and MassDOT must re-certify the current status of the originally proposed cost and/or schedule savings.

Until a contract modification is issued and schedule and cost/savings re-certification is complete and accepted by MassDOT, the Contractor shall remain obligated to perform the Work in accordance with the terms and conditions of the original Contract Documents.

Upon completion of the work associated with the VECP, MassDOT may require verification that the VECP savings has been achieved.

- D. VECs will be processed (distributed, reviewed, commented upon, accepted or rejected) expeditiously (pursuant to M.G.L. c. 30, § 39R); however, as this is an elective modification to the contract, MassDOT shall not be liable for any delay or cost in the review and acceptance of the VECP. During the review of the VECP, the Contractor remains obligated to progress the original Contract scope, and schedule, as planned; until a Contract Modification, accepting the Contractor re-certified VECP, has been executed by MassDOT.

The Contractor has the right to withdraw part, or all of any VECP, prior to acceptance by MassDOT. Such withdrawal shall be made in writing to the Engineer. The Contractor shall state the period of time, from the date of the initial VECP submittal, that the VECP shall remain valid and feasible. Revision of this validity and feasibility period shall be allowed only by mutual agreement of the Contractor and the Engineer in writing.

If the Contractor desires to withdraw the proposal prior to the expiration of this period for non-technical reason, MassDOT reserves the right to recover all actual costs that have been incurred to MassDOT.

VALUE ENGINEERING CHANGE PROPOSAL (Continued)

If the Contractor withdraws the VEC Proposal, MassDOT reserves the right to proceed with the VECP or any portion of the VECP as a normal change and the Contractor waives any right it may have had to share in net savings thereunder.

For purposes of this provision, expiration of the time established by the Contractor for approval shall be considered as withdrawal by the Contractor if MassDOT requests an extension of that time and the Contractor does not provide a written extension.

- E. With regard to unknown conditions or sub-surface work, in general, the expectation is that the Contractor and MassDOT will strive to gain enough knowledge about the risks in order to provide a forward-priced Change Proposal. Therefore, any costs to fully evaluate the proposal, such as additional borings and/or test pits, must be considered in the cost evaluation of whether the VECP is worth pursuing. However, if it is impractical to gather conclusive exploratory information, before the VECP is executed, MassDOT may consider provisions in the VECP that clearly identifies the risk sharing (cost and time) related specifically to the unknown/sub-surface conditions. If these VECP provisions are acceptable to MassDOT they are to include supplemental language to provide a determination of the final savings/cost, and time impacts, no later than 45 days after the sub-surface work is completed. All other aspects of the VECP, unrelated to these Provisions, will be binding upon execution of the VECP.

SUBSECTION 8.02 SCHEDULE OF OPERATIONS

Replace this subsection with the following:

An integrated cost and schedule controls program shall be implemented by the Contractor to track and document the progress of the Work from Notice to Proceed (NTP) through the Contractor Field Completion (CFC) Milestone. The Contractor's schedules will be used by the Engineer to monitor project progress, plan the level-of-effort required by the Department's work force and consultants and as a critical decision-making tool. Accordingly, the Contractor shall ensure that it complies fully with the requirements specified herein and that its schedules are both accurate and updated as required by the specification throughout the life of the project. Detailed requirements are provided in Division II, Section 722 Construction Scheduling.

SUBSECTION 8.14 UTILITY COORDINATION, DOCUMENTATION, AND MONITORING RESPONSIBILITIES

A. GENERAL

In accordance with the provisions of Section 8.00 Prosecution and Progress, utility coordination is a critical aspect to this Contract. This section defines the responsibility of the Contractor and MassDOT, with regard to the initial utility relocation plan and changes that occur as the prosecution of the Work progresses. The Engineer, with assistance from the Contractor shall coordinate with Utility companies that are impacted by the Contractor's operations. To support this effort, the Contractor shall provide routine and accurate schedule updates, provide notification of delays, and provide documentation of the steps taken to resolve any conflicts for the temporary and/or permanent relocations of the impacted utilities. The Contractor shall provide copies to the Engineer of the Contractor communication with the Utility companies, including but not limited to:

- Providing advanced notice, for all utility-related meetings initiated by the Contractor.
- Providing meeting minutes for all utility-related meetings that the Contractor attends.
- Providing all test pit records.
- Request for Early Utility work requirements of this section (see below).
- Notification letters for any proposed changes to Utility start dates and/or sequencing.
- Written notification to the Engineer of all apparent utility delays within seven (7) Calendar Days after a recognized delay to actual work in the field – either caused by a Utility or the Contractor.
- Any communication, initiated by the Contractor, associated with additional Right-of-Way needs in support of utility work.
- Submission of completed Utility Completion Forms.

B. PROJECT UTILITY COORDINATION (PUC) FORM

The utility schedule and sequence information provided in the Project Utility Coordination Form (if applicable) is the best available information at the time of the bid and has been considered in setting the contract duration. The Contractor shall use all of this information in developing the bid price and the Baseline Schedule Submission, inclusive of the individual utility durations sequencing requirements, and any work that has been noted as potentially concurrent utility installations.

C. INITIATION OF UTILITY WORK

The Engineer will issue all initial notice-to-proceed dates to each Utility company based on either the:

- 1) Contractor's accepted Baseline Schedule
- 2) An approved Early Utility Request in the form of an Early Utility sub-net schedule (in accordance with the requirements of this Subsection)
- 3) An approved Proposal Schedule

C.1 - BASELINE SCHEDULE – UTILITY BASIS

The Contractor shall provide a Baseline Schedule submission in accordance with the requirements of Subsection 8.02 and inclusive of all of the information provided in the PUC Form that has been issued in the Contract documents. This is to include the utility durations, sequencing of work, allowable concurrent work, and all applicable considerations that have been depicted on the PUC Form.

SUBSECTION 8.14 (Continued)**C.2 – EARLY UTILITY REQUEST – (aka SUBNET SCHEDULE) PRIOR TO THE BASELINE**

All early utility work is defined as any anticipated/required utility relocations that need to occur prior to the Baseline Schedule acceptance. In all cases of proposed early utility relocation, the Contractor shall present all known information at the pre-construction conference in the form of a ‘sub-net’ schedule showing when each early utility activity needs to be issued a notice-to-proceed. The Contractor shall provide advance notification of this intent to request early utility work in writing at or prior to the Pre-Construction meeting. Prior to officially requesting approval for early utility work, the Contractor shall also coordinate with MassDOT and all utility companies (private, state or municipal) which may be impacted by the Contract. If this request is acceptable to the Utilities and to MassDOT, the Engineer will issue a notice-to-proceed to the affected Utilities, based on these accepted dates.

C.3 – PROPOSAL SCHEDULE - CHANGES TO THE PUC FORM

If the Contractor intends to submit a schedule (in accordance with MassDOT Standard Specifications, Division I, Subsection 8.02) that contains durations or sequencing that vary from those provided in the Project Utility Coordination (PUC) Form, the Contractor must submit this as an intended change, in the form of a Proposal Schedule and in accordance with MassDOT Standard Specifications, Division I, Subsection 8.02. These proposed changes are subject to the approval of the Engineer and the impacted utilities, in the form of this Proposal Schedule and a proposed revision to the PUC form. The Contractor shall not proceed with any changes of this type without written authorization from the Engineer, that references the approved Proposal Schedule and PUC form changes. The submission of the Baseline Schedule should not include any of these types of proposed utility changes and should not delay the submission of the Baseline Schedule. As a prerequisite to the Proposal Schedule submission, and in advance of the utility notification(s) period, the Contractor shall coordinate the proposed utility changes with the Engineer and the utility companies, to develop a mutually agreed upon schedule, prior to the start of construction.

D. UTILITY DELAYS

The Contractor shall notify the Engineer upon becoming aware that a Utility owner is not advancing the work in accordance with the approved utility schedule. Such notice shall be provided to the Engineer no later than seven (7) calendar days after the occurrence of the event that the Contractor believes to be a utility delay. After such notice, the Engineer and the Contractor shall continue to diligently seek the Utility Owner’s cooperation in performing their scope of Work.

In order to demonstrate that a critical path delay has been caused by a third-party Utility, the Contractor must demonstrate, through the requirements of the monthly Progress Schedule submissions and the supporting contract records associated with Subsection 8.02, 8.10 and 8.14, that the delays were beyond the control of the Contractor.

SUBSECTION 8.14 (Continued)

All documentation provided in this section is subject to the review and verification of the Engineer and, if required, the Utility Owner. In accordance with MassDOT Specifications, Division I, Subsection 8.10, a Time Extension will be granted for a delay caused by a Utility, only if the actual duration of the utility work is in excess of that shown on the Project Utility Coordination Form, and only if;

- 1) proper Notification of Delay was provided to MassDOT in accordance with the time requirements that are specified in this Section
- 2) the utility delay is a critical path impact to the Baseline Schedule (or most recently approved Progress Schedule)

E. LOCATION OF UTILITIES

The locations of existing utilities are shown on the Contract drawings as an approximation only. The Contractor shall perform a pre-construction utility survey, including any required test pits, to determine the location of all known utilities no later than thirty (30) calendar days before commencing physical site work in the affected area.

F. POST UTILITY SURVEY – NOTIFICATION

Following completion of a utility survey of existing locations, the Contractor will be responsible to notify the Engineer of any known conflicts associated with the actual location of utilities prior to the start of the work. The Engineer and the Contractor will coordinate with any utility whose assets are to be affected by the Work of this Contract. A partial list of utility contact information is provided in the Project Utility Coordination Form.

G. MEETINGS AND COOPERATION WITH UTILITY OWNERS

The Contractor shall notify the Engineer in advance of any meeting they initiate with a Utility Owner's representative to allow MassDOT to participate in the meeting if needed.

Prior to the Pre-Construction Meeting, the Contractor should meet with all Utility Owners who will be required to perform utility relocations within the first 6 months of the project, to update the affected utilities of the Project Utility Coordination Form and all other applicable Contract requirements that impact the Utilities. The Contractor shall copy the Engineer on any correspondence between the Utility Owner and the Contractor.

H. FORCE ACCOUNT / UTILITY MONITORING REQUIREMENTS

The Engineer will be responsible for recording daily Utility work force reports. The start, suspension, re-start, and completion dates of each of the Utilities, within each phase of the utility relocation work, will be monitored and agreed to by the Engineer and the Contractor as the work progresses.

I. ACCESS AND INSPECTION

The Contractor shall be responsible for allowing Utility owners access to their own utilities to perform the relocations and/or inspections. The Contractor shall schedule their work accordingly so as not to delay or prevent each utility from maintaining their relocation schedule.

SECTION 722 CONSTRUCTION SCHEDULING DESCRIPTION

722.20 General

The Contractor's approach to prosecution of the Work shall be disclosed to the Department by submission of a Critical Path Method (CPM) schedule and a cost/resource loaded Construction Schedule as defined by the schedule type set forth below. These requirements are in addition to any requirements imposed in other sections.

This section establishes the requirement for scheduling submissions. There are four schedule types identified as types A, B, C and D.

All schedules shall be prepared and submitted in accordance with this specification and the instructions contained in the Construction Schedule Toolkit located on the MassDOT-Highway Division website at <https://www.mass.gov/info-details/massdot-highway-contractors-schedule-toolkit>.

Type A –

- Schedule Planning Session
- Baseline CPM Schedule
- Monthly Update CPM Schedule
- Short-term Construction Schedule
- Contract Schedule Update Meeting
- Cost-loaded & Resource Loaded CPM
- Resources Graphic Reporting
- Cash Flow Projections from the CPM
- Cash Flow Charts
- Monthly Projected Spending Report (PSR)
- Contractor-furnished CPM software and computer

Type B –

- Schedule Planning Session
- Baseline CPM Schedule
- Monthly Update CPM Schedule
- Short-term Construction Schedule
- Contract Schedule Update Meeting
- Cost-loaded & Resource Loaded CPM
- Monthly Projected Spending Report (PSR)
- Contractor-furnished CPM software and computer

Type C –

- Schedule Planning Session
- Baseline CPM Schedule
- Monthly Update CPM Schedule
- Short-term Construction Schedule
- Contract Schedule Update Meeting
- Monthly Projected Spending Report (PSR)
- Contractor-furnished CPM software and computer

SECTION 722 (Continued)**Type D -**

- Bar chart schedule updated monthly or at the request of the Engineer
- Short-term Construction Schedule
- Monthly Projected Spending Report (PSR)

EQUIPMENT, PERSONNEL**722.40 General****A. Software Requirements**

The Contractor shall use Primavera P6 computer scheduling software.

In addition to the requirements of Section 740 – Engineer’s Field Office and Equipment, the Contractor shall provide to the Department one (1) copy of the scheduling software, one (1) software license and one (1) computer capable of running the scheduling software for the duration of the Contract. This computer and software shall be installed in the Engineer’s Field Office. The computer and software shall be maintained and serviced at no additional cost to the Department.

B. Scheduler Requirements

The Scheduler shall be approved by the Engineer.

For Type A, B and C Schedules the name of the Contractor’s Project Scheduler together with his/her qualifications shall be submitted to the Department for approval by the Engineer within seven (7) Calendar Days after NTP. The Project Scheduler shall have a minimum of five (5) years of project CPM scheduling experience, three (3) years of which shall be on projects of similar scope and value as the project for which the Project Scheduler is being proposed. References shall be provided from past projects that can attest to the capabilities of the Project Scheduler.

SCHEDULING METHODS**722.60 General****A. Schedule Planning Session**

The Contractor shall conduct a schedule planning session prior to submission of the Baseline Schedule. This session will be attended by the Department and its consultants. During this session, the Contractor shall present its planned approach to the project including, but not limited to:

1. the Work to be performed by the Contractor and its subcontractors;
2. the planned construction sequence and phasing; planned crew sizes;
3. summary of equipment types, sizes, and numbers to be used for each work activity;
4. all early work related to third party utilities;
5. identification of the most critical submittals and projected submission timelines;
6. estimated durations of major work activities;
7. the anticipated Critical Path of the project and a summary of the activities on that Critical Path;
8. a summary of the most difficult schedule challenges the Contractor is anticipating and how it plans to manage and control those challenges;

SECTION 722 (Continued)

9. a summary of the anticipated quarterly cash flow over the life of the project.

This will be an interactive session and the Contractor shall answer all questions that the Department and its consultants may have. The Contractor shall provide a written summary of the information presented and discussed during the session to the Engineer. The Contractor's Baseline Schedule and accompanying Schedule Narrative shall incorporate the information discussed at this Schedule Planning Session.

B. Schedule Reviews by the Department**1. Baseline Schedule Reviews**

The Engineer will respond to the Baseline Schedule Submission within thirty (30) Calendar Days of receipt providing comments, questions and/or disposition that either accepts the schedule or requires revision and resubmittal. Rejected Baseline Schedules shall be resubmitted within fifteen (15) Calendar Days after receipt of the Engineer's comments.

2. Contract Progress Schedule / Monthly Update Reviews / Recovery Schedules

The Engineer will respond to each submittal within twenty-one (21) Calendar Days. Rejected schedules shall be resubmitted by the Contractor within five (5) Calendar Days after receipt of the Engineer's comments.

The Engineer's review comments shall not be construed as direction to change the Contractor's means and methods. The review and acceptance of the CPM schedule does not relieve the Contractor of the responsibility for accomplishing the work within the contract required completion dates. Omissions and errors in the accepted CPM schedule shall not excuse performance less than that required by the Contract.

722.61 Schedule Content and Preparation Requirements

All schedules shall be prepared and submitted in accordance with the instructions contained in the Construction Schedule Toolkit located on the MassDOT-Highway Division website at:

<https://www.mass.gov/info-details/massdot-highway-contractors-schedule-toolkit>

and the following:

A. LOGIC

The schedules shall divide the Work into activities with appropriate logic ties to show:

1. conformance with the requirements of this Section and Division I, Subsection 8.02 - Schedule of Operations
2. the Contractor's overall approach to the planning, scheduling, and execution of the Work
3. conformance with any additional sequences of Work required by the Contract Documents, including, but not limited to, Subsection 8.03 - Prosecution of Work and Subsection 8.06 – Limitations of Operations.

SECTION 722 (Continued)**B. ACTIVITIES**

The schedule shall clearly define the progression of the Work from the Notice to Proceed (NTP) to Contractor Field Completion (CFC) by using separate activities, or including attributes within appropriate activities, to address each of the following:

1. Notice to Proceed
2. Work Breakdown Structure
3. The Critical Path is clearly defined and organized.
4. Float shall be clearly identified.
5. Detailed activities to satisfy permit requirements.
6. Subcontractor approvals at fifteen (15) Calendar Days from submittal to response
7. The preparation and submission of shop drawings, procedures, and other required submittals, with a planned duration that is to be demonstrated to the Engineer as reasonable.
8. The review and return of shop drawings, procedures, and other required submittals, approved or with comments, the duration of which shall be thirty (30) Calendar Days, unless otherwise specified or as approved by the Engineer.
9. Procurement of fabricated materials and equipment with long lead times, including time for review and approval of submittals required before procuring and fabricating.
10. Each component of the Work defined by specific activities.
11. Right-of-Way (ROW) takings that have been identified in the Contract.
12. Early Utility Relocation (by others) that has been identified in the Contract.
13. Interfaces with adjacent work, utility companies, other public agencies, sensitive abutters, and/or any other third-party work affecting the Contract.
14. Utility work to be performed in accordance with the Project Utility Coordination (PUC) Form as provided in Section 8.14 - Utilities Coordination, Documentation and Monitoring Responsibilities
15. Access Restraints – restrictions on access to areas of the Work that are defined by the Department in the bid package, in Subsection 8.06 – Limitations of Operations or elsewhere in the Contract
16. Limitations of Work – time of year restrictions and any other limitations identified in the contract
17. Traffic work zone set-up and removal, night work and phasing
18. Material Certifications
19. Milestones listed in Subsection 8.03 - Prosecution of Work or elsewhere in the Contract Documents
20. For Type A and B Contracts only: All items to be paid for, including all Unit Price and Lump Sum pay items, shall be identified by activity. This shall include all non-construction activities such as engineering work; purchase of permanent materials and equipment, purchase of structural steel stock, equipment procurement, equipment delivery to the site or storage location and the representative amount of overhead/indirect costs that was included in the Contractor's Bid Prices.

SECTION 722 (Continued)

21. Contractor's request for validation of FBU (ready to open to traffic)
22. Full Beneficial Use (FBU) Contract Milestone per the following requirements:
The majority of contract Work has been completed and the asset(s) has been opened for full multi-modal transportation use, except for limited contract work items that do not materially impair or hinder the intended public use of the transportation facility. All anticipated lane takings have been completed, except for minor, short term work items and as defined in Subsection 8.03 - Prosecution of Work
23. The Department's confirmation of completed work to allow for FBU.
24. Contractor's request for validation of Substantial Completion
25. Department generated punch list of twenty-one (21) Calendar Days
26. Substantial Completion Contract Milestone as defined in the standard specifications.
27. Punch list Completion Period of at least thirty (30) Calendar Days per the requirements of Subsections 5.11 - Final Acceptance, 7.15 - Claims Against Contractors for Payment of Labor, Materials and Other Purposes
28. Contractor confirmation that all punchlist work and documentation has been completed.
29. Physical Completion of the Work Contract Milestone per the requirements of Subsections 5.11 - Final Acceptance and 8.03 - Prosecution of Work
30. Documentation Completion per the requirements of Subsections 5.11 - Final Acceptance and 8.03 - Prosecution of Work
31. Contractor Field Completion Contract Milestone (which can also be considered the completion date) per the following requirements: All physical contract Work is complete including punchlist. The Contractor has fully de-mobilized from field operations and as defined in Subsection 5.11

C. EARLY AND LATE DATES

Early Dates shall be based on proceeding with the Work or a designated part of the Work exactly on the date when the corresponding Contract Time commences. Late Dates shall be based on completing the Work or a designated part of the Work exactly on the corresponding Contract Time, even if the Contractor anticipates early completion.

D. DURATIONS

Activity durations shall be in Work Days. Planned Original Durations shall be established with consideration of resources and production rates that correspond to the Contractor's Bid Price. Within all of the Department-required schedules, the Contractor shall plan the Work using durations for all physical construction activities of no less than one (1) Work Day and no greater than fourteen (14) Work Days, unless approved by the Engineer as part of the Baseline Schedule Review.

SECTION 722 (Continued)

Should there be an activity with a duration that is determined by the Engineer to be unreasonable, the Contractor will be asked to provide a basis of the duration using bid documents, historic production rates for similar work, or other form of validation that is acceptable to the Engineer. Should the Contractor and the Engineer be unable to agree on reasonable activity durations, the Engineer will, at a minimum, note the disagreement in the Baseline Schedule Review along with a duration the Engineer considers reasonable and the basis for that duration. A schedule that contains a substantial number of activities with durations that are deemed unreasonable by the Engineer will not be accepted.

E. MATERIALS ON HAND

The Contractor shall identify in the Baseline Schedule all items of permanent materials (Materials On Hand) for which the Contractor intends to request payment prior to the incorporation of such items into the Work.

F. ACTIVITY DESCRIPTIONS

The Contractor shall use activity descriptions in all schedules that clearly describe the work to be performed using a combination of words, structure numbers, station numbers, bid item numbers, work breakdown structure (WBS) and/or elevations in a concise and compact label.

G. ACTIVITY IDENTIFICATION NUMBERS

The Contractor shall use the activity identification numbering system specified in the MassDOT Highway Division Contractor Construction Schedule Toolkit.

H. ACTIVITY CODES

The Contractor shall use the activity codes specified in the MassDOT Highway Division Contractor Construction Schedule Toolkit.

I. CALENDARS

Different calendars may be created and assigned to all activities or to individual activities. Calendars define the available hours of work in each Calendar Day, holidays and general or project-specific non-Work Days such as Fish Migration Periods, time-of-year (TOY) restrictions and/or area roadway restrictions. All calendars shall extend two years beyond the current project completion date.

Project Special Provisions identify specific calendar restrictions some examples of special calendars include, but are not limited to:

- Winter Shutdown Period, specific work is required by separate special provision to be performed during the winter. See Special Provision 8.03 (if applicable)
- Peak traffic hours on heavily traveled roadways. This shall be from 6:30 am to 9:30 am and from 3:30 pm to 7:00 pm, unless specified differently elsewhere in the Contract.
- Special requirements by sensitive abutters, railroads, utilities and/or other state agencies as defined in the Contract.
- Planting seasons for trees, shrubs and grasses and wetlands mitigation work.

SECTION 722 (Continued)

- Cape Cod and the Islands Summer Roadway Work Restrictions: A general restriction against highway and bridge construction is enforced between Memorial Day and Labor Day, unless otherwise directed by the Engineer. Cape Ann Summer Roadway Work Restrictions: While there are no general restrictions for Cape Ann as there are for Cape Cod and the Islands, project-specific restrictions may be enforced.
- Turtle and/or Fish Migration Periods and/or other in-water work restrictions: Refer to the Project Special Provisions for specific restrictions.
- Working over Waterways Restricted Periods.
- Night-time paving and striping operations, traffic, and temperature restrictions.
- Utility Restrictions shall be as specified within the Contract.

J. FLOAT

For the calculation of float in the CPM schedule, the setting for *Retained Logic* is required for all schedule submissions, starting with the Baseline Schedule Submission. Should the Contractor have a reason to propose that an alternative calculation setting such as *Progress Override* be used, the Contractor shall obtain the Engineer's approval prior to modifying to this setting.

K. COST AND RESOURCE LOADING (Types A and B only)

For all Type A and B Schedules, the Contractor shall provide a cost and resource-loaded schedule with an accurate allocation of the costs and resources necessary to complete the Work. The costs and resources shall be assigned to all schedule activities in order to enable the Contractor to efficiently execute the Contract requirements and the Engineer to validate the original plan, monitor progress, provide cash flow projections, and analyze delays.

1. Each schedule activity shall have an assigned cost that accurately represents the value of the Work. Each schedule activity shall have its resources assigned to it by craft and the anticipated hours to accomplish the work. Each schedule activity's equipment resources shall be assigned to it by equipment type and hours operated. Front-loading or other unbalancing of the cost distribution will not be permitted.
2. The sum of the cost of all schedule activities shall be equal to the Contractor's Bid Price.
3. Indicating the labor hours per individual, per day, by craft and equipment hours/day will be acceptable.
4. The Engineer reserves the right to use the cost-loading as a means to resolve changes, disputes, time entitlement evaluations, increases or decreases in the scope of Work, unit price renegotiations and/or claims.
5. For all Type A and B Schedules, all subnets, fragnets, Proposal Schedules, and Recovery Schedules shall be cost and resource- loaded to help to quickly validate and monitor the duration of the Work to be performed.
6. For Type A Schedules, cost-loading of the schedule will also be used for cash flow projection purposes.
7. The cost-loading of each activity shall indicate the portion of the cost for that activity that is applicable to a specific bid item (cost account.) The total cost for each cost account must equal the bid item price.

SECTION 722 (Continued)**L. NOT TO BE USED IN THE CONTRACTOR'S CPM SCHEDULE**

1. Milestones or constraint dates not specified in the Contract.
2. Scheduled work not required for the accomplishment of a Contract Milestone
3. Use of activity durations, logic ties and/or sequences deemed unreasonable by the Engineer.
4. Delayed starts of follow-on trades.
5. Float suppression techniques.
6. Leads such as leads, lags, SS, SF, & FF relationships without the expressed permission of the Department.

722.62 Submittal Requirements

All schedules shall be prepared and submitted in accordance with the requirements listed below.

Each monthly Contract Progress Schedule submittal shall be uniquely identified.

Each Submission shall, at a minimum, include the following:

- a. Narrative
- b. Schedule submittals shall be signed by the Scheduler
- c. Schedule Printout - All Activities
- d. Schedule Printout - Critical Path Layout
- e. Schedule Printout - Remaining Work
- f. Schedule Printout - Top 3 Float Path
- g. Work Breakdown Structure (WBS) Summary
- h. Project Spending Report (PSR) in Portable Document Format (.PDF)
- i. Project Spending Report (PSR) in Microsoft Excel spreadsheet (.XLS)
- j. Oracle Primavera P6 Schedule File (.XER)

All digital file submittals will be labeled with the following information.

- Contract Number
- Project Number
- Project locations (i.e., town(s))
- Brief description
- Submittal description (i.e., UP07)
- Data Date (MM-DD-YY)
- File Description (i.e., Critical Path)

Example: C110464 (P606309) - Orange Route 2 over 202 – UP23 (07-15-22) - Critical Path

A. Narratives

A written narrative shall be submitted with every schedule submittal. The narrative shall:

1. itemize and describe the flow of work for all activities on the Critical Path in a format that includes any changes made to the schedule since the previous Contract Progress Schedule / Monthly Update or the Baseline Schedule, whichever is most recent.
2. provide a description of any specification requirements that are not being followed. Identify those that are improvements and those that are not considered to be meeting the requirements.

SECTION 722 (Continued)

3. provide all references to any Notice of Delay that has been issued, within the time period of the Contract Progress Schedule Update, by letter to the Engineer. Note that any Notice of Delay that is not issued by letter will not be recognized by the Engineer. See Subsection 722.64.A – Notice of Delay.
4. provide a description of each third-party utility's planned vs. actual progress and note any that are trending late or are late per the durations and commitments as provided in the PUC Form; provide a description of the five (5) most important responses needed from the Department and the need date for the responses in order to maintain the current Schedule of Record.
5. provide a description of all critical issues that are not within the control of the Contractor or the Department (third party) and any impact they had or may have on the Critical Path.
6. provide a description of any possible considerations to improve the probability of completing the project early or on time.
7. compare Early and Late Dates for activities on the Critical Path and describe reasons for changes in the top three (3) most critical paths.
8. describe the Contractor's plan, approach, methodologies, and resources to be employed for completing the various operations and elements of the Work for the top three (3) most critical paths. For update schedules, describe and propose changes to those plans and verify that a Proposal Schedule is not required.
9. describe, in general, the need for shifts that are not 5 days/week, 8 hours/day, the holidays that are inserted into each calendar and a tabulation of each calendar that has been used in the schedule.
10. describe any out-of-sequence logic and provide an explanation of why each out-of-sequence activity does not require a correction, if one has not been provided, and an adequate demonstration that these changes represent the basis of how these activities will be built, including considerations for resources, dependencies, and previously approved production rates.
11. identify any possible duration increases resulting from actual or anticipated unit price item quantity overruns as compared to the baseline duration, with a corresponding suggestion to mitigate any possible delays to the Critical Path. If the delay is anticipated to impact the Critical Path, refer to Subsections 4.06 – Increased or Decreased Contract Quantities and 8.10 – Determination and Extension of Contract Time for Completion and submit a letter to the Engineer notifying of a potential delay.
12. include a schedule log consisting of the name of the schedule, the data date and the date submitted.
13. include and describe any notifications, communications and coordination meetings with third-parties such as utility companies that occurred from the last update including personnel names, job titles and contact information, date of meeting(s)/correspondence(s), topics discussed, and reasons the third party provided for deviations from the PUC form.

SECTION 722 (Continued)**B. CPM Bar Charts**

One (1) timescaled bar chart containing all activities shall be prepared and submitted using a scale that yields readable plots and that meets the requirements of Subsection 722.61 – Schedule Content and Preparation Requirements. Activities shall be linked by logic ties and shown on their Early Dates. Critical Paths shall be highlighted, and Total Float shall be shown for all activities.

A second timescaled bar chart shall also be prepared containing only the Critical Path or, if the Critical Path is not the longest path, the Longest Path using a scale that yields readable plots and that meets the requirements of Subsection 722.61 – Schedule Content and Preparation Requirements. Activities shall be linked by logic ties and shown on their Early Dates. Total Float shall be shown for all activities.

C. Detailed Activity Schedule Comparisons

A Detailed Activity Schedule Comparison (DASC) is a simple reporting tool in the format of a graphical report that will provide Resident Engineers with immediate, timely and up-to-date information. The DASC consists of an updated bar chart that overlays the current time period's bar chart onto the previous time period's bar chart for an easily read comparison of progress during the present and previous reporting periods.

D. Activity Cost Report and Monthly Cash Flow Projections (Type A only)

With each Contractor Quantity Estimate (CQE), the Contractor shall submit an Activity Cost Report and Cash Flow Projection that includes all activities grouped by Contract Bid Item.

The Activity Cost Report shall be generated from the Schedule of Record and shall be the basis of the Monthly Cash Flow Projection. Within each contract Bid Item, activities shall be sequenced by ascending activity identification number and shall show:

1. activity ID and description,
2. forecast start and finish dates for each activity and,
3. when submitted as a revised schedule, actual start, and finish dates for each completed activity.
4. any variance to the estimated contract quantity shall be shown.

E. Resource Graphs (Type A only)

Monthly and cumulative resource graphs for the remaining Contract period using the Early Dates and Late Dates in the Contract Progress Schedule shall be included as part of each schedule submittal.

SECTION 722 (Continued)**F. Projected Spending Reports**

A Projected Spending Report (PSR) shall be prepared and submitted monthly. The PSR shall indicate the monthly spending (cash flow) projection for each month from NTP to Contractor Field Completion (CFC). Each month's actual spending shall be calculated using all CQEs paid during that month. The Projected Spending Report (PSR) shall be depicted in a tabular format and provided in both an .XLS and .PDF.

722.63. Progress Schedule Requirements**A. Baseline Schedule**

The Baseline Schedule shall be due thirty (30) Calendar Days after Notice to Proceed (NTP). The Baseline Schedule shall only reflect the Work awarded to the Contractor and shall not include any additional work involving Extra Work Orders or any other type of alleged delay. The Baseline Schedule shall be prepared and submitted in accordance with Subsections 722.61 - Schedule Content and Preparation Requirements and 722.62 - Submittal Requirements. Once the Baseline Schedule has been accepted by the Engineer, with or without comments, it shall represent the as-planned schedule for the Work and become the Contract Progress Schedule of Record until such time as the schedule is updated or revised under Subsections 722.63.C - Contract Progress Schedules / Monthly Updates, 722.64.C - Recovery Schedules and 722.64.D - Proposal Schedules.

The Cost and Resource-Loading information (Types A and B only) shall be provided by the Contractor within forty-five (45) Calendar Days after NTP.

The Engineer's review comments on the Baseline Schedule and the Contractor's responses to them will be maintained for the duration of the Contract and will be used by the Engineer to monitor the Contractor's work progress by comparing it to the Contract Progress Schedule / Monthly Update.

B. Interim Progress-Only Schedule Submissions

The first monthly update of the Contract Progress Schedule/Monthly Update is due within seventy (70) Calendar Days after Notice to Proceed (NTP.) The Baseline Schedule review period ends at sixty (60) Calendar Days after NTP, see Subsection 722.60.B - Schedule Reviews by the Department. If the Baseline Schedule has not been accepted within sixty (60) Calendar Days after NTP, an Interim Progress-Only Schedule shall be due within seventy (70) Calendar Days after NTP. The purpose of the Interim Progress-Only Schedule is to document the actual progress of all activities, including non-construction activities, from NTP until the Baseline Schedule is accepted.

SECTION 722 (Continued)**C. Contract Progress Schedules / Monthly Updates**

The first Contract Progress Schedule shall be submitted by the Contractor no later than seventy (70) Calendar Days after NTP. The data date for this first Progress Schedule shall be two months (approximately sixty (60) Calendar Days) after NTP. Subsequent Progress Schedules shall be submitted monthly.

Each Contract Progress Schedule shall reflect progress up to the data date. Updated progress shall be limited to asbuilt sequencing and asbuilt dates for completed and inprogress activities. Asbuilt data shall include actual start dates, remaining Work Days and actual finish dates for each activity, but shall not change any activity descriptions, the Original Durations, or the Original Resources (as planned at the time of bid), without the acceptance of the Engineer. If any activities have been completed out-of-sequence, the Contractor shall propose new logic ties for affected in-progress and future activities that accurately reflect the previously approved sequencing. Alternatively, the Contractor may submit to the Engineer for approval an explanation of why an out-of-sequence activity does not require a correction and an adequate demonstration that the changes accurately represent how the activities will be built, including considerations for resources, dependencies, and previously approved production rates. Once approved by the Engineer, the Contractor may incorporate the changes in the next Contract Progress Schedule/Monthly Update with the affected activities clearly identified and explained in the Schedule Narrative.

No revisions to logic ties, sequence, description, or duration of future activities; or planned resource costs shall be made without prior approval by the Engineer.

Any proposed logic changes for in-progress or future activities shall be submitted to the Engineer for approval before being incorporated into a Contract Progress Schedule. The logic changes must be submitted using a Proposal Schedule or a schedule fragnet submission. Once approved by the Engineer, the Contractor may incorporate the logic in the next Contract Progress Schedule/Monthly Update with the affected activities clearly identified and explained in the Schedule Narrative.

For any proposed changes to the original sequence, description or duration of future activities, the Contractor shall submit to the Engineer for approval an explanation of how the proposed description or duration change reflects how the activity will be progressed, including considerations for resources and previously approved production rates. Any description or duration change that does not accurately reflect how the activity will be progressed will not be approved by the Engineer. Once approved by the Engineer, the Contractor may incorporate the changes in the next Contract Progress Schedule/Monthly Update with the affected activities clearly identified and explained in the Schedule Narrative.

Contract Progress Schedules that extend performance beyond the Contract Time or beyond any Contract Milestone shall not be approved by the Engineer. The Contractor shall submit a Recovery Schedule, or a Time Entitlement Analysis, if any Contract Progress Schedule/Monthly Update indicates a failure to meet the Contract Dates.

SECTION 722 (Continued)**D. Short-Term Construction Schedule**

The Contractor shall provide a Short-Term Construction Schedule that details daily work activities, including any multiple shift work that the Contractor intends to conduct, in a spreadsheet format. The daily activities shall directly correspond to the Contract Progress Schedule activities, with a matching reference to the activity identification number in the Contract Progress Schedule and may be at a greater level of detail. The Short-Term Construction Schedule shall be submitted every two weeks. It shall display all work for a thirty-five (35) Calendar Day period consisting of completed work for the two (2) week period prior and all planned work for the following three (3) week period. The initial submission shall be provided no later than thirty (30) Calendar Days after NTP or as required by the Engineer.

The Contractor shall be prepared to discuss the Short-Term Construction Schedule, in detail, with the Engineer in order to coordinate field inspection staff requirements, the schedule of work affecting abutters and any corresponding work with affected utilities. Short-Term Construction Schedules shall be prepared and submitted in accordance with Subsections 722.61 - Schedule Content and Preparation Requirements and 722.62 - Submittal Requirements.

722.64 Impacted Schedule Requirements**A. Notice of Delay**

The Contractor shall notify the Engineer in writing, with copies to the District and State Construction Engineers, within fifteen (15) of the start of any delays to the Critical Path that are caused by actions or inactions that were not within the control of the Contractor. Delay notifications that are not provided in a letter to the Engineer, such as a delay notification in the schedule narrative, will not be recognized as contractual notice in the determination of any Time Extension related to the impacts to the work associated with this specific alleged delay. Should such a delay continue for more than one (1) week, the Contractor shall note it in the Schedule Narrative until the delay is no longer impacting the Critical Path for the completion of the Contract Milestones. The Engineer will evaluate the alleged delay and its impact and will respond to the Contractor within ten (10) Calendar Days after receipt of a notice of delay.

B. Time Entitlement Analysis

A Time Entitlement Analysis (TEA) shall consist of a descriptive narrative, prepared in accordance with Subsection 722.62.A - Narratives, and an as-built CPM schedule, which may be in the form of a schedule fragnet that has been developed from the project's Contract Progress Schedule of Record, and illustrates the impact of a delay to the Critical Path, Contract Milestones and/or Contract Completion Date as required in Subsection 8.10 - Determination and Extension of Contract Time for Completion. TEAs shall also be used to determine the schedule impact of proposed Extra Work Orders (EWO) as also required in Subsection 8.10.

TEAs shall be prepared and submitted in accordance with the requirements of Subsections 722.61 - Schedule Content and Preparation Requirements and 722.62 - Submittal Requirements and shall be based on the Contract Progress Schedule of Record applicable at the start of the delay or impact from an EWO. A TEA fragnet must start with a specific new activity describing the work contained in either a Notice of Delay previously submitted to the Department per Subsection 722.64.A - Notice of Delay or an EWO.

SECTION 722 (Continued)

TEAs shall be submitted:

1. as part of any Extra Work Order that may impact Contract Time,
2. with a request for a Time Extension,
3. within fifteen (15) Calendar Days after a request for a TEA by the Engineer for any other reason.

A TEA shall be submitted to the Engineer before any Time Extension is granted to the Contractor. Time Extensions will not be granted unless the TEA accurately reflects an evaluation of all past delays and the actual events that occurred that impacted the Critical Path. The TEA must also demonstrate a plan for the efficient completion of all of the remaining work through an optimized CPM Schedule. The analysis shall include all delays, including Contractor-caused delays, and shall be subdivided into timeframes and causes of delays.

TEAs shall incorporate any proposed activities, logic ties, resource considerations, and activity costs required to demonstrate the schedule impacts most efficiently in addition to detailing all impacts to existing activities, logic ties, the Critical Path, Contract Milestones, and the Contract Completion Date. In addition, TEAs shall accurately reflect any changes made to activities, logic ties, restraints, and activity costs, necessitated by an Extra Work Order or other schedule impact, for the completion of the remaining work. The Contractor shall provide TEAs that demonstrate that all delays have been mitigated to the fullest extent possible without requiring an Equitable Adjustment to the original bid basis.

All TEAs shall clearly indicate any overtime hours, additional shifts and the resources that are proposed to be incorporated in the schedule. The Engineer shall have final discretion over the use of overtime hours and additional shifts. The Engineer shall have the right to require that overtime hours and/or additional shifts be used to minimize the duration of Time Extensions if it is determined to be in the best interest of the Department to do so.

When accepted, the changes included in a TEA shall be incorporated into the next Contract Progress Schedule per the requirements of Subsection 722.63.C - Contract Progress Schedules / Monthly Updates. During the review of any TEA, all Contract Progress Schedules shall continue to be submitted as required.

The Engineer may request that the Contractor prepare a Proposal Schedule or a Recovery Schedule to further mitigate any delays that are shown in the accepted TEA or Contract Progress Schedule.

C. Recovery Schedules

The Contractor shall promptly report to the Engineer all schedule delays during the prosecution of the Work. Contract Progress Schedules that predict performance extended beyond the Contract Time or beyond any Contract Milestone shall not be approved as the schedule of record. This requirement is critical to the Department's ability to make informed decisions regarding Contract Time and costs.

The Contractor shall submit a Recovery Schedule within fifteen (15) Calendar Days of a Contract Progress Schedule submission that shows failure to meet the Contract Dates unless a recovery schedule is waived by the Department. Waiving the recovery schedule does not relieve the contractor of the responsibility for the delay. The Department may revoke the waiver of a Recovery Schedule, at which time a Recovery Schedule shall be submitted within fifteen (15) Calendar Days of the Contractor being notified.

Changes represented in accepted Recovery Schedules shall be incorporated into the next Contract Progress Schedule.

SECTION 722 (Continued)**D. Proposal Schedules**

A Proposal Schedule is an alternative schedule used to evaluate proposed changes to the Contract scope or significant alternatives to previously approved approaches to complete the Work, which may include changes to activity durations, logic, and sequence. For Types A and B Schedules, the Proposal Schedule shall be cost and resource loaded.

A Proposal Schedule may be requested by the Department at any time or may be offered by the Contractor. The Engineer may request that the Contractor prepare a Proposal Schedule to further mitigate any delays that are shown in an accepted TEA or Contract Progress Schedule.

The Contractor shall submit the Proposal Schedule within thirty (30) Calendar Days of a request from the Department.

The Proposal Schedule shall not be considered a Schedule of Record until the logic, durations, narrative, and basis of the Proposal Schedule have been accepted by the Engineer. If the Proposal Schedule took the form of a fragnet, it must be incorporated into the Contract Progress Schedule of Record showing the current progress of all other activities and the impacts/results of the changes made by the Proposal Schedule before the Proposal Schedule is accepted by the Department.

Proposal Schedules shall clearly indicate any proposed acceleration including overtime hours, additional shifts, and the resources that are proposed to be incorporated in the schedule. The Engineer shall have final discretion over the use of overtime hours and additional shifts. Proposal Schedules that contain a cost element shall be submitted with a separate Cost Proposal.

Changes represented in the accepted Proposal Schedules shall be incorporated into the next Contract Progress Schedule. During the review of any Proposal Schedule, all Contract Progress Schedules shall continue to be required every month.

E. Disputes

All schedules shall be submitted, reviewed, dispositioned, and accepted in the timely manner specified herein so as to provide the greatest possible benefit to the execution of this Contract.

The Contractor may dispute a decision by the Engineer by filing a claim notice within seven (7) days after the Contractor's request for additional time has been denied or if the Contractor does not accept the number of days granted in a time extension. The Contractor's claim notice shall include a revised time entitlement analysis that sufficiently explains the basis of the time-related claim. Failure to submit the required time entitlement analysis with the claim notice shall result in denial of the Contractor's claim. A determination on the Contractor's claim shall be in accordance with Subsection 7.16 Claims of Contractor for Compensation. Pending resolution of any dispute, the last schedule accepted by the Engineer will remain the Contract Schedule of Record.

SECTION 722 (Continued)**722.65 Schedule Type D Requirements**

This section is to detail the requirements for Type D Schedules and is separate from the requirements listed above. These schedules are intended for a project in which a more formal schedule would not be practical.

Schedules for Type D projects shall be submitted for each work assignment. The Schedule Type D shall be submitted electronically in .XLS and .PDF format and meet the following requirements.

The schedule requirements for work assignments that are anticipated to last three weeks or less shall conform to the requirements for Short-term Construction Schedules below.

Work assignments that are anticipated to last longer than three weeks shall submit a bar chart baseline and provided update schedules upon request of the engineer as required under Bar Chart Schedule below in addition to meeting the Short-term Construction schedule requirements.

A. Bar Chart Schedule

A Bar Chart that shall include the following:

- Work Assignment start date.
- Activities to identify.
 - Major work operations broken down to be no longer than 14 days.
 - Procurement of fabricated materials and equipment with long lead times, including time for review and approval of submittals required before procuring and fabricating.
 - The preparation and submission of shop drawings, procedures, and other required submittals, with a planned duration that is to be demonstrated to the Engineer as reasonable.
 - The review and return of shop drawings, procedures, and other required submittals, approved or with comments, the duration of which shall be shown as thirty (30) Calendar Days,
 - Detailed activities to satisfy permit requirements.
 - Subcontractor approvals at fifteen (15) Calendar Days from submittal to response
 - Project Close out activities including a 21-calendar day creation of a punchlist activity and 30 calendar day minimum completion of punchlist activity.
- Interfaces with adjacent work, utility companies, other public agencies, sensitive abutters, and/or any other third-party work affecting the Contract.
- Access Restraints – restrictions on access to areas of the Work
- Traffic work zone set-up and removal, night work and phasing
- Contract Milestones including Full beneficial Use, Substantial Completion and Contractor Field Completion

The Bar Char Schedule shall be provided at the beginning of the project and updated with each work order created for the project.

SECTION 722 (Continued)**B. Short-Term Construction Schedule**

The Contractor shall provide a Short-Term Construction Schedule that details daily work activities, including any multiple shift work that the Contractor intends to conduct, in a spreadsheet format. The daily activities shall directly correspond to the Contract Progress Schedule activities, with a matching reference to the activity identification number in the Contract Progress Schedule and may be at a greater level of detail. See schedule toolkit for suggested format.

The Short-Term Construction Schedule shall be submitted every two weeks. It shall display all work for a thirty-five (35) Calendar Day period consisting of completed work on the assignment for the two week period prior and all planned work for the following three week period. The initial submission shall be provided no later than thirty (30) Calendar Days after NTP or as required by the Engineer.

The Contractor shall be prepared to discuss the Short-Term Construction Schedule, in detail, with the Engineer in order to coordinate field inspection staff requirements, the schedule of work affecting abutters and any corresponding work with affected utilities.

C. Project Spending Report (PSR)

A Projected Spending Report (PSR) shall be prepared and submitted monthly. The PSR shall be for all active work assignments, broken down by work assignment. The PSR shall indicate the monthly spending (cash flow) projection for each month from NTP to Contractor Field Completion (CFC). Each month's actual spending shall be calculated using all CQEs paid during that month. The Projected Spending Report (PSR) shall be depicted in a tabular format and provided in both an .XLS and .PDF

SECTION 722 (Continued)**COMPENSATION****722.80 Method of Measurement****Schedule of Operations (Type A, B and C)**

The project bid documents specify the fixed-price amounts to be paid to the Contractor for the Project Schedule requirements contained herein. Each bidder shall include this fixed price bid item amounts in their bid. Failure to do so may be grounds for the rejection of the bid.

This fixed price amount is for payment purposes only and is separate from what the Department considers to be the Contractor's General Condition costs. If the Contractor deems it necessary to include additional costs to provide all of the requirements of this section, these additional costs shall be included in the Contractor's overall bid price.

All required schedule-related work, including, but not limited to computers, computer software, the planning and coordination with utilities, training, schedule preparation and schedule submittals will be paid for under the fixed price amount.

Twenty percent (20%) of this pay item will be paid upon the Engineer's acceptance of the Contractor's Baseline Schedule, prepared and submitted in accordance with Subsection 722.63.A.

The remaining eighty percent (80%) of this pay item will be paid in equal monthly installments distributed across the Contract Duration from Notice to Proceed (NTP) to Contractor Field Completion (CFC), less the 2 months required for the submittal and review of the Baseline Schedule in accordance with the following formula:

$$\text{Monthly Payment} = \frac{\text{Remaining Fixed Price amount (80\% of the Item Cost.)}}{\text{Contract Duration in whole months} - 2 \text{ months}}$$

The Schedule of Operations pay item will be adjusted to pay for only the actual quantity of schedules that have been submitted in accordance with this section.

Should there be a Time Extension granted to the Contractor, the Engineer may provide an Equitable Adjustment for additional Contract Progress Schedule Updates at intervals directed by the Engineer. The monthly payment will be the basis for this Equitable Adjustment.

Schedule of Operations (Type D)

For projects assigned with Type D schedule requirements, all scheduling work shall be considered incidental to the project with no separate payment under this section.

SECTION 722 (Continued)**722.81 Basis of Payment**

The timely and accurate submission of the Baseline Schedule is critical to the Contract and the Department's ability to make informed decisions. Only payments under Item 740 - Engineer's Field Office and Item 748 - Mobilization will be made until the Baseline Schedule is accepted by the Engineer.

All required schedule-related work, including, but not limited to computers, computer software, the planning and coordination with utilities, training, schedule preparation and schedule submittals (including monthly progress schedules, short-term schedules, project spending reports, TEAs, recovery schedules or impacted schedules) shall be included in this work.

No payment for any other pay item will be processed beyond seventy-five (75) Calendar Days from Notice to Proceed (NTP) until the Baseline Schedule is accepted by the Engineer. Until the Engineer's acceptance of the Baseline Schedule, the combined total of all payments made to the Contractor will be limited to an amount no greater than the total price for Item 748 - Mobilization or 3% of the contract price, whichever is less.

All Contract Progress Schedule Updates submitted later than ten (10) Calendar Days after the CQE (Contract Quantity Estimate) completion date, or greater than forty (40) Calendar Days from the Data Date of the previous submission, will be deemed to be no longer useful and will not qualify for payment. The late submission of Impacted schedules, including TEAs, recovery schedules and proposal schedules will result in the forfeiture of the monthly payment for the month in which they were due and subsequent months until the submission is made. Late submission of missed submittals will not result in recovery of the previously forfeited portion of the Schedule of Operations Fixed Price Payment Item.

Failure to submit schedules as and when required may result in the forfeiture of that portion of the Schedule of Operations Fixed Price Payment and/or the withholding of the full or partial CQE payments by the Engineer.

Failure to submit schedules that are acceptable to the Engineer may result in the forfeiture of that portion of the Schedule of Operations Fixed Price Payment and/or the withholding of the full or partial CQE payments by the Engineer.

The Schedule of Operations pay item will be adjusted to pay for only the actual quantity of schedules that have been submitted in accordance with this section.

The Contractor's failure or refusal to comply with the requirements of this Section shall be reasonable evidence that the Contractor is not prosecuting the Work with due diligence and may result in the Engineer withholding of full or partial payments of all work performed.

722.82 Payment Items

722.1	SCHEDULE OF OPERATIONS (TYPE A) - FIXED PRICE \$ _____	LUMP SUM
722.2	SCHEDULE OF OPERATIONS (TYPE B) - FIXED PRICE \$ _____	LUMP SUM
722.3	SCHEDULE OF OPERATIONS (TYPE C) - FIXED PRICE \$ _____	LUMP SUM

ITEM 102.3**HERBICIDE TREATMENT OF INVASIVE PLANTS****HOURLY**

This work must be performed by persons who meet the qualifications below and are approved by the Landscape Design Section.

Work under this item consists of herbicide treatment of invasive plants currently existing within the project limits and as directed. An Invasive Plant Management Strategy (IPMS) shall be submitted to the Engineer for review and approval and the IPMS shall be implemented on-site. The IPMS shall be written and submitted per Item 102.33 Invasive Plant Management Strategy and shall be measured and paid for under that Item.

Work under this item shall be coordinated with work and schedule for Selective Clearing, Clearing and Grubbing, Mowing, Tree Removal, Planting, and Wetland Mitigation items.

Payment is per hour on-site and shall be compensation for a minimum crew of 2 licensed applicators, 2 back-pack sprayers and mist-blowers, a properly equipped spray truck with spray hoses, and a tank with sufficient capacity for a full day of work. If there is only one applicator, hourly payment shall be adjusted to 50 percent of the unit price.

Date and time stamped photos indicating start and stop time of work must be submitted if requested.

This item is not intended for manual removal of plants.

Management of plants determined to have been introduced to the site via imported loam, compost, mulch, plants, equipment, or other construction activities will be the Contractor's responsibility and at the Contractor's expense.

Herbicide shall be applied during daytime hours only.

Measures to prevent the introduction of invasive plant species to the site and to address introduction due to construction-related activities shall be covered under the Standard Specifications, Division I - Subsections 7.01(D) Plant Pest Control and 7.13 Protection and Restoration of Property as amended in these Special Provisions.

Plant species targeted for management under this item shall be as determined in the field per the site walk and as specified in the IPMS.

The definition of invasive plant species shall be as described by Massachusetts Invasive Plant Advisory Group (MIPAG): "non-native species that have spread into native or minimally managed plant systems in Massachusetts, causing economic or environmental harm by developing self-sustaining populations and becoming dominant and/or disruptive to those systems."

ITEM 102.3 (Continued)

Control of invasive plants shall begin immediately with the initiation of construction activities and prior to any clearing or site disturbance. Treatment areas shall include stockpile locations and may, upon approval of the Engineer, extend outside the project limit. Treatment shall be done each consecutive year for the duration of the contract unless specified otherwise in the IMPS or unless directed otherwise by the MassDOT invasive species contact. Work shall be done during the growing season from May – October unless otherwise specified in the IPMS.

Areas identified for vegetation control measures shall be as shown on the plans and as determined in the field by the Engineer and a MassDOT Landscape Architect. Contact at MassDOT Landscape Design Section may be contacted at: tara.mitchell@dot.state.ma.us

QUALIFICATIONS

The applicators shall submit and meet the qualifications outlined below. A list of contractors specializing in invasive management and approved by MassDOT Landscape Design Section is available on the following website: <https://www.mass.gov/lists/landscape-design-and-roadside-maintenance> under Invasive Plant Management.

Requirements

1. Company must provide proof of qualifications by providing the following:
 - a. Narrative describing company, its expertise and experience with invasive plant control.
 - b. Demonstrate experience with herbicide treatment as part of restorations and in sensitive areas.
 - c. Describe company's technical qualifications and past performance.
2. Company must meet licensing requirements:
 - a. All crew applicators must have a Massachusetts Commercial Applicator License (CORE).
 - b. At least one or more applicator must have a ROW certification, if required for work.
 - c. Company must provide name(s) of applicator(s) and Applicator License/Certification number for all contractor crew leaders working on the project.
 - d. Company must provide documentation of any warnings, penalties or fines received in the last three (3) years.
3. Company must provide proof of experience with invasive plant control and include following:
 - a. At least five (5) references from prior invasive plant control work completed in last five (5) years. Provide contact information including address, phone number and email.
 - b. Provide a summary of each of these projects including nature of the problem, specific invasive vegetation treated, dates and period of treatment, methodologies used, and summary of success or not in terms of meeting performance objectives. Include summary of equipment used.
 - c. Photo documentation of these projects.
 - d. GPS coordinates of project locations, if available.

ITEM 102.3 (Continued)

4. Crew leader must have expertise with invasive plant control and provide the following:
 - a. Have held Core license for at least five (5) years.
 - b. Resume listing five (5) or more years of experience applying pesticides with the company or with another company specializing in vegetation management.

SUBMITTALS

No work shall begin without approval of the submittals.

Submittals include the following items:

Invasive Plant Management Strategy (IPMS)

At least thirty (30) days prior to proposed treatment the IPMS shall be submitted for approval by the Engineer and MassDOT Landscape Architect. All chemicals, methods and work done under this item shall be consistent with the IPMS. The IPMS shall be as described under Item 102.33.

Herbicide Use Report

Within two (2) weeks after each application, the Contractor shall provide to the Engineer and the MassDOT Landscape Architect a completed and signed MassDOT Herbicide Use Report.

Photo Documentation

Digital photos with date and time of herbicide application work, showing start time and completion time, are required and must be submitted for measurement of payment upon request.

MATERIALS

All proposed herbicides shall be as approved in the IPMS. Herbicides shall be labeled for the method of treatment and shall meet all federal, state and local regulation requirements. Application rates will depend on herbicide proposed and shall be per the manufacturer's label for specific application.

METHODS

All methods used shall be as approved in the IPMS which shall be determined during the Initial Site Walk as described under Item 102.33 Invasive Plant Management Strategy.

The Contractor shall be responsible for marking delineated areas and plants to be preserved, removed, or otherwise treated. Fencing or other materials needed for marking and delineating protected areas shall be incidental to this item.

The Contractor shall notify the Engineer a minimum of 3 days prior to date of expected herbicide application. Applicators shall notify the Engineer upon arriving on-site and upon leaving the site.

ITEM 102.3 (Continued)**Herbicide Applications**

All herbicide application shall conform to Massachusetts Pesticide Laws and Regulations per the Massachusetts Department of Agricultural Resources (MDAR) Pesticide Bureau.

Mixing, applying and/or disposing of herbicides shall always be in accordance with instructions on their labels and all applicable federal, state, and local regulations. Mixing shall not occur within sensitive areas, wetlands, or buffer zones.

Contractor shall not spray 2 hours prior to precipitation, during rain, or during windy conditions. The Contractor shall be responsible for monitoring weather conditions and adjusting the work schedule as appropriate for the herbicide and application method to be used.

Targeted vegetation shall be identified and marked prior to treatment. Plants treated by foliar spray, injection or glove application or other methods that leave standing vegetation, as opposed to cut-stump application, shall remain clearly marked for identification through the contract period.

Desirable vegetation shall be protected from both spray and other physical damage.

Contractor is responsible for any damage to vegetation not designated for removal or treatment. Vegetation damaged shall be restored. Cost of replacement plants and/or restoration shall be borne by the Contractor.

Contractor shall ensure that the public does not enter a work area while herbicide application or spraying is underway.

Disposal of Invasive Plant Material

All material to be cleared shall become the property of the Contractor. The satisfactory disposal of all cleared plant material (seeds, roots, woody vegetation, associated soils, etc.) shall be the Contractor's responsibility.

The Contractor shall take measures to prevent viable plant material from leading to further infestations (seeds, roots, woody material, etc.) while stockpiled, in transit, or at final disposal locations. All precautions shall be taken to avoid contamination of natural landscapes with invasive plants or invasive plant material.

Chipping, shredding, or on-site burning of plant material must be approved by the Engineer and included in the IMPS.

For plant material taken to an incinerating facility per the IPMS, a receipt from that facility shall be submitted to the Engineer as proof of disposal.

ITEM 102.3 (Continued)

Where feasible, it is preferable to dispose of plants on-site or to bury them on-site with on-going monitoring for re-sprouting. Disposal locations and methods must be approved and included in the IPMS. Site work such as grading and seeding to stabilize and restore disposal area shall be incidental to this item.

The Contractor shall be responsible for treating or otherwise managing areas of re-growth due to improper disposal. Treatment shall be at the Contractor's expense.

Follow-Up Treatment

Plants and areas shall be re-treated as necessary and as appropriate to the time of year. Treatment shall be for the duration of the contract and per the IPMS.

MEASURE OF SUCCESS

The expectation is a minimum of 85-95 percent control achieved after the first treatment, depending on plants targeted and extent of population, and based on the expectations laid out in the IPMS. The expectation for the contract duration is 95-100% eradication by the end of the treatment period, unless otherwise specified in the IPMS.

METHOD OF MEASUREMENT

Item 102.3 will be measured for payment by the Hour of verified crew time spent on the project doing herbicide application as and where specified herein and in the IPMS. A crew shall be defined as a minimum of two licensed applicators each equipped with (at minimum) back-pack sprayer and mist blower. The crew shall also have a properly equipped spray truck with hoses and a tank with sufficient capacity for a full day of work.

BASIS OF PAYMENT

Item 102.3 will be paid at the contract unit price per Hour, which price shall include all labor, materials, equipment, tools, and all incidental costs required to complete the work.

Payment will be based upon verified time spent on the project doing herbicide application as and where specified in the IPMS and upon receipt and approval of submittals. Payment will not include travel time to and from the Contractor's place of business and nor time for investigative field trips.

If there is only one applicator, hourly payment shall be adjusted to 50 percent of the unit price.

The Invasive Plant Management Strategy will be paid for under Item 102.33.

ITEM 102.33**INVASIVE PLANT MANAGEMENT STRATEGY****HOUR**

This item consists of providing an Invasive Plant Management Strategy (IPMS) for the control of invasive plants currently existing on the project site and/or as directed and shall be coordinated with Item 102.3 Herbicide Treatment of Invasive Plants. Unless otherwise approved, the IPMS shall be submitted in the form of the MassDOT Invasive Plant Management Strategy Report Form.

The IPMS shall be submitted for review and approval by the MassDOT Landscape Design Section or their representative, and the IPMS shall be implemented on-site.

The Invasive Plant Management Strategy Report Form is available online at <https://www.mass.gov/lists/landscape-design-and-roadside-maintenance> under Invasive Plant Management.

Herbicide treatment for invasive plants shall be as described under Item 102.3 Herbicide Treatment of Invasive Plants and shall be compensated per that Item.

Work under this item shall be coordinated with work and schedule for Selective Clearing, Clearing and Grubbing, Mowing, Tree Removal, Planting, and Wetland Mitigation as relevant to the project.

Individual attending the site walk and determining the Invasive Plant Management Strategy must demonstrate expertise with vegetation management and invasive plant control and submit qualifications as described below.

QUALIFICATIONS

Individual shall be from the same company as that providing services for Item 102.3 Herbicide Treatment of Invasive Plants and shall submit the following, if not submitted under Item 102.3:

- Submit copy of current Core license.
- Submit a resume listing five (5) or more years of experience managing invasive plants with a company specializing in vegetation management.
- References shall be submitted if requested.

SUBMITTALS**Task Summary & Reports**

For measurement of payment, the contractor shall submit the total sum and a breakdown of hours for the tasks performed. At a minimum, the tasks shall include the Initial Site Walk, submittal of an approved IPMS, and if requested to accommodate project or site changes, a Follow-up Site Inspection and accompanying IPMS Amendment.

Interim Site Monitoring Reports and/or a Final Report shall be submitted if requested by the MassDOT Landscape Design contact. The MassDOT Landscape Design contact must be notified to attend the site inspection walk when an Interim or Final Report has been requested.

ITEM 102.33 (Continued)**Invasive Plant Management Strategy (IPMS)**

At least thirty (30) days prior to construction activities and/or any proposed treatment, the contractor shall submit the IPMS for approval by the Engineer and MassDOT Landscape Architect. All chemicals and methods proposed shall be consistent with applicable Massachusetts Wetlands Protection Act Order of Conditions.

The IPMS shall be completed in coordination with the Prime Contractor and the Engineer and shall include the following as appropriate and applicable to the project and to the IPMS Report Form questions and Guidance:

I. Project Information

- a. Company writing the IPMS and performing the herbicide application.
- b. Date of site walk
- c. Attendees at site walk
- d. Expected end date of contract and expected last treatment (month/season)

II. Brief Description of Conditions

- a. Provide a free-hand sketch on construction plans or aerial image showing species, location, and as relevant, show or note extent of population as relevant to Strategy (i.e., population extends off ROW preventing eradication, small population and eradication deemed feasible within contract schedule, etc.).

III. Coordination with Roadway Contractor regarding other work

- a. Tree Work: Note coordination to be implemented with tree removal, clearing, and clearing and grubbing as applicable to the project.
- b. Wetland Mitigation - Include management proposed for wetland mitigation areas in the IPMS, if and as required.
- c. Planting: If there will be planting in areas proposed for treatment, propose treatment and schedule to avoid herbicide damage to plants.
- d. Mowing: If coordination is required with state mowers, note need in IPMS.

IV. Soil Management

- a. Provide specifics on how soil with invasive plant roots (in particular) or seeds will be handled (i.e., separate stockpiles, plant material will be buried on-site, re-used on-site, disposed off-site and if so, where?).
- b. Show stockpile locations on plan and include treatment schedule.
- c. Note measures that will be implemented to avoid spread through equipment, including how and where equipment will be cleaned.

V. Invasive Plant Treatment & Management

- a. Proposed chemical and methods of treatment for each species or area.
- b. Time of treatment based on target plant species.
- c. Submit product label including application methods and rates (entire MSDS information need not be submitted if available online).
- d. Proposed performance metrics or measure of treatment success if different from that specified under Item 102.3.

ITEM 102.33 (Continued)

- e. Method for disposing invasive plant material. This includes material that may result in spread (i.e., seeds, roots) and material that has been treated and/or is not viable (foliage, dead wood, etc.). Methods may include grinding in place, stockpiling and treating, and incinerating offsite.
- f. Expected follow-up treatment for duration of contract.

VI. Monitoring Schedule if requested by MassDOT.

Note: The IPMS is critical for identifying pre-construction conditions as well as strategies for minimizing import or spread of invasive plants. Failure to provide an approved IPMS may jeopardize this item, in which case, the contractor will be responsible for management of invasive plants found on-site at no cost to the contract.

Photo Documentation

Digital photos of site conditions, typical species, and extent of infestation must be provided with the IPMS and with any follow-up monitoring or reporting. Photos of follow-up monitoring and reporting must be date and time stamped for acceptance.

METHODS**Initial Site Walk**

Prior to any construction activities and soil disturbance, the Contractor shall walk the site with the Engineer and the MassDOT Landscape Architect to determine the IPMS. During the site walk the Contractor shall identify limits of work and, as necessary, mark locations of areas designated for treatment and individual plants targeted for treatment or removal. The Contractor shall be responsible for marking delineated areas and plants to be preserved, removed, or otherwise treated. Fencing or other materials needed for marking and delineating protected areas shall be incidental to this item.

IPMS Follow-up Amendment

The IPMS may be amended to address additional concerns or adjust to conditions if required by the MassDOT Landscape Architect. The amended IPMS shall be submitted to the Engineer and MassDOT Landscape Architect for approval at least fourteen (14) days prior to any proposed treatment.

Interim Site Monitoring Inspection Reports

If required by the MassDOT Landscape Architect and Engineer, Interim Site Monitoring and an accompanying report shall be conducted. Interim Reports must include time and date stamped photos showing treated locations and species.

ITEM 102.33 (Continued)**Final Inspection**

A final inspection and report documenting the status of the invasive control may be required for regulatory purposes or for instances where control will be continued by others. The report shall include photo documentation of pre-construction (existing) and post-treatment conditions, notations on a plan or aerial image of area treated, summary of treatment performed, and control achieved. Final reports submittal must include time and date stamped photos.

METHOD OF MEASUREMENT

Item 102.33 will be measured for payment by the Hour. The basis for measurement shall be per the completion of tasks as approved under the Task Summary submittal and acceptance of submittals and photos described above.

BASIS OF PAYMENT

Item 102.33 will be paid at the contract unit price per Hour, which price shall include all labor, materials, equipment, tools, and all incidentals required to complete the work. Payment shall not include travel time to and from the Contractor's place of business.

ITEM 102.511 **TREE PROTECTION - ARMORING AND PRUNING** **EACH**

The work under this item shall conform to the relevant provisions of Subsection 771 of the Standard Specifications and the following:

Tree protection – armoring and pruning shall be used for instances where construction activity (the use of heavy equipment), comes within proximity to potentially damage tree trunk(s) or limbs.

The work shall include the furnishing and installing of temporary tree trunk protection, minor limb pruning, or removal of lower tree limbs to prevent injury to the tree from construction equipment and activities; as shown on the Drawings; and/or as required by the Engineer.

REFERENCES

If requested, the Contractor shall provide to the Engineer one copy of the latest edition of the American National Standards Institute (ANSI) A300 Standard Practices for Tree, Shrub, and Other Woody Plant Maintenance: Part 1-Pruning and Part 5-Construction Management Standard. Provision of reference shall be incidental to this item.

MATERIALS

Trunk armoring shall be such that it prevents damage to the trunk from construction equipment. Material used for trunk armoring or mounting shall be such that installation and removal shall not damage the trunk.

Acceptable trunk armoring materials shall include two by four (2x4) wood cladding, mounted with wire or metal strapping, or when duration of construction activities is less than three months, slotted corrugated plastic pipe, mounted with duct tape. Eight (8) once untreated burlap shall be used to wrap the tree trunk prior to installation of cladding.

Alternative armoring methods or materials may be acceptable if approved by the Engineer.

The height of tree trunk cladding shall be measured from the base of the tree (including root flare) to the bottom of the first branch, or to a height of eight (8) feet, or as may be required by the Engineer.

METHODS OF WORK

Prior to construction activities, the Engineer, Contractor, and the Arborist (if item is included in the contract), shall review trees noted on the Drawings to be protected. Final decision and selection of trees to be armored and/or pruned shall be per the Engineer.

Care shall be taken to avoid damage to the bark during installation and removal of armoring. Trunk armoring shall be maintained such that it is effective for as long as required or replaced when materials are found to be damaged or ineffective, as determined by the Engineer. Replacement, if required, shall be incidental to the work. Armoring shall be removed immediately upon completion of work activities adjacent to the protected tree(s).

ITEM 102.511 (Continued)

Pruning of limbs shall conform to the techniques and standards of the most recent ANSI A300 standards.

DAMAGES OR LOSS

If trees designated for protection under this item are damaged, including root damage from unapproved trespassing onto the root zone, the Contractor shall, at his own expense, secure the services of an Arborist. The Arborist shall be approved by MassDOT.

If, based on the recommendation of the Arborist, the Engineer determines that damages can be remedied by corrective measures, such as repairing trunk or limb injury; soil compaction remediation; pruning; soil injection fertilization; and/or watering; the damage shall be repaired as soon as possible, within the appropriate season for such work and according to industry standards.

If, based on the recommendation of the Arborist, the Engineer determines that damages are irreparable, or that the damages are such that the tree is sufficiently compromised to pose a future safety hazard, the tree shall be removed. Tree removal shall include cleanup of all wood, grinding of the stump to a depth sufficient to plant a replacement tree or plant, removal of all chips from the stump site, and filling the resulting hole with topsoil. Such tree removal(s), grinding, debris removal, and topsoil filling, shall be at the Contractor's expense.

Tree removal from improper or inadequate tree protection shall result in the Engineer assessing the Contractor monetary damages consistent with industry standards for assessed value and/or replacement.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Item 102.511 will be measured and paid at the contract unit price per EACH tree to be armored and pruned. This will include full compensation for all labor, equipment, materials, and incidentals for the satisfactory completion of the work and the subsequent removal and satisfactory disposal of the protective materials upon completion of the contract or as required by the Engineer.

Payment for work under this item will be scheduled as follows:

- 40% of the value shall be paid upon installation of trunk armoring and completion of pruning work, if required.
- 60% of the value shall be paid at the end of construction operations that would potentially damage the tree and after protection materials have been removed and properly disposed of by the Contractor. In the event of repairable damages, payment shall be made after the completion of remediation measures.

No separate payment will be made for costs of remedial actions, including Arborist services, tree removal, but all costs in connection therewith shall be included in the Contract unit price bid.

Tree damages assessed, due to lack of or improper tree and plant protective measures being taken, shall be deducted from the contract price of the work.

ITEM 102.521**TREE AND PLANT PROTECTION FENCE****FOOT**

The work under this Item shall conform to the relevant provisions of Subsections 644 and 771 of the Standard Specifications and the following:

Work under this item shall consist of furnishing, installing, and maintaining tree and plant protection fence(s) in a vertical and taut position; removing and resetting fencing as may be required; and final removal of protection fence(s) at the completion of construction activities, or as otherwise required by the Engineer.

The purpose of the fencing is to signify a construction work-free zone and physical barrier, thereby preventing damage to tree roots, tree trunks, soil, and all other vegetation within this delineated Tree and Plant Protection Zone (TPPZ), as shown on the Drawings, as required by the Engineer, and as described herein.

Protection shall be for the duration of the construction activities unless otherwise required by the Engineer.

MATERIALS

Tree and plant protection fence(s) shall provide a minimum forty-eight (48) inch tall barrier, that remains vertical and taut. The Fence shall be orange plastic safety fence (recommended where high visibility is necessary), or wooden snow fencing, or other approved material. Posts and anchoring materials shall be incidental to the work.

Per requirements of the Engineer, additional posts, deeper post depths, and/or additional attachments shall be used if the fabric or fence sags, leans or otherwise is not providing visible or physical protection to the TPPZ.

REFERENCES

If requested, the Contractor shall provide to the Engineer one copy of the American National Standards Institute (ANSI) A300 Standard Practices for Tree, Shrub, and Other Woody Plant Maintenance Part 1, Pruning and Part 5, Construction Management Standard. Provision of reference shall be incidental to this item.

Establishment of the TPPZ

Fencing shall be used to delineate and establish the TPPZ, adjacent to construction areas, staging areas, stockpile areas, as shown on the Drawings, and/or as required by the Engineer.

Fencing shall be located as close to the work zone limit and as far from tree trunk(s) and plants as possible to maximize the area to be protected. Fence shall run parallel and adjacent to construction activity to create a barrier between the work zone and the root zone or designated limit of plants and soils to be protected.

ITEM 102.521 (Continued)

When construction activities surround (or have the potential to surround) trees or plants to be protected, a circular enclosure shall be used. In these instances, the TPPZ limit shall be the drip line of each tree or as close as possible to the drip line, and/or as shown on the Drawings. The drip line is defined as the outermost limit of tree canopy.

The Contractor shall not engage in any construction activity within the TPPZ without the approval of the Engineer. Activities may include operating, moving, or storing equipment, supplies, or materials; and locating temporary facilities, including trailers or portable toilets. Accessing or traversing the TPPZ shall not be permitted.

METHOD OF WORK

TPPZ fencing shall be installed prior to any construction work or staging activities. Fence(s) shall be repositioned where and as necessary for optimum tree and plant protection. Repositioning shall be incidental to this item. TPPZ fencing shall not be moved without prior approval by the Engineer.

The TPPZ shall be protected at all times from compaction of the soil; damage of any kind to trunks, bark, branches, leaves, and roots of all plants; and contamination of the soil with construction materials, debris, silt, fuels, oils, and any chemicals substance.

After construction activities are completed, or when required by the Engineer, fencing, stakes, and other anchoring materials, if any, shall be removed and disposed off-site by the Contractor.

REQUIRED WORK WITHIN THE TPPZ

In the event that grading, trenching, utility work, or storage is unavoidable within the TPPZ, the Engineer shall be notified. Measures may be required for tree protection and preservation, including air spading; the use of six (6) inch depth of wood chips or approved matting for root protection; pruning of branches; and/or trunk protection. These protection measures shall be paid under applicable contract items.

Landscaping work specified within the TPPZ shall be accomplished by hand tools. Where handwork is not feasible, with permission of the Engineer, work shall be conducted with the smallest mechanized equipment necessary.

TREE AND PLANT INJURY OR LOSS

If the TPPZ is encroached by construction activity without approval, at the discretion of the Engineer, the Contractor may be required to provide a more durable barrier (e.g., Jersey Barriers, chain link fence (if not already in use) to secure the area. Costs of furnishing and installing additional or more durable barrier(s) shall be borne by the Contractor.

In such cases of encroachment, soils shall be considered compacted and tree root injury will be assumed. Action shall be taken as specified below.

ITEM 102.521 (Continued)

In the event that trees designated for protection under this item are injured, including root injury from unapproved trespassing onto the root zone, the Contractor shall, at his own expense, secure the services of an Arborist, described under Item 102.55. The Arborist shall be approved by MassDOT.

In the event of spills, compaction or injury, the Contractor shall take corrective action immediately using methods approved by the Engineer, in coordination with the Arborist.

If, based on the recommendations of the Arborist, the Engineer determines that injuries can be remedied by corrective measures, such as repairing trunk or limb injury, soil compaction remediation, pruning, and/or watering; the injury shall be repaired as soon as possible, within the appropriate season for such work, and according to industry standards.

If, based on the recommendations of the Arborist, the Engineer determines that injuries are irreparable, or that the injuries are such that the tree is sufficiently compromised to pose a future safety hazard, the tree shall be removed. Tree removal shall include cleanup of all wood, grinding of the stump to a depth sufficient to plant a replacement tree or plant, removal of all chips from the stump site, and filling the resulting hole with topsoil. Such tree removal(s), grinding, debris removal, and filling, shall be at the Contractor's expense.

Tree removal from improper or inadequate protection of the TPPZ shall result in the Engineer assessing the Contractor monetary damages consistent with industry standards for assessed value and/or replacement.

Shrubs removals from improper or inadequate protection of the TPPZ shall be replaced with plants of similar species and equal size or the largest size plants reasonably available. The Engineer shall approve the size, quality, and quantity of the replacement plant(s). Each replacement shall include a minimum of one year of watering and establishment care, specified under Subsection 771.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Tree and Plant Protection Fence will be measured by the FOOT, complete in place, by the length along the top of the fence.

Tree and plant protection fence will be paid for under the contract unit price per FOOT, complete in place and shall include all materials, labor, and equipment required to furnish, install, anchor, maintain, and remove the fence upon completion, as described herein. Posts, temporary footings, anchoring and removal upon completion, shall be incidental to this item.

No separate payment will be made for costs of remedial actions, including addition of more durable barriers, Arborist services, tree or plant removal, shrub replacement and establishment, but all costs in connection therewith shall be included in the Contract unit price bid.

Tree damages assessed, due to lack of or improper tree and plant protective measures being taken, shall be deducted from the contract price of the work.

ITEM 102.521 (Continued)

Payment for work under this item will be scheduled as follows:

- Forty (40) percent of the value payment will be made upon installation of fencing.
- Sixty (60) percent of the value payment will be made when fencing materials have been maintained to function as specified, for the intended duration, and removed and disposed off-site at the completion of protection measure requirement.

<u>ITEM 107.971</u>	<u>STRUCTURAL STEEL REPAIR - STRINGER REPLACEMENT</u>	<u>POUND</u>
<u>ITEM 107.972</u>	<u>STRUCTURAL STEEL REPAIR - STRINGER STUBS</u>	<u>POUND</u>
<u>ITEM 107.973</u>	<u>STRUCTURAL STEEL REPAIR - SIDEWALK STRINGER SW1</u>	<u>POUND</u>
<u>ITEM 107.974</u>	<u>STRUCTURAL STEEL REPAIR - SIDEWALK STRINGER SW2</u>	<u>POUND</u>
<u>ITEM 107.975</u>	<u>STRUCTURAL STEEL REPAIR - SIDEWALK STRINGER SW3</u>	<u>POUND</u>
<u>ITEM 107.976</u>	<u>STRUCTURAL STEEL - REPAIRS</u>	<u>POUND</u>

The work under these Items shall conform to the relevant provisions of Subsection 960 of the Standard Specifications and the following:

DESCRIPTION

The work shall include, but not be limited to, the replacement and the repair of elements of the bridge structure as shown on the plans or as directed by the Engineer. Included under these items will be the removal and replacement of rivets with high strength bolts and the removal and legal disposal of the deteriorated steel necessary to make repairs. Work shall also include welding, grinding and non-destructive testing (PT, MT, UT) and any other work that may be necessary to complete the specified structural steel repairs.

The handling, removing, disposing and/or recycling of existing structural steel shall be included under these respective items and shall be in accordance with the "GENERAL REQUIREMENTS FOR WORK INVOLVING PAINTED STEEL", included herein these Special Provisions.

MATERIALS

All structural steel required to complete the repairs shall be new and shall conform to AASHTO M270 Grade 50 as specified on the plans.

All bolts shall be high strength bolts meeting the requirements of ASTM F3125 Standard Specification for High Strength Bolts for Structural Steel Joints, unless otherwise noted. Connections shall be slip critical (Class B) contact surface connections unless otherwise noted. Nuts shall conform to AASHTO M291 (ASTM A 563), Standard Specification for Carbon and Alloy Steel Nuts. Washers shall conform to AASHTO M293 (ASTM F 436), Standard Specification for Hardened Steel Washers.

Epoxy Paste for structural steel repairs shall be a solvent free, moisture tolerant, epoxy paste adhesive system, and have a minimum compressive strength of 8,900 psi. The epoxy paste shall be developed specifically for filling, smoothing, sealing, or fairing applications on metals. The paste shall be applied in strict accordance with the manufacturer's latest written instructions.

An acceptable product shall be ITW Philadelphia Resins Repair Compound manufactured by ITW Philadelphia Resins, Sikadur 31, Hi-Mod Gel manufactured by Sika Corporation; #1101 Epoxy Paste Bonding Adhesive manufactured by Fibre Glast Developments Corp or an approved equal.

ITEMS 107.971 through 107.976 (Continued)**CONSTRUCTION METHODS**

Repair locations will be verified by the Engineer after the repair area has been cleaned and primed. After inspection, the Engineer may adjust the repair locations as conditions warrant.

The Contractor shall furnish and install new beams, plates and angles as required on the existing members, as shown on the plans.

The Contractor shall note that certain repair locations may have obstacles that are in conflict with the work that is to be performed. Work required to move, remove, or replace any obstacles interfering with the steel repair work, shall be performed with no additional compensation, and shall be deemed incidental to the unit price bid for this Item.

The Contractor shall provide the Engineer safe access platforms and support to work repair areas for pre, interim and final inspections of the repairs. This support will include the necessary traffic controls to install and remove the access support platforms and lighting as required. The traffic control and any required lighting will be considered incidental to this Item.

Existing steel within 6 inches of repairs shall be cleaned prior to removal in accordance with the requirements set forth in "GENERAL REQUIREMENTS FOR WORK INVOLVING PAINTED STEEL", included elsewhere in these Special Provisions.

New steel shall conform to AASHTO M270 Grade 50 and shall be shop coated prior to installation and shall be painted in accordance with Section 960. Cleaning and painting of existing structural steel shall be provided for under Item 961.201.

The following repairs shall be in accordance with the details shown on the plans and shall be located as shown on the plans or as directed by the Engineer:

Structural Steel Repair – Roadway Stringer Replacement

Existing deteriorated steel roadway stringers shall be removed and replaced with new steel roadway stringers at locations as shown on the plans or as directed by the Engineer. The work under this item will include the replacement of existing connection angles, shelf angles and replacement of existing rivets or bolts at the stringer/floorbeam connections with HS bolts, as indicated on the plans to complete the stringer replacement. The Contractor shall be aware that HS bolts installed into existing rivet holes may require reaming.

Rivets for stringer replacement shall be removed in such a fashion as to not damage adjacent structural steel to remain. The existing rivet hole shall be reamed out as required to allow for the installation of the proposed diameter high strength bolt, nut and washer.

ITEMS 107.971 through 107.976 (Continued)**Structural Steel – Stub Stringer Replacement**

Existing deteriorated steel stub stringers or short stringers shall be removed and replaced in kind with new steel stub or short stringers at locations as shown on the plans or as directed by the Engineer. The work under this item shall also include the replacement of existing connection angles and plates, and replacement of existing rivets and/or bolts that attach to the stringers with HS bolts, as indicated on the plans to complete the stringer replacement. The Contractor shall be aware that HS bolts installed into existing rivet holes may require reaming.

Rivets for stringer replacement shall be removed in such a fashion as to not damage adjacent structural steel to remain. The existing rivet hole shall be reamed out as required to allow for the installation of the proposed diameter high strength bolt, nut and washer.

Structural Steel Repair – Sidewalk Stringer SW1, SW2 and SW3 Replacement

Existing deteriorated steel sidewalk stringers SW1, SW2 and SW3 shall be removed and replaced with new steel stringers at locations as shown on the plans or as directed by the Engineer. The work shall also include the temporary detachment and/or removal of existing horizontal bracing and diaphragms necessary to install the new stringers. The Contractor shall not remove the bracing until he/she is ready to install the new stringers. The work under this item shall also include the replacement of existing connection angles and plates, and replacement of existing rivets and/or bolts that attach to the stringers with HS bolts, as indicated on the plans, to complete the sidewalk stringer replacement. The Contractor shall be aware that HS bolts installed into existing rivet holes may require reaming.

Rivets for sidewalk stringer replacement shall be removed in such a fashion as to not damage adjacent structural steel to remain. The existing rivet hole shall be reamed out as required to allow for the installation of the proposed diameter high strength bolt, nut and washer.

Structural Steel - Repairs

Structural Steel Repairs shall consist of the removal and replacement of a) lateral bracing connection plates, angles and shapes; b) floorbeam web and bottom flange repairs; c) replacement of top flange angles at cantilever sidewalk support brackets; all as indicated on the plans or as directed by the Engineer. The replacement of existing rivets with HS bolts associated with the replacement with these repairs shall be considered as included under the work under this item.

Rivets for structural steel - repairs shall be removed in such a fashion as to not damage adjacent structural steel to remain. The existing rivet hole shall be reamed out as required to allow for the installation of the proposed diameter high strength bolt, nut and washer.

ITEMS 107.971 through 107.976 (Continued)**Weld Repairs**

All welding and nondestructive testing shall conform to the latest edition, as of the bid opening date, of the ANSI/AASHTO/AWS D1.5 Bridge Welding Code. Welding Procedure Specifications (WPS) and Procedure Qualification Records (PQR) shall be approved by the Engineer prior to the start of welding. All welders shall be certified by the Department. All technicians performing nondestructive testing shall be approved by the Engineer. Magnetic particle testing may be by the yoke or prod method. When the prod method is used, aluminum prods shall be used on all steel with a minimum yield strength of 345 MPa (50 ksi) or greater. Arc strikes shall be removed. Excessive arcing will be cause for the removal of the technician from the job at the Contractor's expense. When the yoke method is used, the yoke shall have a lifting force of 178 Newtons (40 lbs.) when using direct current and 45 Newtons (10 lbs.) when using alternating current.

Welding shall be done by the shielded metal arc (SMAW) or flux cored arc (FCAW) welding processes. If FCAW is used, a procedure qualification test must also be performed and submitted for approval with the WPS. Notification shall be given to the Engineer sufficiently in advance of performing the work to permit the scheduling of certified welding inspectors by the Department. Welding shall not be permitted without a Department inspector present.

Electrodes shall be low hydrogen and purchased in hermetically sealed containers. Immediately upon removal from the hermetically sealed container, electrodes shall be placed in an oven and stored continuously at 120°C (250°F) minimum until used. Electrodes exposed to the atmosphere for times exceeding the table below, shall be discarded.

Permissible
Atmospheric Exposure

Electrode	Hours
AWS A5.1 E7018	4 max
AWS A5-5 E70XX-X E80XX-X	4 max 2 max

Welders shall possess current certifications issued by the Department. Welders shall be qualified for all positions in unlimited thickness.

Preheat and interpass temperature controls are contiguous operation and shall not be interrupted until complete. The specified temperature controls are designated to reduce the possibility of hardening of the weld or heat affected zone due to unacceptable cooling rates. In addition, the elevated temperatures are specified to permit the diffusion of hydrogen that may inadvertently be trapped in the weld metal.

ITEMS 107.971 through 107.976 (Continued)

The minimum preheat and interpass temperature of the steel shall conform to the table below. The specified preheat and interpass temperature shall be maintained for a distance of 75 mm minimum in all directions from the repair areas. Temperature monitoring shall be done using crayons, direct reading thermometers or equally accurate devices.

MINIMUM PREHEAT AND INTERPASS TEMPERATURE

Base Metal	Thickness of Thickest Part at Point of Welding			
	Up to 3/4"	Over 3/4" to 1 1/2"	Over 1 1/2" to 2 1/2"	Over 2 1/2"
M270 Gr. 36	38°C (100°F)	66°C (150°F)	93°C (200°F)	121°C (250°F)
M270 Gr. 50	38°C (100°F)	66°C (150°F)	93°C (200°F)	121°C (250°F)
M270 Gr. 50W	38°C (100°F)	93°C (200°F)	121°C (250°F)	149°C (300°F)

Aborted weld starts or arc strikes shall be removed by grinding before continuing. Arc strikes on the base metal shall be removed.

Welding shall not be done when the ambient air temperature in the vicinity of the weld is below -18°C (0°F). Welding may be performed if supplemental heat and protection from the elements are sufficient to maintain a temperature above -18°C (0°F). Welding shall not be performed in the rain unless the area to be welded is adequately protected from the weather. Steel that is wet shall be completely dried by preheating prior to welding.

METHOD OF MEASUREMENT

Item 107.971 will be measured for payment by the unit pound (LB) of structural steel provided for replacement of existing stringer, shelf angles, connection angles and as indicated on the plans. Removal of existing steel to be replaced shall be considered incidental to the work for which it pertains. Replacement of existing rivets with HS bolts, will not be measured separately, but will be considered as included in the unit price of structural steel replaced. Temporary support required for installation will not be measured separately for payment but will be considered included under the unit price of this item. Replacement of rivets with high strength bolts required to make or facilitate structural steel repairs and Epoxy Paste required for structural repairs will not be measured separately but will be considered included under this item for payment.

ITEMS 107.971 through 107.976 (Continued)

Item 107.972 will be measured for payment by the unit pound (LB) of structural steel provided for replacement of stub stringers, existing plates, and as indicated on the plans. Removal of existing steel to be replaced shall be considered incidental to the work for which it pertains. Replacement of existing rivets with HS bolts, will not be measured separately, but will be considered as included in the unit price of structural steel replaced. Temporary support required for installation will not be measured separately for payment but will be considered included under the unit price of this item. Replacement of rivets with high strength bolts required to make or facilitate structural steel repairs and Epoxy Paste required for structural repairs will not be measured separately but will be considered included under this item for payment.

Items 107.973 through 107.975 will be measured for payment by the unit pound (LB) of structural steel provided for proposed stringer, replacement of existing stringers, existing plates, proposed plates and as indicated on the plans, including temporary detachment and/or removal of existing horizontal bracing and diaphragms necessary to install the new stringers. Removal of existing steel to be replaced will be considered incidental to the work for which it pertains. Replacement of existing rivets with HS bolts, will not be measured separately, but will be considered as included in the unit price of structural steel replaced. Temporary support and/or removal and reinstallation of steel bracing and their connection plates required for installation will not be measured separately for payment but will be considered included under the unit price of their items. Replacement of rivets with high strength bolts required to make or facilitate structural steel repairs and Epoxy Paste required for structural repairs will not be measured separately but will be considered included under the respective items for payment.

Items 107.976 will be measured for payment by the unit pound (LB) of structural steel provided for removal and replacement of a) lateral bracing, splice plates, tie plates, connection plates, angles, channels, and shapes; b) floorbeam web and bottom flange repairs; c) replacement of top flange angles at cantilever sidewalk support brackets; all as indicated on the plans or as required by the Engineer. Removal of existing steel to be replaced will be considered incidental to the work for which it pertains. Replacement of existing rivets with HS bolts, will not be measured separately, but will be considered as included in the unit price of structural steel replaced. Temporary support and/or removal and reinstallation of steel bracing and their connection plates required for installation will not be measured separately for payment but will be considered included under the unit price of this item. Replacement of rivets with high strength bolts required to make or facilitate structural steel repairs and Epoxy Paste required for structural repairs will not be measured separately but will be considered included under this item for payment.

ITEMS 107.971 through 107.976 (Continued)**BASIS OF PAYMENT**

Item 107.971 will be paid at the contract unit price per pound of new structural steel used to replace deteriorated steel, which price shall include bolts and nuts, permanent washers, labor, equipment, materials, scaffolding, submittal preparation, , field inspection and all incidental costs required to remove existing steel and complete the work.

Item 107.972 will be paid at the contract unit price per pound of new structural steel used to replace deteriorated steel which shall include bolts and nuts, permanent washers, labor, equipment, materials, scaffolding, submittal preparation, , field inspection and all incidental costs required to remove existing steel and complete the work.

Item 107.973 will be paid at the contract unit price per pound of new structural steel used to replace deteriorated steel which shall include bolts and nuts, permanent washers, labor, equipment, materials, scaffolding, submittal preparation, , field inspection and all incidental costs required to remove and repair existing steel and complete the work.

Item 107.974 will be paid at the contract unit price per pound of new structural steel used to replace deteriorated steel which shall include bolts and nuts, permanent washers, labor, equipment, materials, scaffolding, submittal preparation, , field inspection and all incidental costs required to remove and repair existing steel and complete the work.

Item 107.975 will be paid at the contract unit price per pound of new structural steel which shall include bolts and nuts, permanent washers, labor, equipment, materials, scaffolding, submittal preparation, , field inspection and all incidental costs required to remove and repair existing steel and complete the work.

Item 107.976 will be paid at the contract unit price per pound of new structural steel used to replace deteriorated steel or to make repairs which shall include bolts and nuts, permanent washers, labor. equipment, materials, scaffolding, submittal preparation, , field inspection and all incidental costs required to remove and repair existing steel and complete the work.

Any rivets replaced with bolts as a part of the items above will not be paid under Item 107.980 and will be considered incidental to the structural steel repair or replacement.

ITEM 107.980**RIVET REPLACEMENTS WITH
HIGH STRENGTH BOLTS****EACH**

The work under this item shall conform to the relevant provisions of Subsection 960 of the Standard Specifications and the following:

This item is intended for the replacement of deteriorated rivets, with greater than or equal to 50% section loss to rivet heads, with high strength bolts at truss, floorbeam and/or stringer connections that are NOT associated with steel repairs Items 107.971 thru 107.976. Locations of deteriorated rivets requiring replacement are as indicated on the plans or as required by the Engineer. Replacement of rivets with high strength bolts required to make or facilitate structural steel repairs under Items 107.971 thru 107.976, are not included under this item, but are considered incidental to the respective structural steel repair item.

The work under this item shall be in accordance with the “GENERAL REQUIREMENTS FOR WORK INVOLVING PAINTED STEEL”, included herein these Special Provisions.

Rivets shall be removed in such a fashion as to not damage adjacent structural steel. The existing rivet hole shall be reamed out as required to allow for the installation of the proposed diameter high strength bolt, nut and washer conforming to ASTM F3125, ASTM A563, and ASTM F436.

Cleaning and painting of structural steel required for rivet replacement shall be in accordance with the relevant provisions of Item 961.201.

METHOD OF MEASUREMENT

Item 107.980 will be measured for payment by the unit each, for each rivet replaced with a high strength bolt.

BASIS OF PAYMENT

Item 107.980 will be paid for at the contract unit price per each, which price shall include all labor, materials, equipment, and incidental costs required to complete the work.

ITEM 114.1**DEMOLITION OF SUPERSTRUCTURE OF
BRIDGE NO. C-21-002 (OJJ)****LUMP SUM**

The work under this item shall conform to the relevant provisions of Subsection 112 of the Standard Specifications and the following:

The work under this Item includes the removal and satisfactory disposal of existing superstructure materials above the level of the top of existing stringers and floorbeams of Bridge No. C-21-002. Existing materials to be removed and disposed of under this item include, but are not limited to, the following:

- 1) All existing concrete deck slab and bituminous concrete supported by the existing roadway stringers and floorbeams.
- 2) Existing concrete filled metal grid sidewalk on the bridge.
- 3) Existing metal channels, plates and angles that make up the existing bridge curbing.
- 4) Existing steel plates and shapes that make up existing roadway deck joints.
- 5) Concrete removal at abutment backwalls and tops of wingwalls for backwall and coping modifications.

Excavation behind the existing backwall of bridge abutments and wingwalls, necessary to facilitate wingwall and abutment modifications and construction of approach slabs, as shown on the Contract drawings, or for the placement of membrane waterproofing and waterproofing protective course, shall be paid for under Item 140, Bridge Excavation.

The Contractor shall take care not to damage the existing structural steel to remain and the remaining concrete at each abutment and wingwall. Any of the above items damaged, or otherwise made unsatisfactory for continued use by the Contractor's operations, shall be replaced by the contractor's own expense. In no event shall any pneumatic or power hammers used for the removal of concrete over steel beams be larger than the chipping hammer type of the 25 lb. class.

Where existing steel curbing or railings are attached to existing truss members to remain, the Contractor shall prevent damage to the existing steel to remain when removing these items. At locations requiring cutting of portions of existing steel plates and angles to remain, the aforementioned cut edges of plates and angles shall be ground smooth. All grinding shall be done in a longitudinal direction.

The work under this Item also includes all saw cuts in concrete where indicated on the plans in accordance with the provisions of Subsection 482 of the Standard Specifications.

Removal of steel under Items 107.971 through 107.976, removal of rivets under Item 107.980 and excavation of concrete for repairs under Item 905. are not included under this item.

ITEM 114.1 (Continued)

The Contractor shall thoroughly clean the bridge seats and bearings of all debris and other material of a corrosive nature.

The Contractor is responsible for preventing any debris resulting from demolition, excavation or construction from falling into the river below. The Contractor shall make adequate provisions, including the erection of temporary protective shielding, to prevent debris from falling into the river and prevent personnel from injury due to excavation operations and debris removal. Said shielding shall be considered incidental to this item. The shielding shall be designed by a Professional Structural Engineer registered in Massachusetts and shall be submitted to the Engineer for approval. Prior to any excavation, the Engineer must approve the complete design submittal (calculations, plans, and detail drawings) for the temporary shielding in writing. Any work or materials ordered for the work involved prior to the approval of the design calculations, plans, and detail drawings shall be at the Contractor's own risk.

The Contractor shall take necessary precautions to protect existing utilities from damage during his operations. Additionally, he shall coordinate the removal and/or relocation of existing utilities with their owners throughout the demolition phase.

No debris, tools or incidental equipment of any kind will be permitted to fall into areas within the vicinity of the river. Any material that accidentally falls into the river shall be removed immediately.

All materials removed under Item 114.1 shall become the property of the Contractor and shall be removed from the job site, unless such materials are designated to be reused in the proposed construction.

The Contractor shall prepare and submit a plan indicating the proposed demolition procedures and methods to be used including equipment, tools, devices, crane capacity and location, schedule of operations, methods of utility protection, methods of preventing any debris resulting from demolition, excavation, or construction from falling into the river, etc., to the Engineer for approval. The requirements for equipment and all procedures utilized shall be in conformance with the intent of Subsection 960.61.B: Erection of the Standard Specifications for Highways and Bridges.

The demolition procedures and any necessary calculations and drawings shall be signed and stamped by a Professional Structural Engineer registered in Massachusetts certifying that all existing structural members are suitably braced and supported throughout the demolition process. Work under this item may not commence until the Engineer has given written approval

During the prosecution of this work, the Engineer may reject use of any method or equipment which causes undue vibration or possible damage to portions of the remaining structure. The Contractor is cautioned to use extreme care so as not to damage portions of the existing structure to remain. Any damage done to portions to remain in the bridge shall be replaced or repaired to the satisfaction of the Engineer, by the Contractor at no cost to the Commonwealth.

ITEM 114.1 (Continued)

The Contractor shall take care not to damage exposed reinforcing steel or any remaining concrete or any other part of the structure that is to remain. Any of the above items damaged, or otherwise made unsatisfactory for continued use by the Contractor's operations, shall be replaced by the Contractor at his own expense, as directed by the Engineer.

After the concrete has been removed, all exposed reinforcing steel to remain shall be cleaned by mechanical cleaning and then high pressure washing with water that does not contain detergents or any bond inhibiting chemicals. Where active corrosion has occurred that would inhibit bonding, abrasive blast steel to white metal finish prior to placement of concrete. All costs in connection with such work shall be considered as included in the bid price for this item and no additional compensation will be allowed.

Work under this item includes selective deleading of the structural components which are to be disassembled, burned or cut to allow subsequent removal. Lead removal for demolition purposes will be confined only to the immediate area where the removal of welds, removal of mechanical connections, cutting or burning are to be performed.

The Contractor is required to evaluate and include in his or her costs for the proper handling, disposal and/or recycling of materials suspected to contain lead that are generated during demolition of the bridge, and must conform with all Federal, State and local regulations.

The handling, removing, disposing and/or recycling of all lead-based painted materials shall conform to the "General Requirements For Work Involving Painted Steel" that is included elsewhere in these Special Provisions.

The work shall also include cleaning and removal of debris and pigeon waste that have collected on the steel superstructure and bridge abutment seats. The horizontal surfaces of trusses, stringers and floorbeams and abutment seats shall be swept clean of all debris, which may include but is not limited to sand, gravel, bituminous material and bird droppings. This material shall be removed and disposed of as construction waste unless otherwise determined by the required testing outlined under Subsection 961.68, "Handling of Hazardous Waste and Reporting Release Programs".

BASIS OF PAYMENT

Item 114.1 will be paid for at the contract lump sum price for the portions of the bridge superstructure and portions of the bridge substructure to be demolished, which price shall include full compensation for all labor, equipment, materials, and incidental costs required to complete the work, including field survey, design of shielding and demolition procedures including the services of a Professional Structural Engineer, deleading and as described herein.

ITEM 127.12**REINFORCED CONCRETE EXCAVATION
FOR REPAIRS****CUBIC YARD**

The work under this item includes the removal of deteriorated and/or spalled concrete, as may be required, for repairs of reinforced concrete as shown on the Plans and as required by the Engineer.

Existing deteriorated concrete shall be removed to the limits of sound concrete as required by the Engineer and as shown on the Plans. If sound concrete has been reached at more than 2" from the outside surface, but less than 1" clearance exists between the sound concrete and the inside surface of exposed reinforcing steel, enough sound concrete as is necessary to achieve this 1" minimum clearance shall be removed. The removal of this sound concrete shall also be included for payment under Item 127.12.

The Contractor shall use Pneumatic or Power Hammers no larger than the chipping hammer type of the 25 lb. class when removing concrete specified under this item.

The Contractor shall not damage any existing reinforcing steel in areas where deteriorated or spalled concrete is being removed. Any existing reinforcing steel damaged, as a result of the Contractor's operations shall be repaired to the satisfaction of the Engineer, and at the Contractor's expense.

The Contractor shall take all measures necessary to protect pedestrian and vehicular traffic from his construction operations. No debris, tools or incidental equipment of any kind will be permitted to fall into areas where vehicular and pedestrian traffic exists. Any material that accidentally falls into such areas shall be removed immediately.

All materials removed under this item shall be removed from the job site and properly disposed. The Contractor will not be paid for the removal of any concrete beyond the limits described under this item and approved by the Engineer.

CONSTRUCTION METHODS

- A. Inspection of the Concrete Surfaces: The Contractor will perform his own investigations and will "evaluate" and mark out the surfaces of the concrete to determine the areas for repairs. Methods for evaluation shall include non-destructive methods such as visual observations and acoustic impact method using a hammer or chain drag (for horizontal surfaces only). The Contractor is referenced to ACI Report 201.1R-08 "Guide for Making a Condition Survey of Concrete in Service" and ACI Report 364.1R-19 "Guide for Evaluation of Concrete Structures Prior to Rehabilitation" in regard to evaluation methods.

Before any existing concrete is removed, the Contractor will provide the Engineer clear access to the areas designated for repair. During this time, the Engineer will perform an inspection of the areas and will approve and/or designate the areas where concrete removal and repair will be required.

ITEM 127.12 (Continued)

It shall be the responsibility of the Contractor to inform the Engineer, in writing, of the date that a structure will be available for inspection operations. Notification shall be given to the Engineer at least seven (7) days prior to the date that the area in question will be in a condition acceptable to the Engineer.

The Contractor will not be allowed to do any further repair work until all necessary inspection operations have been performed, unless given permission by the Engineer.

The Contractor will include any costs related to the allowance for this inspection in the general cost of the work.

- B. Removal of Deteriorated Concrete: All deteriorated concrete designated for removal under this item shall be removed within the limits shown on the Plans and where ordered by the Engineer. The lateral limits of each area to be repaired will be delineated by the Contractor and suitably marked and subsequently approved by the Engineer. Where several areas to be repaired are very close together, the Engineer may combine these individual repairs into a larger area. The outlines of each such area shall first be cut to a depth of 1/2 inch with an approved power-saw capable of making straight cuts. In the event that reinforcing steel is encountered within the outer 1/2 inch depth during sawing operations, the depth of sawcut shall immediately be adjusted to a shallower depth so as not to damage the steel bars. If so directed by the Engineer, sawcutting shall again be carried down to the 1/2 inch depth at other locations of repair provided reinforcing steel is not again encountered. Where over-breakage occurs resulting in a featheredge, the featheredge shall be squared up to a vertical edge in an approved manner. Where sawing is impractical, the area shall be outlined by chisel or other approved means.

The removal of deteriorated concrete shall be accomplished by pneumatic hammers approved by the Engineer. For concrete removal, the weight of pneumatic hammers shall not exceed 25 pounds. Fillets at inside corners of intersecting limit lines shall be carefully removed. After completion of concrete removal, the sides of the patch shall be vertical down to the bottom of the patch.

The minimum depth of concrete removal shall not be less than the specified minimum thickness of repair material.

Before removing concrete, the Contractor shall take adequate precautions to prevent any materials from dropping to any areas below the structure. All debris shall be promptly swept up and removed from the site. No additional compensation shall be given to clean up debris that might have fallen. All materials shall be satisfactorily disposed of by the Contractor.

ITEM 127.12 (Continued)

Where the existing reinforcing steel is damaged or deteriorated, it shall be supplemented with new reinforcing steel of the same size. Pneumatic tools shall not be placed in direct contact with reinforcing steel. Any sound reinforcing steel damaged during the concrete removal operations shall be repaired or replaced by the Contractor at his expense as directed by the Engineer. New steel shall be attached beside existing steel with a minimum splice length as indicated on the Plans, or as directed by the Engineer. The concrete shall be removed to a minimum depth of 1 inch below the reinforcing steel.

- C. Surface Preparation: Areas to be repaired must be clean, sound, and free of contaminants. All loose and deteriorated concrete shall be removed by mechanical means. Mechanically prepare the concrete substrate to obtain a surface profile of ± 0.06 inch with a new exposed aggregate surface. Area to be patched shall not be less than 1/2 inch in depth for repairs using Cementitious Mortar for Patching and 2 inches for repairs using 4000 PSI CEMENT CONCRETE.

If reinforcing steel is exposed, then clean by mechanical cleaning and then high pressure washing with water that does not contain detergents or any bond inhibiting chemicals. Where active corrosion has occurred that would inhibit bonding, abrasive blast steel to white metal finish.

After removals and edge conditioning are complete, remove bond inhibiting materials (dirt, grease, loosely bonded aggregate) by abrasion blasting or high-pressure water blasting with water that does not contain detergents or any bond inhibiting chemicals. Check the concrete surfaces after cleaning to ensure that surface is free from additional loose aggregate or that additional delaminations are not present.

Surface preparation is to be paid for under respective concrete items.

METHOD OF MEASUREMENT

Item 127.12 will be measured for payment by the Cubic Yard to the limits shown on the plans or as required by the Engineer, complete and accepted.

BASIS OF PAYMENT

Item 127.12 will be paid for at the contract unit price per Cubic Yard, which price shall include all labor, equipment, materials, and incidental costs required to complete the work.

Any sawcutting and excavation associated with this work is incidental.

ITEM 170.3**SCARIFYING AND RESHAPING
FOR INFILTRATION AREAS****SQUARE YARD**

The work under this item shall conform to the relevant provisions of Subsection 170 of the Standard Specifications, and the following:

CONSTRUCTION METHODS

The work shall include scarifying and decompacting the subgrade in areas designated for infiltration and bioretention basins, as indicated on the design plans, to restore soil porosity and permeability in compacted soils.

After rough grading and immediately prior to placing loam borrow or double-washed crushed stone, decompact and scarify all in-place subgrade soils within the limit of scarifying, as shown on design plans. Mechanically scarify to a depth of at least 4 inches, unless otherwise directed by the Engineer, using the teeth of a backhoe or other equipment capable of loosening and mixing the soil to a depth of at least 4 inches.

After the subgrade soils have been loosened, remove any stones or debris 6" or greater and dispose of off the project site. Do not bury large stones or debris.

Effective decompaction is achieved only when the soil is moderately dry to moderately moist. Scarifying should not be performed when the moisture content is less than 60% nor more than 100% of optimum moisture content as determined by ASSHTO T-99. Apply water, if necessary, or allow the soil to dry to bring soil within the acceptable moisture content range.

Subgrade preparation shall also conform with seeding Item 765.454, soil Item 751.1, and impervious barrier Item 402.5.

METHOD OF MEASUREMENT

Item 170.3 will be measured for payment by the Square Yard, complete in place.

BASIS FOR PAYMENT

Item 170.3 will be paid for at the Contract unit price per Square Yard, which price shall include all labor, materials, equipment, and incidental costs required to complete the work.

ITEM 180.01 ENVIRONMENTAL HEALTH AND SAFETY PROGRAM LUMP SUM

The work shall consist of ensuring the health and safety of the Contractor's employees and subcontracting personnel, the Engineer, their representatives, the environment, and public welfare from any on-site chemical contamination present in air, soil, water and sediment.

The Contractor shall prepare and implement a site-specific Environmental Health and Safety Plan (EHASP) which has been approved and stamped by a Certified Industrial Hygienist (CIH) and includes the preparer's name and work experience. The EHASP shall include appropriate components required by OSHA Standard 29 CFR 1910.120(b) and the Massachusetts Contingency plan (MCP) 310 CMR 40.0018 and must comply with all applicable state and federal laws, regulations, standards and guidelines, and provide a degree of protection and training appropriate for implementation on the project. The EHASP shall be a dynamic document with provision for change to reflect new information, new practices or procedures, changing site environmental conditions or other situations which may affect site workers and the public. The EHASP shall be developed and implemented independently from the standard construction HASP required to work on all MassDOT construction projects.

Health and safety procedures provided by the Contractor shall comply with all the appropriate regulations that address employee working conditions, including but not limited to standards established by OSHA and National Institute for Occupational Safety and Health (NIOSH). Equipment used for the purpose of health and safety shall be approved by and meet pertinent standards and specifications of the appropriate regulatory agencies.

A copy of the most up-to-date version of the EHASP shall be maintained on-site at all times by the Contractor. The on-site copy shall contain the signature of the Engineer and each on-site employee of the MassDOT, Contractor, and Subcontractors involved with on-site activities. The employee's signature on the EHASP shall be deemed prima facie evidence that the employee has read and understands the plan. Updated copies of signature sheets shall be submitted to the Engineer.

The EHASP shall specify a Contractor Site Safety and Health Officer responsible for implementation of the EHASP and to oversee all construction activities, including handling, storage, sampling and transport, which require contact with or exposure to potentially hazardous materials.

The level of protection, required to ensure the health and safety of on-site personnel will be stipulated in the EHASP. The Site Safety and Health Officer shall implement the EHASP based on changing site and weather conditions, type of operation or activity, chemical compounds identified on-site, concentration of the chemicals, air monitoring data, physical state of the hazardous materials, potential duration of exposure to hazardous materials, dexterity required to perform work, decontamination procedures, necessary personnel and type of equipment to be utilized.

ITEM 180.01 (Continued)

During implementation of the EHASP, a daily log shall be kept by the Site Safety and Health Officer and a copy shall be provided weekly to the Engineer. This log shall be used to record a description of the weather conditions, levels of personal protection being employed, screening data and any other information relevant to on-site environmental safety conditions. The Site Safety and Health Officer shall sign and date the daily log.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Preparation and implementation of the Environmental Health and Safety Program, including the monitoring, protection and storage of all contaminated materials, as well as subsequent modifications to the EHASP, will be measured and paid for at the Lump Sum Bid Price.

Payment of 50% of the Environmental Health and Safety Program contract price will be made upon the initial acceptance of the EHASP by the Engineer. Payment of the remaining 50% of the Environmental Health and Safety Program contract price will be made upon completion of the work. The bid price shall include preparation and implementation of the EHASP as well as the cost for its enforcement by the Site Safety and Health Officer along with any necessary revisions and updates. The work of implementing the Environmental Health and Safety Program includes work involving, but not limited to, the monitoring, protection, and storage of all contaminated materials.

ITEM 180.02**PERSONAL PROTECTION LEVEL C UPGRADE****HOURL**

The work shall consist of providing appropriate personal protective equipment (PPE) for all personnel in an area either containing or suspected of containing a hazardous environment.

Contingencies for upgrading the level of protection for on-site workers will be identified in the EHASP and the Contractor shall have the capability to implement the personal protection upgrade in a timely manner. The protective equipment and its use shall be in compliance with the EHASP and all appropriate regulations and/or standards for employee working conditions.

Personal Protection Level C Upgrade will be measured and paid only upon upgrade to Level C and will be at the contract unit price, per hour, per worker, required in Level C personal protection. No payment will be made to the Contractor to provide Level D PPE.

ITEM 180.03**LICENSED SITE PROFESSIONAL SERVICES****HOUR**

Within limited areas of the project site, media (i.e. soils, sediments, surface water and/or groundwater) requiring evaluation and/or management under the Massachusetts Contingency Plan (MCP) may be encountered. A Licensed Site Professional (LSP) shall be required to provide the services necessary to comply with the requirements of the MCP. These services may include a site walk, field screening, sampling, analysis and characterization of potentially contaminated media, preparation and implementation of Immediate Response Action (IRA) Plans, Utility-Related Abatement Measure (URAM) and Release Abatement Measure (RAM) Plans, Imminent Hazard Evaluations, status reports, transmittal forms, release notification forms, risk assessments, completion statements, and related documents required pursuant to the MCP. LSP services shall also be necessary to temporarily move material generated on the project to an off-site storage location.

The name and qualifications of the LSP and all environmental technicians to be assigned to the project shall be submitted to the Engineer for approval at least four weeks prior to initial site activities. The LSP shall have a current, valid license issued by the Massachusetts Board of Registration of Hazardous Waste Site Cleanup Professionals. The LSP shall have significant experience in the oversight of MCP activities at active construction sites. Qualification packages for the LSP and each technician shall include a resume, all recent work assignments with responsibilities identified (previous 5 years), and applicable training and certifications. A list of all Notices of Noncompliance, Notice of Audit Findings and Enforcement Orders issued by the Massachusetts Department of Environmental Protection (DEP) shall be submitted for all work assignments listed for the LSP and environmental technicians. Upon approval of the LSP Qualifications, the LSP will be designated as the LSP of Record unless MassDOT designates in writing otherwise. The LSP of Record will serve as the primary point of contact for all hazardous material matters on the project.

The LSP shall evaluate soil and/or sediment with discoloration, odor, elevated field screening results, presence of petroleum liquid or sheen on the groundwater surface, or any abnormal gas or materials in the ground which are known or suspected to be oil or hazardous materials. Excavated soil and sediment which is suspected of petroleum contamination shall be field screened using the jar headspace procedures according to established DEP Guidance. All field screening equipment must be pre-approved by the Engineer. The LSP shall ensure proper on-site calibration of all field screening instrumentation.

The Engineer shall be contacted immediately when observations or any field screening results verify contamination requiring further analysis, and/or enhanced management of suspect media. Any enhanced management of contaminated soil to ensure proper stockpiling and storage is incidental to the LSP Services item. The LSP shall evaluate the need for confirmatory sampling prior to backfill in areas where contaminated material has been excavated and disposed off-site for compliance with applicable regulatory requirements. The Engineer shall approve the locations of the testing sites prior to the sampling.

ITEM 180.03 (Continued)

Contaminated media shall be handled in accordance with all applicable state and federal statutes, regulations, and policies. The LSP shall adequately evaluate contaminated media for compliance with the requirements of the MCP and Department Policies.

The Contractor and the LSP shall be aware of the reporting requirements for releases of oil and/or other hazardous material (OHM) as set forth in federal and state laws and regulations and both shall be held responsible for performing the work in accordance with all applicable Federal and State laws and regulations. The LSP shall maintain written records in a clear and concise tabular format which tracks the excavation, stockpiling, analysis and reuse/disposal of all known/suspect contaminated media. These records shall be up-to-date and submitted to the Engineer on a bi-weekly basis. The LSP shall review and summarize the laboratory data from any analyses performed on contaminated media in a tabular format and compare the results to applicable reporting thresholds. A report shall be delivered to the Engineer outlining the material sampling methods, laboratory analysis results, evaluation of applicable regulatory exemptions, reporting obligations, and proposed course of action. The laboratory report together with Chain of Custody forms for all analytical results shall be submitted to the Engineer within 14 days after completion of such analyses.

The LSP and Contractor shall be held responsible for the submission of all MCP-related documents to the Engineer at least 14 days in advance of any timeframe specified in the MCP and for the timely submission of data and tracking information as noted within this Item. All documents prepared under this Item must be reviewed and signed by the approved LSP. The Contractor and LSP shall be responsible for all fines, damages, and enforcement requirements imposed by applicable regulatory agencies for failure to meet regulatory and contract timeframes. No compensation will be provided for such fines, damages, and enforcement actions.

The Contractor and the LSP shall be aware of the reporting requirements for releases of oil and/or other hazardous material (OHM) as set forth in federal and state laws and regulations and shall both be held responsible for performing the work in accordance with all applicable Federal and State laws and regulations.

If the Contractor causes a release of OHM, the Contractor shall be responsible for assessing and remediating the release in accordance with all pertinent State and Federal regulations, including securing the services of a LSP, at his own expense.

The LSP shall coordinate all activities involving both MassDOT and the DEP through the Engineer. Any notification of release shall be approved by the Engineer before submittal to the DEP, except if an imminent hazard condition exists as defined in 309 CMR 4.03(4)(b).

ITEM 180.03 (Continued)**LABORATORY TESTING IN SUPPORT OF LSP SERVICES**

Laboratory testing provides for analytical testing in support of LSP services related to maintaining MCP compliance, such as delineating the extent and type of contamination present. Sampling and testing for disposal purposes are not included and are incidental to Items 181.11-181.14.

In order to maintain compliance with the MCP and Department Policies or other regulatory requirements, the LSP shall request approval from the Engineer to obtain samples from various locations and depths within the project area and to perform laboratory analyses on those samples. No sampling shall be conducted without prior approval from the Engineer. The samples shall be delivered to a DEP-certified laboratory using proper chain-of-custody documentation for analyses which, depending upon site conditions and suspected and/or identified contaminants of concern, may include, but are not limited to, metals, polychlorinated biphenyls (PCBs), volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), pesticides, polycyclic aromatic hydrocarbons (PAHs), extractable petroleum hydrocarbons (EPHs) and volatile petroleum hydrocarbons (VPHs). Subsequent testing, depending upon initial results, may be required for Toxicity Characteristic Leaching Procedure (TCLP) analyses (EPA Method 1311) for metals.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

LSP Services for work under this item will be measured per person, per hour of service provided by LSP, Environmental Technicians and other approved personnel. Travel time shall not be included in the billable hours.

The quantity and type of laboratory tests must be approved by the Engineer beforehand. The Contractor will be reimbursed upon satisfactory written evidence of payment. The Contractor may be required to obtain cost estimates from three DEP certified laboratories for the Engineer to choose the service provider.

LSP Services will be paid at the Contractor bid price for each hour, or fraction thereof, spent to perform the work as described above. The bid price shall be a blended rate that includes the cost of the LSP, environmental technicians and other personnel, the performance of all work tasks and field screening, including required equipment, materials and instrumentation, and production of all documentation described above. All requests for payment must be accompanied by the following information: the names of the personnel associated with the work charged under LSP Services, dates and hours worked, work conducted, including, where appropriate, locations as identified on the construction plans, and a copy of the field diary for the dates submitted.

ITEM 180.03 (Continued)

Laboratory testing will be reimbursed upon receipt of paid invoices for testing approved by the Engineer.

This item is for LSP work for compliance with the MCP and Department Policies. LSP hours and any laboratory testing related to off-site disposal of excess soil and sediment is incidental to Items 181.11-181.14 (including, but not limited to, disposal characterization, disposal package preparation, landfill acceptance, shipment paperwork preparation, field screening, and tracking).

<u>ITEM 181.11</u>	<u>DISPOSAL OF UNREGULATED SOIL</u>	<u>TON</u>
<u>ITEM 181.12</u>	<u>DISPOSAL OF REGULATED SOIL - IN-STATE</u>	<u>TON</u>
	<u>FACILITY</u>	
<u>ITEM 181.13</u>	<u>DISPOSAL OF REGULATED SOIL - OUT-OF-STATE</u>	<u>TON</u>
	<u>FACILITY</u>	
<u>ITEM 181.14</u>	<u>DISPOSAL OF HAZARDOUS WASTE</u>	<u>TON</u>

The work under these Items shall include the transportation and disposal of contaminated material excavated, or excavated and stockpiled. It shall also include the cost of any additional laboratory analyses required by a particular disposal facility beyond the standard disposal test set.

Excavation of existing subsurface materials may include the excavation of contaminated soils. The Contractor shall be responsible for the proper coordination of characterization, transport and disposal, recycling or reuse of contaminated soils. Disposal, recycling or reuse will be referred to as "disposal" for the purposes of this specification. However, regardless of the use of the term herein, there will be no compensation under these items for reuse within the project limits. The Contractor will be responsible for coordinating the activities necessary for characterization, transport and disposal of contaminated soils. Such coordination will include the Engineer and his/her designee overseeing management of contaminated materials. Contaminated soils must be disposed of in a manner appropriate for the soil classification as described below and in accordance with the applicable laws of local, state and federal authorities. The Contractor shall be responsible for identifying disposal facility (ies) licensed to accept the class of contaminated soils to be managed and assure that the facility can accept the anticipated volume of soil contemplated by the project. The Contractor shall be responsible for hiring a Licensed Site Professional (LSP) and all ancillary professional services including laboratories as needed for this work. The Contractor will be responsible for obtaining all permits, approvals, manifests, waste profiles, Bills of Lading, etc. subject to the approval of the Engineer prior to the removal of the contaminated soil from the site. The Contractor and LSP shall prepare and submit to the Engineer for approval all documents required under the Massachusetts Contingency Plan (MCP) and related laws and environmental regulations to conduct characterization, transport, and disposal of contaminated materials.

CLASSES OF CONTAMINATED SOILS

The Contractor and its LSP shall determine if soil excavated or soil to be excavated is unregulated soil or contaminated soil as defined in this section. Such materials shall be given a designation for purposes of reuse or disposal based on the criteria of the MCP. Soils and sediments which are not suitable for reuse will be given a designation for purposes of off-site disposal based on the characterization data and disposal facility license requirements. The Classes of Contaminated Soils are defined as follows:

ITEMS 181.11 through 181.14 (Continued)

UNREGULATED SOIL consists of soil, fill and dredged material with measured levels of oil and hazardous material (OHM) contamination at concentrations below the applicable Reportable Concentrations (RCs) presented in the MCP. Unregulated soil consists of material which may be reused (or otherwise disposed) as fill within the Commonwealth of Massachusetts subject to the non-degradation criteria of the MCP (310 CMR 40.0032(3), in a restricted manner, such that they are sent to a location with equal or higher concentrations of similar contaminants. Disposal areas include licensed disposal facilities, approved industrial settings in areas which will be capped or covered with pavement or loamed and seeded, and for purposes of this project should be reused as fill within the project site construction corridor whenever possible. The material cannot be placed in residential and/or environmentally sensitive (e.g. wetlands) areas. Under no circumstances shall contaminated soils be placed in an uncontaminated or less contaminated area (including the area above the groundwater table if this area shows no sign of contamination).

The Contractor shall submit to MassDOT the proposed disposal location for unregulated soils for approval. If such a disposal location is not a licensed disposal facility, the Contractor shall submit to the Engineer analytical data to characterize the disposal area sufficiently to verify that the unregulated material generated within the MassDOT construction project limits is equal to or less than the contaminant levels at the disposal site and meets the non-degradation requirements of the MCP. In addition, the Contractor shall provide written confirmation from the owner of the proposed disposal location that they have been provided with the analytical data for both the materials to be disposed as well as the disposal site characterization and that s/he agrees to accept this material. A Material Shipping Record or Bill of Lading, as appropriate, shall be used to track the off-site disposal of unregulated soil and a copy, signed by the disposal facility or property owner, shall be provided to the Engineer in order to document legal disposal of the unregulated material.

The cost of on-site disposal of unregulated soil within the project area will be considered incidental to the item of work to which it pertains.

ITEMS 181.11 through 181.14 (Continued)

REGULATED SOIL consists of materials containing measurable levels of OHM that are equal to or exceed the applicable Reportable Concentrations for the site as defined by the MCP, 310 CMR 40.0000. Regulated soil which meets the MCP reuse criteria of the applicable soil/groundwater category for this project area may be reused on site provided that it meets the appropriate geotechnical criteria established by the Engineer. Regulated Soil may be reused (as daily or intermediate cover or pre-cap contouring material) or disposed (as buried waste) at lined landfills within the Commonwealth of Massachusetts or at an unlined landfill that is approved by the Massachusetts Department of Environmental Protection (DEP) for accepting such material, in accordance with DEP Policy #COMM-97-001, or at a similar out-of-state facility. It should be noted that soils which exceed the levels and criteria for disposal at in-state landfills, as outlined in COMM-97-001, may be shipped to an in-state landfill, but require approval from the DEP Division of Solid Waste Management and receiving facility. An additional management alternative for this material is recycling into asphalt. Regulated Soils may also be recycled at a DEP approved recycling facility possessing a Class A recycling permit subject to acceptance by the facility and compliance with DEP Policy #BWSC-94-400. Regulated Soil removed from the site for disposal or treatment must be removed via an LSP approved Bill of Lading, Manifest or applicable material tracking form. This type of facility shall be approved/permitted by the State in which it operates to accept the class of contaminated soil in accordance with all applicable local, state and federal regulations.

HAZARDOUS WASTE consists of materials which must be disposed of at a facility permitted and operated in full compliance with Federal Regulation 40 CFR 260-265, Massachusetts Regulation 310 CMR 30.000, Toxic Substances Control Act (TSCA) regulations, or the equivalent regulations of other states, and all other applicable local, state, and federal regulations. All excavated materials classified as hazardous waste shall be disposed of at an out-of-state permitted facility. This facility shall be a RCRA hazardous waste or TSCA facility, or RCRA hazardous waste incinerator. This type of facility shall be approved/permitted by the State in which it operates to accept hazardous waste in accordance with all applicable local, state and federal regulations and shall be permitted to accept all contamination which may be present in the soil excavate. The Contractor shall ensure that, when needed, the facility can accept TSCA waste materials i.e. polychlorinated biphenyls (PCBs). Hazardous waste must be removed from the site for disposal or treatment via an LSP approved Manifest.

MONITORING/SAMPLING/TESTING REQUIREMENTS

The Contractor shall be responsible for monitoring, sampling and testing during and following excavation of contaminated soils to determine the specific class of contaminated material. Monitoring, sampling and testing frequency and techniques should be performed in accordance with Item 180.03 – LSP Services. Additional sampling and analysis may be necessary to meet the requirements of the disposal facility license. The cost of such additional sampling and analysis shall be included in the bid cost for the applicable disposal items. The Contractor shall obtain sufficient information to demonstrate that the contaminated soil meets the disposal criteria set by the receiving facility that will accept the material.

ITEMS 181.11 through 181.14 (Continued)

No excavated material will be permanently placed on-site or removed for off-site disposal until the results of chemical analyses have been received and the materials have been properly classified. The Contractor shall submit to the Engineer results of field and laboratory chemical analyses tests within seven days after their completion, accompanied by the classification of the material determined by the Contractor, and the intended disposition of the material. The Contractor shall submit to the Engineer for review all plans and documents relevant to LSP services, including but not limited to, all documents that must be submitted to the DEP.

WASTE TRACKING:

Copies of the fully executed Weight Slips/Bills of Lading/ Manifests/Material Shipping Records or other material tracking form received by the Contractor from each disposal facility and for each load disposed of at that facility, shall be submitted to Engineer and the Contractor's LSP within three days of receipt by the Contractor. The Contractor is responsible for preparing and submitting such documents for review and signature by the LSP or other appropriate person with signatory authority, three days in advance of transporting soil off-site. The Contractor shall furnish a form attached to each manifest or other material tracking form for all material removed off-site, certifying that the material was delivered to the site approved for the class of material. If the proposed disposition of the material is for reuse within the project construction corridor, the Contractor shall cooperate with MassDOT to obtain a suitable representative sample(s) of the material to establish its structural characteristics in order to meet the applicable structural requirements as fill for the project.

All material transported off-site shall be loaded by the Contractor into properly licensed and permitted vehicles and transported directly to the selected disposal or recycling facility and be accompanied by the applicable shipping paper. At a minimum, truck bodies must be structurally sound with sealed tail gates, and trucks shall be lined and loads covered with a liner, which shall be placed to form a continuous waterproof tarpaulin to protect the load from wind and rain.

DECONTAMINATION OF EQUIPMENT

Tools and equipment which are to be taken from and reused off site shall be decontaminated in accordance with applicable local, state and federal regulations. This requirement shall include, but not be limited to, all tools, heavy machinery and excavating and hauling equipment used during excavation, stockpiling and handling of contaminated material. Decontamination of equipment is considered incidental to the applicable excavation item.

ITEMS 181.11 through 181.14 (Continued)**REGULATORY REQUIREMENTS**

The Contractor shall be responsible for adhering to regulations, specifications and recognized standard practices related to contaminated material handling during excavation and disposal activities. MassDOT shall not be responsible at any time for the Contractor's violation of pertinent State or Federal regulations or endangerment of laborers and others. The Contractor shall comply with all rules, regulations, laws, permits and ordinances of all authorities having jurisdiction including, but not limited to, Massachusetts DEP, the U.S. Environmental Protection Agency (EPA), Federal Department of Transportation (DOT), Massachusetts Water Resources Authority (MWRA), the Commonwealth of Massachusetts and other applicable local, state and federal agencies governing the disposal of contaminated soils.

All labor, materials, equipment and services necessary to make the work comply with such regulations shall be provided by the Contractor without additional cost to MassDOT. Whenever there is a conflict or overlap within the regulations, the most stringent provisions shall apply. The Contractor shall reimburse MassDOT for all costs it incurs, including damages and/or fines, as a result of the Contractor's failure to adhere to the regulations, specifications, recognized standard practices, etc., that relate to contaminated material handling, transportation and disposal.

Submittals**I. Summary of Sampling Results, Classification of Material and Proposed Disposal Option.**

The following information, presented in tabular format, must be submitted to the Engineer for review and approval prior to any reuse on-site or disposal off-site. This requirement is on-going throughout the project duration. At least two weeks prior to the start of any excavation activity, the Contractor shall submit a tracking template to be used to present the information as stipulated below. Excavation will not begin until the format is acceptable to MassDOT.

Characterization Reports will be submitted for all soil, sediment, debris and groundwater characterized through the sampling and analysis program. Each report will include a site plan which identifies the sampling locations represented in the Report. The Construction Plan sheets may be used as a baseplan to record this information.

The Sampling Results will be presented in tabular format. Each sample will be identified by appropriate identification matching the sample identification shown on the Chain of Custody Record. The sample must also be identified by location (e.g. grid number or stockpile number). For each sample, the following information must be listed: the classification (unregulated, regulated, etc.), proposed disposal option for the stockpile or unit of material represented, and, all analytical results.

ITEMS 181.11 through 181.14 (Continued)

Each Characterization Report will include the laboratory analytical report and Chain of Custody Record for the samples included in the Report.

II. Stockpiling, Transport, and Disposal.

At least two weeks prior to the start of any excavation activity, the Contractor shall submit, in writing, the following for review and shall not begin excavation activity until the entire submittal is acceptable to MassDOT.

Excavation and Stockpiling Protocol:

Provide a written description of the management protocols for performing excavation and stockpiling and/or direct loading for transport, referencing the locations and methods of excavating and stockpiling excavated material.

Disposal and Recycling Facilities:

1. Provide the name, address, applicable licenses and approved waste profile for disposal and/or recycling location(s) where contaminated soil will be disposed. Present information substantiating the suitability of proposed sites to receive classifications of materials intended to be disposed there, including the ability of the facility to accept anticipated volumes of material.
2. Provide a summary of the history of compliance actions for each disposal/recycling facility proposed to be used by the Contractor. The compliance history shall include a comprehensive list of any state or federal citations, notices of non-compliance, consent decrees or violations relative to the management of waste (including remediation waste) at the facility. Material should not be sent to facilities which are actively considered by the DEP, USEPA or other responsible agency to be in violation of federal, state or local hazardous waste or hazardous material regulations. MassDOT reserves the right to reject any facility on the basis of poor compliance history.

Transportation:

The name, address, applicable license and insurance certificates of the licensed hauler(s) and equipment and handling methods to be used in excavation, segregation, transport, disposal or recycling.

III. Material Tracking and Analytical Documentation for Reuse/Disposal.

The following documents are required for all excavation, reuse and disposal operations and shall be in the format described. At least two weeks prior to the start of any excavation or demolition activity, the Contractor shall submit the tracking templates required to present the information as stipulated below. Excavation or demolition will not begin until the format is acceptable to MassDOT.

ITEMS 181.11 through 181.14 (Continued)

All soils, sediments and demolition debris must be tracked from the point of excavation to stockpiling to onsite treatment/processing operations to off-site disposal or onsite reuse as applicable.

Demolition Debris:

Demolition debris must be tracked if the debris is stockpiled at a location other than the point of origin or if treatment or material processing is conducted. Identification of locations will be based on the station-offset of the location. The tracking table will identify date and point of generation, any field screening such as PID or dust monitoring, visual observations/comments, quantity, and stockpile ID/processing operation location. For each unit of material tracked, the table will also track reuse of the material on-site, providing reuse date, location of reuse as defined by start and end station, width of reuse location by offset, the fill elevation range, quantity, and finish grade for said location. For demolition debris which is not reused on site, the table will also track disposal of the material as defined by disposal date, quantity and disposal facility. The table must provide a reference to any analytical data generated for the material.

Soil/Sediment:

Soil excavation will be identified based on the station-offset of the excavation location limits. The tracking table will identify date and point of generation, any field screening such as PID or dust monitoring, visual observations, quantity, and stockpile number/location. For each unit of material tracked, the table will also track reuse of the material on-site and disposal of the material off-site using the same categories identified for demolition debris above.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Disposal of contaminated soil shall be measured for payment by the Ton of actual and verified weight of contaminated materials removed and disposed of. The quantities will be determined only by weight slips issued by and signed by the disposal facility. The most cost-effective, legal disposal method shall be used. The work of the LSP for disposal under all of these items shall be incidental to the work with no additional compensation.

Item 181.11 Measurement for Disposal of Unregulated Soil shall be under the Contract Unit Price by the weight, in tons, of contaminated materials removed from the site and transported to and disposed of at an approved location or licensed facility, and includes any and all costs for approvals, permits, fees and taxes, additional testing/characterization required by the facility beyond the standard disposal test set, decontamination procedures, transportation and disposal.

Item 181.12 Measurement for Disposal of Regulated Soil – In-State Facility shall be under the Contract Unit Price by the weight in tons of contaminated materials removed from the site and transported to and disposed of at an approved in-state facility, and includes any and all costs for approvals, permits, fees and taxes, testing/characterization required by the facility beyond the standard disposal test set, decontamination procedures, transportation and disposal.

ITEMS 181.11 through 181.14 (Continued)

Item 181.13 Measurement for Disposal of Regulated Soil - Out-of-State Facility shall be under the Contract Unit Price by the weight in tons of contaminated materials removed from the site and transported to and disposed of at an approved out-of-state facility, and includes any and all costs for approvals, permits, fees and taxes, testing/characterization required by the facility beyond the standard disposal test set, decontamination procedures, transportation and disposal.

Item 181.14 Measurement for Disposal of Hazardous Waste shall be under the Contract Unit Price by the weight in tons of hazardous waste removed from the site and transported to and disposed of at the licensed hazardous waste facility, and includes any and all costs for approvals, permits, fees and taxes, testing/characterization required by the facility beyond the standard disposal test set, decontamination procedures, transportation and disposal.

ITEM 209.6**OUTLET CONTROL STRUCTURE****EACH**

The work under this Item shall conform to the relevant provisions of Subsections 201 and 220 of the Standard Specifications and the following:

MATERIALS

The outlet control structure shall meet material and construction standards for precast concrete drainage structures (Items 201. and 202.). Structure size and outlet elevations shall be constructed in accordance with the plans and construction details. The structure base shall be supported on a compacted level foundation of crushed stone at least 12-inches thick.

Submit to the Engineer for approval, complete sets of shop drawings for materials. No materials shall be fabricated or shipped prior to approval of the shop drawings by the Engineer and Research and Materials Department.

METHOD OF MEASUREMENT

Item 209.6 will be measured for payment by the Each, regardless of structure depth or size, complete in place.

BASIS OF PAYMENT

Item 209.6 will be paid for at the Contract unit price per Each, which price shall include all labor, tools, materials, equipment, shop drawings, submittals, and incidental costs required to complete the work.

No separate payment will be made for all excavation, removal of any existing structure, shoring, bracing, crushed stone bedding, frame and grate, gravel backfill and the furnishing and installation of the removable plug for the orifice, but all costs in connection therewith shall be included in the contract unit price bid.

ITEM 221.1**FRAME AND COVER - SECURED****EACH**

The work under this Item shall conform to the relevant provisions of Subsections 201 and 220 of the Standard Specifications and the following:

The work to be done under this Item consists of the furnishing and delivering Frame and Cover – Secured to the site as shown on the Plans, and as required by the Engineer.

Frame and Cover - Secured assemblies shall consist of covers and frames that conform to the nominal size, weight, material and load-carrying requirements in MassDOT Construction Standard Details 221.0.1, 221.0.2, and 221.0.3, and are on the relevant MassDOT Qualified Construction Materials list. Some dimensions of secured manhole covers and frames may vary slightly from those shown on the standard details to account for necessary fastening components. The Contractor shall submit shop drawings of all drainage castings for approval prior to ordering.

Covers and frames shall be held securely together by bolting to threaded holes in the frame or to nuts or tumbler devices secured by the frame, by use of hooks attached to the cover or by any other means approved by MassDOT, to prevent being dislodged under traffic loading. Gaskets and other sealing devices will not be allowed.

METHOD OF MEASUREMENT

Item 221.1 will be measured for payment by the each Frame and Cover – Secured furnished and delivered to the site.

BASIS OF PAYMENT

Item 221.1 will be paid for at the contract unit price per each frame and cover – secured furnished and delivered.

ITEM 235.12 12 INCH DRAINAGE PIPE FLARED END - OPTION EACH

The work under this item shall conform to the relevant provisions of Subsection 230 of the Standard Specifications and the following:

Pipe shall meet the material requirements of Subsection 230 for the option selected.

METHOD OF MEASUREMENT

Item 235.12 will be measured for payment by the unit each, for each 12 inch drainage pipe flared end furnished and installed, complete in place.

BASIS OF PAYMENT

Item 235.12 will be paid for at the Contract unit price per each, which price shall include all labor, materials, equipment, and incidental costs required to complete the work.

ITEM 271.121**12 INCH AND UNDER PIPE REMOVED
AND DISCARDED****FOOT**

The work under this item shall conform to the relevant provision of Subsection 270 of the Standard Specifications and the following:

All existing drainage pipes shown on the plans to be removed shall be disposed by the Contractor away from the site.

The work will include the backfill of the areas where the pipe is removed with acceptable material as required by the Engineer.

METHOD OF MEASUREMENT

Item 271.121 will be measured for payment by the foot of pipe removed and discarded.

BASIS OF PAYMENT

Item 271.121 will be paid at the Contract unit price per foot, which price shall include all labor, materials, equipment, excavation, and incidental costs required to complete the work.

ITEM 402.5**IMPERVIOUS BARRIER MATERIAL****CUBIC YARD**

The work under this item shall conform to the relevant provision of Subsection 402 of the Standard Specifications and the following:

The work under this item consists of the construction of the impervious barrier for the proposed infiltration basin berm and proposed auxiliary spillway as shown on the Plans.

MATERIALS

Graded Material shall meet the following requirements:

SQUARE MESH SIEVE	% PASSING BY WEIGHT
3/4"	100%
#4	90-100%
#40	65-90%
#100	50-75%
#200	35-50%

CONSTRUCTION METHODS

Graded Material shall be shaped by hand and compacted by hand or using a lightweight machine compactor.

METHOD OF MEASUREMENT

Item 402.5 will be measured for payment by the Cubic Yard, complete in place, with an added 25 percent of this quantity for compaction.

BASIS OF PAYMENT

Item 402.5 will be paid for at the Contract unit price per Cubic Yard, which price shall include all labor, materials, equipment, and incidental costs required to complete the work.

ITEM 467.1**HIGH FRICTION SURFACE
TREATMENT - GREEN (BIKE LANES)****SQUARE FOOT**

This work shall consist of furnishing and placing a green-colored High Friction Surface Treatment (HFST) on asphalt or concrete pavement.

The HFST shall be comprised of surface preparation and a minimum of a single layer using a Binder Resin System which holds a surface applied aggregate firmly in place. The Binder Resin System shall include Polymeric or Methyl Methacrylate (MMA) Resins.

QUALIFICATION OF INSTALLER

The installer shall submit a minimum of three projects with the owner's contact information on which a cumulative minimum of 5,000 square yards of HFST has been placed within the past three years. An installer who does not meet this minimum shall be allowed if they are certified by the manufacturer to install and a manufacturer's representative is onsite during installations.

Quality Control (QC) Plan

The QC plan shall be project specific detailing installer's key personnel, equipment, materials, proposed methods of installation, materials blending procedures, monitoring of ambient temperature, proposed methods of curing and corrective action plan. The QC plan shall also specify that either mark-up panels with approved colors and/or shop drawings showing the same shall be submitted to the Engineer for approval prior to installation of the HFST. The Contractor shall submit a QC plan to the Engineer for approval at least 30 days prior to placement. Any deviation from the approved QC plan shall be cause for immediate suspension of operations.

MATERIAL REQUIREMENTS

Resin Binder Systems shall be recommended by the manufacturer as suitable for use on the intended pavement surface and for the potential range of atmospheric exposure.

ITEM 467.1 (Continued)

The Contractor shall furnish and install a Resin Binder System that meets the criteria in Table 1:

Table 1 - Resin Binder System			
Property	Test Method	Requirements	
		Polymeric Resin	MMA
Ultimate Tensile Strength	AASHTO M-235	2000-5000 psi	1500-5000 psi
Elongation at break point	AASHTO M-235	30-70%	30-70%
Compressive Strength	ASTM C-579	1600 psi min.	1600 psi min.
Compressive Strength	AASHTO M-235	1000 psi min. at 3 hours 5000 psi min. at 7 days	1000 psi min. at 3 hours 2000 psi min. at 7 days
Water Absorption	AASHTO M-235	1% max.	1% max.
Durometer Hardness (Shore D)	ASTM D-2240	60-80	40-75
Viscosity	ASTM D-2556	Class C: 7-30 poises	Class C: 12-20 poises
Gel Time	AASHTO M-235	Class C: 10 minutes min.	Class C: 10 minutes, min.
Cure Rate (Dry through time)	ASTM D-1640	3 hrs. max.	3 hrs. max.
Adhesive Strength at 24 hours	ASTM D-4541	250 psi min. or 100% substrate failure	250 psi min. or 100% substrate failure

Independent laboratory reports per formulation shall be provided, documenting that the resin binder meets the requirements of this specification. A sample of the resin binder or components lot/batch shall be provided a minimum of 14 days prior to the commencement of work.

At the request of the engineer, the manufacturer of the Resin Binder System shall certify that the Resin Binder System meets the requirements of this specification. Such certification shall consist of either a copy of the manufacturer's test report or a statement by the manufacturer, accompanied by a copy of the current test results, that the Resin Binder System has been sampled and tested. Such certification shall indicate the date of testing and shall be signed by the manufacturer.

ITEM 467.1 (Continued)**Aggregate**

The contractor shall furnish and install a high friction aggregate that is clean, dry and free from deleterious material. The high friction aggregate shall be Calcined Bauxite.

The calcined bauxite aggregate shall meet the properties shown in Table 2:

Table 2 - Calcined Bauxite Aggregate		
Property	Test Method	Requirement
Polish Stone Value	AASHTO T-279	65 min.
Resistance to Degradation	AASHTO T-96	20% max.
Aggregate Grading	AASHTO T-27	No. 4 Percent Passing 100% min. No. 6 Percent Passing 95% min. No. 16 Percent Passing 5% max.
Moisture Content	AASHTO T-255	0.2% max.
Aluminum Oxide	ASTM C-25	87% min.

All aggregates shall be furnished in appropriate packaging that is clearly labeled and protects the aggregate from any contaminants on the jobsite and from exposure to rain or other moisture.

Unless the HFST is on the MassDOT Qualified Products List, the manufacturer shall provide a 50 lb bag of aggregate accompanied to the DOT for approval a minimum of 14 days prior to the commencement of work. On all projects and regardless of the HFST status on the MassDOT Qualified Products List, the manufacturer of the aggregate shall certify that the aggregate meets the requirements of this specification. Such certification shall consist of either a copy of the manufacturer's report or a statement by the manufacturer, accompanied by a copy of the current test results, that the aggregate has been sampled and tested. Such certification shall indicate the date of testing and shall be signed by the manufacturer.

Color

The color of the HFST material shall be green, as specified in the Federal Highway Administration (FHWA) Interim Approval for Optional Use of Green Colored Pavement for Bike Lanes (IA-14), dated April 15, 2011. Green pigment used for this purpose shall be applied to the Resin Binder System and the aggregate. The Contractor shall certify that any Resin Binder System and/or aggregate treated with green pigment shall conform to the above material requirements of this specification.

ITEM 467.1 (Continued)**EQUIPMENT AND APPLICATION REQUIREMENTS****Construction Requirements**

A manufacturer's representative of the Resin Binder System shall be present at the jobsite during all construction operations relating to the preparation and placement of the HFST. All construction operations relating to the HFST shall meet the recommendations of the manufacturer's representative. Final approval of all HFST placement operations will be given by the engineer.

Weather Limitations

Resin Binder system shall not be placed on any wet surface or when the ambient temperature or the temperature of the pavement is below the manufacturer's recommendations or when the anticipated weather conditions would prevent the proper application of the surface treatment as directed by the manufacturer's representative.

Surface Preparations

The surface shall be thoroughly cleaned immediately prior to installation of the HFST. The surface shall be clean, dry and free of all dust, oil, debris and any other material that might interfere with the bond between the resin binder material and the existing surface as recommended by the manufacturer's representative. HFST may not be placed on any new HMA pavement that has been placed in the previous 30 days with motor vehicle traffic or 60 days without motor vehicle traffic.

The contractor shall pre-treat joints and crack greater than ¼ inch in width and depth with the mixed Resin Binder System. Once the resin binder in the pre-treated areas has gelled, the installation of the HFST may proceed.

Surface preparation work, surface temperature and placement of the HFST shall be in conformance with the binder supplier's specifications and as approved by the manufacturer's representative.

All existing edge line pavement markings that are adjacent to the HFST location shall be covered and protected as approved by the engineer prior to performing surface preparation. HFST shall not be placed over existing pavement markings or rumble strips. Lane line pavement markings that conflict with the HFST installation shall be removed by methods approved by the manufacturer's representative. Any existing edge line pavement markings that are damaged during the HFST application process shall be replaced at the contractor's expense per direction of the Engineer.

ITEM 467.1 (Continued)

HFST shall be allowed to cure for the minimum duration as recommended by the binder component supplier's specifications and during that time the application area shall be closed to all vehicles and contractor's equipment traffic. After placement and cure of the HFST, the contractor shall test the finished surface in accordance with ASTM D7234 to detect unbonded areas.

Excess and loose aggregate shall be removed from the traveled way and shoulders in such a way that the HFST is not damaged or disturbed. Excess aggregate that can be reused shall be reclaimed by a Vacuum sweeper. The recovered aggregate shall be clean, uncontaminated and dry, if it is to be re-used in the HFST application.

Utilities, drainage structures, curbs and any other structures within or adjacent to the treatment location shall be protected against the application of the HFST materials.

HFST shall not be applied to newly placed asphalt pavement surfaces that are less than 30 days old, unless the surface is sandblasted as approved by the manufacturer's representative, prior to application.

Surface Friction Test

The surface friction of the completed HFST shall meet a minimum requirement of 65 FN40R from the ASTM E274 test. MassDOT-Highway Division will perform this test within 7 calendar days after completion of the HFST.

Any surface that fails to conform to the above friction requirement must be removed and replaced at the contractor's expense within 24 hours after being notified by the engineer.

Application Methods

HFST shall be applied in accordance with the manufacturer's recommendations. The HFST can be applied by either mechanical or manual techniques as follows: mechanical application shall be required for all travel lanes and shoulders, mechanical or manual application is required for smaller surface areas requiring hand work such as small areas of HFST application, crosswalks, narrow median or smaller areas of special delineation and as approved by the Engineer.

The Resin Binder System shall be blended and mixed in the ratio per the manufacturer's specification (+/- 2% by volume) and shall be continuously applied once blended. The Resin Binder System shall be applied at a uniform thickness of 50-65 mils (25-32 square feet per gallon). Coverage rate is based upon expected variances in the surface profile of the pavement.

The operation shall proceed in such a manner that will not allow the mixed material to separate, cure, dry, be exposed or otherwise harden in such a way as to impair retention and bonding of the high friction aggregate.

ITEM 467.1 (Continued)

The high friction aggregate shall be immediately applied at a rate of 12-15 pounds per square yard (achieving saturation) in such a manner that there is no disruption to the leveled binder. It is the responsibility of the contractor to ensure full embedment of the high friction aggregate. Wet spots shall be covered with the high friction aggregate prior to the gelling of the Resin Binder System.

Walking, standing on, or any form of contact or contamination with the wet uncured Resin Binder System, prior to application of the aggregate, will result in that section of Resin Binder System being removed and replaced at the contractor's expense.

METHOD OF MEASUREMENT

Item 467.1 will be measured for payment by the total square foot area of HFST material and shall be the actual number of square feet applied as directed and approved by the Engineer.

BASIS OF PAYMENT

Item 467.1 will be paid for at the contract unit price per square foot of HFST material applied under this item in the Contract, which shall be full compensation for all labor, materials, tools, equipment, testing and incidental items necessary to complete the described work.

ITEM 504.2**GRANITE CURB TYPE VA4 - SPLAYED END****EACH**

The work under this item shall conform to the relevant provisions of Subsection 501 of the Standard Specifications and the following:

The work shall consist of installing transition curbs between the HMA berm to the Granite Curb Type VA4 at the locations shown on the Plans and as directed by the Engineer. The vertical face of the curb shall be sloped to generally match the profile of the HMA berm at the limits of work.

The Contractor shall submit for approval shop drawings of the granite curb sections which detail this transition.

METHOD OF MEASUREMENT

Item 504.2 will be measured for payment by the Each Granite Curb Type VA4 – Splayed End installed, complete in place.

BASIS OF PAYMENT

Item 504.2 will be paid for at the Contract unit price per Each, which price shall include all labor, materials, equipment, and incidental costs required to complete the work.

No separate payment will be made for concrete backfill and gravel subbase, sawcutting, but all costs in connection therewith shall be included in the Contact unit price bid.

ITEM 628.5**BARRIER AND ATTENUATOR –
REMOVED AND STACKED****LUMP SUM**

The work under this item shall include the following:

Existing concrete highway barrier and impact attenuators on site shall be removed, transported, delivered, and carefully stacked at the MassDOT District 1 Headquarters, 270 Main Street, Lenox, MA 01240 or location as coordinated with the Engineer.

The Contractor is required to notify MassDOT a minimum of 48-hours prior to delivery of materials.

BASIS OF PAYMENT

Item 628.5 will be paid at the Contract bid price as a lump sum, which payment shall be considered compensation for all labor, tools, equipment, materials, and incidental costs required to complete the work.

ITEM 657.**TEMPORARY FENCE****FOOT**

The work under this Item shall conform to the relevant provisions of Section 600 of the Standard Specifications and includes installation of a chain link fence shown on the plans and the following:

The temporary 6 foot high chain link fence shall be placed around the work area to protect areas with excavations as required by the Engineer and shall meet the requirements of the Standard Specifications and the Construction Standards, except the material need not be in new condition.

Gates shall be used at all locations that are to be opened on a regular basis.

Temporary fence shall be reset as often as required by Contractor activities to meet the project schedule and to stage the construction, as required by the Engineer. The Contractor shall submit a plan to the Engineer indicating the locations and the lengths of each of these Items that he/she anticipates he/she will provide for the project. The methods of installation(s) and fence detail(s) shall also be submitted for approval by the Engineer.

The Contractor shall inspect the condition of temporary fence on a daily basis. Temporary fence that is damaged shall be promptly replaced.

METHOD OF MEASUREMENT

Items 657. will be measured for payment by the Foot of temporary fence installed, complete in place.

BASIS OF PAYMENT

Item 657. will be paid for at the respective Contract unit prices per Foot; which prices shall include all labor, materials, equipment, and incidental costs required to complete the work including posts, fence fabric, gates, bracing, and footings.

No separate payment will be made for the final removal of the temporary fence but all costs inconnection therewith shall be included in the unit price bid.

ITEM 697.1**SILT SACK****EACH**

Work under this item shall conform to the relevant provisions of Subsections 227 and 670 of the Standard Specifications and the following:

The work under this item includes the furnishing, installation, maintenance and removal of a reusable fabric sack to be installed in drainage structures for the protection of wetlands and other resource areas and the prevention of silt and sediment from the construction site from entering the storm water collection system. Devices shall be ACF Environmental (800)-448-3636; Reed & Graham, Inc. Geosynthetics (888)-381-0800; The BMP Store (800)-644-9223; or approved equal.

CONSTRUCTION

Silt sacks shall be installed in retained existing and proposed catch basins and drop inlets within the project limits and as required by the Resident Engineer.

The silt sack shall be as manufactured to fit the opening of the drainage structure under regular flow conditions, and shall be mounted under the grate. The insert shall be secured from the surface such that the grate can be removed without the insert discharging into the structure. The filter material shall be installed and maintained in accordance with the manufacturer's written literature and as directed by the Engineer.

Silt sacks shall remain in place until the placement of the pavement overlay or top course and the graded areas have become permanently stabilized by vegetative growth. All materials used for the filter fabric will become the property of the Contractor and shall be removed from the site.

The Contractor shall inspect the condition of silt sacks after each rainstorm and during major rain events. Silt sacks shall be cleaned periodically to remove and disposed of accumulated debris as required. Silt sacks, which become damaged during construction operations, shall be repaired or replaced immediately at no additional cost to the Department.

When emptying the silt sack, the contractor shall take all due care to prevent sediment from entering the structure. Any silt or other debris found in the drainage system at the end of construction shall be removed at the Contractors expense. The silt and sediment from the silt sack shall be legally disposed of offsite. Under no condition shall silt and sediment from the insert be deposited on site and used in construction.

All curb openings shall be blocked to prevent stormwater from bypassing the device.

All debris accumulated in silt sacks shall be handled and disposed of as specified in Section 227 of the Standard Specifications

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Silt sacks will be measured and paid at the Contract unit price per each, complete in place, which price shall include all labor, materials, equipment and incidental costs required to complete the work. No separate payment will be made for removal and disposal of the sediment from the insert, but all costs in connection therewith shall be included in the Contract unit price bid.

ITEM 698.3**GEOTEXTILE FABRIC FOR SEPARATION****SQUARE YARD**

The material to be supplied under this Item shall conform to the relevant provisions of Section M9.50.0 and AASHTO M 288 for the intended application, and the following;

The fabric shall be used under the stone on slopes, at overflow spillways, and under stone for pipe ends/modified rockfill in front of drainage outlets, side walls of bioretention areas, and as directed by the Engineer.

MATERIALS

Geotextile fabric shall be a non-woven geotextile specially designed for drainage and materials separation applications and shall be a pervious sheet of polypropylene or polyester fibers oriented into a stable network so that the fibers retain their relative positions with respect to each other. The fabric shall be composed of continuous or discontinuous (staple) fibers held together through needle punching. The edges of the fabric shall be salvaged or otherwise finished to prevent these outer fibers from pulling away from the fabric. The fabric shall meet the requirements of AASHTO M 288 for the intended application.

CONSTRUCTION METHODS

The geotextile fabric shall be installed smooth with no puckers, ridges or similar irregularities on a prepared graded surface having no sharp projections. The fabric shall not be staked but shall be secured in place with stones to prevent movement when backfill is placed against it. Fabric shall be completely covered with backfill material of the type and minimum cover required at each installation. The backfill material shall be placed and spread to provide a workable surface that will not damage fabric and backfill material already placed. Torn or displaced fabric shall be replaced and reinstalled at no additional compensation.

METHOD OF MEASUREMENT

Item 698.3 will be measured for payment by the Square Yard of Geotextile Fabric for Separation, furnished and installed within the lines and grades as shown on the plans and as required by the Engineer, complete in place.

Overlaps shall be measured as a single layer of cloth.

BASIS OF PAYMENT

Item 698.3 will be paid for at the Contract unit price per Square Yard, which price shall include all labor, equipment, materials, and incidental costs required to complete the work.

ITEM 706.1**BRICK WALK REMOVED AND RELAID****SQUARE YARD**

The work under this item shall conform to the relevant provisions of Section 700 of the Standard Specifications and the following:

It is the intention of this special provision that the reset brick at the new locations shall conform as close as possible in every detail to the existing walks.

The work under this item include removing and relaying walks as shown on the plans in order to transition the existing walkways to the proposed sidewalk and accommodate any grade changes resulting from the proposed roadway and sidewalk construction. Lines and grades shall be consistent with the new sidewalk construction as shown on the plans and established by the Engineer.

The existing brick shall be reused where possible. Re-laid brick shall be similar in appearance to the walks which are removed, or which abut a new or reconstructed walk.

If existing bricks are broken or if new units are necessary to relay the walks, the new bricks shall be of similar color and texture as the existing. If excess bricks are present, the contractor shall ask if property owner would like to take possession of materials. If so, the contractor shall neatly stack excess materials at a location designated by the property owner. Unwanted materials shall become property of the contractor.

All existing units shall be thoroughly cleaned before being set. The units shall be of the same color and texture as the existing.

All walks shall be laid on an 8-inch gravel foundation. If the existing base is of another material, that material may be used subject to the approval of the Engineer.

Cement mortar used to reset the bricks shall conform to Material Specification M4.02.15.

METHOD OF MEASUREMENT

Items 706.1 will be measured for payment by the Square Yard of brick walk removed and relaid, complete in place.

BASIS OF PAYMENT

Items 706.1 will be paid for at the contract unit price per Square Yard, which price shall include all labor, materials, removing, resetting or furnishing and installing bricks, cleaning, cement concrete / asphalt base courses, equipment, and incidental costs required to complete the work.

Excess bricks not accepted by the property owner shall be disposed of by the Contractor without additional compensation.

Gravel for base material will be paid for under Item 151.

Compaction of subgrade material will be paid for under Item 170.

ITEM 740. ENGINEER'S FIELD OFFICE AND EQUIPMENT (TYPE A) MONTH

The work under this Item shall conform to the relevant provisions of Subsection 740 of the Standard Specifications and the following:

Two computer systems and printer system meeting minimum requirements set forth below including installation, maintenance, power, paper, disks, and other supplies shall be provided at the Resident Engineer's Office:

All equipment shall be UL approved and Energy Star compliant.

The Computer System shall meet the following minimum criteria or better:

Processor:	Intel, 3.5 GHz
System Memory (RAM):	12 GB
Hard Drive:	500 GB
Optical Drive:	DVD-RW/DVD+RW/CD-RW/CD+RW
Graphics Card:	8 GB
Network Adapter:	10/100 Mbit/s
USB Ports:	6 USB 3.0 ports
Keyboard:	Generic
Mouse:	Optical mouse with scroll, MS-Mouse compliant

Video/Audio	the computer system shall be capable of allow video calling and recording:
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Video camera	shall be High Definition 1080p widescreen capable video calling and recording with built in microphone. The microphone system shall capture natural audio while filtering out background noise.
Audio	shall be stereo multimedia speaker system delivering premium sound.

OS:	Latest Windows Professional with all security updates
Web Browser:	Latest Internet Explorer with all security updates
Applications:	Latest MS Office Professional with all security updates Latest Adobe Acrobat Professional with all security updates Latest Autodesk AutoCAD LT Antivirus software with all current security updates maintained through the life of the contract.

Monitors:	Two 27" LED with Full HD resolution. Max. resolution 1920 x 1080
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Flash drives:	2 (two) - 128GB USB 3.0
Internet access:	High Speed (min. 24 mbps) internet access with wireless router.

ITEM 740. (Continued)

The Multifunction Printer System shall meet the following minimum criteria or better:

Color laser printer, fax, scanner, email and copier all in one with the following minimum capabilities:

- | | |
|--|--|
| - Estimated volume 8,000 pages per month | - 600 x 600 dpi capability |
| - LCD touch panel display | - 30 pages per minute print speed (color), |
| - 50 page reversing automatic document feeder | - 4 Paper Trays Standard
(RADF) (not including the bypass tray) |
| - Reduction/enlargement capability | - Automatic duplexing |
| - Ability to copy and print 11" x 17" paper size | - Finisher with staple functions |
| - email and network pc connectivity | - Standard Ethernet. Print Controller |
| - Microsoft and Apple compatibility | - Scan documents to PDF, PC and USB |
| - ability to overwrite latent images on hard drive | - ability to print with authenticated access
protection |

The Contractor shall supply a maintenance contract for next day service, and all supplies (toner, staples, paper) necessary to meet estimated monthly usage.

The Engineer's Field Office and the equipment included herein including the computer system, and printer shall remain the property of the Contractor at the completion of the project. Disks, flash drives, and card readers with cards shall become the property of the Department.

Compensation for this work will be made at the contract unit price per month which price includes full compensation for all services and equipment, and incidentals necessary to provide equipment, maintenance, insurance as specified and as directed by the Engineer.

ITEM 756.1**CONSTRUCTION PERIOD POLLUTION
PREVENTION AND EROSION AND
SEDIMENTATION CONTROL PLAN****LUMP SUM**

The work under this item shall consist of the preparation and implementation of a Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan (CP/PP) as required by a regulatory agency. This Item is applicable to projects that are not subject to the preparation and implementation of a Storm Water Pollution Prevention Plan (SWPPP) required by the National Pollutant Discharge Elimination System (NPDES) and applicable Construction General Permit (CGP) issued by the U.S. Environmental Protection Agency (EPA).

The work under this item shall also include the preparation, submission and implementation of a Flood Contingency Plan. The plan shall address the potential need for the temporary relocation of construction and auxiliary equipment situated within the 1% annual chance of flooding zone to designated upland locations above the Base Flood Elevation during flood events. The Flood Contingency Plan shall address any additional MassDEP-required information requirements, as applicable. The Flood Contingency Plan shall be submitted to the Engineer for review and approval at the same time as the CP/PP.

The CP/PP, at a minimum, shall include the following:

- Project & Site Description
- Project Site Contact Information
 - This shall include the phone number for the Contractor Site Superintendent, Project Manager and CP/PP Inspector(s).
- Qualifications of the CP/PP Inspector and documentation of qualifications
 - At a minimum, relevant personnel responsible for erosion and sedimentation control inspections shall have completed the EPA's construction inspection training course and obtained a certificate confirming completion of the training module, or have completed a third-party stormwater course which covers the minimum topics listed in Part 6.3.b of the CGP.
- Reference to and information to address permit Special Conditions relevant to the CP/PP contents. These include but are not limited to the MassDEP 401 Water Quality Certification (Filing Number 24-WW11-0045-APP, dated May 12, 2025, with the following Conditions:
 - A Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan (CP/PP) shall be developed and implemented as required by 314 CRM 9.06(6)(a)8. A minimum of 14 days prior to the start of work, MassDOT shall submit the CP/PP for review and approval. If the U.S. Environmental Protection Agency (EPA) Construction General Permit (CGP) applies, the Stormwater Pollution Prevention Plan (SWPPP) may serve as the CP/PP, providing it includes the measures required to be in the CP/PP per these Special Conditions, in addition to the measures specifically required by the CGP. Any subsequent changes to the final CP/PP (defined herein as including the construction period SWPPP if applicable) must be approved by MassDEP.

ITEM 756.1 (Continued)

- Training regarding erosion and sedimentation controls is required. The RE, CP/PP Inspector, and any other relevant personnel responsible for erosion and sedimentation controls shall complete the EPA CGP Inspector Training, or other training that meets the CGP requirements, as well as complete a comprehensive review of the Final CP/PP. Proof of completion of the training shall be submitted to MassDEP prior to the start of work.
- The CP/PP shall identify, but shall not be limited to, staging and laydown areas in relation to BVWs and LUW, proposed dewatering methods and locations, proposed stockpile locations and their proximity to catch basins or other drainage conveyances that discharge to wetland resource areas, and the location of construction-period erosion and sedimentation controls. Stockpiles shall be located no less than 50 feet from BVWs, IVWs, LUW, catch basins, or other drainage conveyances that discharge to BVWs, IVWs, or LUW.
- A minimum of 14 days prior to the start of work, MassDOT shall submit a Control of Water Plan for review and approval. The Plan shall meet requirements of the CP/PP, be specific to the Project, and include the following:
 - A description of proposed methods to isolate and dewater work areas within streams, should it be required, while maintaining stream flow, including but not limited to the method of isolation (e.g., steel sheeting or sandbag cofferdams), dewatering methods and locations and specifications for stream bypass systems as applicable;
 - A plan depicting BVW and LUW boundaries, and the location of all relevant methods and materials which shall be located within the BVW and LUW impact areas approved herein; and
 - Proposed LUW restoration methods following removal of the cofferdams.
- Prior to the start of work, approved erosion and sedimentation control measures shall be installed per the approved CP/PP and as applicable, the manufacturer specifications. Erosion and sedimentation control measures may consist of, but are not limited to, silt fence, staked straw bales, silt/turbidity curtains, compost filter tubes, etc.
- The Project shall identify one individual with at least three years of experience with construction period erosion and sedimentation control to be responsible for erosion and sedimentation control inspections (CP/PP Inspector). Under the direction of the CP/PP Inspector, inspection and maintenance of erosion and sediment controls in active work areas may be performed by both the Contractor and RE or other MassDOT project staff. Maintenance is the responsibility of the Contractor; however, the permittee shall be ultimately responsible for erosion and sedimentation control failure. The RE and/or contractor shall immediately notify MassDEP and the Cummington Conservation Commission if any unauthorized discharges to BVWs or LUW occur.

ITEM 756.1 (Continued)

- CP/PP inspections shall occur at least once every seven calendar days and within 24 hours of a storm event that produces 0.5 inches or more of rain within a 24-hour period, or at a more stringent frequency if the CP/PP requires.
- Copies of CP/PP Inspection and Maintenance Log Forms shall be submitted to MassDEP within 14 days upon request.
- Work within LUW shall be conducted in low or no-flow conditions to the extent practicable. Notice shall be provided to MassDEP and the Cummington Conservation Commission within 24 hours prior to the commencement of dewatering, if required. Dewatering methods and location(s) shall be approved by the RE or other project staff with knowledge of these practices prior to use to ensure consistency with the approved Control of Water Plan, and shall be documented in the CP/PP. There shall be no discharge of untreated dewatered stormwater or groundwater to BVWs or LUW. Any discharges shall be visibly free of sediment.
- Additional erosion and sedimentation control materials shall be stored on-site at all times for emergency and routine replacement. Materials shall be kept covered, dry, and accessible at all times. The CP/PP Inspector shall be responsible for anticipating the need for and installation of additional erosion and sedimentation controls and shall have the authority to require additional erosion control measures to protect wetland resource areas beyond what is shown on the plans if field conditions or professional judgment dictate that additional protection is necessary.
- Any storm drains with potential to receive discharge from stockpiled materials or construction operations shall be managed to inhibit the inflow of sediment while not increasing the likelihood of roadway flooding during periods of precipitation. The CP/PP shall specify measures to implement this. Filter fabric stretched under storm drain inlet grates are not acceptable for this purpose.
- Construction Sequencing/Phasing
- Erosion Prevention, Sediment Control, and Best Management Practices (BMP s) to be implemented
- Maintenance measures and intended timeline to address maintenance and corrective actions for implemented Erosion Prevention Measures, Sediment Control Devices, and BMPs
- Anticipated inspection schedule and sample inspection report form
 - Use the EPA's Site Inspection Report Template found on the EPA's website.
- Site Plans
 - This shall depict, at minimum, the project limits, locations of construction phase erosion prevention measures, construction phase sedimentation control measures, limits of disturbance, staging and laydown areas, proposed dewatering locations and proposed stockpile locations. Depict existing jurisdictional wetland resource areas, drainage conveyances and stormwater treatment features.

ITEM 756.1 (Continued)

The Contractor shall prepare the CP/PP, and update/revise as needed upon changes in site conditions, relevant project personnel, construction phase controls, schedule changes, revised work, regulations, and construction methodologies. The Contractor shall submit the CP/PP to the Engineer for approval at least thirty (30) days prior to commencement of any project related activity that disturbs land, including clearing and grubbing. Submission of the CP/PP to a regulatory agency for review and approval may also be required by a Special Condition associated with a permit issued under the Wetlands Protection Act, or Section 401 of the Clean Water Act and their implementing Regulations. It is the responsibility of the Contractor to ensure the CP/PP is submitted to reviewers in a timely manner to support the construction schedule.

It is the responsibility of the Contractor to comply with the conditions of any state Wetlands Protection Act Order, Water Quality Certification, Army Corps of Engineers Section 404 Permit and other environmental permits applicable to the project, and to include in the CP/PP the methods and means necessary to comply with applicable conditions of said permits.

Inspection frequency shall be at least once every seven calendar days and within 24 hours of a storm event that produces 0.5 inches or more of rain within a 24-hour period. The inspections shall be performed by an individual that meets the qualifications specified in the permits and proof of the inspector's qualifications shall be included as an Appendix in the CP/PP. CP/PP inspection reports shall be completed and distributed to the Resident Engineer within 24-hours of each inspection. Special conditions associated with permits may also require submittal of reports to regulators at a certain frequency. Reports shall be maintained throughout the duration of the project. In addition, if the Engineer determines at any time that the inspector's performance is inadequate, the Contractor shall provide an alternate inspector.

The Contractor is responsible for preparation of the CP/PP, inspections, and associated reports. The Standard Specifications require adequate erosion and sedimentation control for the duration of the Contract. All control measures must be properly selected, installed, and maintained in accordance with manufacturer specifications, good engineering practices, and MassDOT standard specifications and special provisions. Contractor must maintain all control measures and other protective measures in effective operating conditions in accordance with the additional Special Provisions herein. If periodic inspections or other information indicates a control has been used inappropriately or is no longer adequate, it is the responsibility of the Contractor to replace or modify the control for site conditions at no additional cost to the Department.

BASIS OF PAYMENT

Item 756.1 will be measured at the contract unit price, lump sum, which shall include all work detailed above, including CP/PP and Flood Contingency Plan preparation, required revisions, revisions/addenda during construction, inspections and reports.

Work under this item shall include acceptable completion of the CP/PP, Flood Contingency Plan, site inspections, and revisions/amendments required during construction. In addition, any erosion prevention or sediment control measures beyond those specified in bid items that are selected by the Contractor to facilitate and/or address the Contractor's schedule, methods and execution of the work shall be considered incidental to this item.

ITEM 756.1 (Continued)

Payment of thirty (30) % of the contract price shall be made upon acceptance of the CP/PP and Flood Contingency Plan. Payment of forty (40) % of the contract price shall be made in equal installments over the expected duration of stormwater pollution prevention measures. Payment of the final thirty (30) % of the contract price shall be paid when final stabilization has been achieved (minimum of 75% total cover of disturbed vegetated areas with perennial ground cover).

ITEM 765.454**WETLAND/BASIN MIX -
SEASONALLY FLOODED****SQUARE YARD**

The work under this item shall conform to the relevant provisions of Subsection 765 of the Standard Specifications and the following:

The work shall consist of planting and establishing a stand of grass in the areas shown on the plans or as required by the Engineer. For the purposes of these specifications, the term “grass” shall apply to all the forbs, grasses, sedges, and rushes included in the materials.

All seeding shall be done by a company having a minimum of five years of experience with native grass establishment. Prior to beginning work, the seeding Contractor shall furnish proof of qualifications to the Engineer for approval. Proof of qualifications includes, if requested, providing documentation (photos and contacts) to demonstrate knowledge and expertise with native seeding and proof of having completed successful native seeding projects.

Seeding shall be done within 48 hours of placement of loam and final grading.

Work under this item shall consist of furnishing the mix(es) specified below in the required quantity.

SUBMITTALS

- 1) Pre-Verification of Seed Availability. Within 30 days after the Notice to Proceed, the Contractor shall submit to the Engineer the supplier’s verification of availability of seed species in the required quantities and for the anticipated date of seeding. Verification shall be on the supplier’s letterhead and notarized by the supplier’s notary. Species not expected to be available should be noted and substitutions recommended.
- 2) Final Verification of Seed Availability. No earlier than 21 days prior to ordering, the Contractor shall submit to the Engineer the supplier’s verification of availability of seed species and in the required quantities. Verification shall be on the supplier’s letterhead and notarized by the supplier’s notary. A copy of this submittal shall be forwarded to the MassDOT Landscape Design Section. Substitutions or changes in the mix at this time must be approved by MassDOT Landscape Design Section.
- 3) Seed Worksheet provided herein shall be submitted to the Engineer prior to ordering seed to determine the number of pounds of Pure Live Seed required.
- 4) Seed Tags. The contractor shall submit original seed tags from each bag of seed used on the project or ensure that each tag is photo documented by the Engineer while on the unopened bag.

Number of tags submitted must correspond to number of bags delivered.

ITEM 765.454 (Continued)

Species listed on the seed tag shall match the Final Verification of Seed Availability (Submittal #2) unless approved otherwise. Tag must include: variety and species name; lot number; purity; percentage of inert matter; percentage of weeds, noxious seeds, and other crop seeds; germination, dormant or hard seed; total viability; origin of seed; germination test date, net weight, and name and address of seller. The origin of seed must be listed on the seed tag for all species in the mix to provide verification of original (generation 0) seed source. The smallest known geographic area (township, county, ecotype region, etc.) shall be listed. Ecotypes and cultivars shall be as close to Massachusetts as possible and appropriate to the site conditions.

A copy of this submittal shall be forwarded to the MassDOT Landscape Design Section.

- 5) Verification of Seed Delivery. Prior to payment, contractor shall submit the Seed Delivery Verification form contained within the contract or the Supplier's Verification on company letterhead or a bill of lading. Supplier verification must include all information requested on the Verification form within this contract. The bill of lading must include variety and species name, lot number, net weight shipped, date of sale, invoice, project or seeding location, and name and address of Supplier. All information must be filled in and complete for acceptance. Information must match the seed tags and quantity of seed used on the job. A copy of this submittal shall be forwarded to the MassDOT Landscape Design Section
- 6) Seed Sample. If requested or if seed is from a previously opened bag, the contractor may be asked to submit to the Engineer a sample of seed from the seed bag (1-2 cups) at the time of seeding.

SEEDING SEASON

The appropriate seeding seasons are:

Spring: April 1 - May 15

Fall: October 1 - December 1 for dormant seeding

PERMANENT SEED MIX(ES)Calculating Pure Live Seed (PLS)

Quantities specified are PURE LIVE SEED. Greater quantities of ordered seed may be required to achieve actual specified seeding rates.

Pure Live Seed (PLS) is defined as a percentage calculated by multiplying the percent of pure seed by the percent of viable seed (total germination, hard seed, and dormant seed). For example:

If a seed label indicates 90% purity, 78% germination, 10% hard seed, and 2% dormancy, it is calculated to be $90\% \times [78 + 10 + 2]\% = 81\%$ PLS.

Therefore, each pound of PLS would need $1 \text{ pound} / 0.81 = 1.2$ pounds of seed with a 90% purity and 90% total germination

ITEM 765.454 (Continued)

Seed Mix(es) shall be as specified below. Ecotypes and cultivars shall be as close to Massachusetts as possible and appropriate to the site conditions.

Botanical Name	Common Name	% PLS By Weight
Grass		
Elymus riparius	Riverbank Wild Rye	20.00%
Andropogon gerardii	NY Eco Big Bluestem NY Eco	12.00%
Carex lupulina	Hop Sedge	10.00%
Panicum clandestinum 'Tioga'	Deer Tongue 'Tioga'	10.00%
Carex vulpinoidea	Fox Sedge	10.00%
Carex scoparia	Broom sedge	8.00%
Sorghastrum nutans NY Eco	Indiangrass NY Ecotype	8.00%
Panicum virgatum	Switch Grass	8.00%
Juncus effusus	Soft Rush	2.00%
Juncus tenuis	Path Rush	1.00%
		<hr/> 89.00%
Herb/Forb		
Verbena hastata	Blue Vervain	4.00%
Desmodium canadense	Showy Tick Trefoil	2.00%
Eupatorium maculatum	Joe-pye Weed	1.00%
Asclepias incarnata	Swamp Milkweed	1.00%
Aster novae-angliae	New England Aster	1.00%
Eupatorium perfoliatum	Boneset	0.70%
Helenium autumnale	Common Sneezeweed	0.50%
Aster puniceus	Aster - Swamp	0.50%
Mimulus ringens	Monkey Flower	0.20%
Vernonia noveboracensis	New York Ironweed	0.10%
		<hr/> 11.00%
		<hr/> 100.00%

Application Rate

Wetland/Basin Mix: 20 lbs/acre PLS. No cover crop shall be applied.

Any species substitutions shall be with a species having similar characteristics and function. Substitutions must be approved by MassDOT Landscape Design Section per the documentation submittal process.

ITEM 756.454 (Continued)**50% Increase Adjustment for Field Conditions**

Seeding under the following conditions requires a 50% increase in the permanent mix at the time of construction:

- Seeding out of season
OR
- Seeding after Compost Blanket has been applied (unless already increased for out of season).

METHOD OF MEASUREMENT

Item 756.454 will be measured for payment by the pound of Pure Live Seed delivered and complete in place.

BASIS OF PAYMENT

Item 756.454 will be paid at the contract unit price per pound of Pure Live Seed delivered upon approval of all Seed Submittal Documentation. Overseeding required to correct poor germination or establishment shall be incidental to the item.

ITEM 756.454 (Continued)***NATIVE SEED WORKSHEET***

Project Description: _____

Project No: _____

Contractor: _____

Contract No: _____

Seed Mix Number & Description: _____

Contractor: Complete Prior To Ordering

Pounds of Seed Required Per Contract:

_____ lbs./acre for _____ Acre(s) OR _____ SY

Additional 50% increase if required (out of season or seeding over compost blanket):

_____ **lbs. Total Seed Required**Calculated Quantity for **Pure Live Seed (PLS¹)**:_____ **Total Pounds PLS****Engineer: Verification at Time of Application**Number pounds delivered to site²: _____ Date(s): _____

Actual Seed Bag Tag/s Received or photo documented by Engineer: _____

¹ PLS=% pure seed x % viable seed (total germination, hard seed, and dormant seed).²Quantity delivered should match pounds **Total Pounds PLS** and **Verification of Seed Delivery**.
Pounds should be shown on each Seed Tag.

ITEM 756.454 (Continued)**SUPPLIER VERIFICATION OF SEED DELIVERY FOR MASSDOT PROJECTS**

Date _____

We hereby certify that (*Seed Supplier*): _____Furnished to (*Contractor*): _____For use on: (*Project Description*) _____

Project #: _____ Contract #: _____

Pounds of Pure Live Seed: _____

Of Mix (*Description*): _____

Lot Number _____

The material was delivered on (*Date*) _____.

The labels and contents meet all State and Federal regulations. The mixture consists of the following species, including cultivars (as applicable) and ecotype region, and at the following percentages (may be attached separately):

Name (print): _____ Title: _____

Supplier: _____

Signature and Seal: _____

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
- Straw bales which shall be trenched

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 in the approximate location as shown on the plans 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 specified on the plans and 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.

ITEM 767.121 (Continued)**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.

Straw Bales

Straw bales shall be used if shown on the plans or when specified by Orders of Condition or other permit requirements.

Bales should be placed in a single row, lengthwise on the contour, with ends of adjacent bales tightly abutting one another. All bales should be either wire-bound or string-tied. Straw bales should be installed so that bindings are oriented around the sides (rather than along the tops and bottoms) of the bales in order to prevent deterioration of the bindings.

The barrier should be entrenched and backfilled. A trench should be excavated the width of a bale and the length of the proposed barrier to a minimum depth of 4 inches. The trench must be deep enough to remove all grass and other material which might allow underflow. After the bales are staked and chinked (filled by wedging), the excavated soil should be backfilled against the barrier. Backfill soil should conform to the ground level on the downhill side and should be built up to 4 inches against the uphill side of the barrier.

Each bale should be securely anchored by at least 2 stakes or re-bars driven through the bale. The first stake in each bale should be driven toward the previously laid bale to force the bales together. Stakes or re-bars should be driven deep enough into the ground to securely anchor the bales. For safety reasons, stakes should not extend above the bales but should be driven in flush with the top of the bale.

The gaps between the bales should be chinked (filled by wedging) with straw to prevent water from escaping between the bales. Loose straw scattered over the area immediately uphill from a straw bale barrier tends to increase barrier efficiency. Wedging must be done carefully in order not to separate the bales.

When used in a swale, the barrier should be extended to such a length that the bottoms of the end bales are higher in elevation than the top of the lowest middle bale to assure that sediment-laden runoff will flow either through or over the barrier but not around it.

ITEM 767.121 (Continued)**MAINTENANCE**

Maintenance of the sediment control barrier shall be per Subsection 670.60 of the Standard Specifications or per the Stormwater Pollution Prevention Plan (SWPPP), whichever is more restrictive.

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.
- Straw bales shall be removed and disposed off-site by the Contractor. Areas of trenching shall be raked smooth and disturbed soils stabilized with a seed mix matching adjacent seeding or existing grasses (i.e., lawn or native grass mix).
- Sedimentation fence, stakes, and other debris shall be removed and disposed off-site. Site shall be restored to a neat and clean condition.

ITEM 767.121 (Continued)**METHOD OF MEASUREMENT AND BASIS OF PAYMENT**

Item 767.121 will be measured and paid for at the contract unit price per foot of sediment control barrier which price shall include all labor, equipment, materials, maintenance, dismantling, removal, restoration of soil, and all incidental costs required to complete the work.

Additional barrier, such as double or triple stacking of compost filter tubes, will be paid for per foot of tube installed.

Barriers that have been driven over or otherwise damaged by construction activities shall be repaired or replaced as directed by the Engineer at the Contractor's expense.

ITEM 816.71**PORTABLE SOLAR POWERED
TRAFFIC SIGNAL SYSTEM****LUMP SUM**

This item is for Solar-Powered Portable Trailer Mounted Three Color Traffic Signal (PTS) System (minimum of two trailers per system). The unit shall comply with the requirements for Portable Traffic Control Signals as defined in the Federal Manual of Uniform Traffic Control Devices (MUTCD), Part IV, including specifically the requirements pertaining to signal heads, lamps, and spacing of signals, clearance, and number of signal faces. The PTS System units shall utilize L.E.D. traffic signal indications meeting the Institute of Traffic Engineers specifications. Each PTS System delivered shall contain the trailer, structural support system, mast arm assembly; lift mechanism, regulated power supply, batteries, solar charging system, trailer-mounted traffic signal controller, signal heads, microwave detector, all necessary wire and cable and all ancillary equipment. The PTS-System shall be able to function continuously, independent of utility power sources. The system trailers shall conform to applicable sections of Massachusetts law governing trailers, including lighting to highway standards.

PTS System construction, materials, and operation shall conform to the ITE, NFPA, ULI, and NEC. The unit shall be a trailer mounted and equipped with a mechanically lifted mast and arm. It shall be equipped to display (2) 12", 3 section traffic signal heads with back plates. Vehicle heads shall be dark green or federal yellow in color.

TRAILER

The trailer shall be designed for safe transport at normal highway speeds of 55 mph. Lights, reflectors, and splash guards shall be provided to comply with ICC and Massachusetts regulations. The PTS System shall be delivered with Department approved reflective tape installed on all four (4) sides of the trailer. Each side of the trailer shall have the minimum equivalent of 72 square inches of reflective tape.

STRUCTURAL SUPPORT

The deployed structure shall supply adequate support to allow complete traffic signal operation, including raising and lowering of the mast arm, and shall remain stable during wind gusts of 80 mph when stationary.

LIFT MECHANISM

1. The lift mechanism shall be an electric or electrically assisted hydraulic or mechanically assisted manual mechanism capable of raising and lowering the mast arm.
2. The mechanism shall be capable of being lowered manually.
3. A safety feature shall be provided to prevent the mast arm from lowering once in the raised position. If a safety bolt is used, a self-locking mechanism shall be incorporated into the safety bolt which prevents it from being inadvertently dislodged.
4. The mast arm of the unit shall extend a minimum of 9 feet from the side of the trailer and provide a minimum clearance of 17 feet over the baseline established by the jacks.

ITEM 816.71 (Continued)**ELECTRICAL**

1. The PTS System shall operate primarily from a solar powered electrical system. Secondary power supply type shall provide capability to accept existing 120V commercial electric service.
2. This system shall consist of a battery power system and solar array panels, and shall be capable of operating the PTS System for at least 14 consecutive days on batteries alone at 70°F. The system shall be designed to operate continuously within Massachusetts, January thru December. Should weather conditions preclude the use of pure solar power the PTS System shall be equipped with an on-board auxiliary charging system to enable the batteries to be recharged via a 120 Volt AC connection.

TRAFFIC SIGNAL OPERATION

The traffic signal controller shall be enclosed in a cabinet mounted on each trailer. The controller shall be furnished with a keypad and LCD display screen; the use of a PC or laptop only for programming is not acceptable. The controller keyboard or keypad shall be capable of allowing the signal operator to program the signal under all weather conditions. The traffic signal controller shall also:

1. Be capable of operating over a -30 ° to +150 °F range and in a 20% to 100% humidity range.
2. Be capable of performing normal traffic signal operations as defined on the plans.
3. To avoid the possibility of conflicting signal indications, or absence of signal voltages, the traffic signal system shall be either hard-wired or controlled by radio signals, and in either case shall employ the use of a conflict monitors, or similar electronic technology that is typically used in traditional traffic signal operations which will not allow conflicting signal displays.
4. In the event that a conflict is detected the signal heads shall display flashing red indications, and the system shall require the malfunction to be manually reset.
5. Retain programs in the controller's memory in the event of power failure.
6. Be capable of automatic system recovery after power outages without operator intervention.
7. Place the signal into programmed flashing operation when the output voltage drops below the manufacturer's recommendations.
8. Be contained in a weatherproof, lockable housing, and insulated to protect against excessive vibration and temperature. The housing shall have a lockable door latch.
9. Have the ability to be programmed with a password, to help prevent unauthorized access to the controller software in the field.
10. The controller software provided with the PTS System shall not contain any computer code that would disable such software or system or impair in any way its operation based on the elapsing of a period of time, exceeding an authorized number of copies, advancement to a particular date or other numeral, or other similar self-destruct mechanisms, (sometimes referred to as "time bombs", "time locks", or "drop dead" devices), or that would permit contractor to access the Product to cause such disablement or impairment (sometimes referred to as a "trap door" device).
11. Contractor shall submit shop drawings and specifications of traffic signal controller for the review and approval of the Engineer prior to construction.

ITEM 816.71 (Continued)**BASIS OF PAYMENT**

Item 816.71 will be paid for at the Contract Lump Sum price, which price shall include all labor, materials, equipment, shop drawings, submittals, and incidental costs required to complete the work. The Lump Sum price bid shall include the installing and maintaining of an operable Portable Solar Powered Traffic Signal System.

<u>ITEM 853.21</u>	<u>TEMPORARY BARRIER REMOVED AND RESET</u>	<u>FOOT</u>
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Work under this item shall conform to the relevant provisions of Subsection 850 of the Standard Specifications and shall consist of removing, transporting and resetting temporary barrier systems and limited deflection temporary barrier systems from alignments established along the roadway to new alignments in accordance with the details shown on the plans, as required by the construction and staged construction operations and as required by the Engineer for the channelization of traffic and/or work zone protection.

The work shall also include furnishing and installing all hardware and associated materials per the details and/or manufacturer's specifications. The work shall also include necessary patches and repairs caused by the temporary barrier system to damaged pavement surfaces or any adjacent longitudinal barrier once the system has been removed.

Temporary barrier systems and limited deflection temporary barrier systems shall be removed from existing locations and reset in accordance to the construction methods stated in the respective barrier items.

Damage to the pavement surface or adjacent permanent barriers caused by removing or resetting temporary barrier shall be repaired as directed by the Engineer at the Contractor's expense.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Item 853.21 will be measured and paid by the foot, in place which shall provide full compensation for removing, relocating, resetting, realigning, and transporting maintaining the temporary barrier system and/or limited deflection temporary barrier system. The Contractor will be paid for this item each time the barrier is relocated either to a new work zone, to off-season storage, or back to the project from storage. The Contractor will not be separately compensated for any work necessary to maintain or re-align units or replace damaged units. No payment will be made for removing and resetting barriers for the purpose of gaining access to the construction work zone. No payment will be made for removing, relocating and resetting any barriers moved for the convenience of the Contractor.

For temporary barrier systems that require anchorage systems, the cost of furnishing, installing and removing the anchorage and hardware and the restoration of pavement surfaces or adjacent permanent barrier systems to facilitate anchorage shall be considered incidental to the cost of this Item.

ITEM 853.33 TEMPORARY BARRIER – LIMITED DEFLECTION (TL-3) FOOT

Work under this item shall conform to the relevant provisions of Subsection 850 and shall consist of furnishing, installing, maintaining and final removal of limited deflection TL-3 temporary barrier systems for channelization of traffic and/or work zone protection. Limited deflection temporary barrier systems shall have a maximum dynamic deflection of 6 inches or less (on-bridge) and shall be used in areas where the available clear area behind the barrier system is 6 inches or less. Limited deflection temporary barrier systems shall have a maximum dynamic deflection of 24 inches or less (off-bridge) and shall be used in areas where the available clear area behind the barrier system is 24 inches or less (off-bridge).

MATERIALS

The Contractor shall use a temporary barrier system that is listed on the Qualified Traffic Control Equipment List.

The Contractor may submit alternate materials to the Engineer for approval if the limited deflection temporary barrier system meets the following criteria:

1. The system has been tested by an independent laboratory that is accredited by FHWA to crash test roadside hardware;
2. The system meets the minimum requirements of the AASHTO *Manual on Assessing Safety Hardware* (MASH) at Test Level (TL) 3 or higher; and
3. The system has a federal-aid eligibility letter from FHWA.

Copies of the testing results and the federal-aid eligibility letter shall be submitted and approved by the Engineer prior to procurement of an alternate temporary barrier system.

The Contractor shall supply shop drawings to confirm the available clear area behind the barrier equals or exceeds the maximum dynamic deflection of MASH Test 3-11 during testing procedures taken at an independent laboratory that is accredited by FHWA to crash test roadside hardware.

Delineators shall be installed on all limited deflection temporary barrier systems in conformance with the relevant provisions of Section 850.69 and shall be incidental to the temporary barrier systems.

Temporary impact attenuators that are listed on the Qualified Traffic Control Equipment List shall be used whenever a blunt end of the limited deflection temporary barrier system is facing traffic within the clear zone unless it is protected by a second barrier system or secured to a separate barrier system or bridge railing by a method approved by the manufacturer.

ITEM 853.33 (Continued)**CONSTRUCTION METHODS**

Limited deflection temporary barrier systems shall be placed in line with the drawings. Installation shall be per the manufacturer's specifications, details, and the approved shop drawings.

The Contractor shall not place any breaks in the limited deflection temporary barrier system that will result in sections that are shorter than the stated minimum length-of-need (LON) under MASH Test 3-11. Exceptions shall be allowed for gate systems or changeable length segments placed over expansion joints if those barrier segment types have been tested and meet the minimum requirements of MASH Test 3-11 with the adjoining limited deflection barrier system.

Within the LON section, limited deflection temporary barrier systems shall only be placed on paved surfaces unless otherwise tested and certified under MASH TL-3 for those conditions.

Damage to the pavement surface caused by the limited deflection temporary barrier during installation, while in service, and/or during removal shall be repaired as directed by the Engineer at the Contractor's expense

METHOD OF MEASUREMENT

Item 853.33 will be measured for payment by the foot, in place.

BASIS OF PAYMENT

Payment for work under this item will be made at the contract price per foot for limited deflection temporary barrier installed in place, including all incidental items. This price shall include the cost of furnishing, installing, maintaining and final removal of all limited deflection temporary barrier systems.

For limited deflection temporary barrier systems that require anchorage systems, the cost of furnishing and installing the anchorage and hardware and the restoration of pavement surfaces or adjacent permanent barrier systems to facilitate anchorage shall be considered incidental to the cost of the item.

Payment for limited deflection temporary barrier removed and reset will be made under Item 853.21.

ITEM 859.1**REFLECTORIZED DRUMS WITH SEQUENTIAL
FLASHING WARNING LIGHTS****DAY**

The work under this Item shall conform the relevant provisions of Subsection 850 of the Standard Specifications and the following:

Work under this item consists of furnishing, installing, maintaining in proper operating conditions, and removing reflectorized drums, and any necessary ballast, equipped with sequential flashing warning lights.

Reflectorized drums shall be listed on the MassDOT Qualified Traffic Control Equipment List. Reflective sheeting on drums shall meet or exceed ASTM D4956 Type VIII. All drums shall be maintained in a satisfactory manner including the removal of oils, dirt, and debris that may cause reduced retroreflectivity.

The Contractor shall use one of the following sequential flashing warning light systems unless otherwise approved by the Engineer:

1. Empco-Lite LWCS.
2. pi-Lit® Sequential Barricade-Style Lamp; or
3. Unipart Dorman SynchroGUIDE.

Sequential flashing warning lights shall be secured to reflectorized drums per the light manufacturer's specifications.

The first ten (10) drums in any merging or shifting taper as designated in the Temporary Traffic Control Plan shall be equipped with sequential flashing warning lights. These lights shall be operating, at a minimum, between dusk and dawn when the taper is deployed.

The successive flashing of the sequential warning lights shall occur from the upstream end of the merging or shifting taper to the downstream end of the taper in order to identify the desired vehicle path. Each warning light in the sequence shall be flashed at a rate of not less than 55, nor more than 75 times per minute.

Warning lights shall be powered off when drums are not deployed in a taper.

METHOD OF MEASUREMENT

A group of ten (10) reflectorized drums with sequential flashing warning lights is considered one (1) unit and will be measured by the day. Each period of up to 24 hours during which this unit is in use will be measured as one day regardless of the number of times that the drums are positioned, repositioned, removed, or returned to service.

BASIS OF PAYMENT

Reflectorized Drums with Sequential Flashing Warning Lights will be paid for at the contract unit price per day, which shall include full compensation for furnishing, positioning, repositioning, and removing the group of ten (10) drums as directed by the Engineer.

ITEM 864.35**SLOTTED PAVEMENT MARKER TWO-WAY
YELLOW/YELLOW****EACH**

The work under this item shall conform to the relevant provision of Subsection 860 of the Standard Specifications and the following:

The work to be done under this item shall consist of furnishing and installing two-way yellow/yellow reflectorized pavement markers (slotted in pavement) in accordance with the relevant provisions of Traffic Standard TR.6.5 "Typical Pavement Marking for Conventional Roadways".

The work shall include cutting the tapered pavement slot to the dimensions specified by the Manufacturer for the one-way or two-way markers, application of the Manufacturer's recommended epoxy adhesive, and placing the reflectorized pavement marker in the proper position within the slot so that the reflective face is visible and perpendicular to oncoming traffic and so that the top of the marker is set $1/8 \pm$ inch below the top of the adjacent pavement.

Surface preparation and installation shall be strictly in accordance with the Manufacturer's instructions.

Reflectorized pavement markers shall be 3M Series 290, Avery Dennison Lifelite Model C80, Ray-O-Lite Model 2004 or an approved equivalent.

METHOD OF MEASUREMENT

Item 864.35 will be measured for payment by the unit Each, for each marker installed, complete in place.

BASIS OF PAYMENT

Item 864.35 will be paid for at the contract unit price per Each, which price shall include all labor, materials, equipment, and incidental costs required to complete the work.

No separate payment will be made for cutting the tapered pavement slot, but all costs in connection therewith shall be included in the Contract unit price bid.

<u>ITEM 866.206</u>	<u>6 INCH REFLECTORIZED WHITE LINE</u> <u>(POLYUREA) (RECESSED)</u>	<u>FOOT</u>
<u>ITEM 866.212</u>	<u>12 INCH REFLECTORIZED WHITE LINE</u> <u>(POLYUREA) (RECESSED)</u>	<u>FOOT</u>
<u>ITEM 867.206</u>	<u>6 INCH REFLECTORIZED YELLOW LINE</u> <u>(POLYUREA) (RECESSED)</u>	<u>FOOT</u>

The work under these items shall conform to the relevant provisions of Subsection 860 of the Standard Specifications and the following:

Work shall consist of the following major activities:

- Cutting or grinding recessed grooves or slots in the pavement, and
- Installing white or yellow pavement markings in the recessed grooves, and
- Periodically measuring and reporting the performance of the pavement markings.

MATERIALS

Material certification shall be submitted to the Engineer before all applications. All work shall be done in accordance with the Material Supplier's specifications and the following:

Wet reflective polyurea pavement markings shall consists of a liquid binder, first drop beads or elements to provide dry and wet retroreflectivity, and second drop glass beads to improve the durability of the pavement marking, reduce track-free times, and provide supplementary dry retroreflectivity.

Polyurea shall be one of the following binders and first drop beads or elements, or approved equivalent:

1. 3M™ Liquid Pavement Marking Series 5000 with 3M™ All Weather Series 90 elements;
2. Epoplex GLOMARC® 90 with Potters VISIMAX® Glass Bead System; or
3. SWARCO MFUA-12 with SWARCO MEGALUX-BEADS®.

Combination of other binder and first drop bead or element series may only be used at the approval of the Engineer.

Second drop beads shall be manufactured from glass of a composition that is highly resistant to traffic wear and to the effects of weathering. If coating is required to meet the performance requirements, the second drop beads shall be coated to ensure satisfactory embedment and adhesion. Second drop beads retained on a No. 40 U.S. Standard Mesh Sieve shall have a minimum crush strength of 30 lbs. when tested in accordance with ASTM D1213.

Second drop beads shall have a minimum refractive index of 1.51 when tested in accordance with AASHTO M247.

Second drop beads passing the No. 30 sieve shall have a minimum of 75 percent true spheres when tested in accordance with ASTM D1155. All second drop beads retained on the No. 20 and No. 30 sieves shall have a minimum of 80 percent true spheres as determined by ASTM D1155.

ITEMS 866.206, 866.212, 867.206 (Continued)

Second drop beads shall meet the following gradation requirements when tested in accordance with ASTM D1214:

U.S. Standard Sieve No.	Percent Retained
20	3-10
30	15-35
50	45-75
70	0-10
Pan	0-5

CONSTRUCTION METHODS**Installation Of Groove**

The Contractor shall not cut the recessed grooves without the approval of the Engineer. Prior to cutting the recessed grooves for any lines, the Contractor shall layout the proposed lines on the pavement surface. The Contractor shall use a chalk line or other suitable method to mark the proposed layout. The Contractor may cut the recessed grooves upon approval of the proposed layout by the Engineer.

Grooves shall be positioned so that there shall be a minimum of 4 inches from the edge of the pavement marking to any longitudinal pavement joints. Grooves shall not be installed on bridge joints, at drainage structures, or in other areas identified by the Engineer. For intermittent pavement markings (ie: broken or dotted lane lines), grooves shall be cut in the same intermittent pattern. Grooves for such pavement markings shall not be cut as a single continuous groove, but shall be cut only where markings will be applied.

The use of gang stacked diamond cutting blades to grind a smooth square slot is required for producing all grooves. The spacers between blade cuts shall be such that there will be less than a 10 mil rise in the finished groove between the blades. The acceptability of the surface texture will be determined by the Engineer. The diamond grinder shall have an articulating head so that the slots are installed correctly on grades and super elevated sections.

Grooves that are ground deeper or wider than the specified allowable limits shall be repaired per the direction of the Engineer at no additional cost. Grooves that are ground too shallow, too narrow, or with unacceptable rises between blade cuts shall be reground to the correct size, depth, and surface finish at no additional cost. Slots ground out of alignment shall be patched using an approved method and materials.

Grooves shall be 1 inch \pm ¼ inch wider than the pavement marking material. Groove depth shall be 100 mils \pm 5 mils, unless otherwise approved by the Engineer. Depth shall be consistent across the full width of the groove. Depth plates shall be provided by the Contractor to the Engineer to assure that desired groove depth is achieved.

ITEMS 866.206, 866.212, 867.206 (Continued)

Grooves shall be clean, dry and free of laitance, oil, dirt, grease, paint or other foreign contaminants. Shrouds and a vacuum apparatus shall be included as part of the grinder to remove larger pieces of pavement that are ground out. If water is used to clean the groove or the grooving process takes place during rainfall, a minimum of 24 hours of dry time is required prior to the placement of pavement markings.

After the depth, width, length, and surface condition has been approved by the Engineer, an air lance shall be used to remove fine particles from the groove. Air compressors shall initially be blown out away from the application area to prevent compressor condensation build-up from entering the groove. The Contractor shall prevent traffic from traversing the grooves and re-clean grooves, as necessary, prior to application of pavement markings at no additional cost to the Department.

All grooves must be given final approval by the Engineer prior to the placement of pavement markings.

Installation Of Wet Reflective Polyurea

Installation of wet reflective polyurea pavement markings shall conform to the Manufacturer's specifications and the following:

Application rate for binder and all beads and elements shall consider final pavement surface composition and smoothness in advance of application to ensure proper wet film thickness and embedment of all beads and elements. The Contractor shall provide the Engineer with documentation from the Manufacturer with all recommended application rates in advance of any pavement marking installation.

The minimum uniform wet thickness for the polyurea binder shall be 25-30 mils. The line thickness shall be met across at least the middle $\frac{2}{3}$ of the pavement marking width. Depth plates shall be provided by the Contractor to the Engineer to assure that desired thickness is achieved.

The finished white color shall be free from tint, with good opacity and visibility under both daylight and artificial light. The finished yellow color shall be defined by Federal Test Standard 595 - Color Chip Number 13538, using Federal Test Standard 141 (Method 4252). The finished lines shall be uniform in color and have clean, well-defined edges.

First and second drop beads and/or elements shall be applied in a manner that does not induce rolling or bouncing, to ensure that exposed portions of beads are free of binder material. Beads and elements should be embedded in the binder to a depth of approximately 50% of their diameter.

Drop rate for first drop bead or element shall be per the Manufacturer's specifications.

Drop rate for second drop glass bead shall be 6.4-10.2 lbs. per gallon.

ITEMS 866.206, 866.212, 867.206 (Continued)

Newly installed pavement markings shall be protected from tracking during the setting period per Subsection 860.63.

Once the installed pavement markings have been open for traffic for a minimum of 48 hours, the Contractor shall perform retroreflectance readings per the measurement and sampling procedures contained in ASTM D7585 (Standard Practice for Evaluating Retroreflective Pavement Markings Using Portable Hand-Operated Instruments) using the Referee Evaluation Protocol found in section 6.4. The following tests shall be performed during the measurement and sampling process:

1. ASTM E1710 (*Standard Test Method for Measurement of Retroreflective Pavement Marking Materials with CEN-Prescribed Geometry Using a Portable Retroreflectometer*); and
2. ASTM E2177 (*Standard Test Method for Measuring the Coefficient of Retroreflected Luminance (RL) of Pavement Markings in a Standard Condition of Wetness*).

The average initial retroreflectance readings shall exceed the following minimum values:

	*White Markings	*Yellow Markings
ASTM E1710 (Dry)	475 mcd/lux/m ²	375 mcd/lux/m ²
ASTM E2177 (Wet Recovery)	375 mcd/lux/m ²	300 mcd/lux/m ²

*Observation Angle = 1.05°, Entrance Angle = 88.8°

Pavement markings with measured average initial retroreflectance readings that do not meet the specified minimum values using the procedures outlined in subsection 6.4.5 of ASTM D7585 shall be removed by a method approved by the Engineer and reapplied at no additional cost.

Pavement Marking Asset Management

Upon completion of the pavement marking installation, the following data shall be tabulated by the Contractor:

1. Retroreflectance readings, including date(s), time(s), and location(s) where readings took place;
2. Liquid binder type(s) and application rate;
3. Reflective element type and drop rate;
4. Date of groove installation;
5. Lot, batch number, or any other material identifiers and manufacturing information;
6. Date and time of final liquid marking installation;
7. Highway location (including direction) of installation;
8. Air and pavement temperature during application;
9. Measured material application thickness, depth of groove; and
10. Any other pertinent information that may assist MassDOT with Quality Control.

ITEMS 866.206, 866.212, 867.206 (Continued)

Results for all readings shall be provided within 10 business days of testing to the Engineer, with a second copy sent to:

State Traffic Engineer
Attention: Pavement Marking Retroreflectivity Testing
10 Park Plaza, Room 7210
Boston, MA 02116

The cost to prepare and submit this data shall be considered incidental to the cost of the items.

METHOD OF MEASUREMENT

All pavement marking lines will be measured per Foot, complete in place in accordance with Subsection 860.80.

BASIS OF PAYMENT

Pavement marking lines will be paid for at the respective Contract unit price per Foot, under the corresponding item, which price shall include all labor, materials, equipment and incidental costs required to complete the work.

No separate payment will be made for measuring the pavement marking performance, but all costs in connection therewith shall be included in the Contract unit price bid for the respective item.

ITEM 874.2**TRAFFIC SIGN REMOVED AND RESET****EACH**

The work under this Item shall conform to the relevant provisions of Subsections 828 and 840 of the Standards Specifications and the following:

The work under this item shall consist of removing and resetting existing signs affected by the construction as shown on the Plans or as directed by the Engineer.

The signs shall be removed, relocated and reset in the locations shown on the Plans or where required by the Engineer. Signs removed and reset shall be provided with new P-5 posts, or if reset temporarily may be provided with supports conforming to NCHRP 350. The Contractor shall be responsible for any damage (or loss of) the signs during the removal, storage and resetting.

Also included in this item is the removal of the existing supports and foundations from which the existing signs are removed. The existing foundations shall either be removed completely or the excavation shall be to a depth of at least 12" below the existing or proposed ground level, whichever is lower. The remaining hole shall be backfilled with compacted gravel and the ground surface restored or replaced in kind to match adjacent surface materials.

METHOD OF MEASUREMENT

Item 874.2 will be measured for payment by the each, for each traffic sign removed and reset, complete in place.

BASIS OF PAYMENT

Item 874.2 will be paid at the Contract unit price per Each, which price shall include full compensation for removing and resetting sign, removal and disposal of existing sign support and foundation, all labor, materials and hardware, bolts, tools, temporary supports, equipment, backfilling, area restoration, and incidental costs required to complete the work.

Removing and resetting signs to and from temporary supports, if required, shall be considered incidental to this item and no additional payment made therefore.

Payment for installation of new breakaway posts for reset signs (final permanent locations only) will be made under Item 847.1, Sign Support (N/Guide)+Route Marker w/1 Breakaway Post Assembly – Steel. The Contractor shall protect and maintain the existing traffic sign temporarily at the intersection throughout construction operations until the new replacement sign is installed, unless otherwise required by the Engineer. Temporary supports meeting NCHRP 350 furnished and erected for temporary protection and maintenance of the existing traffic sign during construction operations shall be considered incidental to Item 874.2 and shall not be measured for payment, and no additional compensation shall be made to the Contractor thereto.

This item does not include advance signing and construction signs covered under Item 852., Safety Signing for Construction Operations. Advance signing and construction signs shall be paid for under Item 852., Safety Signing for Construction Operations.

ITEM 905. **4000 PSI, 3/8 INCH, 660 CEMENT CONCRETE** **CUBIC YARD**

The work under this item shall conform to the relevant provisions of Subsection 901 of the Standard Specifications and the following:

4000 PSI, 3/8 INCH, 660 CEMENT CONCRETE shall be used to patch deteriorated areas of concrete in existing reinforced concrete that are greater than 2" in depth as shown on the Plans or at areas designated by the Engineer.

The Contractor shall remove existing concrete to the limits indicated under Item 127.12, Reinforced Concrete Excavation for Repairs. After the existing concrete has been removed, the surface has been prepared, and Epoxy Bonding Compound has been applied to existing surfaces to be patched, 4000 PSI, 3/8 INCH, 660 CEMENT CONCRETE shall be placed in the areas requiring patching. Cost for furnishing and applying of Epoxy Bonding Compound shall be incidental to Item 905.

Surface preparation shall conform to the requirements herein described, and all costs in connection with such surface preparation shall be considered incidental to Item 905. Areas to be repaired must be clean, sound, and free of contaminants. All loose and deteriorated concrete shall be removed by mechanical means. Mechanically prepare the concrete substrate to obtain a surface profile of ± 0.06 inch with a new exposed aggregate surface. Area to be patched shall not be less than 2 inch in depth for repairs using 4000 PSI, 3/8 Inch, 660 Cement Concrete.

The Contractor shall have the approval of the Engineer certifying that existing concrete has been removed to the required limits and that adequate surface preparation has been achieved before any concrete is placed.

All edges where this condition exists shall be sawcut a minimum 1/2" deep as part of the concrete removal work.

After removals and edge conditioning are complete, remove bond inhibiting materials (dirt, grease, loosely bonded aggregate) by abrasion blasting or high-pressure water blasting with water that does not contain detergents or any bond inhibiting chemicals. Check the concrete surfaces after cleaning to insure that surface is free from additional loose aggregate or that additional delaminations are not present.

Epoxy bonding compound shall be applied to the reinforcing steel and concrete, immediately prior to placing the concrete.

Epoxy bonding compound shall be used as a bonding adhesive to bond fresh plastic concrete to sound, hardened concrete where indicated on the Plans or in the specifications. Epoxy bonding compound shall be applied in accordance with manufacturer's recommendations and shall conform to the requirements of the Subsection 901.37.F and M.4.10.1.

Manufacturers of products that are considered to meet the specification requirements for epoxy bonding compound shall be on the MassDOT approved material list. Products to be used for epoxy bonding compound shall be approved by the Engineer before the Contractor begins his operations.

ITEM 905. (Continued)

The surface of the old concrete shall be thoroughly cleaned by abrasive blasting to remove all loose particles, dust and other films. Surface preparation for bonding new concrete to existing concrete shall include thoroughly cleaning, roughening and pre-wet the surface with clean water to saturated surface dry (SSD), followed by an application of epoxy bonding compound to existing concrete and existing and proposed epoxy-coated reinforcing steel. The bonding compound shall be applied to this clean surface by spray or by brushing, using brushes of a size and/or design that will reach through the reinforcing steel to the underlying concrete surface. The bonding compound may be applied before placing the wire mesh, provided all the required work is accomplished within the contact time of the bonding compound. The manner of mixing, the rate of application, and the allowable open or contact time, before placing the concrete, shall be in accordance with the recommendations of the bonding compound manufacturer.

All patches shall be formed over the entire surface with forms approved by the Engineer. They shall be held securely in place and able to withstand the hydrostatic pressure resulting from the placement of the wet concrete. Forms shall be built in such a way that the surface of the resulting patch will duplicate the original lines of the concrete removed. Form faces shall be of new-finished plywood or steel, or other smooth surface as approved by the Engineer prior to use. Forms will be provided with a top chute, at a maximum spacing of 4 feet for providing a compression head of concrete in the form. The overfilled area shall be struck off flush when forms are removed. Forms shall be placed snugly against the surface of the old concrete at the edges of the patch and shall extend beyond the edges at least three inches. They shall not deflect under the placement of the fresh concrete.

4000 PSI, 3/8 INCH, 660 CEMENT CONCRETE shall be mixed and placed in accordance with the relevant provisions of Item 905. The concrete shall be pumped or hand shoveled into the forms. Vibrators shall be of an approved design and shall be internal mechanical vibrators of a size suitable to the work at hand. If requested, the use of external vibrators attached to the forms will be permitted subject to the results obtained. The amount of vibrating to be done will be subject to the direction of the Engineer, who will be guided by the quality of the results obtained, as evidenced after removal of the forms.

The Contractor will be required to remove all stains and discolorations that have occurred as a result of his operations. These stains and discolorations shall be removed from all portions of the structure, regardless of whether such portions are part of the work of the Contract.

For this purpose, abrasive blasting may be required, supplemented by other methods if necessary, to render the surfaces completely free of discoloration. The cost of this work will be incidental to the price bid for the various items of work.

ITEM 909.2 **CEMENTITIOUS MORTAR FOR PATCHING** **SQUARE FOOT**

The work under this Item consists of furnishing and placing a polymer-modified, cementitious, 2-component, fast-setting, trowel grade patching mortar to patch vertical, horizontal and overhead surfaces on the existing structure in areas of spalled concrete at the locations indicated on the Plans and/or as directed by the Engineer.

This Item does not include the repair of any horizontal or vertical spalls which exceeds 1.5 inches in depth. The repairs to those areas shall be made with 4000 PSI, 3/8 Inch, 660 Cement Concrete as specified under Item 905.

The procedure to be used to repair deteriorated or spalled concrete shall be as defined on the plans and as follows:

The Contractor shall remove all deteriorated or spalled concrete as specified under Item 127.12, in the areas designated on the Plans or as required by the Engineer. All costs to remove the deteriorated and spalled concrete shall to be covered in Item 127.12.

The Contractor shall have the approval of the Engineer certifying that all spalled and deteriorated concrete has been removed prior to repairing the deteriorated area. The maximum thickness of application in one pass shall be one (1) inch. If the depth of patch exceeds one (1) inch, the mortar shall be placed in two passes of approximate equal thickness, with a total thickness not to exceed two (2) inches.

Concrete at the edges of all areas to be patched using Cementitious Mortar for Patching shall be removed to a minimum depth of 1/2 inch prior to the application of the mortar.

MATERIALS

The polymer modified cementitious system shall consist of a system from the Department's Qualified Products List for the specific application.

SURFACE PREPARATION

Areas to be patched must be clean and sound. All loose and disintegrated concrete shall be removed by means of chipping or an equivalent method to a depth where sound concrete is exposed. Minimum patch depth at edges of patch shall be a depth of 1/2 inch. Abrasive blast existing concrete to remove all contaminants prior to applying mortar. Chipping methods to be approved in advance by the Engineer.

MIXING

Mix manually or mechanically. The mortar shall be prepared in accordance with the Manufacturer's instructions.

ITEM 909.2 (Continued)**APPLICATION AND FINISH**

At time of application, surfaces should be damp (saturated surface dry) with no glistening water.

Application and finishing shall be as per the manufactures literature.

CURING

Use fine mist spray of water, wet burlap, or non solvent approved curing compound if ambient conditions might cause premature surface drying by high temperatures, low humidity and strong winds.

If necessary, protect newly applied mortar from rain. To prevent freezing, cover with insulating material.

MANUFACTURER'S FIELD REPRESENTATIVE

The Contractor shall arrange with the materials manufacturer or distributor to have the services of a competent field representative at the work site prior to any mixing of components to instruct the work crews in the proper mixing and application procedures. The field representative shall remain at the job site after work commences and continue to instruct until he and the Contractor, Inspector and/or Engineer are satisfied that the crew has mastered the technique of installing the system successfully. The representative shall make periodic visits to the project as the work progresses and shall confer on each visit with the Contractor, Inspector and/or Engineer.

The manufacturer's field representative must be fully qualified to perform the work and shall be subject to the approval of the Engineer.

The Contractor shall be completely responsible for the expense of the services of the required field representative and the bid contract price shall be full compensation for all costs in connection therewith.

METHOD OF MEASUREMENT

Item 909.2 will be measured for payment by the square foot of patch area, complete in place.

BASIS OF PAYMENT

Item 909.2 will be paid at the contract unit price per Square Foot, which price shall include full compensation for all labor, materials, equipment, and incidental costs required to complete the work.

Compensation for the removal of deteriorated concrete is provided for under Item 127.12.

ITEM 912.5**DRILLED AND GROUTED #5 DOWELS****EACH**

The work under this Item shall consist of drilling and grouting holes in the existing concrete wingwalls and abutments following concrete removal, and placing #5 steel reinforcing dowels/bars as shown on the Contract Plans or as directed 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 the Department'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 90% 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.

ITEM 912.5 (Continued)

METHOD OF MEASUREMENT

Item 912.5 will be measured for payment by the unit Each, for each drilled and grouted #5 dowels furnished and installed, complete in place.

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 961.201**CLEAN (FULL REMOVAL) AND PAINT**
STEEL BRIDGE NO. C-21-002**LUMP SUM**

The work under this item shall conform to the relevant provisions of Subsection 961 of the Standard Specifications and the following:

Work under this item includes the surface preparation and painting of all steel of the existing bridge, including but not limited to, the trusses, floorbeams, stringers, underneath bracing and bearings. This item also includes the implementation of worker protection programs, environmental protection, containment of the work and waste disposal.

All Contractors or Subcontractors performing the lead-based paint removal, containment and collection, surface preparation, or coating of structural steel must be pre-qualified by MassDOT in the Painting (Structural) category.

Surface Preparation: Full Removal

Paint: 3 (Three) Coat System (full prime, intermediate, and final coat)

The finish coat shall be Federal Standard Color #14223, green.

Structural Steel Inspection

The Contractor shall notify the Engineer if significant amount of section loss is found on the structural steel during the cleaning and blasting process. If requested by the Engineer, the Contractor shall provide the access and time window to the Engineer to inspect and document the structural steel section loss after the cleaning and blasting operation.

BASIS OF PAYMENT

Item 961.201 will be paid for at the contract unit price Lump Sum, which price shall include all labor, materials, equipment, and incidental costs required to complete the work. Partial payments of the lump sum will be made in accordance with Subsection 961.80 of the Standard Specifications.

Incidental to this item are all costs associated with the design, installation, and final removal of the required containment system/work platform.

SPECIAL NOTES REGARDING PREVAILING WAGE REQUIREMENTS

Note that the erection and dismantling of scaffolding, rigging and containment for bridge painting work is subject to the "Painter(Bridges/Tanks)" prevailing wage rate. This includes surface preparation, including removal of all types of paint on bridges, the application of paint and the clean-up of debris resulting from paint removal operation on bridges, pursuant to the determination by the Massachusetts Department of Labor Standards' 12/23/2009 "Notice Concerning the Removal and Application of Paint on Bridges and Tanks."

ITEM 983.521**STREAMBED RESTORATION****LUMP SUM**

This work shall consist of restoring the river bed where disturbance takes place in the project area within the limits of work. Disturbance may take place as a result of the placement/removal of the cofferdams as part of the work-in-water, as well as Contractor use behind the cofferdams. The streambed restoration shall replicate the existing natural channel bed outside the work area in terms of material, roughness, shape, profile and appearance. A key objective of the streambed restoration is to restore the hydraulic roughness where the sandbag cofferdams are installed and behind the cofferdam. This location of temporary impact to the streambed shall look like it did prior to the project.

The Contractor shall coordinate with his/her sub-contractors to ensure all required equipment is available on-site to complete the work in this manner. The streambed restoration is required to comply with environmental permits issued for the project.

The Resident Engineer is responsible for overseeing the work to provide review of the final design during streambed restoration construction to ensure the restoration is constructed as required by these Special Provisions and in accordance with permit requirements.

At least 30 days prior to the commencement of construction, the Contractor shall coordinate with David Paulson (MassDOT Wildlife Unit Supervisor, (508) 389-6366 / david.j.paulson@state.ma.us) to set up an initial (virtual or in person) meeting with the Contractor, and Resident Engineer. The Contractor should be prepared to discuss the anticipated means, methods, and schedule.

Process Approval

In lieu of a mockup, the Contractor shall schedule an additional onsite meeting to discuss the streambed restoration with the Resident Engineer and respective parties from MassDOT. The Resident Engineer shall be onsite during initial streambed restoration. The Contractor shall provide the Resident Engineer adequate access to observe, direct, and inspect the channel restoration work throughout the duration of the removal, stockpile, and reinstallation of the existing streambed material.

MATERIAL

No excavation of streambed material is proposed, therefore no new material is anticipated.

Related Items

Control of Water shall conform to the requirements of Item 991.1 Control of Water – Structure No. C-21-002 and shall be paid for under that Item.

ITEM 983.521 (Continued)**CONSTRUCTION**

The streambed material shall be restored in place to match existing conditions prior to the installation of sandbag cofferdams as part of Item 991.1. Any materials used to level the existing streambed to install the sandbag cofferdams shall be removed upon removal of the sandbags. The removal of those materials shall be paid for under Item 991.1.

The final streambed shape and appearance shall be finalized in the field as required by the Engineer.

Completion

Once all material has been regraded in the stream channel and approved by the Resident Engineer, the Contractor shall remove the cofferdams in such a way as to slowly wet the stream to minimize the initial sediment pulse. Every attempt shall be made to minimize the downstream movement of sediment.

The final streambed shall maintain the general configuration of the existing streambed bedform and there shall be minimal subsurface flow upon final inspection by the Resident Engineer. The project must be passable by fish and other aquatic organisms following construction.

The streambed restoration to be measured for payment will be the complete and accepted work for restoration of the streambed within the limits of the sandbag cofferdams as accepted by the Engineer.

BASIS OF PAYMENT

Item 983.521 will be paid for at the contract lump sum bid price, which price shall include all excavating, stockpiling, transporting, and placing the material specified and for furnishing all labor, tools, equipment, testing, and incidental costs required to complete the work.

ITEM 986.2**MODIFIED ROCKFILL****CUBIC YARD**

The work under this item shall conform to the relevant provisions of Subsection 983 and Section M2 of the Standard Specifications and the following:

Modified Rock fill shall consist of hard, durable angular shaped stones which are the product of the primary crushing of a stone crusher. Rounded stone, boulders, sandstone and similar soft stone or relatively thin slabs will not be acceptable. Stone shall be free from overburden, spoil, shale, organic material and shall meet the gradation requirements of Subsection M2.02.4 of the standard specifications.

METHOD OF MEASUREMENT

Item 986.2 will be measured for payment by the Cubic Yard, of modified rock fill complete in place.

BASIS OF PAYMENT

Item 986.2 will be paid for at the Contract unit price per Cubic Yard, which price shall include all labor, materials, equipment, and incidental costs required to complete the work.

ITEM 988.01**SEDIMENT FOREBAY PAVING****SQUARE FOOT**

The work under this item shall conform to the relevant provisions of Subsections 501 and 983 of the Standard Specifications and the following:

The purpose of this item is to provide a level protective surface over a crushed stone foundation and geotextile fabric for separation to facilitate in maintenance of the pretreatment sedimentation forebay.

The work shall include the construction to the line and grade of a level sedimentation forebay protective bottom surface conforming to the minimum size and dimensions shown on the Contract Drawings and the following:

Each piece of granite curb or edging shall have a minimum length of eighteen (18) inches, minimum width of twelve (12) inches and minimum depth of four (4) inches. Granite curb or edging shall be placed in an offset tile pattern with two (2) inch spacing on all sides. Material may either be new or existing curb or edging designated to be discarded as shown on the plans within the Project limits of work.

Reused curbing shall include removal, temporary storage and protection, cutting, removal and disposal of all foreign matter and installation.

Curb layout pattern shall be pre-approved by the Engineer.

METHOD OF MEASUREMENT

Item 988.01 will be measured for payment by the Square Foot of sediment forebay paving installed, complete in place.

BASIS OF PAYMENT

Item 988.01 will be paid for at the Contract bid price per Square Foot, which price shall include all labor, equipment, materials, and incidental costs required to complete the work.

Crushed stone will be paid for separately by the Ton under Item 156.

Geotextile Fabric for Separation will be paid for separately by the Square Yard under Item 698.3.

ITEM 991.1 **CONTROL OF WATER - STRUCTURE NO. C-21-002** **LUMP SUM**

The work under this item shall conform to the relevant provisions of Subsection 140 of the Standard Specifications and consists of all equipment, labor and materials, placement of straw bales, cofferdams, sedimentation basins, and other water control devices required for the control of water for substructure concrete repairs and for other work that may be required to complete the preservation of existing Bridge No. C-21-002 as shown on the plans, as required by the Engineer, and as specified herein.

The Contractor shall follow the guidelines of this specification for which dewatering is to be accomplished. However, except for payment, all work shall conform to the relevant requirements of Subsection 140.

This work shall be done within the limits of the Water Quality Plans and their associated impact areas.

The Contractor shall submit complete working drawings and computation of the proposed dewatering system with supporting data as necessary to the Engineer for approval in accordance with Subsection 5.02 and the Special Provisions. These drawings shall be accompanied by design calculations. Both shall be certified by a Professional Engineer registered in the Commonwealth of Massachusetts. The Contractor shall evaluate existing conditions and water flow, and of the effects of the proposed temporary works and construction methods, and shall provide in the design for all loads and construction conditions necessary to permit demolition and construction of the specified structure while maintaining public safety and protecting complete work and all third party property from damage resulting from construction operations.

Measures to control the discharge of pollutants into water resource areas shall include, but not be limited to the following:

- Rigorous management of construction operations involving potentially hazardous materials, such as, refueling and maintenance of construction equipment.
- Formulation of contingency plans to control accidental spillage from potentially hazardous materials.
- Siting of construction staging areas outside of the riverfront inner riparian area and Wetlands buffer zones, and locating construction staging on relatively flat ground.
- Scheduling of work within the resource areas to avoid periods of high flood (e.g., spring floods) and inclement weather.
- Installation and continuous maintenance of staked straw bales and filter fences to prevent sediment migration into adjacent downstream resource areas. Placement of erosion controls shall be as shown on the plans, as specified herein, or as directed by the Engineer, so as to accomplish maximum control of project related sediment mobilization. Additional erosion control measures shall be employed as necessary to prevent erosion and sedimentation of the streambed. These measures shall be maintained for the duration of the contract.
- All discharge resulting from dewatering activities shall be directed to temporary sedimentation/retention basins located as necessary to control turbidity. At no time shall said discharge be directly released into adjacent resource areas.

ITEM 991.1 (Continued)

The Contractor shall provide water barriers, sandbags, filtering fabrics, silt fencing, sedimentation/retention basins and/or other effective procedures or structures together with all labor, materials, and equipment necessary for controlling water in the under and around the bridge. Such work shall be subject to the approval of the Engineer, but such approval will not relieve the Contractor of responsibility for the adequacy of construction, maintenance, operation and safety of the water control system.

The Contractor is advised that the work to be performed under this item shall be in conformance with the environmental permits associated with this contract.

All work (including all labor, tools, equipment, materials, maintenance, and fees) required in order to conform to the above environmental permitting sections, if not included separately under other items, shall be considered incidental to Item 991.1, and no additional compensation shall be made to the Contractor.

Also included shall be all necessary additional permits that may be required in performing the work under this item. The Contractor is advised that the use of sandbags or jersey barriers, for cofferdam control of water on this project, would constitute a temporary fill in waters of the United States, and would require permitting under Section 404 of the Clean Water Act, the Army Corp Permit.

Upon completion of the work, the cofferdams, temporary sheeting, water barriers, and/or other water control items, etc., shall be removed from the site and streambed shall be restored to pre-construction condition.

BASIS FOR PAYMENT

Item 991.1 will be paid for at the contract Lump Sum bid price, which price shall include full compensation for all labor, tools, equipment, materials, permitting, permitting fees, installation, maintenance, and removal of all temporary water barriers and/or other materials as described above, all diverting systems or material, all sedimentation fences, sedimentation/retention basins, pumping operations, and all incidental costs required to complete the work under this item required for the preservation of Structure No. C-21-002.

Restoration of the streambed to pre-construction condition shall be incidental to Item 991.1.

ITEM 992.1 ALTERATION TO BRIDGE STRUCTURE NO. C-21-002 LUMP SUM

The work under this item shall conform to the relevant provisions of Subsection 995 of the Standard Specifications and the specific requirements stipulated below for component parts of this Item. Where no specific requirement is stated for a particular component, the Standard Specifications shall apply except for payment. Payment for components shall be included under the Lump Sum Price for Item 992.1.

The work includes all materials and labor complete for the replacement of the bridge deck and sidewalk, new copings and deck joints, and for modifications to the abutment backwalls, and tops of wingwalls as shown on the Contract Drawings. The lump sum payment for the work on this item does not include payment for Demolition of Superstructure, concrete repairs below the sawcut line, or other work for which payment is provided elsewhere in the Contract.

This item includes all materials and labor necessary to complete the work in accordance with the schedules listed hereinafter under Basis for Partial Payments and all other items that are part of the work for which payment is not provided in the proposal.

5000 PSI, 3/4 INCH, 685 HP CEMENT CONCRETE
5000 PSI, 3/8 INCH, 710 HP CEMENT CONCRETE

The work under these headings shall conform to all material requirements contained in Subsections 901 and M4.06.1 of the Standard Specifications and the following:

The work includes all of the proposed Cement Concrete required to complete the proposed replacement or construction of the bridge deck and copings, bridge sidewalk, abutment backwalls, approach slabs, tops of wingwalls, highway guardrail transitions, CM-TL3 Railing foundations off the bridge and as indicated on the Contract Plans.

Waterstops, preformed filler, joint sealer, paraffin and all other materials (complete in place) at expansion and construction joints and all other work considered as incidental to the work involved in furnishing and placing concrete and not covered in the schedule for partial payments, or for which payment is not provided elsewhere in the contract, shall be considered as included in the unit price per Cubic Yard of concrete as stated by the Contractor and approved by the Engineer in the "Basis for Partial Payments."

All concrete shall be placed in the dry.

MECHANICAL REINFORCING BAR SPLICER

The work under this heading shall include the furnishing and installing of mechanical field splices for reinforcing bars. The Contractor shall submit the proposed device to the Engineer prior to use on the project. The work shall be done in accordance with the location, size and detail shown on the plans and shall conform to the manufacturer's recommendations for installation. Reinforced bar splicer shall conform to Subsection M8.01.9.

ITEM 992.1 (Continued)**SHEAR CONNECTORS**

The work under this heading shall conform to the relevant provisions of Subsection 960.66 and M8.04.1 of the Standard Specifications and the following:

Work under this heading shall be for attaching shear connectors as shown and detailed on the drawings to the existing and proposed steel floorbeams and stringers in the field.

Prior to welding the studs, the Contractor shall clean the top flange of the stringers and floorbeams as recommended by the manufacturer.

DRILLING AND GROUTING DOWELS

The work under this heading shall consist of drilling and grouting dowels for the anchorage of new concrete to existing as shown on the plans and as directed by the Engineer.

Materials

The grout to be used for these dowels shall be a non-shrink cementitious mortar. Grouting material, which has been tested, is approved, and is listed on the QCML is acceptable for use on MassDOT Highway Division bridge projects. Epoxy, vinyl, or polyester resin adhesives shall not be utilized.

The steel dowels shall meet the requirements of AASHTO M31 (ASTM A615) Grade 60 for reinforcement. All steel reinforcement dowels shall be epoxy coated. Steel dowels shall be incidental to the work under this heading. The #5 dowels used to perform partial depth concrete surface repair at the abutments and wingwalls shall be included under Item 912.5, outside of Lump Sum.

Construction Methods

All dowel holes shall be air drilled provided that the minimum edge distance of 3 inches is observed. Should, in the Engineer's opinion, air drilling be inappropriate due to questionable strength of the existing concrete masonry or insufficient edge distance, the dowel holes shall be diamond core drilled. The inner surfaces of diamond core drilled dowel holes shall be scored to develop sufficient keying action. The method of scoring of the dowel hole's inner surfaces shall be subject to the approval of the Engineer. The depth and diameter of the drilled dowel holes shall be as shown on the Plans, except that the depth of drilled hole shall be modified as required to comply with the minimum depth of hole specified in the product literature of the cementitious mortar by the Contractor to develop the full yield strength of the reinforcing bars. 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.

ITEM 992.1 (Continued)

The drilling operation shall be performed without damage to any existing reinforcing or concrete masonry 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 existing condition 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.

Submittals

The Contractor shall submit the grout manufacturer's literature completely describing the products to be utilized. The materials shall be delivered clearly marked with legible and intact labels containing the manufacturer's name, brand name, and identification of the areas where temperatures conform to manufacturer's instructions and recommendations.

STRUCTURAL STEEL – COATED STEEL

The work under this heading shall conform to the relevant provisions of Subsection 960 of the Standard Specifications and the following:

The work under this heading shall include the furnishing and installing the structural steel plates and shapes and HS bolts for the proposed curb channel connected to the existing north arch as shown on the plans. Plates and shapes shall conform to AASHTO M270 (ASTM A709) Grade 50.

Installation of the plates and shapes will require field drilling for installation of the HS bolts and the replacement of rivets. Rivets shall be removed in such a fashion as to not damage adjacent structural steel to remain. The existing rivet hole shall be reamed out as required to allow for the installation of the proposed diameter high strength bolt, nut and washer conforming to ASTM F3125, ASTM A563, AASHTO M292, AND ASTM F436.

The color of the finish coat of paint for structural steel under this heading shall be Federal Standard Color #14223, green.

ITEM 992.1 (Continued)**STEEL GRID DECK**

The grid deck work for bridge sidewalk shall conform to Subsection 901 and Materials Section M8 of the Standard Specifications. All work shall be completed as shown on the drawings. The 2" concrete fill and 1½" to ½" topping over the grid deck shall be cast-in-place.

Material

Permanent grid deck for the sidewalk replacement shall be ASTM A36 steel and shall be galvanized in accordance with ASTM A 123. Pans shall be a minimum 20 gage. The grid deck will be filled with 5000 PSI, 3/8 IN, 710 HP Cement Concrete and shall be reinforced with fiber reinforcement, as described below.

Fiber Reinforcement

Microfiber reinforcing for concrete fill and topping shall be 100 percent virgin fibrillated polypropylene fibers containing no reprocessed olefin materials and specifically manufactured to an optimum gradation for use as concrete secondary reinforcement. Specific gravity shall be 0.91. Tensile strength shall be 50 ksi to 110 ksi. Fiber length shall be graded in accordance with the manufacturer's recommendation for intended use. Microfiber application rate shall equal a minimum of 0.1 percent by volume of concrete or 1.5 lb./cu.yard. Fiber reinforcement shall conform to ASTM C-116.

PRECAST HIGHWAY GUARDRAIL TRANSITION**A. General.**

The highway guardrail transitions at the Northwest (NW) and Northeast (NE) corner are precast. The work under this Heading consists of fabricating, transporting and installing the precast highway guardrail transition at the NW and NE corners and includes all necessary labor, materials, and equipment to complete the work as shown on the Plans. The work shall conform with the MassDOT Standard, Supplemental Specifications, and the requirements of the current AASHTO LRFD Bridge Construction Specifications, supplemented by the current relevant provisions of the latest edition of PCI MNL-116 (The Manual for Quality Control for Plants and Production of Precast and Prestressed Concrete Products), except as noted herein.

QUALITY ASSURANCE**A. General.**

Quality Assurance includes all the planned and systematic actions necessary to provide confidence that a product or facility will perform satisfactorily in service. It is an all-encompassing term that includes Quality Control (performed by the Fabricator) and Acceptance (performed by MassDOT). Quality Control is the system used by the Contractor and Fabricator to monitor and assess their production processes at the plant facility and installation activities at the project site to ensure that the final product will meet the specified level of quality. Acceptance includes all factors used by MassDOT to determine the corresponding value for the product. MassDOT Acceptance inspection at the plant facility is intended as a means of evaluation of compliance with contract requirements. Contractor and Fabricator Quality Control activities and MassDOT Acceptance activities shall remain independent from one another. MassDOT Acceptance activities shall not replace Fabricator Quality Control activities.

ITEM 992.1 (Continued)**B. Fabricator Quality Control.**

Quality Control shall be performed by the Fabricator to ensure that the product is fabricated in conformance with the specifications herein. The Fabricator shall maintain a Quality Control system to monitor, assess, and adjust placement and fabrication processes to ensure the Precast Concrete Bridge Element(s) meet the specified level of quality, through sufficient Quality Control sampling, testing, inspection, and corrective action (where required). The Fabricator's Quality Control system shall address all key activities during the placement and fabrication and shall be performed in conformance with the Fabricator's NPCA or PCI Certification. Quality Control documentation shall meet the requirements of the *Fabricator Quality Control – Documentation* section below. Upon request, Fabricator Quality Control documentation shall be provided to the MassDOT Plant Inspector.

1. Plant.

Prior to the fabrication of Precast Concrete Bridge Elements, the Fabricator's precast concrete plant shall obtain the following:

- (a) Certification by the National Precast Concrete Association (NPCA) Plant Certification Program or Precast/Prestressed Concrete Institute (PCI) Plant Certification Program, for the applicable types of Precast Concrete Bridge Element(s) being fabricated
- (b) MassDOT Prequalification
- (c) MassDOT Mix Design Approval

All concrete for a given Precast Concrete Bridge Element shall be produced by a single company and plant, unless otherwise approved by the Engineer.

2. Personnel.

The Fabricator shall provide adequate training for all QC personnel in accordance with NPCA or PCI certification. There shall be sufficient personnel trained and certified to perform the tests listed under Subsection M4.02.13, Part D. At a minimum, the Fabricator's Quality Control Personnel shall maintain the following qualifications and certifications:

- (a) QC Manager with an active NETTCP Field Technician or ACI Concrete Field Testing Technician – Grade I certification or higher, and a minimum of 4 years continuous experience in the manufacture of Precast Concrete Bridge Elements for state transportation departments. The QC Manager shall be on site while the batch plant is producing and placing concrete for MassDOT projects.
- (b) A Technician/Inspector having the Precast/Prestressed Concrete Institute (PCI) Technician/Inspector Level I or NorthEast Transportation Training and Certification Program (NETTCP) Precast Concrete Inspector, or higher.

The Contractor shall submit to the Engineer a copy of the Fabricator's Quality Control Personnel required qualifications, as specified above.

3. Laboratory.

The Fabricator shall provide a room of sufficient size to house all equipment and to adequately perform all testing. The room shall have either a separate moisture storage room or curing box for concrete cylinders, and it shall be thermostatically controlled to maintain temperatures consistent with AASHTO T 23. It shall include a desk and file cabinet for proper record keeping, and have good lighting and ventilation. This room shall be kept for testing and quality control and not used for any other purpose. An additional desk and file cabinet shall be provided for exclusive use of the Engineer. No exception from these requirements will be allowed without the express written permission of the Engineer.

ITEM 992.1 (Continued)**4. Testing Equipment.**

At a minimum, the Fabricator's plant facility shall have the following testing equipment:

- (a) Air Content Meter Type A or B: AASHTO T 152
- (b) Air Content Meter Volumetric Method: AASHTO T 196 (Required for Lightweight Concrete)
- (c) Slump Cone: AASHTO T 119
- (d) Cylinder Molds AASHTO M205
- (e) Concrete Testing Machine: AASHTO T 22
- (f) Screening Sieve: AASHTO T 27, AASHTO T 11
- (g) Curing Box: AASHTO T 23
- (h) Spread Test Base Plate for Self-Consolidating Concrete (SCC): ASTM C1611
- (i) All other equipment prescribed by AASHTO and ASTM standards for the tests to be performed by the Fabricator as specified.

5. Inspection.

Quality Control personnel shall monitor and inspect the fabrication of each Precast Concrete Bridge Element. Quality Control personnel shall report all inspection activities on Quality Control Inspection Reports and non-conformances on Non-Conformance Reports (NCRs) throughout the entire fabrication process, as specified herein.

6. Temperature Monitoring.

At a minimum, the Fabricator shall monitor, record, and report the temperatures of the form, ambient temperatures surrounding the concrete, and temperatures of the concrete continuously, without interruption as specified below:

- (a) Prior to placement of concrete to verify that $T_i \geq 50^\circ\text{F}$.
- (b) Immediately after placement to verify that $T_i \geq 50^\circ\text{F}$ is maintained.
- (c) Throughout the entire duration of the curing cycle, at regular intervals not to exceed one hour until 100% Design Strength (f'_c) is attained and concrete has cooled to within 40°F of the ambient temperature surrounding the Precast Concrete Bridge Element.

At a minimum, the temperature measuring devices shall record and report the temperature of the concrete to the nearest 2°F . At least two temperature sensors (thermocouples) shall be positioned to record the maximum and minimum anticipated concrete temperatures. The anticipated minimum temperature shall be measured with one or more thermocouples at a distance no greater than 2 inches from the surface of the thinnest section. The anticipated maximum temperature shall be measured with one or more thermocouples at the center of the thickest section. Proposed temperature measurement locations shall be submitted to the Engineer for approval. Temperature recording devices shall be located within the curing enclosure and calibrated as required by PCI MNL-116 Section 4.18.4. Maximum heat increase and cool down rates shall comply with PCI MNL-116, Section 4.19. The Contractor shall furnish temperature logs recorded at a minimum frequency of once per hour to the Inspector as required, with each post-pour QC inspection report.

ITEM 992.1 (Continued)**7. Sampling and Testing.**

At a minimum, the Fabricator shall perform random Quality Control sampling and testing as specified in Table 1: Quality Control Sampling and Testing. The Fabricator shall perform additional Quality Control sampling and testing on concrete that has been retempered with admixtures or hold-back water during fabrication. Test Specimens shall conform to the requirements of Section M4.02.13 of the MassDOT Standard and Supplemental Specifications and AASHTO R 60, with the exception of the Stripping (80% f'_c) set of cylinders. Stripping (80 % f'_c) cylinders shall be cured in the same location and environment as the Precast Bridge Elements they represent. If approved by the Engineer, compressive strength cylinder match curing equipment, that maintains the same concrete conditions that the corresponding Precast Bridge Element is exposed to, may be utilized in lieu of Stripping (80 % f'_c) field cured cylinders, with the use of thermocouples, controllers, and heaters.

Table 1: Quality Control Sampling and Testing

Quality Characteristic	Test Method	Sample Size	Specification Limit	Lot Size ^(c)	Sublot Size ^(d)	Frequency	Point of Sampling
Slump (in.) ^(a)	AASHTO T 119	Per AASHTO	≤ 8 in. or as approved by the Engineer	Total Quantity of Concrete (cy) produced on a Contract, per Type of Element fabricated, per Mix Design	20 cy	One (1) per Sublot or fraction thereof	Point of Discharge
Air Content (%)	AASHTO T 152	Per AASHTO	$5\% \leq \% \leq 8\%$				
Temperature (°F)	AASHTO T 309	Per AASHTO	$50^\circ\text{F} \leq ^\circ\text{F} \leq 90^\circ\text{F}$				
Compressive Strength (psi)	AASHTO T 22	Stripping Cylinders: One (1) set of Three (3) 4 x 8 in.	$\geq 80\% f'_c$ at Stripping				
		7-day Cylinders: One (1) set of Three (3) 4 x 8 in.	For Information at 7 days				
		28-day Cylinders: One (1) set of Three (3) 4 x 8 in.	$\geq 100\% f'_c$ at 28 days				
		56-day Cylinders: One (1) set of Three (3) 4 x 8 in.	$\geq 100\% f'_c$ at 56 days ^(b)				

Notes:

- (a) Self-consolidating concrete (SCC) shall meet the requirements of M4.02.17.
- (b) 56-day Compressive Strength test specimens shall require testing only when 28-day Compressive Strength test specimens have failed to meet Design Strength (f'_c).
- (c) Lot shall be defined as a specific quantity of material from a single source, produced or placed by the same controlled process.
- (d) Sublot shall be defined as an equal division or part of a Lot from which a sample of material is obtained in order to assess the Quality Characteristics of the Lot.

ITEM 992.1 (Continued)**8. Certificate of Compliance.**

The Fabricator shall provide a Certificate of Compliance in accordance with Standard Specifications, Division I, Section 6.01, stating that QC test cylinders have achieved the design strength, f'_c . A Certificate of Compliance shall accompany each shipment and shall be presented to the MassDOT Resident Engineer or designee upon delivery to the site.

9. Documentation.

At a minimum, the Fabricator shall maintain a filing system for the following QC records and documentation. All QC records and documentation shall be made available to MassDOT upon the request of the Department.

- (a) Current MassDOT Approved Mix Design Sheet(s) and Approval Letter(s)
- (b) PCI or NPCA Certification
- (c) Current Qualifications and Certifications for QC Manager(s) and QC Technician(s)
- (d) Most current set of Approved Shop Drawings
- (e) Approved Placement, Finishing and Curing Plan
- (f) Approved Dunnage Plan
- (g) Fabricator Certificate of Compliance for each fabricated Precast Concrete Bridge Element
- (h) Admixture Manufacturer's Certification of Compliance for each approved Admixture
- (i) Completed QC Inspection Report for each fabricated Precast Concrete Bridge Element
- (j) Identification Number for each fabricated Precast Concrete Bridge Element
- (k) Time and date of casting of each fabricated Precast Concrete Bridge Element
- (l) Date of stripping of each fabricated Precast Concrete Bridge Element
- (m) Batch Ticket Printout reporting the quantity of concrete produced for each batch of concrete produced
- (n) Concrete temperature records for each Precast Concrete Bridge Element fabricated
- (o) QC Test Report Forms for each subplot of concrete produced
- (p) Non-Conformance Reports (NCRs)
- (q) Documentation of Repairs (if applicable)

C. Acceptance.

MassDOT will perform Acceptance inspection, sampling, and testing during fabrication and installation, to evaluate the quality and degree of compliance of the fabricated Precast Concrete Bridge Element to MassDOT specifications. Additionally, MassDOT Inspectors will monitor the Fabricator's Quality Control activities to ensure the Fabricator is properly administering Quality Control in conformance with the Fabricator's NPCA or PCI Certification. Acceptance inspection and test results not meeting MassDOT specifications will result in Non-conformance Reports (NCR) being issued by MassDOT to the Fabricator or Contractor for corrective action. Final Acceptance for the fabricated Precast Concrete Bridge Elements shall be determined by MassDOT.

1. Inspection.

A MassDOT Inspector will be assigned to perform Acceptance activities during fabrication, which includes the inspection of the materials, work procedures, and Precast Concrete Bridge Elements. At least seven (7) days prior to the scheduled start of fabrication, the Fabricator shall contact the MassDOT Research and Materials Section (RMS) to provide notice of the scheduled fabrication start date. The Fabricator shall complete the following activities prior to notifying MassDOT RMS of the scheduled start date:

- (a) Receive approval for all submitted Fabricator cement concrete mix designs from the MassDOT Research and Materials Section for the current year, as specified under the *Mix Design* section and *Table 3: Trial Batch Sampling Testing for New Mix Designs*. Self-consolidating concrete shall meet the requirements of M4.02.17.
- (b) Receive approval for the submitted Fabricator Placement, Finishing, and Curing Plan from the MassDOT Research and Materials Section, as specified under the *Placement, Finishing, and Curing Plan* section.
- (c) Receive Engineer of Record approved shop drawings from the MassDOT Research and Materials Section as specified under the *Shop Drawings* section.

ITEM 992.1 (Continued)

- (d) Participate in the pre-production meeting, as described under the *Pre-Production Meeting* section (if required).

Prior to the start of fabrication, the Fabricator shall review the fabrication schedule with the MassDOT Inspector. Fabrication shall only proceed when:

- (a) The QC Inspector and MassDOT Inspector are present to inspect the Precast Concrete Bridge Element(s) being fabricated.
- (b) The QC Manager is present at the Fabricator's plant.

The Fabricator shall grant access to all required areas of the Fabricator's plant to the MassDOT Inspector, during the hours of fabrication. Fabrication without MassDOT Inspector access to required areas is prohibited, and will result in the rejection of the fabricated Precast Concrete Bridge Element(s).

Additionally, the MassDOT Inspector will monitor the adequacy of the Fabricator's Quality Control activities. MassDOT Inspector Acceptance activities performed at the Fabricator's plant shall remain independent from the Fabricator, and does not replace the Fabricator's required Quality Control activities.

2. Sampling and Testing.

At a minimum, the MassDOT Inspector will perform random Acceptance sampling and testing for each Sublot of concrete produced as specified in *Table 2: Acceptance Sampling and Testing*. The MassDOT Inspector will also perform Acceptance sampling and testing on concrete that has been retempered with admixtures or hold-back water during production. Test Specimens will conform to the requirements of Section M4.02.13 of the MassDOT Standard and Supplemental Specifications and AASHTO R 60.

Table 2: Acceptance Sampling and Testing

Quality Characteristic	Test Method	Sample Size	Specification Limit	Lot Size ^(c)	Sublot Size ^(d)	Frequency	Point of Sampling
Slump (in.) ^(a)	AASHTO T 119	Per AASHTO	≤ 8 in. or as approved by the Engineer	Total Quantity of Concrete (cy) produced on a Contract, per Type of Element fabricated, per Mix Design	20 cy	One (1) per Sublot or fraction thereof	Point of Discharge ^e
Air Content (%)	AASHTO T 152	Per AASHTO	5% ≤ % ≤ 8%				
Temperature (°F)	AASHTO T 309	Per AASHTO	50°F ≤ °F ≤ 90°F				
Compressive Strength (psi)	AASHTO T 22 AASHTO T 23	7-day Cylinders: One (1) set of Three (3) 4 x 8 in.	For Information at 7 days				
		28-day Cylinders: One (1) set of Three (3) 4 x 8 in.	≥ 100% f'_c at 28 days				
		56-day Cylinders: One (1) set of Three (3) 4 x 8 in.	≥ 100% f'_c at 56 days ^(b)				

ITEM 992.1 (Continued)**Notes:**

- (a) Self-consolidating concrete (SCC) shall meet the requirements of M4.02.17.
- (b) 56-day Compressive Strength test specimens shall require testing only when 28-day Compressive Strength test specimens have failed to meet Design Strength (f'_c).
- (c) Lot shall be defined as a specific quantity of material from a single source, produced or placed by the same controlled process.
- (d) Sublot shall be defined as an equal division or part of a Lot from which a sample of material is obtained in order to assess the Quality Characteristics of the Lot.

MATERIALS**A. Materials.**

Materials shall meet the following specifications (if applicable):

General	M4.00.00
Portland Cement	M4.01.0
Blended Hydraulic Cements	M4.01.1
Fly Ash	M4.01.2
Cement Concrete	M4.02.00
Cement	M4.02.01
Cement Mortar	M4.02.15
Aggregates	M4.02.02
Lightweight Aggregates	M4.02.03
Water	M4.02.04
Cement Concrete Additives	M4.02.05
Proportioning	M4.02.06
Mixing and Delivery	M4.02.10
Test Specimens	M4.02.13
Mortar for Filling Keyways	M4.04.0
Slag	AASHTO M 302
High Performance Cement Concrete	M4.06.1
Self-Consolidating Concrete (SCC)	M4.02.17
Controlled Density Fill – Non-Excavatable	M4.08.0
Reinforcing Bars	M8.01.0
Epoxy Coated Reinforcing Bars	M8.01.7
Galvanized Reinforcing Bars	M8.01.8
Welded Wire Reinforcement	M8.01.2
Mechanical Reinforcing Bar Splicer	M8.01.9
Lifting Devices	PCI MNL-116
Corrugated Metal Pipe	AASHTO M 36

1. Cement Concrete Mix Design.

The cement concrete shall be comprised of specified proportions of water and MassDOT approved aggregates, cement, supplementary cementitious materials (SCMs), and admixtures to form a homogenous composition. Cement concrete for Precast Concrete Bridge Elements shall meet the requirements of M4.06.1 High Performance Cement Concrete, with the exception that the “Total Cementitious Content” specified shall be considered the “Maximum Allowable Cementitious Content”. When used, self-consolidating concrete (SCC) shall meet the requirements of M4.02.17.

ITEM 992.1 (Continued)

Prior to production of cement concrete, the Fabricator shall report and submit all proposed mix design formulations and its constituent materials onto the MassDOT Cement Concrete Mix Design Sheet to the MassDOT Research and Materials Section for review and approval. All mix design yields shall be designed for 1.0 cubic yards of concrete, with an allowable tolerance of $\pm 1.0\%$. All liquids incorporated into the proposed mix design(s) shall include both water and admixtures in the liquid mass calculation.

During production of cement concrete, the Fabricator shall not alter the previously approved mix design formulation or its constituent materials. Proposed alterations in source, type, batch quantity, or gradation to any of the constituent materials of the previously approved mix design formulation shall require a new MassDOT Mix Design Sheet submission to the MassDOT Research and materials Section for review and approval. Fabrication shall not occur without prior MassDOT mix design approval.

The Fabricator shall notify MassDOT RMS to schedule trial batch testing for the new mix design(s). Trial batch testing shall meet the following requirements:

- (a) Performed by a qualified laboratory and/or AASHTO accredited laboratory.
- (b) Performed and/or sampled in the presence of a MassDOT Inspector.
- (c) Meet the requirements as specified in *Table 3: Trial Batch Sampling Testing for New Mix Designs*. Self-consolidating concrete (SCC) shall meet M4.02.17.

Failure to perform all of the required trial batch testing or provide MassDOT RMS trial batch test results within the Specification Limits (as specified in Table 3) will result in the disqualification of the Fabricator's proposed mix design(s).

Table 3: Trial Batch Sampling and Testing for New Mix Designs

Quality Characteristic	Test Method	Sample Size	Specification Limit	Performed By
Slump ^(a)	AASHTO T 119	Per AASHTO	Max. 8 inches or as approved by the Engineer	Quality Control
Air Content (AC)	AASHTO T 152	Per AASHTO	$5\% \leq AC \leq 8\%$	Quality Control
Temperature (°F)	AASHTO T 309	Per AASHTO	$50^{\circ}\text{F} \leq ^{\circ}\text{F} \leq 90^{\circ}\text{F}$	Quality Control
Compressive Strength ^(b)	AASHTO T 22 AASHTO T 23	28-day Cylinders: One (1) set of Three (3) 4 x 8 in.	Lab Mixed $f'_{cr} = 1.3 f'_c$ at 28 days Batch Mixed $f'_{cr} = 1.2 f'_c$ at 28 days	MassDOT
Alkali-Silica Reaction (ASR) ^(d)	ASTM C 1567	Per ASTM	M4.02.00	Quality Control
Resistance to Chloride Ion Penetration Chloride Ion Penetration ^(e)	AASHTO T 358 ^(f)	28-day Cylinders: One (1) set of Three (3) 4 x 8 in.	Resistivity $\geq 21 \text{ k}\Omega\text{-cm}$ at 28 days	MassDOT
Freeze/Thaw Durability ^(c)	AASHTO T 161 (Procedure A)	Per AASHTO	Relative Dynamic Modulus of Elasticity after 300 cycles $\geq 80\%$	Quality Control

ITEM 992.1 (Continued)**Notes:**

- (a) Self-consolidating concrete (SCC) shall meet the requirements of M4.02.17.
- (b) Trial batch compressive strength testing shall be performed by MassDOT. Laboratory mixed trial batch compressive strength results shall achieve 130% Design Strength (f'_c). Batch-mixed trial batch compressive results shall achieve 120% f'_c . Acceptance will be based on compressive strength testing performed by MassDOT.
- (c) If an AASHTO accredited laboratory is preparing the trial batch test specimens, MassDOT Acceptance presence is not required. If the Fabricator is preparing the trial batch test specimens, MassDOT Acceptance presence is required during trial batch test specimen preparation.
- (d) Alkali Silica Reaction (ASR) testing shall meet the requirements of M4.02.00. Independent laboratories performing ASR testing shall be listed on the MassDOT Quality Construction Materials List (QCML).
- (e) Calcium nitrite shall be removed from mix designs containing the admixture and replaced by an equivalent quantity of water when preparing Chloride Ion Penetration resistance trial batch test specimens.
- (f) The Wenner probe tip spacing "a" shall be 1.5.

2. Vertical Adjustment Assembly.

Vertical Adjustment Assembly details and material requirements shall be as shown on the plans. Alternate devices may be used provided that they are adjustable and can support the anticipated loads. The design of the leveling devices, with necessary calculations, shall be submitted to the Engineer of Record for approval.

3. Grout.

Grout used for shear keys, vertical adjustment assembly voids, and hand holes shall be in accordance with M4.04.0.

4. Reinforcement.

All reinforcing steel shall be coated Grade 60 unless otherwise noted on the plans. Mechanical reinforcing bar splicers shall be epoxy coated.

5. Threaded Inserts.

Threaded inserts are permissible to facilitate forming the keyway pours. Threaded inserts shall be hot dip galvanized or made of stainless steel. The number of threaded inserts shall be minimized, and the inserts shall not come in contact with the reinforcing steel.

6. Corrugated Metal Pipe.

Corrugated Metal Pipe to be used for forming voids as specified on the plans shall be fabricated from steel and shall have a protective metallic coating of zinc (galvanizing).

CONSTRUCTION METHODS – PLANT FABRICATION**A. Shop Drawings.**

Prior to performing any work under this Section, the Contractor shall receive approval for all shop drawings for the Precast Concrete Bridge Element being worked on and any special Contract requirements, provided that a complete shop drawing package is provided. The Contractor shall not order materials or begin work before receiving approved shop drawings. MassDOT will reject Precast Concrete Bridge Elements that deviate from the approved drawings or are fabricated prior to receiving written approval of the shop drawings. The Contractor shall bear full responsibility and costs for all materials ordered or work performed prior to the approval of the shop drawings or written authorization from MassDOT.

ITEM 992.1 (Continued)

Contractor shall submit scaled shop drawings to the Engineer of Record for review and approval. Upon approval, the Engineer of Record will forward two (2) sets of scaled, full size (minimum 24x36") paper copies of the Approved (or Approved As Noted) shop drawings to the MassDOT Director of Research and Materials. Calculations are not to be included in any submittal to the Research and Materials Section. An approval stamp shall appear on every shop drawing sheet. Wet-stamping or wet-signing is not required, provided that the stamp and reviewer name are legible. The Fabricator's name and address shall appear on each sheet.

Resubmittal of "Approved as Noted" shop drawings is not necessary for minor revisions, provided that the correction can be clearly understood and is unambiguous without possibility of misinterpretation. Shop drawings with questions or comments that require a response and/or additional information from the Fabricator must be resubmitted.

Detailed shop drawings shall be prepared in accordance with the relevant provisions of Subsection 5.02 and shall, at a minimum, contain the following:

- (a) Number and type and/or piece mark of the precast concrete bridge element including overall length, width and height.
- (b) Skew angle.
- (c) Location, size and geometry of all steel reinforcement, including mechanical reinforcing bar splicers to be used for connecting Precast Concrete Bridge Elements together in the field.
- (d) Location and details of all inserts, anchors, Vertical Adjustment Assemblies, and any other items required to be cast into the Precast Concrete Bridge Elements (whether detailed on the plans by the Engineer of Record or provided for the Contractor's convenience). Precast Concrete Bridge Elements shall not be fired or drilled into for attachment purposes. All hardware shall be galvanized except as noted.
- (e) Locations and details of the lifting devices, including supporting calculations, type and amount of any additional reinforcing required for lifting. The Fabricator shall design all lifting devices based on the no cracking criteria in Chapter 8 of the PCI Design Handbook (7th edition).
- (f) The minimum compressive strength required prior to handling the precast concrete bridge element.

The shop drawings shall not include procedures for placement, finishing, and curing of concrete. These details shall be included in the Placement, Finishing and Curing Plan that is to be submitted to MassDOT Research and Materials Section as described under *Placement, Finishing, and Curing Plan*.

B. Fabrication.

All Precast Concrete Bridge Elements shall be fabricated in accordance with the latest edition of PCI MNL-116 as modified herein.

C. Placement, Finishing and Curing Plan.

At least 30 days prior to start of fabrication, the Contractor shall submit the Fabricator's proposed Placement, Finishing and Curing Plan to the Engineer for approval by MassDOT Research and Materials Section. This shall be an independent submittal, separate from the fabrication shop drawings. The Placement, Finishing and Curing Plan shall include the following:

- (a) Method of Mixing
- (b) Method of Placement
- (c) Method of Consolidation
- (d) Method of Finishing
- (e) Method of Initial Curing
- (f) Method of Intermediate Curing
- (g) Method of Final Curing
- (h) Moisture Retention Materials and Equipment (water spray equipment, saturated covers, sheet materials, liquid membrane-forming compounds, accelerated curing equipment, etc.)
- (i) Cylinder Curing Methods, Location, and Environmental Control (temperature, humidity, etc.)
- (j) Temperature Monitoring, Recording, and Reporting

ITEM 992.1 (Continued)**D. Dunnage Plan Shop Drawings.**

At least 30 days prior to the start of fabrication, the Contractor shall submit proposed Dunnage Plan Shop Drawings to the Engineer of Record for review and approval. This shall be an independent submittal, separate from the fabrication shop drawings. Upon approval, the Engineer of Record will forward two (2) sets of scaled, full size (minimum 24"x36") paper copies of the Approved (or Approved As Noted) Dunnage Plan to the MassDOT Director of Research and Materials. Calculations are not to be included in any submittal to the Research and Materials Section. The Dunnage Plan shall include the following:

- (a) Proposed layout of the Precast Concrete Bridge Elements for storage in yard and during shipping
- (b) Support and blocking point locations
- (c) Support and blocking materials

E. Pre-Production Meeting.

The Contractor shall notify the MassDOT Research and Materials Section to determine if a pre-production meeting will be required to review the specification, shop drawings, curing plan, schedule, and discuss any specific requirements. The meeting shall be held prior to scheduling a MassDOT Inspector (refer to Section *Quality Assurance – Precast Concrete, C. Acceptance, A. Inspection*), and at least seven (7) days prior to the scheduled casting of any Precast Concrete Bridge Element or control section. The Contractor shall schedule the meeting, which shall include representatives of the Fabricator and MassDOT.

F. Reinforcement.

The reinforcing bars shall be installed in accordance with Section 901.62 of the Supplemental Specifications, including tolerances for cover and horizontal spacing of bars. Components of mechanical reinforcing bar splicers shall be set with the tolerances shown on the plans. The reinforcing bars and mechanical reinforcing bar splicers shall be assembled into a rigid cage that will maintain its shape in the form and which will not allow individual reinforcing bars to move during the placement of concrete. This cage shall be secured in the form so that the clearances to all faces of the concrete, as shown on the plans, shall be maintained.

Where reinforcing bars are to protrude from one Precast Concrete Bridge Element in order to mate with reinforcing bar splicers in a second precast concrete element, the fabricator shall set the reinforcing bars and the reinforcing bar splicers with a template in order to ensure proper fit up within the tolerances specified on the plans.

G. Tolerances.

Fabrication shall comply with tolerances specified on the plans. Tolerances for steel reinforcement placement shall be in accordance with 901.62. In the absence of specifications on the plans, tolerances shall comply with the latest version of the PCI MNL 135, Precast Tolerance Manual.

H. Forms.

Concrete shall be cast in rigidly constructed forms, which will maintain the Precast Concrete Bridge Elements within specified tolerances to the shapes, lines and dimensions shown on the approved fabrication drawings. Forms shall be constructed from flat, smooth, non-absorbent material and shall be sufficiently tight to prevent the leakage of the plastic concrete. When wood forms are used, all faces in contact with the concrete shall be laminated or coated with a non-absorbent material. All worn or damaged forms, which cause irregularities on the concrete surface or damage to the concrete during form removal, shall be repaired or replaced before being reused. Any defects or damage of more than "Category 2, Minor Defects" made to the concrete, due to form work, stripping or handling, shall be subject to repair or rejection, as defined in the *Repairs and Replacement* section. If threaded inserts are cast into the elements for support of formwork, the inserts shall be recessed a minimum of 1 inch and shall be plugged after use with a grout of the same color as that of the precast cement concrete.

ITEM 992.1 (Continued)**I. Mixing of Concrete.**

The concrete shall be proportioned and mixed in conformance with the Fabricator's MassDOT approved mix design and M4.02.10 Mixing and Delivery Fabrication shall not occur without prior MassDOT mix design approval. The Fabricator shall provide copies of batch tickets to the MassDOT Plant Inspector. The MassDOT Plant Inspector will verify if the batch ticket quantities are within the tolerances of the Fabricator's MassDOT approved mix design.

J. Placement of Concrete.

Prior to the placement of concrete, the temperature of the forms shall be greater than or equal to 50°F. Quality Control inspection shall be performed by the Fabricator as specified in the *Fabricator Quality Control* section. Placement of the concrete shall not proceed until the MassDOT Plant Inspector is present to perform inspection and begin monitoring Fabricator Quality Control inspection activities, and is in compliance with specifications. The MassDOT Plant Inspector shall inspect and accept the placement of the reinforcing steel prior to the placement of concrete into the forms. The Fabricator shall verify all materials and equipment required for protecting and curing the concrete are readily available and meet the requirements of the *Final Curing Methods* section below. All items encased in the concrete shall be accurately placed in the position shown on the Plans and firmly held during the placing and setting of the concrete. Clearance from the forms shall be maintained by supports, spacers, or hangers and shall be of approved shape and dimension.

During placement, the concrete shall maintain a concrete temperature range between 50°F and 90°F. The Fabricator shall minimize the time to concrete placement (measured from start of mixing to completion of placement). In no event shall time to placement exceed 90 minutes. The Fabricator shall perform additional Quality Control sampling and testing on concrete that has been retempered with admixtures or hold-back water during the placement of the concrete as specified in the *Fabricator Quality Control* section above. Delays or shutdowns of over 30 minutes shall not be allowed during the continuous filling of individual forms.

K. Consolidation of Concrete.

Suitable means shall be used for placing concrete to prevent segregation or displacement of reinforcing steel or forms. The concrete shall be thoroughly consolidated by external or internal vibrators or a combination of both. Vibrators shall not be used to move concrete within the forms. Vibrators shall be used as specified in 901.63C and as directed by the Engineer. Concrete shall be placed and consolidated in a way that minimizes the presence of surface voids or bug holes on the formed surfaces. When used, self-consolidating concrete (SCC) shall meet the requirements of M4.02.17.

L. Finishing of Concrete.

The finish of the Precast Concrete Bridge Elements shall be as indicated on the plans. Where Precast Concrete Bridge Elements have keyways for grout or closure pours, the surfaces of these shear keys shall be abrasive blasted prior to shipment. The Fabricator may utilize a surface retarder with water blast, sandblast, or a combination of both to achieve the desired keyway finish. At a minimum, the profile of the keyway surfaces shall be similar to that of 60 grit sand paper. The exposed reinforcing steel in the precast slab shall be protected from damage during the cleaning of the keyways. Damaged epoxy coating of steel reinforcement shall be repaired, and the reinforcing steel shall be cleaned as directed by the Engineer.

The Fabricator shall permanently mark each precast concrete bridge element with its type and/or piece mark, date of casting, and supplier identification either by stamp markings in fresh concrete, waterproof paint, or other approved means on a surface that will not be exposed after assembly.

M. Exposed Surfaces of Precast Concrete Bridge Elements.

As soon as conditions permit, before the concrete has fully hardened, all dirt, laitance, and loose aggregate shall be removed from the exposed concrete surfaces. Contractor shall not allow foot traffic on the uncured concrete until it has reached sufficient strength to prevent damage.

ITEM 992.1 (Continued)**N. Exposed Surfaces of Closure Pour Shear Keys.**

The closure pour shear key cast in the sides of the beam flanges shall have an exposed aggregate finish. The closure pour reinforcing steel and its coating shall not be damaged by the process for creating the exposed aggregate surface. Fabricator may utilize a surface retarder with water blast, abrasive blast, or a combination of both to achieve the desired shear key finish. The abrasive blast shall use oil free compressed air. The profile of the shear key surfaces shall be similar to that of 60 grit sand paper.

O. Initial Curing Methods.

After the placement of concrete and prior to concrete finishing, the Fabricator shall initiate initial curing methods when the concrete surface begins to dry, to reduce moisture loss from the surface. Application of one or more of the following initial curing methods shall occur immediately after the bleed water sheen has disappeared.

1. Fogging.

Fogging nozzles shall atomize water into a fog-like mist. The fog spray shall be directed and remain visibly suspended above the concrete surface, to increase the humidity of the air and reduce the rate of evaporation. Water from fogging shall not be worked into the surface during finishing operations and shall be removed or allowed to evaporate prior to finishing.

2. Liquid-applied Evaporation Reducers

Evaporation reducers shall be sprayed onto the freshly placed concrete surface to produce an effective monomolecular film that reduces the risk of plastic-shrinkage cracking and rate of evaporation of the bleed water from the concrete surface. Evaporation reducers shall be applied in accordance with manufacturer's recommendations.

P. Intermediate Curing Methods.

The Fabricator shall initiate intermediate curing methods if concrete finishing has taken place prior to the concrete reaching final set. The freshly finished concrete surface shall be protected from moisture loss, by the continuation of initial curing methods (fogging and evaporation reducers) until final curing methods are applied or by the use of liquid membrane-forming curing compounds (see *Liquid Membrane-Forming Compounds for Curing* section).

Q. Final Curing Methods.

The Fabricator shall initiate and apply final curing methods to the concrete immediately after the following conditions are met:

- (a) Completion of concrete finishing
- (b) Final set of concrete
- (c) Concrete has hardened sufficiently enough to prevent surface damage

During fabrication of Precast Concrete Bridge Elements, the Fabricator shall maintain the required concrete temperature ranges throughout the entire duration of the final curing method cycle as specified herein. Controlled and gradual termination of the final curing method shall occur after all specified conditions are met. The concrete temperature shall be reduced at a rate not to exceed 36°F per hour until the concrete temperature is within 20°F of the ambient temperature outside of the final curing method enclosure. The Fabricator shall maintain a minimum concrete temperature of 40°F until 100% f'c is attained (see *Handling and Storage* section below).

1. Water Spray Curing.

All exposed concrete surfaces shall remain moist with a continuous fine spray of water throughout the entire duration of the final curing method cycle (see *Table 4: Final Curing Method Cycle for Water Spray*).

ITEM 992.1 (Continued)**Table 4: Final Curing Method Cycle for Water Spray**

Sustained Concrete Temperature	Final Curing Method Cycle Duration	Compressive Strength
50°F ≤ °F ≤ 90°F	≥ Five (5) days	≥ 80% f _c

2. Saturated Covers for Curing.

All exposed concrete surfaces shall remain moist with a continuous application of saturated covers throughout the entire duration of the final curing method cycle (see *Table 5: Final Curing Method Cycle for Saturated Covers*). Saturated covers shall be allowed to dry thoroughly before removal to provide uniform, slow drying of the concrete surface.

Table 5: Final Curing Method Cycle for Saturated Covers

Sustained Concrete Temperature	Final Curing Method Cycle Duration	Compressive Strength
50°F ≤ °F ≤ 90°F	≥ Three (3) days	≥ 80% f _c

Saturated covers, such as burlap, cotton mats, and other coverings of absorbent materials shall meet the requirements of AASHTO M 182, Class 3. Saturated covers shall be in good condition, free from holes, tears, or other defects that would render it unsuitable for curing concrete. Saturated covers shall be dried to prevent mildew when storing. Prior to application, saturated covers shall be thoroughly rinsed in water and free of harmful substances that are deleterious or cause discoloration to the concrete. Saturated covers shall have sufficient thickness and proper positioning onto the concrete surface to maximize moisture retention.

Saturated covers shall contain a sufficient amount of moisture to prevent moisture loss from the surface of the concrete. Saturated covers shall be kept continuously moist so that a film of water remains on the concrete surface throughout the entire duration of the final curing method cycle. The Fabricator shall not permit the saturated covers to dry and absorb water from the concrete. Use of polyethylene film (see *Polyethylene Film* section) may be applied over the saturated cover to potentially decrease the need for continuous watering.

3. Sheet Materials for Curing.

All exposed concrete surfaces shall remain moist with a continuous application of curing sheet materials throughout the entire duration of the final curing method cycle (see *Table 6: Final Curing Method Cycle for Curing Sheet Materials*).

Table 6: Final Curing Method Cycle for Sheet Materials

Sustained Concrete Temperature	Final Curing Method Cycle Duration	Compressive Strength
50°F ≤ °F ≤ 90°F	≥ Three (3) days	≥ 80% f _c

Sheet Materials used for curing, such as polyethylene film, white burlap-polyethylene sheeting, and reinforced paper shall meet the requirements of ASTM C171 and the specifications herein. Sheet materials shall inhibit moisture loss and reduce temperature rise in concrete exposed to radiation from the sun during the final curing method cycle. Adjoining covers shall overlap not less than 12 inches. All edges of the covers shall be secured to maintain a moist environment.

(a) Polyethylene Film.

Polyethylene film shall meet the requirements of ASTM C171, consist of a single sheet manufactured from polyethylene resins, be free of visible defects, and have a uniform appearance. Careful considerations shall be taken by the Fabricator to prevent the film from tearing during storage and application, so as to not

disrupt the continuity of the film (polyethylene film reinforced with glass or other fibers is more durable and less likely to be torn). The Fabricator shall monitor the application of the film to prevent uneven spots from appearing (mottling) on the concrete surface, due to variations in temperature, moisture content, or both. The Fabricator shall prevent mottling from occurring on the concrete surface by applying additional water under the film or applying a combination of polyethylene film bonded to absorbent fabric to the concrete surface to retain and evenly distribute the moisture.

Immediately following final finishing, polyethylene film shall be placed over the surface of the fresh concrete surface, so as to not damage the surface of the concrete and shall be placed and weighted so that it remains in contact with the concrete throughout the entire duration of the final curing method cycle. The film shall extend beyond the edges of the concrete surface. The film shall be placed flat on the concrete surface, avoiding wrinkles, to minimize mottling. Edges of adjacent polyethylene film shall overlap a minimum of 6 inches and be tightly sealed with the use of sand, wood planks, pressure-sensitive tape, mastic, or glue to maintain close contact with the concrete surface, retain moisture, and prevent the formation of air pockets throughout the entire duration of the final curing method cycle.

(b) White Burlap-Polyethylene Sheeting

White burlap-polyethylene sheeting shall meet the requirements of ASTM C171, be securely bonded to the burlap so to avoid separation of the materials during handling and curing of the concrete, and be applied in the same manner as the polyethylene film.

(c) Reinforced Impervious Paper.

Reinforced impervious paper shall meet the requirements of ASTM C171, consist of two sheets of kraft paper cemented together with a bituminous adhesive and reinforced with embedded cords or strands of fiber running in both directions, and be white in color. Reinforced impervious paper shall be treated to prevent tearing when wetted and dried.

Reinforced impervious paper can be reused so long as it is effective in retaining moisture on the concrete surface. The Fabricator shall visually inspect the reinforced impervious paper for all holes, tears, and pin holes from deterioration of the paper through repeated use by holding the paper up to the light. The paper shall be discarded and prohibited from use when the moisture is no longer retained.

After the concrete has hardened sufficiently to prevent surface damage, the concrete surface shall be thoroughly wetted prior to the application of the reinforced impervious paper, and be applied in the same manner as the polyethylene film.

4. Liquid Membrane-Forming Compounds for Curing.

All exposed concrete surfaces shall remain moist with a continuous application of liquid membrane-forming compounds throughout the entire duration of the final curing method cycle (see *Table 7: Final Curing Method Cycle for Liquid Membrane-Forming Compounds*).

Table 7: Final Curing Method Cycle for Liquid Membrane-Forming Compounds

Sustained Concrete Temperature	Final Curing Method Cycle Duration	Compressive Strength
50°F ≤ °F ≤ 90°F	≥ Seven (7) days	≥ 80% f _c

Liquid membrane-forming compounds shall meet the requirements of ASTM C 1315, Type I, Class A and shall exhibit specific properties, such as alkali resistance, acid resistance, adhesion-promoting quality, and resistance to degradation by ultraviolet light, in addition to moisture-retention capabilities. Liquid membrane-forming compounds shall consist of waxes, resins, chlorinated rubber, or other materials to reduce evaporation of moisture from concrete. Liquid membrane-forming compounds shall be applied in accordance with the manufacturer's recommendations.

ITEM 992.1 (Continued)

Liquid membrane-forming compounds shall be applied immediately after the disappearance of the surface water sheen following final finishing. All exposed surfaces shall be wetted immediately after form removal and kept moist to prevent absorption of the compound, allowing the curing membrane to remain on the concrete surface for proper membrane moisture retention. The concrete shall reach a uniformly damp appearance with no free water on the surface prior to the application of the compound.

If patching or finishing repairs are to be performed prior to the application of the compound, the Precast Concrete Bridge Element shall be covered temporarily with saturated covers until the repairs are completed and the compound is applied. Only areas being repaired shall be uncovered during this period. While the saturated covers are removed to facilitate the patching process, the work shall continue uninterrupted. If for any reason the work is interrupted, saturated covers shall be placed onto the uncovered concrete surface, until the work continues and is completed, at which time the curing compound shall be applied to the repaired area.

Careful considerations shall be made by the Fabricator to determine if the evaporation rate is exceeding the rate of bleeding, thus causing the surface to appear dry even though bleeding is still occurring. Under such conditions, the application of liquid membrane-forming compounds to the concrete surface shall be delayed, in order to prevent bleed water from being sealed below the concrete surface and avert map cracking of the membrane films, reduction in moisture-retention capability, and reapplication of the compound. To diagnose and prevent this condition, the Fabricator shall place a transparent plastic sheet over a test area of the uncured and unfinished concrete surface and shall determine if any bleed water accumulates under the plastic.

The compound shall be applied in two applications at right angles to each other to ensure uniform and more complete coverage. On very deeply textured surfaces, the surface area to be treated shall be at least twice the surface area of a troweled or floated surface. In such cases, two separate applications may be needed, each at 200 ft²/gal., with the first being allowed to become tacky before the second is applied.

The curing compound shall be applied by power sprayer, using appropriate wands and nozzles with pressures between 25 and 100 psi. For very small areas such as repairs, the compound shall be applied with a wide, soft-bristled brush or paint roller. The compound shall be stirred or agitated before use and applied uniformly in accordance with the manufacturer's recommended rate. The Fabricator shall verify the application rates are in accordance with the manufacturer's recommended rate.

When the concrete surface is to receive paint, finishes, or toppings that require positive bond to the concrete, it is critical that the curing procedures and subsequent coatings, finishes, or toppings be compatible to achieve the necessary bond.

After the termination of the final curing method cycle has occurred, liquid membrane-forming compounds shall be removed by blast-cleaning from any concrete surface that is to receive paint, finishes, plastic concrete from secondary pour, grout, or any other toppings that require bonding to the concrete surface. These surfaces shall be further blast-cleaned to remove the cement matrix down to exposed aggregate to ensure proper bonding to the material. The method used to remove the curing compound shall not damage the reinforcement and coating. Compounds are prohibited on any concrete surface that will have a penetrating or coating type treatment such as a sealer, stain, or waterproofing membrane applied to it.

5. Accelerated Curing.

Accelerated curing shall use live steam or radiant heat with moisture in accordance with PCI MNL-116 as modified herein. The concrete temperature shall meet the maximum heat increase and cool down rates as specified herein. Concrete temperature monitoring shall meet the requirements of the *Temperature Monitoring* section. Excessive and fluctuating rates of heating and cooling shall be prohibited. The concrete temperature shall not exceed 158°F at any time. The Fabricator shall meet the following accelerated curing sequencing and requirements.

(a) Initial Delay Period.

The initial delay period shall be defined as the duration immediately following the placement of the concrete and the attainment of initial set of the concrete. The Fabricator shall determine the time of initial set in accordance with AASHTO T 197 specifications. Throughout the entire duration of the preset period, initial curing shall be implemented. The temperature increase period (see *Temperature Increase Period* section)

shall not occur until initial set of the concrete is attained. During the initial delay period, the concrete temperature shall meet the following requirements:

- i. Concrete temperature rate of increase shall not exceed 10°F per hour.
- ii. Total concrete temperature increase shall not exceed 40°F higher than the placement concrete temperature or 100°F, whichever is less

(b) Temperature Increase Period.

The temperature increase period shall be defined as the duration immediately following the completion of the initial delay period (after initial set) and immediately prior to the start of the constant maximum temperature period. Application of steam to the enclosure shall not occur until the initial delay period is complete. After the initial delay period is complete, all exposed concrete surfaces shall be cured in a moist environment where the concrete temperature increases at a rate not to exceed 36°F per hour.

(c) Constant Maximum Temperature Period.

The constant maximum temperature period shall be defined as the duration immediately following the completion of the temperature increase period and immediately prior to the start of the temperature decrease period. After the temperature increase period is complete, all exposed concrete surfaces shall be cured in a moist environment at a controlled and constant elevated temperature throughout the entire duration of the constant maximum temperature period. Termination of the constant maximum temperature period and the start of the termination decrease period shall occur after all specified conditions are met (see *Table 8: Constant Maximum Temperature Period*).

Table 8: Constant Maximum Temperature Period

Sustained Concrete Temperature	Constant Maximum Temperature Period	Compressive Strength
120°F ≤ °F ≤ 158°F	6 hrs ≤ Time ≤ 48 hrs	≥ 80% f _c

(d) Temperature Decrease Period.

After the constant maximum temperature period is complete, the concrete temperature shall be cured in a moist environment at a controlled and reduced rate not to exceed 36°F per hour until the concrete temperature is within 20°F of the ambient temperature outside of the curing enclosure.

R. Stripping.

The Fabricator shall not strip forms or handle the Precast Concrete Bridge Element until Quality Control compressive strength cylinders attain a minimum compressive strength of 80% Design Strength (f_c) or the value indicated on the approved drawings has been achieved. After removal from the form, all exposed concrete surfaces shall continue to be cured in conformance with the *Final Curing Methods* sections until completion.

S. Handling and Storage of Precast Concrete Bridge Elements.

Precast Concrete Bridge Elements may be exposed to temperatures below freezing (32°F) when the chosen curing cycle has been completed, provided that the following conditions are met:

- (a) Precast Concrete Bridge Elements are protected from precipitation with polyethylene curing covers until 100% f_c is attained
- (b) Precast Concrete Bridge Elements maintain a minimum concrete temperature of 40°F until 100% f_c is attained

Precast Concrete Bridge Elements damaged during handling and storage will be repaired or replaced at MassDOT's direction at no cost to MassDOT. Precast Concrete Bridge Elements shall be lifted at the designated points by approved lifting devices embedded in the concrete and in accordance with proper lifting and handling procedures. Storage areas shall be smooth and well compacted to prevent damage due to differential settlement. Precast Concrete Bridge Elements shall be supported on the ground by means of continuous blocking, in accordance with the approved dunnage plan.

ITEM 992.1 (Continued)

Precast Concrete Bridge Elements shall be loaded on a trailer with blocking as described above, in accordance with the approved dunnage plan. Shock-absorbing cushioning material shall be used at all bearing points during transportation of the Precast Concrete Bridge Elements. Blocking shall be provided at all locations of tie-down straps. Precast Concrete Bridge Elements stored prior to shipment shall be inspected by the Contractor prior to being delivered to the site to identify damage that would be cause for repair or rejection.

T. Repairs and Replacement.

In the event defects are identified, they shall be classified in the following categories and a non-conformance report (NCR) shall be filed if required. The NCR shall be submitted to MassDOT for review. Defects in all categories shall be documented by plant Quality Control personnel and made available to MassDOT upon request. Any required repairs shall utilize materials listed on the MassDOT QCML.

Where noted, defects shall be repaired according to the PCI Northeast Region Guidelines for Resolution of Non-Conformances in Precast Concrete Bridge Elements, Report Number PCINE-18-RNPCBE. Please note that reference to PCINE-18-RNPCBE is made for repair details only. In the case of conflicts with this Special Provision, this Special Provision shall govern.

1. Category 1, Surface Defects.

Category 1 defects do not need to be repaired, and an NCR does not need to be filed. Surface defects are defined as the following:

- (a) Surface voids or bug holes that are less than 5/8-inch in diameter and less than 1/4-inch deep, except when classified as Category 4
- (b) Cracks less than or equal to 0.006 inches wide
- (c) Cracks less than or equal to 0.125 inches wide on surfaces that will receive a field-cast concrete overlay

2. Category 2, Minor Defects.

Category 2 defects shall be repaired, but an NCR does not need to be filed. Minor defects are defined as the following:

- (a) Spalls, honeycombing, surface voids that are less than 2 inches deep and have no dimension greater than 12 inches
- (b) Cracks less than or equal to 0.016 inches that will not receive a concrete overlay
- (c) Broken or spalled corners that will be covered by field-cast concrete

Minor defects shall be repaired according to PCINE-18-RNPCBE. Cracks shall be sealed according to the PCI Repair Procedure #14 in PCINE-18-RNPCBE.

3. Category 3, Major Defects.

For Category 3 defects, the Fabricator shall prepare an NCR that documents the defect and describes the proposed repair procedure. The NCR shall be submitted to MassDOT for approval prior to performing the repair. Major defects are defined as the following:

- (a) Spalls, honeycombing and surface voids that are deeper than 2 inches or have any dimension greater than 12 inches, when measured along a straight line
- (b) Concentrated area of defects consisting of four or more Category 2 Defects within a 4-square foot area.
- (c) Exposed reinforcing steel
- (d) Cracks greater than 0.016 inches and less than or equal to 0.060 inches in width that will not receive a concrete overlay
- (e) Bearing area spalls with dimensions not exceeding 3 inches
- (f) Cracks, spalls and honeycombing that will be encased in cast in place concrete need not be repaired, but the limits and location of the defects shall be documented with an NCR

Upon MassDOT approval, defects and cracks shall be repaired according to PCINE-18-RNPCBE and this specification. All repairs shall be completed at the expense of the Contractor.

ITEM 992.1 (Continued)**4. Category 4, Rejectable Defects.**

Rejectable defects as determined by the MassDOT Inspector, RMS, and Engineer may be cause for rejection. Fabricator may submit an NCR with a proposed repair procedure, requesting approval. Some rejectable defects are defined as the following:

- (a) Surface defects on more than 5% of the surface area which will be exposed to view after installation
- (b) Minor defects that in total make up more than 5% of the surface area of the unit
- (c) Cracks greater than 0.060 inches in width except as noted in Category 1
- (d) Elements fabricated outside of the specified tolerances
- (e) MassDOT compressive strength testing that does not meet the specified Design Strength, f'_c .

U. Loading.

Prior to the Fabricator loading the Precast Bridge Element on to the truck for shipping, the Fabricator shall provide the MassDOT Plant Inspector and RMS a minimum seven (7) days' notice of the Fabricator's intent to load the Precast Bridge Element. Inspection by the MassDOT Plant Inspector shall take place while the element is still on dunnage in the yard. The element shall not be loaded onto the truck until the MassDOT Plant Inspector has performed the inspection.

V. Shipping.

Prior to shipment, the Fabricator shall perform the following actions and provide the required documentation to the MassDOT Plant Inspector:

- (a) Precast Concrete Bridge Elements shall remain at the Fabricator's plant for a minimum of 7 days after cast date.
- (b) QC Inspection Reports shall be signed by the Quality Control Manager and provided to the MassDOT Plant Inspector.
- (c) QC Compressive Strength Test Report Forms attaining Design Strength, f'_c for the Precast Concrete Bridge Element's representative Sublot shall be generated by the Fabricator and provided to the MassDOT Plant Inspector.
- (d) Certificate of Compliance shall be generated by the Fabricator as described under the Fabricator Quality Control section and provided to the MassDOT Plant Inspector.
- (e) All MassDOT RMS approved Corrective Actions submitted on the Non-Conformance Reports (NCR), shall be verified to have been completed by the MassDOT Plant Inspector and Quality Control Manager.
- (f) All NCRs shall be signed off by the Quality Control Manager, MassDOT Inspector and MassDOT RMS.

W. Delivery.

Upon Delivery, the following documentation shall be provided to the MassDOT Resident Engineer or designee:

- (a) QC Compressive Strength Test Report Forms attaining Design Strength, f'_c for the Precast Concrete Bridge Element's representative sublot.
- (b) Certificate of Compliance generated by the Fabricator as described under the Fabricator Quality Control section.
- (c) QC Inspection Reports signed by the Quality Control Manager.

The Contractor shall inspect Precast Concrete Bridge Elements upon receipt at the site. Precast Concrete Bridge Elements damaged during delivery shall be repaired or replaced at MassDOT's direction at no cost to MassDOT.

ITEM 992.1 (Continued)**CONSTRUCTION METHODS – FIELD CONSTRUCTION****A. General.**

All of the Contractor's field personnel involved in the erection and assembly of the Precast Concrete Bridge Elements shall have knowledge of and follow the approved Erection Procedure.

Prior to installation, the following documentation shall be reviewed and confirmed by the MassDOT Engineer or designee:

- (a) QC Compressive Strength Test Report Forms attaining Design Strength, f'_c for the Precast Concrete Bridge Element's representative subplot.
- (b) Certificate of Compliance generated by the Fabricator as described under the Fabricator Quality Control section.
- (c) QC Inspection Reports signed by the Quality Control Manager.

Field construction staff shall verify that the Engineer has accepted all Precast Concrete Bridge Elements prior to installation.

B. Erection Procedure

Prior to the erection, the Contractor shall submit an Erection Procedure for approval by the Engineer. This submittal shall include computations and drawings for the transport, hoisting, erection and handling of the Precast Concrete Bridge Elements. The Erection Procedure shall be prepared and stamped by a Professional Engineer registered in the Commonwealth of Massachusetts with working knowledge of the Contractor's equipment, approved shop drawings, and materials to build the bridge. The Erection Procedure shall, at a minimum, include the following:

1. Erection Procedure

The Erection Procedure shall be prepared to conform to the requirements of 960.61, Erection and the applicable sections in Chapter 8 of the PCI Design Handbook (seventh edition) for handling, erection, and bracing requirements. At a minimum, the Erection Procedure shall provide:

- (a) Minimum concrete compressive strength for handling the Precast Concrete Bridge Elements.
- (b) Concrete stresses during handling, transport, and erection.
- (c) Crane capacities, pick radii, sling geometry, and lifting hardware.
- (d) Verification that the equipment can handle all pick loads and weights with the required factor of safety.
- (e) Evaluation of construction sequence and evaluation of any geometric conflicts in the lifting of the Precast Concrete Bridge Elements and setting them as shown on the plans.
- (f) Design of crane supports including verification of subgrade for support.
- (g) Location and design of all temporary bracing that will be required during erection.

Non-shrink grout and concrete materials, approved by the Engineer, shall be placed as shown on the plans. Fill joints, keyways, and voids, in strict accordance with the specifications and manufacturer's recommendations and instructions.

For footings, approach slabs and highway guardrail transitions, once these Precast Concrete Bridge Elements have been set to the correct horizontal and vertical alignment, the void between them and the supporting soil shall be filled with Controlled Density Fill – Non-Excavatable to the limits as shown on the plans. Add additional grout ports in the footings to facilitate the bedding process if required.

Joints shall be filled flush to the top with non-shrink grout, and any vertical misalignment between adjacent elements shall be feathered out on a slope of 1 to 12.

Curing of grout or concrete shall be performed in strict accordance with the specifications and manufacturer's recommendations. Filling shall not be completed in cold weather when either the ambient temperature or the precast member's temperature is below the manufacturer's recommendation. No localized heating of either the precast members or of the air surrounding the element will be permitted in an attempt to reach application temperatures.

ITEM 992.1 (Continued)

If the joints or voids are not filled within five days after the Precast Bridge Elements are erected, the Contractor shall cover and protect the openings from weather and debris until they are filled.

C. Survey and Layout.

Working points, working lines, and benchmark elevations shall be established prior to placement of all elements. The Contractor is responsible for field survey as necessary to complete the work. MassDOT reserves the right to perform additional independent survey. If discrepancies are found, the Contractor may be required to verify previous survey data.

D. Preparation of Closure Pour Keyways.

Immediately prior to erecting the Precast Concrete Bridge Elements, the closure pour shear keys shall be cleaned at the job site of all dust, dirt, carbonation, laitance, and other potentially detrimental materials which may interfere with the bonding of the closure pour concrete and precast concrete using a high- pressure water blast. The exposed reinforcing steel in the precast concrete shall be protected from damage during the cleaning of the keyways. Damaged epoxy coating of steel reinforcement shall be repaired, and the reinforcing steel shall be cleaned as directed by the Engineer. The surfaces of the shear keys shall be wetted so that the surfaces shall have a Saturated Surface Dry (SSD) condition for at least 24 hours prior to the placement of the closure pour concrete.

E. Erection.

The elements shall be placed in the sequence and according to the methods outlined in the Erection Procedure. As the erection proceeds, the Contractor shall constantly monitor the assembly to ensure that the precast concrete bridge element is within proper horizontal and vertical location and tolerances prior to releasing it from the crane and setting the next unit. The Contractor may use shims to maintain proper setting tolerances.

The concrete elements shall be lifted only by the lifting devices, and the utmost care shall be taken to prevent distortion of the elements during handling, transportation or storage.

Suitable spreaders shall be used during lifting so that only a vertical pull will be made on the lifting device. A non-vertical lifting force may be permitted if prior written approval is given by the Engineer. This approval will be contingent on the Contractor demonstrating by calculations, prepared by a Professional Engineer registered in Massachusetts, that the elements will not be damaged by the non- vertical lifting force and by documentation that the capacity of the lifting devices is adequate for the non- vertical lifting force.

Precast components shall be pre-bed with non-shrink grout thicker than shim stacks prior to placing other precast elements on top of them.

After all Precast Concrete Bridge Elements have been placed, the actual overall dimensions of the structure both horizontal and vertical, as laid out shall not deviate from the nominal dimensions shown on the plans beyond a tolerance of +0 inches and -1 inches. Once the layout of Precast Concrete Bridge Elements has been accepted by the Engineer, the Contractor shall cut all lifting devices off below the surfaces of the elements.

F. Filling of Blockouts for Lifting Devices and Threaded inserts.

If the blockouts in the Precast Concrete Bridge Elements where the lifting devices were located will be exposed and visible after assembly is complete, the Contractor shall fill these blockouts with Cement Mortar (M4.02.15) or grout.

After the formwork has been removed, all threaded inserts that have been cast into the precast concrete bridge deck for support of the formwork shall be filled with a grout of the same color as that of the precast concrete.

ITEM 992.1 (Continued)**ORNAMENTAL RAILING REMOVED AND REPLACED**

The work under this heading shall conform to the relevant provisions of Subsection 960 and 975 as herein amended. The work shall include the removal and legal disposal of existing ornamental railing and the supply, fabrication, and installation of new replacement railing consisting of painted steel and cast-iron railing as shown on the Plans. The Contractor shall submit his procedure for preparing, painting and installing the steel and cast-iron railing to the Engineer for approval.

Materials

Materials used in the fabrication of the new ornamental railing shall conform to the following requirements:

Materials shall be new and free from any surface coatings of paint or other materials. All castings shall be sound, free from blow-holes or other imperfections and have smooth surfaces.

Steel anchor bolts, nuts and washers shall conform to M8.01.5.

Posts shall be gray iron castings conforming to ASTM-A48, Class No. 30.

Steel pipe for rails shall conform to requirements of ASTM-A53, Grade B.

All flat bar and pales shall conform to ASTM-A36 steel.

The new railing shall be accurately fabricated in accordance with the plans or as directed by the Engineer. Fabrication and erection shall be done in accordance with the requirements for steel bridges and structural steel as given herein. The rail elements shall be erected to produce a smooth, continuous rail between posts and shall parallel the line and grade of the sidewalk surface, as shown on the plans.

Railing panel and top and bottom rails shall be carefully adjusted prior to welding to insure proper matching at abutting connections and correct alignment throughout their length. Consistency of weld size and length of weld at each picket is a requirement for appearance and is a requirement of this specification.

All sharp edges and burrs shall be removed from all pales and pipe edges before fabrication.

Welded fabrication shall be in accordance with the latest Bridge Welding code, ANSI/AASHTO/AWS D1.5.

New Ornamental Railing and Posts shall be galvanized and painted in accordance with Section 975 of the Standard Specifications. Color of the proposed railing shall be the same color as the bridge after it is painted.

ITEM 992.1 (Continued)**Construction**

The Contractor will make a detailed inventory and dimensional drawing of the existing ornamental railing prior to its removal and disposal for submittal to the Engineer. The drawing shall show the existing post spacing and locations relative to the existing backwalls, end of wingwalls and other reference points. The drawing shall also show sections of the railing and posts.

The existing railing is believed to be coated with lead paint and shall be cleaned legally disposed of off-site by the Contractor.

The new railing shall be attached to the sidewalk, coping and wingwalls with a similar layout as the existing and as indicated on the plans.

METAL BRIDGE RAILING (CM-TL3)

The work to be done under this heading shall conform to the relevant provisions of Section 975 of the Supplemental Specifications and the following:

The CM-TL3 railing shall be as detailed on the plans. The work under this heading shall include the railing on bridge and the railing on the approaches. The color of the finish coat of the CM-TL3 rail and posts after galvanizing shall be Federal Standard Color # 14223, green.

BASIS FOR PARTIAL PAYMENT

Within ten (10) days of the Notice to Proceed, the Contractor shall submit, in duplicate, for the approval of the Engineer, a schedule of quantities and unit prices for the major components of the bridge structure as listed below. The bridge structure Lump Sum breakdown quantities provided below are estimated and not guaranteed. The total of all partial payments to the Contractor shall equal the lump sum contract price regardless of the accuracy of the quantities furnished by the Engineer for the individual bridge components. The cost of labor and materials for any Item not listed but required to complete the work shall be considered incidental to Item 992.1 and no further compensation will be allowed:

ITEM 992.1 (Continued)**Item 992.1 Alteration To Bridge Structure No.C-21-002**

<u>Sub-Item</u>	<u>Description</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Total</u>
901.	4000 PSI, 1.5 Inch, 565 Cement Concrete	45	CY		
904.	4000 PSI, 3/4 Inch, 610 Cement Concrete	30	CY		
904.3	5000 PSI, 3/4 Inch, 685 HP Cement Concrete	65	CY		
904.4	4000 PSI, 3/4 Inch, 585 HP Cement Concrete	200	CY		
905.2	5000 PSI, 3/8 Inch, 710 HP Cement Concrete	12	CY		
910.1	Steel Reinforcement for Structures - Epoxy Coated	60,000	LB		
910.4	Mechanical Reinforcing Bar Splicer	630	EA		
911.1	Shear Connectors	6,100	EA		
912.1	Drilling and Grouting Dowels	750	FT		
960.02	Steel Grid Deck	120	SY		
965.	Membrane Waterproofing for Bridge Decks	250	SF		
970.	Damp-proofing	1,500	SF		
972.	Strip Seal Bridge Joint System	130	FT		
974.11	Ornamental Railing Removed and Replaced	325	FT		
975.8	Metal Bridge Railing (CM-TL3)	360	FT		

Total Cost of Item 992.1 = _____

The above schedule applies only to Bridge Structure No. C-21-002. Payment for similar materials and construction at locations other than at this bridge structure shall not be included under this Item.

Sub-Item numbering is presented for information only in coordination with MassDOT Standard Nomenclature.

END OF DOCUMENT

DOCUMENT A00802

DETAIL SHEETS

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PROJECT NO. 612514THE COMMONWEALTH OF MASSACHUSETTS
MASSACHUSETTS HIGHWAY DEPARTMENT
TEN PARK PLAZA, BOSTON, MA**-ESTIMATE OF QUANTITIES - DETAIL SHEET-**

CITY/TOWN:	<u>Cummington</u>	YEAR:	<u>FFY 2027</u>
CLASS:	<u>Principal Arterial</u>	ROAD:	<u>ST 9/ST 112</u>
TYPE OF PROJECT:	<u>Bridge Preservation</u>	DATE:	<u>May 16, 2025</u>

Earth Excavation	280 CY	Gravel Borrow	65 CY
Pavement Fine Milling	940 SY	Sand Borrow	0 CY
Gravel Borrow for Backfilling Structures and Pipes	70 CY	Loam For Lawns	150 CY
Class A Rock Excavation	7 CY	Ordinary Borrow	5 CY
Test Pit for Exploration	6 CY	Class B Trench Excavation	30 CY
Crushed Stone	110 TON	Class B Rock Excavation	2 CY
		Modified Rockfill	15 CY

PAVEMENT NOTES**PROPOSED FULL DEPTH CONSTRUCTION WITH RECLAIMED BASE****AREA = 2640 SY**

1 1/2" SUPERPAVE SURFACE COURSE – 9.5 POLYMER (SSC-9.5-P) OVER

2" SUPERPAVE INTERMEDIATE COURSE – 12.5 (SIC-12.5) OVER

4" SUPERPAVE BASE COURSE – 37.5 (SBC-37.5) OVER

8" RECLAIMED PAVEMENT SUPPLEMENTED WITH GRAVEL BORROW (TYPE B) AS REQUIRED

PROPOSED FINE MILLING AND OVERLAY**AREA = 940 SY**

1 1/2" SUPERPAVE SURFACE COURSE – 9.5 POLYMER (SSC-9.5-P) OVER

1 1/2" PAVEMENT FINE MILLING

PAVEMENT NOTES (Continued)

PROPOSED HMA FOR DRIVEWAYS

AREA = 15 SY

1 1/2" SUPERPAVE SURFACE COURSE – 9.5 POLYMER (SSC-9.5-P) OVER

2 1/2" SUPERPAVE INTERMEDIATE COURSE – 12.5 (SIC-12.5) OVER

8" GRAVEL BORROW (TYPE B)

PROPOSED CEMENT CONCRETE SIDEWALK, & PED. CURB RAMPS

AREA = 95 SY

4" (4000 PSI, 3/4", 610) CEMENT CONC. PLACED IN ONE COURSE

8" GRAVEL BORROW (TYPE B)

PROPOSED HMA FOR PATCHING PERMANENT TRENCH PAVEMENT

AREA = 5 TON

(PRIOR TO FINE MILLING OPERATIONS)

NOTE: 1 1/2" SURFACE COURSE SHALL BE TEMPORARY UNTIL FINE MILLING OPERATIONS ARE PERFORMED

1 1/2" TEMPORARY HMA (PAID UNDER ITEM 451.) OVER

2" SUPERPAVE INTERMEDIATE COURSE – 12.5 (SIC-12.5) OVER

4 1/2" SUPERPAVE BASE COURSE – 37.5 (SBC-37.5) OVER

TRENCH BACKFILL AS REQUIRED

(SEE PLAN DETAILS AND CONTRACT SPECIAL PROVISIONS)

VARIES GRAVEL BORROW (TYPE B) TO SUPPLEMENT SUITABLE BACKFILL

(REFER TO UTILITY TRENCH DETAILS)

The following shall define the limits between the Bridge Lump Sum items (i.e. Bridge Excavation) and Highway items (i.e. Earth Excavation):

West Approach Sta. 380+52.52

East Approach Sta. 381+87.95

ITEM 101. CLEARING AND GRUBBING

If and where required by the Engineer

ITEM 102.1 TREE TRIMMING

Assume treeline will require trimming in certain areas to provide room for construction.

ITEM 103. TREE REMOVED - DIAMETER UNDER 24 INCHES

STREET	STATION	SIDE	Dia. (in)
THAYER	100+71	RT	15

ITEM 146. DRAINAGE STRUCTURE REMOVED

Street	Station	Offset
Berkshire	382+09	RT
Berkshire	382+35	RT
Berkshire	382+41	RT

If required by the Engineer.

ITEM 151.2 GRAVEL BORROW FOR BACKFILLING STRUCTURES AND PIPES

Use for the following work:

- Backfill of drainage piping trenches and structures if unsuitable material is encountered, as determined by the Engineer

Elsewhere as directed.

ITEM 156. **CRUSHED STONE**

Use for bedding under proposed drainage pipes, sediment forebay, and structures if unsuitable subgrade is encountered, as determined by the Engineer.

ITEM 170. **FINE GRADING AND COMPACTING – SUBGRADE AREA**

Locations including but not limited to areas of proposed sidewalks, proposed, pedestrian curb ramps, driveways, bike lanes, and locations otherwise required by the Engineer.

ITEM 201. **CATCH BASIN**

Structure Name	Station	Offset
CB-1	379+57	LT
CB-2	379+64	LT
CBCI-1	379+64	RT
CBCI-2	380+38	RT
CB-3	201+03	RT
CBCI-3	201+06	LT
CBCI-4	382+20	RT
CBCI-5	383+75	RT

ITEM 202. **MANHOLE**

Structure Name	Station	Offset
DMH-1	100+87	LT
DMH-2	379+94	RT
DMH-3	201+06	RT
DMH-4	382+92	RT

ITEM 204. **GUTTER INLET**

Structure Name	Station	Offset
GI-1	382+13	RT

ITEM 234.12 12 INCH DRAINAGE PIPE - OPTION

Street	Side	From	To	Length (ft)
Berkshire	LT	CB-1	CB-2	3
Berkshire	LT	CB-2	DMH-2	47
Berkshire	RT	CBCI-1	DMH-2	27
Berkshire	RT	CBCI-2	DMH-2	41
Thayer	LT	DMH-2	DMH-1	38
Lilac	RT	CB-3	DMH-3	8
Lilac	LT	CBCI-3	DMH-3	7
Lilac	RT	DMH-3	E-DMH	34
Berkshire	RT	CBCI-5	DMH-4	77

ITEM 238.12 12 INCH DUCTILE IRON PIPE

Street	Side	From	To	Length (ft)
BERKSHIRE	RT	GI-1	CBCI-4	3
BERKSHIRE	RT	CBCI-4	DMH-4	65
OLD ROUTE 9	LT	DMH-4	FES-1	33
OLD ROUTE 9	LT	Outlest Stc.	FES-2	20

ITEM 472. TEMPORARY ASPHALT PATCHING

For use as temporary HMA trench patching for utility installation prior to full depth construction.

Elsewhere as required for miscellaneous ramping, as determined by the Engineer.

ITEM 504. GRANITE CURBING VA4 - STRAIGHT

Street	Side	From	To	Length (ft)
Berkshire	LT	378+00	379+63	161
Berkshire	RT	379+19	379+64	51
Thayer Corner	RT	100+95	101+02	7
Berkshire	RT	380+50	380+61	13
Berkshire	RT	382+06	382+93	90
Lilac	LT	200+97	201+25	28
Old Rte 9	RT	400+13	400+41	24
Old Rte 9	RT	400+37	401+23	93
Berkshire	LT	382+44	384+44	200
Berkshire	RT	383+71	384+44	70

ITEM 504. GRANITE CURBING VA4 - CURVED

Street		Side	Length (ft)
Berkshire	Thayer Corner	SW	16
Berkshire	Thayer Corner	SE	42
Berkshire	Lilac	NE	19
Old Rte 9	Berkshire	SW	25
Old Rte 9	Berkshire	SE	46

ITEM 509. GRANITE TRANSITION CURB FOR PEDESTRIAN CURB RAMPS – STRAIGHT

If and where required by the Engineer

ITEM 509.1 GRANITE TRANSITION CURB FOR PEDESTRIAN CURB RAMPS – CURVED

Street		Side	Length (ft)
Berkshire	Lilac	NW	20

ITEM 595. CURB INLET REMOVED AND DISCARDED

Required for removal of existing CBCI

ITEM 627.1 TRAILING ANCHORAGE

Required at guardrail trailing ends.

ITEM 627.83 GUARDRAIL TANGENT END TREATMENT, TL-3

Required at guardrail leading ends

ITEM 628.24 TRANSITION TO BRIDGE RAIL

Required at each corner of bridge structure

DOCUMENT A00810

MassDOT Herbicide Use Report

MassDOT Herbicide Use Report

Date Submitted:

Use multiple sheets for multiple application techniques or sites as needed.

Contractor
Performing Work:

Project or Contract No:

Town/s:

Associated Route:

Project

Description:

MDAR ALERT*:

Treatment
Description:

Area Treated (as applicable)

Acres:

Sq Yds:

Miles:

Weeds
Targeted:

Gallons Formula Used:

Application
Method:

Date/Time Began:

Date/Time End:

Product Used:

Name: _____ EPA Reg. No: _____ % Active Ingredient Dry: _____ Liquid: _____ Formulation (dilution rate): _____	Name: _____ EPA Reg. No: _____ % Active Ingredient Dry: _____ Liquid: _____ Formulation (dilution rate): _____	Name: _____ EPA Reg. No: _____ % Active Ingredient Dry: _____ Liquid: _____ Formulation (dilution rate): _____
--	--	--

Additional products used (surfactants, etc.) or other information:

Applicators:**License Numbers:**

* Please note:

EDRR Species (MAM, Hogweed, Pepperweed, Kudzu, etc.)

Tree of Heaven 1) stands of >20 trees; 2) >5 trees near nursery, landscape company, or highway rest area where trucks stop

Upon completion, please submit form to MassDOT District Engineer and Landscape Design Section in Boston office.

07/18/2018

DOCUMENT A00811

WATERING LOG for MassDOT Plantings

Watering Log for MassDOT Plantings

Project Description:

Contract No:

Project No:

Notes:

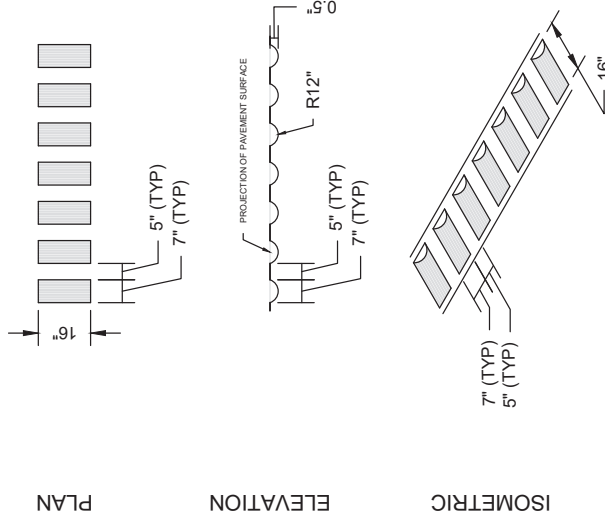
Plant Locations/s:
(Attach planting
plan/s as
necessary)

	Separate logs shall be kept to track areas or plants with different watering schedules. Trees shall receive a minimum of 10 gallons with each watering and shrubs a minimum of 5 gallons. Provide note that if watering is not performed as scheduled due to rain. Record date of rainfall and amount.											
Date Watered												
Landscape Contractor Initial												
Prime Contractor Initial												
Date Watered												
Landscape Contractor Initial												
Prime Contractor Initial												

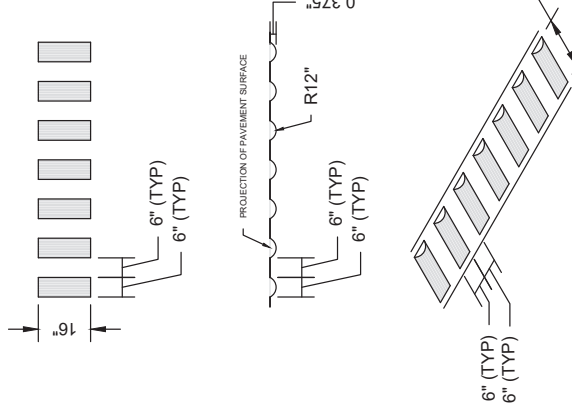
Each week, following watering, Log shall be submitted to the MassDOT Engineer.
6/15/2018

RUMBLE STRIP DETAILS

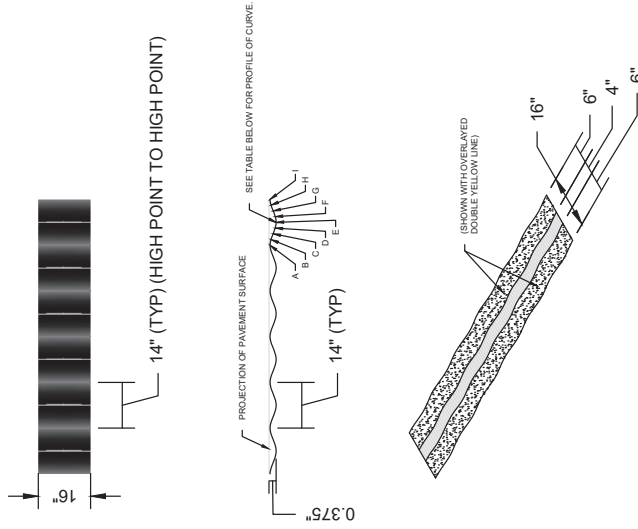
TYPE A
CYLINDER RUMBLE STRIP
(BICYCLE TRAVEL PROHIBITED)



TYPE B
CYLINDER RUMBLE STRIP
(BICYCLE TRAVEL PERMITTED)



TYPE C
CONTINUOUS SINUSOIDAL
RUMBLE STRIP



NOTES:

1. NOT TO SCALE. SOME LINE WORK EXAGGERATED FOR CLARITY.
2. SEE PLANS FOR LOCATION(S) AND START AND END STATIONS FOR ALL RUMBLE STRIP INSTALLATIONS.
3. HIGH POINT OF SINUSOIDAL RUMBLE STRIP LOCATED $\frac{1}{16}$ " BELOW PAVEMENT SURFACE.

DESIGN OF CURVE PROFILE FOR SINUSOIDAL RUMBLE STRIP

POINT	A	B	C	D	E	F	G	H	I
DEPTH FROM PAVEMENT SURFACE (IN.)	$\frac{1}{16}$	$\frac{1}{8}$	$\frac{7}{32}$	$\frac{11}{32}$	$\frac{3}{8}$	$\frac{11}{32}$	$\frac{7}{32}$	$\frac{1}{8}$	$\frac{1}{16}$
DISTANCE FROM HIGH POINT "A" (IN.)	0	1.75	3.5	5.25	7	8.75	10.5	12.25	14



TRAFFIC & SAFETY STANDARDS
SECTION 860

RUMBLE STRIP DETAILS

D-T-E OF ISSUE
2020

DR- ING NUMBER
XXX.X.X

DOCUMENT A00820

**Massachusetts Department of Transportation
Conditions of Custody****REQUEST FOR RELEASE OF MASSDOT AUTOCAD FILES FORM**

(Only to be used following award of contract)

City/Town: CUMMINGTONProject File Number: 612514Contract Number: 130933Project Description: Bridge Preservation, C-21-002, Route 9 over Westfield River

All AutoCAD files are provided solely as a courtesy to facilitate public access to information. MassDOT attempts to provide current and accurate information but cannot guarantee so. MassDOT provides such documents, files or other data "as is" without any warranty of any kind, either expressed or implied, including but not limited to, accuracy, reliability, omissions, completeness and currentness. The Commonwealth of Massachusetts and its Consultants shall not be liable for any claim for damages, including lost profits or other consequential, exemplary, incidental, indirect or special damages, relating in any way to the documents, files or other data accessible from this file, including, but not limited to, claims arising out of or related to electronic access or transmission of data or viruses. Because data stored on electronic media can deteriorate undetected or be modified without our knowledge, MassDOT cannot be held liable for its completeness or correctness. MassDOT makes no representation as to the compatibility of these files beyond the version of the stated CAD software.

By signing this form, I agree that it shall be my responsibility to reconcile this electronic data with the conformed contract documents, and that only the conformed contract documents shall be regarded as legal documents for this Project. I understand that this authorization does not give me the right to distribute the files. I agree to the terms above and wish to receive the AutoCAD files.

This signed form shall be emailed to the Highway Design Engineer at the MassDOT -Highway Division at the following email address:

DOTHighwayDesign@dot.state.ma.us

Attn: AutoCAD Files

Name of person requesting AutoCAD files: _____

Affiliation/Company: _____

Address: _____

Telephone number: _____

Email address: _____

Signature/Date: _____

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DOCUMENT A00830

**401 WATER QUALITY CERTIFICATION AND
404 US ARMY CORPS OF ENGINEERS
PRE-CONSTRUCTION NOTIFICATION
PERMIT APPLICATION**

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401 Water Quality Certification and 404 USACE Pre-Construction Notification

**ST 9/ST 112 over East Branch Westfield River
(ID segment MA32-04)**

**MassDOT Project No. 612514
Cummington, MA**

APPLICANT:

MassDOT

10 Park Plaza

Suite 7360

Boston, MA 02116

May 17, 2024



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May 17, 2024

Heidi Davis, Senior Environmental Analyst & Highway Unit Supervisor
MassDEP Boston Office
100 Cambridge Street Suite 900
Boston, MA 02114

Dan Vasconcelos,
Regulatory Division, Department of the Army
New England District, Corps of Engineers
696 Virginia Road
Concord, MA 01742

**Re: 401 Water Quality Certification and 404 USACE Pre-Construction Notification
for the Preservation of Bridge No. C-21-002, ST 9/ST 112 (Berkshire Trail) over
East Branch Westfield River
MassDOT Project File No. 612514**

Dear Ms. Davis and Mr. Vasconcelos:

Benesch, on behalf of the Highway Division of the Massachusetts Department of Transportation (MassDOT), is submitting the enclosed 401 Water Quality Certification/404 USACE Pre-Construction Notification (GP 23) for your review.

A prefilming meeting occurred in the field on March 12, 2024 with attendees from MassDOT Environmental, MassDEP, USACE, US National Parks Service and Benesch (project designer).

The proposed project is a bridge preservation of the Dudley Manor Bridge, which carries ST 9/ST 112 (Berkshire Trail) over the East Branch Westfield River in Cummington, MA. The single span bridge superstructure and substructure will be retained in place with various structural repairs. The bridge deck and pedestrian sidewalk will be replaced and crash tested curb rails will be installed to protect the bridge structure. The project will require work within Waters of the United States, including 4,100 SF of temporary waterway impacts, to facilitate concrete repairs to the substructure. There are no permanent waterway impacts or dredging proposed as part of this project.

Due to the temporary impacts to Waters of the United States, a Pre-Construction Notification will be filed with USACE.

This project is being filed under the MassDOT bridge exemption as specified in the 2014 Transportation Bond Bill. The bridge preservation and design are substantially the functional equivalent of, and in similar alignment to, the existing bridge.

Page | 2

The project proponent, MassDOT, hereby certifies that all information contained herein is true, accurate and complete to the best of my knowledge and belief.

The project proponent hereby requests that the certifying authority review and take action on this CWA 401 certification request within the applicable reasonable period of time.

Accompanying the Application are several attachments describing the proposed project in detail. If you have any questions concerning the proposed work, you may contact Courtney Walker, at (857) 262-0757 or courtney.l.walker@dot.state.ma.us.

Sincerely,



Courtney Walker
MassDOT – Highway Division
Wetlands and Water Resources Coordinator

CC:

Sarah Fournier-Scanlon, Cummington Conservation Commission
Michael Joa, MassDOT
Tyler Lewis, MassDEP
Ryan Hale, MassDEP
Stephen Soma, MassDOT

PUBLIC NOTICE

Massachusetts Department of Environmental Protection
Division of Wetlands and Waterways
MassDEP Boston Office
100 Cambridge Street Suite 900
Boston, MA 02114

Pursuant to 33 U.S.C. 1341 and M.G.L. c. 21 §§ 26 - 53, notice is given of a 401 Water Quality Certification application for the preservation of Bridge #C-21-002, Route 9 over the Westfield River in the Town of Cummington, Massachusetts by the Massachusetts Department of Transportation – Highway Division, Ten Park Plaza, Room 7360, Boston, MA 02116. The proposed project is a bridge preservation project. The work consists of structural repairs. The bridge deck and pedestrian sidewalk will be replaced and crash tested curb rails will be installed to protect the bridge structure. Additional information may be obtained from the Massachusetts Department of Transportation – Highway Division at the above address, attention Courtney Walker or by emailing courtney.l.walker@dot.state.ma.us. Written comments should be sent to Heidi Davis, MassDEP Wetlands Program, 100 Cambridge Street, Suite 900, Boston, MA 02114 or heidi.davis@mass.gov within twenty-one days of this notice.

Any group of ten persons, any aggrieved person, or any governmental body or private organization with a mandate to protect the environment who submits written comments may appeal the Department's Certification. Failure to submit written comments before the end of the public comment period may result in the waiver of any right to an adjudicatory hearing.

U.S. Army Corps of Engineers (USACE), New England District (NAE)

PRE-CONSTRUCTION NOTIFICATION (PCN)**DATA REQUIRED BY THE PRIVACY ACT OF 1974**

Authority	Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Regulatory Programs of the Corps of Engineers; Final Rule 33 CFR 320-332.
Principal Purpose	The information provided will be used in evaluating activities under Pre-Construction Notification procedures within New England.
Routine Uses	This information may be shared with other federal, state, and local government agencies during the application review process. Submission of requested information is voluntary. However, if information is not provided the PCN application cannot be fully evaluated nor can USACE render a permit decision.
Instructions	The applicant must complete ALL required sections of this document before their submission to USACE. The PCN submission to USACE shall include one set of drawings which show the location and character of the proposed activity, statements that address each required field below, and documentation that supports each field (e.g., emails, letters, description/narrative, phone calls, surveys, reports, etc.). Electronic submissions to the following address are strongly preferred: cenae-r-ma@usace.army.mil . The email subject line shall contain the following: General Permit #, PCN, City/Town, and date submitted. An application that is not completed in full will be returned.

(ITEMS 1 THRU 4 TO BE FILLED BY USACE)

1. APPLICATION NO.	2. FIELD OFFICE CODE	3. DATE RECEIVED	4. DATE APPLICATION COMPLETE
--------------------	----------------------	------------------	------------------------------

(ITEMS BELOW TO BE FILLED BY APPLICANT)

5. APPLICANT'S NAME First - Courtney Middle - Last - Walker Company - MassDOT - Highway Division E-mail Address - courtney.l.walker@dot.state.ma.us	8. AUTHORIZED AGENT'S NAME AND TITLE (<i>agent is not required</i>) First - Peeyush Middle - Last - Rohela Company - Benesch E-mail Address - prohela@benesch.com
6. APPLICANT'S ADDRESS: Address- 10 Park Plaza, Suite 7360 City - Boston State - MA Zip - 02116 Country - USA	9. AGENT'S ADDRESS: Address- 50 Redfield Street, Suite 102 City - Boston State - MA Zip - 02122 Country - USA
7. APPLICANT'S PHONE NOS. with AREA CODE a. Residence b. Business c. Fax d. Mobile 857-262-0757	10. AGENT'S PHONE NOS. with AREA CODE a. Residence b. Business c. Fax d. Mobile 857-271-3016

STATEMENT OF AUTHORIZATION

11. I **hereby authorize**, Peeyush Rohela to act on my behalf as my agent in the processing of this general permit PCN application and to furnish, upon request, supplemental information in support of this general permit PCN application.



SIGNATURE OF APPLICANT

5/7/2024

DATE

NAME, LOCATION, AND DESCRIPTION OF PROJECT OR ACTIVITY

12. PROJECT NAME or TITLE (<i>see instructions</i>) MassDOT Project #612514 - Cumington - Bridge Preservation, C-21-002, Route 9 and Route 112 over Westfield River	14. PROPOSED ACTIVITY STREET ADDRESS (<i>if applicable</i>) ST 9/ ST 112 (Berkshire Trail) City: Cumington State: MA Zip: 01026
13. NAME OF WATERBODY, IF KNOWN (<i>if applicable</i>) East Branch Westfield River	
15. LOCATION OF PROPOSED ACTIVITY (<i>see instructions</i>) Latitude: 42° 27' 21.37" °N Longitude: 72° 53' 4.89" °W	

16. OTHER LOCATION DESCRIPTIONS, IF KNOWN (*see instructions*)

State Tax Parcel ID:

Municipality:

Section:

Township:

Range:

17. DIRECTIONS TO THE SITE.

From West: Follow I-90 East to Lee and take Exit 10 for US-20 West. Follow US-20 West to Pittsfield and turn right on MA-9 East. Follow MA-9 East. The bridge is located approximately 500' east of mile marker 23.0.

From East: Follow I-90 West to West Springfield and take Exit 45 for I-91 North to Northampton and take Exit 25 for MA-9 West. Follow MA-9 West for approximately 20 miles. The bridge is located approximately 1000' west of mile marker 23.5.

18. IDENTIFY THE SPECIFIC GENERAL PERMIT(S) YOU PROPOSE TO USE:

GP 23

19. DESCRIPTION OF PROPOSED GENERAL PERMIT ACTIVITY (*see instructions*)

See Attachment A - Water Quality Certification Narrative

20. DESCRIPTION OF PROPOSED MITIGATION MEASURES (*see instructions*)

The temporary sandbag cofferdams have been proposed to not impact existing vegetated wetland on site. Temporary sandbag cofferdams are to be installed during low flow river conditions to reduce the temporary impact to the Waters of the US.

21. PURPOSE OF GENERAL PERMIT ACTIVITY (*Describe the reason or purpose of the project, see instructions*)

The purpose of this project is to preserve the deteriorating Dudley Manor Bridge which spans over the East Branch Westfield River in Cummington, MA. The project will include steel repairs, abutment concrete repairs, deck replacement, the installation of a new curb rail and the installation of new ornamental bridge railing.

22. Quantity of Wetlands, Streams, or Other Types of Waters Directly Affected by Proposed General Permit Activity (*see instructions*)

Area (square feet)	Length (linear feet)	Volume (cubic yards)	Duration	Purpose
4,100 SF	150 FT	250 CY	Temp. (30 days)	Installation of sandbag cofferdams in order to perform abutment repairs


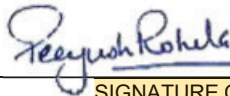

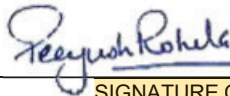

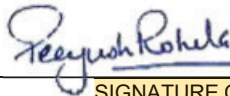
Each PCN must include a delineation of wetlands, other special aquatic sites, and other waters, such as lakes and ponds, and perennial, intermittent, and ephemeral streams, on the project site.

23. List any other GP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project on any related activity (*see instructions*)

N/A

24. If the proposed activity will result in the loss of aquatic resources that exceed those identified in the New England District Compensatory Mitigation Thresholds, explain how the compensatory mitigation requirement will be satisfied. (*see instructions*)

N/A

<p>25. Is Any Portion of the General Permit Activity Already Complete? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, describe the completed work:</p>									
<p>26. List the name(s) of any species listed as endangered or threatened under the Endangered Species Act that might be affected by the proposed GP activity or utilize the designated critical habitat that might be affected by the proposed GP activity. (<i>see instructions</i>)</p> <p>Northern Long-Eared Bats (NLEB) are listed as Endangered. There are no known presence of NLEB or roosts in the vicinity of the project, therefore no impacts are anticipated.</p>									
<p>27. List any historic properties that have the potential to be affected by the proposed GP activity or include a vicinity map indicating the location of the historic property or properties. Attach relevant project information, along with any responses received from project notifications to this submittal. (<i>see instructions</i>)</p> <p>N/A</p>									
<p>28. For a proposed GP activity that will occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status, identify the Wild and Scenic River or the "study river":</p> <p>Work will occur within the East Branch Westfield River which is designated as a Wild and Scenic River.</p>									
<p>29. If the proposed GP activity also requires permission from the USACE pursuant to 33 U.S.C. 408 because it will alter or temporarily or permanently occupy or use a U.S. Army Corps of Engineers federally authorized civil works project, have you submitted a written request for section 408 permission from the USACE district having jurisdiction over that project? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>If "yes", please provide the date your request was submitted to the USACE District:</p>									
<p>30. Does the activity require a 401 Water Quality Certification (WQC)? If so, specify the type of 401 WQC that is required (general or individual). In cases where an individual 401 WQC is required, provide the date the 401 WQC certification request was submitted to the certifying authority and their contact information.</p> <p>MassDEP Individual 401 WQC, 05/07/2024 Heidi Davis 100 Cambridge Street Suite 900 Boston, MA 02114</p>									
<p>31. If the terms of the GP(s) you want to use require additional information to be included in the PCN (i.e. sampling and analysis plan), please include that information in this space or provide it on an additional sheet of paper marked Block 30. (<i>see instructions</i>)</p> <p>N/A</p>									
<p>32. I certify that the information in this pre-construction notification is complete and accurate. I further certify that I possess the authority to undertake the work described herein or am acting as the duly authorized agent of the applicant.</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 35%; text-align: center; vertical-align: bottom;">  <div style="border-top: 1px solid black; margin-top: 5px;"></div> </td> <td style="width: 15%; text-align: center; vertical-align: bottom;"> <div style="border-top: 1px solid black; margin-top: 5px;"></div> </td> <td style="width: 35%; text-align: center; vertical-align: bottom;">  <div style="border-top: 1px solid black; margin-top: 5px;"></div> </td> <td style="width: 15%; text-align: center; vertical-align: bottom;"> <div style="border-top: 1px solid black; margin-top: 5px;"></div> </td> </tr> <tr> <td style="text-align: center;">SIGNATURE OF APPLICANT</td> <td style="text-align: center;">DATE</td> <td style="text-align: center;">SIGNATURE OF AGENT</td> <td style="text-align: center;">DATE</td> </tr> </table>		 <div style="border-top: 1px solid black; margin-top: 5px;"></div>	<div style="border-top: 1px solid black; margin-top: 5px;"></div>	 <div style="border-top: 1px solid black; margin-top: 5px;"></div>	<div style="border-top: 1px solid black; margin-top: 5px;"></div>	SIGNATURE OF APPLICANT	DATE	SIGNATURE OF AGENT	DATE
 <div style="border-top: 1px solid black; margin-top: 5px;"></div>	<div style="border-top: 1px solid black; margin-top: 5px;"></div>	 <div style="border-top: 1px solid black; margin-top: 5px;"></div>	<div style="border-top: 1px solid black; margin-top: 5px;"></div>						
SIGNATURE OF APPLICANT	DATE	SIGNATURE OF AGENT	DATE						
<p>The Pre-Construction Notification must be signed by the person who desires to undertake the proposed activity (applicant) and, if the statement in block 11 has been filled out and signed, the authorized agent.</p> <p>18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals, or covers up any trick, scheme, or disguises a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statements or entry, shall be fined not more than \$10,000 or imprisoned not more than five years or both.</p>									

ATTACHMENTS

Attachment A -	Water Quality Certification Narrative
Attachment B -	Wetland Exhibits
Attachment C -	Design Plans
Attachment D -	Description of Wetland Resources
Attachment E -	Flood Insurance Rate Map
Attachment F -	Project Photos
Attachment G -	Stormwater Management Memo
Attachment H -	Stormwater Checklist
Attachment I -	O&M Plan and LTPPP
Attachment J	Relevant Special Provisions
Attachment K	Section 7 Documentation
Attachment L	Section 106 Documentation



WATER QUALITY CERTIFICATION

MassDOT Proj. # 612514 – Berkshire Trail (Route 9 & 112) over Westfield River
Cummington, MA

ATTACHMENT A

Water Quality Certification Narrative



ATTACHMENT A – WATER QUALITY CERTIFICATION NARRATIVE

INTRODUCTION

The proposed project is a bridge preservation of the Dudley Manor Bridge C-21-002 (00J), which carries ST 9/ST 112 (Berkshire Trail) over the East Branch Westfield River in Cummington, MA. The single span bridge superstructure and substructure will be retained in place with various structural repairs. The bridge deck and pedestrian sidewalk will be replaced and crash tested curb rails will be installed to protect the bridge structure. This project meets the Bridge Exemption under the 2014 Transportation Bond Bill as the existing bridge is being repaired and will remain functionally equivalent.

The project will require work within Waters of the United States in order to complete repairs on the abutments in the dry. This work includes 4,100 SF of temporary impacts to Waters of the US. There are no permanent waterway impacts, dredging or impacts to Vegetated Wetlands proposed as part of this project.

This project requires a Pre Construction Notification from the USACE under the MA general permit due to the temporary impacts to Waters of the United States. Aside from the 401 MassDEP WQC and 404 USACE PCN, there are no additional regulatory permits as part of this project.

1.0 EXISTING CONDITIONS

1.1 Description of Existing Bridge Structure

The Dudley Manor Bridge (Bridge No. C-21-002 (0JJ)) carries ST 9/ST 112 (Berkshire Trail) over the East Branch Westfield River in Cummington, MA. The single span bridge structure consists of tied through arches with a reinforced concrete deck. The existing out-to-out width of the bridge is 53'-5". The bridge is 128' long from centerline-to-centerline of arch bearings. The bridge has six drainage scuppers that outlet directly to the river below without pre-treatment.

1.2 Description of Existing Roadway, Pedestrian, and Bicycle Facilities

ST 9/ST 112 (Berkshire Trail) is classified as a National Highway System (NHS) Principal Arterial roadway. The posted speed limit in the vicinity of the bridge is 45 mph. There is an unsignalized T-intersection with Thayer Corner Road from the south approximately 50 ft west of the bridge, an unsignalized T-intersection with Lilac Ave from the north immediately east of the bridge, and an unsignalized T-intersection with Old Route 9 from the south approximately 150 feet east of the bridge. Investigation with the Pioneer Valley Planning Commission (PVPC) indicates that this corridor is not within a defined bicycle or bus route. The project area is zoned as a mix of Village and Rural Residential.

Approximately 50 ft east of the bridge, ST 9/ST 112 (Berkshire Trail) transitions to a horizontal curve heading southeast. The roadway on either side of the bridge consists of two 12' wide

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lanes (one lane traveling in each direction) and 8' minimum wide shoulders. To the west of the bridge, Berkshire Trail is approximately 44'-6" wide. Immediately east of the bridge, Berkshire Trail is approximately 40' wide, before narrowing through the curve to approximately 37'-10". The shoulders on the bridge are currently reduced to approximately 2' wide due to temporary barriers in place to protect the existing bridge structure.

Existing pedestrian facilities within the project limits include a concrete sidewalk on the bridge structure only. There are no approach sidewalks within the project limits and no pedestrian curb ramps to access the bridge sidewalk. There are also no bicycle lanes on the bridge or approach bicycle lanes within the project limits.

The existing profile of ST 9/ST 112 (Berkshire Trail) slopes down to a low point located approximately 1300 feet west of the bridge. The existing roadway drainage consists of "country drainage" with sheet flow from the roadway directly onto grass/plant growth adjacent to the roadway. Longitudinal slope and cross slope direct drainage to exposed grass areas along Berkshire Trail and side streets. It should be noted that the horizontal curve of ST 9/ST 112 (Berkshire Trail) east of the bridge is superelevated such that runoff is directed onto Old Route 9 before following a "country drainage" pattern.

1.3 Description of Waterbody Under the Bridge Structure

The East Branch Westfield River is a stream that flows in a southerly direction in the vicinity of the bridge and is a tributary of the Swift River in the southeast. The East Branch Westfield River is designated as a National Wild & Scenic River, a coldwater fishery, as well as a FEMA floodway area.

The channel width (bankfull width) upstream and downstream of the bridge varies approximately from 70 feet to 80 feet with an ordinary high water elevation of approximately 974'. The channel width (bankfull width) at the bridge is approximately equal to this existing span which is 128'. Bankfull width was not generated utilizing StreamStats as this project is a preservation project and the existing substructure is being retained in place. The bankfull width was estimated based on survey data of the river width.

The wetlands flagging report was completed September 9, 2022 and can be found in Attachment D. The FEMA Flood Insurance Rate Map can be found in Attachment E.

1.4 Description of Existing Hydraulics at the Bridge Site

According to the FEMA Flood Insurance Rate Map (Community-Panel Number 250159 0008B), the East Branch Westfield River lies within a 100-year flood zone. Near the bridge, areas beyond both sides of the brook bank are considered 500-year flood zones, or 100 year flood-zones with average depths less than 1 foot. At the bridge, the 100-year flood is at an elevation of 990'. This elevation locates the 100-year flood water at approximately the top of the existing floorbeams.

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1.5 Description of All Utilities Within the Bridge Site

There are no utilities carried by the bridge structure.

Overhead wires run along across the East Branch Westfield River, adjacent to the south fascia. UP #107 is located just south of the intersection between Berkshire Trail and Lilac Ave, approximately 20 ft from the curb line.

1.6 Description of Environmentally Sensitive or Cultural Resource Areas Affecting the Bridge Site

According to MassMapper, the East Branch Westfield River is within estimated NHESP Priority Habitats for Rare Species (PH 2064) and has wetlands present at the project site. There are no potential or certified vernal pools within the vicinity of the bridge structure. The wetlands flagging report was completed September 9, 2022 for the immediate bridge area and can be found in Attachment D. For NHESP map, refer to attachment B.

According to the Massachusetts Cultural Resource Information System (MACRIS), three historical resources are located within or near the project area. This includes the Dudley Manor Bridge itself, the L.J. Orcutt House on 2 Lilac Avenue, and the Robbin, Hiram-Barber, Jerijah House on 4 Thayer Corner Road. All three locations are considered National Register of Historic Places. Besides the bridge, the other two locations will not be impacted during project work.

The East Branch Westfield River is designated as a National Wild & Scenic River, a coldwater fishery, as well as a FEMA Floodway area.

Per research performed by Benesch using MassMapper, the East Branch Westfield River in the vicinity of the project is not considered an Outstanding Resource Water.

Per research performed by Benesch using MassMapper, the project site is not within an ACEC.

1.7 Hazardous Materials

There is no known presence of hazardous materials, or activity use limitation (AUL) deed restrictions at the bridge site or along the corridor.

2.0 PROPOSED CONDITIONS

2.1 Proposed Substructure

The existing substructure will be retained with no changes to the existing span length. Spalled and cracked concrete areas on both abutments are to be repaired. These repairs are to be preformed in the dry, behind sandbag cofferdams.



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2.2 Proposed Superstructure

The bridge superstructure will be preserved, and the bridge deck will be replaced. The superstructure preservation will consist of steel repairs and painting. The deck replacement shall include the placement of a new bridge deck, installation of ornamental railing, installation of CM-TL3 curb rail and new sidewalk. The existing bridge scuppers will be removed, with roadway runoff being directed to the existing stormwater system.

2.3 Proposed Roadway

The proposed ST 9/ST 112 roadway section on the bridge will provide two 12 ft wide lanes (one in each direction) of vehicular traffic, 6 ft bike lanes, 2' striped buffer, and cement concrete sidewalk with ADA compliant curb ramps. As a result of the project, there will be a 560 SF increase to impervious material within the project limits.

As part of the work, one 15" diameter tree is proposed to be removed due to current guardrail standards.

3.0 CONSTRUCTION SEQUENCE

3.1 Construction Sequence

The bridge work will be performed in two stages, with traffic being maintained with a one-way alternating pattern for both stages. Temporary work in water will occur during both construction stages.

Exact construction equipment will be determined by the Contractor as part of their means and methods, however heavy equipment present on site is anticipated to include pavement milling machines, excavator, skid steer, dump trucks, snoop truck and a small crane. All heavy equipment will remain in the roadway or grass shoulder between the existing guardrail and edge of road. Staging, laydown, and stockpile areas will be determined by the Contractor.

The sequence of demolition and construction is determined by the Contractor as part of their means and methods, however is anticipated to be as follows:

Construction Stage 1:

1. Install temporary restrained barriers along the construction baseline and south half of the bridge.
2. Install temporary traffic signals at both bridge approaches.
3. Demolish the south half of the existing bridge deck. Perform steel repairs to bridge superstructure.
4. Construct the proposed bridge deck on the south half of the bridge.
5. Install railing and wearing surface on south half of the bridge.

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6. Remove temporary barriers from south half of the bridge.

Construction Stage 2:

1. Install temporary restrained barriers along the construction baseline and north half of the bridge.
2. Demolish the north half of the existing bridge deck. Perform steel repairs to bridge superstructure.
3. Construct the proposed bridge deck on the north half of the bridge.
4. Install sidewalk, railing, and wearing surface on north half of the bridge.
5. Remove temporary barriers from the south half of the bridge.
6. Remove temporary traffic signals at both bridge approaches.

The Temporary Work in Water (TWIW) Construction sequence is anticipated to be as follows:

TWIW Stage 1:

1. TWIW Stage 1 corresponds with Construction Stages 1 and 2.
2. Place compost filter tubes or similar around the work area for erosion control at the bottom of slope.
3. Place sandbag cofferdams at both existing abutments to provide Contractor access.
 - a. Note, cofferdams shall be placed during low flows. Cofferdams are intended to ensure no construction debris related to the abutment repairs enters the East Branch Westfield River. No dewatering is anticipated.
4. After abutment repairs have been completed, remove the cofferdams.

4.0 WETLAND IMPACTS

Table 1: Summary of Impacts (Square Feet)

	Temporary Impacts	Permanent Impacts
Land Under Water/Waters of the US	4,100 SF	0 SF
Bordering Vegetated Wetlands/Vegetated Wetland	0 SF	0 SF

4.1 Permanent Impacts to Land Under Water/Waters of the U.S.

The proposed work will not have permanent impacts to Land Under Water/Waters of the U.S.

4.2 Temporary Impacts to Land Under Water/Waters of the U.S.

The proposed work under the bridge will require the placement and removal of temporary sandbag cofferdams in order to repair the existing substructure. A total of approximately 4,100 square feet of LUW/Waters of the U.S. will be temporarily impacted by the cofferdams and construction access. Refer to “Control of Water, Structure” special provisions in Attachment J regarding restoration after removing sandbag cofferdams.

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All of the temporary impacts are shown in attachment C, sheet 6 – Temporary Impacts.

4.3 Permanent Impacts to Bordering Vegetated Wetlands/Vegetated Wetland

The proposed work will not permanently impact bordering vegetated wetlands/vegetated wetlands.

4.4 Temporary Impacts to Bordering Vegetated Wetlands/Vegetated Wetland

The placement of temporary sandbag cofferdams will be required to complete the proposed work. These cofferdams will be outside the limits of Bordering Vegetated Wetlands/Vegetated Wetland as flagged in the Description of Wetland Resources report.

All of the temporary impacts are shown on attachment B sheet 6 – Temporary Impacts.

4.5 Impacts to FEMA Floodway

The East Branch Westfield River is designated as a FEMA Floodway area.

The Contractor shall be required to install the sandbag cofferdams only during times of low flow and shall ensure that the sandbags are secured in place in case of an unexpected storm event. The cofferdams are intended to ensure no construction debris related to the abutment repairs enters the River. The existing substructure, superstructure and bridge low chord are being retained which will not permanently affect the floodway and have no impact to the base flood profile.

5.0 WETLAND MITIGATION

5.1 Bordering Vegetated Wetlands/Vegetated Wetland Restoration

The cofferdams have been proposed to not impact existing bordering vegetated wetlands/vegetated wetland on site.

Per the Description of Wetland Resources report, Japanese Knotweed is present in the vicinity of the bridge and the project limits. Proposed grading due to guardrail installation has been designed to encroach as little as possible down the existing slopes towards the River and therefore be outside existing limits of Japanese Knotweed on site. However, project special provisions related to Invasive Plant Management are being carried in the Contract in the event the Japanese Knotweed has spread by time Construction begins. If an Invasive Plant Management Strategy is necessary, the Contractor shall coordinate with MassDOT prior to implementation of the strategy.

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Refer to Attachment D for the Description of Wetland Resources report. Refer to Attachment J for the project Special Provisions.

6.0 SEDIMENTATION CONTROL

6.1 Sedimentation Control

The appropriate erosion and sedimentation controls, such as compost filter tubes or equivalent, will be utilized throughout construction to minimize any impacts to adjacent areas.

To control turbidity, the repairs of the existing substructure will be confined within the sandbag cofferdams. Use of the cofferdams will minimize sedimentation within the surrounding areas and will allow the Contractor to perform the repairs without negatively impacting the River. Additionally, silt sacks are required to be used by the Contractor at all existing and proposed drainage structures within the project limits. The Contractor shall routinely inspect, repair and/or clean the silt sacks throughout construction and after major rain events.

Refer to Attachment J for the relevant project Special Provisions.

7.0 DEWATERING

7.1 Dewatering

Dewatering aided by a water pump is not part of the proposed work. Sandbag cofferdams will only be used to divert the river away from the abutments while containing construction related sedimentation and/or debris. Sandbag cofferdams are proposed at both abutments in order to perform repairs; however no water containment is anticipated as part of this project. Exact procedure shall be determined by the Contractor as part of their means and methods.

8.0 STORMWATER MANAGEMENT

8.1 Best Management Practices (BMP) Stormwater Management

The proposed project will install a total of 8 new catch basin structures and 1 gutter inlet to capture stormwater on either side of the bridge and the existing bridge scuppers will be removed. The proposed catch basins will tie into the existing drainage systems which outlet to the East Branch Westfield River. All proposed catch basins will include deep sumps.

Drainage analysis has been performed and the two existing drainage outfalls are able to accommodate the increased runoff volume generated from removing the bridge scuppers.

Refer to Attachments G&I for the MassDOT Stormwater Management Memo and MassDOT O&M Plan and LTPPP.



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9.0 FISHERIES AND WILDLIFE

9.1 Fisheries and Wildlife Research

National Marine Fisheries Service – Not applicable due to the absence of saltwater.

NHESP – (Natural Heritage and Endangered Species Program) – MassMapper indicates that there are NHESP Priority Habitats of Rare Species along the East Branch Westfield River. The bridge is located in a priority habitat of rare species and also an estimated habitat of rare wildlife area, located within the 100-year flood zone, FEMA Floodway area and coldwater fishery.

MassDOT is currently coordinating with NHESP.

US Fish & Wildlife Service IPaC – Per research performed by Benesch using USFWS IPaC website, there are no critical habitats at the project location. The Northern Long-Eared Bat (NLEB) is listed for the area as “wherever found.” Standard MassDOT language regarding the NLEB is included in the up-front portion of the project special provisions. This language includes ensuring the Contractor is aware of NLEB, restrictions regarding roost locations and provides a time of year restriction on tree cutting. MassDOT’s Wildlife Unit conducted a Section 7 Consultation and received a No Effect Determination.

Vernal Pools – Per research performed by Benesch using MassMapper, no certified vernal pools exist in the vicinity of the project. No Vernal pools were identified during wetland delineation. Refer to Attachment D for Description of Wetland Resources.

NOAA Essential Fish Habitat (EFH) – Per research performed by Benesch using NOAA’s EFH mapper, the project site is not within EFH.

9.2 Massachusetts Stream Crossing Standards

This project is considered a bridge preservation project with no changes to the existing substructure (aside from repairs), therefore no changes to the existing span length or openness ratio. The existing natural bottom substrate will be maintained, as well as the existing waterway depths and velocities.

10.0 ALTERNATIVE ANALYSIS

10.1 Alternative 1 – Build

This alternative includes the preservation of the existing steel structure and the full replacement of the bridge deck. The advantages of this alternative include improved life span of the bridge

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structure, improved pedestrian accommodations and the addition of buffered bicycle facilities. Pedestrian sidewalks will be constructed to ADA/AAB regulations.

Alternative 1 is the proposed alternative and the associated impacts to resource areas are included throughout this narrative.

10.2 Alternative 2 – No Build

A routine inspection was last performed June 23, 2021 and was determined to be structurally deficient with the deck and substructure rated in fair condition and the superstructure rated overall in poor condition. The steel stringers are rated in serious condition. There are currently temporary traffic barriers along both curb lines protecting the traffic from the deteriorating condition of the steel stringers.

This alternative was not considered feasible due to the advanced deterioration of the existing structure. Continuous maintenance and monitoring will be required to keep the bridge open and eventually lead to load postings and a full closure of the bridge. If the bridge was closed, it would require a detour for local traffic and significant detour for trucks, as ST 9/ST 112 is a main trucking route for the area.

This alternative poses no immediate impacts to resource areas, however would be subject to impacts based on the nature of repairs performed in the future.

11.0 CONCLUSION

The purpose of this project is to preserve the Dudley Manor Bridge over the East Branch Westfield River. Work to be included in the project relative to the work in water includes repairing spalled and cracked concrete abutments as well as the placement and removal of sandbag cofferdams. This work results in temporary impacts to LUW/Waters of the U.S. of 4,100 SF and no impacts to Bordering Vegetated Wetlands/Vegetated Wetland.

The applicant respectfully requests that MassDEP and the United States Army Corps of Engineers find these measures adequately protective of the interests identified in the 401 Water Quality Regulations and 404 Massachusetts General permits and issue a Water Quality Certificate and 404 Authorization approving the work shown on the accompanying plan set.

WATER QUALITY CERTIFICATION

MassDOT Proj. # 612514 – Berkshire Trail (Route 9 & 112) over Westfield River
Cummington, MA

ATTACHMENT B

Wetland Exhibits





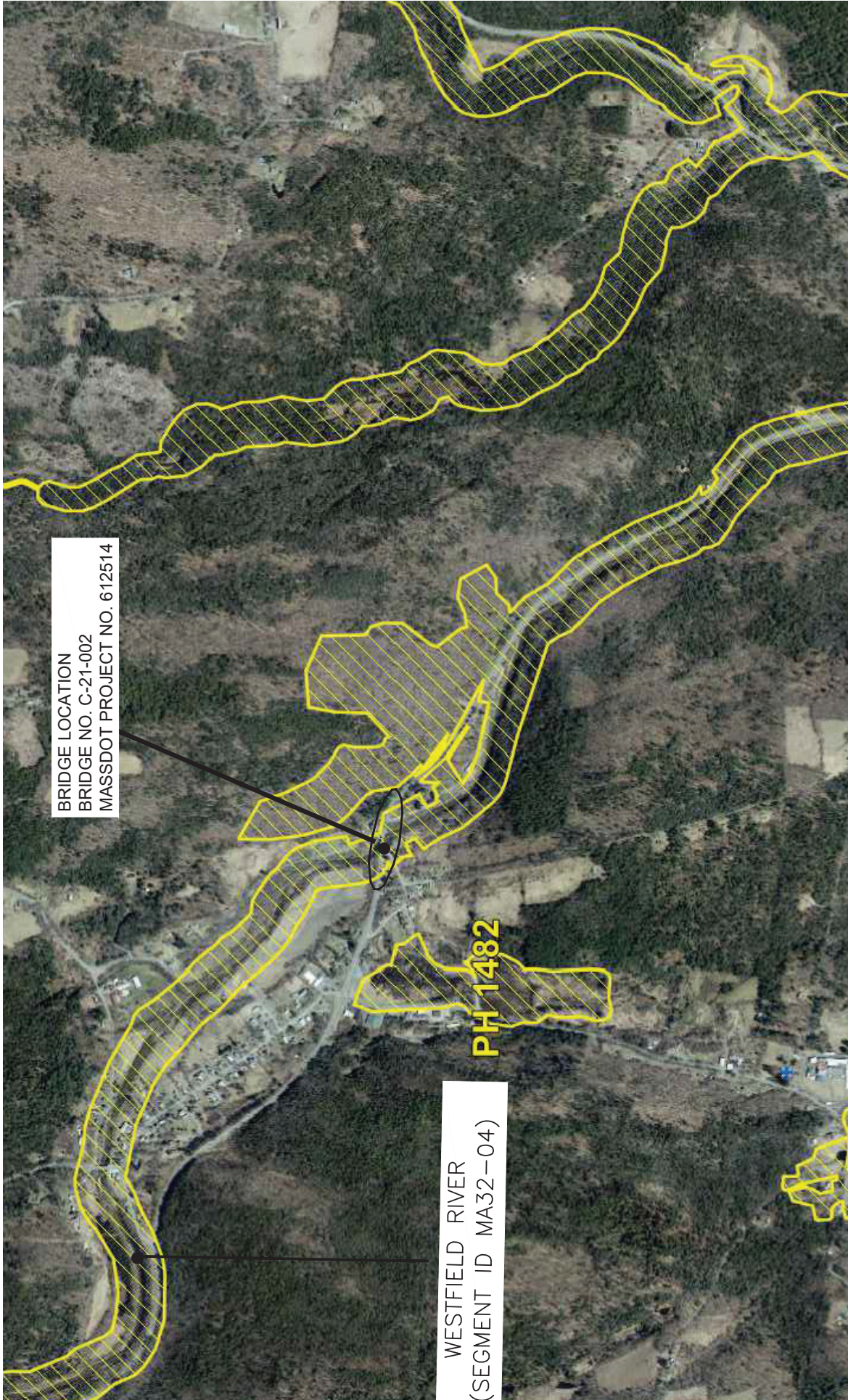
LOCUS MAP



**SR 9/SR 112 OVER EAST
BRANCH WESTFIELD RIVER
CUMMINGTON, MA**

SCALE: N.T.S.

EXHIBIT NO. 1 OF 3



A00830 - 24

OF RARE WILDLIFE
OF RARE SPECIES (PH 2064)
ENVIRONMENTAL CONCERN ACEC'S (NONE)
ATERS (NONE)
HOWEVER THE EAST
ON WATER FISHFRY

ENVIRONMENTAL CONSTRAINTS MAP



WETLANDS RESOURCE MAP

WATER QUALITY CERTIFICATION

MassDOT Proj. # 612514 – Berkshire Trail (Route 9 & 112) over Westfield River
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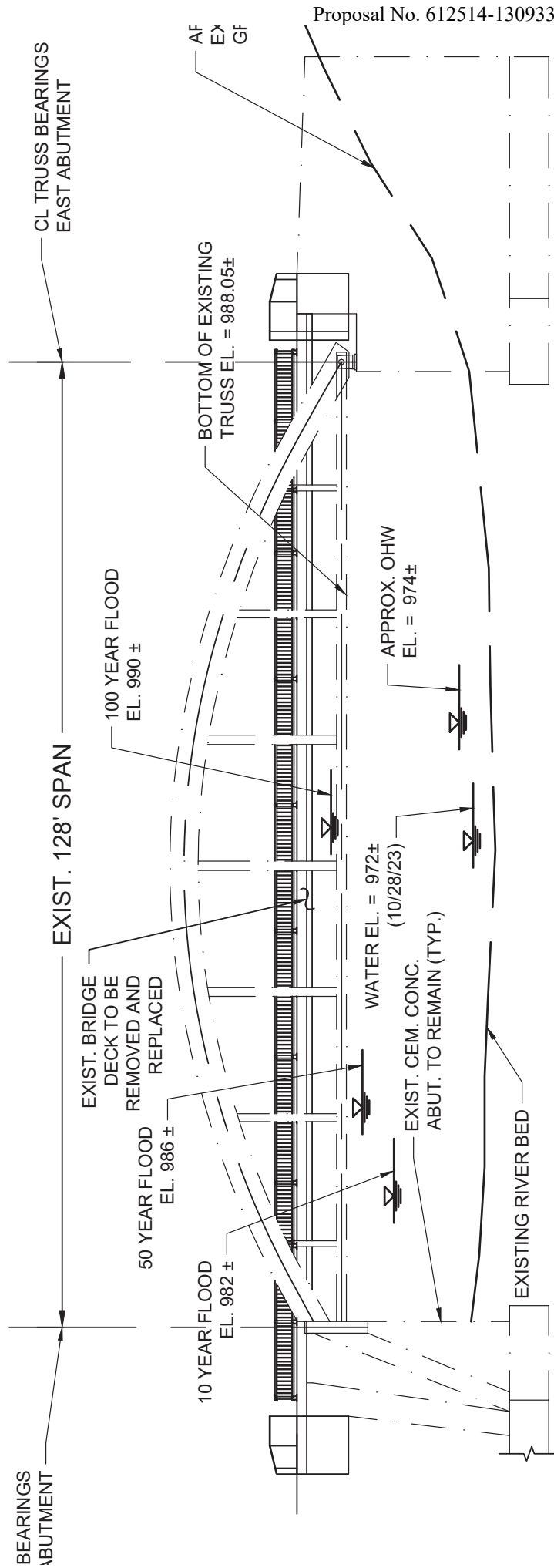
ATTACHMENT C

Design Plans



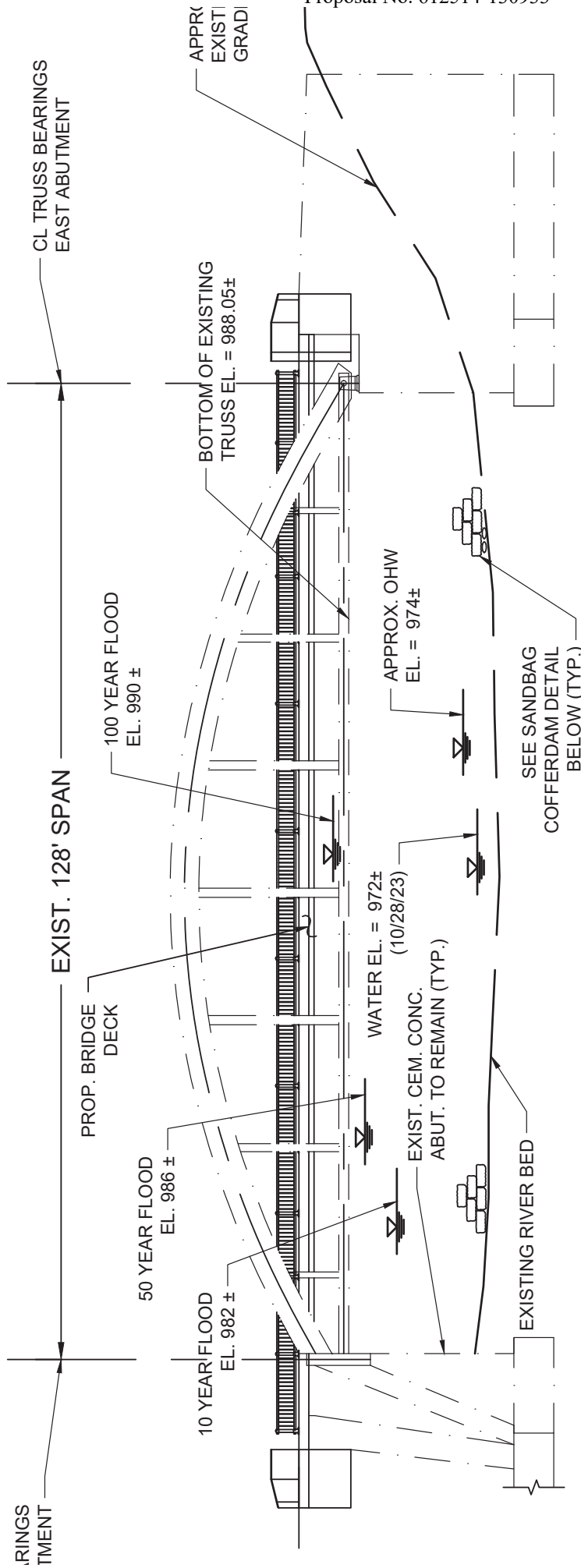


PLAN VIEW

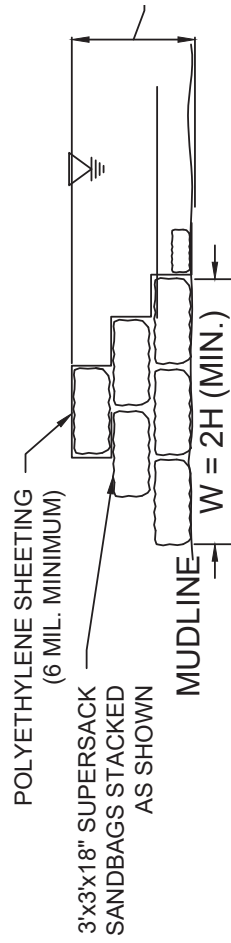


SOUTH ELEVATION EXISTING

WN USING THE NAVD88 VERTICAL DATUM.



SANDBAG COFFERDAM DETAIL
NOT TO SCALE



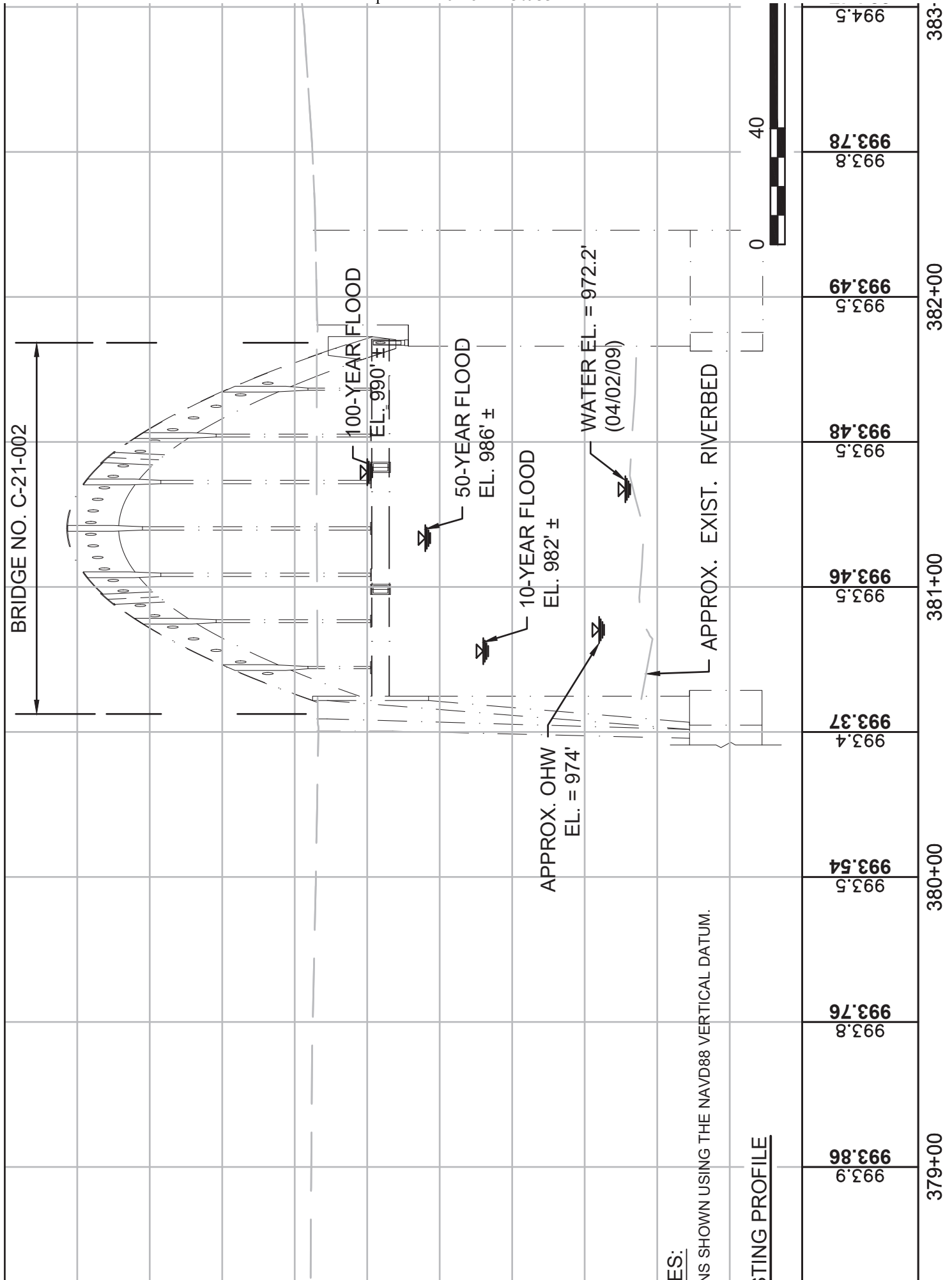
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OF 7.

FILL AS A RESULT OF SANDBAG COFFERDAMS IS CALCULATED AS 250 CY.

SOUTH ELEVATION PROPOSED

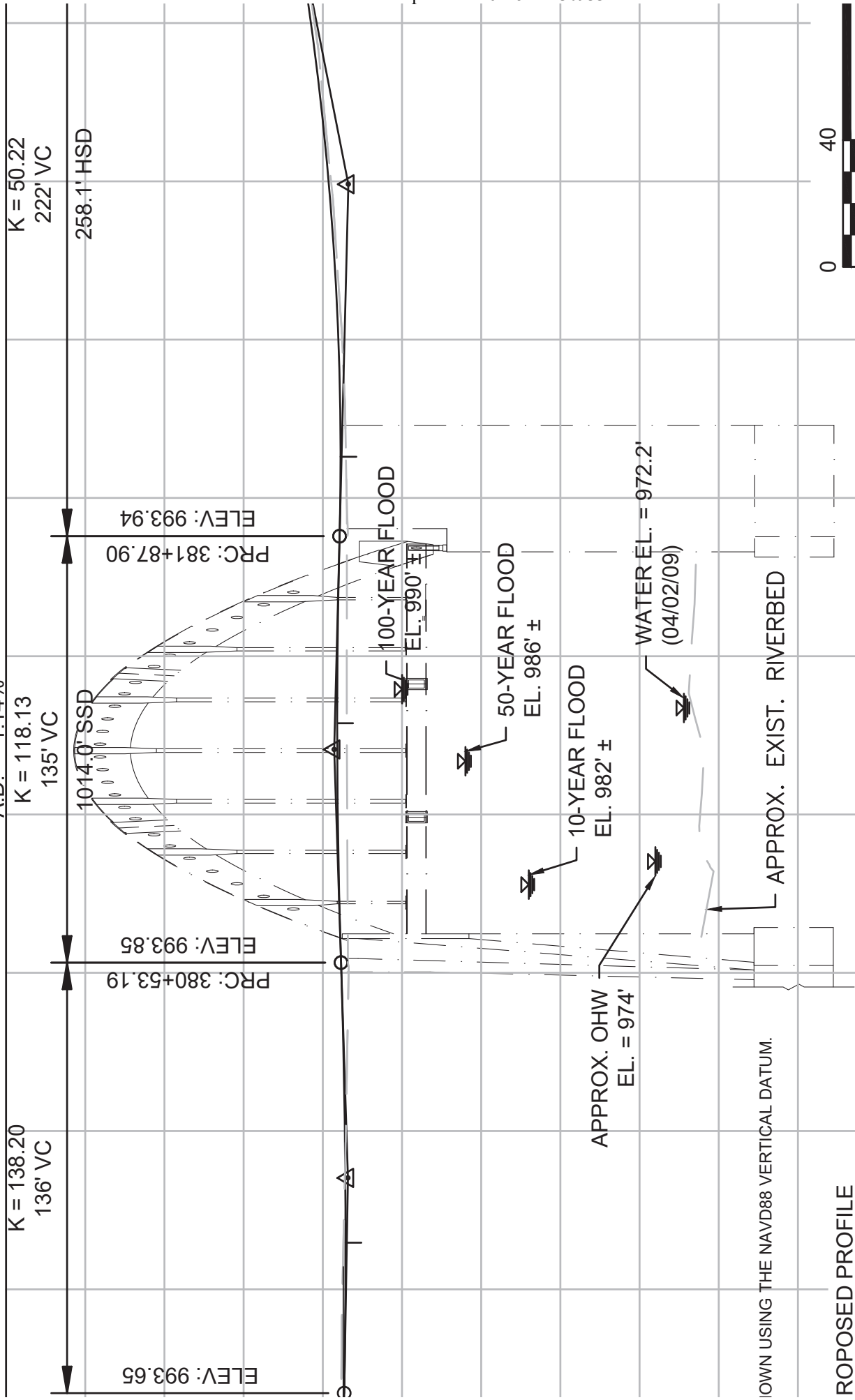




PVI ELEV = 993.41
A.D. = 0.98%

PVI ELEV = 994.28
A.D. = -1.14%

PVI ELEV = 993.39
A.D. = 4.43%

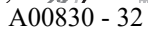


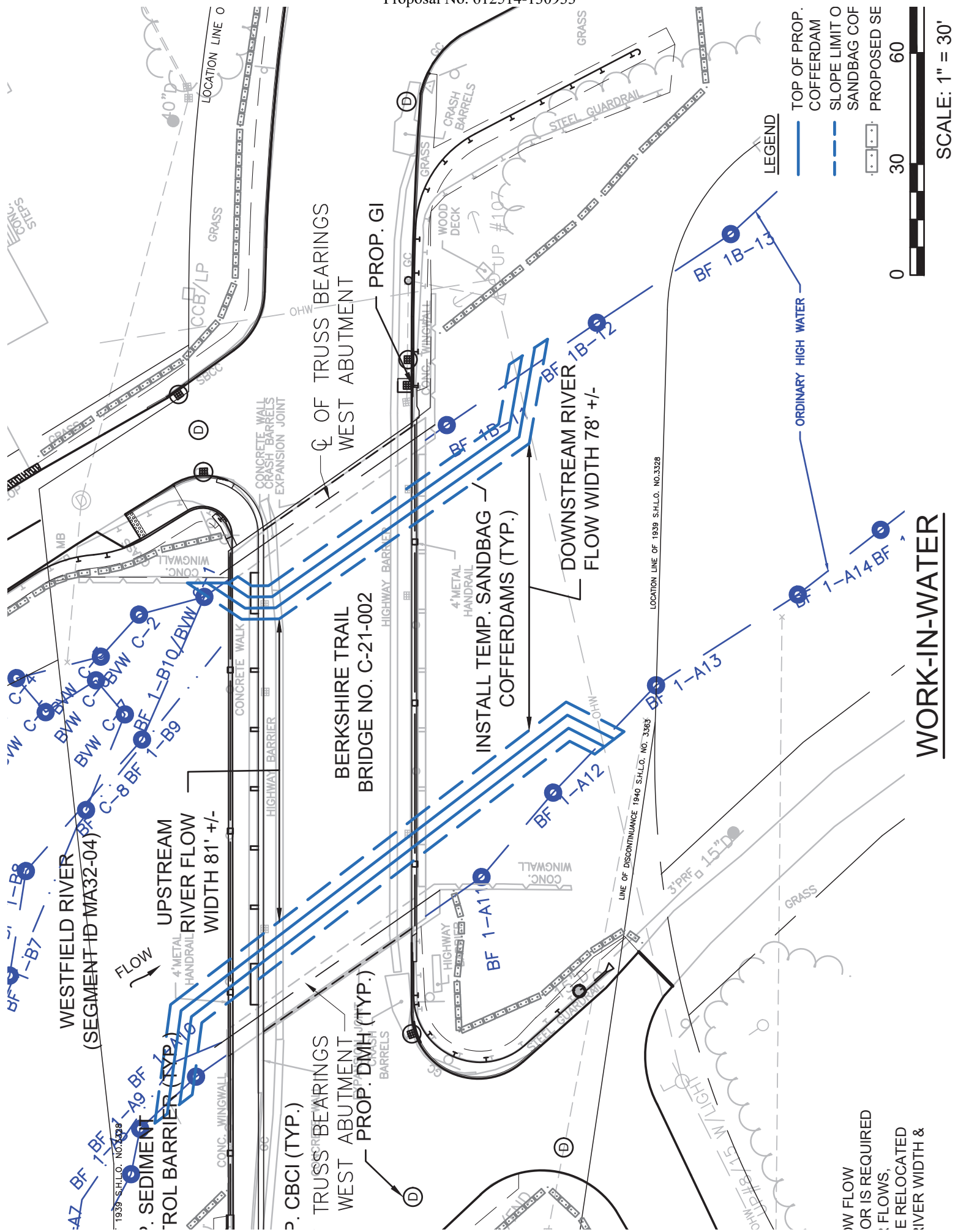
DOWN USING THE NAVD88 VERTICAL DATUM.

ROPOSED PROFILE



993.8	993.57	993.5	993.61	993.4	993.83	993.5	994.05	993.5	994.07	993.5	993.90	993.8	994.02	994.5	994.63	995.5	995.75
380+00			381+00			382+00			383+00			384+00			385+00		





WATER QUALITY CERTIFICATION

MassDOT Proj. # 612514 – Berkshire Trail (Route 9 & 112) over Westfield River
Cummington, MA

ATTACHMENT D

Description of Wetland Resources





Sound Science. Creative Solutions.®

Amherst Office
15 Research Drive
Amherst, Massachusetts 01002
Tel 413.256.0202 Fax 413.256.1092

October 14, 2022

Dawood Engineering, Inc.
Attn: Keith Barnes
325 Wood Road, Suite 109
Braintree, MA 02184
Via Email: keith.barnes@dawood.net

**Re: Wetland/Watercourse Delineation
Westfield River & Berkshire Trail Bridge Replacement, Cummington, MA
SWCA Project #: 73429**

Dear Keith:

SWCA Environmental Consultants (SWCA), in cooperation with Dawood Engineering (Dawood), conducted a wetland/watercourse delineation at the location of a proposed bridge replacement over the Westfield River on the Berkshire Trail (Route 112) in Cummington, Massachusetts on September 9, 2022. The purpose of the assessment was to confirm the presence or absence of jurisdictional wetland and water course resource areas within the immediate vicinity of the proposed bridge replacement work area. Surveyors with Dawood were present on September 9, 2022, to record stream cross-sections, longitudinal profiles, bankfull elevations, and other relevant engineering data. These data will support the engineer's determination of the appropriate bridge size for the replacement project. Photographs representing these assessments are included with this letter (Appendix A).

The Westfield River is a perennial stream with headwaters originating in the foothills of the Berkshire Mountains, flowing more than 78 miles to its confluence with the Connecticut River in Agawam, Massachusetts. The Westfield River flows through historic villages, prime farmland, rural forested hills, and urban areas, providing more than 50 miles of white-water recreational interests, native trout fisheries, and endangered species habitat. There are three named branches of the Westfield River, which join in Huntington, Massachusetts to form the mainstem, including the North Branch (sometimes called the East Branch), the West Branch, and the Middle Branch. The Cummington bridge is located over the North Branch (or East Branch) of the Westfield River.

Bridge C-09-013 is located along the Berkshire Trail (Route 112), east of Mougin Road and west of Lilac Avenue in Cummington. The Westfield River flows north to south at the crossing. The surrounding landscape consists of agricultural, undeveloped forested areas, and low-density residential land uses. The Cummington Wildlife Management Area (Massachusetts Department of Fish and Wildlife [MADFW]) and the Chesterfield Forest (Massachusetts Department of Conservation and Recreation [MADCR]) are located to the south of the bridge crossing, encompassing large tracts of contiguous forested hills along the Westfield River. The section of the Westfield River at the bridge is mapped as a Cold Water Fisheries resource (MADFW 2022), Priority Habitat for Rare

Species (Natural Heritage & Endangered Species Program [NHESP] 2021a), and Estimated Habitat for Rare Wildlife (NHESP 2021b). Figure 4 illustrates NHESP areas at the site.

Bridge C-09-013 is in poor condition and consists of metal support beams fitted on concrete abutments, which are rusted and crumbling (reference photo 3, Appendix A). Figure 1 illustrates the site location on a US Geological Survey (USGS) topographic map. Figure 2 illustrates the site on an orthophotograph. Figure 3 illustrates the site is within flood zone A, Special Flood Hazard Area, on a Firmette (Federal Emergency Management Agency [FEMA] 1990).

The Westfield River is located within the Westfield River watershed. SWCA ran a USGS StreamStats analysis by selecting a sub-watershed delineation point downstream of the bridge. The resulting StreamStats analysis calculates the sub-basin drainage area to be ± 58.7 square miles (StreamStats Report, Appendix B). The stream channel type is a Rosgen B-3 (or B-4c), a cobble-dominated, but with sections of sand-dominated, stream bed within a colluvial valley, occasionally on well vegetated stable alluvial fans, with sections of stable banks due to coarse material (Rosgen 1994, 1996). Sections of this stream reach also exhibit characteristics of a C-3 stream, with Valley Type VIII (multiple terraces), well-connected to floodplain (as demonstrated with agricultural land use), and a classic riffle-pool stream morphology. Stream types C-3 also consist of a relatively stable stream channel with a well-distributed benthic material, but primarily a cobble substrate.

Vegetation surrounding the bridge consists of a mixed deciduous/coniferous forest, including American beech (*Fagus grandifolia*), sugar maple (*Acer saccharum*), slippery elm (*Ulmus rubra*), green ash (*Fraxinus pennsylvanicus*), and willow (*Salix* sp.) in the canopy; with American hornbeam (*Carpinus caroliniana*), black cherry (*Prunus serotina*), glossy buckthorn (*Frangula alnus*), and multiflora rose (*Rosa multiflora*) in the understory. Japanese knotweed (*Reynoutria japonica*), ostrich fern (*Matteuccia struthiopteris*), lady fern (*Athyrium filix-femina*), and Jack-in-the pulpit (*Arisaema triphyllum*) are common in the herbaceous layer within the assessment area. A field stone staircase leads from Lilac Avenue to the left descending stream bank of the Westfield River, likely associated with a private residence. Residential areas associated with Mougins Road, Old Route 9, and Lilac Avenue abut the River upstream and downstream of the bridge, and an agricultural field is located west of the River upstream of the bridge within the area of assessment.

WETLAND AND WATERCOURSE DELINEATION

SWCA performed a delineation using a multiple parameter method approach following the Massachusetts Wetlands Protection Act (M.G.L. c. 131, §40) (WPA) and its implementing regulations (310 CMR 10.00 et seq.), Delineating Bordering Vegetated Wetlands Under the Massachusetts Wetlands Protection Act (Massachusetts Department of Environmental Protection [MADEP] 1995) and the Corps of Engineers Wetland Delineation Manual (Environmental Laboratory 1987), and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (v 2.0) (U.S. Army Corps of Engineers [USACE] 2012). SWCA examined soils, evidence of hydrology, vegetation, and bankfull indicators to identify limits of the federal and/or state definition of a jurisdictional wetland, and bankfull indicators to identify limits of the stream bank and the Mean Annual High Water (MAHW). Hydric soils and hydrophytic vegetation were able to be evaluated since ground conditions were not frozen and evidence of hydrology was observed. Figure 5 illustrates a site sketch with the resource areas flagged in the field; Dawood surveyors collected the locations of waterbody flags on September 9, 2022. SWCA delineated watercourse and wetland boundaries for the following features present ± 200 feet and ± 100 feet up/downstream of the bridge, respectively, as follows:

Bank/Mean Annual High Water for the perennial Westfield River (Stream 1) is denoted with blue flagging tape as:

- Stream 1-A1 to 1-A18 (right descending stream bank)
- Stream 1-B1 to 1-B17 (left descending stream bank)

Perennial Streams have a 200-Riverfront Area beginning at the MAHW mark.

Bank for unnamed intermittent streams (Streams 2 & 3) is denoted with blue flagging tape as:

- Stream 2-A1 to 2A-6 (right descending stream bank)
- Stream 2-B1 to 2-B6 (left descending stream bank)
- Stream 3-A1 to 3-A7 (right descending stream bank)
- Stream 3-B1 to 3-B8 (left descending stream bank)

Intermittent Streams have a 100-foot buffer zone.

Bordering Vegetated Wetland (BVW) is denoted with pink and black flagging tape as:

- A-1 to A-2
- B-1 to B-3
- C-1 to C-8

BVW have a 100-foot buffer zone.

Photographs illustrating these areas and dataforms supporting the delineation are included with this report (Appendices A and C, respectively).

The Westfield River is an upper perennial stream (Cowardin et al. 1979) with a bedform morphology indicative of a riffle/pool configuration, and a moderately well-developed floodplain (minorly terraced). Benthic material is well distributed in size but is dominated by cobble, with some boulders, gravel, and sand. The vegetative community includes sugar maple, American beech, green ash, and American hornbeam within the vicinity of the bridge.

The MAHW line of the Westfield River (Stream 1) was flagged on site as stated above. Figure 5 illustrates a site sketch of the resource areas flagged in the field. The Westfield River has a 200-foot Riverfront Area (RFA) extending outward 200-feet from the MAHW line on each side of the stream. The WPA regulations at 310 CMR 10.58(2)(a) state, "A Riverfront Area is the area of land between a river's MAHW line measured horizontally outwards from the river with a parallel line located 200-feet away." The RFA may include other resource areas or their buffer zones. The RFA does not have a buffer zone.

Two intermittent streams were identified within the Assessment Area. Stream 1 joins the Westfield River at the right descending stream bank immediately upstream of the bridge. Stream 2 joins the left descending stream bank of the Westfield River approximately 100 feet upstream of the bridge. Stream 2 receives stormwater drainage from Route 112 (Berkshire Trail). Stream 2's banks are well vegetated with American beech, sugar maple, multiflora rose, American hornbeam, Japanese knotweed, and lady fern. Benthic material is dominated with cobble and field bankfull measurements average 9 feet in width. The banks of Stream 3 are vegetated with pussy willow (*Salix discolor*),

speckled alder (*Alnus incana*), multiflora rose, and Japanese knotweed. StreamStats does not illustrate these intermittent streams.

Areas of BVW were evaluated surrounding the immediate vicinity of the bridge on the Berkshire Trail (Route 112). The A-wetland abuts the right descending stream bank of the Westfield River upstream of the bridge and consists of palustrine forested wetland with drainage leading to the mainstem channel. The B-wetland abuts the left descending stream bank of the Westfield River upstream of the bridge and consists of a low-lying floodplain vegetated with willow, glossy buckthorn, Japanese knotweed, mixed goldenrods (*Solidago* spp.), soft rush (*Juncus effusus*), bugleweed (*Lycopus uniflorus*), and wool grass (*Scirpus cyperinus*). The C-wetland consists of a floodplain wetland adjacent to the left descending stream bank of the River immediately upstream of the bridge, vegetated with Japanese knotweed, multiflora rose, spotted tough-me-not (*Impatiens capensis*), and sensitive fern (*Onoclea sensibilis*). Evidence of hydrology includes drainage patterns, and geomorphic position. Soils consist of Lyman-Tunbridge association, 3-15% slopes, and are extremely stony. SWCA collected paired USACE data plots at the C-5 flag. Evidence of hydrology includes drainage patterns, geomorphic position, and oxidized rhizospheres on live roots. We observed evidence of redoximorphic features (concentrations) at the surface in the soil profile, with oxidized rhizospheres observed on live roots at the C-wetland dataplot. The BVW areas may also be within the Special Flood Hazard Area (Figure 3) depending on the elevation.

The verification of the wetland boundaries can only be definitively determined by the local Conservation Commission, by MADEP, USACE, or Superior Court on appeal. Any proposed work within the streams, wetlands, 100-foot Buffer Zone, or the 200-foot RFA would require filing a Notice of Intent from the Town of Cummington Conservation Commission and MADEP. Land Under Water is also present (below the Mean Annual Low Water mark in the Westfield River) but was not separately delineated as it is within the limits of the MAHW line. Please note that SWCA's field effort was limited to identifying wetlands and watercourses; other state wetland resource areas, such as Bordering Land Subject to Flooding (BLSF), which typically coincides with the Federal Emergency Management Agency (FEMA) 100-year Flood Zone, also exist on site. SWCA recommends the engineer illustrate the limit of BLSF on the plans using the appropriate elevation.

The Westfield River is also jurisdictional under the U.S. Clean Water Act. Any work proposed within a federally jurisdictional resource will also require filing with the USACE for approval. If work within the Westfield River is below the MAHW mark, a Water Quality Certificate, a Corps permit, or a Self-Verification Form may be required.

STREAM STATISTICS

SWCA ran a StreamStats analysis using a subwatershed drainage area delineation point immediately downstream of the bridge on the Berkshire Trail (statistical analysis results are attached to this letter, Appendix B). The drainage area is estimated to be ± 58.7 square miles with an estimated bankfull streamflow statistic of $\pm 1,200$ cubic feet per second (cfs). The watershed drainage area has a mean basin elevation of $\pm 1,710$ feet above sea level. The majority of the watershed drainage area within this reach is estimated to be forested (84.35%) with 4.25% wetlands and 6% developed (urban) land. StreamStats bankfull width is ± 82 feet, the bankfull depth is estimated to be ± 3.3 feet, the bankfull area is ± 207 square feet, and the bankfull streamflow value is 1,200 cfs.

ADDITIONAL CONSIDERATIONS

SWCA reviewed the assessment reach for other potential sensitive environmental resource area constraints. The stream reach is located within a mapped Coldwater Fisheries Resource Waters (DFW 2022). The Westfield River is a popular angling river for brook trout (*Salvelinus fontinalis*). The bridge is located within Priority and Estimated Habitat for rare species (NHESP 2021). No Areas of Environmental Concern (ACEC 2009) or Outstanding Resource Waters

Page 5

(ORWs 2010) are located within the work area. Portions of the assessment area may be within BLSF (Figure 3). No digital FIRM data are available for this portion of the state; however, paper maps illustrate some of the work area is within the flood zone AE. SWCA recommends the engineers illustrate the limits of BLSF on project plans. Additional jurisdictional wetland area may be present. The limit of RFA is 200 feet. The Town of Cummington does not administer a Wetland Protection Bylaw.

SUMMARY

SWCA completed a jurisdictional wetland and watercourse delineation to supplement the detailed survey data for a bridge replacement located on the Berkshire Trail (Route 112) over the Westfield River in Cummington, Massachusetts on September 9, 2022 in conjunction with the Dawood survey crew. We are providing the wetland and watercourse delineation data in this letter. Dawood additionally collected longitudinal profiles of the stream and topographic stream cross section survey at 25-foot intervals for a distance of 75-feet upstream and 75-feet downstream from the bridge. These data will be used to determine an appropriate bridge size for replacement. If SWCA can provide further assistance in relation to this bridge replacement project, please contact me at cmcdonough@swca.com or via direct office phone at 413-658-2063.

Sincerely,



Christin McDonough, M.S.
Professional Wetland Scientist (PWS)
Certified Wildlife Biologist (CWB)

ATTACHMENTS:

- Figure 1. USGS Topographic Map of Site
- Figure 2. Orthophotograph of Site
- Figure 3. FEMA Floodplain Map
- Figure 4. NHESP Areas
- Figure 5. Wetland/Watercourse Delineation Site Sketch

- Appendix A - Photographs Representing Site
- Appendix B - StreamStats Report (Basin Characteristics, Peak Drainage Statistics, and Bankfull Statistics)
- Appendix C - ACOE Wetland Delineation Dataforms & Stream Dataform

REFERENCES:

- Bent, G.C., and Waite, A.M. 2013. Equations for estimating bankfull channel geometry and discharge for streams in Massachusetts: U.S. Geological Survey Scientific Investigations Report 2013-5155. 62 pages. Accessible at: <http://dx.doi.org/10.3133/sir20135155>.
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35:951-956.

FIGURES



BRIDGE NO. C-09-013
**Figure 1. USGS
 Topographic Map**

■ Project Area
--- 7.5' Quadrangle Boundary

Cummington, MA
 USGS 7.5' Quadrangle:
 Worthington
 72.8847°W 42.4559°N

Base Map: ESRI ArcGIS Online,
 accessed October 2022

Updated: 10/7/2022
 Project No. 73429

N
 1:24,000



0 1,000 2,000
 Feet
 0 250 500
 Meters

SWCA
 ENVIRONMENTAL CONSULTANTS



BRIDGE NO. C-09-013

Figure 2. Aerial Map

 Project Area

SWCA
ENVIRONMENTAL CONSULTANTS

Cummington, MA
USGS 7.5' Quadrangle:
Worthington
72.8847°W 42.4559°N

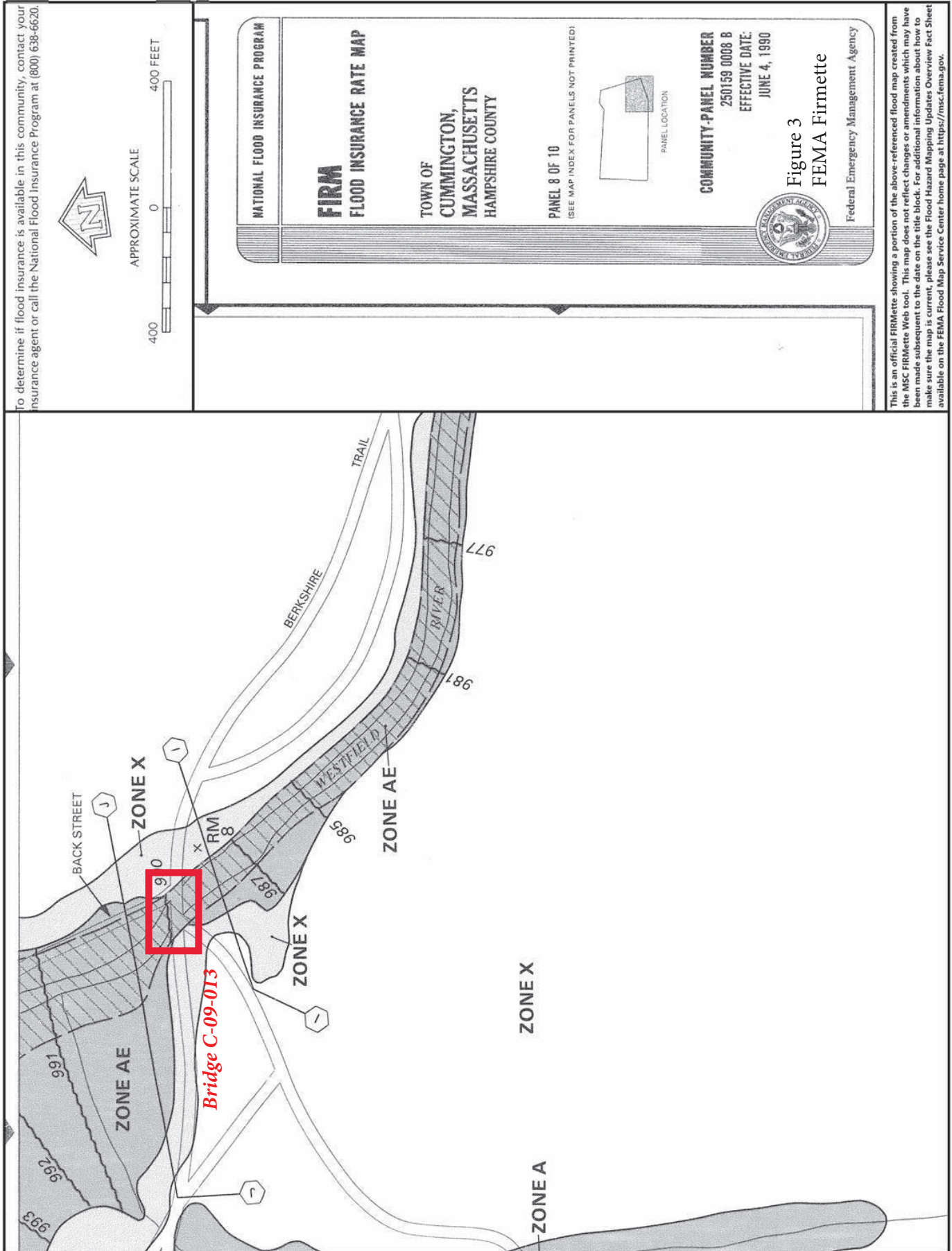
Base Map: ESRI ArcGIS Online,
accessed October 2022

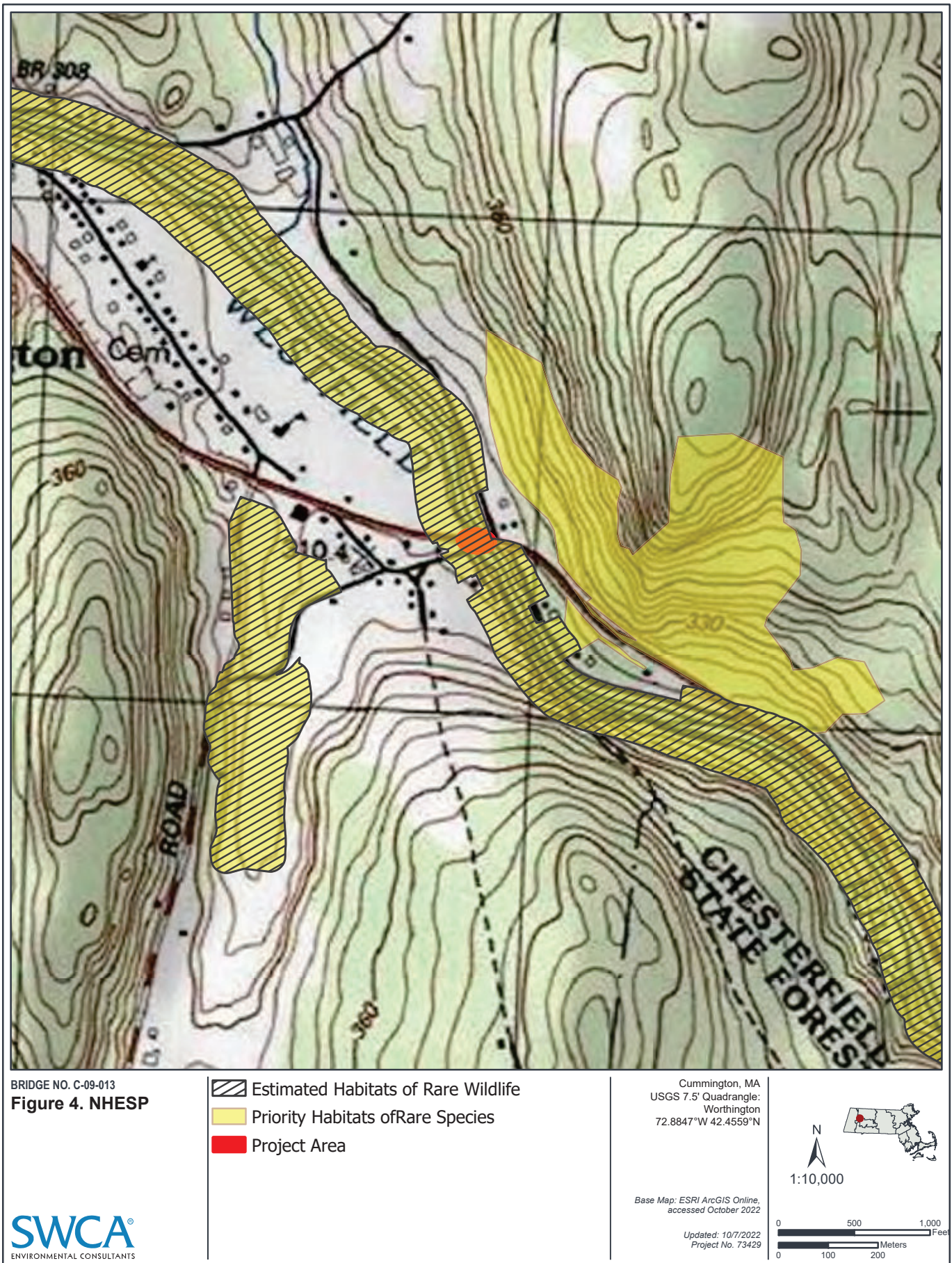
Updated: 10/7/2022
Project No. 73429



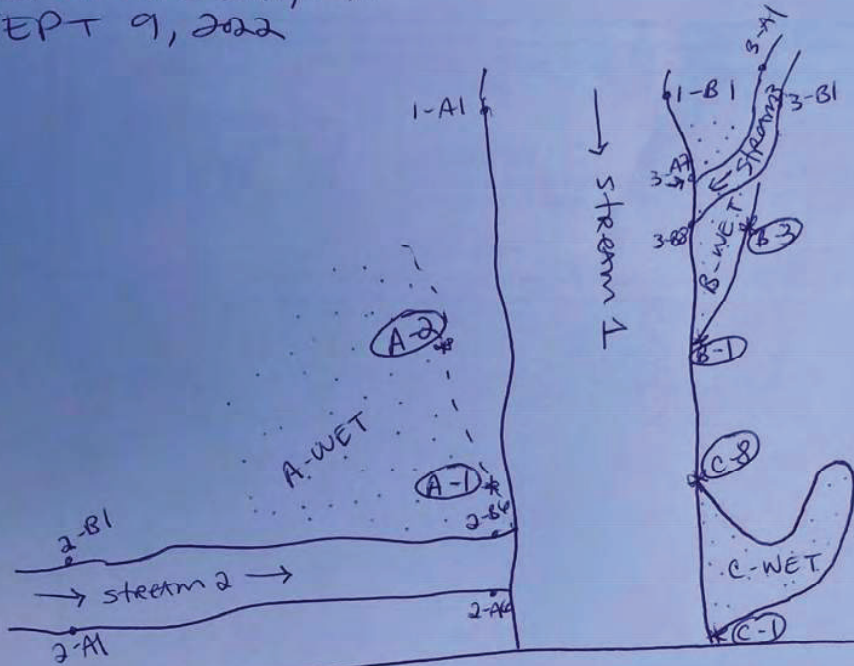
1:1,500







WESTFIELD RIVER
CUMMINGTON, MA
SEPT 9, 2022



Jurisdictional Resources

Stream 1 : Mean Annual
HIGH WATER
1-A1 to 1-A18 (RB)
1-B1 to 1-B17 (LB)

Stream 2 : BANK
2-A1 to 2-A6 (RB)
2-B1 to 2-B6 (LB)

Stream 3 : BANK
3-A1 to 3-A7 (RB)
3-B1 to 3-B8 (LB)

WETLAND A : BW
A-1 to A-2 1-A18

WETLAND B : BW
B-1 to B-3

WETLAND C : BW
C-1 to C-8

WESTFIELD RIVER
(STREAM 1)
↓
1-B17



APPENDIX A:

Site Photographs

Westfield River Bridge Replacement, Berkshire Trail, Cummington, MA – Wetland/Waterbody Delineation Photo Pages



Photo 1: View facing downstream showing the existing bridge C-09-013. *Photo taken September 9, 2022*



Photo 4: View facing upstream from the bridge. Note the B wetland (arrow) and C wetland are located along the left descending stream bank (floodplain wetlands). *Photo taken September 9, 2022*

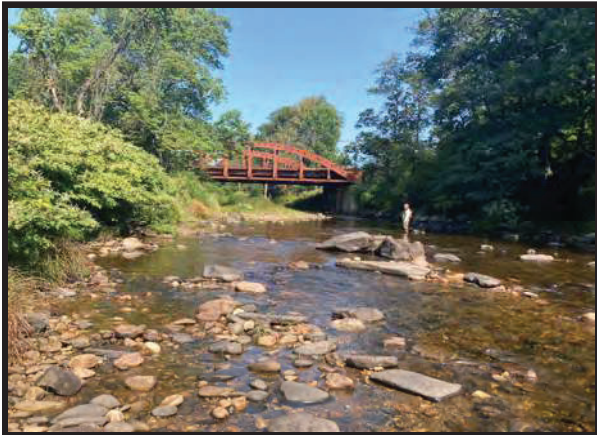


Photo 2: View facing upstream showing the existing bridge C-09-013. Note the Japanese knotweed along the banks. *Photo taken September 9, 2022*



Photo 5: View facing upstream at flag 1-A1, along the right bank of the Westfield River. *Photo taken September 9, 2022*



Photo 3: View of the concrete bridge abutments (bridge C-09-013). *Photo taken September 9, 2022*

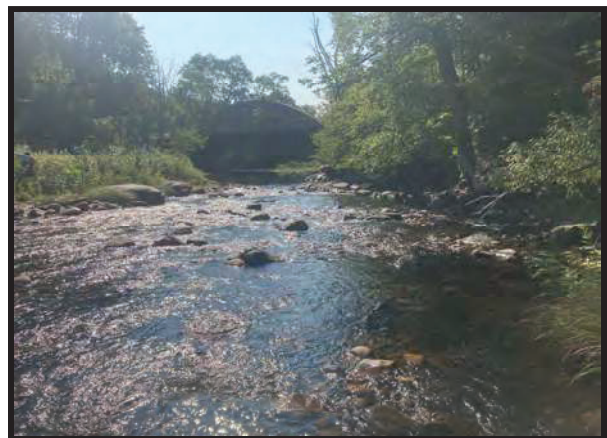


Photo 6: View facing downstream at flag 1-A1, along the right bank of the Westfield River. *Photo taken September 9, 2022*

Westfield River Bridge Replacement, Berkshire Trail, Cummington, MA – Wetland/Waterbody Delineation Photo Pages

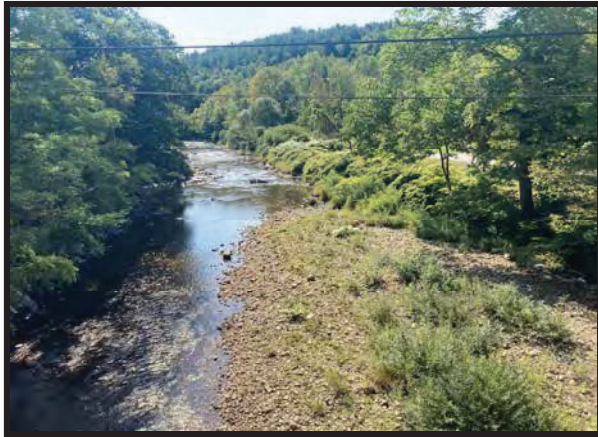


Photo 7: View facing downstream at bridge C-09-013. Note the Japanese knotweed along the banks. *Photo taken September 9, 2022*



Photo 10: View facing upstream at Stream 2. *Photo taken September 9, 2022*



Photo 8: View facing downstream at flag 1-A11, along the right bank of the Westfield River. Note the gravel bar along the right bank of the River. *Photo taken September 9, 2022*



Photo 11: Greenfrogs were observed throughout the assessment area. *Photo taken September 9, 2022*

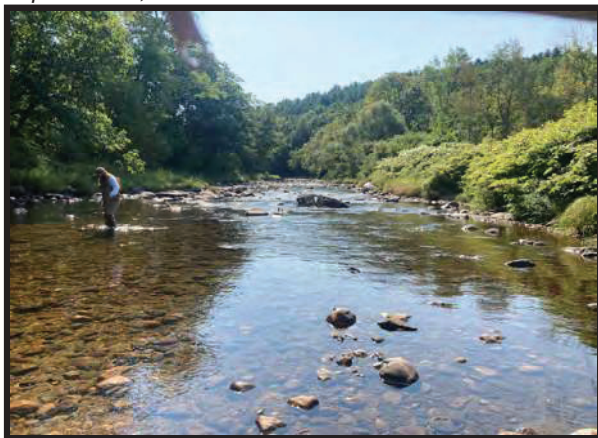


Photo 9: View facing downstream at flag 1-A18, along the right bank of the Westfield River. Note the Japanese knotweed along the banks. *Photo taken September 9, 2022*



Photo 12: Vegetation within the C-floodplain wetland. *Photo taken September 9, 2022*



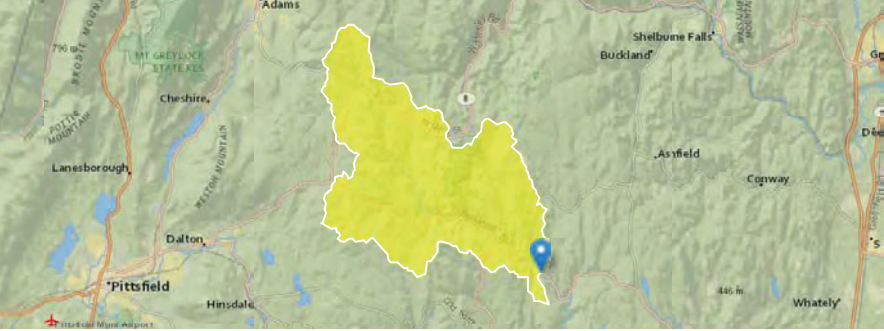
APPENDIX B:

StreamStats Report

StreamStats Report - Westfield River Cummington MA

Region ID:
Workspace ID:
Clicked Point (Latitude, Longitude):
Time:

MA
MA20220908163614922000
42.45574, -72.88470
2022-09-08 12:36:38 -0400



Bridge No. C-09-013 on Berkshire Trail east of Thayer Corner Road, west of Old Route 9, south of Back Street/Lilac Ave

Collapse All

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
ACRSFT	Area underlain by stratified drift	1.55	square miles
BSLDEM10M	Mean basin slope computed from 10 m DEM	12.117	percent
BSLDEM250	Mean basin slope computed from 1:250K DEM	7.343	percent
CAT1ROADS	Length of interstates lmted access highways and ramps for lmted access highways, includes cloverleaf interchanges (USGS Ntl Transp Dataset)	0	miles
CAT2ROADS	Length of sec hwy or maj connecting roads; main arteries & hwys not lmted access, usually in the US Hwy or State Hwy systems (USGS Ntl Transp Dataset)	0	miles
CAT3ROADS	Length of local connecting roads; roads that collect traffic from local roads & connect towns, subdivisions & neighborhoods (USGS Nat Transp Dataset)	24.8	miles
CAT4ROADS	Length of local roads; generally paved street, road, or byway that usually have single lane of traffic in each direction (USGS Ntl Transp Dataset)	127	miles
CENTROIDX	Basin centroid horizontal (x) location in state plane coordinates	78381.5	meters
CENTROIDY	Basin centroid vertical (y) location in state plane units	919294.7	meters
CROSCOUNT1	Number of intersections between streams and roads, where the roads are interstate, limited access highway, or ramp (CAT1ROADS)	0	dimensionless
CROSCOUNT2	Number of intersections between streams and roads, where the roads are secondary highway or major connecting road (CAT2ROADS)	0	dimensionless
CROSCOUNT3	Number of intersections between streams and roads, where roads are local conecting roads (CAT3ROADS)	26	dimensionless
CROSCOUNT4	Number of intersections between streams and roads, where roads are local roads (CAT4ROADS)	110	dimensionless
CRSFT	Percentage of area of coarse-grained stratified drift	1.36	percent
CSL10_85	Change in elevation divided by length between points 10 and 85 percent of distance along main channel to basin divide - main channel method not known	61.8	feet per mi
DRFTPERSTR	Area of stratified drift per unit of stream length	0.0147	square mile per mile
DRNAREA	Area that drains to a point on a stream	58.7	square miles
ELEV	Mean Basin Elevation	1710	feet
FOREST	Percentage of area covered by forest	84.35	percent
LAKEAREA	Percentage of Lakes and Ponds	0.69	percent
LC06STOR	Percentage of water bodies and wetlands determined from the NLCD 2006	2.52	percent
LC11DEV	Percentage of developed (urban) land from NLCD 2011 classes 21-24	6	percent
LC11IMP	Average percentage of impervious area determined from NLCD 2011 impervious dataset	0.9	percent
LFPLENGTH	Length of longest flow path	19.1	miles
MAREGION	Region of Massachusetts 0 for Eastern 1 for Western	1	dimensionless
MAXTEMP	Mean annual maximum air temperature over basin area, in degrees Centigrade	11.6	degrees C
OUTLETX	Basin outlet horizontal (x) location in state plane coordinates	86105	feet
OUTLETY	Basin outlet vertical (y) location in state plane coordinates	912615	feet
PCTSDNGRV	Percentage of land surface underlain by sand and gravel deposits	1.36	percent
PRECPRIS00	Basin average mean annual precipitation for 1971 to 2000 from PRISM	52	inches
STRMTOT	total length of all mapped streams (1:24,000-scale) in the basin	106	miles
WETLAND	Percentage of Wetlands	4.25	percent

Peak-Flow Statistics

Peak-Flow Statistics Parameters [Peak Statewide 2016 5156]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	58.7	square miles	0.16	512
ELEV	Mean Basin Elevation	1710	feet	80.6	1948
LC06STOR	Percent Storage from NLCD2006	2.52	percent	0	32.3

Peak-Flow Statistics Flow Report [Peak Statewide 2016 5156]

PIl: Prediction Interval-Lower, Plu: Prediction Interval-Upper, ASEp: Average Standard Error of Prediction, SE: Standard Error (other -- see report)

Statistic	Value	Unit	PIl	Plu	ASEp
50-percent AEP flood	2120	ft³/s	997	4510	42.3
20-percent AEP flood	3560	ft³/s	1640	7710	43.4
10-percent AEP flood	4780	ft³/s	2150	10600	44.7
4-percent AEP flood	6610	ft³/s	2850	15300	47.1
2-percent AEP flood	8190	ft³/s	3400	19700	49.4
1-percent AEP flood	9900	ft³/s	3960	24800	51.8

Statistic	Value	Unit	PII	Plu	ASEp
0.5-percent AEP flood	11800	ft³/s	4550	30600	54.1
0.2-percent AEP flood	14600	ft³/s	5320	40000	57.6

Peak-Flow Statistics Citations

Zarriello, P.J.,2017, Magnitude of flood flows at selected annual exceedance probabilities for streams in Massachusetts: U.S. Geological Survey Scientific Investigations Report 2016–5156, 99 p. (<https://dx.doi.org/10.3133/sir20165156>)

> Low-Flow Statistics

Low-Flow Statistics Parameters [Statewide Low Flow WRIR00 4135]					
Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	58.7	square miles	1.61	149
BSLDEM250	Mean Basin Slope from 250K DEM	7.343	percent	0.32	24.6
DRFTPERSTR	Stratified Drift per Stream Length	0.0147	square mile per mile	0	1.29
MAREGION	Massachusetts Region	1	dimensionless	0	1

Low-Flow Statistics Flow Report [Statewide Low Flow WRIR00 4135]

PII: Prediction Interval-Lower, PlU: Prediction Interval-Upper, ASEp: Average Standard Error of Prediction, SE: Standard Error (other -- see report)

Statistic	Value	Unit	PII	Plu	SE	ASEp
7 Day 2 Year Low Flow	7.32	ft³/s	2.51	20.6	49.5	49.5
7 Day 10 Year Low Flow	3.7	ft³/s	1.03	12.4	70.8	70.8

Low-Flow Statistics Citations

Ries, K.G., III,2000, Methods for estimating low-flow statistics for Massachusetts streams: U.S. Geological Survey Water Resources Investigations Report 00-4135, 81 p. (<http://pubs.usgs.gov/wri/wri004135/>)

> Flow-Duration Statistics

Flow-Duration Statistics Parameters [Statewide Low Flow WRIR00 4135]					
Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	58.7	square miles	1.61	149
DRFTPERSTR	Stratified Drift per Stream Length	0.0147	square mile per mile	0	1.29
MAREGION	Massachusetts Region	1	dimensionless	0	1
BSLDEM250	Mean Basin Slope from 250K DEM	7.343	percent	0.32	24.6

Flow-Duration Statistics Flow Report [Statewide Low Flow WRIR00 4135]

PII: Prediction Interval-Lower, PlU: Prediction Interval-Upper, ASEp: Average Standard Error of Prediction, SE: Standard Error (other -- see report)

Statistic	Value	Unit	PII	Plu	SE	ASEp
50 Percent Duration	60.8	ft³/s	32.9	112	17.6	17.6
60 Percent Duration	42.1	ft³/s	19.5	90.5	19.8	19.8
70 Percent Duration	28.9	ft³/s	13.5	61.1	23.5	23.5
75 Percent Duration	23.4	ft³/s	10.7	50.5	25.8	25.8
80 Percent Duration	17.3	ft³/s	7.68	38.4	28.4	28.4
85 Percent Duration	14.1	ft³/s	6.27	31.1	31.9	31.9
90 Percent Duration	10.1	ft³/s	4.37	22.8	36.6	36.6
95 Percent Duration	7.25	ft³/s	2.76	18.4	45.6	45.6
98 Percent Duration	4.99	ft³/s	1.6	14.7	60.3	60.3
99 Percent Duration	4.01	ft³/s	1.22	12.4	65.1	65.1

Flow-Duration Statistics Citations

Ries, K.G., III,2000, Methods for estimating low-flow statistics for Massachusetts streams: U.S. Geological Survey Water Resources Investigations Report 00-4135, 81 p. (<http://pubs.usgs.gov/wri/wri004135/>)

> August Flow-Duration Statistics

August Flow-Duration Statistics Parameters [Statewide Low Flow WRIR00 4135]					
Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	58.7	square miles	1.61	149
BSLDEM250	Mean Basin Slope from 250K DEM	7.343	percent	0.32	24.6
DRFTPERSTR	Stratified Drift per Stream Length	0.0147	square mile per mile	0	1.29
MAREGION	Massachusetts Region	1	dimensionless	0	1

August Flow-Duration Statistics Flow Report [Statewide Low Flow WRIR00 4135]

PII: Prediction Interval-Lower, PlU: Prediction Interval-Upper, ASEp: Average Standard Error of Prediction, SE: Standard Error (other -- see report)

Statistic	Value	Unit	PII	Plu	SE	ASEp
August 50 Percent Duration	14.9	ft³/s	6.67	32.7	33.2	33.2

August Flow-Duration Statistics Citations

Ries, K.G., III,2000, Methods for estimating low-flow statistics for Massachusetts streams: U.S. Geological Survey Water Resources Investigations Report 00-4135, 81 p. (<http://pubs.usgs.gov/wri/wri004135/>)

> Bankfull Statistics

Bankfull Statistics Parameters [Bankfull Statewide SIR2013 5155]					
Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	58.7	square miles	0.6	329
BSLDEM10M	Mean Basin Slope from 10m DEM	12.117	percent	2.2	23.9

Bankfull Statistics Parameters [Appalachian Highlands D Bieger 2015]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	58.7	square miles	0.07722	940.1535
Bankfull Statistics Parameters [New England P Bieger 2015]					
Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	58.7	square miles	3.799224	138.999861
Bankfull Statistics Parameters [USA Bieger 2015]					
Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	58.7	square miles	0.07722	59927.7393
Bankfull Statistics Flow Report [Bankfull Statewide SIR2013 5155]					
PII: Prediction Interval-Lower, PIu: Prediction Interval-Upper, ASEP: Average Standard Error of Prediction, SE: Standard Error (other -- see report)					
Statistic		Value	Unit	ASEp	
Bankfull Width		82	ft	21.3	
Bankfull Depth		3.3	ft	19.8	
Bankfull Area		270	ft^2	29	
Bankfull Streamflow		1200	ft^3/s	55	
Bankfull Statistics Flow Report [Appalachian Highlands D Bieger 2015]					
Statistic		Value	Unit		
Bieger_D_channel_width		82.4	ft		
Bieger_D_channel_depth		3.61	ft		
Bieger_D_channel_cross_sectional_area		303	ft^2		
Bankfull Statistics Flow Report [New England P Bieger 2015]					
Statistic		Value	Unit		
Bieger_P_channel_width		79	ft		
Bieger_P_channel_depth		3.37	ft		
Bieger_P_channel_cross_sectional_area		276	ft^2		
Bankfull Statistics Flow Report [USA Bieger 2015]					
Statistic		Value	Unit		
Bieger_USA_channel_width		51.9	ft		
Bieger_USA_channel_depth		2.87	ft		
Bieger_USA_channel_cross_sectional_area		154	ft^2		
Bankfull Statistics Flow Report [Area-Averaged]					
PII: Prediction Interval-Lower, PIu: Prediction Interval-Upper, ASEP: Average Standard Error of Prediction, SE: Standard Error (other -- see report)					
Statistic		Value	Unit	ASEp	
Bankfull Width		82	ft	21.3	
Bankfull Depth		3.3	ft	19.8	
Bankfull Area		270	ft^2	29	
Bankfull Streamflow		1200	ft^3/s	55	
Bieger_D_channel_width		82.4	ft		
Bieger_D_channel_depth		3.61	ft		
Bieger_D_channel_cross_sectional_area		303	ft^2		
Bieger_P_channel_width		79	ft		
Bieger_P_channel_depth		3.37	ft		
Bieger_P_channel_cross_sectional_area		276	ft^2		
Bieger_USA_channel_width		51.9	ft		
Bieger_USA_channel_depth		2.87	ft		
Bieger_USA_channel_cross_sectional_area		154	ft^2		

Bankfull Statistics Citations

Bent, G.C., and Waite, A.M.,2013, Equations for estimating bankfull channel geometry and discharge for streams in Massachusetts: U.S. Geological Survey Scientific Investigations Report 2013–5155, 62 p., (<http://pubs.usgs.gov/sir/2013/5155/>)
Bieger, Katrin; Rathjens, Hendrik; Allen, Peter M.; and Arnold, Jeffrey G.,2015, Development and Evaluation of Bankfull Hydraulic Geometry Relationships for the Physiographic Regions of the United States, Publications from USDA-ARS / UNL Faculty, 17p. (https://digitalcommons.unl.edu/usdaarsfacpub/1515?utm_source=digitalcommons.unl.edu%2Fusdaarsfacpub%2F1515&utm_medium=PDF&utm_campaign=PDFCoverPages)

➤ Probability Statistics

Probability Statistics Parameters [Perennial Flow Probability]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	58.7	square miles	0.01	1.99
PCTSDGRV	Percent Underlain By Sand And Gravel	1.36	percent	0	100
FOREST	Percent Forest	84.35	percent	0	100
MAREGION	Massachusetts Region	1	dimensionless	0	1

Probability Statistics Disclaimers [Perennial Flow Probability]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors.

Probability Statistics Flow Report [Perennial Flow Probability]

Statistic	Value	Unit
Probability Stream Flowing Perennially	0.996	dim

Probability Statistics Citations

Bent, G.C., and Steeves, P.A.,2006, A revised logistic regression equation and an automated procedure for mapping the probability of a stream flowing perennially in Massachusetts: U.S. Geological Survey Scientific Investigations Report 2006–5031, 107 p. (http://pubs.usgs.gov/sir/2006/5031/pdfs/SIR_2006-5031rev.pdf)

USGS Data Disclaimer: Unless otherwise stated, all data, metadata and related materials are considered to satisfy the quality standards relative to the purpose for which the data were collected. Although these data and associated metadata have been reviewed for accuracy and completeness and approved for release by the U.S. Geological Survey (USGS), no warranty expressed or implied is made regarding the display or utility of the data for other purposes, nor on all computer systems, nor shall the act of distribution constitute any such warranty.

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Application Version: 4.10.1
StreamStats Services Version: 1.2.22
NSS Services Version: 2.2.1

APPENDIX C:

Dataforms

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region


Project/Site: Westfield River/Berkshire Trail Bridge Replacement City/County: Hampshire Sampling Date: 09.09.22
 Applicant/Owner: Municipal State: MA Sampling Point: C-5 WET
 Investigator(s): C. McDonough (SWCA) Section, Township, Range: Cummington
 Landform (hillside, terrace, etc.): Floodplain Local relief (concave, convex, none): Concave Slope %: <5
 Subregion (LRR or MLRA): LRR R Lat: 42°27'21.4"N Long: 72°53'05.5"W Datum: DMS (NAD83)
 Soil Map Unit Name: Lyman-Tunbridge association, 3 to 15 percent slopes, extremely stony NWI classification: PSS1

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☒ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? No Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? No (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If yes, optional Wetland Site ID: <u>Wetland C</u>
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks: (Explain alternative procedures here or in a separate report.) The C-wetland abuts the left descending stream bank of the Westfield River immediately upstream of the bridge under Route 112 (Berkshire Trail). The surrounding wetland consists of a palustrine shrub swamp vegetated with Norway maple and multiflora rose in the shrub/sapling layer, with Japanese knotweed, spotted tough-me-not, New England aster, and sensitive fern in the herbaceous layer. The data plot at C-5 (WET) was determined to be within a wetland due to evidence of hydrology and hydric soil; however, vegetation does not meet the dominance tests as it is dominated with non-native species. A drought has been issued for this region (see https://droughtmonitor.unl.edu/Maps/MapArchive.aspx)	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)		Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: One primary and two secondary indicators of hydrology were noted, including oxidized rhizospheres on live roots, drainage patterns, and geomorphic position.		
Overview of vegetation at C-5 WET plot:		

VEGETATION – Use scientific names of plants.Sampling Point: C-5 WET

<u>Tree Stratum</u> (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u>Fraxinus pennsylvanica</u>	20	Yes	FACW	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>40.0%</u> (A/B)																
2. <u>Acer platanoides</u>	7	Yes	UPL																	
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
	27	=Total Cover		Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>3</u></td> <td>x 1 = <u>3</u></td> </tr> <tr> <td>FACW species <u>50</u></td> <td>x 2 = <u>100</u></td> </tr> <tr> <td>FAC species <u>3</u></td> <td>x 3 = <u>9</u></td> </tr> <tr> <td>FACU species <u>63</u></td> <td>x 4 = <u>252</u></td> </tr> <tr> <td>UPL species <u>37</u></td> <td>x 5 = <u>185</u></td> </tr> <tr> <td>Column Totals: <u>156</u> (A)</td> <td><u>549</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>3.52</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>3</u>	x 1 = <u>3</u>	FACW species <u>50</u>	x 2 = <u>100</u>	FAC species <u>3</u>	x 3 = <u>9</u>	FACU species <u>63</u>	x 4 = <u>252</u>	UPL species <u>37</u>	x 5 = <u>185</u>	Column Totals: <u>156</u> (A)	<u>549</u> (B)	Prevalence Index = B/A = <u>3.52</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>3</u>	x 1 = <u>3</u>																			
FACW species <u>50</u>	x 2 = <u>100</u>																			
FAC species <u>3</u>	x 3 = <u>9</u>																			
FACU species <u>63</u>	x 4 = <u>252</u>																			
UPL species <u>37</u>	x 5 = <u>185</u>																			
Column Totals: <u>156</u> (A)	<u>549</u> (B)																			
Prevalence Index = B/A = <u>3.52</u>																				
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15</u>)																				
1. <u>Acer platanoides</u>	30	Yes	UPL																	
2. <u>Rosa multiflora</u>	3	No	FACU																	
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
	33	=Total Cover																		
<u>Herb Stratum</u> (Plot size: <u>5</u>)																				
1. <u>Reynoutria japonica</u>	60	Yes	FACU	Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤3.0 ¹ <u>4</u> - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
2. <u>Impatiens capensis</u>	25	Yes	FACW																	
3. <u>Symphotrichum novae-angliae</u>	5	No	FACW																	
4. <u>Onoclea sensibilis</u>	3	No	OBL																	
5. _____																				
6. _____																				
7. _____																				
8. _____																				
9. _____																				
10. _____																				
11. _____																				
12. _____																				
	93	=Total Cover																		
<u>Woody Vine Stratum</u> (Plot size: <u>15</u>)																				
1. <u>Vitis riparia</u>	3	No	FAC	Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.																
2. _____																				
3. _____																				
4. _____																				
	3	=Total Cover		Hydrophytic Vegetation Present? Yes <u> </u> No <u> X </u>																

Remarks: (Include photo numbers here or on a separate sheet.)
 The vegetation at plot C-5 WET does not meet hydrophytic vegetation indicator tests; however, non-native species dominate the plot. Other indicators of hydrology and the presence of hydric soil were observed.

[illegible]

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R ,
<input type="checkbox"/> Histic Epipedon (A2)	MLRA 149B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> High Chroma Sands (S11) (LRR K, L)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input checked="" type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input checked="" type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Marl (F10) (LRR K, L)
<input type="checkbox"/> Dark Surface (S7)	

Indicators for Problematic Hydric Soils³:

_____ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
 _____ Coast Prairie Redox (A16) (**LRR K, L, R**)
 _____ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
 _____ Polyvalue Below Surface (S8) (**LRR K, L**)
 _____ Thin Dark Surface (S9) (**LRR K, L**)
 _____ Iron-Manganese Masses (F12) (**LRR K, L, R**)
 _____ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
 _____ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
 _____ Red Parent Material (F21)
 _____ Very Shallow Dark Surface (F22)
 _____ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? Yes X No

Remarks:

The soil at C-5 WET data plot was determined to meet the criteria for a hydric soil.

View of soil profile at C-5 WET:



WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Westfield River/Berkshire Trail Bridge Replacement City/County: Hampshire Sampling Date: 09.09.22
 Applicant/Owner: Municipal State: MA Sampling Point: C-5 UP
 Investigator(s): C. McDonough (SWCA) Section, Township, Range: Cummington
 Landform (hillside, terrace, etc.): Floodplain Local relief (concave, convex, none): convex Slope %: <5
 Subregion (LRR or MLRA): LRR R Lat: 42°27'23.2"N Long: 72°53'06.2"W Datum: DMS (NAD83)
 Soil Map Unit Name: Lyman-Tunbridge association, 3 to 15 percent slopes, extremely stony NWI classification: N/C

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☒ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? No Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? No (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) The C-5 UP plot abuts the left descending stream bank of the Westfield River immediately upstream of the bridge under Route 112 (Berkshire Trail). The surrounding area consist of deciduous forest/shrub uplands vegetated with Norway maple and green ash in the canopy, with mixed grasses, common dandelion, and English plantain in the herbaceous layer. The data plot at C-5 (UP) was determined to be within an upland due to lack of hydric soil and hydrophytic vegetation; however, one secondary indicator of hydrology was noted (geomorphic position), which is not sufficient to qualify the plot as hydric. A drought has been issued for this region	


HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	

Remarks:

One secondary indicator of hydrology was noted, including geomorphic position. One secondary indicator of hydrology is insufficient to qualify the plot as hydric, however. Therefore, the plot was determined to be within an upland.

View facing north at C-5 UP plot:



VEGETATION – Use scientific names of plants.Sampling Point: C-5 UP

<u>Tree Stratum</u> (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u>Fraxinus pennsylvanica</u>	30	Yes	FACW	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>33.3%</u> (A/B)																
2. <u>Acer platanoides</u>	15	Yes	UPL																	
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
	45	=Total Cover		Prevalence Index worksheet: <table style="width: 100%;"> <tr> <th style="width: 40%;">Total % Cover of:</th> <th style="width: 60%;">Multiply by:</th> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>30</u></td> <td>x 2 = <u>60</u></td> </tr> <tr> <td>FAC species <u>3</u></td> <td>x 3 = <u>9</u></td> </tr> <tr> <td>FACU species <u>99</u></td> <td>x 4 = <u>396</u></td> </tr> <tr> <td>UPL species <u>16</u></td> <td>x 5 = <u>80</u></td> </tr> <tr> <td>Column Totals: <u>148</u> (A)</td> <td><u>545</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>3.68</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>30</u>	x 2 = <u>60</u>	FAC species <u>3</u>	x 3 = <u>9</u>	FACU species <u>99</u>	x 4 = <u>396</u>	UPL species <u>16</u>	x 5 = <u>80</u>	Column Totals: <u>148</u> (A)	<u>545</u> (B)	Prevalence Index = B/A = <u>3.68</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>0</u>	x 1 = <u>0</u>																			
FACW species <u>30</u>	x 2 = <u>60</u>																			
FAC species <u>3</u>	x 3 = <u>9</u>																			
FACU species <u>99</u>	x 4 = <u>396</u>																			
UPL species <u>16</u>	x 5 = <u>80</u>																			
Column Totals: <u>148</u> (A)	<u>545</u> (B)																			
Prevalence Index = B/A = <u>3.68</u>																				
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15</u>)																				
1. <u>Rosa multiflora</u>	2	No	FACU																	
2. _____																				
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
	2	=Total Cover																		
<u>Herb Stratum</u> (Plot size: <u>5</u>)				Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤3.0 ¹ <u>4</u> - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
1. <u>Digitaria ischaemum</u>	85	Yes	FACU																	
2. <u>Reynoutria japonica</u>	5	No	FACU																	
3. <u>Taraxacum officinale</u>	5	No	FACU																	
4. <u>Setaria pumila</u>	3	No	FAC																	
5. <u>Verbascum thapsus</u>	1	No	UPL																	
6. <u>Trifolium repens</u>	1	No	FACU																	
7. <u>Galium mollugo</u>	1	No	FACU																	
8. _____																				
9. _____																				
10. _____																				
11. _____																				
12. _____																				
	101	=Total Cover																		
<u>Woody Vine Stratum</u> (Plot size: <u>15</u>)				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.																
1. <u>None observed</u>																				
2. _____																				
3. _____																				
4. _____																				
		=Total Cover		Hydrophytic Vegetation Present? Yes <u> </u> No <u> X </u>																

Remarks: (Include photo numbers here or on a separate sheet.)
 The vegetation at plot C-5 UP does not meet hydrophytic vegetation indicator tests.

[illegible]

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- | | |
|--|--|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R , |
| <input type="checkbox"/> Histic Epipedon (A2) | MLRA 149B) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> High Chroma Sands (S11) (LRR K, L) |
| <input type="checkbox"/> Stratified Layers (A5) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Redox (S5) | <input type="checkbox"/> Redox Depressions (F8) |
| <input type="checkbox"/> Stripped Matrix (S6) | <input type="checkbox"/> Marl (F10) (LRR K, L) |
| <input type="checkbox"/> Dark Surface (S7) | |

Indicators for Problematic Hydric Soils³:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
 ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
 ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
 ___ Polyvalue Below Surface (S8) (**LRR K, L**)
 ___ Thin Dark Surface (S9) (**LRR K, L**)
 ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
 ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
 ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
 ___ Red Parent Material (F21)
 ___ Very Shallow Dark Surface (F22)
 ___ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type:

Depth (inches): _____

Hydric Soil Present?	Yes	No	X
----------------------	-----	----	---

Remarks:

The soil at C-5 UP data plot does not meet the criteria for a hydric soil.

View of soil profile at C-5 UP:



Waterbody Physical Characterization Data Sheet

Client: Dawood		Date: Sept 9, 2022		Waterbody Name: Westfield River	
Investigators: C. McDonough (SWCA)		Feature ID:		Weather or Recent Event:	
Project: Bridge C-09-013		Flag 1-A16		clear, dry conditions	
State: MA		County: Hampshire		Township: Cummington	
		Milepost/Station N/A		or Lat/Long: 42.4559 N/ -72.8847 W	
Waterbody type:		<input type="checkbox"/> Lake <input type="checkbox"/> Pond <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Stormwater <i>Check all that apply</i>			
Flow type:		<input checked="" type="checkbox"/> Perennial <input type="checkbox"/> Intermittent <input type="checkbox"/> Ephemeral <input type="checkbox"/> Ag. Ditch <input type="checkbox"/> Road Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Erosional Feature			
Flow speed:		<input checked="" type="checkbox"/> Fast <input type="checkbox"/> Moderate <input type="checkbox"/> Slow <input type="checkbox"/> Stagnate <input type="checkbox"/> No flow			
Origin:		<input type="checkbox"/> Spring <input type="checkbox"/> Culvert <input type="checkbox"/> Wetland <input checked="" type="checkbox"/> Outside LOW			
Sinuosity/Condition:		<input checked="" type="checkbox"/> Sinuous <input type="checkbox"/> Channelized <input type="checkbox"/> Braided <input type="checkbox"/> Dam <input type="checkbox"/> Piped <input type="checkbox"/> Manmade <i>Check all that apply</i>			
Degradation:		<input type="checkbox"/> Bank erosion <input type="checkbox"/> Downcutting <input checked="" type="checkbox"/> Sedimentation <input type="checkbox"/> Livestock/Manure <input type="checkbox"/> Waste discharge pipe			
Water quality:		<input type="checkbox"/> Odors– Sewage/Petrol <input type="checkbox"/> Surface oils <input type="checkbox"/> Turbid– Slightly/Very <input type="checkbox"/> Trash <input type="checkbox"/> Clear <input type="checkbox"/> Algae <input type="checkbox"/> No water			
Surrounding landuse		<input checked="" type="checkbox"/> Forested <input type="checkbox"/> Fallow Field <input type="checkbox"/> Pasture <input checked="" type="checkbox"/> Ag. Field <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Commercial <input type="checkbox"/> Industrial <input checked="" type="checkbox"/> Other			
Top of Bank Width:		93 Ft			
OHWM:		85 Ft <input type="checkbox"/> NA/Swale			
Water Width:		68 Ft			
Water Depth:		Ft 11 Inches			
Bank height:		2 Left Bank Ft 2 Right Bank Ft at CL crossing facing downstream			
Canopy Cover: <input checked="" type="checkbox"/> Open <input type="checkbox"/> Covered <input checked="" type="checkbox"/> Partial					
Dominant vegetation: Japanese knotweed*					
Left Descending Bank Slope: <input type="checkbox"/> Vertical <input type="checkbox"/> 1:1 <input checked="" type="checkbox"/> 2:1 <input type="checkbox"/> 3:1 <input type="checkbox"/> 4:1					
Right Descending Bank Slope: <input type="checkbox"/> Vertical <input type="checkbox"/> 1:1 <input checked="" type="checkbox"/> 2:1 <input type="checkbox"/> 3:1 <input type="checkbox"/> 4:1					
Substrate:		<input type="checkbox"/> % Bedrock <input type="checkbox"/> 1 % Boulder <input type="checkbox"/> 0 % Channery <input type="checkbox"/> 50 % Cobble <input type="checkbox"/> 20 % Gravel <input type="checkbox"/> 30 % Sand <input type="checkbox"/> % Silt <input type="checkbox"/> 0 % Clay <input type="checkbox"/> 0 % Sediment			
Organics:		<input type="checkbox"/> 5 Detritus– sticks, leaves, wood <input type="checkbox"/> Muck/Mud– black, fine organics <input type="checkbox"/> 0 Marl– gray, shell fragment			
Stream Morphology:		<input checked="" type="checkbox"/> Riffle and Run sequences <input checked="" type="checkbox"/> Shallow Pool <input type="checkbox"/> Deep Pool <input type="checkbox"/> Flat <i>Check all that apply</i>			
Habitat:		<input type="checkbox"/> Sand Bar <input checked="" type="checkbox"/> Gravel Bar <input type="checkbox"/> Mud Bar <input type="checkbox"/> Overhanging Veg <input type="checkbox"/> Bank Roots <input checked="" type="checkbox"/> Adj Wetland <input type="checkbox"/> Abutt Wetland			
In-Stream Veg:		<input type="checkbox"/> Submergent <input checked="" type="checkbox"/> Emergent <input type="checkbox"/> Algae			
Riparian zone:		<input checked="" type="checkbox"/> Trees <input checked="" type="checkbox"/> Shrubs/Saplings <input checked="" type="checkbox"/> Herbaceous <input type="checkbox"/> Significant bare area			
Aquatic organisms:		Observed: <input checked="" type="checkbox"/> Fish <input checked="" type="checkbox"/> Minnows <input checked="" type="checkbox"/> Frogs <input type="checkbox"/> Salamanders <input type="checkbox"/> Turtles <input type="checkbox"/> Odonates <input type="checkbox"/> Other			

Feature Sketch: Indicate North, CL and Survey Corridor, Photo Locations

Feature ID: 1-A16



View facing upstream at Flag 1-A16



View facing downstream at Flag 1-A16



View facing the right bank at Flag 1-A16



View facing the left bank at Flag 1-A16

WATER QUALITY CERTIFICATION

MassDOT Proj. # 612514 – Berkshire Trail (Route 9 & 112) over Westfield River
Cummington, MA

ATTACHMENT E

Flood Insurance Rate Map





WATER QUALITY CERTIFICATION

MassDOT Proj. # 612514 – Berkshire Trail (Route 9 & 112) over Westfield River
Cummington, MA

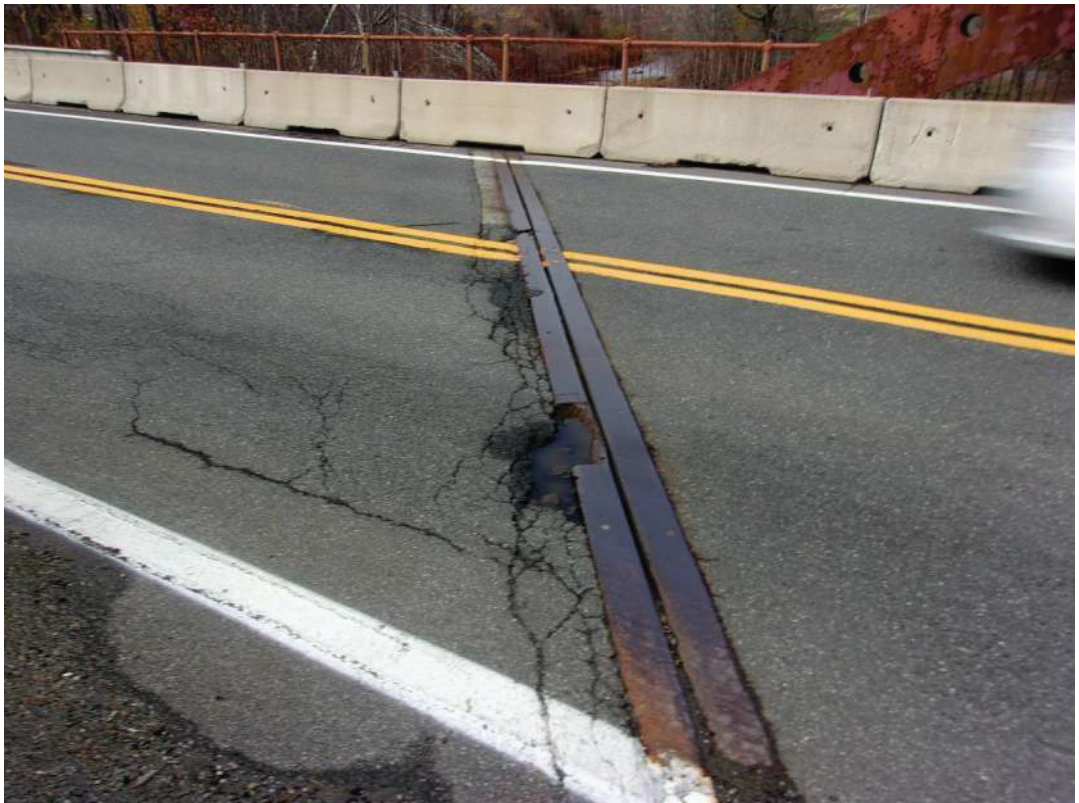
ATTACHMENT F

Project Photos





1. East Approach Looking West



2. West Bridge Joint Looking North



3. West Approach Looking East



4. North Bridge Sidewalk Looking West



5. West Approach Looking East (Note North Sidewalk Lacking Connection Point)



6. Bridge Elevation Looking North



7. Bridge Elevation Looking South



8. East Abutment Elevation & Ceiling



9. Underside of Bridge Looking South



10. Underside of Bridge Looking North

WATER QUALITY CERTIFICATION

MassDOT Proj. # 612514 – Berkshire Trail (Route 9 & 112) over Westfield River
Cummington, MA

ATTACHMENT G

Stormwater Management Memo





To: MassDOT

Date: May 17, 2024

Project #: 612514

From: Benesch

Re: ST 9/ST 112 over East Branch Westfield River
(ID segment MA 32-04)

This Stormwater Management Memorandum has been prepared to show compliance with the Massachusetts Stormwater Management Standards in accordance with the Massachusetts Water Quality Certification Regulations (314 CMR 9.00) to support the Project's Section 401 Water Quality Certificate Application.

Project Description

The Applicant, MassDOT, is proposing Project 612514 to rehabilitate a bridge located in Cummington MA. As proposed, the Project consists of replacing the bridge deck, steel repairs and painting, installing new ornamental railing, installing new curb rails, and abutment concrete repairs. The proposed ST 9/ST 112 roadway section on the bridge will provide two 12 ft wide lanes (one in each direction) of vehicular traffic, 6' bike lanes, 2' striped buffer, cement concrete sidewalk with ADA compliant curb ramps.

Existing and Proposed Drainage Conditions

The project area is approximately 650 ft of ST 9/ST 112 (Berkshire Trail) and the Dudley Manor Bridge. In this area Berkshire Trail is approximately 37'-40' wide. The Westfield River flows in a southerly direction below the bridge. The channel width at the bridge varies approximately from 70 to 80 feet. Existing drainage structures in the project area include: 7 catch basins, 1 drain manhole, and 4 drain outfalls. These 4 outfalls discharge into the Westfield River. According to the FEMA Flood Insurance Rate Map (Community-Panel Number 250159 0008B), the Westfield River lies within a 100-year flood zone. Near the bridge, areas beyond both sides of the brook bank are considered 500-year flood zones, or 100 year flood-zones with average depths less than 1 foot. At the bridge, the 100-year flood is at an elevation of 993'.

The Project will include construction of new drainage structures and an increase in impervious surface area of 560 SF. This increase is required to provide ADA compliant ramps to access the bridge sidewalk. On the west side of the bridge, 4 deep sump catch basins will be constructed, as well as two drain manholes. These structures will be connected by 12" RCP and will connect to the existing drain outfall southwest of the bridge. Northeast of the bridge 2 catch basins and one drain manhole will be constructed. These structures will be connected by 12" RCP and will connect to the drain outfall Northwest of the bridge. Southeast of the bridge 2 catch basins, 1 manhole, 1 gutter inlet and 1 catch basin-to-manhole change-in-type will be constructed. These structures will be connected with 12" RCP and will connect to the drain outfall southeast of the bridge.

Massachusetts Department of Environmental Protection (MassDEP) – Stormwater Management Standards

As demonstrated below, the proposed Project complies with the MassDEP Stormwater Management Standards (the Standards). Under the Stormwater Management Standards, the Project is considered a redevelopment project because it involves maintenance and improvement of an existing roadway. The existing bridge superstructure will be rehabilitated including steel repairs, painting, and the installation of new ornamental railing, and new curb rails. Two 12' wide lanes, 6' bike lanes, and 2' striped buffers with rumble strips are also proposed. New ADA compliant concrete sidewalk and concrete pedestrian curb ramps will also be constructed. The Project has been designed to meet the Stormwater Management Standards to the maximum extent practicable and to improve upon existing conditions.

Standard 1: No New Untreated Discharges

No new stormwater conveyance (e.g. outfalls) may discharge untreated stormwater directly to or cause erosion in wetlands or waters of the Commonwealth.

The Project has been designed to comply with Standard 1 to the maximum extent practicable.

No new stormwater outfalls are proposed for the Project. No changes to the existing outfalls are proposed.

Standard 2: Peak Rate Attenuation

Stormwater management systems shall be designed so that post-development peak discharge rates do not exceed pre-development peak discharge rates. This Standard may be waived for discharges to land subject to coastal storm flowage as defined in 310 CMR 10.04.

The Project has been designed to comply with Standard 2 to the maximum extent practicable. Table 1 includes a summary of impervious cover impacts, which can be used as a metric to understand impacts to peak discharge rates following development.

In order to construct pedestrian curb ramps that are ADA compliant the bridge sidewalk is required to extend West along Berkshire Trail and north along Lilac Avenue, these extensions account for the 560 sq ft increase in impervious surface area. Because of the small increase in surface area (1.45%) and the installation of new catch basins on both sides of the bridge there is no new flooding concern.

Table 1: Existing and proposed impervious cover

Existing Impervious Area (sq. ft)	Proposed Impervious Area (sq. ft)	Change In Impervious Area (sq. ft)	Percent Increase in Impervious Area (%)
38527	39087	560	1.45%

Standard 3: Stormwater Recharge

Loss of annual recharge to groundwater shall be eliminated or minimized through the use of environmentally sensitive site design, low impact development techniques, stormwater management

practices and good operation and maintenance. At a minimum, the annual recharge from the post-development site shall approximate the annual recharge from pre-development conditions based on soil types. This Standard is met when the stormwater management system is designed to infiltrate the required recharge volume as determined in accordance with the Massachusetts Stormwater Handbook.

The Project has been designed to comply with Standard 3 to the maximum extent practicable. The purpose of this standard is to replenish groundwater by ensuring that the infiltration volume of precipitation into the ground under post-development conditions is at least as much as the infiltration volume under pre-development conditions.

Standard 4: Water Quality

Stormwater management systems shall be designed to remove 80% of the average annual post-construction load of Total Suspended Solids (TSS). This Standard is met when:

- a) Suitable practices for source control and pollution prevention are identified in a long-term pollution prevention plan, and thereafter are implemented and maintained;*
- b) Structural stormwater best management practices are sized to capture the required water quality volume determined in accordance with the Massachusetts Stormwater Handbook; and*
- c) Pretreatment is provided in accordance with the Massachusetts Stormwater Handbook.*

The Project has been designed to comply with Standard 4 to the maximum extent practicable. New deep sump catch basins are to be constructed which provide 25% TSS removal. The existing pavement disconnection between the roadway and the river was improved compared to the existing conditions. The bridge scuppers, which outlet directly to the River below, have been removed with bridge drainage now being directed to the roadway gutter and proposed deep sump catch basins prior to outletting to the River. Areas without curbing (using "country drainage") have been maintained to continue providing pavement disconnection from the River.

Additional stormwater control measures, including infiltration basins and porous pavements, were not considered feasible for this bridge preservation project.

A Long-Term Pollution Prevention Plan (LTPPP) has been developed for the project in compliance with Standard 4. The Standard 9 section of this document includes this LTPPP.

Standard 5: Land Uses with Higher Potential Pollutant Loads (LUHPPLs)

For Land Uses with Higher Potential Pollutant Loads (LUHPPLs), source control and pollution prevention shall be implemented in accordance with the Massachusetts Stormwater Handbook to eliminate or reduce the discharge of stormwater runoff from such land uses to the maximum extent practicable. If through source control and/or pollution prevention all LUHPPLs cannot be completely protected from exposure to rain, snow, snow melt, and stormwater runoff, the proponent shall use the specific structural stormwater BMPs determined by the Department to be suitable for such uses as provided in the Massachusetts Stormwater Handbook. Stormwater discharges from LUHPPLs shall also comply with the requirements of the Massachusetts Clean Waters Act, M.G.L. c. 21, §§ 26-53 and the regulations promulgated thereunder at 314 CMR 3.00, 314 CMR 4.00 and 314 CMR 5.00.

Standard 5 does not apply to the Project. There are no Land Uses with Higher Potential Pollutant Loads within the project area.

Standard 6: Critical Areas

Stormwater discharges within the Zone II or Interim Wellhead Protection Area of a public water supply and stormwater discharges near or to any other critical area require the use of the specific source control and pollution prevention measures and the specific structural stormwater best management practices determined by the Department to be suitable for managing discharges to such areas as provided in the Massachusetts Stormwater Handbook. A discharge is near a critical area if there is a strong likelihood of a significant impact occurring to said area, taking into account site-specific factors. Stormwater discharges to Outstanding Resource Waters and Special Resource Waters shall be removed and set back from the receiving water or wetland and receive the highest and best practical method of treatment. A "stormwater discharge" as defined in 314 CMR 3.04(2)(a) 1 or (b), to an Outstanding Resource Water or Special Resource Water shall comply with 314 CMR 3.00 and 314 CMR 4.00. Stormwater discharges to a Zone I or Zone A are prohibited unless essential to the operation of a public water supply.

The Project has been designed to comply with Standard 6 to the maximum extent practicable. The East Branch Westfield River is considered a Coldwater Fishery. There are no new stormwater discharges (outfalls) being proposed as part of this project, however the project proposes tying into an existing stormwater system that outfalls to the Westfield River. All proposed catch basins on this project will have deep sumps for sediment collection prior to entering the existing stormwater system. The deep sumps will provide 25% TSS removal.

Standard 7: Redevelopments and Other Projects Subject to the Standards only to the Maximum Extent Practicable

A redevelopment project is required to meet the following Stormwater Management Standards only to the maximum extent practicable: Standard 2, Standard 3, and the pretreatment and structural best management practice requirements of Standards 4, 5, and 6. Existing stormwater discharges shall comply with Standard 1 only to the maximum extent practicable. A redevelopment project shall also comply with all other requirements of the Stormwater Management Standards and improve existing conditions.

The Project is considered a redevelopment and has been designed to comply with the Stormwater Management Standards to the maximum extent practicable.

Standard 8: Construction Period Pollution Prevention and Erosion and Sedimentation Controls

A plan to control construction-related impacts, including erosion, sedimentation and other pollutant sources during construction and land disturbance activities (construction period erosion, sedimentation, and pollution prevention plan) shall be developed and implemented.

The implementation of erosion and sediment (E&S) controls during construction is considered a standard practice for all MassDOT projects. E&S controls will be installed before any land disturbance begins for the Project and will remain in place for the duration of the Project. The E&S controls for the Project are shown on the project plans. These control measure include the use of compost filter tubes along project limits, as well as catch basin silt sacks in existing catch basins in the project area. The project disturbs less than 1 acre and therefore does not require filing for NPDES Construction General Permit coverage.

Standard 9: Operation and Maintenance Plan

A Long-Term Operation and Maintenance (O&M) Plan shall be developed and implemented to ensure that stormwater management systems function as designed.

MassDOT O&M plans are implemented on a programmatic level by each MassDOT district. Each MassDOT district office is responsible for providing operation and maintenance for the MassDOT stormwater management systems within their respective jurisdictions. Appendix B includes the O&M Plan for this project.

Long-term pollution prevention for the Project includes litter pick-up, inspection and maintenance of stormwater assets, maintenance of landscaped areas, snow and ice management, street sweeping, prohibition of illicit discharges, and spill prevention and response.

Standard 10: Prohibition of Illicit Discharges

All illicit discharges to the stormwater management system are prohibited.

Illicit Discharge Statement

The project's stormwater management system, as shown on the plans submitted with this report, have been designed in full compliance with Standard 10. The project area does not have any known illicit connections. Any illicit connections to the stormwater management system found in the project limit of work during construction will be removed and/or resolved through MassDOT's Illicit Discharge Detention and Elimination (IDDE) Program.

Attachments: Appendix A – O&M Plan

WATER QUALITY CERTIFICATION

MassDOT Proj. # 612514 – Berkshire Trail (Route 9 & 112) over Westfield River
Cummington, MA

ATTACHMENT H

Stormwater Checklist



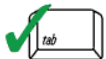


Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands Program

Checklist for Stormwater Report

A. Introduction

Important: When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



A Stormwater Report must be submitted with the Notice of Intent permit application to document compliance with the Stormwater Management Standards. The following checklist is NOT a substitute for the Stormwater Report (which should provide more substantive and detailed information) but is offered here as a tool to help the applicant organize their Stormwater Management documentation for their Report and for the reviewer to assess this information in a consistent format. As noted in the Checklist, the Stormwater Report must contain the engineering computations and supporting information set forth in Volume 3 of the [Massachusetts Stormwater Handbook](#). The Stormwater Report must be prepared and certified by a Registered Professional Engineer (RPE) licensed in the Commonwealth.

The Stormwater Report must include:

- The Stormwater Checklist completed and stamped by a Registered Professional Engineer (see page 2) that certifies that the Stormwater Report contains all required submittals.¹ This Checklist is to be used as the cover for the completed Stormwater Report.
- Applicant/Project Name
- Project Address
- Name of Firm and Registered Professional Engineer that prepared the Report
- Long-Term Pollution Prevention Plan required by Standards 4-6
- Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan required by Standard 8²
- Operation and Maintenance Plan required by Standard 9

In addition to all plans and supporting information, the Stormwater Report must include a brief narrative describing stormwater management practices, including environmentally sensitive site design and LID techniques, along with a diagram depicting runoff through the proposed BMP treatment train. Plans are required to show existing and proposed conditions, identify all wetland resource areas, NRCS soil types, critical areas, Land Uses with Higher Potential Pollutant Loads (LUHPPL), and any areas on the site where infiltration rate is greater than 2.4 inches per hour. The Plans shall identify the drainage areas for both existing and proposed conditions at a scale that enables verification of supporting calculations.

As noted in the Checklist, the Stormwater Management Report shall document compliance with each of the Stormwater Management Standards as provided in the Massachusetts Stormwater Handbook. The soils evaluation and calculations shall be done using the methodologies set forth in Volume 3 of the Massachusetts Stormwater Handbook.

To ensure that the Stormwater Report is complete, applicants are required to fill in the Stormwater Report Checklist by checking the box to indicate that the specified information has been included in the Stormwater Report. If any of the information specified in the checklist has not been submitted, the applicant must provide an explanation. The completed Stormwater Report Checklist and Certification must be submitted with the Stormwater Report.

¹ The Stormwater Report may also include the Illicit Discharge Compliance Statement required by Standard 10. If not included in the Stormwater Report, the Illicit Discharge Compliance Statement must be submitted prior to the discharge of stormwater runoff to the post-construction best management practices.

² For some complex projects, it may not be possible to include the Construction Period Erosion and Sedimentation Control Plan in the Stormwater Report. In that event, the issuing authority has the discretion to issue an Order of Conditions that approves the project and includes a condition requiring the proponent to submit the Construction Period Erosion and Sedimentation Control Plan before commencing any land disturbance activity on the site.



Massachusetts Department of Environmental Protection
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Checklist for Stormwater Report

B. Stormwater Checklist and Certification

The following checklist is intended to serve as a guide for applicants as to the elements that ordinarily need to be addressed in a complete Stormwater Report. The checklist is also intended to provide conservation commissions and other reviewing authorities with a summary of the components necessary for a comprehensive Stormwater Report that addresses the ten Stormwater Standards.

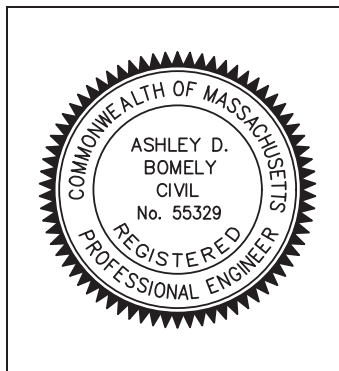
Note: Because stormwater requirements vary from project to project, it is possible that a complete Stormwater Report may not include information on some of the subjects specified in the Checklist. If it is determined that a specific item does not apply to the project under review, please note that the item is not applicable (N.A.) and provide the reasons for that determination.

A complete checklist must include the Certification set forth below signed by the Registered Professional Engineer who prepared the Stormwater Report.

Registered Professional Engineer's Certification

I have reviewed the Stormwater Report, including the soil evaluation, computations, Long-term Pollution Prevention Plan, the Construction Period Erosion and Sedimentation Control Plan (if included), the Long-term Post-Construction Operation and Maintenance Plan, the Illicit Discharge Compliance Statement (if included) and the plans showing the stormwater management system, and have determined that they have been prepared in accordance with the requirements of the Stormwater Management Standards as further elaborated by the Massachusetts Stormwater Handbook. I have also determined that the information presented in the Stormwater Checklist is accurate and that the information presented in the Stormwater Report accurately reflects conditions at the site as of the date of this permit application.

Registered Professional Engineer Block and Signature



Ashley Bomely

05/17/2024

Signature and Date

Checklist

Project Type: Is the application for new development, redevelopment, or a mix of new and redevelopment?

- ☐ New development
- ☒ Redevelopment
- ☐ Mix of New Development and Redevelopment



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands Program

Checklist for Stormwater Report

Checklist (continued)

LID Measures: Stormwater Standards require LID measures to be considered. Document what environmentally sensitive design and LID Techniques were considered during the planning and design of the project:

- ☒ No disturbance to any Wetland Resource Areas
- ☐ Site Design Practices (e.g. clustered development, reduced frontage setbacks)
- ☐ Reduced Impervious Area (Redevelopment Only)
- ☒ Minimizing disturbance to existing trees and shrubs
- ☐ LID Site Design Credit Requested:
 - ☐ Credit 1
 - ☐ Credit 2
 - ☐ Credit 3
- ☒ Use of "country drainage" versus curb and gutter conveyance and pipe
- ☐ Bioretention Cells (includes Rain Gardens)
- ☐ Constructed Stormwater Wetlands (includes Gravel Wetlands designs)
- ☐ Treebox Filter
- ☐ Water Quality Swale
- ☐ Grass Channel
- ☐ Green Roof
- ☐ Other (describe): _____

Standard 1: No New Untreated Discharges

- ☒ No new untreated discharges
- ☐ Outlets have been designed so there is no erosion or scour to wetlands and waters of the Commonwealth
- ☐ Supporting calculations specified in Volume 3 of the Massachusetts Stormwater Handbook included.



Massachusetts Department of Environmental Protection
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Checklist for Stormwater Report

Checklist (continued)

Standard 2: Peak Rate Attenuation

- ☐ Standard 2 waiver requested because the project is located in land subject to coastal storm flowage and stormwater discharge is to a wetland subject to coastal flooding.
- ☒ Evaluation provided to determine whether off-site flooding increases during the 100-year 24-hour storm.
- ☐ Calculations provided to show that post-development peak discharge rates do not exceed pre-development rates for the 2-year and 10-year 24-hour storms. If evaluation shows that off-site flooding increases during the 100-year 24-hour storm, calculations are also provided to show that post-development peak discharge rates do not exceed pre-development rates for the 100-year 24-hour storm.

Standard 3: Recharge

- ☐ Soil Analysis provided.
- ☐ Required Recharge Volume calculation provided.
- ☐ Required Recharge volume reduced through use of the LID site Design Credits.
- ☐ Sizing the infiltration, BMPs is based on the following method: Check the method used.
 - ☐ Static
 - ☐ Simple Dynamic
 - ☐ Dynamic Field¹
- ☒ Runoff from all impervious areas at the site discharging to the infiltration BMP.
- ☐ Runoff from all impervious areas at the site is *not* discharging to the infiltration BMP and calculations are provided showing that the drainage area contributing runoff to the infiltration BMPs is sufficient to generate the required recharge volume.
- ☐ Recharge BMPs have been sized to infiltrate the Required Recharge Volume.
- ☐ Recharge BMPs have been sized to infiltrate the Required Recharge Volume *only* to the maximum extent practicable for the following reason:
 - ☐ Site is comprised solely of C and D soils and/or bedrock at the land surface
 - ☐ M.G.L. c. 21E sites pursuant to 310 CMR 40.0000
 - ☐ Solid Waste Landfill pursuant to 310 CMR 19.000
 - ☐ Project is otherwise subject to Stormwater Management Standards only to the maximum extent practicable.
- ☐ Calculations showing that the infiltration BMPs will drain in 72 hours are provided.
- ☐ Property includes a M.G.L. c. 21E site or a solid waste landfill and a mounding analysis is included.

¹ 80% TSS removal is required prior to discharge to infiltration BMP if Dynamic Field method is used.



Massachusetts Department of Environmental Protection
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Checklist for Stormwater Report

Checklist (continued)

Standard 3: Recharge (continued)

- ☐ The infiltration BMP is used to attenuate peak flows during storms greater than or equal to the 10-year 24-hour storm and separation to seasonal high groundwater is less than 4 feet and a mounding analysis is provided.
- ☐ Documentation is provided showing that infiltration BMPs do not adversely impact nearby wetland resource areas.

Standard 4: Water Quality

The Long-Term Pollution Prevention Plan typically includes the following:

- Good housekeeping practices;
 - Provisions for storing materials and waste products inside or under cover;
 - Vehicle washing controls;
 - Requirements for routine inspections and maintenance of stormwater BMPs;
 - Spill prevention and response plans;
 - Provisions for maintenance of lawns, gardens, and other landscaped areas;
 - Requirements for storage and use of fertilizers, herbicides, and pesticides;
 - Pet waste management provisions;
 - Provisions for operation and management of septic systems;
 - Provisions for solid waste management;
 - Snow disposal and plowing plans relative to Wetland Resource Areas;
 - Winter Road Salt and/or Sand Use and Storage restrictions;
 - Street sweeping schedules;
 - Provisions for prevention of illicit discharges to the stormwater management system;
 - Documentation that Stormwater BMPs are designed to provide for shutdown and containment in the event of a spill or discharges to or near critical areas or from LUHPPL;
 - Training for staff or personnel involved with implementing Long-Term Pollution Prevention Plan;
 - List of Emergency contacts for implementing Long-Term Pollution Prevention Plan.
- ☒ A Long-Term Pollution Prevention Plan is attached to Stormwater Report and is included as an attachment to the Wetlands Notice of Intent.
 - ☐ Treatment BMPs subject to the 44% TSS removal pretreatment requirement and the one inch rule for calculating the water quality volume are included, and discharge:
 - ☐ is within the Zone II or Interim Wellhead Protection Area
 - ☐ is near or to other critical areas
 - ☐ is within soils with a rapid infiltration rate (greater than 2.4 inches per hour)
 - ☐ involves runoff from land uses with higher potential pollutant loads.
 - ☐ The Required Water Quality Volume is reduced through use of the LID site Design Credits.
 - ☐ Calculations documenting that the treatment train meets the 80% TSS removal requirement and, if applicable, the 44% TSS removal pretreatment requirement, are provided.



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands Program

Checklist for Stormwater Report

Checklist (continued)

Standard 4: Water Quality (continued)

- ☐ The BMP is sized (and calculations provided) based on:
 - ☐ The ½" or 1" Water Quality Volume or
 - ☐ The equivalent flow rate associated with the Water Quality Volume and documentation is provided showing that the BMP treats the required water quality volume.
- ☐ The applicant proposes to use proprietary BMPs, and documentation supporting use of proprietary BMP and proposed TSS removal rate is provided. This documentation may be in the form of the propriety BMP checklist found in Volume 2, Chapter 4 of the Massachusetts Stormwater Handbook and submitting copies of the TARP Report, STEP Report, and/or other third party studies verifying performance of the proprietary BMPs.
- ☐ A TMDL exists that indicates a need to reduce pollutants other than TSS and documentation showing that the BMPs selected are consistent with the TMDL is provided.

Standard 5: Land Uses With Higher Potential Pollutant Loads (LUHPPLs)

- ☐ The NPDES Multi-Sector General Permit covers the land use and the Stormwater Pollution Prevention Plan (SWPPP) has been included with the Stormwater Report.
- ☐ The NPDES Multi-Sector General Permit covers the land use and the SWPPP will be submitted **prior to** the discharge of stormwater to the post-construction stormwater BMPs.
- ☐ The NPDES Multi-Sector General Permit does **not** cover the land use.
- ☐ LUHPPLs are located at the site and industry specific source control and pollution prevention measures have been proposed to reduce or eliminate the exposure of LUHPPLs to rain, snow, snow melt and runoff, and been included in the long term Pollution Prevention Plan.
- ☒ All exposure has been eliminated.
- ☐ All exposure has **not** been eliminated and all BMPs selected are on MassDEP LUHPPL list.
- ☐ The LUHPPL has the potential to generate runoff with moderate to higher concentrations of oil and grease (e.g. all parking lots with >1000 vehicle trips per day) and the treatment train includes an oil grit separator, a filtering bioretention area, a sand filter or equivalent.

Standard 6: Critical Areas

- ☒ The discharge is near or to a critical area and the treatment train includes only BMPs that MassDEP has approved for stormwater discharges to or near that particular class of critical area.
- ☐ Critical areas and BMPs are identified in the Stormwater Report.



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands Program

Checklist for Stormwater Report

Checklist (continued)

Standard 7: Redevelopments and Other Projects Subject to the Standards only to the maximum extent practicable

- ☒ The project is subject to the Stormwater Management Standards only to the maximum Extent Practicable as a:
- ☐ Limited Project
 - ☐ Small Residential Projects: 5-9 single family houses or 5-9 units in a multi-family development provided there is no discharge that may potentially affect a critical area.
 - ☐ Small Residential Projects: 2-4 single family houses or 2-4 units in a multi-family development with a discharge to a critical area
 - ☐ Marina and/or boatyard provided the hull painting, service and maintenance areas are protected from exposure to rain, snow, snow melt and runoff
 - ☐ Bike Path and/or Foot Path
 - ☒ Redevelopment Project
 - ☐ Redevelopment portion of mix of new and redevelopment.
 - ☐ Certain standards are not fully met (Standard No. 1, 8, 9, and 10 must always be fully met) and an explanation of why these standards are not met is contained in the Stormwater Report.
 - ☐ The project involves redevelopment and a description of all measures that have been taken to improve existing conditions is provided in the Stormwater Report. The redevelopment checklist found in Volume 2 Chapter 3 of the Massachusetts Stormwater Handbook may be used to document that the proposed stormwater management system (a) complies with Standards 2, 3 and the pretreatment and structural BMP requirements of Standards 4-6 to the maximum extent practicable and (b) improves existing conditions.

Standard 8: Construction Period Pollution Prevention and Erosion and Sedimentation Control

A Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan must include the following information:

- Narrative;
 - Construction Period Operation and Maintenance Plan;
 - Names of Persons or Entity Responsible for Plan Compliance;
 - Construction Period Pollution Prevention Measures;
 - Erosion and Sedimentation Control Plan Drawings;
 - Detail drawings and specifications for erosion control BMPs, including sizing calculations;
 - Vegetation Planning;
 - Site Development Plan;
 - Construction Sequencing Plan;
 - Sequencing of Erosion and Sedimentation Controls;
 - Operation and Maintenance of Erosion and Sedimentation Controls;
 - Inspection Schedule;
 - Maintenance Schedule;
 - Inspection and Maintenance Log Form.
- ☐ A Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan containing the information set forth above has been included in the Stormwater Report.



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands Program

Checklist for Stormwater Report

Checklist (continued)

Standard 8: Construction Period Pollution Prevention and Erosion and Sedimentation Control (continued)

- ☐ The project is highly complex and information is included in the Stormwater Report that explains why it is not possible to submit the Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan with the application. A Construction Period Pollution Prevention and Erosion and Sedimentation Control has **not** been included in the Stormwater Report but will be submitted **before** land disturbance begins.
- ☐ The project is **not** covered by a NPDES Construction General Permit.
- ☐ The project is covered by a NPDES Construction General Permit and a copy of the SWPPP is in the Stormwater Report.
- ☒ The project is covered by a NPDES Construction General Permit but no SWPPP been submitted. The SWPPP will be submitted BEFORE land disturbance begins.

Standard 9: Operation and Maintenance Plan

- ☒ The Post Construction Operation and Maintenance Plan is included in the Stormwater Report and includes the following information:
 - ☒ Name of the stormwater management system owners;
 - ☒ Party responsible for operation and maintenance;
 - ☒ Schedule for implementation of routine and non-routine maintenance tasks;
 - ☒ Plan showing the location of all stormwater BMPs maintenance access areas;
 - ☐ Description and delineation of public safety features;
 - ☐ Estimated operation and maintenance budget; and
 - ☐ Operation and Maintenance Log Form.
- ☐ The responsible party is **not** the owner of the parcel where the BMP is located and the Stormwater Report includes the following submissions:
 - ☐ A copy of the legal instrument (deed, homeowner's association, utility trust or other legal entity) that establishes the terms of and legal responsibility for the operation and maintenance of the project site stormwater BMPs;
 - ☐ A plan and easement deed that allows site access for the legal entity to operate and maintain BMP functions.

Standard 10: Prohibition of Illicit Discharges

- ☒ The Long-Term Pollution Prevention Plan includes measures to prevent illicit discharges;
- ☐ An Illicit Discharge Compliance Statement is attached;
- ☐ NO Illicit Discharge Compliance Statement is attached but will be submitted **prior to** the discharge of any stormwater to post-construction BMPs.

WATER QUALITY CERTIFICATION

MassDOT Proj. # 612514 – Berkshire Trail (Route 9 & 112) over Westfield River
Cummington, MA

ATTACHMENT I

O&M Plan and LTPPP



ST 9/ST 112 over East Branch Westfield River

Stormwater Management System
Operation and Maintenance Plan and
Long-Term Pollution Prevention Plan
Town of Cummington

PREPARED FOR



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PREPARED BY

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03/26/2024

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1

Stormwater Management System Operation and Maintenance (O&M) Plan

This Stormwater Management System Operation and Maintenance (O&M) Plan describes the approach for inspection and maintenance of drainage infrastructure and structural stormwater control measures (SCMs) to minimize contaminant loading for ST 9/ST 112 over East Branch of Westfield River, town of Cummington. In general, inspection and maintenance activities will be conducted consistent with the National Pollutant Discharge Elimination System (NPDES) General Permit for Stormwater Discharges from Small Municipal Separate Storm Sewer System (MS4) and MassDOT's anticipated NPDES Transportation Separate Storm Sewer System (TS4) Permit.

This document has been prepared per the requirements of Massachusetts Department of Environmental Protection (MassDEP) Regulations 310 CMR 10.05 (6)(k)(9) and satisfies the requirements of Massachusetts Stormwater Standard 9.

1.1 Responsible Party

In accordance with MassDOT procedures, the MassDOT District 1 office located in Lenox, MA, is responsible for the maintenance of all stormwater management systems on MassDOT roads within the project area.

Questions or concerns regarding activities associated with this O&M Plan should be addressed to MassDOT's District 1 office located at , phone (857) 368-1000, during regular weekday hours, or to MassDOT's Highway Operations Center located in South Boston, MA at (800) 227-0608 during all other times and days, including weekends and holidays.

1.2 Inspection and Maintenance Measures and Record-Keeping

See the Drainage & Utility Plans for the proposed stormwater system within the project limits. The stormwater management system covered by this O&M Plan consists of the following measures:

- The construction of 8 catch basins, 4 drain manholes, 1 gutter inlet and 1 catch basin to manhole change-in-type.

MassDOT uses a performance-based inspection and maintenance program for SCMs and catch basins. For SCMs, MassDOT's overall approach is to inspect SCMs, and based on the

results of the inspections, perform maintenance to preserve functionality. For catch basins, MassDOT's overall approach is to perform maintenance at an interval that maintains the functionality of the catch basin (e.g., sump is less than 50% full of sediment). Catch basin inspections, including documentation of sediment accumulation, and maintenance will generally occur simultaneously.

MassDOT's O&M program is data driven. Inspections and maintenance are recorded by personnel using hand-held tablets in the field to document sediment accumulation, maintenance action performed, and follow-up actions needed. Data are recorded in MassDOT's asset management system which is accessible in the field (mobile) or the office (desktop).

The table below summarizes data that is generally collected for each asset type. For all assets, the inspector and inspection date are recorded. Photo documentation of structure condition is taken and attached to the inspection record.

Inspection Form	Applicable Stormwater Assets	Information Collected
Inlets	<ul style="list-style-type: none"> › Catch basins › Outlet control structures 	<ul style="list-style-type: none"> › Sediment accumulation › Trash/Debris accumulation › Signs of contamination › Frame and grate condition › Overall structure condition
Storm Discharge Points	<ul style="list-style-type: none"> › Outlets to SCMs 	<ul style="list-style-type: none"> › Presence of flow › Signs of contaminated flow › Sediment accumulation › Level of erosion › Pipe condition › Scour protection condition › Overall structure condition

Inspection and maintenance records can be made available using the asset management system through request with the MassDOT District 1. Environmental Engineer. Records will be kept for at least three years. Representatives of the Cummington Conservation Commission(s), MassDEP, and US EPA may obtain access to these records, upon request. Additionally, MassDOT will allow members and agents of MassDEP and the Conservation Commission(s) to enter and inspect the premises, upon request, to evaluate and ensure that the Operation and Maintenance Plan requirements for each SCM are being followed.

Maintenance actions will not occur at any set frequency, but rather will be based on condition and impact to functionality. Maintenance to be performed on the stormwater system includes: Removing and disposing of trash, sediment, debris, and root intrusions, clearing out of sumps at an interval to maintain functionality, jetting and repairing pipes, and rehabilitating filtering and infiltration materials.

Based on the results of the inspection, repairs will be made in accordance with MassDOT standard practices. Maintenance will be prioritized given the urgency of the required maintenance and availability of staff, contracts, etc. Maintenance may require contracting if existing contracts are unavailable to perform the work. More intensive remedial activities may require permitting and/or an engineering solution.

1.3 Erosion and Sediment Control Measures during Maintenance Activities

For maintenance activities that could result in discharges of sediments or other contaminants into wetlands, waterways, or other resource areas regulated under 310 CMR 10.00, the responsible maintenance personnel will employ measures to prevent migration of these sediments/contaminants. Such temporary measures may include, but are not necessarily limited to, the use of siltation barriers, catch basin silt sacks/filter bags, pipe plugs, cofferdams deployed within the stormwater structure, turbidity curtains, or other practices designed to prevent such discharges.

Where maintenance occurs in areas that are confined, with no risk of discharge to adjacent water bodies, no special measures may be needed. Examples include, but are not limited to: (1) cleaning of a forebay under dry conditions when the work can be completed and exposed surfaces stabilized prior to placing it back into service; and (2) catch basin cleaning where the activity is limited to removing material from a sump below the elevation of the outlet pipe.

1.4 O&M Budget

MassDOT performs maintenance for stormwater management systems as part of their routine operation and maintenance budget for roadways and bridges. Budgets are managed at the district level and vary by fiscal year, depending on funding sources.

2

Long-Term Pollution Prevention Plan

This Long-Term Pollution Prevention Plan (LTPPP) describes the approach for pollution prevention and related maintenance activities for ST 9/ ST 112 over East Branch Westfield River in Cummington. In general, long-term pollution prevention and related maintenance activities will be conducted consistent with:

- The National Pollutant Discharge Elimination System (NPDES) General Permit for Stormwater Discharges from Small Municipal Separate Storm Sewer System (MS4),
- MassDOT's anticipated NPDES Transportation Separate Storm Sewer System (TS4) Permit, and
- Measures outlined in MassDOT's Stormwater Management Plan (SWMP).

This LTPPP satisfies the requirements related to pollution prevention under Massachusetts Stormwater Standards 4, 5, 6, and 10.

2.1 Practices for Long-Term Pollution Prevention

For the facilities covered, long-term pollution prevention includes the following measures.

2.1.1 Litter Pick-up

MassDOT will conduct litter pick-up from the stormwater management facilities in conjunction with routine road maintenance activities.

2.1.2 Inspection and Maintenance of Stormwater Assets

MassDOT will conduct inspection and maintenance of drainage infrastructure and the stormwater control measures (SCMs) in accordance with the O&M Plan, as described in Section 1.

2.1.3 Maintenance of Landscaped Areas

Routine mowing will be conducted according to standard MassDOT practices. SCM basin bottoms and embankments designed to impound water should be mowed as required to prevent establishment of woody vegetation.

Except in rare circumstances, MassDOT does not use fertilizers, herbicides, and pesticides for the maintenance of facilities. Exceptions include using fertilizer to ensure the survival of new plantings and herbicides to control invasive plants. Use of fertilizers and herbicides is reviewed and approved by the MassDOT Landscape Design Section and District 1 Environmental Engineer prior to application. Local Conservation Commission review may also be required.

2.1.4 Snow and Ice Management

Snow and Ice Management will be conducted consistent with the practices outlined in the MassDOT Snow and Ice Control Program Environmental Status and Planning Report (ESPR), formerly known as the Snow and Ice Control Generic Environmental Impact Report (GEIR).

In accordance with the Snow and Ice Control ESPR, no sand is used on MassDOT properties for snow and ice control. The exception to this rule is within reduced salt areas where high sodium levels have been found in drinking water sources.

2.1.5 Street Sweeping

Routine highway cleaning, with a brush-type street sweeper, will be conducted in accordance with standard MassDOT practices. Sweeping will occur annually in the Spring.

2.1.6 Prohibition of Illicit Discharges

The MassDEP Stormwater Management Standard 10 prohibits illicit discharges to the stormwater management system. Illicit discharges are discharges that do not consist entirely of stormwater, except for certain specified non-stormwater discharges.

In accordance with the existing MS4 permit and anticipated TS4 permit requirements, examples of discharges from the following sources are not considered illicit discharges:

- › Firefighting activities*
- › Foundation drains
- › Water line flushing
- › Footing drains
- › Landscape irrigation
- › Individual residential car washing
- › Uncontaminated groundwater
- › Rising groundwater
- › Diverted stream flows
- › Flows from riparian habitats/wetlands
- › Potable water sources
- › Dechlorinated swimming pool water
- › Street wash waters
- › Wash water from residential buildings (no detergents)
- › Condensation from air conditioning units
- › Run-on from private driveways caused by precipitation
- › Lawn watering
- › Water from crawl space pumps

*Water from firefighting activities is allowed and need only be addressed where they are identified as significant sources of pollutants to waters of the United States.

Based on plan review and confirmation in the field, there are no known or proposed illicit connections associated with the ST 9/ ST 112 over East Branch Westfield River. Should an interconnection to the stormwater management system be identified, the MassDOT PM will coordinate with the District Permits Engineer to confirm if the connections are authorized. For unauthorized connections, the MassDOT PM and/or MassDOT Environmental Services Section will investigate the connections and if they are determined to be illicit, the connections will be managed through MassDOT's Illicit Discharge Detection and Elimination (IDDE) program and/or through other agencies.

WATER QUALITY CERTIFICATION

MassDOT Proj. # 612514 – Berkshire Trail (Route 9 & 112) over Westfield River
Cummington, MA

ATTACHMENT J

Relevant Project Special Provisions



CONTRACTS:

- INCLUDE HERBICIDE REPORT FORM IN THE BOOK – SEE PROPOSAL DOCS FOLDER DOCUMENT A00810

REV. 2023.03.01 (REV. DATE TO BE REMOVED BY CONTRACTS)

ITEM 102.3 HERBICIDE TREATMENT OF INVASIVE PLANTS HOURLY

This work must be performed by persons who meet the qualifications below and are approved by the Landscape Design Section.

Work under this item consists of herbicide treatment of invasive plants currently existing within the project limits and as directed. An Invasive Plant Management Strategy (IPMS) shall be submitted to the Engineer for review and approval and the IPMS shall be implemented on-site. The IPMS shall be measured and paid for under Item 102.33 Invasive Plant Management Strategy.

Work under this item shall be coordinated with work and schedule for Selective Clearing, Clearing and Grubbing, Mowing, Tree Removal, Planting, and Wetland Mitigation items.

Payment is per hour on-site and shall be compensation for a minimum crew of 2 licensed applicators, 2 back-pack sprayers and mist-blowers, a properly equipped spray truck with spray hoses, and a tank with sufficient capacity for a full day of work. If there is only one applicator, hourly payment shall be adjusted to 50 percent of the unit price. This item is not intended for manual removal of plants.

Management of plants determined to have been introduced to the site via imported loam, compost, mulch, plants, equipment, or other construction activities will be the Contractor's responsibility and at the Contractor's expense.

Herbicide shall be applied during daytime hours only.

Measures to prevent the introduction of invasive plant species to the site and to address introduction due to construction-related activities shall be covered under the Standard Specifications, Division I - Subsections 7.01(D) Plant Pest Control and 7.13 Protection and Restoration of Property as amended in these Special Provisions.

Plant species targeted for management under this item shall be as determined in the field per the site walk and as specified in the IPMS.

The definition of invasive plant species shall be as described by Massachusetts Invasive Plant Advisory Group (MIPAG): "non-native species that have spread into native or minimally managed plant systems in Massachusetts, causing economic or environmental harm by developing self-sustaining populations and becoming dominant and/or disruptive to those systems."

ITEM 102.3 (Continued)

Control of invasive plants shall begin immediately with the initiation of construction activities and prior to any clearing or site disturbance. Treatment areas shall include stockpile locations and may, upon approval of the Engineer, extend outside the project limit. Treatment shall be done each consecutive year for the duration of the contract unless specified otherwise in the IMPS or unless directed otherwise by the MassDOT invasive species contact. Work shall be done during the growing season from May – October unless otherwise specified in the IPMS.

Areas identified for vegetation control measures shall be as shown on the plans and as determined in the field by the Engineer and a MassDOT Landscape Architect. Contact at MassDOT Landscape Design Section may be contacted at: XXXXXX.XXXX@dot.state.ma.us. (DESIGNER: Insert LD Project Reviewer email.)

QUALIFICATIONS

The applicators shall submit and meet the qualifications outlined below. A list of contractors specializing in invasive management and approved by MassDOT Landscape Design Section is available on the following website: <https://www.mass.gov/lists/landscape-design-and-roadside-maintenance> under Invasive Plant Management.

Requirements

1. Company must provide proof of qualifications by providing the following:
 - a. Narrative describing company, its expertise and experience with invasive plant control.
 - b. Demonstrate experience with herbicide treatment as part of restorations and in sensitive areas.
 - c. Describe company's technical qualifications and past performance.
2. Company must meet licensing requirements:
 - a. All crew applicators must have a Massachusetts Commercial Applicator License (CORE).
 - b. At least one or more applicator must have a ROW certification, if required for work.
 - c. Company must provide name(s) of applicator(s) and Applicator License/Certification number for all contractor crew leaders working on the project.
 - d. Company must provide documentation of any warnings, penalties or fines received in the last three (3) years.
3. Company must provide proof of experience with invasive plant control and include following:
 - a. At least five (5) references from prior invasive plant control work completed in last five (5) years. Provide contact information including address, phone number and email.
 - b. Provide a summary of each of these projects including nature of the problem, specific invasive vegetation treated, dates and period of treatment, methodologies used, and summary of success or not in terms of meeting performance objectives. Include summary of equipment used.
 - c. Photo documentation of these projects.
 - d. GPS coordinates of project locations, if available.

ITEM 102.3 (Continued)

4. Crew leader must have expertise with invasive plant control and provide the following:
 - a. Have held Core license for at least five (5) years.
 - b. Resume listing five (5) or more years of experience applying pesticides with the company or with another company specializing in vegetation management.

SUBMITTALS

No work shall begin without approval of the submittals.

Submittals include the following items:

Invasive Plant Management Strategy (IPMS)

At least thirty (30) days prior to proposed treatment the IPMS shall be submitted for approval by the Engineer and MassDOT Landscape Architect. All chemicals, methods and work done under this item shall be consistent with the IPMS. The IPMS shall be as described under Item 102.33.

Herbicide Use Report

Within two (2) weeks after each application, the Contractor shall provide to the Engineer a completed and signed MassDOT Herbicide Use Report.

Photo Documentation

Digital photos with date and time of herbicide application work may be required and shall be submitted upon request.

MATERIALS

All proposed herbicides shall be as approved in the IPMS. Herbicides shall be labeled for the method of treatment and shall meet all federal, state and local regulation requirements. Application rates will depend on herbicide proposed and shall be per the manufacturer's label for specific application.

METHODS

All methods used shall be as approved in the IPMS which shall be determined during the Initial Site Walk as described under Item 102.33 Invasive Plant Management Strategy.

The Contractor shall be responsible for marking delineated areas and plants to be preserved, removed, or otherwise treated. Fencing or other materials needed for marking and delineating protected areas shall be incidental to this item.

The Contractor shall notify the Engineer a minimum of 3 days prior to date of expected herbicide application. Applicators shall notify the Engineer upon arriving on-site and upon leaving the site.

ITEM 102.3 (Continued)**Herbicide Applications**

All herbicide application shall conform to Massachusetts Pesticide Laws and Regulations per the Massachusetts Department of Agricultural Resources (MDAR) Pesticide Bureau.

Mixing, applying and/or disposing of herbicides shall always be in accordance with instructions on their labels and all applicable federal, state, and local regulations. Mixing shall not occur within sensitive areas, wetlands, or buffer zones.

Contractor shall not spray 2 hours prior to precipitation, during rain, or during windy conditions. The Contractor shall be responsible for monitoring weather conditions and adjusting the work schedule as appropriate for the herbicide and application method to be used.

Targeted vegetation shall be identified and marked prior to treatment. Plants treated by foliar spray, injection or glove application or other methods that leave standing vegetation, as opposed to cut-stump application, shall remain clearly marked for identification through the contract period.

Desirable vegetation shall be protected from both spray and other physical damage.

Contractor is responsible for any damage to vegetation not designated for removal or treatment. Vegetation damaged shall be restored. Cost of replacement plants and/or restoration shall be borne by the Contractor.

Contractor shall ensure that the public does not enter a work area while herbicide application or spraying is underway.

Disposal Of Invasive Plant Material

All material to be cleared shall become the property of the Contractor. The satisfactory disposal of all cleared plant material (seeds, roots, woody vegetation, associated soils, etc.) shall be the Contractor's responsibility.

The Contractor shall take measures to prevent viable plant material from leading to further infestations (seeds, roots, woody material, etc.) while stockpiled, in transit, or at final disposal locations. All precautions shall be taken to avoid contamination of natural landscapes with invasive plants or invasive plant material.

Chipping, shredding, or on-site burning of plant material must be approved by the Engineer and included in the IMPS.

For plant material taken to an incinerating facility per the IPMS, a receipt from that facility shall be submitted to the Engineer as proof of disposal.

ITEM 102.3 (Continued)

Where feasible, it is preferable to dispose of plants on-site or to bury them on-site with on-going monitoring for re-sprouting. Disposal locations and methods must be approved and included in the IPMS. Site work such as grading and seeding to stabilize and restore disposal area shall be incidental to this item.

The Contractor shall be responsible for treating or otherwise managing areas of re-growth due to improper disposal. Treatment shall be at the Contractor's expense.

Follow-Up Treatment

Plants and areas shall be re-treated as necessary and as appropriate to the time of year. Treatment shall be for the duration of the contract and per the IPMS.

MEASURE OF SUCCESS

The expectation is a minimum of 85-95 percent control achieved after the first treatment, depending on plants targeted and extent of population, and based on the expectations laid out in the IPMS. The expectation for the contract duration is 95-100% eradication by the end of the treatment period, unless otherwise specified in the IPMS.

METHOD OF MEASUREMENT

Item 102.3 will be measured for payment by the Hour of crew time spent on the project doing actual herbicide application work. A crew shall be defined as a minimum of two licensed applicators each equipped with (at minimum) back-pack sprayer and mist blower. The crew shall also have a properly equipped spray truck with hoses and a tank with sufficient capacity for a full day of work.

BASIS OF PAYMENT

Item 102.3 will be paid at the contract unit price per Hour, which price shall include all labor, materials, equipment, tools, and all incidentals required to complete the work.

Payment will be based upon time spent on the project doing actual work and shall not include travel time to and from the Contractor's place of business and shall also not include time for investigative field trips.

If there is only one applicator, hourly payment shall be adjusted to 50 percent of the unit price.

The Invasive Plant Management Strategy will be paid for under Item 102.33.

ITEM 102.33**INVASIVE PLANT MANAGEMENT STRATEGY****HOUR*****REV. 2023.03.01 (REV. DATE TO BE REMOVED BY CONTRACTS)***

This item consists of providing an Invasive Plant Management Strategy (IPMS) for the control of invasive plants currently existing on the project site and/or as directed and shall be coordinated with Item 102.3 Herbicide Treatment of Invasive Plants. The IPMS shall be submitted for review and approval and the IPMS shall be implemented on-site.

Herbicide treatment for invasive plants shall be as described under Item 102.3 Herbicide Treatment of Invasive Plants and shall be compensated per that Item.

Work under this item shall be coordinated with work and schedule for Selective Clearing, Clearing and Grubbing, Mowing, Tree Removal, Planting, and Wetland Mitigation as relevant to the project.

Individual attending the site walk and determining the Invasive Plant Management Strategy must demonstrate expertise with vegetation management and invasive plant control and submit qualifications as described below.

QUALIFICATIONS

Individual shall be from the same company as that providing services for Item 102.3 Herbicide Treatment of Invasive Plants and shall submit the following, if not submitted under Item 102.3:

- Submit copy of current Core license.
- Submit a resume listing five (5) or more years of experience managing invasive plants with a company specializing in vegetation management.
- References shall be submitted if requested.

SUBMITTALS**Task Summary & Reports**

For measurement of payment, the contractor shall submit the total sum and a breakdown of hours for the tasks performed. At a minimum, the tasks shall include the Initial Site Walk, the IPMS Written Report, and if necessary to accommodate project or site changes, a Follow-up Site Inspection and accompanying IPMS Amendment.

Interim Site Monitoring Reports and/or a Final Report shall be submitted if requested by the MassDOT Landscape Design contact. The MassDOT Landscape Design contact must be notified to attend the final walk through when a Final Report has been requested.

ITEM 102.33 (Continued)**Invasive Plant Management Strategy (IPMS)**

At least thirty (30) days prior to construction activities and/or any proposed treatment, submit a written IPMS proposal for approval by the Engineer and MassDOT Landscape Architect. All chemicals and methods proposed shall be consistent with applicable Massachusetts Wetlands Protection Act Order of Conditions.

The IPMS shall be completed in coordination with the Roadway Contractor and the Engineer and shall include the following as appropriate to the project:

I. Project Information

- a. Company writing IPMS and performing herbicide application.
- b. Date of site walk
- c. Attendees at site walk
- d. Expected end date of contract and expected last treatment (month/season)

II. Brief Description of Conditions

- a. Provide a free-hand sketch on construction plans or aerial image showing species, location, and as relevant, show or note extent of population as relevant to Strategy (i.e., population extends off ROW preventing eradication, small population and eradication deemed feasible within contract schedule, etc.).

III. Coordination with Roadway Contractor regarding other work

- a. Tree Work: Note coordination to be implemented with tree removal, clearing, and clearing and grubbing as applicable to the project.
- b. Wetland Mitigation - Include management proposed for wetland mitigation areas in the IPMS, if and as required.
- c. Planting: If there will be planting in areas proposed for treatment, propose treatment and schedule to avoid herbicide damage to plants.
- d. Mowing: If coordination is required with state mowers, note need in IPMS.

IV. Soil Management

- a. Provide specifics on how soil with invasive plant roots (in particular) or seeds will be handled (i.e., separate stockpiles, plant material will be buried on-site, re-used on-site, disposed off site and if so, where?).
- b. Show stockpile locations on plan and include treatment schedule.
- c. Note measures that will be implemented to avoid spread through equipment, including how and where equipment will be cleaned.

ITEM 102.3 (Continued)**V. Invasive Plant Treatment & Management**

- a. Proposed chemical and methods of treatment for each species or area.
- b. Time of treatment based on target plant species.
- c. Submit product label including application methods and rates (entire MSDS information need not be submitted if available online).
- d. Proposed performance metrics or measure of treatment success if different from that specified under Item 102.3.
- e. Method for disposing invasive plant material. This includes material that may result in spread (i.e., seeds, roots) and material that has been treated and/or is not viable (foliage, dead wood, etc.). Methods may include grinding in place, stockpiling and treating, and incinerating offsite.
- f. Expected follow-up treatment for duration of contract.

VI. Monitoring Schedule if requested by MassDOT.

Note: The IPMS is critical for identifying pre-construction conditions as well as strategies for minimizing import or spread of invasive plants. Failure to provide an approved IPMS may jeopardize this item, in which case, the contractor will be responsible for management of invasive plants found on-site at no cost to the contract.

Photo Documentation

Digital photos with date and time verification shall be provided with the IPMS and with any follow-up monitoring or reporting.

METHODS**Initial Site Walk**

Prior to any construction activities and soil disturbance, the Contractor shall walk the site with the Engineer and the MassDOT Landscape Architect to determine the IPMS. During the site walk the Contractor shall identify limits of work and, as necessary, mark locations of areas designated for treatment and individual plants targeted for treatment or removal. The Contractor shall be responsible for marking delineated areas and plants to be preserved, removed, or otherwise treated. Fencing or other materials needed for marking and delineating protected areas shall be incidental to this item.

IPMS Follow-up Amendment

The IPMS may be amended to address additional concerns or adjust to conditions if required by the MassDOT Landscape Architect. The amended IPMS shall be submitted to the Engineer and MassDOT Landscape Architect for approval at least fourteen (14) days prior to any proposed treatment.

ITEM 102.3 (Continued)**Interim Site Monitoring Inspection Reports**

If required by the MassDOT Landscape Architect and Engineer, Interim Site Monitoring and an accompanying report shall be conducted.

Final Inspection

A final inspection and report documenting the status of the invasive control may be required for regulatory purposes or for instances where control will be continued by others. The report shall include photo documentation of pre-construction (existing) and post-treatment conditions, notations on a plan or aerial image of area treated, summary of treatment performed, and control achieved.

METHOD OF MEASUREMENT

Item 102.33 will be measured for payment by the Hour. The basis for measurement shall be per the completion of tasks as approved under the Task Summary submittal.

BASIS OF PAYMENT

Item 102.33 will be paid at the contract unit price per Hour, which price shall include all labor, materials, equipment, tools, and all incidentals required to complete the work.

Payment shall not include travel time to and from the Contractor's place of business.

ITEM 102.511 **TREE PROTECTION – ARMORING & PRUNING** **EACH**

REV. 2022.01.01 (REV. DATE TO BE REMOVED BY CONTRACTS)

The work under this item shall conform to the relevant provisions of Sections 771 and shall be for furnishing and installing temporary tree trunk protection and for minor limb pruning or removal of lower tree limbs to prevent injury to the tree from construction equipment and activities.

Trunk armoring is for instances where construction activity (the use of heavy equipment) comes close enough to potentially damage the tree trunk or limbs. It is to be used where shown on the plans and as directed by the Engineer.

REFERENCES

If requested, the Contractor shall provide to the Engineer one copy of the latest edition of the American National Standards Institute (ANSI) A300 Standard Practices for Tree, Shrub, and Other Woody Plant Maintenance: Part 1-Pruning and Part 5-Construction Management Standard. Provision of reference shall be incidental to this item.

MATERIALS

Trunk armoring shall be such that it prevents damage to the trunk from construction equipment. Selected material shall be such that installation and removal will not damage the trunk.

Acceptable materials include 2x4 wood cladding with wire or metal strapping, or, for instances when duration of construction activities is less than three months, corrugated plastic pipe mounted with duct tape. Height of cladding shall be from base of tree (including root flare) to the bottom of the first branch, eight feet above the ground, or as required by the Engineer. Material and methods shall be approved by the Engineer.

Other materials or methods may be acceptable if approved by MassDOT Landscape Design or by an Arborist.

METHODS OF WORK

Prior to construction activities, the Engineer, the Contractor, the Town Tree Warden, and the Arborist (if item is included in the contract), shall review trees noted on the plans to be protected. Final decision as to trees armored and/or pruned shall be per the Engineer.

Care shall be taken to avoid damage to the bark during installation and removal of armoring. Trunk armoring shall be replaced and maintained such that it is effective for as long as required and shall be removed immediately upon completion of work activities adjacent to trees.

Pruning of limbs shall conform to the techniques and standards of the most recent ANSI A300 standards.

ITEM 102.511 (Continued)**DAMAGES & PENALTIES**

If trees designated for protection under this item are damaged, including root damage from unapproved trespassing onto the root zone, the Contractor shall, at his own expense obtain an Arborist. The Arborist shall be approved by MassDOT.

If, based on the recommendations of the Arborist, the Engineer determines that damages can be remedied by corrective measures, such as repairing trunk or limb injury, soil compaction remediation, pruning, and/or watering, the damage will be repaired as soon as possible within the appropriate season for such work and according to industry standards.

If the Engineer determines that damages are irreparable, the Contractor shall pay for the damages in the amount of \$500.00 per diameter inch at breast height (DBH) per tree.

Additionally, if the Engineer determines that the damages are such that the tree is sufficiently compromised as to pose a future safety hazard, the tree shall be removed. Tree removal will include clean-up of all wood parts, grinding of the stump to a depth sufficient to plant a replacement tree or plant, removal of all chips from the stump site, and filling the resulting hole with topsoil.

METHOD OF MEASUREMENT

Item 102.511 will be measured per each.

BASIS OF PAYMENT

Item 102.511 will be paid at the contract unit price per each. This will include full compensation for all labor, equipment, materials, and incidentals for the satisfactory completion of the work and the subsequent removal and satisfactory disposal of the protective materials upon completion of the contract.

In the event of tree damage, cost of Arborist services, of remediation measures, and/or tree removal will be borne by the Contractor.

Payment under this item will be scheduled throughout the length of contract:

- 40% of value shall be paid upon installation of trunk armoring and completion of pruning work, if required.
- 60% shall be paid at the end of construction operations that would damage the tree and after protection materials have been removed and properly disposed of by the Contractor. In the event of repairable damages, payment shall be made after the completion of remediation measures.

In the event of irreparable damage due to lack of proper protective measures being taken there will be no compensation in addition to the \$500.00 per diameter inch penalty.

<u>ITEM 102.521</u>	<u>TREE AND PLANT PROTECTION FENCE</u>	<u>FOOT</u>
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REV. 2022.01.01 (REV. DATE TO BE REMOVED BY MASSDOT CONTRACTS)

The work under this Item shall conform to the relevant provisions of Sections 644 and 771 of the Standard Specifications and the following:

Work under this item consists of furnishing, installing, removing and resetting, maintaining fence in a vertical and effective position at all times, and final removal of temporary fence.

The purpose of the fence is to prevent damage to tree roots, tree trunks, soil, and all other vegetation within a delineated Tree and Plant Protection Zone (TPPZ) as shown on the plans, as directed by the Engineer, and as described herein.

Protection shall be for the duration of the construction activities unless otherwise directed.

MATERIALS

Temporary Fence shall be such that it provides a minimum 48-inch tall barrier that remains vertical and effective (not sagging) for the duration of period required. Fence shall be plastic orange safety fence (recommended where high visibility is necessary), wooden snow fencing, or other approved material.

Per the Engineer, additional posts, deeper post depths, and/or additional attachments will be used if the fabric or fence sags, leans or otherwise shows signs of failing to create a sufficient barrier to access.

REFERENCES

If requested, the Contractor shall provide to the Engineer one copy of the American National Standards Institute (ANSI) A300 Standard Practices for Tree, Shrub, and Other Woody Plant Maintenance Part 1, Pruning and Part 5, Construction Management Standard. Provision of reference shall be incidental to this item.

Establishment of TPPZ

Fencing shall be used for construction areas, staging areas, and stockpile areas as shown on the plans and as directed by the Engineer to establish the Tree and Plant Protection Zone (TPPZ).

Fence shall be located as close to the work zone limit and as far from the trunk as possible to maximize the area to be protected. Fence shall run parallel and adjacent to construction activity to create a barrier between the work zone and the root zone or designated limit of plants and soils to be protected.

When construction activities surround (or have the potential to surround) trees or plants to be protected, a circular enclosure shall be used. In these instances, the TPPZ limit shall be the Drip Line of each tree or as close as possible to the Drip Line, and as shown on the plans and details. The Drip Line is defined as the limit of tree canopy.

ITEM 102.521 (Continued)

The Contractor shall not engage in any construction activity within the TPPZ without the approval of the Engineer, including: operating, moving or storing equipment; storing supplies or materials; locating temporary facilities including trailers or portable toilets; and shall not permit employees to traverse the area to access adjacent areas of the project or use the area for lunch or any other work breaks.

METHOD OF WORK

Fence shall be installed prior to any construction work or staging activities and shall be installed and maintained in a vertical and effective position at all times.

Fence shall be repositioned where and as necessary for optimum effectiveness. Repositioning shall be incidental to this item. Fence shall not be moved without prior approval by the Engineer.

The TPPZ shall be protected at all times from compaction of the soil; damage of any kind to trunks, bark, branches, leaves, and roots of all plants; and contamination of the soil with construction materials, debris, silt, fuels, oils, and any chemicals substance. After construction activities are completed, or when directed by the Engineer, fence, stakes, and other materials shall be removed and disposed off-site by the Contractor.

REQUIRED WORK WITHIN THE TPPZ

In the event that grading, trenching, utility work, or storage is unavoidable within the TPPZ, the Engineer shall be notified. Measures may be required for tree protection and preservations, including air spading, the use of six-inch depth of wood chips or approved matting for root protection, pruning of branches, and/or trunk protection. These protection measures will be paid under applicable items.

Landscaping work specified within the TPPZ shall be accomplished by hand tools. Where hand work is not feasible, with permission of the Engineer, work shall be conducted with the smallest mechanized equipment necessary.

TREE AND PLANT DAMAGES OR LOSS

If the TPPZ is intruded upon, at the discretion of the Engineer, the Contractor will be required to provide a more durable barrier (e.g., Jersey Barriers) to secure the area. Cost of furnishing and installing additional or more durable barrier shall be borne by the Contractor.

If the Contractor intrudes into a TPPZ without approval, soil will be considered compacted and tree root damage will be assumed. Action will be taken as specified below.

In the event that trees designated for protection under this item are damaged, including root damage from unapproved trespassing onto the root zone, the Contractor shall, at his own expense obtain an Arborist. The Arborist shall be approved by MassDOT.

ITEM 102.521 (Continued)

In the event of spills, compaction or damage, the Contractor shall take corrective action immediately using methods approved by the Engineer in coordination with the Arborist.

If, based on the recommendations of the Arborist, the Engineer determines that damages can be remedied by corrective measures, such as repairing trunk or limb injury, soil compaction remediation, pruning, and/or watering, the damage will be repaired as soon as possible within the appropriate season for such work and according to industry standards.

If the Engineer determines that damages are irreparable, the Contractor shall pay for the damages in the amount of \$500.00 per diameter inch at breast height (DBH) per tree.

Additionally, if the Engineer determines that the damages are such that the tree is sufficiently compromised as to pose a future safety hazard, the tree shall be removed. Tree removal will include cleanup of all wood parts, grinding of the stump to a depth sufficient to plant a replacement tree or plant, removal of all chips from the stump site, and filling the resulting hole with topsoil.

Shrubs will be replaced with a plant of similar species and equal size or the largest size plants reasonably available. The Engineer will approve the size and quality of the replacement plant. Replacement will include a minimum of one year of watering and care.

METHOD OF MEASUREMENT

Item 102.521 will be measured and paid for by the foot of Tree and Plant Protection Fence, complete in place. This includes all labor, materials, equipment, maintenance, final removal and disposal of the protective materials, damages repair, and all incidental cost required to complete the work.

BASIS OF PAYMENT

Payment of 40 percent of value will be made upon installation of Fence. The remaining 60 percent will be made when protection materials have been removed and disposed off-site.

No separate payment will be made for costs of remedial actions, including addition of more durable barriers, or arborist services, but all costs in connection therewith shall be included in the Contract unit price bid.

In the event of irreparable damage due to lack of proper protective measures being taken there will be no compensation in addition to the \$500.00 per diameter inch penalty.

ITEM 114.1**DEMOLITION OF SUPERSTRUCTURE OF
BRIDGE NO. C-21-002****LUMP SUM****GENERAL**

The work under this item shall conform to the relevant provisions of Section 112 of the Standard Specifications and the following:

The work under this Item includes the removal and satisfactory disposal of existing superstructure materials above the level of the top of existing stringers and floorbeams of Bridge No. C-21-002. Existing materials to be removed and disposed of under this item include, but are not limited to, the following:

- 1) All existing concrete deck slab and bituminous concrete supported by the existing roadway stringers and floorbeams.
- 2) Existing concrete filled metal grid sidewalk on the bridge.
- 3) Existing metal channels, plates and angles that make up the existing bridge curbing.
- 4) Existing steel plates and shapes that make up existing roadway deck joints.
- 5) Concrete removal at abutment backwalls and tops of wingwalls for backwall and coping modifications.

Excavation behind the existing backwall of bridge abutments and wingwalls, necessary to facilitate wingwall and abutment modifications and construction of approach slabs, as shown on the Contract drawings, or for the placement of membrane waterproofing and waterproofing protective course, shall be paid for under Item 140, Bridge Excavation.

The Contractor shall take care not to damage the existing structural steel to remain and the remaining concrete at each abutment and wingwall. Any of the above items damaged, or otherwise made unsatisfactory for continued use by the Contractor's operations, shall be replaced by the contractor's own expense. In no event shall any pneumatic or power hammers used for the removal of concrete over steel beams be larger than the chipping hammer type of the 25 lb. class.

Where existing steel curbing or railings are attached to existing truss members to remain, the Contractor shall prevent damage to the existing steel to remain when removing these items. At locations requiring cutting of portions of existing steel plates and angles to remain, the aforementioned cut edges of plates and angles shall be ground smooth. All grinding shall be done in a longitudinal direction.

The work under this Item also includes all saw cuts in concrete where indicated on the plans.

ITEM 114.1 (Continued)

The Contractor shall thoroughly clean the bridge seats and bearings of all debris and other material of a corrosive nature.

Plans of the existing bridge are available from the office of the State Bridge Engineer at MassDOT, Highway Division, 10 Park Plaza, Boston, MA. 02116.

The Contractor is responsible for preventing any debris resulting from demolition, excavation or construction from falling into the river below. The Contractor shall make adequate provisions, including the erection of temporary protective shielding, paid under Item 994.01, to prevent debris from falling into the river and prevent personnel from injury due to excavation operations and debris removal. Said shielding shall be considered incidental to this item. The shielding shall be designed by a Professional Structural Engineer registered in Massachusetts and shall be submitted to the Engineer for approval. Prior to any excavation, the Engineer must approve the complete design submittal (calculations, plans, and detail drawings) for the temporary shielding in writing. Any work or materials ordered for the work involved prior to the approval of the design calculations, plans, and detail drawings shall be at the Contractor's own risk.

The Contractor shall take necessary precautions to protect existing utilities from damage during his operations. Additionally, he shall coordinate the removal and/or relocation of existing utilities with their owners throughout the demolition phase.

No debris, tools or incidental equipment of any kind will be permitted to fall into areas within the vicinity of the river. Any material that accidentally falls into the river shall be removed immediately.

All materials removed under Item 114.1 shall become the property of the Contractor and shall be removed from the job site, unless such materials are designated to be reused in the proposed construction.

The Contractor shall prepare and submit a plan indicating the proposed demolition procedures and methods to be used including equipment, tools, devices, crane capacity and location, schedule of operations, methods of utility protection, methods of preventing any debris resulting from demolition, excavation, or construction from falling into the river, etc., to the Engineer for approval. The requirements for equipment and all procedures utilized shall be in conformance with the intent of Subsection 960.61D, Steel Erection of the Standard Specifications for Highways and Bridges.

The demolition procedures and any necessary calculations and drawings shall be signed and stamped by a Professional Structural Engineer registered in Massachusetts certifying that all existing structural members are suitably braced and supported throughout the demolition process. Work under this item may not commence until the Engineer has given written approval.

ITEM 114.1 (Continued)

During the prosecution of this work, the Engineer may reject use of any method or equipment which causes undue vibration or possible damage to portions of the remaining structure. The Contractor is cautioned to use extreme care so as not to damage portions of the existing structure to remain. Any damage done to portions to remain in the bridge shall be replaced or repaired to the satisfaction of the Engineer, by the Contractor at no cost to the Commonwealth.

The Contractor shall take care not to damage exposed reinforcing steel or any remaining concrete or any other part of the structure that is to remain. Any of the above items damaged, or otherwise made unsatisfactory for continued use by the Contractor's operations, shall be replaced by the Contractor at his own expense, as directed by the Engineer.

After the concrete has been removed, all exposed reinforcing steel to remain shall be cleaned by mechanical cleaning and then high pressure washing with water that does not contain detergents or any bond inhibiting chemicals. Where active corrosion has occurred that would inhibit bonding, abrasive blast steel to white metal finish prior to placement of concrete. All costs in connection with such work shall be considered as included in the bid price for this item and no additional compensation will be allowed.

Work under this item includes selective deleading of the structural components which are to be disassembled, burned or cut to allow subsequent removal. Lead removal for demolition purposes will be confined only to the immediate area where the removal of welds, removal of mechanical connections, cutting or burning are to be performed.

The Contractor is required to evaluate and include in his or her costs for the proper handling, disposal and/or recycling of materials suspected to contain lead that are generated during demolition of the bridge, and must conform with all Federal, State and local regulations.

The handling, removing, disposing and/or recycling of all lead-based painted materials shall conform to the "General Requirements For Work Involving Painted Steel" that is included elsewhere in these Special Provisions.

The work shall also include cleaning and removal of debris and pigeon waste that have collected on the steel superstructure and bridge abutment seats. The horizontal surfaces of trusses, stringers and floorbeams and abutment seats shall be swept clean of all debris, which may include but is not limited to sand, gravel, bituminous material and bird droppings. This material shall be removed and disposed of as construction waste unless otherwise determined by the required testing outlined under Subsection 961.68, "Handling of Hazardous Waste and Reporting Release Programs".

ITEM 114.1 (Continued)**METHOD OF MEASUREMENT**

The work under Item 114.1 shall be measured at the contract lump sum price for the portions of the bridge superstructure and portions of the bridge substructure to be demolished.

BASIS OF PAYMENT

The work under Item 114.1 shall be paid for at the contract lump sum price for the portions of the bridge superstructure and portions of the bridge substructure to be demolished, which price shall include full compensation for all labor, equipment and materials to complete the work, including field survey, design of shielding and demolition procedures including the services of a Professional Structural Engineer, deleading and as described herein.

ITEM 697.1**SILT SACK****EACH**

Work under this item shall conform to the relevant provisions of Subsections 227 and 670 of the Standard Specifications and the following:

The work under this item includes the furnishing, installation, maintenance and removal of a reusable fabric sack to be installed in drainage structures for the protection of wetlands and other resource areas and the prevention of silt and sediment from the construction site from entering the storm water collection system. Devices shall be ACF Environmental (800)-448-3636; Reed & Graham, Inc. Geosynthetics (888)-381-0800; The BMP Store (800)-644-9223; or approved equal.

CONSTRUCTION

Silt sacks shall be installed in retained existing and proposed catch basins and drop inlets within the project limits and as required by the Engineer.

The silt sack shall be as manufactured to fit the opening of the drainage structure under regular flow conditions, and shall be mounted under the grate. The insert shall be secured from the surface such that the grate can be removed without the insert discharging into the structure. The filter material shall be installed and maintained in accordance with the manufacturer's written literature and as directed by the Engineer.

Silt sacks shall remain in place until the placement of the pavement overlay or top course and the graded areas have become permanently stabilized by vegetative growth. All materials used for the filter fabric will become the property of the Contractor and shall be removed from the site.

The Contractor shall inspect the condition of silt sacks after each rainstorm and during major rain events. Silt sacks shall be cleaned periodically to remove and disposed of accumulated debris as required. Silt sacks, which become damaged during construction operations, shall be repaired or replaced immediately at no additional cost to the Department.

When emptying the silt sack, the contractor shall take all due care to prevent sediment from entering the structure. Any silt or other debris found in the drainage system at the end of construction shall be removed at the Contractors expense. The silt and sediment from the silt sack shall be legally disposed of offsite. Under no condition shall silt and sediment from the insert be deposited on site and used in construction.

All curb openings shall be blocked to prevent stormwater from bypassing the device.

All debris accumulated in silt sacks shall be handled and disposed of as specified in Section 227 of the Standard Specifications.

COMPENSATION

Silt sacks will be measured and paid at the Contract unit price per each, complete in place, which price shall include all labor, materials, equipment and incidental costs required to complete the work. No separate payment will be made for removal and disposal of the sediment from the insert, but all costs in connection therewith shall be included in the Contract unit price bid.

ITEM 767.121**SEDIMENT CONTROL BARRIER****FOOT**

REV. 2022.02.01 (REV. DATE TO BE REMOVED BY MASSDOT CONTRACTS)

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
- Straw bales which shall be trenched

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 in the approximate location as shown on the plans 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 specified on the plans and 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.

ITEM 767.121 (Continued)**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.

Straw Bales

Straw bales shall be used if shown on the plans or when specified by Orders of Condition or other permit requirements.

Bales should be placed in a single row, lengthwise on the contour, with ends of adjacent bales tightly abutting one another. All bales should be either wire-bound or string-tied. Straw bales should be installed so that bindings are oriented around the sides (rather than along the tops and bottoms) of the bales in order to prevent deterioration of the bindings.

The barrier should be entrenched and backfilled. A trench should be excavated the width of a bale and the length of the proposed barrier to a minimum depth of 4 inches. The trench must be deep enough to remove all grass and other material which might allow underflow. After the bales are staked and chinked (filled by wedging), the excavated soil should be backfilled against the barrier. Backfill soil should conform to the ground level on the downhill side and should be built up to 4 inches against the uphill side of the barrier.

Each bale should be securely anchored by at least 2 stakes or re-bars driven through the bale. The first stake in each bale should be driven toward the previously laid bale to force the bales together. Stakes or re-bars should be driven deep enough into the ground to securely anchor the bales. For safety reasons, stakes should not extend above the bales but should be driven in flush with the top of the bale.

The gaps between the bales should be chinked (filled by wedging) with straw to prevent water from escaping between the bales. Loose straw scattered over the area immediately uphill from a straw bale barrier tends to increase barrier efficiency. Wedging must be done carefully in order not to separate the bales.

When used in a swale, the barrier should be extended to such a length that the bottoms of the end bales are higher in elevation than the top of the lowest middle bale to assure that sediment-laden runoff will flow either through or over the barrier but not around it.

MAINTENANCE

Maintenance of the sediment control barrier shall be per Section 670.60 of the Standard Specifications or per the Stormwater Pollution Prevention Plan (SWPPP), whichever is more restrictive.

ITEM 767.121 (Continued)

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.
- Straw bales shall be removed and disposed off-site by the Contractor. Areas of trenching shall be raked smooth and disturbed soils stabilized with a seed mix matching adjacent seeding or existing grasses (i.e., lawn or native grass mix).
- 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

Item 767.121 will be measured per foot of sediment control barrier which price shall include all labor, equipment, materials, maintenance, dismantling, removal, restoration of soil, and all incidental costs required to complete the work.

Additional barrier, such as double or triple stacking of compost filter tubes, will be measured for per foot of tube installed.

ITEM 767.121 (Continued)

BASIS OF PAYMENT

Item 767.121 will be paid for at the contract unit price per foot of sediment control barrier which price shall include all labor, equipment, materials, maintenance, dismantling, removal, restoration of soil, and all incidental costs required to complete the work.

Additional barrier, such as double or triple stacking of compost filter tubes, will be paid for per foot of tube installed.

Barriers that have been driven over or otherwise damaged by construction activities shall be repaired or replaced as directed by the Engineer at the Contractor's expense.

ITEM 991.1**CONTROL OF WATER, STRUCTURE**
NO. C-21-002**LUMP SUM**

The work to be done under this item shall conform to the relevant provisions of Section 140 and consists of all equipment, labor and materials, placement of straw bales, cofferdams, sedimentation basins, and other water control devices required for the control of water for substructure concrete repairs and for other work that may be required to complete the preservation of existing Bridge No. C-21-002 as shown on the plans, as directed by the Engineer, and as specified herein.

The Contractor shall follow the guidelines of this specification for which dewatering is to be accomplished. However, except for payment, all work shall conform to the relevant requirements of Section 140.

This work shall be done within the limits of the Water Quality Plans and their associated impact areas.

The Contractor shall submit complete working drawings and computation of the proposed dewatering system with supporting data as necessary to the Engineer for approval in accordance with Subsection 5.02 and the Special Provisions. These drawings shall be accompanied by design calculations. Both shall be certified by a Professional Engineer registered in the Commonwealth of Massachusetts. The Contractor shall evaluate existing conditions and water flow, and of the effects of the proposed temporary works and construction methods, and shall provide in the design for all loads and construction conditions necessary to permit demolition and construction of the specified structure while maintaining public safety and protecting complete work and all third party property from damage resulting from construction operations.

Measures to control the discharge of pollutants into water resource areas shall include, but not be limited to the following:

- Rigorous management of construction operations involving potentially hazardous materials, such as, refueling and maintenance of construction equipment.
- Formulation of contingency plans to control accidental spillage from potentially hazardous materials.
- Siting of construction staging areas outside of the riverfront inner riparian area and Wetlands buffer zones, and locating construction staging on relatively flat ground.
- Scheduling of work within the resource areas to avoid periods of high flood (e.g., spring floods) and inclement weather.
- Installation and continuous maintenance of staked straw bales and filter fences to prevent sediment migration into adjacent downstream resource areas. Placement of erosion controls shall be as shown on the plans, as specified herein, or as directed by the Engineer, so as to accomplish maximum control of project related sediment mobilization. Additional erosion control measures shall be employed as necessary to prevent erosion and sedimentation of the streambed. These measures shall be maintained for the duration of the contract.
- All discharge resulting from dewatering activities shall be directed to temporary sedimentation/retention basins located as necessary to control turbidity. At no time shall said discharge be directly released into adjacent resource areas.

ITEM 991.1 (Continued)

The Contractor shall provide water barriers, sandbags, filtering fabrics, silt fencing, sedimentation/retention basins and/or other effective procedures or structures together with all labor, materials, and equipment necessary for controlling water in the under and around the bridge. Such work shall be subject to the approval of the Engineer, but such approval will not relieve the Contractor of responsibility for the adequacy of construction, maintenance, operation and safety of the water control system.

The Contractor is advised that the work to be performed under this item shall be in conformance with the environmental permits associated with this contract.

All work (including all labor, tools, equipment, materials, maintenance, and fees) required in order to conform to the above environmental permitting sections, if not included separately under other items, shall be considered incidental to Item 991.1, and no additional compensation shall be made to the Contractor.

Also included shall be all necessary additional permits that may be required in performing the work under this item. The Contractor is advised that the use of sandbags or jersey barriers, for cofferdam control of water on this project, would constitute a temporary fill in waters of the United States, and would require permitting under Section 404 of the Clean Water Act, the Army Corp Permit.

Upon completion of the work, the cofferdams, temporary sheeting, water barriers, and/or other water control items, etc., shall be removed from the site.

METHOD OF MEASUREMENT

Measurement for Item 991.1 will be made per Lump Sum for Control of Water.

BASIS FOR PAYMENT

Payment for Item 991.1 will be made per Lump Sum for Control of Water, which price shall include full compensation for all labor, tools, equipment, materials, permitting, permitting fees, installation, maintenance, and removal of all temporary water barriers and/or other materials as described above, all diverting systems or material, all sedimentation fences, sedimentation/retention basins, pumping operations, and all incidental work necessary to complete the work under this item required for the preservation of Structure No. C-21-002.

WATER QUALITY CERTIFICATION

MassDOT Proj. # 612514 – Berkshire Trail (Route 9 & 112) over Westfield River
Cummington, MA

ATTACHMENT K

Section 7 Documentation





United States Department of the Interior

FISH AND WILDLIFE SERVICE
New England Ecological Services Field Office
70 Commercial Street, Suite 300
Concord, NH 03301-5094
Phone: (603) 223-2541 Fax: (603) 223-0104



In Reply Refer To:

05/02/2024 15:59:40 UTC

Project code: 2024-0084984

Project Name: 612514 - CUMMINGTON- BRIDGE PRESERVATION, C-21-002, ROUTE 9
OVER WESTFIELD RIVER

Subject: Consistency letter for the '612514 - CUMMINGTON- BRIDGE PRESERVATION, C-21-002, ROUTE 9 OVER WESTFIELD RIVER' project under the amended February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion (dated March 23, 2023) for Transportation Projects within the Range of the Indiana Bat and Northern Long-eared Bat (NLEB).

To whom it may concern:

The U.S. Fish and Wildlife Service (Service) has received your request dated May 02, 2024 to verify that the **612514 - CUMMINGTON- BRIDGE PRESERVATION, C-21-002, ROUTE 9 OVER WESTFIELD RIVER** (Proposed Action) may rely on the amended February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion (dated March 23, 2023) for Transportation Projects within the Range of the Indiana Bat and Northern Long-eared Bat (PBO) to satisfy requirements under section 7(a)(2) of the Endangered Species Act of 1973 (ESA) (87 Stat.884, as amended; 16 U.S.C. 1531 *et seq.*).

Based on the information you provided (Project Description shown below), you have determined that the Proposed Action will have no effect on the endangered Indiana bat (*Myotis sodalis*) or the endangered northern long-eared bat (*Myotis septentrionalis*). If the Proposed Action is not modified, **no consultation is required for these two species**. If the Proposed Action is modified, or new information reveals that it may affect the Indiana bat and/or northern long-eared bat in a manner or to an extent not considered in the PBO, further review to conclude the requirements of ESA section 7(a)(2) may be required.

For Proposed Actions that include bridge/culvert or structure removal, replacement, and/or maintenance activities:

If your initial bridge/culvert or structure assessment failed to detect Indiana bats and/or NLEBs use or occupancy, yet later detected prior to, or during construction, please submit the Post Assessment Discovery of Bats at Bridge/Culvert or Structure Form (User Guide Appendix E) to this Service Office within 2 working days of the incident. In these instances, potential incidental

take of Indiana bats and/or NLEBs may be exempted provided that the take is reported to the Service.

If the Proposed Action may affect any other federally-listed or proposed species and/or designated critical habitat, additional consultation between the lead Federal action agency and this Service Office is required. If the proposed action has the potential to take bald or golden eagles, additional coordination with the Service under the Bald and Golden Eagle Protection Act may also be required. In either of these circumstances, please advise the lead Federal action agency accordingly.

The following species may occur in your project area and **are not** covered by this determination:

- Monarch Butterfly *Danaus plexippus* Candidate
- Tricolored Bat *Perimyotis subflavus* Proposed Endangered

PROJECT DESCRIPTION

The following project name and description was collected in IPaC as part of the endangered species review process.

NAME

612514 - CUMMINGTON- BRIDGE PRESERVATION, C-21-002, ROUTE 9 OVER
WESTFIELD RIVER

DESCRIPTION

612514 - CUMMINGTON- BRIDGE PRESERVATION, C-21-002, ROUTE 9 OVER
WESTFIELD RIVER

Tricolored Bat: Proposed Endangered Species only. At this time, no formal USFWS
consultation is required

Monarch Butterfly: Candidate Species only, no conservation measures at this time.

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@42.4559159,-72.88475010000002,14z>



DETERMINATION KEY RESULT

Based on the information you provided, you have determined that the Proposed Action will have no effect on the endangered Indiana bat and/or the endangered northern long-eared bat.

Therefore, no consultation with the U.S. Fish and Wildlife Service pursuant to Section 7(a)(2) of the Endangered Species Act of 1973 (ESA) (87 Stat. 884, as amended 16 U.S.C. 1531 *et seq.*) is required for these two species.

QUALIFICATION INTERVIEW

1. Is the project within the range of the Indiana bat^[1]?

[1] See [Indiana bat species profile](#)

Automatically answered

No

2. Is the project within the range of the northern long-eared bat^[1]?

[1] See [northern long-eared bat species profile](#)

Automatically answered

Yes

3. [Semantic] Does your proposed action intersect an area where Indiana bats and northern long-eared bats are not likely to occur?

Automatically answered

Yes

DETERMINATION KEY DESCRIPTION: FHWA, FRA, FTA PROGRAMMATIC CONSULTATION FOR TRANSPORTATION PROJECTS AFFECTING NLEB OR INDIANA BAT

This key was last updated in IPaC on October 30, 2023. Keys are subject to periodic revision.

This decision key is intended for projects/activities funded or authorized by the Federal Highway Administration (FHWA), Federal Railroad Administration (FRA), and/or Federal Transit Administration (FTA), which may require consultation with the U.S. Fish and Wildlife Service (Service) under Section 7 of the Endangered Species Act (ESA) for the endangered **Indiana bat** (*Myotis sodalis*) and the endangered **northern long-eared bat** (NLEB) (*Myotis septentrionalis*).

This decision key should only be used to verify project applicability with the Service's [amended February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion \(dated March 23, 2023\) for Transportation Projects](#). The programmatic biological opinion covers limited transportation activities that may affect either bat species, and addresses situations that are both likely and not likely to adversely affect either bat species. This decision key will assist in identifying the effect of a specific project/activity and applicability of the programmatic consultation. The programmatic biological opinion is not intended to cover all types of transportation actions. Activities outside the scope of the programmatic biological opinion, or that may affect ESA-listed species other than the Indiana bat or NLEB, or any designated critical habitat, may require additional ESA Section 7 consultation.

IPAC USER CONTACT INFORMATION

Agency: Massachusetts Department of Transportation

Name: Trevor Burns

Address: 10 Park Plaza

City: Boston

State: MA

Zip: 02116

Email: trevor.b.burns@dot.state.ma.us

Phone: 8573010759

LEAD AGENCY CONTACT INFORMATION

Lead Agency: Federal Highway Administration

WATER QUALITY CERTIFICATION

MassDOT Proj. # 612514 – Berkshire Trail (Route 9 & 112) over Westfield River
Cummington, MA

ATTACHMENT K

Section 106 Documentation



950 CMR: OFFICE OF THE SECRETARY OF THE COMMONWEALTH

APPENDIX A
 MASSACHUSETTS HISTORICAL COMMISSION
 220 MORRISSEY BOULEVARD
 BOSTON, MASS. 02125
 617-727-8470, FAX: 617-727-5128

PROJECT NOTIFICATION FORM

Project Name: Rehabilitation of Bridge C-21-002 (MassDOT #612514)
Location /Address: Berkshire Trail (ST Route 9/112) over East Branch Westfield River
City/Town: Cummington
Project Proponent
Name: Massachusetts Department of Transportation
Address: 10 Park Plaza
City/Town/Zip/Telephone: Boston, MA 02116 / T: 207-590-4999

Agency license or funding for the project (list all licenses, permits, approvals, grants or other entitlements being sought from state and federal agencies).

<u>Agency Name</u>	<u>Type of License or funding (specify)</u>
FHWA (lead agency)	Federal Aid funding
US Army Corps of Engineers	Section 404 permit

Project Description (narrative):

The Massachusetts Department of Transportation (MassDOT) proposes to rehabilitate Bridge C-21-002, which carries Berkshire Trail (Route 9/112) over the East Branch Westfield River in Cummington. Constructed in 1939, Bridge C-21-002, also known as Dudley Manor Bridge, consists of a single-span half-through tied steel box rib arch superstructure supported on reinforced concrete abutments with wingwalls. The bridge has welded steel Boston Type railings. Dudley Manor Bridge is the only known example of its type in Massachusetts and accordingly meets the criteria for individual listing in the National Register of Historic Places for its contribution to the understanding of bridge engineering in the state.

The proposed project will connect a gap in the multi-modal trail network along Mystic River. This shared use path will provide a safe connection between MacDonald Park and Station Landing Park, mirroring a similar path and boardwalk on the south bank of the river that allows pedestrians and bicyclists to follow the trail network along the river without crossing eight lanes of traffic on the Fellsway.

Proposed work will rehabilitate Bridge C-21-002, with repair of both the structural steel of the tied arch superstructure and the reinforced concrete substructure. Repairs to the arches will involve replacing existing splice plates along the arch tie beam on the south elevation of the bridge at Panels L2-L3 and L5-L6. Strengthening plates will be installed to repair section loss present in the arch tie beam at Panel L7-L8 on the north elevation. Strengthening plates will be installed at the lower end of the vertical arch hangers on both sides of the bridge. More extensive deterioration and steel section loss is evident in much of the floor system, including the floorbeam ends, deck stringers, lateral and horizontal bracing members, gusset plate connections and cantilever brackets carrying the sidewalk along the northerly side of the bridge. Deteriorated floor system members will be repaired or replaced in-kind, as noted on the attached plans.

950 CMR: OFFICE OF THE SECRETARY OF THE COMMONWEALTH**APPENDIX A (continued)**

Additional rehabilitation work on the bridge will include full removal and replacement of the existing concrete deck and concrete-filled grid sidewalk; installation of new wheel guards and crash-tested at-curb vehicular railing; in-kind replacement of existing Boston-type pedestrian railings; concrete repairs to areas of cracking, spalling and delamination on the abutments and wingwalls; cleaning and painting all existing structural steel.

Proposed work will also include roadway reconstruction along the bridge approaches, extending 250' to the east and west of the bridge. Roadway reconstruction will include full-depth pavement reconstruction along the bridge approaches, including the intersections at Thayer Corner Road/Mougin Road, Lilac Avenue and Old Route 9. Existing galvanized steel W-beam guardrail will be replaced in-kind. Existing granite curbing will be replaced in-kind, and existing asphalt berm will be replaced with granite curbing. New catch basins and drain pipes will be installed within the reconstructed roadway to connect into existing drainage systems within the project area. Roadside slopes will be graded to match existing topography and temporary erosion and sedimentation controls will be installed. All proposed project work within the project area will be confined to the existing State Highway layout.

A wetland restoration has been identified at the northeast corner of the bridge. The proposed restoration will remove invasive plants currently growing along the riverbank and replace them with a suitable mix of native riparian wetland plants.

Does the project include demolition? If so, specify nature of demolition and describe the building(s) which are proposed for demolition.

N/A

Does the project include rehabilitation of any existing buildings? If so, specify nature of rehabilitation and describe the building(s) which are proposed for rehabilitation

N/A

Does the project include new construction? If so, describe (attach plans and elevations if necessary).

N/A

To the best of your knowledge, are any historic or archaeological properties known to exist within the project's area of potential impact? If so, specify.

Review of the National Register of Historic Places revealed that no National Register-listed properties or historic districts are located within or adjacent to the project area of potential effects (APE). However, review of the Inventory of Historic and Archaeological Assets of the Commonwealth revealed that the APE is located within the Inventoried **Cummington Center Area (CUM.C)**. This area consists of an intact late 18th through 19th century village, incorporating numerous 19th century residences, as well as several churches, schools and civic buildings, and formerly centered around several mills, factories and other manufacturing businesses. There are two residences within the Inventoried area in the vicinity of Dudley Manor Bridge: the **L.J. Orcutt House (CUM.69)**, a finely-detailed Italianate style dwelling built in 1871, located at 2 Lilac Avenue to the northeast of the bridge; and the **Hiram Robbin House (CUM.98)**, a vernacular five-bay, 1 1/2-story high-posted Cape form house built in 1854, located at 4 Thayer Corner Road to the southwest of the bridge. Cummington Center has been recommended eligible for listing in the National Register. **Dudley Manor Bridge (CUM.906)** is also located within the boundaries of the Inventoried area, and has been determined individually eligible for listing in the National Register.

A review of MHC's archaeological maps in MACRIS revealed no recorded pre-Contact or historic archaeological sites within or adjacent to the project's direct APE. Additionally, there are no recorded sites within several miles of the APE. It is the opinion of the MassDOT Archaeologist, Jameson Harwood, that

950 CMR: OFFICE OF THE SECRETARY OF THE COMMONWEALTH**APPENDIX A (continued)**

low sensitivity can be ascribed to the project's direct APE based on the impacts of past roadway, bridge, and drainage construction. Based on the 1939 construction plans and recent soil borings, the bridge approaches are constructed on 11-ft. of elevated fill to carry the roadway over the river. The proposed bridge rehabilitation and roadway reconstruction activities will be confined to disturbed areas within the existing SHLO.

What is the total acreage of the project area?

Woodland	<u> </u>	acres	Productive Resources:		
Wetland	<u> </u>	acres	Agriculture	<u> </u>	acres
Floodplain	<u><1</u>	acres	Forestry	<u> </u>	acres
Open Space	<u><2</u>	acres	Mining/Extraction	<u> </u>	acres
Developed	<u> </u>	acres	Total Project Acreage	<u><3</u>	acres

What is the acreage of the proposed new construction?

<1 acres

What is the present land use of the project area?

The Project area is situated along State Route 9/112, amid tree-lined riverbanks with a cultivated agricultural field located to the northwest of the bridge, and 19th century residences to the southwest and northeast.

Please attach a copy of the section of the USGS quadrangle map which clearly marks the project location.

This Project Notification Form has been submitted to the MHC in compliance with 950 CMR 71.00.

Signature of person submitting this form:



Date: 4/5/2024

Name: Kurt Jergensen

Address: 10 Park Plaza

City/Town/Zip: Boston, MA 02116

Telephone: 207-590-4999

REGULATORY AUTHORITY

950 CMR 71.00: M.G.L. c. 9, §§ 26-27C as amended by St. 1988, c. 254.

7/1/93

950 CMR - 276

EXHIBIT NO. 1 OF 9



LOCUS MAP

Jergensen, Kurt E. (DOT)

From: Jergensen, Kurt E. (DOT)
Sent: Friday, April 5, 2024 4:13 PM
To: Bettina Washington
Cc: Harwood, Jameson (DOT)
Subject: Cummington, Bridge C-21-002 rehabilitation (MassDOT #612514)
Attachments: Cummington Br. C-21-002 PNF.pdf; Locus map.pdf; 612514 100% Highway Plans.pdf; 612514 100% Bridge Plans.pdf

Tracking:	Recipient	Delivery
	Bettina Washington	
	Harwood, Jameson (DOT)	Delivered: 4/5/2024 4:14 PM

Dear Ms. Washington,

MassDOT is submitting the enclosed information regarding the above-noted project to the Wampanoag Tribe of Gay Head (Aquinnah) to meet the Section 106 consultation requirements of the US Army Corps of Engineers. Please submit any written comments or concerns regarding historic or archaeological properties that may be affected by this project to Carrie Lavalley, P.E., Chief Engineer, Massachusetts Department of Transportation, 10 Park Plaza, Boston, MA 02116-3973, Attn: Jameson Harwood.

You also may send comments, questions, or requests for more information by email to either myself or Jameson.

Thank you very much.

Kurt Jergensen
Historic Bridge Specialist
Environmental Services
MassDOT, Highway Division
Ten Park Plaza, Boston, MA 02116
Cell: 207-590-4999

Jergensen, Kurt E. (DOT)

From: Microsoft Outlook
To: Bettina Washington
Sent: Friday, April 5, 2024 4:14 PM
Subject: Relayed: Cummington, Bridge C-21-002 rehabilitation (MassDOT #612514)

Delivery to these recipients or groups is complete, but no delivery notification was sent by the destination server:

[Bettina Washington \(thpo@wampanoagtribe-nsn.gov\)](mailto:thpo@wampanoagtribe-nsn.gov)

Subject: Cummington, Bridge C-21-002 rehabilitation (MassDOT #612514)



Cummington,
Bridge C-21-002...

Jergensen, Kurt E. (DOT)

From: Jergensen, Kurt E. (DOT)
Sent: Friday, April 5, 2024 4:18 PM
To: Robinson, David S (EEA)
Cc: Harwood, Jameson (DOT)
Subject: Cummington, Bridge C-21-002 rehabilitation (MassDOT #612514)
Attachments: Cummington Br. C-21-002 PNF.pdf; Locus map.pdf; 612514 100% Highway Plans.pdf; 612514 100% Bridge Plans.pdf

Tracking:	Recipient	Delivery
	Robinson, David S (EEA)	Delivered: 4/5/2024 4:18 PM
	Harwood, Jameson (DOT)	Delivered: 4/5/2024 4:18 PM

Dear Mr. Robinson,

MassDOT is submitting the enclosed information regarding the above-noted project to the Board of Underwater Archaeological Resources to meet the Section 106 consultation requirements of the US Army Corps of Engineers. Please submit any written comments or concerns regarding historic or archaeological properties that may be affected by this project to Carrie Lavalley, P.E., Chief Engineer, Massachusetts Department of Transportation, 10 Park Plaza, Boston, MA 02116-3973, Attn: Jameson Harwood.

You also may send comments, questions, or requests for more information by email to either myself or Jameson.

Thank you very much.

Kurt Jergensen
Historic Bridge Specialist
Environmental Services
MassDOT, Highway Division
Ten Park Plaza, Boston, MA 02116
Cell: 207-590-4999

Jergensen, Kurt E. (DOT)

From: Microsoft Outlook
To: Robinson, David S (EEA)
Sent: Friday, April 5, 2024 4:18 PM
Subject: Delivered: Cummington, Bridge C-21-002 rehabilitation (MassDOT #612514)

Your message has been delivered to the following recipients:

[Robinson, David S \(EEA\) \(David.S.Robinson@mass.gov\)](mailto:David.S.Robinson@mass.gov)

Subject: Cummington, Bridge C-21-002 rehabilitation (MassDOT #612514)



Cummington,
Bridge C-21-002...

Jergensen, Kurt E. (DOT)

From: Jergensen, Kurt E. (DOT)
Sent: Friday, April 5, 2024 4:14 PM
To: David Weeden
Cc: 106Review@mwtribe-nsn.gov; Harwood, Jameson (DOT)
Subject: Cummington, Bridge C-21-002 rehabilitation (MassDOT #612514)
Attachments: Cummington Br. C-21-002 PNF.pdf; Locus map.pdf; 612514 100% Highway Plans.pdf; 612514 100% Bridge Plans.pdf

Dear Mr. Weeden,

MassDOT is submitting the enclosed information regarding the above-noted project to the Mashpee Wampanoag Tribe to meet the Section 106 consultation requirements of the US Army Corps of Engineers. Please submit any written comments or concerns regarding historic or archaeological properties that may be affected by this project to Carrie Lavallee, P.E., Chief Engineer, Massachusetts Department of Transportation, 10 Park Plaza, Boston, MA 02116-3973, Attn: Jameson Harwood.

You also may send comments, questions, or requests for more information by email to either myself or Jameson.

Thank you very much.

Kurt Jergensen
Historic Bridge Specialist
Environmental Services
MassDOT, Highway Division
Ten Park Plaza, Boston, MA 02116
Cell: 207-590-4999

Jergensen, Kurt E. (DOT)

From: Microsoft Outlook
To: David Weeden; 106Review@mwtribe-nsn.gov
Sent: Friday, April 5, 2024 4:15 PM
Subject: Relayed: Cummington, Bridge C-21-002 rehabilitation (MassDOT #612514)

Delivery to these recipients or groups is complete, but no delivery notification was sent by the destination server:

[David Weeden \(David.Weeden@mwtribe-nsn.gov\)](mailto:David.Weeden@mwtribe-nsn.gov)

[106Review@mwtribe-nsn.gov \(106Review@mwtribe-nsn.gov\)](mailto:106Review@mwtribe-nsn.gov)

Subject: Cummington, Bridge C-21-002 rehabilitation (MassDOT #612514)



Cummington,
Bridge C-21-002...

Jergensen, Kurt E. (DOT)

From: Jergensen, Kurt E. (DOT)
Sent: Friday, April 5, 2024 4:16 PM
To: thpo
Cc: Harwood, Jameson (DOT)
Subject: Cummington, Bridge C-21-002 rehabilitation (MassDOT #612514)
Attachments: Cummington Br. C-21-002 PNF.pdf; Locus map.pdf; 612514 100% Highway Plans.pdf; 612514 100% Bridge Plans.pdf

Tracking:	Recipient	Delivery
	thpo	
	Harwood, Jameson (DOT)	Delivered: 4/5/2024 4:16 PM

Dear Dr. Bendremer,

MassDOT is submitting the enclosed information regarding the above-noted project to the Stockbridge-Munsee Band of Mohicans to meet the Section 106 consultation requirements of the US Army Corps of Engineers. Please submit any written comments or concerns regarding historic or archaeological properties that may be affected by this project to Carrie Lavalley, P.E., Chief Engineer, Massachusetts Department of Transportation, 10 Park Plaza, Boston, MA 02116-3973, Attn: Jameson Harwood.

You also may send comments, questions, or requests for more information by email to either myself or Jameson.

Thank you very much.

Kurt Jergensen
Historic Bridge Specialist
Environmental Services
MassDOT, Highway Division
Ten Park Plaza, Boston, MA 02116
Cell: 207-590-4999

Jergensen, Kurt E. (DOT)

From: Microsoft Outlook
To: thpo
Sent: Friday, April 5, 2024 4:16 PM
Subject: Relayed: Cummington, Bridge C-21-002 rehabilitation (MassDOT #612514)

Delivery to these recipients or groups is complete, but no delivery notification was sent by the destination server:

[thpo \(thpo@mohican-nsn.gov\)](mailto:thpo@mohican-nsn.gov)

Subject: Cummington, Bridge C-21-002 rehabilitation (MassDOT #612514)



Cummington,
Bridge C-21-002...

DOCUMENT A00831

ARMY CORPS OF ENGINEERS

GENERAL PERMIT

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**DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS
NEW ENGLAND DISTRICT OFFICE
696 VIRGINIA ROAD
CONCORD, MASSACHUSETTS 01742-2751**

June 6, 2025

Regulatory Division
Transportation & Utility Section
File Number: NAE-2024-00658

Courtney Walker
MassDOT – Highway Division
10 Park Plaza
Boston, Massachusetts 02116
Via Email: Courtney.l.walker@dot.state.ma.us

Dear Ms. Walker:

This letter is in response to the application you submitted to the U.S. Army Corps of Engineers (USACE), New England District on May 21, 2024, for a Department of the Army general permit verification. We have assigned this project file number NAE-2024-00658, which you should reference in all correspondence with this office.

The work includes the temporary discharge of fill material within 4,100 square feet below the Ordinary High Water (OHW) mark of the East Branch of the Westfield River associated with bridge preservation work proposed for Bridge C-2-002, which carries Route 9 and Route 112 over the East Branch of the Westfield River located at Latitude 42.4559° and Longitude -72.8847°; in Cummington, Hampshire County, Massachusetts. The work is shown on the enclosed plans titled "ST 9/ST 112 OVER EAST BRANCH WESTFIELD RIVER," on 14 sheets dated 4/10/2025.

Based on the information you have provided, we verify that the activity is authorized under General Permit 23 (Linear Transportation and Wetland/Stream Crossings) of the June 2, 2023, federal permit known as the Massachusetts General Permits (GPs). If the extent of the project area and/or nature of the authorized impacts to waters are modified, a revised application must be submitted to this office for written approval before work is initiated. You can find a copy of these permits at:
<https://www.nae.usace.army.mil/Missions/Regulatory/State-General-Permits/>.

Any deviation from the terms and conditions of the permit, or your submitted plans, may subject the permittee to the enforcement provisions of our regulations. Therefore, in the event changes to this project are contemplated, it is recommended you coordinate with this office prior to proceeding with the work. This office must approve any changes before you undertake them. You must perform this work in compliance

with the terms and conditions of the GPs listed above, and also in compliance with the following special conditions:

Project Specific Special Conditions:

1. The permittee shall complete and return the enclosed Work-Start Notification Form to this office at least two weeks prior to the anticipated construction start date.
2. The permittee shall complete and return the enclosed Completion Certification Form to this office at least one month following the completion of the authorized work.
3. A conditioned Water Quality Certification (WQC) has been issued by the Massachusetts Department of Environmental Protection for your project and is attached. You must comply with the conditions specified in the WQC.
4. The National Park Service issued a Wild & Scenic Rivers Act Section 7 Determination with specific avoidance and minimization measures and actions cited as necessary to prevent a "direct and adverse" effect on the East Branch of the Wild & Scenic Westfield River. You must comply with the conditions specified in the attached Section 7 Determination from the National Park Service.
5. All construction shall be completed in accordance with the limits of construction and construction sequences detailed on the enclosed plans titled "ST 9/ST 112 OVER EAST BRANCH WESTFIELD RIVER," on 14 sheets dated 4/10/2025. If there are changes to the plans or construction methods for work within or adjacent to waters of the U.S., the permittee shall contact USACE to discuss modification of this authorization. USACE must approve any changes before they are undertaken.

This GP verification and any associated authorizations does not preclude the necessity to obtain any other federal, state, or local permits, licenses, and/or certifications, which may be required.

If you have any questions related to this verification or have issues accessing documents referenced in this letter, please contact Kevin Newton, Project Manager at (978)-318-8044, or by email at kevin.m.newton@usace.army.mil and cenae-r-ma@usace.army.mil.

This agency continually strives to improve our customer service. To better serve you, please complete the Customer Service Survey located at:
<https://regulatory.ops.usace.army.mil/customer-service-survey/>.

Sincerely,



Steven Rochette
Acting Chief, Technical Support Branch
Regulatory Division

Enclosures

cc (w/enclosures):

Heidi Davis, MassDEP (via Heidi.davis@mass.gov)
Peeyush Rohela, Benesch (via prohela@benesch.com)
Ashley Bomely, Benesch (via abomely@benesch.com)
Edward Reiner, US EPA (via reiner.ed@epa.gov)
Haley Miller, US EPA (via miller.haley@epa.gov)
Andrew Petit de Mange, National Park Service (via
 Andrew_petit_de_mange@nps.gov)
Taelise Ricketts, FEMA (via Taelise.ricketts@fema.gov)

Work-Start Notification Form

File Number: NAE-2024-00658
Hampshire

State: Massachusetts

County:

Permittee: MassDOT – Highway Division, Courtney Walker
Date Verification Issued: 6/6/2025
Project Manager: Kevin Newton

At least two weeks prior to commencing the activity authorized by this permit, sign this certification and return it to the following address:

US ARMY CORPS OF ENGINEERS

New England District

Attn: Kevin Newton

696 Virginia Road

Concord , MA 01742

or

kevin.m.newton@usace.army.mil and cenae-r-ma@usace.army.mil

(978)-318-8044

Please note that your permitted activity is subject to a compliance inspection by a U. S. Army Corps of Engineers (USACE) representative. Failure to comply with any terms or conditions of this authorization may result in the USACE suspending, modifying or revoking the authorization and/or issuing a Class I administrative penalty, or initiating other appropriate legal action.

The people (e.g. contractor) listed below will do the work, and they understand the permit's conditions and limitations.

Contractor Name/Contractor Firm: _____

Business Address: _____

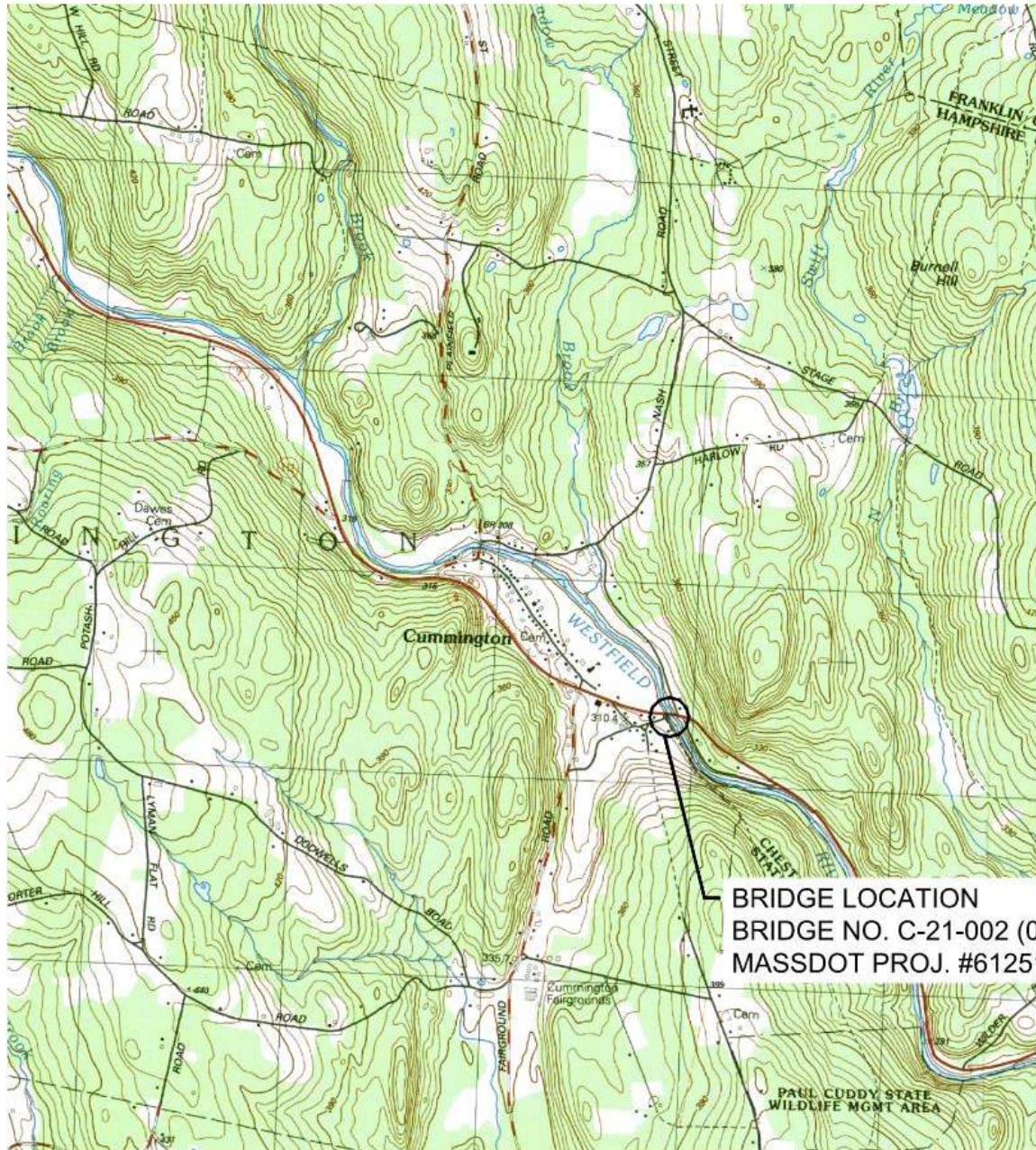
Contractor Phone and Email: _____

Proposed Construction Dates: Start: _____ **Finish:** _____

Signature of Permittee

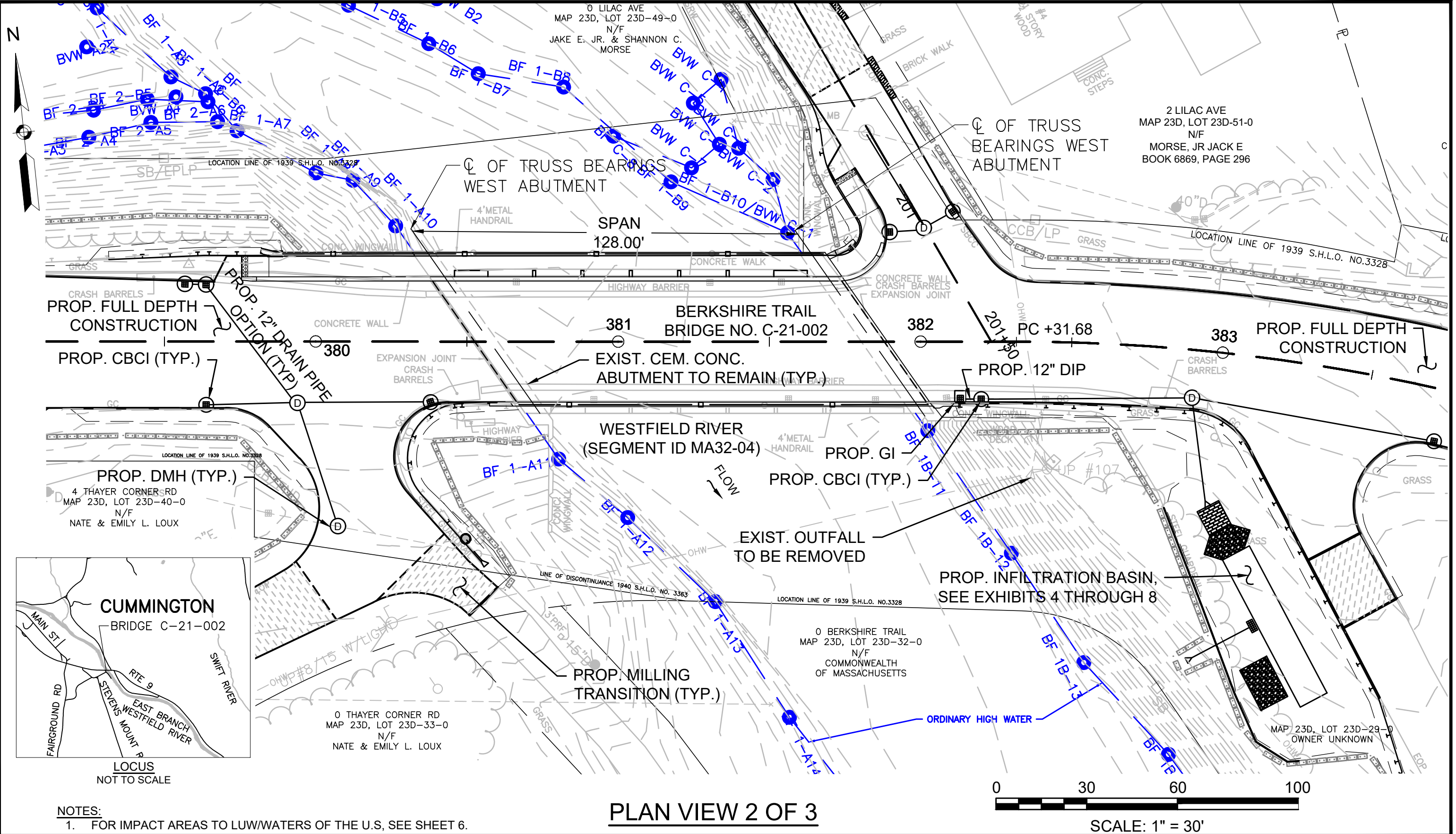
Date

U.S. Army Corps of Engineers (USACE) CERTIFICATION OF COMPLIANCE WITH DEPARTMENT OF THE ARMY PERMIT For use of this form, see Section 404 of the Clean Water Act, Section 10 of the Rivers and Harbors Act of 1899, and Section 103 of the Marine Protection, Research, and Sanctuaries Act; the proponent agency is CECW-COR.		Form Approved - OMB No. 0710-0003 Expires 2027-10-31
The Agency Disclosure Notice (ADN)		
The Public reporting burden for this collection of information, 0710-0003, is estimated to average 10 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or burden reduction suggestions to the Department of Defense, Washington Headquarters Services, at whs.mc-alex.esd.mbx.dd-dod-information-collections@mail.mil . Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.		
PURPOSE: This form is used by recipients of U.S. Army Corps of Engineer Regulatory permits to certify compliance with the permit terms and conditions. Your permitted activity is subject to a compliance inspection by a U.S. Army Corps of Engineers representative. If you fail to comply with this permit, you are subject to permit suspension, modification, or revocation.		
Upon completion of the activity authorized by this permit and any mitigation required by the permit, sign this certification and return it to the U.S. Army Corps of Engineers, <u>New England District Office</u> . The certification can be submitted by email at cenae-r-tu@usace.army.mil or by mail at the below address: Upon completion of the activity authorized by this permit and any mitigation required by the permit, sign this certification and return it to the U.S. Army Corps of Engineers, <u>New England District Office</u> . <div style="text-align: right; padding-right: 50px;"> U.S. Army Corps of Engineers New England District Regulatory Division 696 Virginia Road Concord, MA 01742-2751 </div>		
COMPLETED BY THE CORPS		
Corps Action Number:	NAE-2024-00658	
Permit Type:	Massachusetts General Permit 23	
General Permit Number and Name (if applicable):		
Name of Permittee:	MassDOT	
Project Name:	MassDOT Dudley Manor Bridge Preservation	
Project Location (physical address):	Dudley Manor Bridge conveying Berkshire Trail over the East Branch of the Westfield River, Cummington, Massachusetts	
PERMITTEE'S CERTIFICATION		
Date Work Started: _____ Date Work Completed: _____ Enclose photographs showing the completed project (if available). I _____ hereby certify that the work authorized by the above referenced permit has been completed in accordance with all of the permit terms and conditions, and that any required compensatory mitigation has been completed in accordance with the permit conditions.		
Name	Date	Signature



LOCUS MAP

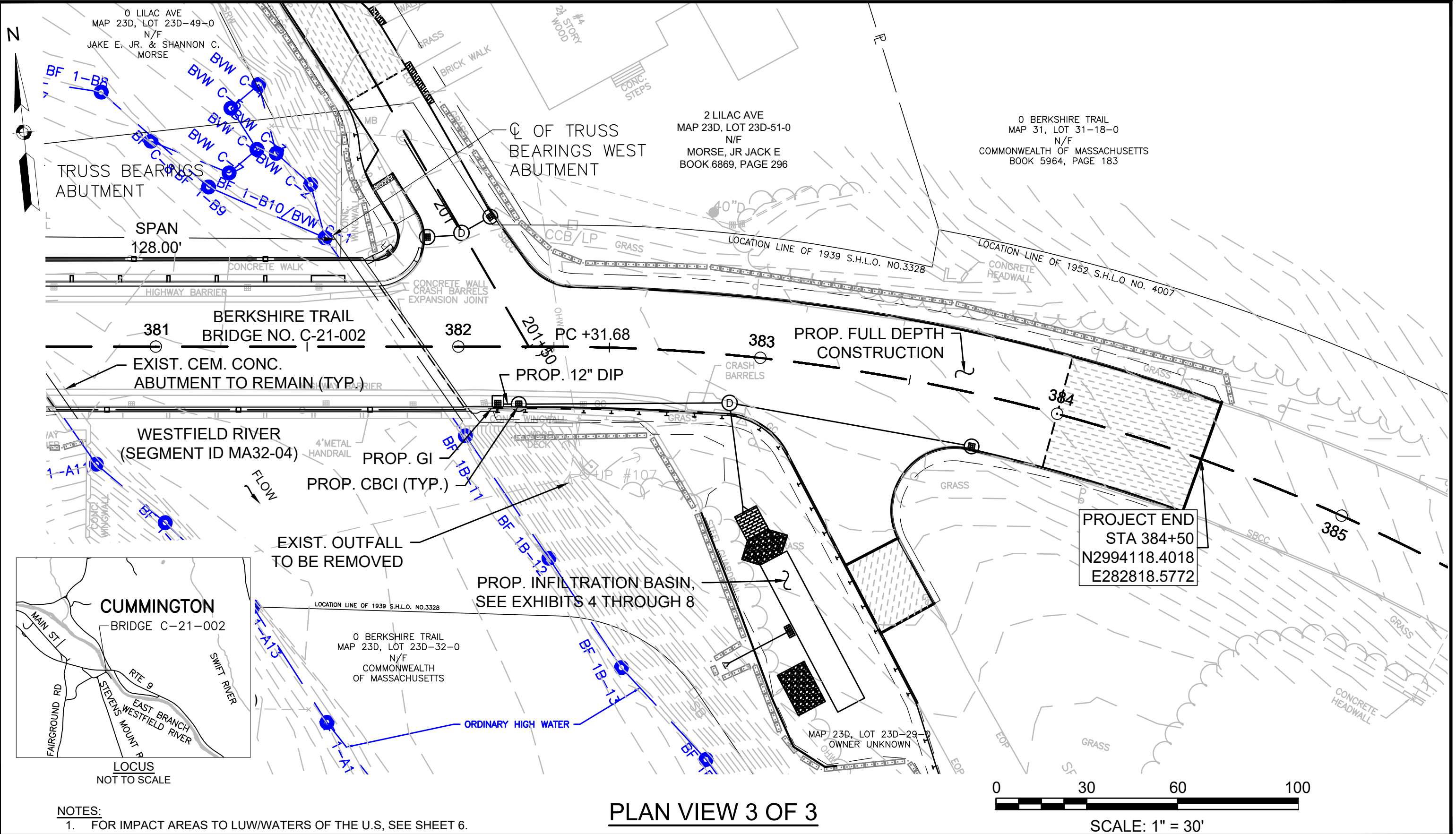


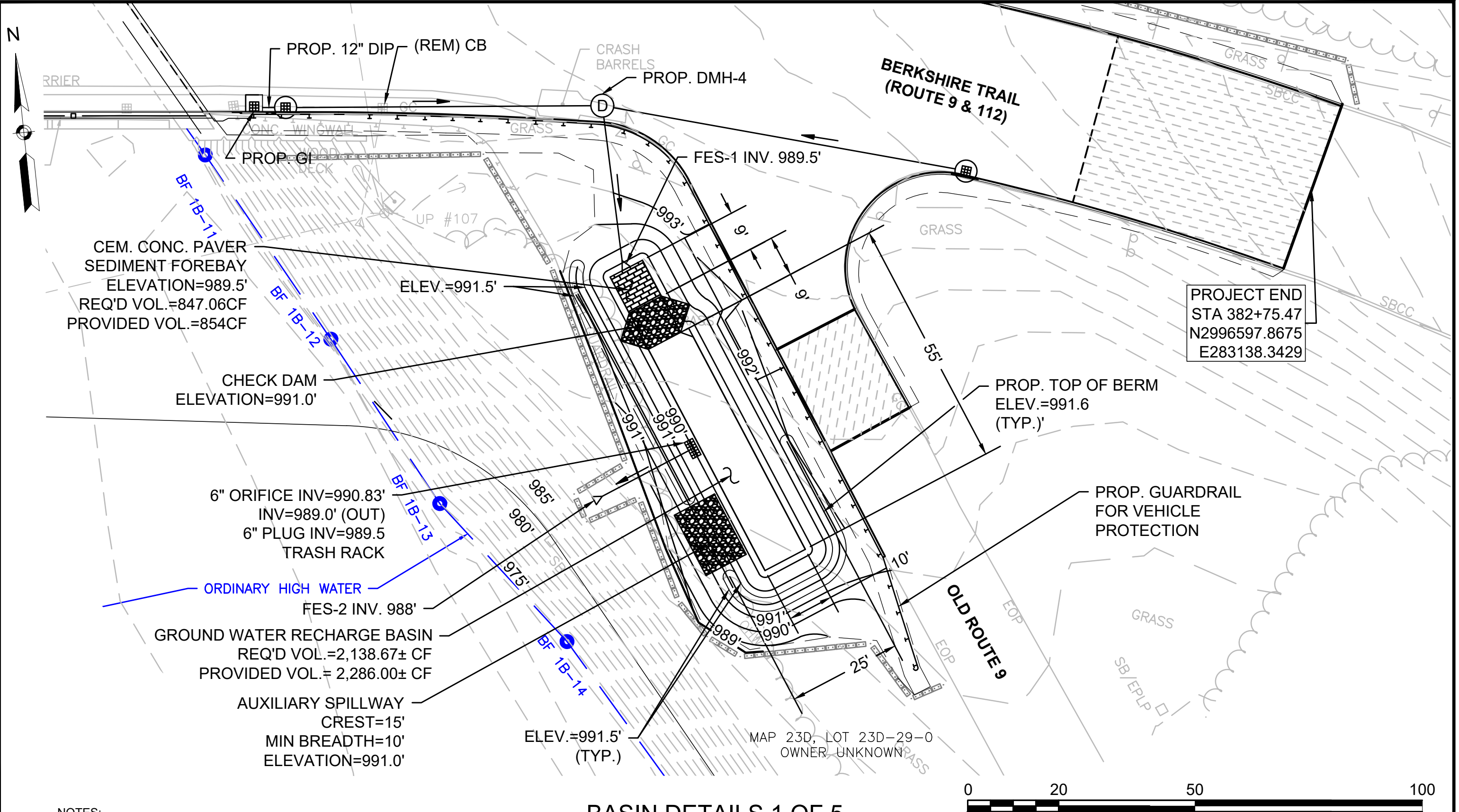


ST 9/ST 112 OVER EAST BRANCH WESTFIELD RIVER (segment ID MA32-04)
CUMMINGTON, MA



SCALE: 1" = 30'
EXHIBIT NO. 2 OF 14





NOTES:
1. FOR IMPACT AREAS TO LUW/WATERS OF THE U.S, SEE SHEET 6.

BASIN DETAILS 1 OF 5

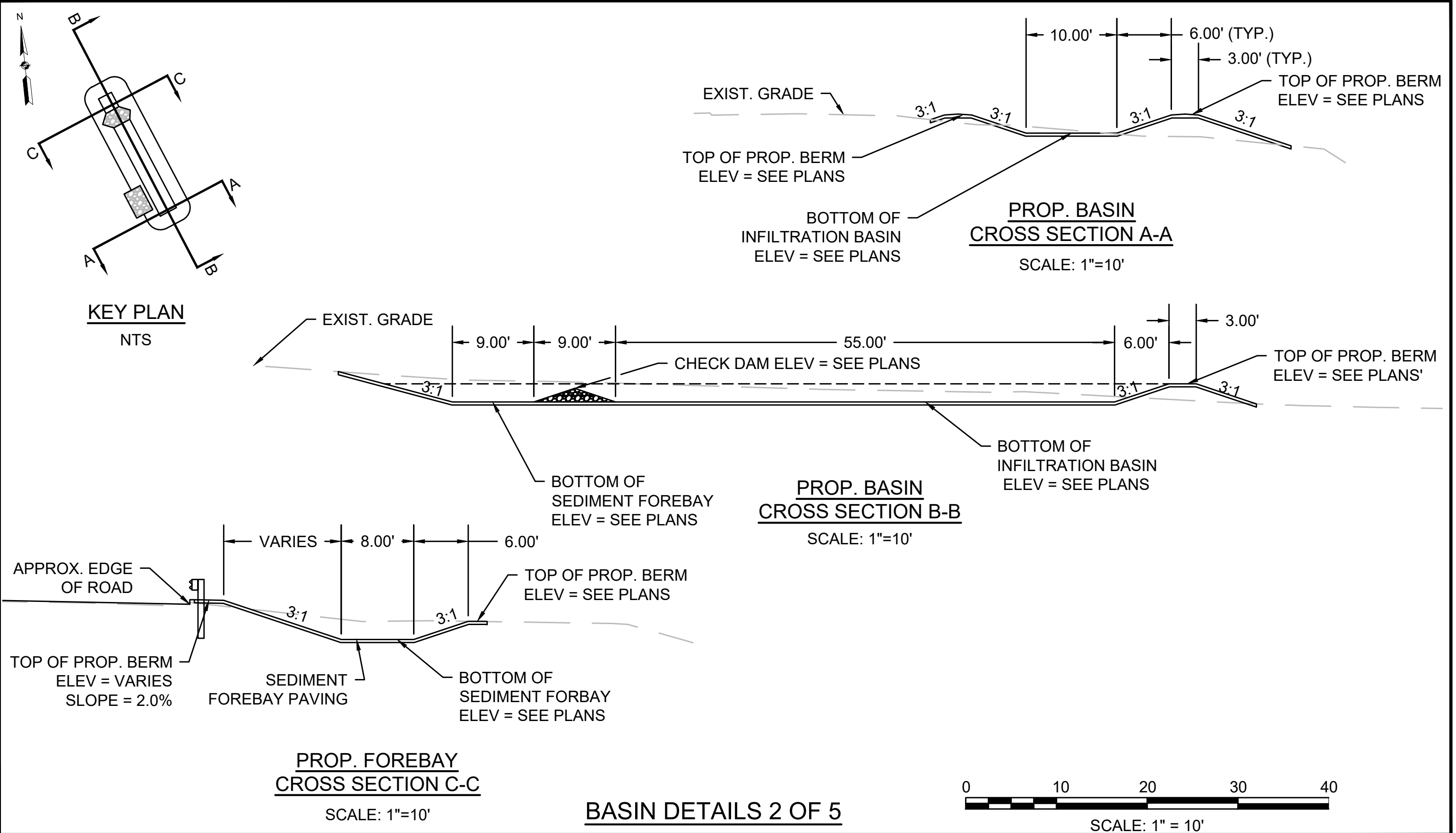
ST 9/ST 112 OVER EAST BRANCH WESTFIELD
RIVER (segment ID MA32-04)
CUMMINGTON, MA

SCALE: 1" = 20'

SCALE: 1" = 20'

EXHIBIT NO. 4 OF 14

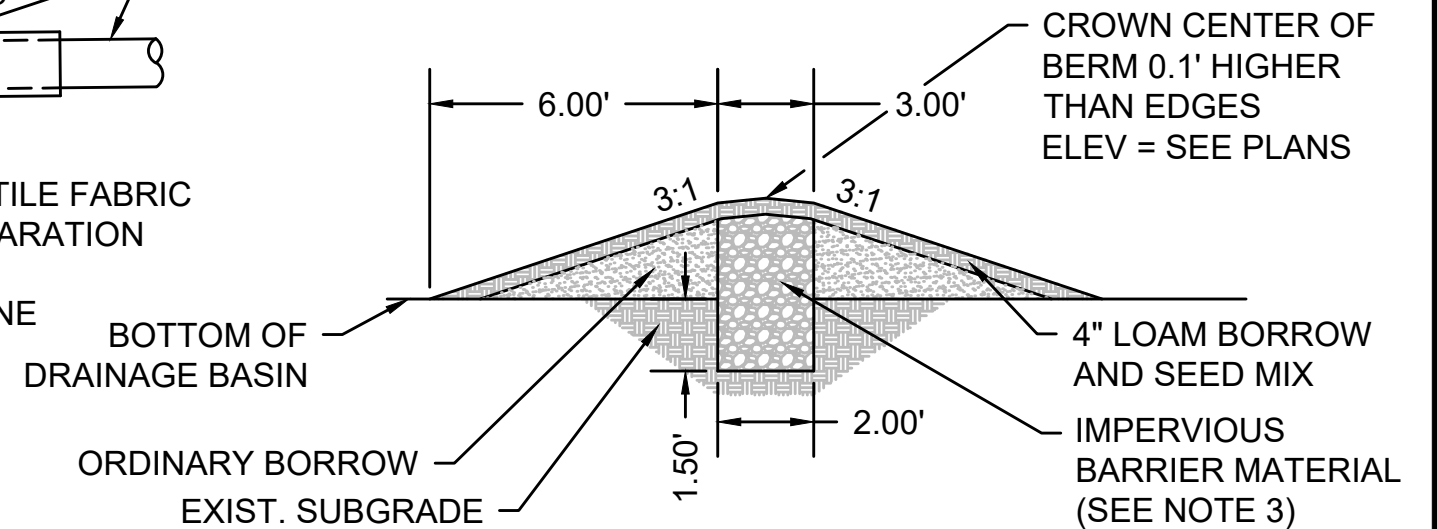




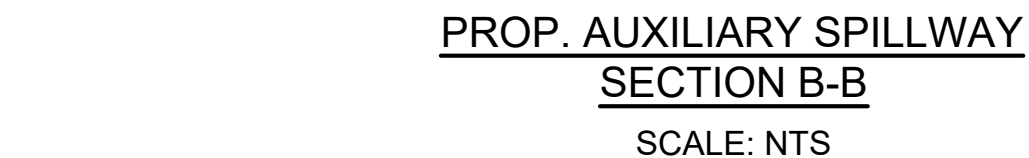
ST 9/ST 112 OVER EAST BRANCH WESTFIELD
RIVER (segment ID MA32-04)
CUMMINGTON, MA

SCALE: 1" = 10'

EXHIBIT NO. 5 OF 14



PROP. BASIN BERM
SECTION DETAIL
SCALE: NTS



- ST 9/ST 112 OVER EAST BRANCH WESTFIELD
RIVER (segment ID MA32-04)
CUMMINGTON, MA**

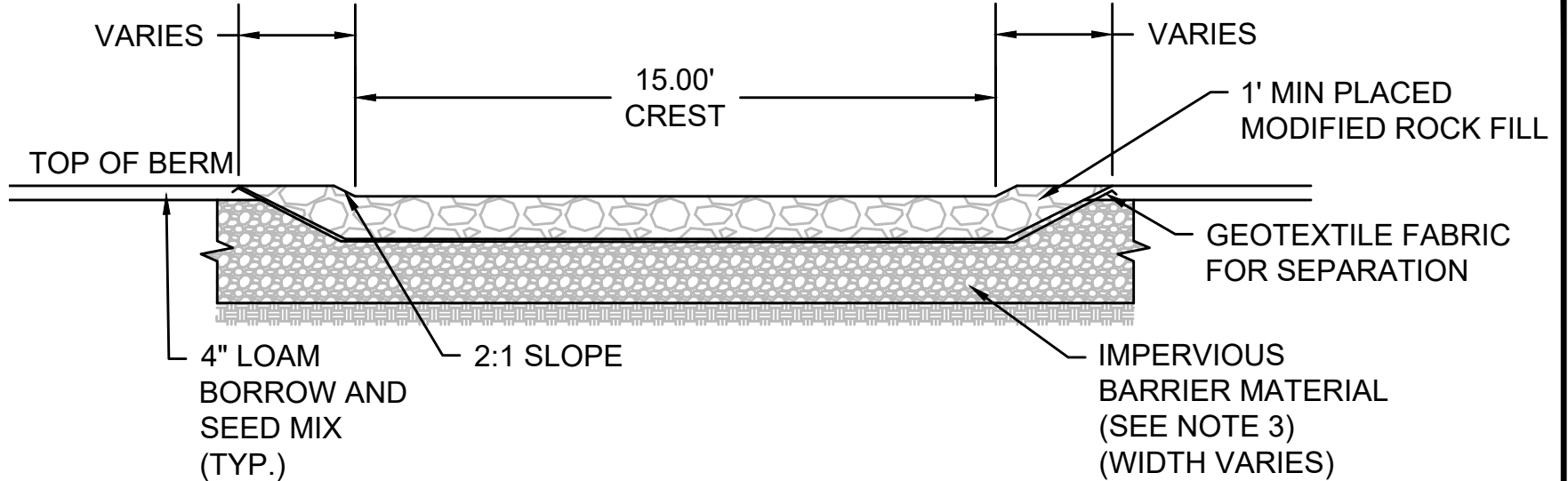
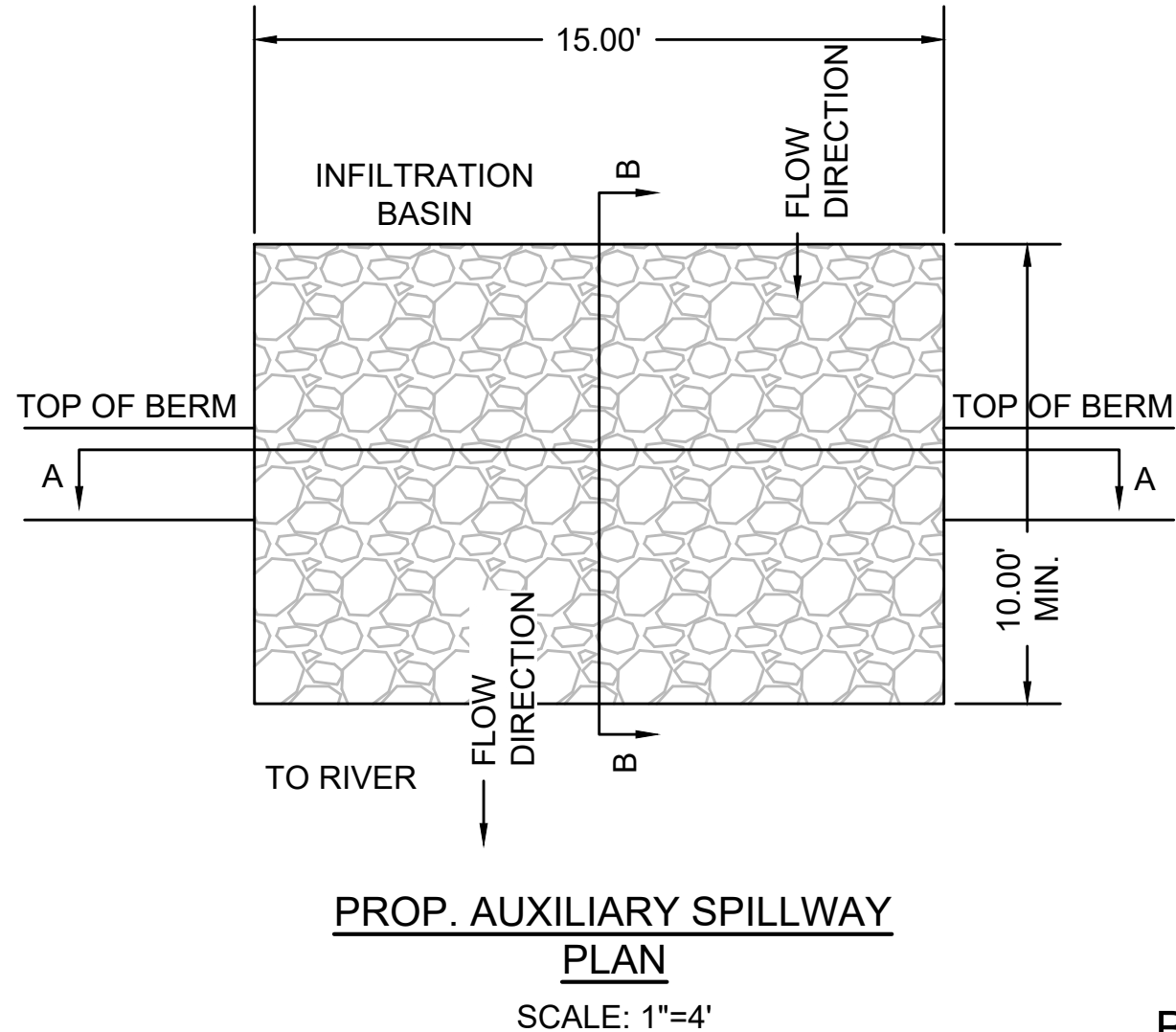
SCALE: VARIES

EXHIBIT NO. 6 OF 14

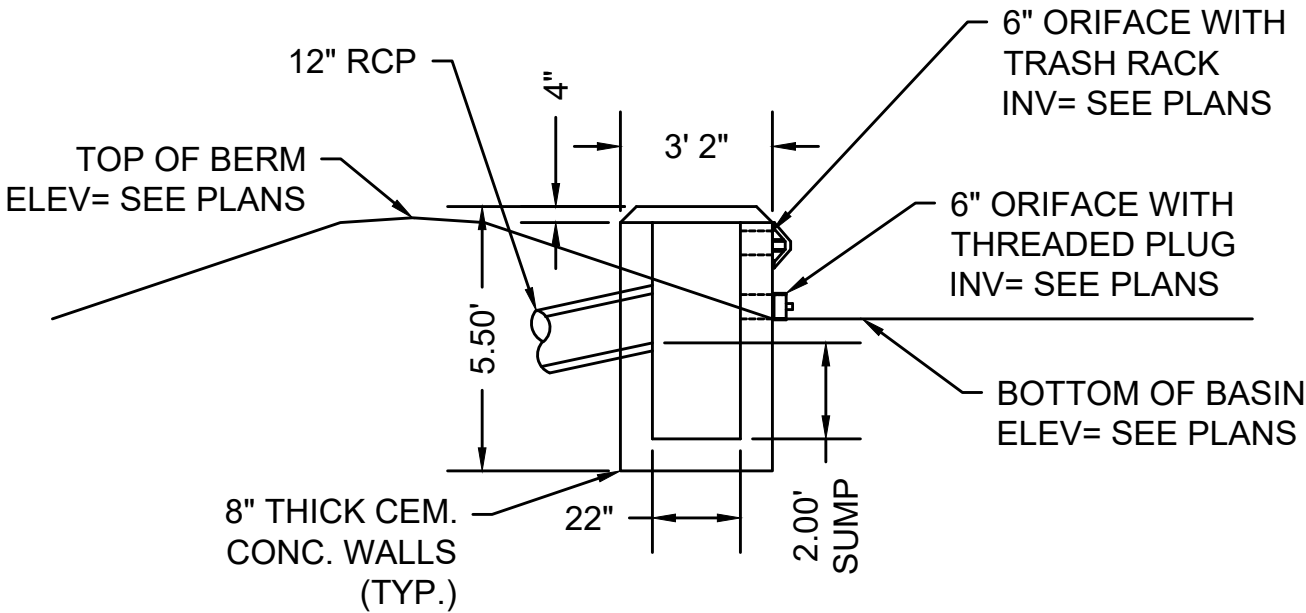
NOTES:

1. SIDES OF BASIN SHALL BE SEEDED.
2. BOTTOM OF BASIN ARE TO BE SEEDED WITH INFILTRATION BASIN BOTTOM/SWALE SEED MIX.
3. IMPERVIOUS BARRIER MATERIAL:

SQUARE MESH SIEVE	% PASSING BY WEIGHT
$\frac{3}{4}$ "	100%
#4	90-100%
#40	65-90%
#100	50-75%
#200	35-50%
4. REFER TO MASSDOT STANDARD DRAWING E 203.1.0 FOR MORE INFORMATION



PROP. AUXILIARY SPILLWAY
SECTION A-A
SCALE: 1"=4'



PROP. OUTLET CONTROL STRUCTURE
SECTION B-B
SCALE: 1"=4'

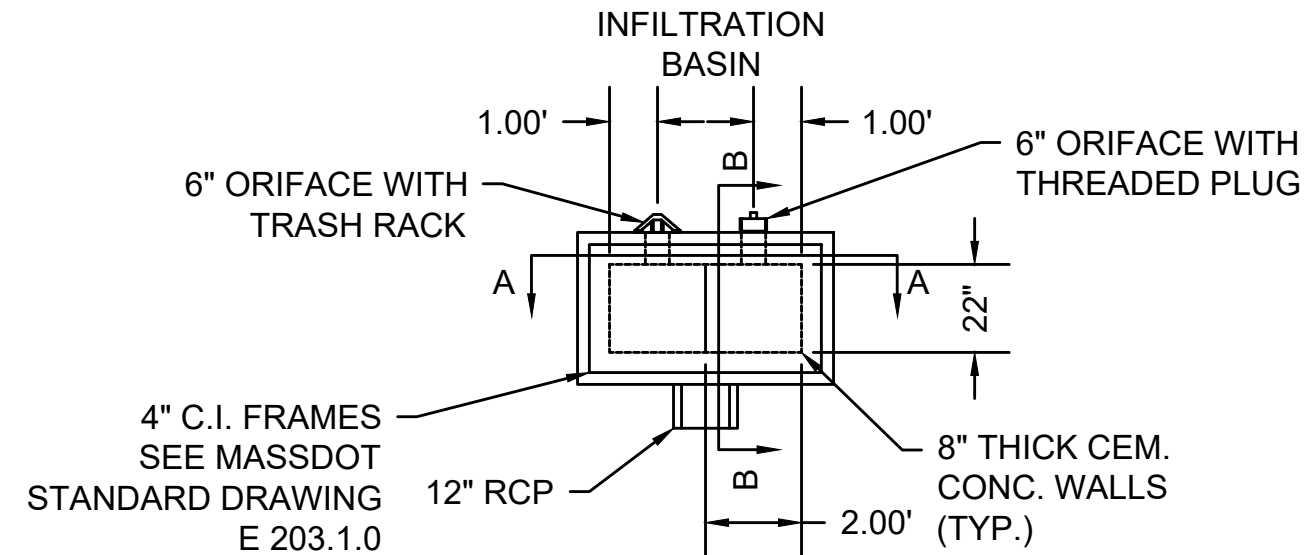
BASIN DETAILS 4 OF 5

ST 9/ST 112 OVER EAST BRANCH WESTFIELD
RIVER (segment ID MA32-04)
CUMMINGTON, MA



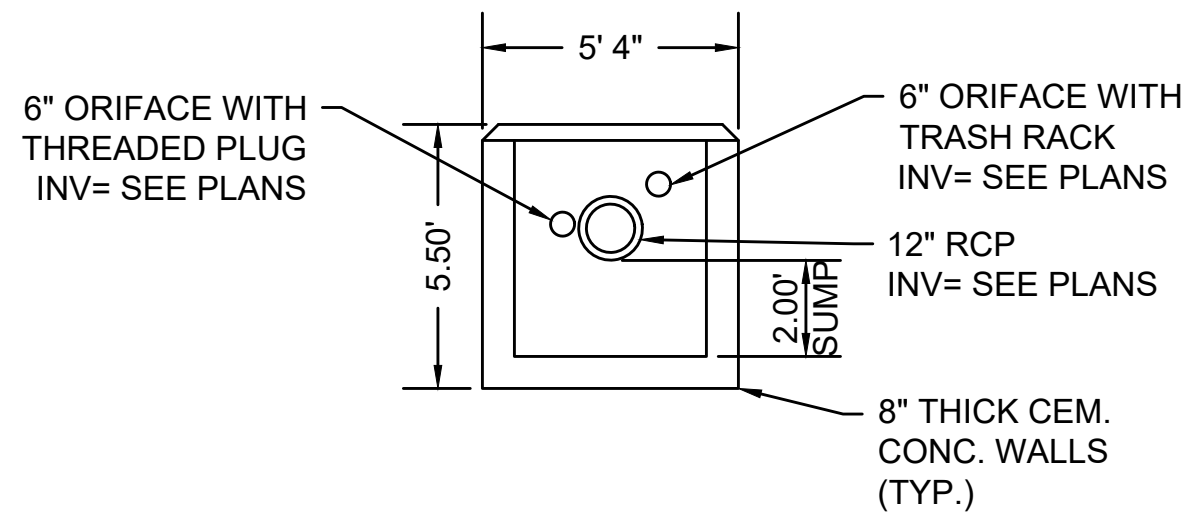
SCALE: 1"=4'

EXHIBIT NO. 7 OF 14



**PROP. OUTLET CONTROL STRUCTURE
PLAN**

SCALE: 1"=4'



**PROP. OUTLET CONTROL STRUCTURE
SECTION A-A**

SCALE: 1"=4'

NOTES:

1. REFER TO MASSDOT STANDARD DRAWING E 203.1.0 FOR MORE INFORMATION

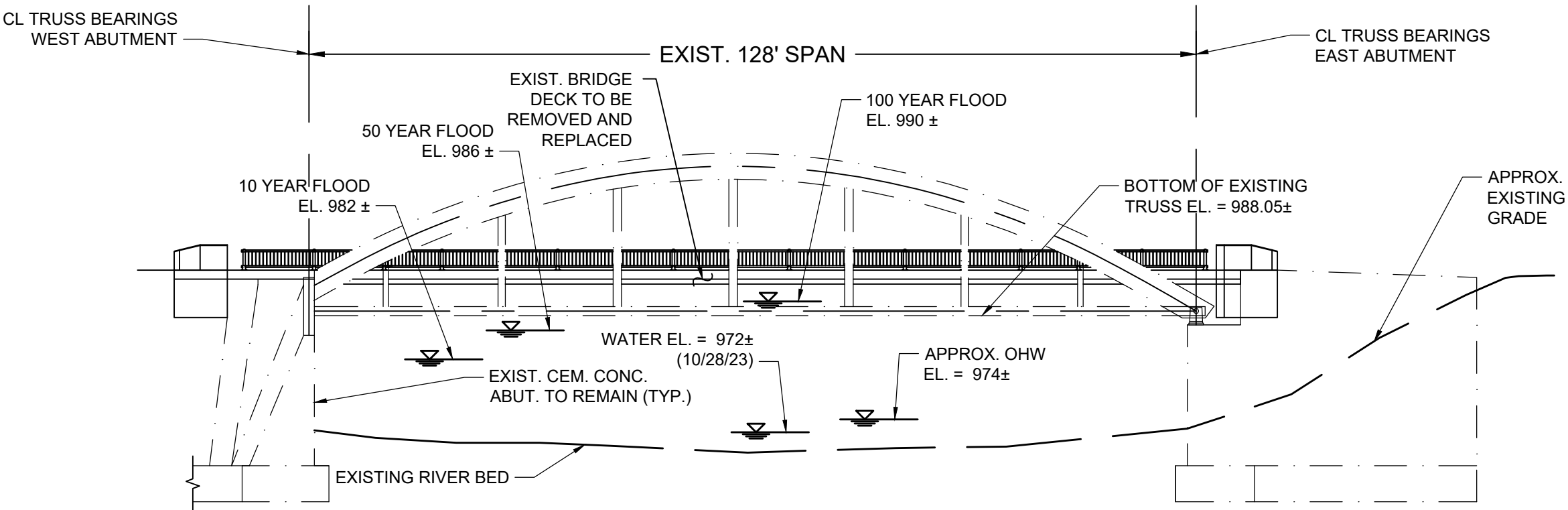
BASIN DETAILS 5 OF 5



ST 9/ST 112 OVER EAST BRANCH WESTFIELD
RIVER (segment ID MA32-04)
CUMMINGTON, MA

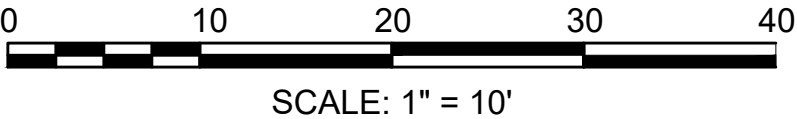
SCALE: 1"=4'

EXHIBIT NO. 8 OF 14



GENERAL NOTES:

1. ALL ELEVATIONS SHOWN USING THE NAVD88 VERTICAL DATUM.



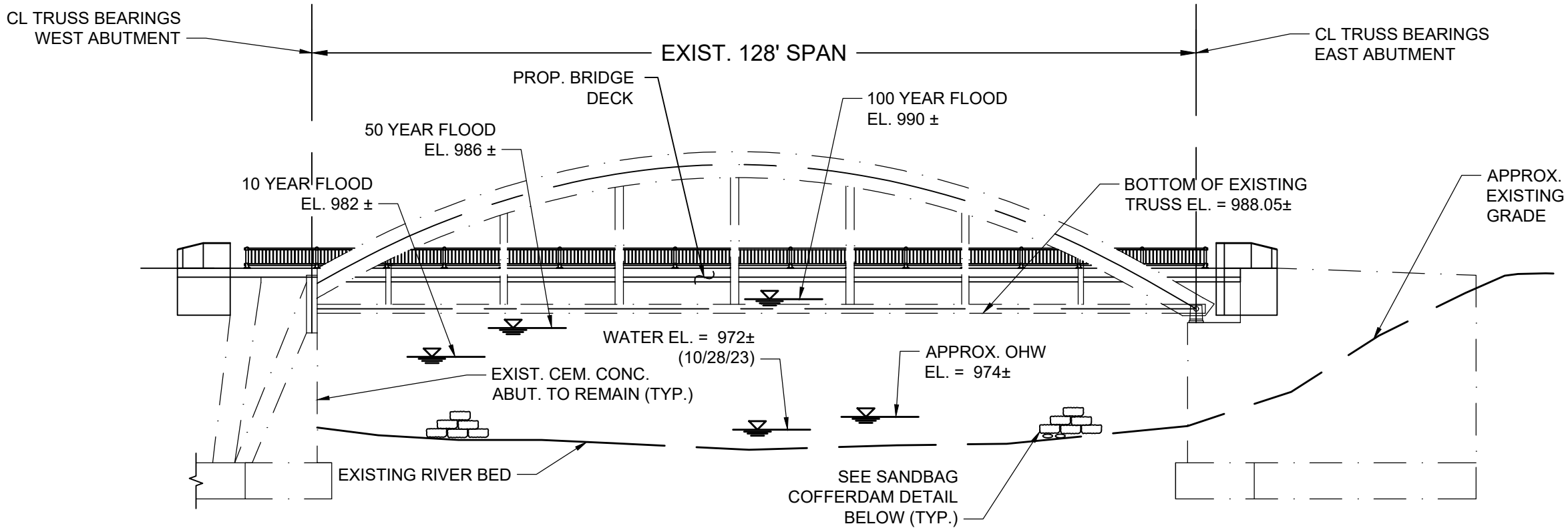
SOUTH ELEVATION EXISTING

**ST 9/ST 112 OVER EAST BRANCH WESTFIELD
RIVER (segment ID MA32-04)
CUMMINGTON, MA**

SCALE: 1" = 10'

EXHIBIT NO. 9 OF 14





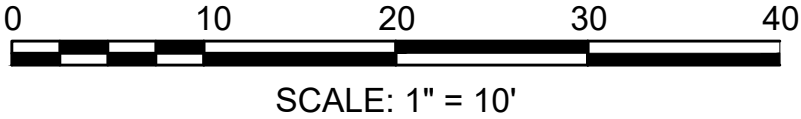
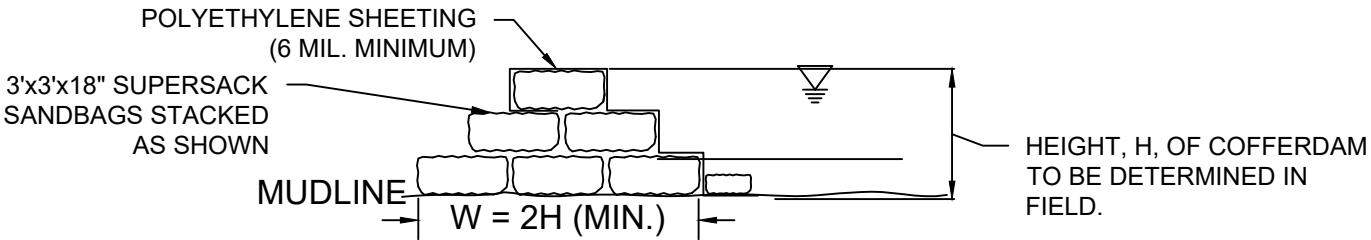
GENERAL NOTES:

1. ALL ELEVATIONS SHOWN USING THE NAVD88 VERTICAL DATUM.

SANDBAG NOTES:

1. SANDBAG COFFERDAM IS TO BE CONSTRUCTED IN A PYRAMID SHAPE BASED ON THE REQUIRED HEIGHT AND NUMBER OF BAGS REQUIRED.
2. THE SANDBAGS ARE TO BE PLACED OVERLAPPING ALONG THE LENGTH OF THE COFFERDAM.
3. PROPOSED TEMPORARY IMPACTS TO LAND UNDER WATER/WATERS OF THE UNITED STATES ARE SHOWN IN SHEET 6 OF 7.
4. TOTAL TEMPORARY FILL AS A RESULT OF SANDBAG COFFERDAMS IS CALCULATED AS 250 CY.

**SANDBAG COFFERDAM DETAIL
NOT TO SCALE**



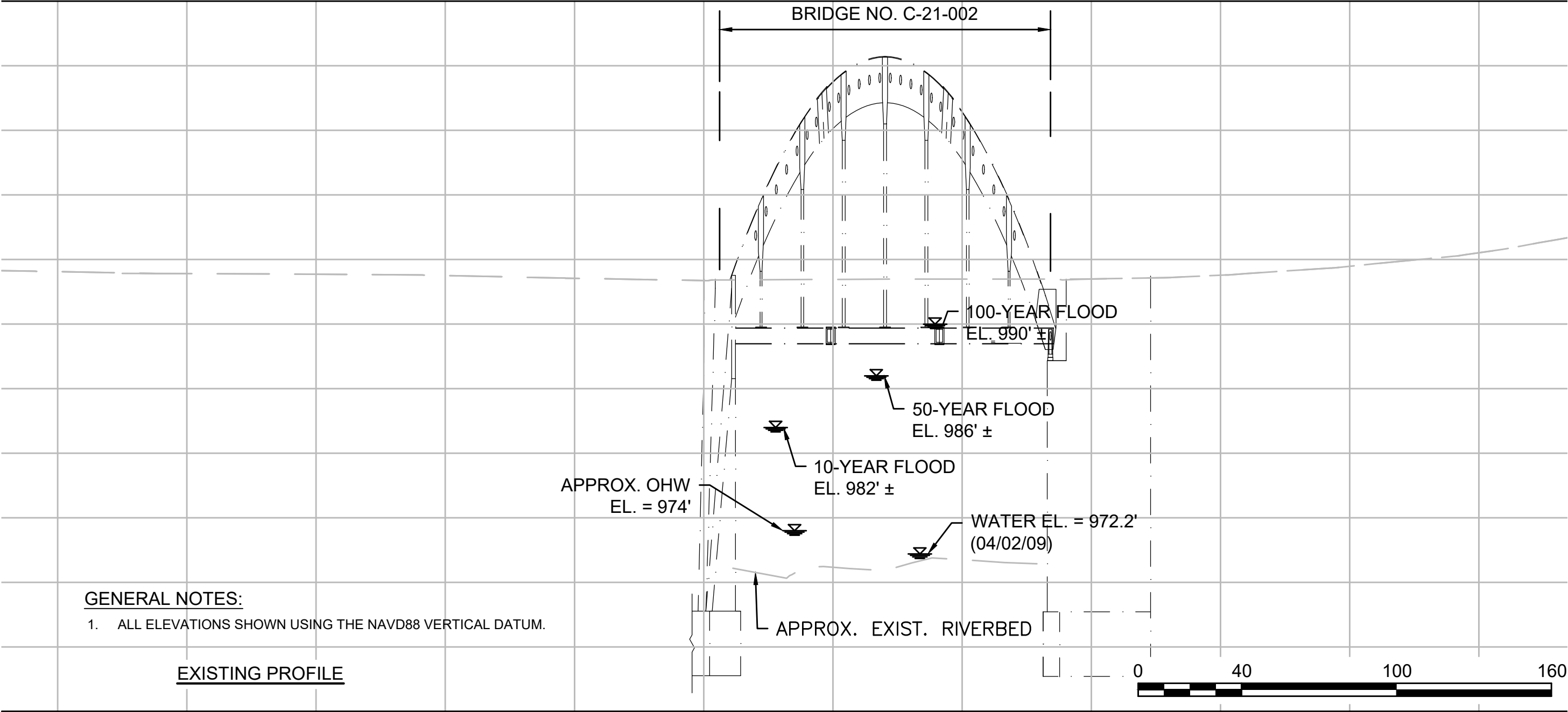
SOUTH ELEVATION PROPOSED

ST 9/ST 112 OVER EAST BRANCH WESTFIELD
RIVER (segment ID MA32-04)
CUMMINGTON, MA



SCALE: 1" = 10'

EXHIBIT NO. 10 OF 14



GENERAL NOTES:
1. ALL ELEVATIONS SHOWN USING THE NAVD88 VERTICAL DATUM.

994.1 994.06	993.9 993.91	993.9 993.86	993.8 993.76	993.5 993.54	993.4 993.37	993.5 993.46	993.5 993.48	993.5 993.49	993.8 993.78	994.5 994.47	995.5 995.52
378+00	379+00	380+00	381+00	382+00	383+00						



ST 9/ST 112 OVER EAST BRANCH WESTFIELD
RIVER (segment ID MA32-04)
CUMMINGTON, MA

SCALE: 1" = 40'
EXHIBIT NO. 11 OF 14

LOW POINT ELEV = 993.56
 LOW POINT STA = 379+64.74
 PVI STA = 379+85.21
 PVI ELEV = 993.41
 A.D. = 0.98%

HIGH POINT ELEV = 994.09
 HIGH POINT STA = 381+28.82
 PVI STA = 381+20.55
 PVI ELEV = 994.28
 A.D. = -1.14%

LOW POINT ELEV = 993.88
 LOW POINT STA = 382+13.01
 PVI STA = 382+99.08
 PVI ELEV = 993.39
 A.D. = 4.43%

K = 138.20
 136' VC

K = 118.13
 135' VC

K = 50.22
 222' VC

258.1' HSD

PVC: 379+17.22
 ELEV: 993.65

PRC: 380+53.19
 ELEV: 993.85

PRC: 381+87.90
 ELEV: 993.94

PVT: 384+10.26
 ELEV: 997.75

1014.0' SSD

100-YEAR FLOOD
 EL. 990' ±

50-YEAR FLOOD
 EL. 986' ±

10-YEAR FLOOD
 EL. 982' ±

APPROX. OHW
 EL. = 974'

WATER EL. = 972.2'
 (04/02/09)

APPROX. EXIST. RIVERBED

GENERAL NOTES:

- ALL ELEVATIONS SHOWN USING THE NAVD88 VERTICAL DATUM.

PROPOSED PROFILE



993.9 993.88	993.9 993.71	993.8 993.57	993.5 993.61	993.4 993.83	993.5 994.05	993.5 994.07	993.5 993.90	993.8 994.02	994.5 994.63	995.5 995.75	997.2 997.36
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379+00

380+00

381+00

382+00

383+00

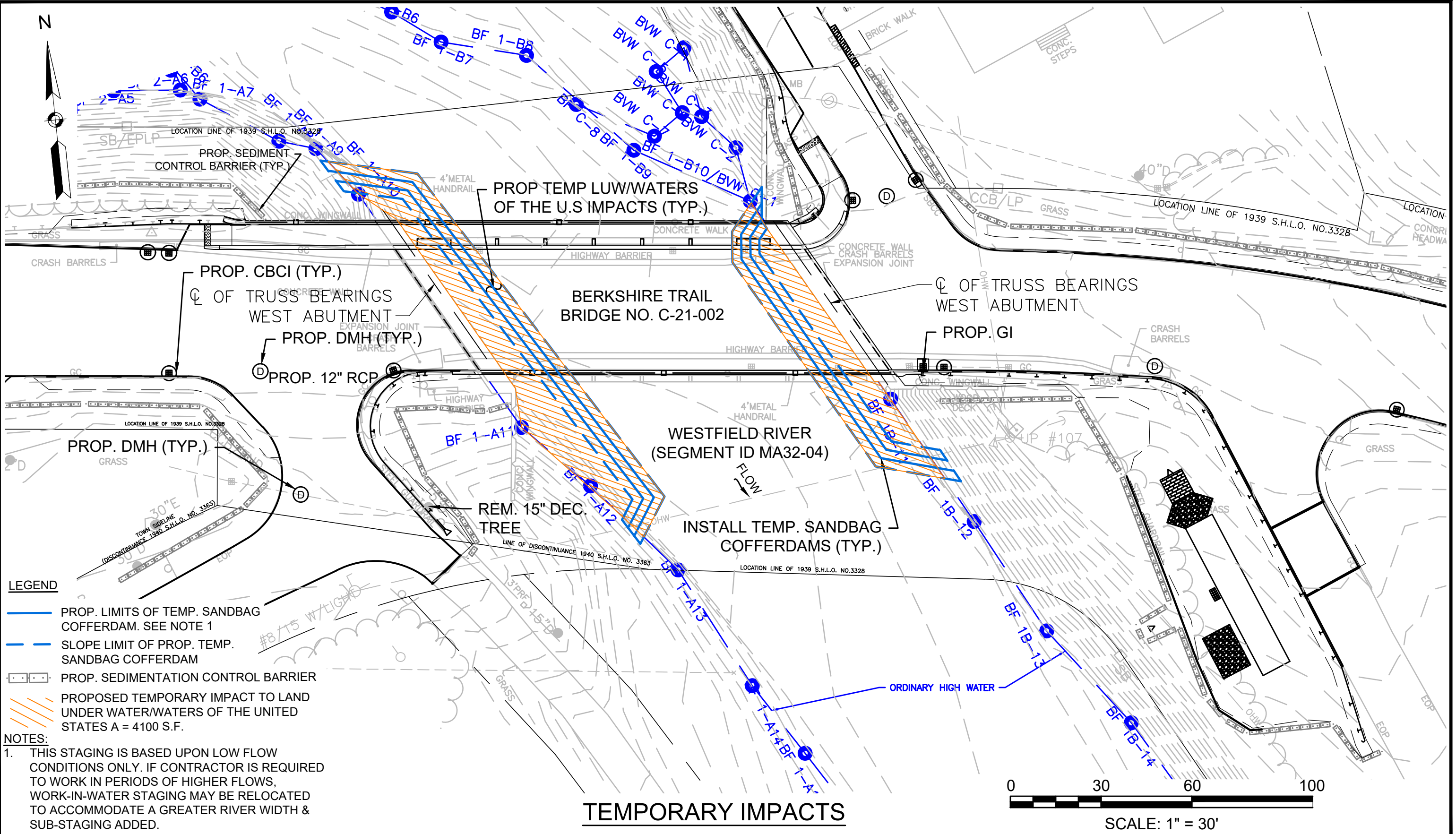
384+00



**ST 9/ST 112 OVER EAST BRANCH WESTFIELD
 RIVER (segment ID MA32-04)
 CUMMINGTON, MA**

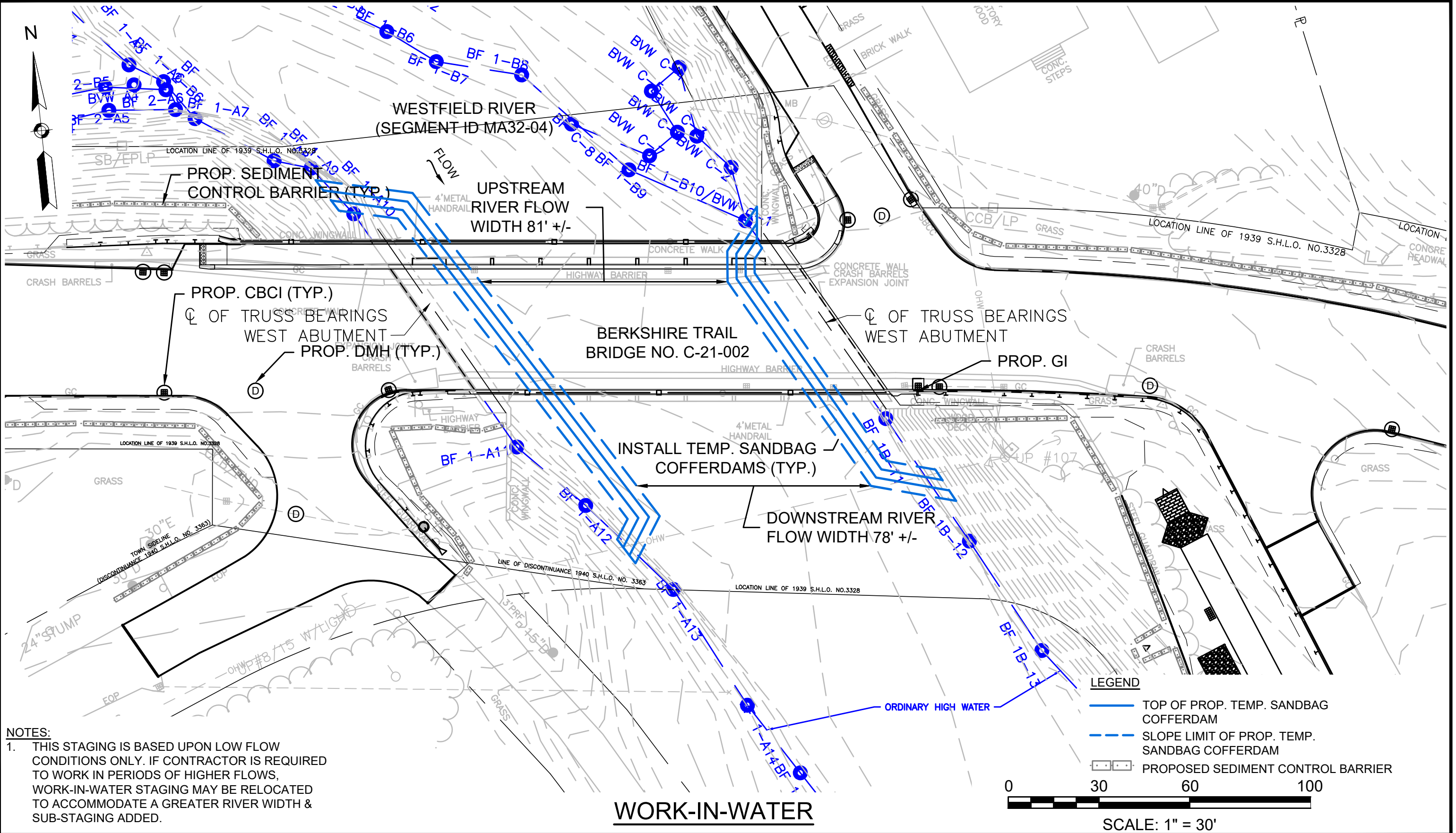
SCALE: 1" = 40'

EXHIBIT NO. 12 OF 14



ST 9/ST 112 OVER EAST BRANCH WESTFIELD RIVER (segment ID MA32-04) CUMMINGTON, MA

SCALE: 1" = 30'
EXHIBIT NO. 13 OF 14



ST 9/ST 112 OVER EAST BRANCH WESTFIELD RIVER (segment ID MA32-04) CUMMINGTON, MA

SCALE: 1" = 30'
EXHIBIT NO. 14 OF 14



Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

100 Cambridge Street Suite 900 Boston, MA 02114 • 617-292-5500

Maura T. Healey
Governor

Kimberley Driscoll
Lieutenant Governor

Rebecca L. Tepper
Secretary

Bonnie Heiple
Commissioner

May 12, 2025

Massachusetts Department of Transportation Highway Division
Ten Park Plaza, Suite 7360
Boston, MA 02116
Attn: Courtney Walker

RE: Section 401 Water Quality Certification
BRP WW11, Minor Fill Project
Bridge Preservation Project (C-21-002)
Berkshire Trail (ST 9/ ST 112) over East Branch Westfield River
Cummington, Massachusetts

401 WQC Filing No: 24-WW11-0045-APP
USACE Application No: NAE-2024-00658
MassDOT File No: 612514

Dear Ms. Walker:

The Massachusetts Department of Environmental Protection (MassDEP) has reviewed your application for a Water Quality Certification (WQC), as referenced above; this application was deemed complete on May 12, 2025. In accordance with the provisions of MGL Ch. 21, §§26-53 and Section 401 of the Federal Clean Water Act as amended (33 U.S.C. §1251 et seq.), it has been determined there is reasonable assurance the proposed project will be conducted in a manner which will not violate applicable water quality standards (314 CMR 4.00) and other applicable requirements of state law.

The proposed project is for the rehabilitation of the Dudley Manor Bridge (Bridge No. C-21-002) that carries Berkshire Trail (ST 9/ST 112) over the East Branch Westfield River in Cummington (the Project). Reconstruction of the roadway approaches and stormwater drainage improvements will also be completed. The bridge is stated as needing repair/replacement due to poor condition and various structural deficiencies.

The existing bridge is oriented east/west with the East Branch Westfield River flowing north to south under the bridge. The surveyed bankfull width of the river in the location of the bridge is 128 feet, the same as the bridge span width. Two reinforced concrete abutments comprise the substructure to support a tied arch superstructure. The 53.5-foot-wide bridge deck carries two travel lanes and one concrete sidewalk. The roadway approaches on either side of the bridge consist of two 12-foot-wide

travel lanes flanked by 8-foot-wide shoulders. Stormwater discharges directly into the river without pretreatment via six bridge scuppers and is entirely country drainage along the approaches.

The East Branch Westfield River is a tributary of the Connecticut River and is designated as a National Wild and Scenic River by the National Park Service (NPS). In addition, the river is mapped as a Coldwater Fishery Critical Area. Bordering Vegetated Wetlands (BVWs) are present northeast and northwest of the bridge. The Project is located within a mapped 1% annual chance of flood zone with a Base Flood Elevation (BFE) of 990 feet NAVD; Zone AE.

The Project proposes to repair the existing substructure in place, retaining the length, width, and horizontal alignment of the bridge. Temporary sandbag cofferdams will be installed around each bridge abutment. The bridge deck, sidewalk, ornamental railings and curb rails will be replaced, and the arch structure will undergo steel repairs and painting. The roadway approaches 250 feet east and west of the bridge will be reconfigured to include two 12-foot-wide travel lanes with bike lanes and shoulders on either side. Americans with Disabilities Act (ADA)-compliant ramps will also be installed to access the sidewalk between the roadway approaches and bridge.

Placement of the sandbag cofferdams needed to complete bridge abutment repairs will require a total of 4,100 square feet (sf) of temporary impacts to Land Under Water (LUW). No permanent impact or dredging of LUW is proposed, nor will the Project result in temporary or permanent impact to BVWs. Following construction, the sandbag cofferdams will be removed and the streambed restored to pre-construction conditions.

The proposed ADA-compliant sidewalk and ramps will increase impervious surfaces in the Project area by 669 sf. Point source discharges will be eliminated through removal of the bridge scuppers. Six new deep sump catch basins are proposed that will connect to the existing drainage system and three existing outfalls. During the course of Project review, MassDOT revised the stormwater design to incorporate a new infiltration basin with sediment forebay southwest of the Berkshire Trail/Old Route 9 intersection which will receive runoff from an impervious area of 10,360 sf in the eastern half of the Project area via two new deep sump catch basins. Country drainage will be utilized for the remaining portions of the site.

The Project fully complies with Stormwater Standard 2 as the peak discharge rate for all storm events will decrease by an average of 0.28 cubic feet per second (cfs). Stormwater Standards 3 and 4 will be met to the maximum extent practicable with the new infiltration basin providing 55% of the required groundwater recharge volume, as well as 46% total suspended solids (TSS) removal when combined with the new sediment forebay and deep sump catch basins throughout the site.

The Project is located within Massachusetts Natural Heritage and Endangered Species Program (NHESP) Estimated and Priority Habitats of Rare Species (EH 11499 and PH 2064). Consultation with NHESP is ongoing regarding rare and endangered species that are present on the site. Any time of year (TOY) restrictions and other conditions issued by NHESP within a Conservation and Management Permit (CMP) or Conditional No-Take Determination to avoid a prohibited Take of state-listed species are conditioned herein.

Given the presence of lake chub (*Couesius plumbeus*) spawning habitat in the Project area, this WQC incorporates the TOY condition required by the NPS Wild and Scenic Rivers Program in their letter to the U.S. Army Corps of Engineers (USACE) dated May 6, 2025; please see Special Condition 31.

Public notice was provided in the Country Journal on May 20, 2024. No comment letters were received during the public comment period.

Based on a review of information provided by the applicant, MassDEP finds that this project complies with the standards described under 314 CMR 9.06. Therefore, based on information currently in the record, MassDEP grants a WQC for this project subject to the following conditions to maintain water quality, to minimize impact on waters and wetlands, and to ensure compliance with appropriate state law. MassDEP further certifies in accordance with 314 CMR 9.00 that there is reasonable assurance the project or activity will be conducted in a manner which will not violate applicable water quality standards (314 CMR 4.00) and other applicable requirements of state law. Finally, the Department has determined that upon satisfying the conditions and mitigation requirements of this approval, the project provides a level of water quality necessary to protect existing uses and accordingly finds that the project to be implemented satisfies the Surface Water Quality Standards at 314 CMR 4.00.

Pursuant to 314 CMR 9.09(1)(d); 314 CMR 9.06(6)(a); 310 CMR 9.06(2); 314 CMR 9.07; 314 CMR 9.07(1); 314 CMR 9.09(7)(5)(c); 314 CMR 9.11; and 314 CMR 9.09(1)(e), the following Special Conditions are necessary to ensure that construction practices and stormwater controls are implemented in such a manner as to prevent degradation to wetlands and waters; ensure that practicable steps have been taken which will avoid and minimize impacts to wetlands and waters; minimize turbidity and sediment caused by construction activities; ensure that water quality is not degraded, and that biology of the waters are not negatively impacted by potential discharges; and/or maintain a record of the dredged material for reference and to ensure accountability in its transportation.

Those Special Conditions that require direct submittals to MassDEP for either review, or review and approval, are denoted by the following notation (Submittal) at the end of the condition and are summarized in Attachment A. In addition, those conditions with the (Submittal) designation shall be included in the Special Provisions and, as applicable, reviewed at the Pre-Construction Meeting.

1. All work shall be performed in accordance with the following documents and plans:
 - Application for Water Quality Certification. Prepared by Benesch on behalf of MassDOT, dated May 17, 2024, with cover letter and attachments. 401 WQC Filing Number: 24-WW11-0045-APP.
 - Plans entitled: "ST 9/ST 112 over East Branch Westfield River (Segment ID MA32-04), Cummington, MA". Sheets 1 through 14. Prepared by Benesch. Last revised April 10, 2025.
 - MassDEP Administrative Completeness and Technical Deficiency Review. 401 Water Quality Certification Transmittal Nos: 24-WW11-0045-APP. ST 9/ST 112 (Berkshire Trail) over East Branch Westfield River. Dated June 11, 2024.
 - MassDOT Responses to MassDEP Technical Deficiency Review, with attachments. Prepared by Benesch on behalf of MassDOT. 401 Water Quality Certification Transmittal

Nos: 24-WW11-0045-APP. ST 9/ST 112 (Berkshire Trail) over East Branch Westfield River. Dated April 16, 2025.

- Letter from Andrew Petitdemange of the NPS Wild & Scenic Rivers Program to the USACE. Dated May 6, 2025.

Pre-Construction

2. Prior to the Pre-Construction Meeting required in Condition 3, the applicant shall provide MassDEP with the name and contact information of the Resident Engineer (RE) responsible for ensuring that all work complies with the conditions of this WQC. **(Submittal)**
3. A minimum of 21 days prior to the start of ground disturbance, MassDOT shall contact MassDEP to schedule an onsite Pre-Construction Meeting to review the approved plans and terms and conditions of this WQC. The RE, the construction contractor, a representative from the MassDOT Environmental Section and/or the District Environmental Engineer shall attend the Pre-Construction Meeting. **No work shall commence prior to the Pre-Construction Meeting.**
4. MassDEP shall be copied on applicable submittals to the U.S. Army Corps of Engineers (USACE). These include but are not limited to: Self-Verification Notification Form (SVNF); Pre-Construction Notification (PCN); Work-Start Notification Form; Mitigation Work-Start Notification Form; and Compliance Certification Form. The Work-Start Notification Form shall be submitted at least 14 days before the anticipated start of work and the Compliance Certification Form shall be submitted within 30 days following the completion of the authorized work. **(Submittal)**
5. A Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan (CP/PP) shall be developed and implemented as required by 314 CMR 9.06(6)(a)8. A minimum of 14 days prior to the start of work, MassDOT shall submit the CP/PP for review and approval. If the U.S. Environmental Protection Agency (EPA) Construction General Permit (CGP) applies, the Stormwater Pollution Prevention Plan (SWPPP) may serve as the CP/PP, providing it includes the measures required to be in the CP/PP per these Special Conditions, in addition to the measures specifically required by the CGP. Any subsequent changes to the Final CP/PP (defined herein as including the construction period SWPPP if applicable) must be approved by MassDEP. **(Submittal)**
6. Training regarding erosion and sedimentation controls is required. The RE, CP/PP Inspector, and any other relevant personnel responsible for erosion and sedimentation controls shall complete the EPA CGP Inspector Training, or other training that meets the CGP requirements, as well as complete a comprehensive review of the Final CP/PP. Proof of completion of the training shall be submitted to MassDEP prior to the start of work. **(Submittal)**
7. The CP/PP shall identify, but shall not be limited to, staging and laydown areas in relation to BVWs and LUW, proposed dewatering methods and locations, proposed stockpile locations and their proximity to catch basins or other drainage conveyances that discharge to wetland resource areas, and the location of construction-period erosion and sedimentation controls. Stockpiles shall be located no less than 50 feet from BVWs, IVWs, LUW, catch basins, or other drainage conveyances that discharge to BVWs, IVWs, or LUW.

8. A minimum of 14 days prior to the start of work, MassDOT shall submit a Control of Water Plan for review and approval. The Plan shall meet requirements of the CP/PP, be specific to the Project, and include the following **(Submittal)**:
 - a. A description of proposed methods to isolate and dewater work areas within streams, should it be required, while maintaining stream flow, including but not limited to the method of isolation (e.g., steel sheeting or sandbag cofferdams), dewatering methods and locations and specifications for stream bypass systems as applicable;
 - b. A plan depicting BVW and LUW boundaries, and the location of all relevant methods and materials which shall be located within the BVW and LUW impact areas approved herein; and
 - c. Proposed LUW restoration methods following removal of the cofferdams.
9. Dewatering and stream bypasses, as well as LUW restoration activities as needed, shall be conducted under the supervision of the RE or other project staff with knowledge of these practices and comply with the applicable conditions identified herein.
10. Prior to the start of work, approved erosion and sedimentation control measures shall be installed per the approved CP/PP and as applicable, the manufacturer specifications. Erosion and sedimentation control measures may consist of, but are not limited to, silt fence, staked straw bales, silt/turbidity curtains, compost filter tubes, etc.
11. Prior to the Pre-Construction Meeting, the boundaries of BVWs and LUW shall be re-flagged where they are within 50 feet of the limits of work. In the event BVWs and LUW boundaries overlap, the outermost boundary (i.e., closest to the proposed work) shall be flagged. All boundary markers, once in place, shall remain in place throughout construction until all disturbed surfaces have been permanently stabilized. Boundary markers shall be fully evaluated annually and refreshed where needed. Implementation of and compliance with this requirement shall be documented by the RE. All construction personnel shall be made aware of these markers.
12. Prior to any work within the 1% annual chance of flooding zone within Project limits, including mobilization or storage of equipment and materials, a Flood Contingency Plan shall be submitted to MassDEP for review and approval that includes at a minimum the following information and provisions **(Submittal)**:
 - a. The RE and/or Contractor shall monitor the National Weather Service forecast daily, and upon issuance of a flood watch or flood warning for the Project area, the Flood Contingency Plan shall be implemented.
 - b. Upon implementation of the Flood Contingency Plan, all construction equipment and materials located below the Base Flood Elevation (BFE) shall be removed and placed in an upland location above the BFE and outside of BVW and/or LUW.

- c. Anchored stationary equipment may remain below the BFE if demonstrated to be required and upon written approval from MassDEP. In the event semi-stationary equipment cannot be feasibly removed before the arrival of the storm, they shall be adequately secured and MassDEP shall be notified prior to the storm.
 - d. A requirement to inspect and maintain all erosion and sedimentation controls, and stabilize all exposed soils as needed below the BFE prior to the storm shall be included.
 - e. A plan depicting at a minimum, but not limited to, BVW and/or LUW boundaries, the Project limits, and the BFE boundary based on ground elevations shall be included.
 - f. Staff and materials must be available 24 hours per day, seven days per week to implement the Flood Contingency Plan. The name, affiliation, title, email address, and phone number of each person responsible for implementing the Flood Contingency Plan shall be included.
 - g. No work shall commence until the flood watch or flood warning has ended, all areas below the BFE have been inspected, and erosion and sedimentation controls are maintained as needed.
13. In the event that invasive species have spread into the Project area prior to construction, the Contractor shall develop an Invasive Plant Management Strategy (IPMS) to be submitted to MassDEP for review and approval prior to the Pre-Construction Meeting. The IPMS shall be implemented as approved. **(Submittal)**
14. If needed, use of herbicides to control invasive species shall be implemented in accordance with the approved IPMS and with the following requirements:
- a. Herbicides can only be applied by a Licensed Applicator;
 - b. Applicant must provide MassDEP Material Safety Data Sheets (MSDS) of the product being used and must also keep MSDS sheets on site;
 - c. Product registration in MA with Massachusetts Pesticide Product Registration Number must be confirmed with Massachusetts Department of Agricultural Resources Pesticide Division;
 - d. EPA Registration Number for the product must be identified;
 - e. Product label restricted use provisions must be followed; and
 - f. Applicant must contact MassDEP Wetlands Program, Dredge Unit to determine if a BRP WM 04 herbicide permit is required in waterbodies.

Construction Period

15. No more than **0 sf** of permanent and **4,100 sf** of temporary impacts to LUW shall occur. **No** permanent or temporary impacts to BVWs and **no** dredging in LUW shall occur. All work shall avoid unapproved impacts to BVW and LUW.

16. The Project shall identify one individual with at least three years of experience with construction period erosion and sedimentation control to be responsible for erosion and sedimentation control inspections (CP/PP Inspector). Under the direction of the CP/PP Inspector, inspection and maintenance of erosion and sediment controls in active work areas may be performed by both the Contractor and RE or other MassDOT project staff. Maintenance is the responsibility of the Contractor; however, the permittee shall be ultimately responsible for erosion and sedimentation control failure. The RE and/or contractor shall immediately notify MassDEP and the Cummington Conservation Commission if any unauthorized discharges to BVWs or LUW occur.
17. CP/PP inspections shall occur at least once every seven calendar days and within 24 hours of a storm event that produces 0.5 inches or more of rain within a 24-hour period, or at a more stringent frequency if the CP/PP requires.
18. Copies of CP/PP Inspection and Maintenance Log Forms shall be submitted to MassDEP within 14 days upon request.
19. Disturbed areas shall be stabilized immediately after activities have permanently ceased or will be temporarily inactive for 14 or more calendar days. The installation of stabilization measures shall be implemented as soon as practicable, but no later than 14 calendar days after stabilization has been initiated.
20. Work within LUW shall be conducted in low or no-flow conditions to the extent practicable. Notice shall be provided to MassDEP and the Cummington Conservation Commission within 24 hours prior to the commencement of dewatering, if required. Dewatering methods and location(s) shall be approved by the RE or other project staff with knowledge of these practices prior to use to ensure consistency with the approved Control of Water Plan, and shall be documented in the CP/PP. There shall be no discharge of untreated dewatered stormwater or groundwater to BVWs or LUW. Any discharges shall be visibly free of sediment.
21. Additional erosion and sedimentation control materials shall be stored on-site at all times for emergency and routine replacement. Materials shall be kept covered, dry, and accessible at all times. The CP/PP Inspector shall be responsible for anticipating the need for and installation of additional erosion and sedimentation controls and shall have the authority to require additional erosion control measures to protect wetland resource areas beyond what is shown on the plans if field conditions or professional judgment dictate that additional protection is necessary.
22. The Contractor shall monitor the National Weather Service forecast for updates, and upon issuance of a flood watch for the 1% annual chance of flooding zone, shall implement the flood contingency plan referenced in Condition 12.
23. Any storm drains with potential to receive discharge from stockpiled materials or construction operations shall be managed to inhibit the inflow of sediment while not increasing the likelihood of roadway flooding during periods of precipitation. The CP/PP shall specify measures to implement this. Filter fabric stretched under storm drain inlet grates are not acceptable for this purpose.

24. Stockpiles shall be located no less than 50 feet from BVWs, LUW, catch basins, or other drainage conveyances that discharge to BVWs or LUW.
25. The contractor shall have designated washout areas for concrete equipment that will be comprised of impermeable material and sized to contain project concrete wastes and wash water. Concrete wash out areas shall be located no less than 50 feet from BVWs, LUW, and catch basins or other drainage conveyances that discharge directly or indirectly to BVWs or LUW.
26. Refueling, washing, and cleaning of vehicles and other construction equipment shall not take place within 50 feet of BVWs or LUW and any wash water shall be contained such that it does not drain toward BVWs or LUW. MassDEP shall explicitly approve in writing any deviation to this condition for oversized stationary vehicles.
27. The contractor shall have spill containment kits on site. In the event of a release of fuels and/or oils, the local fire department, MassDEP Emergency Response and MassDEP Wetlands Program Highway Unit shall be contacted, and in addition, the MassDEP Bureau of Waste Site Cleanup shall be notified per the requirements of the Massachusetts Contingency Plan, 310 CMR 40.0000.
28. Construction vehicles or other vehicles or heavy equipment are prohibited from traversing over the proposed infiltration Stormwater Control Measures (SCMs) to avoid compaction of soils during construction. These areas shall be demarcated by silt fence with signage, or high visibility fencing. No vehicles or heavy equipment shall be permitted within the infiltration SCM following placement of the final materials without written approval from MassDEP. Proposed infiltration SCMs shall remain offline until final stabilization is achieved, unless written approval is obtained from MassDEP.
29. Construction vehicles and equipment shall not enter the BVW or LUW unless authorization is provided by way of this permit or amendment. The Contractor shall use equipment with boom reach capabilities and other measures to avoid inadvertent impacts to jurisdictional resource areas as a result of excavation, riprap placement, and/or bridge/pier demolition materials.
30. A temporary shielding or containment system shall be in place beneath the bridge structure prior to removal to prevent debris from falling into the water below. In the event that any debris accidentally enters the East Branch Westfield River, it shall be immediately retrieved. Notice shall be provided to MassDEP if debris enters the river and that it has been removed with photo-documentation (if practicable) submitted by email.
31. To the extent practicable, the TOY restriction for in-water work between the dates of June 1st to July 31st as described in the NPS letter dated May 6, 2025, referenced herein, is hereby incorporated into this WQC.
32. As the Project may subject to a CMP or Conditional No-Take Determination from NHESP, no work shall occur within Priority or Estimated Habitats of Rare Species until the CMP or Determination is issued by NHESP. All conditions imposed by NHESP to avoid a Take of state-listed species shall be implemented and are hereby incorporated into this WQC by reference.

Stream Mitigation

33. The RE shall oversee all LUW restoration, as necessary. The Control of Water Plan required in Condition 8 shall include measures to create no-flow conditions for this work such as a pump bypass system or other dewatering method, if needed.
34. Water shall be slowly introduced back into the restored, and if applicable, dewatered LUW work areas as to not cause erosion and sedimentation. This work shall be overseen by the RE.
35. MassDEP reserves the right to determine the success or failure of the LUW restoration areas and reserves the right to require additional measures deemed necessary to promote success.

Post-Construction

36. All temporary erosion controls shall be removed at the conclusion of work once the surrounding area has achieved final stabilization.

General Conditions

37. Any proposed alterations, minor plan changes, or amendment requests, as well as any required submittals shall be sent by email for review and approval to heidi.davis@mass.gov and jaimie.iannelli@mass.gov. **(Submittal)**
38. This WQC remains in effect for the same duration as the Section 404 permit that requires it.
39. No Special Condition set forth herein shall be construed or operate to prohibit MassDEP from taking enforcement against MassDOT or its contractors for any failure to comply with the terms and requirements of this WQC.
40. No activity authorized by this WQC may begin prior to expiration of the 21-day appeal period, or until a final decision is issued by MassDEP in the event of an appeal.

Failure to comply with this Certification is grounds for enforcement, including civil and criminal penalties, under MGL Ch. 21 §42, MGL Ch. 21A §16, or other possible actions/penalties as authorized by the General Laws of the Commonwealth.

This Certification does not relieve the applicant of the obligation to comply with other appropriate state or federal statutes or regulations.

NOTICE OF APPEAL RIGHTS

a.) Appeal Rights and Time Limits

Certain persons shall have a right to request an adjudicatory hearing concerning certifications by MassDEP when an application is required: (a) the applicant or property owner; (b) any person aggrieved by the decision who has submitted written comments during the public comment period; any ten (10) persons of the Commonwealth pursuant to M.G.L. c.30A where a group member has submitted written

comments during the public comment period; or (d) any governmental body or private organization with a mandate to protect the environment which has submitted written comments during the public comment period. Any person aggrieved, any ten (10) persons of the Commonwealth, or a governmental body or private organization with a mandate to protect the environment may appeal without having submitted written comments during the public comment period only when the claim is based on new substantive issues arising from material changes to the scope or impact of the activity and not apparent at the time of public notice. To request an adjudicatory hearing pursuant to M.G.L. c.30A, § 10, a Notice of Claim must be made in writing, provided that the request is made by certified mail or hand delivery to MassDEP, with the appropriate filing fee specified within 310 CMR 4.10 along with a DEP Fee Transmittal Form within twenty-one (21) days from the date of issuance of this Certificate, and addressed to:

Case Administrator
Department of Environmental Protection
100 Cambridge Street, 9th Floor
Boston, MA 02114

A copy of the request shall at the same time be sent by certified mail or hand delivery to the Department of Environmental Protection at:

Department of Environmental Protection
Commissioner's Office
100 Cambridge Street, Suite 900
Boston, MA 02114

b.) Contents of Hearing Request

A Notice of Claim for Adjudicatory Hearing shall comply with MassDEP's Rules for Adjudicatory Proceedings, 310 CMR 1.01(6), and shall contain the following information pursuant to 314 CMR 9.10(3):

3. the 401 Certification Transmittal Number;
4. the complete name of the applicant and address of the project;
5. the complete name, address, and fax and telephone numbers of the party filing the request, and, if represented by counsel or other representative, the name, fax and telephone numbers, and address of the attorney;
6. if claiming to be a party aggrieved, the specific facts that demonstrate that the party satisfies the definition of "aggrieved person" found at 314 CMR 9.02;
7. a clear and concise statement that an adjudicatory hearing is being requested;
8. a clear and concise statement of (1) the facts which are grounds for the proceedings, (2) the objections to this Certificate, including specifically the manner in which it is alleged to be inconsistent with the MassDEP's Water Quality Regulations, 314 CMR 9.00, and (3) the relief sought through the adjudicatory hearing, including specifically the changes desired in the final written Certification; and
9. a statement that a copy of the request has been sent by certified mail or hand delivery to the applicant, the owner (if different from the applicant), the conservation commission of the city or town where the activity will occur, the Department of Conservation and Recreation (when the certificate concerns projects in Areas of Critical Environmental Concern), the public or private water supplier where the project is located (when the certificate concerns projects in

Outstanding Resource Waters), and any other entity with responsibility for the resource where the project is located.

c.) Filing Fee and Address

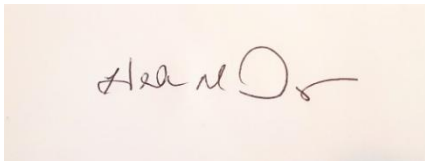
The hearing request along with a DEP Fee Transmittal Form and a valid check or money order payable to the Commonwealth of Massachusetts in the amount of one hundred dollars (\$100) must be mailed to:

Commonwealth of Massachusetts
Department of Environmental Protection
Commonwealth Master Lockbox
PO Box 4062
Boston, MA 02211

The request will be dismissed if the filing fee is not paid, unless the appellant is exempt or granted a waiver. The filing fee is not required if the appellant is a city or town (or municipal agency), county, or district of the Commonwealth of Massachusetts, or a municipal housing authority. MassDEP may waive the adjudicatory hearing filing fee pursuant to 310 CMR 4.06(2) for a person who shows that paying the fee will create an undue financial hardship. A person seeking a waiver must file an affidavit setting forth the facts believed to support the claim of undue financial hardship together with the hearing request as provided above.

Should you have any questions relative to this permit, please contact myself or Jaime Iannelli at heidi.davis@mass.gov and jaime.iannelli@mass.gov.

Very truly yours,

A handwritten signature in dark ink, appearing to read "Heidi Davis", is written on a light-colored rectangular background.

Heidi M. Davis
Highway Unit Supervisor

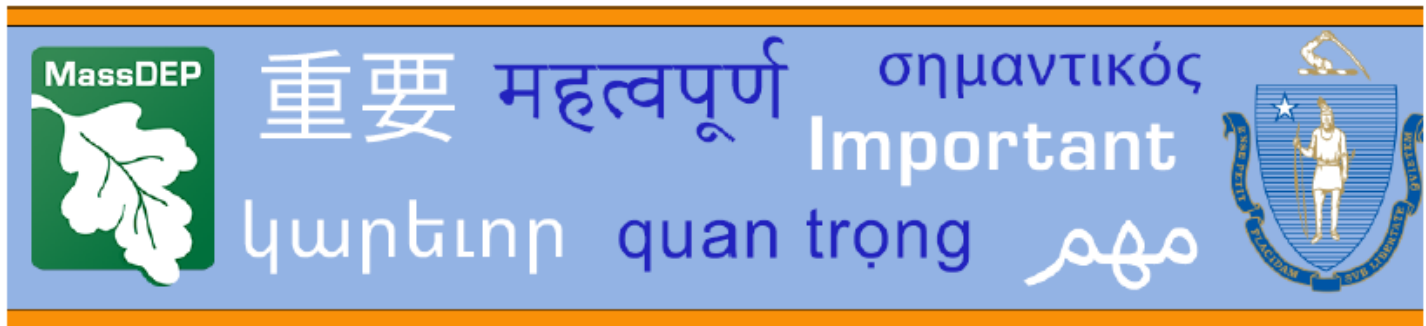
Ecc: DEP WERO – Michael McHugh
USACE – Dan Vasconcelos
USACE – Kevin Newton
MassDOT – Michael Joa
MassDOT – Stephen Soma
MassDOT – Amer Raza
Benesch – Ashley Bomely
Benesch – Peeyush Rohela
Cummington Conservation Commission – Sarah Fournier-Scanlon, Chair

**ATTACHMENT A
PRE-CONSTRUCTION SUBMITTAL CHECKLIST**

**Bridge Replacement (C-21-002), Berkshire Trail (ST 9/ST 112) over East Branch Westfield River
Cummington, Massachusetts**

THIS CHECKLIST MUST BE COMPLETED PRIOR TO THE START OF WORK; NOTE THAT SOME CONDITIONS REQUIRE THAT INFORMATION BE SUBMITTED A SPECIFIC NUMBER OF DAYS PRIOR TO THE START OF WORK OR THE PRE-CONSTRUCTION MEETING.

Condition	Required Submittal	Due Date	Date Submitted	Date Approved
PRE-CONSTRUCTION SUBMITTAL REQUIREMENTS				
2	Name and contact information of the RE	Prior to Pre-Construction Meeting		
4	USACE Work-Start Notification Form	14 days prior to work start		
5	CP/PP	14 days prior to work start		
6	Verification of CP/PP Training	Prior to work start		
8	Control of Water Plan	14 days prior to work start		
12	Flood Contingency Plan	Prior to any work within 1% annual chance of flooding zone		



Communication for Non-English-Speaking Parties

This document is important and should be translated immediately.

If you need this document translated, please contact MassDEP's Director of Environmental Justice at the telephone number listed below.

Español Spanish

Este documento es importante y debe ser traducido inmediatamente. Si necesita traducir este documento, póngase en contacto con el Director de Justicia Ambiental de MassDEP (*MassDEP's Director of Environmental Justice*) en el número de teléfono que figura más abajo.

Português Portuguese

Este documento é importante e deve ser traduzido imediatamente. Se você precisar traduzir este documento, entre em contato com o Diretor de Justiça Ambiental do MassDEP no número de telefone listado abaixo.

繁體中文 Chinese Traditional

本文檔很重要，需要即刻進行翻譯。
如需對本文檔進行翻譯，請透過如下列示電話號碼與 MassDEP 的環境司法總監聯絡。

简体中文 Chinese Simplified

这份文件非常重要，需要立即翻译。
如果您需要翻译这份文件，请通过下方电话与 MassDEP 环境司法主任联系。

Ayisyen Kreyòl Haitian Creole

Dokiman sa a enpòtan epi yo ta dwe tradui l imedyatman. Si w bezwen tradui dokiman sa a, tanpri kontakte Direktè. Jistis Anviwònmanal MassDEP a nan nimewo telefòn ki endike anba a.

Việt Vietnamese

Tài liệu này và quan trọng và phải được dịch ngay. Nếu quý vị cần bản dịch của tài liệu này, vui lòng liên hệ với Giám Đốc Phòng Công Lý Môi Trường của MassDEP theo số điện thoại được liệt kê bên dưới.

ប្រទេសកម្ពុជា Khmer/Cambodian

ឯកសារនេះមានសារៈសំខាន់
ហើយគួរត្រូវបានបកប្រែភ្លាមៗ។
ប្រសិនបើអ្នកត្រូវការអោយឯកសារនេះបកប្រែ
សូមទាក់ទងនាយកផ្នែកយុត្តិធម៌បរិស្ថានរបស់
MassDEPតាមរយៈលេខទូរស័ព្ទដែលបានរាយដូចខាងក្រោម។

Kriolu Kabuverdianu Cape Verdean

Es dokumentu sta important i tenki ser tradusidu imediatamenti. Se nho ta presisa ke es dokumentu sta tradisidu, por favor kontata O Diretor di Justisia di Environman di DEP ku es numero di telefoni menxionadu di baixo.

Contact Deneen Simpson 857-406-0738

**Massachusetts Department of Environmental Protection
100 Cambridge Street 9th Floor Boston, MA 02114**

TTY# MassRelay Service 1-800-439-2370 • <https://www.mass.gov/environmental-justice>
(Version revised 8.2.2023) 310 CMR 1.03(5)(a)

Русский Russian

Это чрезвычайно важный документ, и он должен быть немедленно переведен. Если вам нужен перевод этого документа, обратитесь к директору Департамента экологического правосудия MassDEP (MassDEP's Director of Environmental Justice) по телефону, указанному ниже.

العربية Arabic

هذه الوثيقة مهمة وتجب ترجمتها على الفور.

إذا كنت بحاجة إلى ترجمة هذه الوثيقة، فيرجى الاتصال بمدير العدالة البيئية في MassDEP على رقم الهاتف المذكور أدناه.

한국어 Korean

이 문서는 중대하므로 즉시 번역되어야 합니다. 본 문서 번역이 필요하신 경우, 매사추세츠 환경보호부의 "환경정의" 담당자 분께 문의하십시오. 전화번호는 아래와 같습니다.

հայերէն Armenian

Այս փաստաթուղթը կարևոր է, և պետք է անհապաղ թարգմանել այն:
Եթե Ձեզ անհրաժեշտ է թարգմանել այս փաստաթուղթը, դիմեք Մասաչուսեթսի շրջակա միջավայրի պահպանության նախարարության (MassDEP) Բնապահպանական հարցերով արդարադատության ղեկավարին (Director of Environmental Justice)՝ ստորև նշված հեռախոսահամարով

فارسی Farsi Persian

این نوشتار بسیار مهمی است و باید فوراً ترجمه شود. اگر نیاز به ترجمه این نوشتار دارید لطفاً با مدیر عدالت محیط زیستی MassDEP در شماره تلفن ذکر شده زیر تماس بگیرید.

Français French

Ce document est important et doit être traduit immédiatement. Si vous avez besoin d'une traduction de ce document, veuillez contacter le directeur de la justice environnementale du MassDEP au numéro de téléphone indiqué ci-dessous.

Deutsch German

Dieses Dokument ist wichtig und muss sofort übersetzt werden. Wenn Sie eine Übersetzung dieses Dokuments benötigen, wenden Sie sich bitte an MassDEP's Director of Environmental Justice (*Direktor für Umweltgerechtigkeit in Massachusetts*) unter der unten angegebenen Telefonnummer.

Ελληνική Greek

Το έγγραφο αυτό είναι πολύ σημαντικό και πρέπει να μεταφραστεί αμέσως. Αν χρειάζεστε μετάφραση του εγγράφου αυτού, παρακαλώ επικοινωνήστε με τον Διευθυντή του Τμήματος Περιβαλλοντικής Δικαιοσύνης της Μασαχουσέτης στον αριθμό τηλεφώνου που αναγράφεται παρακάτω

Italiano Italian

Questo documento è importante e deve essere tradotto immediatamente. Se hai bisogno di tradurre questo documento, contatta il Direttore della Giustizia Ambientale di MassDEP al numero di telefono sotto indicato.

Język Polski Polish

Ten dokument jest ważny i powinien zostać niezwłocznie przetłumaczony. Jeśli potrzebne jest tłumaczenie tego dokumentu, należy skontaktować się z dyrektorem ds. sprawiedliwości środowiskowej MassDEP pod numerem telefonu podanym poniżej.

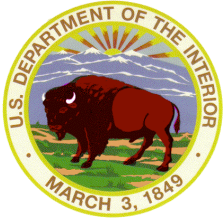
हिन्दी Hindi

यह दस्तावेज महत्वपूर्ण है और इसका अनुवाद तुरंत किया जाना चाहिए। यदि आपको इस दस्तावेज का अनुवाद कराने की जरूरत है, तो कृपया नीचे दिए गए टेलीफोन नंबर पर MassDEP के पर्यावरणीय न्याय निदेशक से संपर्क करें।

Contact Deneen Simpson 857-406-0738

Massachusetts Department of Environmental Protection
100 Cambridge Street 9th Floor Boston, MA 02114

TTY# MassRelay Service 1-800-439-2370 • <https://www.mass.gov/environmental-justice>
(Version revised 8.2.2023) 310 CMR 1.03(5)(a)



United States Department of the Interior

**NATIONAL PARK SERVICE
PARTNERSHIP WILD & SCENIC RIVERS
One Armory Square
Springfield, MA 01105**



Re: NAE-2024-00658

MassDOT Proj. # 612514 – Berkshire Trail (Route 9 & 112) over Westfield River, Cummington, MA

May 6, 2025

Dear Mr. Newton

The National Park Service (NPS) appreciates the opportunity to review NAE – 2024 -00658, otherwise known as the Dudley Manor Bridge Preservation Project (Project) that intersects a designated segment of the Wild & Scenic Westfield River in Cummington, MA. Further, we appreciate the coordination to this point with the US Army Corps of Engineers (USACE) and the proponent.

NPS has completed its review of the Project construction plans and item specifications (April 21, 2025) and has determined that the proposed Project would not have direct and adverse effects on the free-flowing condition, water quality, and outstandingly remarkable values for which the Westfield River was designated as a component of the National Wild and Scenic Rivers System.

Background

As a Wild and Scenic River, this section of the Westfield River is reviewed by the National Park Service for consistency with Section 7 of the Wild & Scenic Rivers Act (PL 90-542; 16 U.S.C. 1271) and the designation of the Westfield River as Wild & Scenic (58 FR 60459 and 69 FR 63171), more info at www.rivers.gov.

This review occurs when a water resource Project is either federally-funded or permitted and may have direct and adverse effects on free-flow, water quality, or the outstanding resource values for which the river was designated. In the case of the Westfield River, those values are biodiversity, cultural landscape, geology, historic features, water quality, and one of the few wild segments of river remaining in the east. The NPS has reviewed this Project with those values in mind.

Proposed Activity

The Massachusetts Department of Transportation (MassDOT) is proposing to replace of the bridge deck and sidewalk, steel repairs installation of a new curb rail, and dewatering around the bridge abutments to facilitate concrete repairs. The Project proposes to restore the bridge in place and improve the integrity of the structure while also installing new infiltration basin that will manage stormwater run-off entering the river.

Alteration of Within-Channel Conditions

The Project as proposed will temporarily alter free flow and includes 4,100 SF of temporary impacts. Temporary alterations are limited to sandbag coffer dams around concrete bridge abutments that will constrict flow underneath the bridge. Coffers will be removed upon completion of the Project and no permanent alteration is described.

Alteration of Riparian and/or Floodplain Conditions

Construction activities in the riparian and floodplain associated with the proposed Project include the installation of an infiltration basin mid-bank to manage stormwater flows. The installation includes disturbance of banks, building of berms, filling with cobble, and planting of native plants. The effects on vegetation would be limited to the footprint of the Project and associated construction staging areas, and disturbed vegetation would be reestablished with native plant materials.

If present within the Project boundary, invasive species like *Reynoutria japonica* (Tatsoo knotweed) will be controlled.

Alteration of Upland Conditions

There is no temporary or permanent alteration of upland conditions expected from this Project as described in the proposal.

Alteration of Hydrologic or Biologic Processes

Minimal temporary alteration of the hydrologic or biologic processes is expected resulting from the installation and removal of sandbag coffer dams in the river near the base of the bridge abutments. This is a necessary step to successfully complete the repair of the bridge and will serve to minimize the impact of work-related debris, erosion, and sedimentation that may impact aquatic biota as a result of the Project. Working in and near the river and utilizing coffer dams will have temporary impact on that riverine and benthic habitat of some species listed for Cummington, MA by Massachusetts Natural Heritage and Endangered Species Program (NHESP) as Rare, Special Concern, Threatened, or Endangered.

There are no permanent impacts associated with this Project as described.

Magnitude and Spatial Extent of Potential Off-Site Changes

No off-site changes are anticipated.

Time Scale

The timing and duration of the work is not known. It is however important to avoid spawning season of species listed by NHESP to the extent possible. This primarily includes June and July each year.

Comparison of Project Analyses to Management Goals

Management objectives for the Wild & Scenic Westfield River and its outstandingly remarkable values are provided in the Westfield River Greenway Plan (1993) and Westfield River Stewardship Plan (2021). The designated segment of the East Branch of the Westfield River impacted by the Project, is classified as Recreational. The outstandingly remarkable values (ORV) associated with this segment include free-flow, water quality, geology, biodiversity, history, scenery, and recreation.

Effects of the Proposed Project on Wild and Scenic River Values

1. Flow (including free-flowing condition, within-channel conditions, hydrological processes)

ORV: Maintaining free-flowing conditions is integral to the designated status of the Wild & Scenic Westfield River under the Wild and Scenic Rivers Act (1968), supports the integrity of the ORVs, and is a key component of future management. The East Branch at the time of designation, was free of impoundments, dams, and channel alterations.

Short-term effects: Potential flow impacts from the Project are expected to be temporary and minimal. Constriction of flow as a result of the installation of sandbag coffer dams will allow for water to flow through the middle of the channel and removal of sandbag coffer dams upon completion of the Project will alleviate this burden. Natural stream flows would be restored once the Project is complete, allowing for the resumption of hydrological processes.

Long-term effects: Long-term effects from this Project are not anticipated to be significant.

2. Water Quality

ORV: Water quality is also integral to designated status of the Wild & Scenic Westfield River under the Wild and Scenic Rivers Act, supports the integrity of the ORVs, and is a key component of future management. The pristine headwater streams of the East Branch offer remarkable aquatic habitat. This segment of the East Branch is adjacent Cummington Wildlife Management Area and Gilbert Bliss State Forest, and owes its good water quality in part to these protected lands and minimal development in the vicinity.

Short-term effects: Short-term water quality impacts from the Project are expected to be temporary sedimentation and turbidity resulting from in-stream activities associated with emplacing sand-bag coffer dams to repair concrete abutments in the dry. With the use of best management practices, required implementation of appropriate erosion prevention and sediment control measures, and observance of proper construction sequencing, sedimentation and turbidity issues are expected to be temporary and minimal.

Long-term effects: Long-term water quality impacts are expected to be minimal or non-existent.

3. Geology

ORV: Geology is a key characteristic of the channel through which the Wild & Scenic Westfield flows. Waterfalls, gorges, and granite walls that open into meandering stream channels are regionally significant.

Short-term effects: No adverse short-term effects on geologic features are anticipated from the Project.

Long-term effects: No adverse long-term effects are anticipated from the Project.

4. Biological

ORV: Biology (and Ecology) is an ORV for the Wild & Scenic Westfield River. The river and riparian corridor support important aquatic biota and wildlife habitat; species diversity; rare, threatened, and endangered species, and plant and natural communities.

Short-term effects: Short-term effects on biological resources of the East Branch include the temporary minor impairment of river flow, increased turbidity, erosion, and/or sedimentation associated with work in the channel related to establishing coffer dams, and work on the banks to install an infiltration basin.

These all have the potential to harm habitat and life-cycle processes associated with species listed as rare (Special Concern, Threatened, or Endangered) by the Massachusetts Natural Heritage and Endangered Species Program (NHESP) including Bridle Shiner, Lake Chub, Longnose Sucker, Harpoon Clubtail, Ocellated Darter, Riffle Snaketail, and Ski-tipped Emerald. Being mindful of the lifecycle patterns and habitat requirements of these species, including avoiding work during key spawning times (June, July), minimizing manipulation of stream bed materials, and controlling run-off and turbidity will minimize the impact of the Project. Please see Required Conditions below.

Long-term effects: No adverse long-term effects on natural resources are anticipated from the Project.

5. Historic

ORV: Historic resources are ORVs for the Wild & Scenic East Branch Westfield River. Historic resources include the Dudley Manor Bridge itself, as well as the L.J. Orcutt House, and the Robbin, Hiram-Barber, Jerijah House in the vicinity of the Project site.

Short-term effects: No adverse short-term effects on historic resources are anticipated from the Project.

Long-term effects: No adverse long-term effects are anticipated from the Project. The repairs and improvements made to the bridge are anticipated to enhance the experience of visitors and users of this historic structure.

6. Scenic and Recreational

ORV: Scenic and recreational resources are ORVs for the Wild & Scenic East Branch of the Westfield River. Scenic resources include intact riparian forests and marshes, noteworthy historic landscapes, and distinctive scenic bridges. Recreational values include hiking and walking, and wildlife viewing.

Short-term effects: Possible short-term effects on scenic and recreational resources include the sight and sound of construction equipment which could disturb hikers, walkers, and wildlife. This disturbance will be temporary and short-term effects are expected to be minimal.

Long-term effects: Successful completion of the Project is expected to improve integrity and appearance of the Dudley Manor Bridge (listed on the National Register of Historic Places) and is expected to benefit the scenic and historic values of this segment of river.

Section 7 Determination

The National Park Service has determined on behalf of the Secretary of the Interior, pursuant to Section 7 of the Wild and Scenic Rivers Act, that the proposed Project would not have a “direct and adverse” effect on the East Branch of the Wild & Scenic Westfield River’s free-flowing condition, water quality or outstandingly remarkable values, provided that the avoidance and minimization measures and actions cited below are fully and properly fulfilled for the duration of the Project.

Required Project Measures/Conditions

1. To the extent possible, **work in the channel shall avoid spawning season (June and July) for the most vulnerable species listed by NHESP, Lake Chub (*Couesius plumbeus*).**
2. ***Downstream flows shall always be maintained***, with all practical effort made to prevent excessive sediments and discharged turbid water into downstream areas. **The timely collection and relocation of entrapped fish or mussels shall be done in a manner that promotes their safe recovery the stream channel.**

3. Water quality shall be maintained by implementing appropriate ***erosion prevention and sediment control*** practices from the Massachusetts Erosion and Sediment Control Guidelines for Urban and Suburban Areas (2003).
4. No hay bales shall be used for erosion and sediment controls; ***chemical-free straw bales are acceptable.***
5. Woven and mechanically bound ***biodegradable erosion control matting*** shall be used to stabilize all slopes steeper than 3H:1V. No plastic netting or welded joint poly-based matting shall be used.
6. Native seed mixes and plant species shall be used to reestablish vegetation. No borrow, loam, or fill material shall contain invasive species.
7. Prior to moving construction equipment into the Project area, ***the contractor must take reasonable measures to ensure that each piece of equipment is free of soil, seeds, vegetative matter, or other debris that may contain seeds of non-native invasive species*** (including aquatic if equipment will be used in-stream).
8. ***All fueling operations, lubricating, hydraulic topping off, fuel tank purging, and equipment maintenance/repairs shall be performed at an upland site outside of the one-hundred-year floodplain.*** These activities shall take place on an approved pad with spill control/collection devices in place, and the operator trained in their use.

Any changes to the proposed Project as described in the package submitted for evaluation, such as the plan set, item specifications, special provisions, construction methods or schedule for in-stream work, will require consultation with the NPS before the work proceeds, and may also require additional review or approvals.

Sincerely,



Andrew Petitdemange
River Manager
Partnership Wild & Scenic Rivers
National Park Service
andrew_petit_de_mange@nps.gov
617-283-3111

CC: Jamie Fosburgh, Branch Chief, Partnership Wild and Scenic Rivers
Melanie Glynn, Chair, Westfield River Wild and Scenic Committee

General Permit No.: NAE-2022-02649

Final Effective Date: June 2, 2023

Applicant: General Public, Commonwealth of Massachusetts

Expiration Date: June 1, 2028

Department of the Army
General Permits for the Commonwealth of Massachusetts

The New England District of the U.S. Army Corps of Engineers (USACE) hereby issues twenty-five (25) regional general permits (GPs) for activities subject to USACE jurisdiction in waters of the U.S., including wetlands, navigable waters within the Commonwealth of Massachusetts and adjacent ocean waters to the seaward limit of the outer continental shelf. The Massachusetts GPs (hereafter referred to as the MA GP or GP) are issued in accordance with USACE regulations at 33 CFR 320 – 332 [see 33 CFR 325.5(c)(1)]. These GPs establish criteria and contain permit conditions to ensure that the authorized activities have no more than minimal individual and cumulative adverse impacts to the environment.

This document contains the following sections:Pages

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In issuing these GPs, the Federal Government does not assume any liability for the following:

(a) damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes; (b) damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the U.S. in the public interest; (c) damages to persons, property or to other permitted or unpermitted activities or structures caused by the activity authorized by any of the GPs; (d) design or construction deficiencies associated with the permitted work; or (e) damage claims associated with any future modification, suspension or revocation of these permits.

Tammy R. Turley 02 June 2023

 Tammy R. Turley Date
 Chief, Regulatory Division

SECTION I. STATUTORY AUTHORITIES & REGULATED ACTIVITIES

1. Work Requiring USACE Authorization

- a. Section 10: Work and structures that are located in, over, under or that affect navigable waters of the United States (U.S.) (see 33 CFR 329). The USACE regulates these activities under section 10 of the Rivers and Harbors Act of 1899 (see 33 CFR 322).
- b. Section 404: The discharge of dredged or fill material into waters of the U.S (see 33 CFR 328). The USACE regulates these activities under Section 404 of the Clean Water Act (CWA). The term “discharge of dredged or fill material” also includes certain discharges resulting from excavation. Applicants should contact USACE to determine if a particular excavation discharge occurring within waters of the U.S., is a regulated activity. See 33 CFR 323.4 of the CWA for exempted activities.

For additional information on the limits of USACE jurisdiction, please see:

https://www.nae.usace.army.mil/Portals/74/docs/regulatory/JurisdictionalLimits/Jurisdictional_Limits_Brochure.pdf

2. Authority to Issue General Permits

- a. In accordance with 33 CFR 322.2(f), 325.2(e)(2), and 325.5(c), USACE may issue regional general permits authorizing activities under Section 10 of the RHA.
- b. In accordance with Section 404(e) of the CWA, 33 USC 1344(e), and 33 CFR 323.2(h), 325.2(e)(2), and 325.5(c), after notice and opportunity for public hearing, USACE may issue regional general permits for any category of activities involving discharges of dredged or fill material if the activities in such category are similar in nature, will cause only minimal adverse environmental effects when performed separately, and will only have minimal cumulative adverse effect on the environment.

3. Related Laws

33 CFR 320.3 includes a list of related laws including, but not limited to, Section 408 of the Rivers and Harbors Act of 1899, Section 401 of the Clean Water Act, Section 402 of the Clean Water Act, Section 307(c) of the Coastal Zone Management Act of 1972, Section 106 of the National Historic Preservation Act of 1966, Section 7 of the Endangered Species Act, the Fish and Wildlife Coordination Act of 1956, the Magnuson-Stevens Fishery Conservation and Management Act, the Fish and Wildlife Coordination Act, Section 302 of the Marine Protection, Research and Sanctuaries Act of 1972, Section 7(a) of the Wild and Scenic Rivers Act, the Golden Eagle Protection Act, and the Migratory Bird Treaty Act.

SECTION II. REVIEW CATEGORIES & APPLICATION PROCEDURES

To qualify under these GPs, the design, construction, and maintenance associated with each proposed activity must meet the terms and eligibility criteria listed in Section III, all applicable general conditions (GCs) in Section IV, and any specific mitigation requirements in Section V. Applicants should first review the GPs to see if a project is eligible for authorization under one or more of the GPs within this document. Any activity not specifically listed may still be eligible for authorization under these GPs; applicants are advised to contact USACE for specific eligibility determination.

Please note that these GPs allow for Self-Verification (SV) contingent upon meeting all criteria and with full adherence to all GCs. Projects that do not qualify for SV, may meet criteria for Pre-Construction Notification (PCN). Tables are provided under each activity, which outline criteria for SV and PCN. Activities that do not meet criteria for SV or PCN may require review as an Individual Permit (IP). Activities may require a PCN or IP as noted in Sections III and/or IV of this GP. Notwithstanding compliance with the terms of these GPs, USACE retains discretionary authority to require either PCN review or IP review on a case-by-case basis for any project based on concerns for the environment or for any of the other public interest factors found in 33 CFR 320.4(a). These GPs also do not replace or change those activities identified as exempt from USACE regulation (33 CFR 323.4).

1. Pre-Application Assistance

Prospective applicants may request a pre-application meeting to address any questions they may have. USACE may also request a pre-application meeting or additional information to facilitate review of the request. Pre-application meetings and/or site visits help streamline the authorization process by alerting the prospective applicant to potentially time-consuming factors that may arise during the evaluation of their project (e.g., avoidance, minimization and compensatory mitigation requirements, historic properties, endangered species, essential fish habitat, impacts to federal projects, and/or dredging of contaminated sediments).

To schedule a pre-application meeting, present questions, or if you need further assistance, please contact USACE at:

Email: cenae-r-ma@usace.army.mil (strongly preferred)

Phone: (978) 318-8338

Mail: U.S. Army Corps of Engineers
New England District
Regulatory Division, Massachusetts Section
696 Virginia Road
Concord, MA 01742

2. Submitting a Request

Please follow the procedures outlined in Sections II.2-5 when requesting an SV or applying for PCN authorization for activities covered by these GPs. The GPs are provided in Section III below. For SV-eligible projects, the Self-Verification Notification (SVN) must be submitted within 30 days of commencing work. Otherwise, a Pre-Construction Notification (PCN) must be submitted for work that is not SV-eligible. Please include appropriate drawings and attachments and submit your request using the mailbox identified in Section II.4 or II.5 below. USACE will promptly confirm receipt of your request and notify you in the event additional information is required. Guidance on

how to submit electronic correspondence is located on the NAE Regulatory website here:
<https://www.nae.usace.army.mil/Missions/Regulatory/Submitting-Electronic-Correspondence>.

3. Local, State & Federal Approvals

Applicants are responsible for applying for and obtaining any required local, state, and federal permits or approvals. These must be obtained prior to the commencement of work in waters. Such authorizations may include a Water Quality Certification, a Coastal Zone Management Act consistency determination, and other approvals as noted below. Authorization under these GPs does not obviate the need for the permittee to obtain other Federal, State, or local permits, approvals, or authorizations required by law.

I. Water Quality Certification under Section 401 of the Federal Clean Water Act (33 USC 1341).

Applicants are responsible for determining the appropriate 401 Water quality Certification (WQC) requirements and submitting this information to the USACE at the time of their PCN application or when completing their SVN. Applicants that are unsure of whether their activity has been certified should contact MassDEP, or EPA Region 1 when the activity is located on tribal lands, for a determination. The 401 WQC requirement must be satisfied by acquiring one of the following WQCs from MassDEP (see GC 8):

General 401 WQC: The MassDEP issued a WQC on April 21, 2023 conditionally certifies all activities in GPs 1 – 24 eligible for SV and PCN so long as the activity is described in 314 CMR 9.03, and is not an activity described in 314 CMR 9.04, and so long as the activity meets all other requirements, terms and conditions of this WQC. The MassDEP WQC also conditionally certifies activities described in GP 25 so long as the activity meets all other conditions of the WQC. Emergency projects described in GP 25 must obtain an emergency certification or otherwise be authorized pursuant to 310 CMR 10.06, qualify under a Severe Weather Emergency Declaration pursuant to 310 CMR 10.06(8) issued by the MassDEP, or meet the requirements of 9.12(2) or (3) in order to be certified under the WQC

Applicants should refer to the following link to determine if their activity is eligible:
<https://www.nae.usace.army.mil/Missions/Regulatory/State-General-Permits/Massachusetts-General-Permit/>. If eligible, you must comply with all applicable WQC conditions. Activities listed in 314 CMR 9.03 that are not exempt from the Wetland Protection Act must have a valid Final Order of Conditions (OOC) or Final Restoration Order of Conditions pursuant to 310 CMR 10.00 to be eligible under the General 401 WQC.

Individual 401 WQC: In the event the proposed activity is not covered by the general WQC, applicants shall contact MassDEP and apply for an individual 401 WQC if their activity does not qualify for a General 401 WQC as outlined above. MassDEP may issue, waive, or deny the individual 401 WQC on a case-by-case basis. All activities listed in 314 CMR 9.04 must obtain an individual 401 WQC from MassDEP to be eligible under these GPs. When an Individual 401 WQC is required for *PCN activities*, the applicant shall submit their Individual 401 WQC application concurrently to MassDEP and the USACE to comply with 40 CFR 121.

Activities Proposed on Tribal Lands: When an activity is proposed on Tribal lands, the applicant shall refer to the general 401 WQCs granted by the Environmental Protection Agency (EPA), Region 1 on May 15, 2023. These 401 WQCs are located on the USACE Regulatory website:
<https://www.nae.usace.army.mil/Missions/Regulatory/State-General-Permits/Massachusetts-General-Permit/>.

II. Coastal Zone Management Act Federal Consistency Concurrence pursuant to Section 307 of the CZMA of 1972, as amended. Federal consistency concurrence is required for all activities located within the coastal zone, unless determined otherwise by the Massachusetts Office of Coastal Zone Management (MA CZM) (see GC 9). As applicable, this requirement must be satisfied by acquiring one of the following from the MA CZM:

General CZM Federal Consistency Concurrence (General Concurrence): MA CZM has granted General Concurrence for all SV and PCN activities for GPs 1-25 and this can be found at: <https://www.nae.usace.army.mil/Missions/Regulatory/State-General-Permits/Massachusetts-General-Permit/>. The applicant must obtain all applicable permits and approvals prior to the commencement of work in USACE jurisdiction (i.e., construction begins on site). For SVs, General Concurrence is automatically granted and no further action is required from the applicant. For PCNs, the USACE will coordinate with MA CZM to acquire General Concurrence as part of the PCN application review. During review of the PCN application, USACE may request additional information from the applicant to support CZM's evaluation of the activity.

Individual CZM Federal Consistency Concurrence (Individual Concurrence): In certain cases, MA CZM may elevate any GP activity 1-25 to require Individual Concurrence. The applicant must contact MA CZM and follow the procedures to obtain Individual Concurrence as determined appropriate by MA CZM.

The MA CZM program includes five regional offices that serve 78 coastal municipalities. The following map provides more information about these offices: <https://www.mass.gov/service-details/czm-regions-coastal-communities-and-coastal-zone-boundary>

III. Other Approvals: Approvals typically required in Massachusetts include, but are not limited to, a Chapter 91 Permit/License, Massachusetts Environmental Protection Act (MEPA) review, Wetlands Protection Act Order of Conditions, and/or Aquaculture Certification. *Applicants should also be aware that USACE may not be able to render a permit decision in the event the proposed activity is denied by another local, state and/or federal agency.*

4. Procedures for Self-Verification (SV) Eligible Projects

If the activity is eligible for an SV, the Self-Verification Notification (SVN) must be completed prior to the start of project construction and submitted to USACE within 30 days of commencing work. The purpose of the SVN is to provide applicants with a tool to assist them when determining if the activity as proposed is SV-eligible. The following GPs do not require submission of the SVN: GP 1 (SV #1), GP 3 (SV #2-3), GP 4 (SV #2), GP 11, GP 12 (note #2), GP 14 (see note), GP 15 (see note), and GP 24 (SV #3). **For the activities not listed above, the SVN must be completed prior to the start of work and be kept on site at all times during project construction.** The applicant shall not begin work for SV-eligible activities until they have completely verified the bulleted items below.

Digital submittals by email are **strongly encouraged** to facilitate the most efficient processing of the SVN submittal. Please communicate with USACE staff if you are unable to provide a digital copy. Addresses are cenae-r-ma-sv@usace.army.mil (email) or Regulatory Division, U.S. Army Corps of Engineers, New England District, 696 Virginia Road, Concord, MA 01742-2751 (mail).

Eligible SV Activities:

- Are subject to USACE jurisdiction (see GC 2); and
- Qualify for one or more of the GPs within this document (Section III); and
- Meet the GCs within this document (Section IV); and

- When required, are supported by a complete SVN (Appendix C); and
- Receive all other required local, State, and/or Federal approvals.

5. Procedures for Pre-Construction Notification (PCN) Eligible Projects

For activities that require a PCN, an application to and written authorization from USACE is required. *No work requiring a PCN may proceed until the applicant receives written authorization from USACE verifying that the activity is authorized.* The verification letter may include special conditions that the applicant must comply with. When possible, it is *highly* recommended that PCN application materials are submitted at least 90 days before the target start date to allow for USACE evaluation and any necessary agency consultations. PCN applications shall demonstrate in writing how the proposed activity complies with all GCs, as applicable to their activity.

Digital submittals by email are **strongly encouraged** to facilitate the most efficient processing of the PCN application. Please communicate with USACE staff if you are unable to provide a digital copy. Addresses are cenae-r-ma@usace.army.mil or Regulatory Division, U.S. Army Corps of Engineers, New England District, 696 Virginia Road, Concord, MA 01742-2751 (mail).

Eligible PCN Activities:

- Are subject to USACE jurisdiction (see GC 2); and
- Qualify for one or more of the GPs within this document (Section III); and
- Meet the GCs within this document (Section IV); and
- Comply with the Mitigation Standards within this document (Section V); and
- Are supported by a complete PCN document (Appendix B); and
- When required, are supported by the submittal of project information to the appropriate parties identified in Appendix A; and
- Receive all other required local, State, and/or Federal approvals.

6. Interagency Review Procedures

The USACE reserves the opportunity to coordinate PCN activities with Federal and State agencies to ensure that the proposed activity results in no more than a minimal impact to the aquatic environment. In some cases, USACE may require project modifications involving avoidance, minimization, and/or compensatory mitigation for unavoidable impacts to ensure the net effects of a project are minimal. The USACE determines, after review and coordination with the agencies and/or the applicant, if PCN applications:

- Meet the terms and conditions of the GP as proposed;
- Require additional information;
- Require avoidance, minimization, compensatory mitigation, construction sequencing, project modification, or other special conditions to avoid or minimize adverse impacts to the aquatic environment;
- Require individual permit review regardless of whether the terms and GCs of these GPs are met, based on concerns for the aquatic environment or any other factor of the public interest (see Section 9 below).

For activities requiring a PCN, the applicant must wait for written authorization from USACE before commencing activities in waters of the U.S. Beginning work for PCN required activities without a USACE written authorization is a violation of these GPs, and the terms and conditions of this document. The applicant may be subjected to an enforcement action by USACE and/or the Environmental Protection Agency (EPA).

7. Construction of Solid Fill Structures and Fills Along the Coastline or Baseline from Which the Territorial Sea is Measured.

Projects involving the construction of solid fill structures or discharge of fill that may extend beyond the coastline or the baseline from which the territorial sea is measured (i.e., mean low water) will require a PCN. The USACE will submit a description of the proposed work and a copy of the plans to the Solicitor, Department of the Interior, Washington, DC 20240, and request comments concerning the effects of the proposed work on the outer continental rights of the United States. These comments will be included in the administrative record of the application. After completion of permit review, the record will be forwarded to the Chief of Engineers. The decision on the application will be made by the Secretary of the Army after coordination with the Attorney General.

8. Emergency Activities

Per 33 CFR 325.2(e)(4), an emergency is limited to a situation that would result in an unacceptable hazard to life, a significant loss of property, or an immediate, unforeseen, and significant economic hardship if corrective action requiring a permit is not undertaken within a time period less than the normal time needed to process an application under standard procedures. Emergency work shall be limited to that which is necessary to stabilize and secure the situation. Additional work needed for final repairs shall not be completed until approval is obtained through the appropriate, non-emergency process. Emergency work is subject to the same terms and conditions of these GPs as non-emergency work, and similarly, must qualify for authorization under these GPs; otherwise, an IP is required. *See GP 25 Emergency Situations for additional information.*

9. Individual Permit

Projects that do not meet the terms and conditions of this GP may require review as an IP (33 CFR 325.5 (b)). Proposed work in this category will require a separate Federal application for an individual permit from USACE (33 CFR 325.1). In addition, USACE retains discretionary authority on a case-by-case basis to elevate GP-eligible activities to an IP based on concerns for the environment or any other factor of the public interest (33 CFR 320.4 (a)). Applicants are required to submit the appropriate application materials directly to USACE as early as possible to expedite the permit review process. General information and application forms can be obtained at our website or by contacting our office at cenae-r-ma@usace.army.mil or (978) 318-8338. Individual 401 WQC and/or CZMA Federal consistency concurrence from the appropriate MA agencies are required before USACE can issue an individual permit. Applying for an IP does not relieve the applicant from their obligation to obtain all required Federal, State and/or local approvals.

10. Compliance

Applicants shall ensure compliance with all applicable GPs in Section III, GCs in Section IV, and any special conditions included in USACE verification letters. Noncompliance with these GPs, GCs, and special conditions may subject the applicant to criminal, civil, or administrative penalties, and/or an ordered restoration, and/or the permit may be modified, suspended or revoked by USACE. The USACE will consider any activity requiring USACE authorization to be noncompliant if that activity does not comply with all GP terms and conditions at all times, including while the project is under construction and when work is completed.

SECTION III. MASSACHUSETTS GENERAL PERMITS

Applicants are encouraged to review Sections I & II prior to submitting an application to confirm that the activity as proposed complies with all terms and conditions of the 2023 MA GPs.

Applicants are also encouraged to review the definitions in Section VII, Definitions & Acronyms, of this document. Several terms are frequently used throughout the GPs, and it is important for the reader to understand these terms. If seeking verification for an activity previously verified under the 2018 MA GPs, please contact the USACE to discuss permitting needs in advance of submitting an application.

General Permits

1. Aids to Navigation and Temporary Recreational Structures
2. Maintenance
3. Moorings
4. Structures in Navigable Waters of the U.S.
5. Boat Ramps and Marine Railways
6. Utility Lines, Oil or Natural Gas Pipelines, Outfall Or Intake Structures, and Appurtenant Features
7. Dredging, Disposal of Dredged Material, Beach Nourishment, Rock Removal and Rock Relocation
8. U.S. Coast Guard Approved Bridges
9. Bank and Shoreline Stabilization
10. Aquatic Habitat Restoration, Enhancement, and Establishment Activities
11. Fish and Wildlife Harvesting and Attraction Devices and Activities
12. Response Operations, Oil and Hazardous Substances
13. Cleanup of Hazardous and Toxic Waste
14. Scientific Measurement Devices
15. Survey Activities
16. Land and Water-Based Renewable Energy Generation Facilities and Hydropower Projects
17. Residential, Commercial and Institutional Developments, and Recreational Facilities
18. Aquaculture
19. Mining Activities
20. Living Shorelines
21. Agricultural Activities
22. Reshaping Existing Drainage Ditches, Construction of New Ditches, and Mosquito Management
23. Linear Transportation Projects and Wetland/Stream Crossings
24. Temporary Construction, Access, and Dewatering
25. Emergency Situations

GP 1. AIDS TO NAVIGATION AND TEMPORARY RECREATIONAL STRUCTURES (Authority: §10)

(a) The placement of aids to navigation and regulatory markers that are approved by and installed in accordance with the requirements of the U.S. Coast Guard (USCG). See 33 CFR, Part 66; and (b) Temporary buoys, markers, and similar structures placed for recreational use during specific events such as water skiing competitions and boat races or seasonal use. See GC 16.

Self-Verification Eligible

1. Aids to navigation and regulatory markers approved by and installed in accordance with the requirements of the USCG.
2. Temporary buoys, markers and similar structures that are: (a) placed for recreational use during specific events and removed within 30 days after event; or (b) placed during winter events on ice and removed before spring thaw. These structures must be authorized by the local harbormaster, not located within an FNP or its buffer zone, and not located in saltmarsh or tidal vegetated shallows.

Pre-Construction Notification Required

1. Impacts in saltmarsh or tidal vegetated shallows.
2. Activities that are not SV eligible.

Note: An SVN submittal to USACE is not required for work authorized under SV #1 above.

GP 2. MAINTENANCE (Authorities: §10 and §404)

Repair, rehabilitation, or replacement of any previously authorized¹, currently serviceable structure, or fill, or of any currently serviceable structure or fill authorized by 33 CFR 330.3 (activities occurring before certain dates), provided that the structure or fill is not to be put to uses differing from those uses specified or contemplated for it in the original permit or the most recently authorized modification. Minor deviations in the structure's configuration or filled area, including those due to changes in materials, construction technique requirements of other regulatory agencies, or current construction codes or safety standards that are necessary to make the repair, rehabilitation, or replacement are authorized. This GP also authorizes temporary structures, fills, and work, including the use of temporary mats, necessary to conduct the activities above. Maintenance dredging and beach nourishment are not eligible under GP 2 (see GP 7). Stream crossing modifications (including sliplining), replacements or extensions are not eligible under GP 2 (see GPs 6, 17, 23). See GP 25 Emergency Situations for expedited review of emergency activities.

Not authorized under GP 2 (IP required): (a) Permanent impacts in >1 acre in non-tidal waters and/or wetlands; or (b) Permanent impacts >1/2 acre in tidal waters; >1000 SF in saltmarsh, mud flats, riffle and pool complexes, or non-tidal vegetated shallows; or >100 SF in tidal vegetated shallows; or (c) Temporary impacts >1 acre in tidal waters; >5000 SF in saltmarsh, mud flats, riffle and pool complexes, or non-tidal vegetated shallows; or >1000 SF in vegetated shallows; (d) New stream channelization or stream relocation projects (e.g., those in response to storm or flood events).

Self-Verification Eligible

Maintenance activities that meet all of the following terms:

1. In non-tidal waters, the combined permanent and temporary impacts extending beyond the original footprint are ≤5,000 SF² and not located in vegetated shallows or riffle and pool complexes.
2. In tidal waters, the combined permanent and temporary impacts extending beyond the original footprint are ≤5,000 SF, ≤1,000 SF in mudflats and/or natural rocky habitat, and not located in saltmarsh and tidal vegetated shallows.
3. Minor deviations in the repair, rehabilitation, or replacement of previously authorized, currently serviceable structures or fills.
4. Bulkhead replacement in tidal and non-tidal waters via installation of new bulkhead within 18 inches of the existing bulkhead and associated backfill.
5. Drawdown of an impoundment for dam/levee repair provided it does not exceed 18 months and one growing season (April through September).

Pre-Construction Notification Required

1. Discharges associated with removal of accumulated sediments and debris in the vicinity of existing structures, including intake and outfall structures and associated canals.
2. The removal of sediment outside the immediate vicinity of existing structures (e.g., bridges, culverted road crossings, water intake structures, etc.) that is ≥200 linear feet. This activity is limited to the minimum necessary to restore the waterway in the vicinity of the structure to the approximate dimensions existing when the structure was built.
3. Dam and flood control or levee repair, rehabilitation, or replacement involves:
 - a. A change in the flood elevation or permanent water surface elevation of the impoundment; or
 - b. Drawdown of impoundment for construction exceeding one growing season (see SV eligible #5);
 - c. Any modification that changes the character, scope, or size of the original fill design; or
 - d. Does not meet SV eligible 1-7.
4. Installation of steel piles, including steel sheet piles, that cannot be done in the dry and where NOAA-ESA listed species are mapped as present.

¹ Some maintenance activities may not be subject to regulation under Section 404 of the CWA in accordance with 33 CFR 323.4(a)(2). Per 33 CFR 330.3, Vested dates are: a) Work performed and structures installed before December 18, 1968 (Section 10); and b) Fill placed before July 25, 1975 (Section 404).

² This excludes dam projects that may require a temporary drawdown with impacts >5,000 SF in non-tidal waters. Instead, the drawdown shall comply with SV #5 to be eligible under Self-Verification.

<p>6. Any stream channel modification is limited to the minimum necessary for the repair, rehabilitation, or replacement of the structure or fill; such modifications, including the removal of material from the stream channel, must be immediately adjacent to the project or within the boundaries of the structure or fill.</p> <p>7. Work to previously approved tide gates not affecting upstream tidal resource areas.</p>	<p>5. Activities located in the Connecticut River or Merrimack River, unless they are completed in the dry or when the tide is waterward of the work area.</p> <p>6. Activities on USACE properties & USACE-controlled easements.</p> <p>7. Activities that do not require an IP. Activities that do not require a PCN or an IP may be SV eligible.</p>
<p>Notes:</p> <p>1. This authorizes the repair, rehabilitation, or replacement of any previously authorized structure or fill that does not qualify for the CWA §404(f) exemption for maintenance. See 33 CFR 323.4(a)(2). Prior USACE permits may have included authorization to maintain the activity, in which case authorization under this GP is not necessary.</p> <p>2. See GC 22 for information on temporary construction mats.</p>	

GP 3. MOORINGS (Authority: §10)

New moorings and mooring fields; the relocation of previously authorized moorings; expansions, boundary reconfigurations or modifications of previously authorized mooring fields; and maintenance and replacement of moorings.

Not authorized under GP 3 (IP required): (a) Moorings or mooring fields converted to or associated with a new boating facility¹; or (b) Moorings in a USACE Federal Navigation Anchorage or USACE Federal Navigation Channel, except municipal-operated mooring fields.

Self-Verification Eligible

1. New or relocated moorings that meet all the following terms:
 - a. Authorized by a local harbormaster/ municipality under MGL Chapter 91 §10A; and
 - b. No interference with navigation; and
 - c. Single boat, single-point and non-commercial; and
 - d. Not associated with a boating facility, and
 - e. Neither placed within nor impact tidal vegetated shallows (e.g., eelgrass); and
 - f. Not located within a USACE Federal navigation project (FNP) or the FNP buffer zone.
2. Existing, authorized moorings are converted from traditional moorings to low impact mooring technology (see note below) and/or helical anchors.
3. Maintenance and replacement of moorings authorized by the USACE.

Pre-Construction Notification Required

1. New mooring fields; or expansions, boundary reconfigurations or modifications of existing, authorized mooring fields.
2. Moorings located such that they, and/or vessels docked or moored at them, are within the buffer zone of the horizontal limits of a Federal Anchorage. The buffer zone is equal to 3 times the authorized depth of that channel (see GC 15).
3. New individual moorings located in saltmarsh, mudflats, natural rocky habitat, and tidal vegetated shallows. Locating moorings these areas should be avoided to the maximum extent practicable. If these areas cannot be avoided, plans should show conservation mooring or low-impact mooring systems that prevent mooring chains from resting or dragging on the bottom substrate at all tides, where practicable. USACE may require a survey in areas previously mapped as containing eelgrass or within 100 ft. of existing eelgrass beds to document presence or absence of eelgrass and to determine the appropriate type and amount of compensatory mitigation for impacts to eelgrass.
4. Replacement moorings located in tidal vegetated shallows.
5. Moorings that are not SV eligible and do not require an IP.

Notes:

1. Low impact mooring systems, including conservation moorings, are encouraged to minimize impacts of chain scouring from conventional moorings during the tidal cycle.
2. An SVN submittal to USACE is not required for work authorized under SV #2-3 above.

¹ Boating facilities are marinas, yacht clubs, boat clubs, boat yards, dockominiums, town facilities, land/homeowner's associations, etc. that provide for a fee, rent or sell mooring or docking space. Not classified as boating facilities are municipal moorings or municipal mooring fields that charge an equitable user fee based only on the actual costs incurred.

GP 4. STRUCTURES IN NAVIGABLE WATERS OF THE U.S. (Authority: §10 & §404)

New, expansions, reconfigurations or modifications of structures for navigational access in waters of the U.S. including but not limited to temporary/seasonal or permanent pile and pole-supported piers, floats, stairs, shore out hauls, and boat and float lifts.

Not authorized under GP 4 (IP required): (a) Structures associated with a new boating facility; (b) Structures in a USACE Federal anchorage or channel; or (c) Artificial reefs.

Self-Verification Eligible

1. Private, non-commercial piers, floats and lifts that meet all the following terms:
 - a. Piers and floats in: (i) Tidal waters total ≤ 600 SF combined; and (ii) Non-tidal navigable waters of the U.S. total ≤ 600 SF combined; and
 - b. Piers are ≤ 4 feet wide and ≥ 6 feet above the marsh substrate (the height is measured from the marsh substrate to the bottom of the lowest longitudinal support); and
 - c. Floats and lifts in tidal waters and non-tidal navigable waters of the U.S. are ≥ 24 inches above the substrate during all tidal cycles. Float stops are preferred when site conditions warrant them (i.e., low tide exposes substrate), and skids can only be used in areas where piles are not feasible and on sandy or hard bottom substrates; and
 - d. Piers, floats and lifts: (i) Are ≥ 25 feet from previously mapped or existing vegetated shallows, or riparian property line extensions; (ii) Extend $\leq 25\%$ of the waterway width in non-tidal navigable waters of the U.S. or MHW in tidal navigable waters of the U.S.
 - e. Installation of ≤ 12 -inch diameter timber piles. Installation of ≥ 12 -inch diameter piles of any material type when installed in the dry.
2. Fenders and similar structures.

Pre-Construction Notification Required

1. Shore out hauls.
2. Expansions, modifications, or new reconfiguration zones at any authorized boating facility.
3. New, expansions, reconfigurations, reconfiguration zones, or modifications of structures that provide public, community or government recreational uses such as boating, fishing, swimming, access, etc.
4. Installation of steel piles, including steel sheet piles, that cannot be done in the dry and where NOAA-ESA listed species are mapped as present.
5. Located within the buffer zone of the horizontal limits of an FNP (GC 15).
6. Miscellaneous structures.
7. Impacts in tidal vegetated shallows.
8. Structures that are not SV eligible and do not require an IP.

Notes:

1. See GC 19 regarding pile driving and pile removal in navigable waters and
2. See GC 20 regarding time of year restrictions in tidal waters.
3. Boating facilities are facilities that provide for a fee, rent, or sell mooring space, such as marinas, yacht clubs, boat clubs, boat yards, town facilities, dockominiums, etc. Pile supported structures with no discharges of dredged or fill material are not regulated by USACE in non-navigable waters.
4. A SVN submittal to USACE is not required for SV #2 above.

GP 5. BOAT RAMPS AND MARINE RAILWAYS (Authorities: §10 and §404)

Activities required for the construction of boat ramps and marine railways, including excavation and fill.

Not authorized under GP 5 (IP required): (a) Permanent impacts that are >1 acre in non-tidal waters of the U.S., >½ acre in tidal waters; >1000 SF in saltmarsh, mud flats, riffle and pool complexes, or non-tidal vegetated shallows; or >100 SF in tidal vegetated shallows; (b) Temporary impacts in tidal waters that are >1 acre; >5000 SF in saltmarsh, mud flats, or riffle and pool complexes; or >1000 SF in vegetated shallows¹; or (c) dredging in navigable waters of the U.S. (see GP 7).

Self-Verification Eligible

1. In non-tidal waters, the combined permanent and temporary impacts are (a) ≤5,000 SF, and (b) not located in riffle and pool complexes and non-tidal vegetated shallows.

2. In tidal waters, the combined permanent and temporary impacts are (a) ≤5,000 SF, (b) ≤1,000 SF in mudflats and/or natural rocky habitat, and (c), not located in saltmarsh and tidal vegetated shallows.

Pre-Construction Notification Required

1. Boat ramps are located within 25 feet of property line extensions unless the properties are owned by the same owner. The USACE may require a letter of no objection from the abutter(s).

2. Activities that are not eligible for SV and do not require an IP.

GP 6. UTILITY LINES, OIL OR NATURAL GAS PIPELINES, OUTFALL OR INTAKE STRUCTURES, AND APPURTENANT FEATURES (Authorities: §10 & §404)

Activities required for: (a) The construction, maintenance, repair or removal of utility lines, oil or natural gas pipelines¹, outfall or intake structures², and appurtenant features including the associated excavation, backfill, or bedding for these structures. (b) The construction, maintenance, or expansion of substations and other appurtenant facilities associated with a utility line, oil or natural gas pipeline, and outfall or intake structure in non-tidal waters of the U.S.; and (c) The construction and maintenance of foundations for overhead utility line towers, poles, and anchors in tidal and non-tidal waters of the U.S., provided the foundations are the minimum size necessary and separate footings for each tower leg (rather than a larger single pad) are used where feasible. This GP authorizes the construction of access roads to facilitate construction of the above activities provided the activity, in combination with all other activities included in one single and complete project, does not exceed the thresholds identified below (IP required). Access roads used solely for construction of the utility line must be removed upon completion of the work. This GP also authorizes temporary structures, fills, and work, including the use of temporary mats, necessary to conduct the activities above.³

Not authorized under GP 6 (IP required): (a) Permanent impacts for any single and complete project that are >1 acre in non-tidal waters of the U.S.; >½ acre in tidal waters; >1000 SF in saltmarsh, mud flats, riffle and pool complexes, or non-tidal vegetated shallows; or >100 SF in tidal vegetated shallows; (b) Temporary impacts in tidal waters that are >1 acre; >5000 SF in saltmarsh, mud flats, or riffle and pool complexes; or >1000 SF in vegetated shallows; (c) Stormwater treatment or detention systems, or subsurface sewage disposal systems in waters of the U.S.; or (d) New tide gates that do not meet SV criteria below.

Self-Verification Eligible

1. In non-tidal waters, the combined permanent and temporary impacts are (a) ≤5,000 SF, and (b) not located in riffle and pool complexes and non-tidal vegetated shallows.
2. In tidal waters, the combined permanent and temporary impacts are (a) ≤5,000 SF, (b) ≤1,000 SF in mudflats and/or natural rocky habitat, and (c), not located in saltmarsh and tidal vegetated shallows.
3. Intake structures that are dry hydrants used exclusively for firefighting activities with no stream impoundments.
4. New tide gates on outfall structures for pipes conveying stormwater and/or industrial NPDES-permitted discharges from waters that are not waters of the U.S.

Pre-Construction Notification Required

1. New outfall and/or intake structures.
2. Unconfined work or silt producing activities in streams with diadromous fish.
3. Submarine cables, conduits, or pipelines that occur in, over or under navigable waters of the U.S.
4. Stream channelization, relocation, impoundment, or loss of streambed occurs.
5. The activity is placed within and runs parallel to or along a streambed within waters of the U.S.
6. There is a permanent change in preconstruction contours in waters of the U.S.
7. Installation of utility lines or gas/oil pipelines using trench excavation where material is temporarily sidecast into waters of the U.S. for >3 months. Applicants must demonstrate how the material would not be dispersed by currents or other forces.
8. Activities that are not SV eligible and do not require an IP.

¹ See the definitions of a “utility line” and “oil or natural gas pipeline” in Section VII.

² Outfall structures must be in compliance with regulations issued under the National Pollutant Discharge Elimination System Program (Section 402 of the Clean Water Act).

³ Temporary impacts shall comply with all GCs, including GC 32 Utility Line Installation and Removal.

GP 7. DREDGING (Authority: §10), DISPOSAL OF DREDGED MATERIAL (Authorities: §10, §404), BEACH NOURISHMENT (Authorities: §10 & §404), ROCK REMOVAL (Authority: §10) AND ROCK RELOCATION (Authorities: §10 & §404)

New, improvement and maintenance dredging (see notes below) including: (a) Disposal of dredged material at a confined aquatic disposal cell, beach nourishment location, near shore site, or ocean disposal site selected under Section 404 of the Clean Water Act pursuant to the 404(b)(1) Guidelines, provided the dredged material meets the requirements for such disposal; (b) Beach nourishment not associated with dredging; and (c) Rock removal and relocation for navigation.

Not authorized under GP 7 (IP required): (a) Dredging where ocean disposal is required for the disposal of dredged material (Section 103); New dredging >½ acre; ≥10,000 CY; >1000 SF permanent impacts to intertidal areas, saltmarsh, mud flats, riffle and pool complexes, or non-tidal vegetated shallows; or >100 SF permanent impacts to tidal vegetated shallows; (b) Maintenance or improvement dredging and/or disposal with >1 acre of impacts to intertidal areas, saltmarsh, mudflats, riffle and pool complexes, or non-tidal vegetated shallows; (c) New dredging where the primary purpose is sand mining for beach nourishment; (d) Beach scraping; (e) Boulder removal and relocation for navigation >½ acre; or (f) Blasting.

Self-Verification Eligible

1. Maintenance dredging of previously dredged areas, with upland disposal, that meet all of the following terms:
 - a. Dredged area ≤1/2 acre; and
 - b. Activities comply with GC 20, TOY Restrictions. The time-of-year restriction(s) stated in Appendix B of the MA Division of Marine Fisheries (DMF) Technical Report TR-47¹ can apply instead if the general TOY restriction if a TOY is provided for a specific waterbody and is less restrictive. This is to protect endangered species, EFH, and other species; and
 - c. The dredge footprint is located >25' from salt marsh or >100' from vegetated shallows; and
 - d. Combined permanent and temporary impacts that are (i) ≤1,000 SF in mudflats or natural rocky habitat, or (ii) ≤5,000 SF within intertidal habitat and areas containing shellfish (an area contains shellfish unless: it is verified that minimal shellfish are present per the local shellfish constable or a shellfish survey; or it is not mapped as a MassGIS shellfish suitability area).
 - e. No return water from upland disposal areas.
2. Boulder relocation with ≤1,000 SF of impacts, relocated to a similar depth and substrate.

Pre-Construction Notification Required

1. Maintenance dredging where the primary purpose is sand mining for beach nourishment.
2. New dredging and associated disposal ≤1/2 acre or <10,000 cubic yards.
3. Improvement dredging.
4. Beach nourishment in waters of the U.S. not associated with dredging.
5. Activities that are located in saltmarsh and tidal vegetated shallows.
6. Dredging in a Federal Navigation Project or within the buffer zone (see GC 15).
7. Activities that are not eligible for SV and do not require an IP.

Notes:

1. See Section VII for definitions of improvement and maintenance dredging.
2. For PCN activities, the USACE may waive or adjust the time of year requirement on a case-by-case basis after consultation with resource agencies.
3. Disposal site of any dredged material must be identified prior to obtaining USACE authorization.
4. Contact the USACE if a ten-year authorization to maintain an area is desired.

¹ The MA DMF Technical Report TR-47: <https://www.nae.usace.army.mil/Missions/Regulatory/State-General-Permits/Massachusetts-General-Permit/>

GP 8. U.S. COAST GUARD APPROVED BRIDGES (Authorities: §404)

Discharges of dredged or fill material incidental to the construction and modification of bridges across navigable waters of the U.S., including cofferdams, abutments, foundation seals, piers, and temporary construction and access fills provided that the USCG authorizes the construction of the bridge structure under Section 9 of the Rivers and Harbors Act of 1899 or other applicable laws. A USCG Authorization Act Exemption or a Surface Transportation and Uniform Relocation Assistance Act (STURRA) (144h) exemption do not constitute USCG authorization.

Not authorized under GP 8 (IP Required): Causeways and approach fills (see GP 23).

Self-Verification Eligible

1. Discharges of dredged or fill material that are incidental to the construction of bridges across navigable waters and meet all of the following:
 - a. Combined permanent and temporary impacts that are $\leq 5,000$ SF.
 - b. Combined permanent and temporary impacts that are $\leq 1,000$ SF in mudflats and natural rocky habitat.
 - c. Not located in saltmarsh and tidal vegetated shallows.

Pre-Construction Notification Required

1. Activities on USACE properties & USACE controlled easements.
2. Installation of steel piles, including steel sheet piles, that cannot be done in the dry and where NOAA-ESA listed species are mapped as present.
3. Activities that are not eligible for SV and do not require an IP.

Notes:

1. GP 8 is not applicable to bridges over inland waters or wetlands that are not tidally influenced or regulated as navigable under Section 10.
2. See eligibility criteria for GPs 2 & 23 for projects that are not subject to USCG regulations.

GP 9. BANK AND SHORELINE STABILIZATION (Authorities: §10 & §404)

Bank stabilization activities necessary for erosion protection along the banks of lakes, ponds, streams, estuarine and ocean waters, and any other open waters. Includes bulkheads, seawalls, riprap, revetments, living seawalls, or slope protection & similar structures, specifically for the purpose of shoreline protection. This GP also authorizes temporary structures, fills, and work, including the use of temporary mats, necessary to conduct the activities above.

Activities must meet the following criteria: (a) No material is placed in excess of the minimum needed for erosion protection; (b) No material is of a type, or is placed in any location, or in any manner, that will impair surface water flow into or out of any waters of the U.S.; (c) No material is placed in a manner that will be eroded by normal or expected high flows (properly anchored native trees and treetops may be used in low energy areas); (d) Native plants appropriate for current site conditions, including salinity, must be used for bioengineering or vegetative bank stabilization; (e) The activity is not a stream channelization activity; and (f) The activity must be properly maintained, which may require repairing it after severe storms or erosion events. This GP authorizes those maintenance and repair activities if they require authorization. This GP also authorizes temporary structures, fills, and work, including the use of temporary mats, necessary to construct the bank stabilization activity. See GP 20 for living shoreline stabilization structures or fills.

Not authorized under GP 9 (IP required): (a) New bank stabilization >500 feet in total length (>1,000 linear feet in total length when necessary to protect transportation infrastructure) or permanent loss of saltmarsh >1,000 SF, unless the District Engineer waives this criterion by making a written determination concluding that the discharge of dredged or fill material will result in no more than minimal adverse environmental effects (an exception is for bulkheads – the district engineer cannot issue a waiver for a new bulkhead that is >1,000 feet in length along the bank); (b) Stream channelization or relocation activities; or (c) Breakwaters, groins or jetties.

Self-Verification Eligible

1. Activities in tidal and non-tidal waters that are:
 - a. <200 feet in length.
 - b. <400 feet in length when necessary to protect transportation infrastructure.
 - c. ≤1 cubic yard of fill per linear foot average along the bank waterward of the plane of OHW or HTL.
 - d. Not located in non-tidal wetlands, saltmarsh, vegetated shallows.

Pre-Construction Notification Required

1. Activities in tidal and non-tidal waters that are:
 - a. ≥200 feet to ≤500 feet in total length. Activities >500 feet in total length must have a written waiver from USACE.
 - b. ≥400 feet to ≤1,000 feet in total length when necessary to protect transportation infrastructure. Activities >1,000 feet in total length must have a written waiver from USACE.
 - c. >1 cubic yard of fill per linear foot average along the bank waterward of the plane of OHW or HTL.
 - d. Located in non-tidal wetlands, saltmarsh, vegetated shallows.
2. Activities with permanent loss of tidal or non-tidal waters that is (a) ≥5,000 SF or (b) ≥1,000 SF in mudflats and natural rocky habitat.
3. Activities that are (a) located in the Connecticut River or Merrimack River and/or (b) require installation of steel piles/steel sheet piles that cannot be done in the dry where NOAA ESA-listed species are mapped as present.
4. Activities on USACE properties & USACE-controlled easements.
5. Activities that require grouted riprap and/or poured/unformed concrete.
6. Activities that are not eligible for SV and do not require an IP.

Note: The applicant shall comply with GC 24. This includes utilization of bioengineering techniques in lieu of hard armoring to the maximum extent practicable as site conditions allow.

GP 10. AQUATIC HABITAT RESTORATION, ENHANCEMENT, AND ESTABLISHMENT ACTIVITIES
(Authorities: §10 and §404)

Activities for the restoration, enhancement and establishment of non-tidal and tidal wetlands and riparian areas, including invasive, non-native or nuisance species control; the restoration and enhancement of non-tidal streams and other non-tidal open waters; the relocation of non-tidal waters, including non-tidal streams & associated wetlands for reestablishment of a natural stream morphology and reconnection of the floodplain; the restoration and enhancement of shellfish, finfish and wildlife; and the rehabilitation or enhancement of tidal streams, tidal wetlands and tidal open waters; provided those activities result in net increases in aquatic resource functions and services. See GP 9 for bank and shoreline stabilization. See GP 20 for living shorelines.

Not authorized under GP 10 (IP required): Stream channelization activities and artificial reefs.

Self-Verification Eligible

1. In tidal and non-tidal waters excluding tidal vegetated shallows, the combined permanent and temporary impacts are $\leq 5,000$ SF.
2. Eelgrass (vegetated shallows) planting and transplanting ≤ 100 SF in tidal waters.

Pre-Construction Notification Required

1. In tidal and non-tidal waters excluding tidal vegetated shallows, the combined permanent and temporary impacts are $> 5,000$ SF.
2. Eelgrass (vegetated shallows) planting and transplanting > 100 SF in tidal waters.
3. Permanent water impoundments, dam removal, fish ladders, or tide gates.
4. Stream relocation, impoundment, or loss of streambed occurs.
5. Runneling projects with the purpose of restoring saltmarsh by removing excess water that ponds on the saltmarsh surface.
6. The conversion of: (a) a stream or natural wetlands to another aquatic habitat type (e.g., stream to wetland or vice versa, wetland to pond, etc.) or uplands, (b) one wetland type to another (e.g., forested wetland to an emergent wetland).
7. Activities in the Connecticut River from the Turners Falls Dam to the MA/CT border, or Merrimack River from the Essex Dam to the mouth, involving permanent or temporary impacts unless they are performed < 5 feet waterward from OHW or HTL and in the dry. This is to protect endangered species.
8. Activities on USACE properties & USACE-controlled easements.
9. Activities that are not eligible for SV and do not require an IP.

Notes:

1. Changes in wetland plant communities that occur when wetland hydrology is more fully restored during wetland rehabilitation activities are not considered a conversion to another aquatic habitat type.
2. See RGL 18-01 for guidance on removal of obsolete dams and other structures from rivers and streams.
<https://www.usace.army.mil/missions/civil-works/regulatory-program-and-permits/guidance-letters/>
3. An ecological reference site may be used for a design basis of the restoration activity. The reference site should possess characteristics of an intact aquatic habitat or riparian area that exists in the region. The reference site shall represent the target habitat type of the proposed activity. A reference site may be required at the discretion of USACE.

GP 11. FISH AND WILDLIFE HARVESTING AND ATTRACTION DEVICES AND ACTIVITIES

(Authorities: §10 and §404)

Fish and wildlife harvesting and attraction devices and activities in waters of the U.S. such as pound nets, crab traps, crab and shellfish dredging, eel pots, lobster traps, duck blinds, clam and oyster digging, fish aggregating devices, and small fish attraction devices such as open-water fish concentrators (sea kites, etc.).

Not authorized under GP 11 (IP required): Artificial reefs; or new, or expansions of, impoundments and semi-impoundments of waters of the U.S. for the culture or holding of motile species such as lobster with an impounded area $> \frac{1}{2}$ acre.

Self-Verification Eligible

1. In non-tidal waters, the combined permanent and temporary impacts are (a) $\leq \frac{1}{2}$ acre, and (b) not located in riffle and pool complexes and non-tidal vegetated shallows.
2. Fish and wildlife harvesting and attraction devices and activities that do not require a PCN or IP.

Pre-Construction Notification Required

1. Pound nets, impoundments or semi-impoundments of waters of the U.S. for the culture or holding of motile species such as lobster with an impounded area $\leq \frac{1}{2}$ acre, fish aggregating devices, or small fish attraction devices.
2. Devices and activities that are located in tidal vegetated shallows, mud flats, or saltmarsh.
3. Devices and activities that do not require an IP.

Note: An SVN submittal to USACE is not required for work authorized under GP 11.

GP 12. RESPONSE OPERATIONS, OIL AND HAZARDOUS SUBSTANCES (Authorities: §10 & §404)

(a) Activities conducted in response to a discharge or release of oil and hazardous substances that are subject to the National Oil and Hazardous Substances Pollution Contingency Plan (40 CFR 300) including containment, cleanup, and mitigation efforts, provided that the activities are done under either: (i) The Spill Prevention, Control and Countermeasure Plan required by 40 CFR 112.3; (ii) The direction or oversight of the Federal on-scene coordinator designated by 40 CFR 300; or (iii) Any approved existing State, regional or local contingency plan provided that the Regional Response Team concurs with the proposed response efforts or does not object to the response effort; (b) Activities required for the cleanup of oil releases in waters of the U.S. from electrical equipment that are governed by EPA's polychlorinated biphenyl (PCB) spill response regulations at 40 CFR 761; (c) Booms placed in navigable waters of the U.S. for oil and hazardous substance containment, absorption and prevention; and (d) The use of structures and fills for spill response training exercises. Wetlands, vegetated shallows, mudflats, and riffle and pool complexes should be restored in place at the same elevation.

Self-Verification Eligible

1. Activities are conducted in accordance with (a) or (b) above that are not planned or scheduled, but an emergency response (see Note 1).
2. Booms placed in navigable waters of the U.S. for oil and hazardous substance containment, absorption and prevention.
3. Temporary impacts for spill response training exercises ≤5000 SF in non-tidal waters and ≤1000 SF in tidal waters with no impacts to wetlands, saltmarsh, mudflats, or vegetated shallows.
4. Temporary structures in tidal waters with no impacts to wetlands, saltmarsh, mudflats, vegetated shallows, or riffle and pool complexes and in place ≤30 days.

Pre-Construction Notification Required

1. Activities (a) or (b) above are planned or scheduled, not an emergency response; or
2. Activities that are not eligible for SV and do not require an IP.

Notes:

1. For emergency response activities in the Connecticut River from the Turners Falls Dam to the MA/CT border, Merrimack River from the Essex Dam to the mouth, and remaining tidal waters that are not rivers, the permittee must contact the USACE at (978) 318-8338 before or as soon as possible after the work authorized under GP 12(a) - (c) commences for the USACE to address effects under the Endangered Species Act.
2. An SVN submittal to USACE is not required for booms used for spill prevention, or properly contained and cleaned de minimus oil or hazardous substance discharges into navigable waters of the U.S.

GP 13. CLEANUP OF HAZARDOUS AND TOXIC WASTE (Authorities: §10 and §404)

Specific activities required to affect the containment, stabilization, or removal of hazardous or toxic waste materials, including court ordered remedial action plans or related settlements, which are performed, ordered or sponsored by a government agency with established legal or regulatory authority.

Not authorized under GP 13: (a) Establishment of new disposal sites; or (b) Expansion of existing sites used for the disposal of hazardous or toxic waste.

Self-Verification Eligible

1. In non-tidal waters, the combined permanent and temporary impacts are (a) $\leq 5,000$ SF, and (b) not located in vegetated shallows and riffle and pool complexes.

Pre-Construction Notification Required

1. In non-tidal waters, the combined permanent and temporary impacts are (a) $> 5,000$ SF, and (b) located in vegetated shallows and riffle and pool complexes.

2. Permanent and temporary impacts in tidal waters or navigable waters of the U.S.

3. Stream channelization, relocation, impoundment, or loss of streambed occurs.

4. Activities that are not eligible for SV and do not require an IP.

Notes:

1. Wetlands, vegetated shallows, mudflats, and riffle and pool complexes should be restored in place at the same elevation to the maximum extent practicable.

2. Activities undertaken entirely on a Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) site by authority of CERCLA, are not required to obtain permits under Section 404 of the CWA or Section 10 of the Rivers and Harbors Act.

GP 14. SCIENTIFIC MEASUREMENT DEVICES (Authorities: §10 and §404)

Scientific measurement devices for measuring and recording scientific data, such as staff gauges, tide and current gauges, meteorological stations, water recording and biological observation devices, water quality testing and improvement devices, and similar structures. Also eligible are small weirs and flumes constructed primarily to record water elevation, flow and/or velocity. Upon completion of the use of the device to measure and record scientific data, the measuring device and any other structures or fills associated with that device (e.g., foundations, anchors, buoys, lines, etc.) must be removed to the maximum extent practicable and the site restored to preconstruction elevations.

Not authorized under GP 14 (IP required): (a) Permanent impacts that are >5,000 SF in tidal and non-tidal waters of the U.S.; >1000 SF in tidal saltmarsh, mud flats, riffle and pool complexes; or >100 SF in tidal vegetated shallows; or (b) Temporary impacts in tidal waters that are >1 acre, unless the District Engineer waives this criterion by making a written determination concluding that the discharge of dredged or fill material will result in no more than minimal adverse environmental effects; >5000 SF in saltmarsh, mud flats, or riffle and pool complexes; or >1000 SF in vegetated shallows.

Self-Verification Eligible

1. In non-tidal waters, the combined permanent and temporary impacts are (a) $\leq 5,000$ SF, (b) not located in riffle and pool complexes and non-tidal vegetated shallows.
2. In tidal waters, the combined permanent and temporary impacts are (a) $\leq 5,000$ SF, (b) $\leq 1,000$ SF in mudflats and/or natural rocky habitat, (c) not located in saltmarsh and tidal vegetated shallows.
3. Temporary, non-biological sampling devices in waters that do not restrict or concentrate movement of aquatic organisms and will not adversely affect the course, condition, or capacity of a waterway for navigation.
4. Scientific measurement devices, and small weirs and flumes constructed primarily to record water quantity and velocity provided the discharge of fill is limited to 25 cubic yards. These cannot obstruct or restrict the waterway course, condition, capacity, and location.
5. Temporary measuring devices and associated structures (e.g., anchors, buoys, etc.) in tidal and non-tidal waters that do not require a PCN or IP.

Pre-Construction Notification Required

1. Biological sampling devices, weirs or flumes, or the activity restricts or concentrates movement of aquatic organisms.
2. Permanent towers located in navigable waters that record and measure scientific data.
3. Devices that are not eligible for SV and do not require an IP.

Note: An SVN submittal to USACE is not required for temporary measuring devices with a footprint of <10 SF, with a profile of <3 feet high measured from the substrate and located in water deeper than -10 feet MLW.

GP 15. SURVEY ACTIVITIES (Authorities: §10 and §404)

Survey activities such as soil borings, core sampling, seismic exploratory operations, plugging of seismic shot holes and other exploratory-type bore holes, exploratory trenching, soil surveys, sampling, sample plots or transects for wetland delineations, and historic resources surveys.

Not authorized under GP 15 (IP required): (a) Permanent impacts that are >1 acre in tidal and non-tidal waters; >1000 SF in tidal saltmarsh, mud flats, or riffle and pool complexes; or >100 SF in tidal vegetated shallows; or (b) Temporary impacts in tidal waters that are >1 acre, unless the District Engineer waives this criterion by making a written determination concluding that the discharge of dredged or fill material will result in no more than minimal adverse environmental effects; >5000 SF in saltmarsh, mud flats, or riffle and pool complexes; or >1000 SF in vegetated shallows.

Self-Verification Eligible

1. In non-tidal waters, the combined permanent and temporary impacts are (a) $\leq 5,000$ SF, (b) not located in riffle and pool complexes and non-tidal vegetated shallows.
2. In tidal waters, the combined permanent and temporary impacts are (a) $\leq 5,000$ SF, (b) $\leq 1,000$ SF in mudflats and/or natural rocky habitat, (c) not located in saltmarsh and tidal vegetated shallows.

Pre-Construction Notification Required

1. Exploratory trenching (see Note 2) occurs in waterways (e.g., streams, tidal waters).
2. Activities associated with the recovery of historic resources, and the drilling and discharge of excavated material from test wells for oil and gas exploration.
3. Seismic exploratory operations occur in tidal waters, the Connecticut River from the Turners Falls Dam to the MA/CT border, or the Merrimack River from the Essex Dam to the mouth. This is to protect endangered species.
4. Activities that are not eligible for SV and do not require an IP.

Notes:

1. An SVN submittal is not required for wetland delineations, and core sampling conducted for preliminary evaluation of dredge project analysis.
2. For the purposes of GP 15, the term “exploratory trenching” means mechanical land or underwater clearing of the upper soil profile to expose bedrock or substrate for the purpose of mapping or sampling the exposed material.
3. The discharge of drilling mud and cuttings may require a permit under §402 of the CWA.

GP 16. LAND AND WATER-BASED RENEWABLE ENERGY GENERATION FACILITIES (Authorities: §10 and §404), AND HYDROPOWER PROJECTS (Authority: §10 and §404)

Structures and work in tidal waters and discharges of dredged or fill material into tidal and non-tidal waters for the construction, expansion, modification or removal of: (a) Land-based renewable energy production facilities (e.g., solar, wind, biomass, geothermal) and their attendant features; (b) Water-based wind or hydrokinetic renewable energy generation projects and their attendant features; and (c) Discharges of dredged or fill material associated with hydropower projects. Attendant features may include, but are not limited to, land-based collection and distribution facilities, control facilities, and parking lots. For each single and complete project in (b) above, no more than 10 generation units (e.g., wind turbines or hydrokinetic devices) are authorized in navigable waters of the U.S. Upon completion of the pilot project (see note 2), the generation units, transmission lines, and other structures or fills associated with the pilot project must be removed to the maximum extent practicable.

Not authorized under GP 16 (IP required): (a) Permanent impacts that are >1 acre in non-tidal waters, >½ acre in tidal waters; >1000 SF in saltmarsh, mud flats, riffle and pool complexes, or non-tidal vegetated shallows; or >100 SF in vegetated shallows; or (b) Temporary impacts in tidal waters that are >1 acre; >5000 SF in saltmarsh, mud flats, or riffle and pool complexes; or >1000 SF in vegetated shallows.

Self-Verification Eligible

In non-tidal waters, the combined permanent and temporary impacts for land-based activities are (a) ≤5,000 SF, (b) not located in riffle and pool complexes and non-tidal vegetated shallows.

Pre-Construction Notification Required

1. In non-tidal waters, the combined permanent and temporary impacts for land-based activities are (a) >5000 SF, or (b) located in vegetated shallows or riffle and pool complexes.
2. Permanent and temporary impacts in tidal waters.
3. Water-based wind or hydrokinetic renewable energy generation projects, and hydropower projects.
4. For all activities eligible for authorization under GP 16:
 - a. The activity occurs in tidal waters or in, over or under navigable waters.
 - b. Stream channelization, relocation, impoundment, or loss of streambed occurs.
5. Activities that are not eligible for SV and do not require an IP.

Notes:

1. Utility lines constructed to transfer the energy from the land-based renewable generation or collection facility to a distribution system, regional grid, or other facility may be authorized by GP 6.
2. For the purposes of this GP, the term “pilot project” means an experimental project where the renewable energy generation units will be monitored to collect information on their performance and environmental effects at the project site.

GP 17. RESIDENTIAL, COMMERCIAL AND INSTITUTIONAL DEVELOPMENTS AND RECREATIONAL FACILITIES (AUTHORITIES: §404)

Discharges of dredged or fill material into non-tidal waters for the construction or expansion of: (a) Residences and residential subdivisions; (b) Residential, commercial and institutional building foundations and building pads; and (c) Recreational facilities such as playgrounds, playing fields, bikeways, trails, etc. This GP also authorizes attendant features that include, but are not limited to, roads, parking lots, garages, yards, and utility lines, and stormwater management facilities. This GP authorizes attendant features if they are necessary for the use of the project purpose.

Not authorized under GP 17 (IP required): (a) Permanent impacts that result in loss of non-tidal waters >1/2 acre; >1000 SF in riffle and pool complexes or vegetated shallows; or (b) Subsurface sewerage disposal systems in non-tidal waters.

Self-Verification Eligible

1. In non-tidal waters, the combined permanent and temporary impacts are (a) <5,000 SF, and (b) not located in riffle and pool complexes and non-tidal vegetated shallows.

2. Stream channelization or relocation resulting in loss of streambed that is <200 LF.

Pre-Construction Notification Required

1. In non-tidal waters, the combined permanent and temporary impacts are (a) ≥5,000 SF, or (b) located in riffle and pool complexes or non-tidal vegetated shallows.

2. Stream and wetland crossings that require a PCN per GCs 20 TOY Restrictions and GC 31 Stream Work and Crossings & Wetland Crossings.

3. Stream channelization or relocation resulting in loss of streambed that is ≥200 LF. Stream impoundment activities of any kind.

4. Activities on USACE properties & USACE-controlled easements.

5. Activities that are not SV eligible and do not require an IP.

Notes:

1. Stream and wetland crossings (permanent and temporary), including those built with construction mats; and modifications (including sliplining), replacements or extensions to existing crossings.
2. See GC 22 for information on temporary construction mats.
3. Subdivisions: For residential subdivisions, the aggregate total loss of waters of United States authorized by this GP cannot exceed 1/2-acre. This includes any loss of waters of the United States associated with development of individual subdivision lots.

GP 18. AQUACULTURE (Authorities: §10 and §404)

(a) The installation of buoys, floats, racks, trays, nets, lines, tubes, containers, and other structures into navigable waters of the U.S.; (b) Discharges of dredged or fill material into tidal and non-tidal waters necessary for shellfish seeding, rearing, cultivating, transplanting, and harvesting activities; and (c) Shellfish seeding or brushing the flats projects. Any fill material imported to the project from offsite (this is limited to mineral growth medium used in culture trays) shall be clean and of comparable grain size to the native substrate. Activities authorized under this GP must have (a) their MA DMF Aquaculture Certificate letter for licensed shellfish aquaculture sites, (b) documentation that the applicant has coordinated with the U.S. Coast Guard regarding USCG Private Aids to Navigation standards, (c) their MEPA Certificate (if required), and (d) documentation that the applicant has contacted their local authorities (ex. harbormaster, select board, shellfish constable) for authorization of their facility.

Not authorized under GP 18 (IP required): (a) New, or expansions of, impoundments and semi-impoundments of tidal and non-tidal waters for the culture or holding of motile species such as lobster with an impounded area $> \frac{1}{2}$ acre; (b) Cultivation of a nonindigenous species (see Note 1) unless that species has been previously cultivated in the waterbody; (c) Cultivation of an aquatic nuisance species (see Note 1); (d) Attendant features such as docks, piers, boat ramps (see GP 4); (e) stockpiles, staging areas, or the deposition of shell material back into tidal and non-tidal waters as waste.

Self-Verification Eligible

1. In tidal waters, a new lease site area is (a) ≤ 2 -acre, (b) not located in salt marsh, natural rocky habitat, or tidal vegetated shallows.
2. In tidal waters, expansions of existing lease sites not to exceed 2 acres for the entire site (e.g. 1 acre lease site increasing to a 2 acre lease site may qualify as SV). A PCN is required for expansions in salt marsh, natural rocky habitat, and tidal vegetated shallows.
3. Cages, racks that are elevated ≥ 2 feet above the ocean floor with legs within a lease site with ≤ 4 buoys marking the corners.
4. Floating cage strings with a single connecting line, ≤ 2 anchors and ≤ 2 end marker buoys per string within a lease site with ≤ 4 buoys marking the corners.
5. No activities located within 25 feet of tidal vegetated shallows.
6. Culture only indigenous species.
7. Not located in FNP or within a distance of three times the authorized depth of an FNP (see GC 15).
8. Not located in or impinge upon the value of any National Lands or Federal Properties.
9. Floating upweller docks that total ≤ 600 SF in area.

Pre-Construction Notification Required

1. Discharges of fill material associated with aquaculture $> 5,000$ SF.
2. Research, educational, commercial-viability or experimental aquaculture gear activities $> 1,000$ SF.
3. Kelp or finfish aquaculture.
4. Land-based hatchery intakes > 3 inches in diameter.
5. Activities in water depths > 10 feet mean low lower water (MLLW).
6. Activities with in-water lines, ropes or chains that are not SV eligible (see #3-4).
7. Activities occur in the Connecticut River from the Turners Falls Dam to the MA/CT border or the Merrimack River from the Essex Dam to the mouth. This is to protect endangered species.
8. New, or expansions of, impoundments and semi-impoundments for the culture or holding of motile species such as lobster with an impounded area $\leq \frac{1}{2}$ acre.
9. Activities that do not require an IP. Activities that do not require a PCN or an IP may be SV eligible.

Note: The Nonindigenous Aquatic Nuisance Prevention and Control Act of 1990 defines: (a) nonindigenous species as “any species or other viable biological material that enters an ecosystem beyond its historic range, including any such organism transferred from one country into another”; and (b) aquatic nuisance species as “a nonindigenous species that threatens the diversity or abundance of native species or the ecological stability of infested waters, or commercial, agricultural, aquacultural, or recreational activities dependent on such waters.”

GP 19. MINING ACTIVITIES (Authorities: §10 and §404)

Discharges of dredged or fill material into non-tidal waters for mining activities, except for coal mining and metallic mineral mining activities.

Not authorized under GP 19 (IP required): (a) Permanent impacts >1 acre in non-tidal waters; or (b) Activities in tidal waters.

Self-Verification Eligible

In non-tidal waters, the combined permanent and temporary impacts are (a) ≤5,000 SF, and (b) not located in riffle and pool complexes, non-tidal vegetated shallows, and streams.

Pre-Construction Notification Required

1. In non-tidal waters, the combined permanent and temporary impacts are (a) >5,000 SF, or (b) located in riffle and pool complexes, non-tidal vegetated shallows, and streams.
2. The activity occurs in non-tidal navigable waters of the U.S.
3. Stream channelization, relocation, impoundment, loss of streambed, or discharge of tailings into streams occurs.
4. Work on USACE properties & USACE-controlled easements.
5. Activities that are not eligible for SV and do not require an IP.

GP 20. LIVING SHORELINES¹ (Authorities: §10 and §404)

Construction and maintenance of living shorelines to stabilize banks and shores in tidal waters. In non-tidal waters that are not subject to the ebb and flow of the tide, nature-based bank stabilization techniques such as bioengineering and vegetative stabilization may be authorized by GP 9. This GP authorizes those maintenance and repair activities in-kind that are necessary to address changing environmental conditions.

The following terms must be met for both SVs and PCNs as applicable: (a) Coir logs, coir mats, stone, native oyster shell, native wood debris, and other structural materials must be adequately anchored, of sufficient weight, or installed in a manner that prevents relocation in most wave action or water flow conditions, except for extremely severe storms; (b) For living shorelines consisting of tidal fringe wetlands, native plants appropriate for current site conditions, including salinity and elevation, must be used if the site is planted by the permittee; (c) Discharges of dredged or fill material into waters of the U.S., and oyster or mussel reef structures in navigable waters, must be the minimum necessary for the establishment and maintenance of the living shoreline; (d) If sills or other structural materials per PCN #4 must be constructed to protect fringe wetlands for the living shoreline, those structures must be the minimum size necessary to protect those fringe wetlands; (e) The activity must be designed, constructed, and maintained so that it has no more than minimal adverse effects on water and sediment movement between the waterbody and the shore and the movement of aquatic organisms between the waterbody and the shore; and (f) The living shoreline must be properly maintained and monitored, which may require periodic repair of sills, bioengineered components, or replacing sand fills after severe storms or erosion events. Vegetation may be replanted to maintain the living shoreline.

Not authorized under GP 20 (IP required): (a) The activity is ≥ 1000 feet in length along the bank (≥ 2000 LF both banks) unless waived by the District Engineer; or (b) The activity is >30 feet channel ward of mean low water in tidal waters; or (c) Upland reclamation activities; or (d) Stream channelization or relocation activities; or (e) Breakwaters, groins, jetties, or artificial reefs; or (f) Permanent impacts $>1,000$ SF in existing saltmarsh; >100 SF in existing tidal vegetated shallows.

Self-Verification Eligible

1. Tidal and non-tidal living shorelines ≤ 100 LF for each bank (≤ 200 LF for both banks).
2. Combined permanent and temporary impacts $\leq 5,000$ SF in tidal waters, excluding existing salt marsh, tidal vegetated shallows, natural rocky habitat, and mudflats.

Pre-Construction Notification Required

1. Tidal and non-tidal living shorelines >100 LF to <1000 LF (>200 LF to <2000 LF for both banks).
2. Permanent and temporary impacts in existing salt marsh, tidal vegetated shallows, or mudflats.
3. Work on USACE properties & USACE-controlled easements.
4. Use of stone sills, native oyster shell, native wood debris, or other structural materials.

Notes:

1. PCNs require monitoring for a minimum of 5 years in accordance with an approved restoration plan, unless otherwise determined by the USACE. The first year of monitoring will be the first year that the site has been through a full growing period after completion of construction and planting.
2. Applicants are encouraged to obtain a MEPA certificate prior to submitting a USACE permit application.

¹ A living shoreline has a footprint that is made up mostly of native material. It incorporates vegetation or other living, natural "soft" elements alone or in combination with some type of harder shoreline structure (e.g., oyster or mussel reefs or rock sills) for added protection and stability. Living shorelines should maintain the natural continuity of the land-water interface and retain or enhance shoreline ecological processes. Living shorelines must have a substantial biological component, either tidal or lacustrine fringe wetlands or oyster or mussel reef structures.

GP 21. AGRICULTURAL ACTIVITIES (Authority: §404)

Discharges of dredged or fill material in non-tidal waters for agricultural activities, including the construction of building pads for farm buildings. Authorized activities include: (a) installation, placement, or construction of drainage tiles, ditches, or levees; mechanized land clearing; land leveling; the relocation of existing serviceable drainage ditches; and similar activities; (b) construction of farm ponds, excluding perennial streams, provided the farm pond is used solely for agricultural purposes; and (c) discharges of dredged or fill material to relocate existing serviceable drainage ditches constructed in non-tidal streams.

Not authorized under GP 21 (IP required): (a) Permanent impacts that are >1 acre in non-tidal waters; or >1000 SF in riffle and pool complexes, or non-tidal vegetated shallows; (b) Work in tidal waters; or (c) Construction of farm ponds in perennial streams.

Self-Verification Eligible

In non-tidal waters, the combined permanent and temporary impacts are (a) ≤5,000 SF, and (b) not located in riffle and pool complexes and non-tidal vegetated shallows.

Pre-Construction Notification Required

1. In non-tidal waters, the combined permanent and temporary impacts are (a) >5,000 SF, or (b) located in riffle and pool complexes and non-tidal vegetated shallows.
2. Activities occur in non-tidal navigable waters of the U.S.
3. Stream channelization, relocation, impoundment, loss of streambed, or farm ponds in non-perennial streams occurs.
4. Activities that are not eligible for SV and do not require an IP.

Note: Some discharges for agricultural activities may qualify for an exemption under Section 404(f) of the CWA (see 33 CFR 323.4). This GP authorizes the construction of farm ponds that do not qualify for the CWA §404(f)(1)(C) exemption because of the recapture provision at §404(f)(2).

GP 22. RESHAPING EXISTING DRAINAGE DITCHES, CONSTRUCTION OF NEW DITCHES, AND MOSQUITO MANAGEMENT (Authorities: §10 and §404)

Discharges to modify the cross-sectional configuration of currently serviceable drainage ditches constructed in tidal and non-tidal waters, for the purpose of improving water quality by regrading the drainage ditch with gentler slopes, which can reduce erosion, increase growth of vegetation, and increase uptake of nutrients and other substances by vegetation. Also authorized are mosquito reduction activities.

Not authorized under GP 22 (IP required): Stream channelization, relocation, impoundments, or loss of streambed.

Self-Verification Eligible

≤500 linear feet of drainage ditch will be reshaped provided excavated material is deposited in an upland area.

Pre-Construction Notification Required

1. >500 linear feet of drainage ditch will be reshaped, excavated material is deposited in a water of the U.S., or the reshaping of the ditch increases the drainage capacity beyond the original as-built capacity or expands the area drained by the ditch as originally constructed (i.e., the capacity of the ditch is not the same as originally constructed or drains additional wetlands or other waters of the U.S.).
2. Permanent and temporary impacts in tidal vegetated shallows.
3. New ditches or relocation of drainage ditches constructed in waters of the U.S. (i.e., the location of the centerline of the reshaped drainage ditch is not approximately the same as the location of the centerline of the original drainage ditch).
4. Activities that are not eligible for SV and do not require an IP.

Note: Some ditch activities are exempt under Section 404(f) of the CWA (see 33 CFR 323.4).

GP 23. LINEAR TRANSPORTATION PROJECTS AND WETLAND/STREAM CROSSINGS (Authorities: §10 & §404)

Activities¹ required for the construction, expansion, modification, or improvement of linear transportation projects (e.g., driveways, roads, highways, railways, trails, airport runways, and taxiways) and attendant features. This GP also authorizes temporary structures, fills, and work, including the use of temporary mats (see Note 1), necessary to construct the linear transportation project.

Not authorized under GP 23 (IP required): (a) Permanent impacts for any single and complete project that are >1 acre in non-tidal waters; >½ acre in tidal waters; >1000 SF in saltmarsh, mud flats, riffle and pool complexes, or non-tidal vegetated shallows; or >100 SF in tidal vegetated shallows; (b) Temporary impacts in tidal waters that are >1 acre; >5000 SF in saltmarsh, mud flats, or riffle and pool complexes; or >1000 SF in vegetated shallows; (c) Non-linear features commonly associated with transportation projects, such as vehicle maintenance or storage buildings, parking lots, train stations, or aircraft hangars (see GP 17); or (d) New tide gates.

Self-Verification Eligible

1. In non-tidal waters, the combined permanent and temporary impacts are a) ≤5,000 SF; b) not located in riffle and pool complexes and non-tidal vegetated shallows; and c) meet the Massachusetts River and Stream Crossing Standards
2. Existing crossings (e.g., culverts, elliptical or arch pipes, etc.) are not modified by (a) decreasing the diameter of the crossing or (b) changing the friction coefficient, such as through slip lining (retrofitting an existing culvert by inserting a smaller diameter pipe), culvert relining or invert lining.
3. Stream channelization or relocation resulting in loss of streambed that is <200 LF.

Pre-Construction Notification Required

1. In non-tidal waters, the combined permanent and temporary impacts are a) >5,000 SF; b) located in vegetated shallows or riffle and pool complexes; or c) do not meet the Massachusetts River and Stream Crossing Standards (see note 4).
2. The activity occurs in tidal waters, salt marsh, or in, over or under navigable waters of the U.S.
3. Stream and wetland crossings that require a PCN per GC 20 TOY Restrictions and GC 31 Stream Work and Crossings & Wetland Crossings.
4. Stream channelization or relocation resulting in loss of streambed that is ≥200 LF. Stream impoundment activities of any kind.
5. Work on USACE properties & USACE-controlled easements.
6. Activities that are not eligible for SV and do not require an IP.

Notes:

1. See GC 22 for information on temporary construction mats.
2. Discharges of dredged or fill material incidental to the construction of bridges across navigable waters of the U.S. may be authorized under GP 8.
3. Loss of streambed does not require a PCN when bridge piers or similar supports are used.
4. In their PCN application submission to the USACE, applicants must explain why they are unable to meet the Massachusetts River and Stream Crossing Standards.
5. For tidal crossings, modeling is encouraged as a method to verify the proposed crossing would not be undersized and resilient to the effects of sea level rise.

¹ Stream crossings must conform with the MA Stream Crossing Guidelines when practicable and comply with all applicable GCs of this document (Section IV).

GP 24. TEMPORARY CONSTRUCTION, ACCESS, AND DEWATERING (Authorities: §10 and §404)

Temporary structures, work, and discharges, including cofferdams, necessary for construction activities or access fills or dewatering of construction sites that are not authorized under another GP activity.

Not authorized under GP 24 (IP required): (a) Permanent structures or impacts; (b) Temporary impacts in tidal waters that are >1 acre; >5000 SF in saltmarsh, mud flats, or riffle and pool complexes; or >1000 SF in vegetated shallows; (c) Use of cofferdams to dewater wetlands or other aquatic areas to change their use; (d) Temporary stream crossings (see GPs 6, 17, 23); (e) Structures or fill left in place after construction is completed.

Self-Verification Eligible

1. In non-tidal waters, temporary impacts are a) ≤5,000 SF; b) not located in riffle and pool complexes and non-tidal vegetated shallows.
2. In tidal waters, temporary impacts are a) ≤5,000 SF, b) ≤1,000 SF in mudflats and/or natural rocky habitat, and c) not located in saltmarsh and tidal vegetated shallows.
3. Structures in navigable waters of the U.S. provided impacts do not require a PCN and they are left in place ≤30 days.

Pre-Construction Notification Required

1. In non-tidal waters, temporary impacts are a) >5,000 SF; b) located in riffle and pool complexes or non-tidal vegetated shallows.
2. In tidal waters, temporary impacts are a) >5,000 SF; b) >1,000 SF in mudflats and/or natural rocky habitat, or (c) located in saltmarsh and tidal vegetated shallows.
3. Activities in the Connecticut River from the Turners Falls Dam to the MA/CT border, or Merrimack River from the Essex Dam to the mouth, involving temporary impacts unless they are performed <5 feet waterward from OHW or HTL and in the dry. This is to protect endangered species; or
4. Activities not eligible for SV and do not require an IP.

Notes:

1. Turbidity or sediment resuspension is generally not considered to occur when properly using management techniques to work in dry conditions. See GC 25.
2. Total impact areas under SV Eligible 1-2 exclude use of temporary construction mats. See GC 22 for information on temporary construction mats.
3. An SVN submittal to USACE is not required for SV #3 above.

GP 25. EMERGENCY SITUATIONS (Authorities: §10 and §404)

Structures or work in or affecting navigable waters of the U.S. and the discharge of dredged or fill material into waters of the U.S., including wetlands, necessary for repair or protection measures associated with an emergency situation¹, MassDEP Emergency Declaration/Certification, or FEMA Declared Disaster. The activity shall be the minimum necessary to alleviate the immediate emergency unless that additional work would result in no more than minimal effects to aquatic environment and is necessary to reduce the potential for future failure or loss of the structure or site. Typical activities authorized under this GP include, but are not limited to, restoration of damaged areas; bank stabilization; temporary fills for staging, access, and dewatering; and, repair, replacement, or rehabilitation of existing structures and/or fills (i.e., roads, bridges, utility pipelines and flood control structures, including attendant features, and other existing structures located in waters of the U.S.).

For the restoration of areas damaged by storms floods, or other discrete events: (a) The restored area must not extend waterward of the ordinary high-water mark or high tide line that existed prior to the damage. (b) The slope of the restored area below the ordinary high-water mark or high tide line must not exceed the slope that existed prior to the damage. (c) The bottom elevation of the restored area must not exceed the bottom elevation that existed prior to the damage (i.e., the restored area must not result in a reduction in the depth of the waterbody that existed prior to the damage). (d) Except in cases of FEMA reimbursement, the activity must be initiated, under contract to commence, or funds shall be allocated for the activity within 30 days of authorization under GP 25.

Not authorized under GP 25 (IP required): (a) Permanent impacts for a single and complete project >1/2 acre in tidal waters, unless the district engineer waives this criterion by making a written determination concluding that the activity will result in no more than minimal adverse environmental effects; >1,000 SF in saltmarsh, mud flats, riffle and pool complexes, or non-tidal vegetated shallows; or >100 SF in tidal vegetated shallows; (b) Temporary impacts in tidal waters that are >5,000 SF in saltmarsh, mud flats, or riffle and pool complexes; or >1,000 SF in vegetated shallows; (c) New structures or fills that did not previously exist before the storm event or other discrete event (see other GPs).

Self-Verification Eligible

1. Activities that qualify under a Severe Weather Emergency Declaration pursuant to 310 CMR 10.06(8) and/or receive an Emergency Certification pursuant to 310 CMR 10.06 and/or meet the requirements of 314 CMR 9.12(2) or (3); and
2. Activities eligible under a FEMA Declared Disaster that also comply with #1 above.

Pre-Construction Notification Required

1. Activities that are eligible under a FEMA Declared Disaster and do not qualify under SV #1.
2. Minor deviations in the structure or fill area, including those to existing structures or fills are authorized due to changes in materials, construction techniques, requirements of other regulatory agencies, or current construction codes or safety standards that are necessary to alleviate the emergency.
3. Activities that are not eligible for SV and do not require an IP.

Notes:

1. Review the GCs (Section IV) to confirm if a PCN is not required elsewhere in this document.
2. If the activity is not a MassDEP Emergency Declaration/Certification, does not meet the requirements of 314 CMR 9.12(2) or (3), or is not a FEMA Declared Disaster, applicants must explain in writing why their activity qualifies as an emergency (see footnote) to be eligible under GP 25.
3. SV eligible activities qualify under the general 401 WQC MassDEP issued for the 2023 MA GPs (GC 9).

¹ An emergency, as determined by this office and 33 CFR 325.2(e)(4), is one which would result in an unacceptable hazard to life, a significant loss of property, or an immediate, unforeseen, and significant economic hardship if corrective action requiring a Department of the Army permit is not undertaken within a time period less than the normal time to process the request under standard processing procedures.

SECTION IV. GENERAL CONDITIONS:

To qualify for GP authorization, the applicant must comply with the following general conditions, as applicable, in addition to authorization-specific conditions imposed by the division or district engineer.

1. Other Permits
2. Federal Jurisdictional Boundaries
3. Single and Complete Projects
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1. Other Permits. Authorization under these GPs does not obviate the need for the permittee to obtain other Federal, State, or local permits, approvals, or authorizations required by law. Permittees are responsible for obtaining all required permits, approvals, or authorizations. Activities that are not regulated by the State, but subject to USACE jurisdiction, may still be eligible for these GPs.

2. Federal Jurisdictional Boundaries.

- a. Applicability of these GPs shall be evaluated with reference to Federal jurisdictional boundaries. Activities shall be evaluated with reference to “waters of the U.S.” under the CWA (33 CFR 328) and “navigable waters of the U.S.” under §10 of the Rivers and Harbors Act of 1899 (33 CFR 329). Permittees are responsible for ensuring that the boundaries used satisfy the Federal criteria defined at 33 CFR 328-329. These sections prescribe the policy, practice, and procedures to be used in determining the extent of the USACE jurisdiction. Note: Waters of the U.S. includes all waters pursuant to 33 CFR 328.3(a), and adjacent wetlands as the term is defined in 33 CFR 328.3(c).
- b. Wetlands shall be delineated in accordance with the USACE Wetlands Delineation Manual and the most recent Northcentral/Northeast Regional Supplement. Wetland delineation and jurisdiction information is located at: www.nae.usace.army.mil/missions/regulatory/jurisdiction-and-wetlands and maps are located at www.nae.usace.army.mil/missions/regulatory/state-general-permits/massachusetts-general-permit.
- c. Vegetated shallows shall be delineated when present on the project site. Vegetated shallow survey guidance and maps are located at: www.nae.usace.army.mil/missions/regulatory/state-general-permits/massachusetts-general-permit.
- d. Natural rocky habitats shall be delineated when present on the project site. The definition of natural rocky habitats is in Section VII of the MA GP. Natural rocky habitat survey guidance and maps are located at: www.nae.usace.army.mil/missions/regulatory/state-general-permits/massachusetts-general-permit.

3. Single and Complete Projects. The MA GP shall not be used for piecemeal work and shall be applied to single and complete projects. The term “single and complete project” is defined at 33 CFR 330.2(i) as the total project proposed or accomplished by one owner/developer or partnership or other association of owners/developers.

- a. For non-linear projects, a single and complete project must have independent utility. Portions of a multi-phase project that depend upon other phases of the project do not have independent utility. Phases of a project that would be constructed, even if the other phases were not built, can be considered as separate single and complete projects with independent utility.
- b. Unless USACE determines the activity has independent utility, all components of a single project and/or all planned phases of a multi-phased project (e.g., subdivisions should include all work such as roads, utilities, and lot development) shall be evaluated as one single and complete project.
- c. For linear projects such as power lines or pipelines with multiple crossings, a “single and complete project” is all crossings of a single water of the U.S. (i.e., single waterbody) at a specific location. For linear projects crossing a single waterbody several times at separate and distant locations, each crossing is considered a single and complete project. However, individual channels in a braided stream or river, or individual arms of a large, irregularly shaped wetland or lake, etc., are not separate waterbodies, and crossings of such features cannot be considered separately. If any crossing requires a PCN review or an individual permit review, then the entire linear project shall be reviewed as one project under PCN or the individual permit procedures.

4. Use of Multiple General Permits. The use of more than one GP for a single and complete project is prohibited, except when the acreage loss of waters of the U.S. authorized by the GPs does not exceed the acreage limit of the GPs with the highest specified acreage limit. For example, if a road crossing over waters is constructed under GP 23, with an associated utility line

crossing authorized by GP 6, if the maximum acreage loss of waters of the U.S. for the total project is ≥ 1 acre it shall be evaluated as an IP.

5. Suitable Material & Discharge of Pollutants. No activity may use unsuitable material (e.g., trash, debris, car bodies, asphalt, etc.). All activities involving any discharge into waters of the U.S. authorized under these GPs shall be consistent with applicable water quality standards, effluent limitations, standards of performance, prohibitions, and pretreatment standards and management practices established pursuant to the CWA (33 U.S.C. 1251), and applicable state and local laws. If applicable water quality standards, limitations, etc., are revised or modified during the term of this GP, the authorized work shall be modified to conform with these standards within six months from the effective date of such revision or modification, or within a longer period of time deemed reasonable by the District Engineer in consultation with the Regional Administrator of the EPA. Unless monitoring data indicates otherwise, applicants may presume that their activity complies with state water quality standards provided they are in compliance with the Section 401 WQC (Applicable only to the Section 404 activity).

6. Tribal Rights & Burial Sites

- a. For all SV and PCN applications, prospective permittees shall follow the guidance set forth in Appendix A, Guidance for NHPA Section 106 Compliance in Massachusetts.
- b. No activity or its operation may impair reserved tribal rights, including, but not limited to, reserved water rights and treaty fishing and hunting rights.
- c. Many tribal resources are not listed on the National Register of Historic Places (NRHP) and may require identification and evaluation in collaboration with the identifying tribe and by qualified professionals. The Tribal Historic Preservation Officer (THPO) and State Historic Preservation Officer (SHPO) may be able to assist with locating information on:
 - i. Previously identified tribal resources; and
 - ii. Areas with potential for the presence of tribal resources.
- d. Discovery of Previously Unknown Remains and Artifacts: If any previously unidentified human remains, cultural deposits, or artifacts are discovered while accomplishing the activity authorized by this permit, you must immediately notify the USACE of what you have found, and to the maximum extent practicable, cease work and avoid construction activities that may affect the remains and artifacts until the required coordination has been completed. The USACE will initiate the appropriate the Federal, Tribal, and state coordination required to determine if the items or remains are eligible for listing in the NRHP and warrant a recovery effort or can be avoided.
- e. Burial Sites: Burial sites, marked or unmarked, are subject to state law (Massachusetts Unmarked Burial Law). Native American burial sites on federal or tribal land are subject to the provisions of Native American Graves Protection and Repatriation Act (NAGPRA). Regulated activities may not result in disturbance or removal of human remains until disposition of the remains has been determined by the appropriate authority under these laws, and the work is authorized by the USACE. Regulated activities which result in an inadvertent discovery of human remains must stop immediately, and the USACE, as well as the appropriate state and tribal authority, must be notified. Regulated work at inadvertent discovery sites requires compliance with state law or NAGPRA, as appropriate, prior to re-starting work.

7. Avoidance, Minimization, and Compensatory Mitigation. To qualify under the MA GP, activities must comply with Section V Mitigation Standards and the following as applicable:

- a. Avoid and Minimize: Activities must be designed and constructed to avoid and minimize adverse effects, both temporary and permanent, to waters of the U.S. to the maximum extent practicable at the project site. Avoidance and minimization are required to the extent necessary to ensure that the adverse effects to the aquatic environment (both area and function) are no more than minimal.

- b. Compensatory mitigation for unavoidable impacts to waters of the U.S., including direct, indirect, secondary, and temporal loss, will generally be required for permanent impacts that exceed the thresholds identified in Section V, and may be required for temporary impacts, to offset unavoidable impacts which remain after all appropriate and practicable avoidance and minimization has been achieved and to ensure that the adverse effects to the aquatic environment are no more than minimal. Proactive restoration projects or temporary impact work with no secondary effects may generally be excluded from this requirement.
- c. Mitigation proposals shall follow the guidelines found in the Compensatory Mitigation for Losses of Aquatic Resources; Final Rule April 10, 2008; 33 CFR 332. Prospective permittees may purchase mitigation credits in-lieu of permittee-responsible mitigation as compensation for unavoidable impacts to waters of the U.S. in the Commonwealth of Massachusetts.

8. Water Quality & Stormwater Management. The 401 WQC requirement applies to all activities listed under GPs 1-25, unless determined otherwise by MassDEP. Permittees shall also satisfy stormwater management requirements in Massachusetts.

- a. General 401 WQC: MassDEP issued a WQC on April 21, 2023 which conditionally certifies all activities in GPs 1 – 24 eligible for SV and PCN so long as the activity is described in 314 CMR 9.03, and is not an activity described in 314 CMR 9.04, and so long as the activity meets all other requirements, terms and conditions of the WQC. The MassDEP WQC also conditionally certifies activities described in GP 25 so long as the activity meets all other conditions of the WQC. Emergency projects described in GP 25 must obtain an emergency certification or otherwise be authorized pursuant to 310 CMR 10.06, qualify under a Severe Weather Emergency Declaration pursuant to 310 CMR 10.06(8) issued by the MassDEP, or meet the requirements of 9.12(2) or (3) in order to be certified under the WQC. Prospective permittees may refer to the following link to determine if their activity is eligible: <https://www.nae.usace.army.mil/Missions/Regulatory/State-General-Permits/Massachusetts-General-Permit/>. The General 401 WQC is located here, and it provides detailed information regarding what activities are certified and the conditions for certification. Activities listed in 314 CMR 9.03 that are not exempt from the Wetland Protection Act must have a valid Final Order of Conditions (OOC) or Final Restoration Order of Conditions pursuant to 310 CMR 10.00 to be eligible under the General 401 WQC.
- b. Individual 401 WQC: Prospective permittees shall contact MassDEP and apply for an individual 401 WQC if their activity does not qualify for a General 401 WQC as outlined above. MassDEP may issue, waive, or deny the individual 401 WQC on a case-by-case basis. All activities listed in 314 CMR 9.04 must obtain an individual 401 WQC from MassDEP to be eligible under these GPs. When an Individual 401 WQC is required for *PCN activities*, the prospective permittee shall submit their Individual 401 WQC application concurrently to MassDEP and USACE to comply with 40 CFR 121.
- c. The prospective permittee is responsible for determining the appropriate 401 WQC requirement and submitting this information to the USACE at the time of their PCN application or when completing their SVN. Prospective permittees that are unsure of whether their activity has been certified should contact MassDEP for a determination.
- d. As applicable, all activities shall be compliant with the Massachusetts Stormwater Handbook. The Stormwater Handbook can be accessed on the NAE Regulatory website here: <https://www.nae.usace.army.mil/Missions/Regulatory/State-General-Permits/Massachusetts-General-Permit/>.
- e. No work requiring authorization under Section 404 of the CWA may be performed unless (1) the prospective permittee qualifies for coverage under the April 21, 2023 General 401 WQC, (2) the prospective permittee receives an individual Section 401 WQC from the MassDEP, or (3) the MassDEP waives individual Section 401 WQC.

9. Coastal Zone Management. The permittee must obtain CZM consistency concurrence when an activity is located in the coastal zone in order to be eligible under the MA GP. This requirement

shall be satisfied by acquiring one of the following from the Massachusetts Office of Coastal Zone Management (MA CZM):

- a. General CZM Federal Consistency Concurrence (General Concurrence): MA CZM has granted General Concurrence for all SV and PCN activities for GPs 1-25. The prospective permittee must obtain all applicable permits and approvals before construction of the authorized activity begins (e.g., before work begins on site). For SVs, General Concurrence is automatically granted and no further action is required from the prospective permittee. For PCNs, the USACE will coordinate with MA CZM to acquire General Concurrence as part of the PCN application review.
- b. Individual CZM Federal Consistency Concurrence (Individual Concurrence): In certain cases, MA CZM may elevate any GP activity 1-25 and require Individual Concurrence. The prospective permittee must contact MA CZM and follow the procedures to obtain Individual Concurrence as determined appropriate by MA CZM.
- c. Permittees must obtain CZM consistency concurrence as outlined above before commencing work authorized under these GPs.

10. Federal Threatened and Endangered Species

- a. No activity is authorized under any GP which is likely to directly or indirectly jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or which will directly or indirectly destroy or adversely modify designated critical habitat or critical habitat proposed for such designation. No activity is authorized under any GP which “may affect” a listed species or critical habitat, unless ESA section 7 consultation addressing the consequences of the proposed activity on listed species or critical habitat has been completed. See 50 CFR 402.02 for the definition of “effects of the action” for the purposes of ESA section 7 consultation, as well as 50 CFR 402.17, which provides further explanation under ESA section 7 regarding “activities that are reasonably certain to occur” and “consequences caused by the proposed action.”
- b. Other Federal agencies should follow their own procedures for complying with the requirements of the ESA (see 33 CFR 330.4(f)(1)). If a PCN is required for the proposed activity, the Federal permittee must provide USACE with the appropriate documentation to demonstrate compliance with those requirements. The USACE will verify that the appropriate documentation has been submitted. If the appropriate documentation has not been submitted, additional ESA section 7 consultation may be necessary for the activity and the respective federal agency would be responsible for fulfilling its obligation under section 7 of the ESA.
- c. USFWS ESA-Listed Species: Non-federal applicants shall use the USFWS website, Information for Planning and Consultation (IPAC), to determine if their activity is located within the ESA-listed species range. The IPAC website can be accessed on the NAE Regulatory website: <https://www.nae.usace.army.mil/Missions/Regulatory/State-General-Permits/Massachusetts-General-Permit/>. Applicants shall ensure they have an updated, valid species list before construction begins. This may require applicants to update their species list in IPAC before the start of construction. Note: Applicants should refer to the NAE Regulatory Website at the link above to determine if they have been designated as a non-federal representative. Applicants shall complete Section 7 consultation according to the guidance document located on the NAE Regulatory Website. After completing the Rangewide Determination Key and reaching the outcome “may affect, not likely to adversely affect”, you may be required to wait up to 15 days before that outcome is final and compliance under Section 7 of the ESA is fulfilled.
 - i. *Self-Verification Criteria*: The activity is SV-eligible if:
 - 1) The activity is not located within the ESA-listed species range;
 - 2) Another (lead) Federal agency has completed Section 7 consultation; or
 - 3) The activity is located within the ESA-listed species range and USACE has designated the applicant as a non-federal representative under 50 CFR 402.08 of the ESA for all

species within the project's action area. As the non-federal representative, the applicant shall complete consultation through IPAC and reach the outcome of "no effect" or "not likely to adversely affect".

ii. *Pre-Construction Notification Criteria*: The activity requires a PCN if:

- 1) The activity is located within the ESA-listed species range and USACE has NOT designated the applicant as a non-federal representative under 50 CFR 402.08 of the ESA for all species within the project's action area;
- 2) The activity is located in designated or proposed critical habitat; or
- 3) The activity is located within the ESA-listed species range and completion of the IPAC determination key has resulted in the outcome of "may affect" or "may affect, likely to adversely affect"; or
- 4) A PCN is required elsewhere in this document.

d. NOAA-Listed Species: Non-federal applicants shall refer to the Section 7 Mapper for federally listed species to determine if any species are mapped as present. When NOAA-listed species are present, the applicant shall generate a species report through the mapper and submit this document as part of their PCN or SVN submission. The NOAA Fisheries' Section 7 Mapper can be accessed here on the NAE Regulatory website here: <https://www.nae.usace.army.mil/Missions/Regulatory/State-General-Permits/Massachusetts-General-Permit/>.

e. Authorization of an activity by an GP does not authorize the "take" of a threatened or endangered species as defined under the ESA. In the absence of separate authorization (e.g., an ESA Section 10 Permit, a Biological Opinion with "incidental take" provisions, etc.) from the FWS or the NMFS, the Endangered Species Act prohibits any person subject to the jurisdiction of the United States to take a listed species, where "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. The word "harm" in the definition of "take" means an act which actually kills or injures wildlife. Such an act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering.

11. Essential Fish Habitat (EFH).

a. SV eligible activities have been determined to result in no more than minimal adverse effects, provided the permittee complies with all terms and conditions of the MA GP as applicable to the activity. NMFS has granted General Concurrence [50 CFR 600.920(g)] for all SV eligible activities. These activities do not require project specific EFH consultation.

b. For PCN required activities, the applicant is required to describe and identify potential adverse effects to EFH and should refer to NOAA Fisheries' EFH Mapper (<http://www.fisheries.noaa.gov/resource/map/essential-fish-habitat-mapper>) and Omnibus Essential Fish Habitat Amendment 2 Volume 2: EFH and HAPC Designation Alternatives and Environmental Impacts (https://www.habitat.noaa.gov/application/efhmapper/oa2_efh_hapc.pdf). If an activity is located within EFH, the PCN application must contain:

1. A description of the action located in EFH.
2. An analysis of the potential adverse effects of the action on EFH and the managed Species.
3. Conclusions regarding the effects of the action on EFH.
4. Proposed mitigation, if applicable (refer to the mitigation thresholds located in Section V).

c. Federal agencies shall follow their own procedures for complying with the EFH requirements of the Magnuson-Stevens Fishery Conservation and Management Act. For activities requiring a PCN, the applicant is responsible for furnishing documentation that demonstrates consultation for EFH has been completed.

d. For PCN activities, no work may commence until EFH consultation as required by the Magnuson-Stevens Act has been completed.

12. National Lands. Activities that impinge upon the value of any National Wildlife Refuge, National Forest, National Marine Sanctuary, National Historic Landmarks or any other area administered by the National Park Service, U. S. Fish and Wildlife Service (USFWS) or U.S. Forest Service (USFS) require a PCN or Individual Permit. Federal land managers seeking authorization for activities located in the above listed National Lands may proceed under SV, unless a PCN is required elsewhere in this document.

13. Wild and Scenic Rivers. The following activities in designated river or study river segments in the National Wild and Scenic River (WSR) System require a PCN unless the Federal agency with direct management responsibility for such river, in Massachusetts this is generally the National Park Service, has determined in writing to the proponent that the proposed work will not adversely affect the WSR designation or study status:

- a. Activities that occur in WSR segments, in and 0.25 miles up or downstream of WSR segments, or in tributaries within 0.25 miles of WSR segments;
- b. Activities that occur in wetlands within 0.25 miles of WSR segments;
- c. Activities that have the potential to alter free-flowing characteristics in WSR segments.

No GP activity may occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a “study river” for possible inclusion in the system while the river is in an official study status, unless the appropriate Federal agency with direct management responsibility for such river, has determined in writing that the proposed activity will not adversely affect the Wild and Scenic River designation or study status.

As of May 10, 2023, affected rivers in Massachusetts include: the Taunton River (40 miles), Sudbury River (16.6 miles), Assabet River (4.4 miles), Concord River (8 miles), Nashua River (27 miles), Squannacook River (16.3 miles), Nissitissit River (4.7 miles), and the Westfield River, including West Branch, Middle Branch, Gendale Brook, East Branch, Drowned Land Brook, Center Brook, Windsor Jambs Brook, Shaker Mill Brook, Depot Brook, Savery Brook, Watson Brook, Center Pond Brook (78.1 miles). The most up to date list of designated and study rivers and their descriptions may be obtained from the appropriate Federal land management agency responsible for the designated Wild and Scenic River or study river (e.g., National Park Service, U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service). Information on these rivers is also available at: <http://www.rivers.gov/>.

14. Historic Properties

- a. For all SV and PCN applications, permittees shall follow the guidance set forth in Appendix A, Guidance for NHPA Section 106 Compliance in Massachusetts.
- b. No undertaking authorized by these GPs shall cause effects¹ (defined in 36 CFR Part 800 and 33 CFR Part 325, Appendix C, and its Interim Guidance) on properties listed on, determined to be eligible for listing on, or potentially eligible for listing on the National Register of Historic Places (NRHP)², including previously unknown historic properties within the permit area, unless the USACE or another Federal action agency has satisfied the consultation requirements of Section 106 of the National Historic Preservation Act (Section 106). If another Federal agency is determined the lead federal agency for compliance with Section 106, applicant must obtain the appropriate documentation and provide this information to the USACE to demonstrate compliance with Section 106. The applicant shall not begin the activity until the USACE notifies them in writing that the documentation provided satisfies Section 106 requirements.

¹ Effect means the alteration to the characteristics of a historic property qualifying it for inclusion in or eligibility for the National Register of Historic Properties.

² See the NAE Regulatory website, National Register of Historic Places link here: <https://www.nae.usace.army.mil/Missions/Regulatory/State-General-Permits/Massachusetts-General-Permit/>.

- c. Many historic properties are not listed on the NRHP and may require identification and evaluation by qualified historic preservation and/or archaeological consultants. The State Historic Preservation Officer (SHPO), Massachusetts Board of Underwater Archaeological Resources (BUAR), local historical societies, certified local governments, general public, and NRHP may also be able to assist with locating information on:
 - i. Previously identified historic properties; and
 - ii. Areas with potential for the presence of historic properties.
- d. Discovery of Previously Unknown Remains and Artifacts: If any previously unidentified human remains, cultural deposits, or artifacts are discovered while accomplishing the activity authorized by this permit, you must immediately notify the USACE of what you have found, and to the maximum extent practicable, cease work and avoid construction activities that may affect the remains and artifacts until the required coordination has been completed. The USACE will initiate the Federal, State and tribal coordination required to determine if the items or remains warrant a recovery effort and/or if the site is eligible for listing in the National Register of Historic Places.
- e. Section 110k: Prospective permittees should be aware that section 110k of the NHPA (54 U.S.C. § 306113) prevents the USACE from granting a permit or other assistance to an applicant who, with intent to avoid the requirements of Section 106, has intentionally significantly adversely effected a historic property to which the permit would relate, or having legal power to prevent it, allowed such significant adverse effect to occur, unless the USACE, after consultation with the Advisory Council on Historic Preservation (ACHP), determines that circumstances justify granting such assistance despite the adverse effect created or permitted by the applicant. If circumstances justify granting the assistance, the USACE is required to notify the ACHP and provide documentation specifying the circumstances, the degree of damage to the integrity of any historic properties effected, and proposed mitigation. This documentation must include any views obtained from the applicant, SHPO/THPO, appropriate Indian tribes if the undertaking occurs on or effects historic properties on tribal lands or effects properties of interest to those tribes, and other parties known to have a legitimate interest in the impacts to the permitted activity on historic properties.
- f. Underwater Archaeological Resources: Under Massachusetts General Law Ch. 6, s.'s 179-180, and Ch. 91, s. 63, the BUAR has statutory jurisdiction within state waters and is the sole trustee of the Commonwealth's underwater heritage, charged with the responsibility of encouraging the discovery and reporting, as well as the preservation and protection, of underwater archaeological resources. Underwater archaeological resources located within the waters of the Commonwealth of Massachusetts are property of the Commonwealth, which holds title to these resources and retains regulatory authority over their use. Under Massachusetts General Law, no person, organization or corporation may "remove, displace, damage, or destroy" any underwater archaeological resources located within the Commonwealth's submerged lands except through consultation with the BUAR and in conformity with the permits it issues. <https://www.mass.gov/orgs/board-of-underwater-archaeological-resources>.

15. USACE Property and Federal Projects. (33 USC §408)

- a. USACE projects and property can be found at: <https://www.nae.usace.army.mil/Missions/Civil-Works/>.
- b. In addition to any authorization under these GPs, prospective permittee shall contact the USACE Real Estate Division (<https://www.nae.usace.army.mil/Missions/Real-Estate-Division/>) at (978) 318-8585 for work occurring on or potentially affecting USACE properties and/or USACE-controlled easements. Work may not commence on USACE properties and/or USACE-controlled easements until they have received any required USACE real estate documents evidencing site-specific permission to work.
- c. Any proposed temporary or permanent occupation or alteration of a Federal project (including, but not limited to, a levee, dike, floodwall, channel, anchorage, breakwater, seawall, bulkhead, jetty, wharf, pier, or other work built or maintained but not necessarily owned by the United States),

is not eligible for SV and requires a PCN. This includes all proposed structures and work in, over, or under a USACE federal navigation project (FNP) or in the FNP's buffer zone. The buffer zone is an area that extends from the horizontal limits of the FNP to a distance of three times the FNP's authorized depth. The activity also requires review and approval by the USACE pursuant to 33 USC 408 (Section 408 Permission). The prospective permittee may reach out to the POCs located here: <https://www.nae.usace.army.mil/Missions/Section-408/>.

d. Any structure or work constructed in a FNP or its buffer zone shall be subject to removal at the owner's expense prior to any future USACE dredging or the performance of periodic hydrographic surveys.

e. Where a Section 408 permission is required, written verification for the PCN will not be issued prior to the decision on the Section 408 permission request.

16. Navigation

a. No activity may cause more than a minimal adverse effect on navigation.

b. Any safety lights and signals prescribed by the U.S. Coast Guard, must be installed, and maintained at the permittee's expense on authorized facilities in navigable waters of the U.S.

c. There shall be no unreasonable interference with navigation by the existence or use of the activity authorized herein, and no attempt shall be made by the permittee to prevent the full and free use by the public of all navigable waters at or adjacent to the activity authorized herein.

d. The permittee understands and agrees that if future U.S. operations require the removal, relocation, or other alteration of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from USACE, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the U.S. No claim shall be made against the U.S. on account of any such removal or alteration.

17. Permit/Authorization Letter On-Site. For PCNs, the permittee shall ensure that a copy of these GPs and the accompanying authorization letter are at the work site (and the project office) whenever work is being performed, and that all personnel with operational control of the site ensure that all appropriate personnel performing work are fully aware of its terms and conditions. The entire permit authorization shall be made a part of any and all contracts and sub-contracts for work that affects areas of USACE jurisdiction at the site of the work authorized by these GPs. This shall be achieved by including the entire permit authorization in the specifications for work. The term "entire permit authorization" means these GPs, including GCs and the authorization letter (including its drawings, plans, appendices, special conditions, and other attachments), and any permit modifications. If the authorization letter is issued after the construction specifications, but before receipt of bids or quotes, the entire permit authorization shall be included as an addendum to the specifications. If the authorization letter is issued after receipt of bids or quotes, the entire permit authorization shall be included in the contract or sub-contract as a change order. Although the permittee may assign various aspects of the work to different contractors or sub-contractors, all contractors and sub-contractors shall be obligated by contract to comply with all environmental protection provisions contained within the entire authorization letter, and no contract or sub-contract shall require or allow unauthorized work in areas of USACE jurisdiction. For SVs, the permittee shall ensure that a complete and signed copy of the SVN is present on site during construction and is made available for review at any time by USACE and other Federal, State, & Local regulatory agencies. A complete and signed copy of the SVN must be submitted to USACE Regulatory within 30 days of initiating construction of the authorized activity, unless stated otherwise in the applicable GP.

18. Storage of Seasonal Structures. Coastal structures such as pier sections, floats, etc., that

are removed from the waterway for a portion of the year (often referred to as seasonal structures) shall be stored in an upland location, located above MHW and not in tidal wetlands. These seasonal structures may be stored on the fixed, pile-supported portion of the structure that is seaward of MHW. This is intended to prevent structures from being stored on the marsh substrate and the substrate seaward of MHW.

19. Pile Driving and Pile Removal in Navigable Waters.

- a. Derelict, degraded or abandoned piles and sheet piles in navigable waters of the U.S., except for those inside existing work footprints for piers, must be completely removed, cut and/or driven to 3 feet below the substrate to prevent interference with navigation, and existing creosote piles that are affected by project activities shall be completely removed if practicable. In areas of fine-grained substrates, piles must be removed by the direct, vibratory or clamshell pull method¹ to minimize sedimentation and turbidity impacts and prevent interference with navigation from cut piles. Removed piles shall be disposed of in an upland location landward of MHW or OHW and not in wetlands, tidal wetlands or mudflats.
- b. A PCN is required for the installation or removal of structures with jetting techniques.
- c. A PCN is required for the installation of >12 inch-diameter piles of any material type or steel piles of any size in tidal waters, unless they are installed in the dry. If piles are not installed in the dry:
 - i. Impact pile driving shall commence with an initial set of three strikes by the hammer at 40% energy, followed by a one-minute wait period, then two subsequent 3-strike sets at 40% energy, with one minute waiting periods, before initiating continuous impact driving.
 - ii. Vibratory pile driving shall be initiated for 15 seconds at reduced energy followed by a one-minute waiting period. This sequence of 15 seconds of reduced energy driving, one-minute waiting period shall be repeated two more times, followed immediately by pile-driving at full rate and energy.
 - iii. In addition to using a soft start at the beginning of the workday for pile driving as described in 19c(i-ii), a soft start must also be used at any time following a cessation of pile driving for a period of 30 minutes or longer.
- d. Bubble curtains may be used to reduce sound pressure levels during vibratory or impact hammer pile driving.

20. Time-of-Year (TOY) Restrictions. Activities that include in-water work must comply with the TOY Restrictions below to be SV eligible, otherwise a PCN is required. PCN submittals shall contain written justification for deviation from the TOY Restrictions. The term “in-water work” does not include conditions where the work site is “in-the-dry” (e.g., intertidal areas exposed at low tide). The term “in-the-dry” includes work contained within a cofferdam so long as the cofferdam is installed and subsequently removed outside the TOY Restriction. The TOY restrictions stated in Appendix B of the MA DMF Technical Report TR-47² can apply instead for activities in tidal waters if (1) TOYs are provided for a specific waterbody where the activity is proposed and (2) the TOYs are less restrictive than below. The activity must also not require a PCN elsewhere in this document to be SV eligible.

¹ Direct Pull: Each piling is wrapped with a choker cable or chain that is attached at the top to a crane. The crane then pulls the piling directly upward, removing the piling from the sediment. Vibratory Pull: The vibratory hammer is a large mechanical device (5-16 tons) that is suspended from a crane by a cable. The vibrating hammer loosens the piling while the crane pulls up. Clamshell Pull: This can remove intact, broken or damaged pilings. The clamshell bucket is a hinged steel apparatus that operates like a set of steel jaws. The bucket is lowered from a crane and the jaws grasp the piling stub as the crane pulls up. The size of the clamshell bucket is minimized to reduce turbidity during piling removal.

² The MA DMF Technical Report TR-47: <https://www.nae.usace.army.mil/Missions/Regulatory/State-General-Permits/Massachusetts-General-Permit/>

TOY Restriction (No work)**Non-tidal Waters**

Defer to TR-47

Tidal Waters

January 15 – November 15

Alternate work windows proposed under a PCN will generally be coordinated with the USFWS and NMFS. Resulting written verifications may include species-specific work allowed windows.

21. Heavy Equipment in Wetlands. Operating heavy equipment (drill rigs, fixed cranes, etc.) within wetlands shall be minimized, and such equipment shall not be stored, maintained, or repaired in wetlands, to the maximum extent practicable. Where construction requires heavy equipment operation in wetlands, the equipment shall:

- i. Have low ground pressure (typically ≤ 3 psi);
- ii. Be placed on swamp/construction/timber mats (herein referred to as “construction mats” or “mats”) that are adequate to support the equipment in such a way as to minimize disturbance of wetland soil and vegetation. See GC 22 for information on the placement of construction mats; or
- iii. Be operated on adequately dry or frozen wetlands such that shear pressure does not cause subsidence of the wetlands immediately beneath the equipment and upheaval of adjacent wetlands. Construction mats are to be placed in the wetland from the upland or from equipment positioned on mats if working within a wetland. Dragging construction mats into position is prohibited. Other support structures that are capable of safely supporting equipment may be used with written USACE authorization.

22. Temporary Fill, Work & Construction Mats.

a. Construction mats in non-tidal waters: Temporary construction mats shall be in place ≤ 1 year and for one growing season or less to be SV eligible. A PCN is required if construction mats are in place > 1 year or for more than one growing season. Construction mats can be placed in an area of any size in non-tidal waters. The activity may occur in segments to ensure the requirements for SV above are met, otherwise a PCN is required.

b. Construction mats in tidal waters: Temporary construction mats placed in an area $< 5,000$ SF in tidal waters are SV eligible, provided those mats are in place ≤ 6 months. Temporary construction mats placed in an area $\geq 5,000$ SF or in place > 6 months in tidal waters require a PCN.

c. Management of construction mats: At a minimum, construction mats shall be managed in accordance with the following construction mat best management practices (BMPs):

1. Mats shall be in good condition to ensure proper installation, use, and removal.
2. As feasible, mats shall be placed in a location that will minimize the amount of mats needed for the wetland crossing(s).
3. Inspect mats prior to their re-use and remove any plant debris. Mats are to be thoroughly cleaned before re-use to prevent the spread of invasive plant species.
4. Impacts to wetland areas shall be minimized during installation, use, and removal of the mats.
5. Adequate erosion & sediment controls shall be installed at approaches to mats to promote a smooth transition to, and minimize sediment tracking onto, the mats.
6. In most cases, mats should be placed along the travel area so that the individual boards are resting perpendicular to the direction of traffic. No gaps should exist between mats. Place mats far enough on either side of the resource area to rest on firm ground.

d. A PCN is required for temporary fills in place > 2 years. All temporary fills and disturbed soils shall be stabilized to prevent the material from eroding into waters of the U.S. where it is not authorized. Work shall include phased or staged development to ensure only areas under active development are exposed and to allow for stabilization practices as soon as practicable. Temporary fill must be placed in a manner that will prevent it from being eroded by expected high flows.

- e. Activities that require unconfined temporary fill and are authorized for discharge into waters of the U.S. shall consist of material that minimizes effects to water quality.
- f. Appropriate measures must be taken to maintain normal downstream flows and minimize flooding to the maximum extent practicable when temporary structures, work, and discharges of dredged or fill material, including cofferdams, are necessary for construction activities, access fills, or dewatering of construction sites. Materials shall be placed in a location and manner that does not adversely impact surface or subsurface water flow into or out of the wetland. Temporary fill authorized for discharge into wetlands shall be placed on geotextile fabric or other appropriate material laid on the pre-construction wetland grade where practicable to minimize impacts and to facilitate restoration to the original grade. Construction mats are excluded from this requirement.
- g. Construction debris and deteriorated materials shall not be located in waters of the U.S.
- h. Temporary fills, construction mats, and corduroy roads shall be entirely removed as soon as they are no longer needed to construct the authorized activity and the disturbed areas be restored to pre-construction contours and conditions.
- i. Construction equipment, such as temporary barges in tidal waters, shall provide clearance above the substrate to avoid grounding onto the substrate during all tides.

23. Restoration of Wetland Areas.

- a. Upon completion of construction, all disturbed wetland areas shall be stabilized with a wetland seed mix or plant plugs containing only plant species native to New England, and be appropriate for site conditions, including salinity and frequency of inundation, and shall not contain any species listed in the "Invasive and Other Unacceptable Plant Species" Appendix K of the New England District "Compensatory Mitigation Standard Operating Procedures" found at <https://www.nae.usace.army.mil/Missions/Regulatory/Mitigation.aspx>.
- b. The introduction or spread of invasive plant species in disturbed areas shall be prevented and controlled. Equipment shall be thoroughly cleaned before and after project construction to prevent the spread of invasive species. This includes, but is not limited to, tire treads and construction mats.
- c. In areas of authorized temporary disturbance, if trees are cut in USACE jurisdiction, they shall be cut at or above ground level and not uprooted in order to prevent disruption of any kind to the wetland soil structure and to allow stump sprouts to revegetate the work area, unless otherwise authorized.
- d. Wetland areas where permanent disturbance is not authorized shall be restored to their original condition and elevation, which under no circumstances shall be higher than the pre-construction elevation. Original condition means careful protection and/or removal of existing soil and vegetation, and replacement back to the original location such that the original soil layering and vegetation schemes are approximately the same, unless otherwise authorized.

24. Bank Stabilization.

- a. Projects involving construction or reconstruction/maintenance of bank stabilization within USACE jurisdiction shall be designed to minimize environmental effects, effects to neighboring properties, scour, conversion of natural shoreline to hard armoring, etc. to the maximum extent practicable.
- b. Projects involving the construction of new bank stabilization within USACE jurisdiction shall use bioengineering techniques and natural materials in the project design to the maximum extent practicable. Use of hard structures shall be eliminated or minimized unless the prospective permittee can demonstrate that use of bioengineering techniques is not practicable due to site conditions.
- c. Where possible, bank stabilization projects shall optimize the natural function of the shoreline, including self-sustaining stability to attenuate flood flows, fishery, wildlife habitat and water quality protection, while protecting upland infrastructure from storm events that can cause erosion as well as impacts to public and private property.
- d. No material shall be placed in excess of the minimum needed for erosion protection.
- e. No material shall be placed in a manner that will be eroded by normal or expected high flows (properly anchored native trees and treetops may be used in low energy areas).

- f. Native plants appropriate for current site conditions, including salinity, must be used for bioengineering or vegetative bank stabilization.
- g. The activity must be properly maintained, which may require repairing it after severe storms or erosion events.

25. Soil Erosion and Sediment Controls.

- a. Appropriate soil erosion and sediment controls¹ (hereinafter referred to as “controls”) must be installed prior to earth disturbance and maintained in effective operating condition during construction. Biodegradable wildlife friendly erosion controls should be used whenever practicable to minimize effects to water quality.
- b. Activities in streams (rivers, streams, brooks, etc.) and tidal waters that are capable of producing sedimentation or turbidity should be done during periods of low-flow or no-flow, when the stream or tide is waterward of the work area. Controls may also be used to obtain dry work conditions (e.g., coffer dam, turbidity curtain). The prospective permittee must demonstrate in the project plans where the controls are proposed and how these controls would avoid and/or minimize turbidity or sedimentation.
- c. A PCN is required for controls that encroach: i) >25% of the stream width measured from OHW in non-tidal diadromous streams from March 15 to June 30; or ii) >25% of the waterway width measured from MHW in tidal waters from Feb. 1 to June 30, or >50% of the waterway width measured from MHW in tidal waters from July 1 to Jan. 14. This is to protect upstream fish passage. Proponents must also maintain downstream fish passage throughout the project.
- d. No dewatering shall occur with direct discharge to waters or wetlands. Excess water in isolated work areas shall be pumped or directed to a sedimentation basin, tank or other dewatering structures in an upland area adequately separated from waters or wetlands. Suspended solids shall be removed prior to discharge back into waters or wetlands from these dewatering structures. All discharge points back into waters and wetlands shall use appropriate energy dissipaters and erosion and sedimentation control BMPs.
- e. Temporary controls shall be removed upon completion of work, but not until all exposed soil and other fills, as well as any work waterward of OHW or the HTL, are permanently stabilized at the earliest practicable date. Sediment and debris collected by these devices shall be removed and placed at an upland location in a manner that will prevent its later erosion into a waterway or wetland. Controls may be left in place if they are biodegradable and flows and aquatic life movements are not disrupted.

26. Aquatic Life Movements and Management of Water Flows.

- a. No activity may substantially disrupt the necessary life cycle movements of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area, unless the activity’s primary purpose is to impound water. All permanent and temporary crossings of waterbodies and wetlands shall be:
 - i. Suitably spanned, bridged, culverted, or otherwise designed and constructed to maintain low flows to sustain the movement of those aquatic species; and
 - ii. Properly aligned and constructed to prevent bank erosion or streambed scour both adjacent to and inside the crossing.

¹ Appropriate soil erosion, sediment and turbidity controls include cofferdams, bypass pumping around barriers immediately up and downstream of the work footprint (i.e., dam and pump), installation of sediment control barriers (i.e., silt fence, vegetated filter strips, geotextile silt fences, filter tubes, erosion control mixes, hay bales or other devices) downhill of all exposed areas, stream fords, retention of existing vegetated buffers, application of temporary mulching during construction, phased construction, and permanent seeding and stabilization, etc.

- b. To avoid adverse impacts on aquatic organisms, the low flow channel/thalweg shall remain unobstructed during periods of low flow, except when necessary to perform the authorized work.
- c. For work in tidal waters, in-stream controls (e.g., cofferdams) should be installed in such a way as to not obstruct fish passage.
- d. Riprap and other stream bed materials shall be installed in a manner that avoids organism entrapment in rock voids or water displaced to subterranean flow with crushed stone and riprap.
- e. To the maximum extent practicable, the preconstruction course, condition, capacity, and location of open waters must be maintained for each activity, including stream channelization, storm water management activities, and temporary and permanent road crossings, except as provided below. The activity must be constructed to withstand expected high flows. The activity shall not restrict or impede the passage of normal or high flows unless the primary purpose of the activity is to impound water or manage high flows. The activity may alter the pre-construction course, condition, capacity, and location of open waters if it benefits the aquatic environment (e.g., stream restoration or relocation activities).

27. Spawning, Breeding, and Migratory Areas.

- a. Activities in spawning areas during spawning seasons must be avoided to the maximum extent practicable. Activities that result in the physical destruction (e.g., through excavation, fill, or downstream smothering by substantial turbidity) of an important spawning area are not authorized under these GPs.
- b. Activities in waters of the U.S. that serve as breeding areas for migratory birds must be avoided to the maximum extent practicable.
- c. The applicant is responsible for obtaining any “take” permits required under the USFWS’s regulations governing compliance with the Migratory Bird Treaty Act or the Bald and Golden Eagle Protection Act. The applicant should contact the appropriate local office of the USFWS to determine if such “take” permits are required for a particular activity.
- d. Information on spawning habitat for species managed under the Magnuson-Stevens Fishery Conservation and Management Act (i.e., EFH for spawning adults) can be obtained from NAE Regulatory website, Essential Fish Habitat section, at: <https://www.nae.usace.army.mil/Missions/Regulatory/State-General-Permits/Massachusetts-General-Permit/>.
- e. Information regarding diadromous fish habitat can be obtained from the following DMF website at: <https://www.mass.gov/info-details/massgis-data-diadromous-fish>.

28. Vernal Pools.

- a. A PCN is required if a discharge of dredged or fill material is proposed within a vernal pool depression that is also a water of the U.S.
- b. Vernal pools must be identified on the plans that show aquatic resource delineations.
- c. Adverse impacts to vernal pools shall be avoided & minimized to the maximum extent practicable.

29. Invasive Species.

- a. The introduction, spread or the increased risk of invasion of invasive plant or animal species on the project site, into new or disturbed areas, or areas adjacent to the project site caused by the site work shall be avoided. Construction mats shall be thoroughly cleaned before reuse to avoid spread of invasive species.
- b. Unless otherwise directed by USACE, all applications for PCN non-tidal projects proposing fill in USACE jurisdiction shall include an Invasive Species Control Plan. Additional information can be found at: <https://www.nae.usace.army.mil/Missions/Regulatory/Invasive-Species/>, <https://www.nae.usace.army.mil/Missions/Regulatory/Mitigation/>.

30. Fills Within 100-Year Floodplains. The activity shall comply with applicable Federal Emergency Management Agency (FEMA) approved, Massachusetts Emergency Management

Agency (MEMA) approved and/or local floodplain management requirements. Applicants should contact FEMA and/or MEMA regarding floodplain management requirements.

31. Stream Work and Crossings & Wetland Crossings.

- a. When feasible, all temporary and permanent crossings of waterbodies and wetlands (hereinafter referred to as "crossings") shall conform to the "Massachusetts River and Stream Crossing Standards" located at: <https://www.mass.gov/doc/massachusetts-river-and-stream-crossing-standards/download> or <https://www.nae.usace.army.mil/Missions/Regulatory/State-General-Permits/Massachusetts-General-Permit/>. Projects that do not conform to these guidelines shall be reviewed under PCN or IP procedures.
- b. Crossings shall be suitably culverted, bridged, or otherwise designed to withstand and to prevent the restriction of high flows, to maintain existing low flows, maintain water quality, and not obstruct the movement of aquatic life indigenous to the waterbody beyond the duration of construction.
- c. Crossings shall be installed in such a manner as to preserve hydraulic capacity and flow, sediment transport, and organism passage at its present level, between the wetlands on either side of the road. The applicant shall take necessary measures to correct any wetland damage resulting from deficiencies in hydraulic capacity, sediment transport and organism passage.
- d. Stream crossings shall utilize a natural mixed grain-size streambed material composition that matches upstream and downstream substrates to create a stable streambed. Substrate should function appropriately during normal and high flows without washing out. If natural streambed material is not utilized, a PCN is required.
- e. Activities involving open trench excavation in flowing waters require a PCN. Work should not occur in flowing waters (requires using management techniques such as temporary flume pipes, culverts, cofferdams, etc.). Normal flows should be maintained within the stream boundary's confines when practicable. Projects utilizing these management techniques must meet all applicable terms and conditions of the GP, including the GCs in Section IV.

32. Utility Line Installation and Removal

- a. Subsurface utility lines must be installed at a sufficient depth to avoid damage from anchors, dredging, etc., and to prevent exposure from erosion and stream adjustment.
- b. When utility lines are installed via horizontal directional drilling, a frac-out contingency plan shall be present on site for the duration of construction. As necessary, the applicant shall immediately contain, control, recover, and remove drilling fluids released into the environment.
- c. Abandoned or inactive utility lines must be removed and faulty lines (e.g., leaking hazardous substances, petroleum products, etc.) must be removed or repaired. A written verification from the USACE is required if they are to remain in place, e.g., to protect sensitive areas or ensure safety.
- d. Utility lines shall not adversely alter existing hydrology, and trenches cannot be constructed or backfilled in such a manner as to drain waters of the U.S. (e.g., backfilling with extensive gravel layers, creating a French drain effect). In wetland areas, structures such as ditch plugs, cut-off walls, clay blocks, bentonite, or other suitable material shall be used within utility trenches to ensure that the trench through which the utility line is installed does not drain waters of the U.S. including wetlands.
- e. Stockpiling of tree debris, to the extent where it has the effect of fill material, shall not occur in waters of the U.S. Tree debris shall be removed from waters of the U.S. and placed in uplands without causing additional disturbance to aquatic resources. Failure to meet this condition could change the bottom elevation of the wetland and be considered a discharge of fill material, and depending on the area of alteration, may require a PCN or IP.

33. Water Supply Intakes. No activity may occur in the proximity of a public water supply intake, except where the activity is for the repair or improvement of public water supply intake structures or adjacent bank stabilization.

34. Coral Reefs. Impacts to coral reefs are not authorized under these GPs. Coral reefs consist of the skeletal deposit, usually of calcareous or siliceous materials, produced by the vital activities of anthozoan polyps or other invertebrate organisms present in growing portions of the reef.

35. Blasting. Blasting in waters of the U.S. associated with work such as dredging, trenching, pile installation, etc. is not authorized under these GPs.

36. Inspections. The permittee shall allow USACE to make periodic inspections at any time deemed necessary to ensure that the work is being or has been performed in accordance with the terms and conditions of this permit. To facilitate these inspections, for activities requiring a PCN, the permittee shall complete and return the Certificate of Compliance when it is provided with a PCN verification letter. For SV-eligible activities, the permittee shall complete and submit the SVN to USACE within 30 days of initiating project construction, at which point, USACE may opt to inspect the activity to verify compliance with the terms and conditions of the GP. Post-construction engineering drawings may be required by USACE for completed work. This includes post-dredging survey drawings for any dredging work.

37. Maintenance. The permittee shall maintain the activity authorized by these GPs in good condition and in conformance with the terms and conditions of this permit. Some maintenance activities may not be subject to federal regulation under Section 404 in accordance with 33 CFR 323.4(a)(2). This condition is not applicable to maintenance of dredging projects. Prospective permittees should contact USACE to inquire about maintenance of dredging projects, and its eligibility under these GPs. Maintenance dredging is subject to the review thresholds in GP #7 as well as any conditions included in a written USACE authorization. Maintenance dredging includes only those areas and depths previously authorized and dredged.

38. Property Rights. Per 33 CFR 320.4(g)(6), these GPs do not convey any property rights, either in real estate or material, or any exclusive privileges, nor do they authorize any injury to property or invasion of rights or any infringement of Federal, State, or local laws or regulations.

39. Transfer of GP Verifications. When the work authorized by these GPs is still in existence at the time the property is transferred, the terms and conditions of these GPs, including any special conditions, will continue to be binding on the entity or individual who received the GP authorizations, as well as the new owner(s) of the property. If the permittee sells the property associated with a GP authorization, the applicant may transfer the GP authorization to the new owner by submitting a letter to USACE to validate the transfer. A copy of the GP authorization letter must be attached to the letter, and the letter must include the following statement: "The terms and conditions of these general permits, including any special conditions, will continue to be binding on the new owner(s) of the property." This letter shall be signed by both the seller and new property owner(s).

40. Modification, Suspension, and Revocation. These GPs and any individual authorization issued thereof may be either modified, suspended, or revoked in whole or in part pursuant to the policies and procedures of 33 CFR 325.7; and any such action shall not be the basis for any claim for damages against the U.S.

41. Special Conditions. The USACE may impose other special conditions on a project authorized pursuant to these GPs that are determined necessary to minimize adverse navigational and/or environmental effects or based on any other factor of the public interest. Failure to comply with all conditions of the authorization, including special conditions, constitutes a permit violation and may subject the applicant to criminal, civil, or administrative penalties or restoration.

42. False or Incomplete Information. If USACE makes a determination regarding the eligibility of a project under these GPs, and subsequently discovers that it has relied on false, incomplete, or inaccurate information provided by the applicant, the authorization will not be valid, and the U.S. Government may institute appropriate legal proceedings.

43. Abandonment. If the permittee decides to abandon the activity authorized under these GPs, unless such abandonment is merely the transfer of property to a third party, he/she/they may be required to restore the area to the satisfaction of USACE.

44. Enforcement cases. These GPs do not apply to any existing or proposed activity in USACE jurisdiction associated with an on-going USACE or EPA enforcement action, until such time as the enforcement action is resolved or USACE or EPA determines that the activity may proceed independently without compromising the enforcement action.

45. Previously Authorized Activities.

- a. Completed projects that received prior authorization from USACE (SV or PCN), shall remain authorized in accordance with the original terms and conditions of those authorizations, including their terms, GCs, and any special conditions provided in a written verification.
- b. Activities authorized pursuant to 33 CFR 330.3 (activities occurring before certain dates) are not affected by these GPs.

46. Duration of Authorization.

These GPs expire on June 1, 2028. Activities authorized under these GPs will remain authorized until the GPs expire, unless discretionary authority has been exercised on a case-by-case basis to modify, suspend, or revoke the authorization in accordance with 33 CFR 325.2(e)(2). Activities authorized under GPs 1-25 that have either commenced (i.e., are under construction) or are under contract to commence in reliance upon this authorization will have until June 1, 2029 to complete the work. If requested by USACE, the permittee shall furnish documentation that demonstrates the project was under construction or under contract to commence by June 1, 2028. If work is not completed before June 1, 2029, the permittee must contact USACE. The USACE may issue a new authorization provided the project meets the terms and conditions of the MA GPs in effect at the time. Activities completed under the SV or PCN authorizations of these GPs will continue to be authorized after their expiration date.

SECTION V: MITIGATION STANDARDS

1. Mitigation Types

For all activities, applicants must (a) demonstrate how the project has been designed to avoid or minimize impacts to aquatic resources; and (b) describe measures taken to avoid or minimize impacts to aquatic resources through construction techniques and/or site access. Please see <https://www.nae.usace.army.mil/Missions/Regulatory/Mitigation/> for assistance with preparing mitigation in accordance with the 2008 Compensatory Mitigation for Losses of Aquatic Resources; Final Rule (33 CFR 332.3), hereafter referred to as “2008 Mitigation Rule.”

Avoidance - Avoidance of impacts (direct and indirect) to aquatic resources means that project activities would not result in the placement of fill material or installation of a structure that could impact the resource area. Avoidance can include, but is not limited to, designing the project to avoid impacts to all or a portion of the aquatic resource areas.

Minimization - Minimization of impacts (direct and indirect) to aquatic resources means that measures are taken to ensure the amount and duration of impacts are limited to the maximum extent practicable. There are many minimization measures that could be implemented, prior to, during, or after the proposed activity, to ensure impacts are minimized. Examples include, but are not limited to:

- Permanent preservation of avoided aquatic features and buffer zone, in perpetuity. In these cases, the preserved area would be under a conservation easement and managed by conservation oriented third-party manager.
- Utilization of best management practices (BMPs) to ensure impacts are limited, and do not result in adverse impacts to the integrity and long-term functions of preserved/avoided features.

Compensatory Mitigation - Compensatory mitigation is generally required for PCN activities in which the impacts to the aquatic resources have been avoided and minimized to the maximum extent practicable but would still result in unavoidable adverse effects to the environment that are considered more than minimal or are contrary to the public interest. *Whatever the case may be, compensatory mitigation is no substitute for avoidance and minimization.*

2. Thresholds for Compensatory Mitigation

The basic objective of compensatory mitigation in the USACE Regulatory Program is to offset environmental losses resulting from unavoidable impacts to waters of the U.S. authorized by Department of the Army permits. **The following compensatory mitigation thresholds apply to all PCN activities that result in loss¹ of the resource area types listed below. Activities² in waters of the U.S. associated with the restoration, enhancement, and establishment of tidal and non-tidal aquatic resources are not considered loss and are not subject to the thresholds below.** Thresholds for different resource areas may not be combined to exceed 5,000 SF of total loss of all waters. The USACE will continue to evaluate projects on a case-by-case basis, and may in some cases require compensatory mitigation below these thresholds (e.g. minor impacts that add to a cumulative loss).

¹ See definition of loss in Section VII.

² These activities must result in net increases in aquatic resource functions and services to be exempted from the thresholds above.

Compensatory Mitigation Thresholds in Massachusetts		
Resource Area	Non-Tidal Threshold	Tidal Threshold
Stream	200 LF	200 LF
Bank Stabilization	500 LF	500 LF
Open Water	Project Dependent	Project Dependent
Wetland	5,000 SF	500 SF
Vernal Pool	All	N/A
SAV	Project dependent	25 SF
Mudflat	N/A	1,000 SF
Intertidal	N/A	1,000 SF

These thresholds can be utilized to determine at what point compensatory mitigation is required but are not used to determine how much mitigation may be needed to offset impacts to resources. Per the 2008 Mitigation Rule (33 CFR 332.3(f)(1)) “the amount of required compensatory mitigation must be, to the extent practicable, sufficient to replace lost aquatic resource functions. In cases where appropriate functional or condition assessment methods or other suitable metrics are available, these methods should be used where practicable to determine how much compensatory mitigation is required. If a functional or condition assessment or other suitable metric is not used, a minimum one-to-one acreage or linear foot compensation ratios must be used.”

3. Compensatory Mitigation Hierarchy

Compensatory mitigation should follow the hierarchy as outlined in 33 CFR 332.3(b)(2-6) or current regulation. This hierarchy in order of preference includes: (1) Mitigation Bank credits, (2) In-Lieu Fee program credits, (3) permittee-responsible mitigation under a watershed approach, (4) permittee-responsible mitigation through on-site and in-kind mitigation, and (5) permittee-responsible mitigation through off-site and/or out-of-kind mitigation. If the proposed mitigation deviates from this mitigation hierarchy, the applicant **must** justify in writing why the proposed mitigation is environmentally preferable to the preferred method of compensatory mitigation (See 2008 Mitigation Rule). **In order for your application to be considered complete, you must provide a statement that discusses how your project will compensate for the loss or impact to aquatic resources.** If you are proposing permittee responsible mitigation, the 12 components of a mitigation plan (33 CFR 332.4(c)(2-14)) must be addressed for your application to be considered complete. Prospective applicants are encouraged to contact USACE with questions at any time. Addressing the 12 components of a mitigation plan is commensurate with the amount of compensatory mitigation required, and USACE can assist prospective applicants with the level of information needed to satisfy each component.

For activities resulting in the loss of marine or estuarine resources, permittee-responsible mitigation may be environmentally preferable if there are no mitigation banks or in-lieu fee programs in the area that have marine or estuarine credits available for sale or transfer to the permittee.

4. In-Lieu Fee (ILF)

The purchase of credits from the Massachusetts In-Lieu Fee Program (MA ILFP) is the **preferred** method of compensatory mitigation in Massachusetts since, as of the issuance date of this GP, there are no mitigation banks available in Massachusetts. The applicant shall develop a mitigation plan that addresses the baseline conditions at the impact site and the number of credits to be provided (see 33 CFR 332.4(c)(1)(ii)).

The MA ILFP is administered by the Massachusetts Department of Fish & Game (DFG) in accordance with the 2008 Mitigation Rule at 33 CFR 332. The Mitigation Rule governs in-lieu fee compensatory mitigation associated with USACE permits under §404 of the Clean Water Act and/or §9 or §10 of the Rivers and Harbors Act of 1899.

MA ILFP Website: <https://www.mass.gov/in-lieu-fee-program>

Acceptance of an ILF payment into the ILFP established by the 2014 MA ILFP Instrument (link below) is an acknowledgement by DFG that it assumes all legal responsibility for satisfying the mitigation requirements of the USACE (i.e., the implementation, performance, and long-term management and monitoring of the compensatory mitigation project(s) approved under this Instrument and subsequent Compensatory Mitigation Plans). This transfer of legal responsibility is established by: 1) the approval of this In-Lieu Fee Instrument; 2) receipt by the district engineer of a Notice of Credit Sale and Transfer of Legal Responsibility to DFG that is signed by the DFG and the permittee and dated; and 3) the transfer of fees from the permittee to DFG.

MA ILFP Fact Sheet: <https://www.mass.gov/files/documents/2017/01/sj/ilfp-fact-sheet-ma-ilfp-fees.pdf>

MA ILFP Instrument: <https://www.mass.gov/files/documents/2016/08/nd/ilfp-final-instrument-dfg.pdf>

5. Permittee-Responsible

The USACE may determine that the proposed permittee-responsible compensatory mitigation is appropriate on a case-by-case basis. As described in the Compensatory Mitigation Hierarchy section above, applicants must justify in writing why the proposed mitigation is environmentally preferable to the purchase of ILF credits. Applicants are encouraged to contact the USACE prior to submission of a permit application to seek further guidance regarding USACE mitigation requirements.

Applicants will demonstrate their proposed compensatory mitigation in writing by addressing the 12 components of a mitigation plan (33 CFR 332.4(c)(2-14)). *Please note that all elements must be addressed, or the permit application will be deemed incomplete.* In certain circumstances, the district engineer may determine that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation (see 33 CFR 332.3(k)(3)). Guidance on how to address these components can be found on the New England District Mitigation webpage: <https://www.nae.usace.army.mil/Missions/Regulatory/Mitigation/>

Performance standards will be used to measure the successfulness of the mitigation project. A successful mitigation project is one that is self-sustaining. For a mitigation project that will restore, enhance, or create wetlands, proper performance standards must address hydrology, hydric soils, and hydrophytic vegetation. The mitigation proposal must include an explanation of quantitative methods used to measure the success of performance standards (i.e., percent cover may be measured using vegetation plots, hydrology may be measured using data loggers, soil cores may be taken and evaluated for hydric soil indicators).

Monitoring methods should include quantitative sampling methods following established, scientific protocols. Sampling documentation, as part of monitoring reports, should include maps and coordinates (also shapefiles, if available) showing locations of sampling points, transects, quadrats, etc. In addition, permanent photo stations should be established coincident with sampling locations.

SECTION VI: FEDERAL & STATE AGENCY CONTACT INFORMATION & ORGANIZATIONAL WEBSITES

Federal Agencies

U.S. Army Corps of Engineers

Regulatory Division
696 Virginia Road
Concord, Massachusetts 01742-2751
(978) 318-8338 (phone); (978) 318-8303 (fax)
www.nae.usace.army.mil/missions/regulatory

National Marine Fisheries Service

55 Great Republic Drive
Gloucester, Massachusetts 01930
(978) 281-9300 (phone)
(*Federal endangered species & EFH*)

National Park Service

15 State Street
Boston, Massachusetts 02109
(617) 223-5191 (phone)
(*Wild and Scenic Rivers*)

Chief, Risk Analysis Branch

FEMA Region 1
99 High Street, 6th Floor
U.S. Department of Homeland Security
Boston, Massachusetts 02110
(617) 956-7576 (phone)

U.S. Environmental Protection Agency

5 Post Office Square
Suite 100 (OEP06-3)
Boston, Massachusetts 02109-3912
(617) 918-1692 (phone)

U.S. Army Corps of Engineers

Navigation Division – Section 408
696 Virginia Road
Concord, Massachusetts 01742-2751
See link below for contact information:
<https://www.nae.usace.army.mil/Missions/Section-408/>

U.S. Fish & Wildlife Service

70 Commercial Street, Suite 300
Concord, New Hampshire 03301
(603) 223-2541 (phone)
(*Federal endangered species*)

Bureau of Ocean and Energy Management

1849 C Street, NW
Washington D.C. 20240
202-208-6474 (phone)
(*Offshore Wind Facilities*)

Commander (dpb)

First Coast Guard District
Battery Building
One South Street
New York, New York 10004-1466
(212) 514-4331 (phone); (212) 514-4337 (fax)
(*Bridge permits*)

State Agencies in Massachusetts

<u>Massachusetts Department of Environmental Protection (MassDEP)</u>	
<u>DEP Division of Wetlands & Waterways</u>	100 Cambridge Street, Suite 900 Boston, Massachusetts 02114 (617) 292-5695
<u>Northeast Region</u>	150 Presidential Way, Suite 300 Woburn, Massachusetts 01801 (978) 694-3200
<u>Southeast Region</u>	20 Riverside Drive, Route 105 Lakeville, Massachusetts 02347 (508) 946-2800
<u>Central Region</u>	8 New Bond Street Worcester, Massachusetts 01606 (508) 792-7650
<u>Western Region</u>	436 Dwight Street Springfield, Massachusetts 01103 (413) 784-1100

<u>Massachusetts Office of Coastal Zone Management (CZM)</u>	
Emails may be sent to: czm@mass.gov	
<u>MA Office of Coastal Zone Management</u>	100 Cambridge Street, Suite 900 Boston, Massachusetts 02114 (617) 626-1200
<u>North Shore Region</u>	2 State Fish Pier Gloucester, Massachusetts 01930 (978) 281-3972
<u>South Shore Region</u>	175 Edward Foster Road Scituate, Massachusetts 02066
<u>Cape Cod and Islands Region</u>	3195 Main Street, P.O. Box 220 Barnstable, MA 02630
<u>South Coastal Region</u>	81-B County Road, Suite E Mattapoisett, MA 02739

<u>Massachusetts Historical Commission (MHC)</u>	
Office Location:	220 Morrissey Boulevard Boston, Massachusetts 02125 (617) 727-8470

<u>Massachusetts Board of Underwater Archaeological Resources (BUAR)</u>	
Emails may be sent to: david.s.robinson@mass.gov	
Office Location:	100 Cambridge Street, Suite 900 Boston, Massachusetts 02114 (617) 626-1014

SECTION VII: Definitions & Acronyms

Artificial or Living Reef: A structure which is constructed or placed in waters for the purpose of enhancing fishery resources and commercial and recreational fishing opportunities.

Attendant Features: Occurring with or as a result of; accompanying.

Biodegradable: A material that decomposes into elements found in nature within a reasonably short period of time and will not leave a residue of plastic or a petroleum derivative in the environment after degradation. In contrast, degradable plastics break down into plastic fragments that remain in the environment after degradation. Examples of biodegradable materials include jute, sisal, cotton, straw, burlap, coconut husk fiber (coir) or excelsior. In contrast, degradable plastics break down into plastic fragments that remain in the environment after degradation. Photodegradable, UV degradable or Oxo-(bio)degradable plastics are not considered biodegradable under this GP.

Boating facilities: These provide, rent or sell mooring space, such as marinas, yacht clubs, boat yards, dockominiums, municipal facilities, land/home owners, etc. Not classified as boating facilities are piers shared between two abutting properties or municipal mooring fields that charge an equitable user fee based on the actual costs incurred.

Compensatory mitigation: The restoration (re-establishment or rehabilitation), establishment (creation), enhancement, and/or in certain circumstances preservation of aquatic resources for the purposes of offsetting unavoidable adverse impacts which remain after all appropriate and practicable avoidance and minimization has been achieved. Must comply with the applicable provisions of 33 CFR 332. See also the New England District Compensatory Mitigation Guidance at <http://www.nae.usace.army.mil/Missions/Regulatory/Mitigation.aspx>.

Construction mats: Constructions, swamp and timber mats (herein referred to as “construction mats”) are generic terms used to describe structures that distribute equipment weight to prevent wetland damage while facilitating passage and providing work platforms for workers and equipment. They are comprised of sheets or mats made from a variety of materials in various sizes. A timber mat consists of large timbers bolted or cabled together. Corduroy roads, which are not considered to be construction mats, are cut trees and/or saplings with the crowns and branches removed, and the trunks lined up next to one another. Corduroy roads are typically installed as permanent structures. Like construction mats, they are considered as fill whether they are installed temporarily or permanently.

Cumulative Impacts: The impact on the environment, which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time (40 CFR 1508.1). Although the impact of a particular discharge may constitute a minor change in itself, the cumulative effect of numerous such piecemeal changes can result in a major impairment of the water resources and interfere with the productivity and water quality of existing aquatic ecosystems. See 40 CFR 230.11(g).

Currently serviceable: Useable as is or with some maintenance, but not so degraded as to essentially require reconstruction.

Dredging:

Improvement Dredging: For the purposes of these GPs, this is dredging deeper than previously authorized by the USACE and dredged under that authorization.

Maintenance Dredging: For the purposes of these GPs, this is dredging from an area previously authorized by the USACE and dredged under that authorization. The USACE may require proof of authorization and dredging. Maintenance dredging typically refers to the routine removal of accumulated sediment to maintain the design depths of serviceable navigation channels, harbors, marinas, boat launches and port facilities. Maintenance dredging is conducted for navigational purposes and does not include any expansion of the previously dredged area. The USACE may

review a maintenance dredging activity as new dredging if sufficient time has elapsed to allow for the colonization of SAS, shellfish, etc.

New Dredging: For the purposes of these GPs, this is a) first time the USACE authorizes dredging of a particular location or b) dredging has not occurred for an extended period of time, and this has allowed for aquatic resources (i.e., eelgrass, shellfish, etc.) to redevelop in the area.

Dredged material & discharge of dredged material: These are defined at 33 CFR 323.2(c) and (d). The term dredged material means material that is excavated or dredged from waters of the U.S.

Enhancement: The manipulation of the physical, chemical, or biological characteristics of an aquatic resource to heighten, intensify, or improve a specific aquatic resource function(s). Enhancement results in the gain of selected aquatic resource function(s) but may also lead to a decline in other aquatic resource function(s). Enhancement does not result in a gain in aquatic resource area.

Ephemeral stream: A stream with flowing water only during, and for a short duration, after precipitation events in a typical year. Ephemeral stream beds are located above the water table year-round. Groundwater is not a source of water for the stream. Runoff from rainfall is the primary source of water for stream flow.

Erosion Controls: Appropriate soil erosion, sediment and turbidity controls include cofferdams, bypass pumping around barriers immediately up and downstream of the work footprint (i.e., dam and pump), installation of sediment control barriers (i.e., silt fence, vegetated filter strips, geotextile silt fences, filter tubes, erosion control mixes, hay bales or other devices) downhill of all exposed areas, stream fords, retention of existing vegetated buffers, application of temporary mulching during construction, phased construction, and permanent seeding and stabilization, etc.

Establishment (creation): The manipulation of the physical, chemical, or biological characteristics present to develop an aquatic resource that did not previously exist at an upland site.

Establishment results in a gain in aquatic resource area (33 CFR 332.2).

Expansions: Work that increases the footprint of fill, structures, depth of basin or drainage features, or floats, or slip capacity.

Essential Fish Habitat (EFH): The Federal Magnuson-Stevens Fishery Management and Conservation Act broadly defines EFH to include those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity. See

www.greateratlantic.fisheries.noaa.gov/habitat for more information.

Fill material & discharge of fill material: Material placed in waters of the U.S. where the material has the effect of either replacing any portion of a water of the U.S. with dry land or changing the bottom elevation of any portion of a water of the U.S. Fill material does not include any pollutant discharged into the water primarily to dispose of waste. These are defined at 33 CFR 323.2 (e) & (f).

Federal navigation projects (FNPs): These areas are maintained by the USACE; authorized, constructed and maintained on the premise that they will be accessible and available to all on equal terms; and comprised of USACE Federal anchorages, Federal channels and Federal turning basins. The buffer zone is equal to three times the authorized depth of a FNP. The following are FNPs in MA and more information, including the limits, is provided at

www.nae.usace.army.mil/missions/navigation >> Navigation Projects:

Andrews River, Harwich, MA	Cross Rip Shoals, Nantucket	Gloucester Harbor and
Aunt Lydia's Cove	Sound	Annisquam River
Beverly Harbor	Cuttyhunk Harbor	Green Harbor
Boston Harbor	Dorchester Bay and Neponset	Hingham Harbor
Buttermilk Bay Channel	River	Hyannis Harbor
Canapitsit Channel	Duxbury Harbor	Ipswich River
Cape Cod Canal	Edgartown Harbor	Island End River (Chelsea, MA)
Chatham Harbor	Essex River	Kingston Harbor
Cohasset Harbor	Fall River Harbor	Lagoon Pond
	Falmouth Harbor	Little Harbor Woods Hole

Lynn Harbor
Malden River
Menemsha Creek
Merrimack River
Mystic River
Nantucket Harbor of Refuge
New Bedford and Fairhaven Harbor
Newburyport Harbor
Oak Bluffs Harbor
Pigeon Cove Harbor

Plymouth Harbor
Pollock Rip Shoals, Nantucket Sound
Provincetown Harbor
Red Brook Harbor
Rockport Harbor
Salem Harbor
Sandy Bay Harbor of Refuge
Saugus River
Scituate Harbor
Sesuit Harbor

Taunton River
Vineyard Haven Harbor
Wareham Harbor
Wellfleet Harbor
Westport River and Harbor
Weymouth Back River
Weymouth Fore and Town Rivers
Winthrop Harbor
Woods Hole Channel

Flume: An open artificial water channel, in the form of a gravity chute, which leads water from a diversion dam or weir alongside a natural flow. A flume can be used to measure the rate of flow.

FNP buffer zone: The buffer zone of a USACE Federal Navigation Project (FNP) is equal to three times the authorized depth of the FNP.

Frac out: During horizontal directional drilling (HDD) operations, drilling fluid travels up the borehole into a pit. When the borehole becomes obstructed or the pressure becomes too great inside the borehole, the ground fractures and fluid escapes to the surface and may affect surface waters.

Ground disturbance: Any activity that compacts, relocates, overturns, removes, mixes, or otherwise disturbs the ground, including under water. Ground disturbance can be caused by the use of hand tools (shovels, pick axe, posthole digger, etc.), heavy equipment (excavators, backhoes, bulldozers, dredgers, trenching and earthmoving equipment, etc.), and heavy trucks (large four wheel drive trucks, dump trucks and tractor trailers, etc.). Trenching, bulldozing, dredging, excavating, scraping, and plowing are typical examples of ground disturbance activities.

Height:width ratio: The height of structures shall at all points be equal to or exceed the width of the deck. For the purpose of this definition, height shall be measured from the marsh substrate to the bottom of the longitudinal support beam.

High Tide Line (HTL): The line of intersection of the land with the water's surface at the maximum height reached by a rising tide. The high tide line may be determined, in the absence of actual data, by a line of oil or scum along shore objects, a more or less continuous deposit of fine shell or debris on the foreshore or berm, other physical markings or characteristics, vegetation lines, tidal gages, or other suitable means that delineate the general height reached by a rising tide. The line encompasses spring high tides and other high tides 58 that occur with periodic frequency but does not include storm surges in which there is a departure from the normal or predicted reach of the tide due to the piling up of water against a coast by strong winds. (33 CFR 328). Refer to the highest predicted tide for the current year at the nearest NOAA tide gage. <https://tidesandcurrents.noaa.gov/map/index.html>

Historic Property: Any prehistoric or historic site (including archaeological sites), district, building, structure, or other object included in, or eligible for inclusion in, the National Register of Historic Places maintained by the Secretary of the Interior. This term includes artifacts, records, and remains that are related to and located within such properties. The term includes properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization and that meet the National Register criteria (36 CFR part 60).

Impacts:

Direct Impacts: Effects that are caused by the activity and occur at the same time and place (40 CFR 1508.7).

Indirect impacts: Effects that are caused by the activity and are later in time or farther removed in distance, but are still reasonably foreseeable.

Secondary impacts: Effects on an aquatic ecosystem that are associated with a discharge of dredged or fill materials, but do not result from the actual placement of the dredged or fill material.

Information about secondary effects on aquatic ecosystems shall be considered prior to the time final section 404 action is taken by permitting authorities. Some examples of secondary effects on an aquatic ecosystem are: aquatic areas drained, flooded, fragmented; fluctuating water levels in an impoundment and downstream associated with the operation of a dam; septic tank leaching and surface runoff from residential or commercial developments on fill; and leachate and runoff from a sanitary landfill located in waters of the U.S. See 40 CFR 230.11(h).

Incidental Fallback: Incidental fallback is the redeposit of small volumes of dredged material that is incidental to excavation activity in waters of the U.S. when such material falls back to substantially the same place as the initial removal (33 CFR 323.2(d)(2)(iii)).

In the dry: Work that is done under dry conditions, e.g., work behind cofferdams or when the stream or tide is waterward of the work.

Independent utility: A test to determine what constitutes a single and complete non-linear project in the USACE Regulatory Program. A project is considered to have independent utility if it would be constructed absent the construction of other projects in the project area. Portions of a multi-phase project that depend upon other phases of the project do not have independent utility. Phases of a project that would be constructed even if the other phases were not built can be considered as separate single and complete projects with independent utility.

Individual permit: A Department of the Army authorization that is issued following a case-by-case evaluation of a specific structure or work in accordance with the procedures of 33 CFR 322, or a specific project involving the proposed discharge(s) in accordance with the procedures of 33 CFR 323, and in accordance with the procedures of 33 CFR 325 and a determination that the proposed discharge is in the public interest pursuant to 33 CFR 320.

Intermittent stream: An intermittent stream has flowing water during certain times of the year, when groundwater provides water for stream flow. During dry periods, intermittent streams may not have flowing water. Runoff from rainfall is a supplemental source of water for stream flow.

Intertidal: The area in between mean low water and the high tide line.

Living reef: See the definition of “artificial or living reef.”

Living shoreline: A term used to describe a low-impact approach with a substantial biological component to shoreline protection and restoration along coastal shores, riparian zones, lacustrine fringe wetlands, or oyster or mussel reef structures. This approach integrates natural features to restore, enhance, maintain, or create habitat, functions, and processes while also functioning to mitigate flooding or shoreline erosion. Living shorelines may stabilize banks and shores with small fetch and gentle slopes that are subject to low-to mid-energy waves. A living shoreline has a footprint that is made up mostly of native material. It incorporates vegetation or other living, natural “soft” elements alone or in combination with some type of harder shoreline structure (e.g., oyster or mussel reefs or rock sills) for added protection and stability. Living shorelines should maintain the natural continuity of the land-water interface and retain or enhance shoreline ecological processes.

Loss of waters of the United States: Waters of the U.S. that are permanently adversely affected by filling, flooding, excavation, or drainage because of the regulated activity. The loss of stream bed includes the acres of stream bed that are permanently adversely affected by filling or excavation because of the regulated activity. Permanent adverse effects include permanent discharges of dredged or fill material that change an aquatic area to dry land, increase the bottom elevation of a waterbody, or change the use of a waterbody. The acreage of loss of waters of the U.S. is a threshold measurement of the impact to jurisdictional waters or wetlands for determining whether a project may qualify for a GP; it is not a net threshold that is calculated after considering compensatory mitigation that maybe used to offset losses of aquatic functions and services. Waters of the U.S. temporarily filled, flooded, excavated, or drained, but restored to pre-construction contours and elevations after construction, are not included in the measurement of loss of waters of the U.S. Impacts resulting from activities that do not require Department of the Army authorization, such as activities eligible for exemptions under section 404(f) of the Clean Water Act, are not considered when calculating the loss of waters of the U.S.

Maintenance: The repair, rehabilitation, or in-kind replacement of any previously authorized, currently serviceable structure or fill, or of any currently serviceable structure or fill authorized by 33 CFR 330.3 – “Activities occurring before certain dates,” provided that the structure or fill is not to be put to uses differing from those uses specified or contemplated for it in the original permit or the most recently authorized modification. Maintenance includes minor deviations in the structure’s configuration or filled area, including those due to changes in materials, construction techniques, or current construction codes or safety standards that are necessary to make repair, rehabilitation, or replacement are authorized. Currently serviceable means useable as is or with some maintenance, but not so degraded as to essentially require reconstruction.

Maintenance Exemption: In accordance with 33 CFR 323.4(a)(2), any discharge of dredged or fill material that may result from any of the following activities is not prohibited by or otherwise subject to regulation under Section 404 of the CWA: “Maintenance, including emergency reconstruction of recently damaged parts, of currently serviceable structures such as dikes, dams, levees, groins, riprap, breakwaters, causeways, bridge abutments or approaches, and transportation structures. Maintenance does not include any modification that changes the character, scope, or size of the original fill design.”

Mean high water: Line on the shore reached by the plane of the average high water. Where precise determination of the actual location of the line becomes necessary, it must be established by survey with reference to the available tidal datum, preferably averaged over a period of 18.6 years. Less precise methods, such as observation of the “apparent shoreline” which is determined by reference to physical markings, lines of vegetation, or changes in type of vegetation, may be used only where an estimate is needed of the line reached by the mean high water.

Mechanized land clearing: Land clearing activities using mechanized equipment such as backhoes or bulldozers with sheer blades, rakes or discs constitute point source discharges and are subject to section 404 jurisdiction when they take place in wetlands or waters of the U.S (Regulatory Guidance Letter 90-05).

Metallic mineral: Any ore or material to be excavated from the natural deposits on or in the earth for its metallic mineral content to be used for commercial or industrial purposes. “Metallic mineral” does not include thorium or uranium.

Minor deviations: Deviations in the structure’s configuration or filled area, including those due to changes in materials, construction techniques, or current construction codes or safety standards, which are necessary to make repair, rehabilitation, or replacement are permitted, provided the adverse environmental effects resulting from such repair, rehabilitation, or replacement are minimal.

Natural Rocky Habitats: Intertidal and subtidal substrates of pebble-gravel, cobble, boulder, or rock ledge and outcrops. Manufactured stone (e.g., cur or engineered riprap) is not considered a natural rocky habitat. Natural rocky habitats are either found as pavement (consolidated pebble-gravel, cobble, or boulder areas) or as a mixture with fines (i.e., clay and sand) and other substrates. Rocky habitats as EFH are defined as follows: (1) All pebble-gravel, cobble, or boulder pavements; (2) Pebble-gravel mixed with fines: mixed substrate of pebble-gravel and fines where pebble-gravel is an evident component of the substrate (either through visual observation or within sediment samples). Sediment samples with a content of 10% or more of pebble-gravel in the top layer (6-12 inches) should be delineated; (3) Scattered cobble, scattered boulder, scattered cobble/boulder: mixed substrate of cobble and/or boulder and other substrates. The aerial extent of cobbles and/or boulders should be delineated; and (4) All rock ledge outcrops: area should be delineated along the edge of the ledge/outcrop (as defined by NMFS Habitat and Ecosystems Services Branch, Gloucester, MA).

Navigable waters or Navigable waters of the U.S.: These waters are subject to section 10 of the Rivers and Harbors Act of 1899 and are defined as those waters that are subject to the ebb and flow of the tide and/or are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce (33 CFR Part 329). Work or structures in navigable

waters require permits pursuant to §9 and §10 of the Rivers and Harbors Act of 1899. Also see the definition of “waters of the U.S.” below.

Note: Currently the following non-tidal waters have been determined to be navigable waters of the U.S. subject to permit jurisdiction in Massachusetts: Merrimack River, Connecticut River, and Charles River to the Watertown Dam.

Nearshore disposal: This is defined in the USACE Coastal Engineering Manual as “(1) In beach terminology an indefinite zone extending seaward from the shoreline well beyond the breaker zone. (2) The zone which extends from the swash zone to the position marking the start of the offshore zone, typically at water depths of the order of 20m.” A nearshore berm is an artificial berm built in shallow water using dredged material. Often, the berm is intended to renourish the adjacent and downdrift shore over time under the influence of waves and currents.

Non-regulated activity: Only structures or fills that were previously authorized and are in compliance with the terms and condition of the original authorization can be maintained as a non-regulated activity under 33 CFR 323.4(a)(2). Minor deviations from the previously authorized footprint do not qualify as a non-regulated activity and require new authorization from the USACE. The state’s maintenance provisions may differ from the USACE and a project may require reporting and written authorization from the state.

Non-tidal wetlands: A non-tidal wetland is a wetland that is not subject to the ebb and flow of tidal waters. Non-tidal wetlands contiguous to tidal waters are located landward of the HTL (*i.e.*, spring HTL). Also see the definition of “Waters of the U.S.” below.

Oil or natural gas pipeline: Any pipe or pipeline for the transportation of any form of oil or natural gas, including products derived from oil or natural gas, such as gasoline, jet fuel, diesel fuel, heating oil, petrochemical feedstocks, waxes, lubricating oils, and asphalt.

Ordinary High Water Mark (OHWM): A line on the shore established by the fluctuations of water and indicated by physical characteristics, or by other appropriate means that consider the characteristics of the surrounding areas. See 33 CFR 328.3(e).

Overall project: The overall project, for purposes of these GPs, includes all regulated activities that are reasonably related and necessary to accomplish the project purpose. Also see the definition of “single and complete linear project.”

Perennial stream: A perennial stream has flowing water year-round during a typical year. The water table is located above the stream bed for most of the year. Groundwater is the primary source of water for stream flow. Runoff from rainfall is a supplemental source of water for stream flow.

Practicable: Available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes.

Permanent impacts: Permanent impacts means waters of the U.S. that are permanently affected by filling, flooding, excavation, or drainage because of the regulated activity. Permanent impacts include permanent discharges of dredged or fill material that change an aquatic area to dry land, increase the bottom elevation of a waterbody, or change the use of a waterbody.

Preconstruction notification (PCN): A request submitted by the applicant to the USACE for confirmation that a particular activity is authorized by these GPs. The request may be a permit application, letter, or similar document that includes information about the proposed work and its anticipated environmental effects. Preconstruction notification may be required by the terms and conditions of these GPs. A PCN may be voluntarily submitted in cases where PCN is not required and the applicant wants confirmation that the activity is authorized under these GPs.

Preservation: The removal of a threat to, or preventing the decline of, aquatic resources by an action in or near those aquatic resources. This term includes activities commonly associated with the protection and maintenance of aquatic resources through the implementation of appropriate legal and physical mechanisms. Preservation does not result in a gain of aquatic resource area or functions (33 CFR 332.2).

Real estate subdivision: Includes circumstances where a landowner or developer divides a tract of land into smaller parcels for the purpose of selling, conveying, transferring, leasing, or

developing said parcels. This would include the entire area of a residential, commercial or other real estate subdivision, including all parcels and parts thereof

Reconfiguration zone: A USACE authorized area in which permittees may rearrange pile-supported structures and floats without additional authorizations. A reconfiguration zone does not grant exclusive privileges to an area or an increase in structure or float area.

Re-establishment: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/ historic functions to a former aquatic resource. Re-establishment results in rebuilding a former aquatic resource and results in again in aquatic resource area and functions (33 CFR 332.2).

Reference Site: Reference sites - Compensatory restoration, rehabilitation, and creation mitigation projects should seek to duplicate the features of reference aquatic resources or enhance connectivity with adjacent natural upland and aquatic resource landscape elements. Performance standards related to reference sites are encouraged. Mitigation project sites must be selected based on their ability to be, and continue to be, resistant to disturbance from the surrounding landscape, by locating them adjacent to refuges, buffers, green spaces, and other preserved natural elements of the landscape. In general, aquatic resource mitigation projects must be designed to be self-sustaining, natural systems within the landscape and climate in which they are located, with little or no ongoing maintenance and/or hydrologic manipulation.

Rehabilitation: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of repairing natural/historic functions to a degraded aquatic resource. Rehabilitation results in a gain in aquatic resource function, but does not result in a gain in aquatic resource area (33 CFR 332.2).

Restoration: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former or degraded aquatic resource. For the purpose of tracking net gains in aquatic resource area, restoration is divided into two categories: re-establishment and rehabilitation (33 CFR 332.2).

Riffle and pool complex: Riffle and pool complexes are special aquatic sites under the 404(b)(1) Guidelines. Riffle and pool complexes sometimes characterize steep gradient sections of streams. Such stream sections are recognizable by their hydraulic characteristics. The rapid movement of water over a coarse substrate in riffles results in a rough flow, a turbulent surface, and high dissolved oxygen levels in the water. Pools are deeper areas associated with riffles. A slower stream velocity, a streaming flow, a smooth surface, and a finer substrate characterize pools.

Sedimentation: Sedimentation is defined as the process of deposition of a solid material from a state of suspension. Deposited sediments may accumulate and have temporal impacts to aquatic resource areas. See secondary effects definition above. For the purposes of this document, "greater than minimal sedimentation" is generally not considered to occur when using proper erosion controls (GC 25) or when sedimentation is considered "de minimis" 33 CFR 323.2(d)(5).

Single and complete linear project: A linear project is a project constructed for the purpose of getting people, goods, or services from a point of origin to a terminal point, which often involves multiple crossings of one or more waterbodies at separate and distant locations. The term "single and complete project" is defined as that portion of the total linear project proposed or accomplished by one owner/ developer or partnership or other association of owners/developers that includes all crossings of a single water of the U.S. (i.e., a single waterbody) at a specific location. For linear projects crossing a single or multiple waterbodies several times at separate and distant locations, each crossing is considered a single and complete project for the purposes of these GPs. However, individual channels in a braided stream or river, or individual arms of a large, irregularly shaped wetland or lake, etc., are not separate waterbodies, and crossings of such features cannot be considered separately.

Single and complete non-linear project: For non-linear projects, the term "single and complete project" is defined at 33 CFR 330.2(i) as the total project proposed or accomplished by one owner/developer or partnership or other association of owners/developers. A single and complete

non-linear project must have independent utility (see the definition of “independent utility”). Single and complete non-linear projects may not be “piecemealed” to avoid the limits in a GP authorization.

Special aquatic sites (SAS): These include inland and saltmarsh wetlands, mud flats, vegetated shallows, sanctuaries and refuges, coral reefs, and riffle and pool complexes. These are defined at 40 CFR 230.3 and listed in 40 CFR 230 Subpart E.

Streambed: The stream substrate between the OHW marks on each side. The substrate may be bedrock or inorganic particles that range in size from clay to boulders. Wetlands contiguous to the streambed, but outside of the OHW marks, are not considered part of the streambed.

Stream channelization: The manipulation of a stream’s course, condition, capacity, or location that causes more than minimal interruption of normal stream processes. A channelized stream remains a water of the U.S.

Structure: An object that is arranged in a definite pattern of organization. Examples of structures include, without limitation, any pier, boat dock, boat ramp, wharf, dolphin, weir, boom, breakwater, bulkhead, revetment, riprap, jetty, artificial island, artificial reef, permanent mooring structure, power transmission line, permanently moored floating vessel, piling, aid to navigation, or any other manmade obstacle or obstruction.

Temporal loss: The time lag between the loss of aquatic resource functions caused by the permitted impacts and the replacement of aquatic resource functions at the compensatory mitigation site(s) (33 CFR 332.2).

Temporary impacts: Temporary impacts include, but are not limited to, jurisdictional waters that are temporarily filled, flooded, excavated, or drained because of the regulated activity. Impacts are considered temporary when they are removed immediately upon completion of the activity. Note: An impact is considered temporary when the aquatic resource is restored to pre-project conditions, but effects to archaeological and/or cultural resources may be permanent in duration.

Tidal wetlands: A wetland that is subject to the ebb and flow of the tide. See the definition of “Waters of the U.S.” below.

Tide gates: Structures such as duckbills, flap gates, manual and self-regulating tide gates, etc. that regulate or prevent upstream tidal flows.

Turbidity: A measure of the level of particles such as sediment, plankton, or organic by-products, in a body of water. As the turbidity of water increases, it becomes denser and less clear due to a higher concentration of these light-blocking particles. Suspended solids are more likely to carry toxic chemicals, and can also negatively affect aquatic organisms, water temperature, and dissolved oxygen levels.

Utility line: Any pipe or pipeline for the transportation of any gaseous, liquid, liquescent, or slurry substance, for any purpose that is not oil, natural gas, or petrochemicals. A utility line also includes any cable, line, or wire for the transmission for any purpose of electrical energy, telephone, and telegraph messages, and radio and television communication. The term ‘utility line’ does not include activities that drain a water of the U.S., such as drainage tile or French drains, but it does apply to pipes conveying drainage from another area.

Vegetated shallows: Permanently inundated areas that under normal circumstances support communities of rooted aquatic vegetation, such as eelgrass (*Zostera marina*) and widgeon grass (*Ruppia maritima*) in marine systems (does not include salt marsh) as well as a number of freshwater species in rivers and lakes. These are a type of SAS defined at 40 CFR 230.43. Vegetated shallows are commonly referred to as submerged aquatic vegetation or SAV. Vegetated shallow survey guidance is located at www.nae.usace.army.mil/missions/regulatory/jurisdiction-and-wetlands. Maps of vegetated shallows in Massachusetts are located at www.nae.usace.army.mil/missions/regulatory/state-general-permits/massachusetts-general-permit.

Vernal pools: For the purposes of these GPs, vernal pools are depressional wetland basins that typically dry up in most years and may contain inlets or outlets, typically of intermittent flow. Vernal pools range in both size and depth depending upon landscape position and parent material(s). In

most years, vernal pools support one or more of the following obligate indicator species: wood frog, spotted salamander, blue-spotted salamander, marbled salamander, Jefferson's salamander and fairy shrimp. However, they should preclude sustainable populations of predatory fish.

Water diversions: Water diversions are activities such as bypass pumping (e.g., "dam and pump") or water withdrawals. Temporary flume pipes, culverts or cofferdams where normal flows are maintained within the stream boundary's confines aren't water diversions. "Normal flows" are defined as no change in flow from pre-project conditions.

Waters of the United States (U.S.) These waterbodies are the waters where permits are required for the discharge of dredged or fill material pursuant to §404 of the CWA. These waters include but are not limited to navigable waters of the U.S. and tidal wetlands and include many non-tidal wetlands and other waterbodies. See definitions for navigable waters of the U.S., tidal wetlands, waterbody, and non-tidal wetlands. (33 CFR 328)

Waterbody: Examples of "waterbodies" include oceans, coastal waters, rivers, streams, ditches, lakes, ponds, and wetlands. If a wetland is adjacent to a waterbody determined to be a water of the U.S., that waterbody and any adjacent wetlands are considered together as a single aquatic unit (see 33 CFR 328.4(c)(2)).

Weir: A barrier across a river designed to alter the flow characteristics. In most cases, weirs take the form of a barrier, smaller than most conventional dams, across a river that causes water to pool behind the structure and allows water to flow over the top. Weirs are commonly used to alter the flow regime of a river, prevent flooding, measure discharge and help render a river navigable.

Wetland: Wetlands are areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas. The Corps of Engineers Wetlands Delineation Manual in conjunction with the associated regional supplement should be used to determine if a wetland is present and delineate wetland boundaries.

Acronyms

BMPs	Best Management Practices
BUAR	Massachusetts Board of Underwater Archaeological Resources
CWA	Clean Water Act
CZM	Coastal Zone Management
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
EFH	Essential Fish Habitat
FNP	Federal Navigation Project
GC	General Condition
GP	General Permit
HTL	High Tide Line
IP	Individual Permit
LID	Low impact development
MassDEP	Massachusetts Department of Environmental Protection
MA DMF	Massachusetts Division of Marine Fisheries
MHC	Massachusetts Historical Commission
MHW	Mean High Water
MLLW	Mean Lower Low Water
MLW	Mean Low Water
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service
OHW	Ordinary High Water Mark
PCN	Preconstruction Notification
SAS	Special Aquatic Sites
SF	Square Feet
SV	Self-Verification
SHPO	State Historic Preservation Officer
THPO	Tribal Historic Preservation Officer
USFWS	U.S. Fish and Wildlife Service
USCG	U.S. Coast Guard
USFS	U.S. Forest Service
USGS	U.S. Geological Service
WQC	Water Quality Certification

Appendix A: Guidance for NHPA Section 106 Compliance in Massachusetts

1. Purpose & Applicability

Section 106 of the National Historic Preservation Act of 1966, as amended (NHPA) (54 U.S.C § 306108), requires Federal agencies to take into account the effects of their undertakings on Historic Properties and afford the Advisory Council on Historic Preservation a reasonable opportunity to comment on such undertakings. Therefore, in order for an activity to be eligible for authorization under the 2023 Massachusetts General Permit, the USACE must consider the effect the activity may have on historic properties. Historic properties may include, but are not limited to, historic districts, archaeological districts, sites, buildings, structures, objects, sacred sites, traditional cultural places, and traditional cultural landscapes that are included in, or eligible for inclusion in, the National Register of Historic Places (NRHP).

This guidance applies to projects that require authorization under Section 404 of the Clean Water Act (33 U.S.C. § 1344) and/or Section 10 of the Rivers and Harbors Act (33 U.S.C. §403) and will assist applicants when evaluating and documenting the presence of historic properties within or near their project site(s). The prospective applicant will evaluate their proposed project using the criteria below to determine if their project has the potential to affect historic properties and if so, whether or not historic properties are present or are likely to be present. All activities authorized under these GPs shall follow the terms outlined in General Condition 14: Historic Properties and General Condition 6: Tribal Rights & Burial Sites. Prospective applicants shall complete their due diligence according to the procedures below for their application to be deemed complete.

2. No Potential to Affect Historic Properties

Certain activities do not have the potential to cause effects on historic properties, assuming such historic properties were present, based on the nature of the activity and site-specific conditions. Therefore, these activities **do not** require historic property identification efforts or notification of the SHPO, THPOs, and/or BUAR under Section 106. The USACE has determined the following activities within the stated parameters have no potential to affect historic properties:

General Permit	Activity Parameters
1	Temporary buoys, markers and similar structures that are placed during winter events on ice and removed before spring thaw.
2	Repair or rehabilitation of structures that are less than 45 years in age. Any temporary structures or fills or work necessary to complete repairs or rehabilitation must not result in any ground disturbance.
3	Maintenance and replacement of moorings that are less than 45 years in age.
6	Maintenance, repair, replacement, or removal of utility lines, oil or natural gas pipelines, outfall or intake structures, and/or appurtenant features that are less than 45 years in age when all access, staging, and ground disturbance is strictly limited to previously disturbed areas (including any previous ground disturbance). Replacement must be in kind or smaller in size. Installation of tide gates on outfall structures that are less than 45 years in age.
7	Maintenance dredging of previously dredged areas where dredging does not extend beyond the original bottom elevations.

	Disposal of dredged material at an existing established and USACE-approved confined aquatic disposal cell. Beach nourishment in ongoing existing nourishment areas.
11	Fish and wildlife harvesting and attraction devices and activities.
13	Cleanup of hazardous and toxic waste materials, including contaminated sediments, that are less than 45 years in age.
16	Removal of land-based and water-based renewable energy generation facilities and hydropower projects that are less than 45 years in age.
18	Installation of buoys, floats, racks, trays, nets, lines, tubes, containers, and other structures for previously authorized by the USACE and ongoing aquaculture activities. Discharges of dredged or fill material into tidal or non-tidal waters necessary for shellfish seeding, rearing, cultivating, transplanting, and harvesting activities for previously authorized and ongoing aquaculture activities.
20	Maintenance activities for existing living shorelines <u>excluding</u> maintenance activities that require new ground disturbance such as excavation or re-sloping of the bank/shoreline.
22	Reshaping or maintenance of existing drainage ditches less than 45 years in age <u>excluding</u> ditch enlargement.
23	Placement of temporary and removable linear transportation and wetland/stream crossings that have no ground disturbance prior to placement, during placement, and during removal (i.e., placed on the surface and subsequently removed within one year of placement).
24	Placement of temporary and removable crossings and cofferdams that have no ground disturbance prior to placement, during placement, and during removal (i.e., placed on the surface and subsequently removed within one year of placement).
25	Emergency repair of existing structures and/or fills less than 45 years in age.

3. Historic Property Identification

If the activity does not fit under the criteria above, the following historic property identification efforts must be completed to demonstrate compliance with Section 106 of the NHPA. This includes documenting previously identified and unidentified historic properties in the project area.

a. Previously Identified Historic Properties: The prospective applicant shall document if previously identified historic properties are present on or adjacent to the project site by notifying the Massachusetts Historical Commission (MHC) and the Massachusetts Board of Underwater Archaeological Resources (BUAR), as appropriate, of the proposed project. The MHC and BUAR will check their records for the presence of any previously identified historic properties. The following outlines how prospective applicants should notify the MHC and BUAR.

i. The prospective applicant will notify the SHPO and BUAR to identify any previously recorded cultural resources. Applicants shall mail a completed Project Notification Form¹⁸, project narrative, location (coordinates), plans, soil maps, and information on known cultural resources to the MHC. The MHC does not accept submissions via email. Applicants shall email or mail this information to the BUAR when the activity is located in lakes, ponds, rivers, and/or navigable waters in MA. Emailed file attachments should be <10MB. Any files >10MB shall be delivered via a file exchange system or the hard copy documents shall be mailed. Preferred contact information is listed below.

ii. **When sending this information, applicants must also document proof of receipt OR proof the information was delivered.** Proof of receipt constitutes a certified mail receipt, read email receipt, or other mail/email/online tracking services that document the information has reached the intended recipient(s). Proof the information was delivered constitutes a certificate of mailing, email delivery receipt, or other mail/email/online services that document the information was sent at a particular time. When using proof of delivery such (e.g., certificate of mailing), applicants should add 5 days to the 30-day notification period so the mail has time to reach its intended recipient. When using proof of receipt, the applicant may begin the 30-day notification period from the date received by the intended recipient.

iii. When mailing or emailing the application materials, applicants should include the following statement: "Please send responses to this notification directly to the USACE via email: cenae-r-ma@usace.army.mil or address regular mail responses to: Regulatory Division, U.S. Army Corps of Engineers, New England District, 696 Virginia Road, Concord, Massachusetts 01742-2751." Email responses to the USACE are strongly preferred. The SHPO and BUAR will contact the USACE and cc the applicant(s) within 30 days of receiving the notification if their records indicate that historic properties are located in the project vicinity, and if additional review and/or surveys are recommended to ensure NHPA compliance. If the SHPO and/or BUAR do not respond within 30 days of receiving the notification, it is presumed that no known historic properties are present.

b. Previously Unidentified Historic Properties: The prospective applicant shall evaluate the project site and determine the sensitivity for the presence of historic properties if the project site has not been previously surveyed for cultural resources within the last 10 years. If the sensitivity is determined to be moderate to high, an intensive archaeological and/or architectural survey is required to investigate the potential presence of historic properties. The individual conducting this survey must meet the Secretary of the Interior's Standards for Professional Qualifications (48 FR 44738-44739) in the discipline relevant to a particular resource type. For example, archeologists should not document and evaluate buildings or structures and architectural historians should not document and evaluate archaeological sites. The identification and qualifications for those participating in any survey and evaluation of resources should be included with the survey results. The criteria listed below are indicators of low sensitivity for the presence of historic properties for consideration when determining if an archaeological or architectural survey is needed.

Low sensitivity indicators:

- Previous archaeological and/or architectural survey within the last 10 years with negative results.
- In a location created in modern times (i.e., built on fill placed within the last 45 years or within an area excavated within the last 45 years).
- USACE has reviewed the project description and determined that a survey is not warranted based on the proposed activity and its location.

State survey guidance and standards are provided in the September 1995 Historic Properties Survey Manual Guidelines for the Identification of Historical and Archaeological Resources in Massachusetts available. State survey guidance and standards for underwater surveys are provided

¹⁸ <https://www.sec.state.ma.us/mhc/mhcform/formidx.htm>

in the Board of Underwater Archaeological Resources' 2022 Policy Guidance on Archaeological Investigations and Related Survey Standards for the Discovery of Underwater Archaeological Resources. This guidance is available on the NAE Regulatory website: <https://www.nae.usace.army.mil/Missions/Regulatory/State-General-Permits/Massachusetts-General-Permit/>.

Please note, a negative result from MHC and/or BUAR does not necessarily mean no historic properties are present. Often proposed project sites have not been previously subject to a survey, so historic properties which may be present have not been previously recorded.

4. Tribal Coordination

Prospective applicants shall mail the Project Notification Form, project narrative, location (coordinates), plans with locus map, soil maps, and information on cultural resources to the Wampanoag Tribe of Gay Head (Aquinnah), Mashpee Wampanoag Tribe, Narragansett Indian Tribe, and/or Stockbridge-Munsee Community Band of Mohican Indians with interests in the project location. Preferred tribal contact information, including their respective areas of interest, can be found below. Applicants shall follow the same procedures as identified in Section 3(a)i-iii above when notifying Tribes of the proposed activity. Applicants shall provide the USACE with any responses received from the tribe(s) with their PCN application. If a tribe does not respond within 30 days of receiving the notification, the applicant shall provide USACE with all documentation of tribal outreach with their SV or PCN submission (e.g., emails, letters, phone call log, etc.). If the tribe indicates the presence of a previously unrecorded cultural resource, including a traditional cultural property (TCP) or traditional cultural landscape (TCL), a PCN is required.

5. Effect Determination

The project may have the potential to affect historic properties and/or tribal resources if 1) notification recipients respond within 30 calendar days of notification with concerns, 2) historic properties eligible for listing, or potentially eligible for listing in the NRHP, are present or 3) tribal resources are known to be present. The USACE may need to further review the project to confirm potential effects to historic properties and/or tribal resources. A PCN is required for any activity that may affect a historic property.

The USACE may determine the project will have 'no effect' on historic properties (i.e., no historic properties affected) when procedures outlined in Section 3 above are followed and no cultural resources are identified. Similarly, if historic properties are identified and will be completely avoided, the USACE may determine 'no effect.'

6. Contact Information:

Massachusetts Historical Commission

The Massachusetts Archives Building
220 Morrissey Boulevard
Boston, Massachusetts 02125

No email. Applicants or their representatives must send project information via certified mail and submit the certified mail receipt to the USACE or send via regular mail and submit proof of delivery.

Area of concern: All of Massachusetts.

Massachusetts Board of Underwater Archaeological Resources (BUAR)

100 Cambridge Street, Suite 900
Boston, Massachusetts 02114
Email: david.s.robinson@mass.gov

Applicants or their representatives must send project information via email (***strongly preferred***) or regular mail and provide proof of receipt or proof of delivery.

Area of concern: All waterbodies in Massachusetts.

Wampanoag Tribe of Gay Head (Aquinnah)

Bettina Washington
Tribal Historic Preservation Officer (THPO)
20 Black Brook Road
Aquinnah, Massachusetts 02535
Email: thpo@wampanoagtribe-nsn.gov

Applicants or their representative must send project information via email (***preferred***) or regular mail and provide proof of receipt or proof of delivery.

Area of concern: All of Massachusetts.

Mashpee Wampanoag Tribe

ATTN: David Weeden
Tribal Historic Preservation Officer (THPO)
483 Great Neck Road South
Mashpee, Massachusetts 02649
Email: 106review@mwtribe-nsn.gov
Cc: David.weeden@mwtribe-nsn.gov

Applicants or their representative must send project information via email (***preferred***) or regular mail and provide proof of receipt or proof of delivery.

Area of concern: All of Massachusetts.

Narragansett Indian Tribe

ATTN: John Brown
Tribal Historic Preservation Officer (THPO)
Narragansett Indian Longhouse
4425 South County Trail
Charlestown, Rhode Island 02813
Email: tashtesook@aol.com

Applicants or their representative must send project information via email (***preferred***) or regular mail and provide proof of receipt or proof of delivery.

Area of concern: Massachusetts east of the Connecticut River.

Stockbridge-Munsee Community Band of Mohican Indians

ATTN: Jeff Bendremer
Tribal Historic Preservation Manager
Stockbridge-Munsee Community
Tribal Historic Preservation Extension office
86 Spring Street
Williamstown, Massachusetts 01267
Email: thpo@mohican-nsn.gov

Applicants or their representative must send project information via email (***preferred***) or regular mail and provide proof of receipt or proof of delivery.

Area of concern: West of the Connecticut River and Northfield, Montague, Miller's Falls, Turner's Falls, Sunderland, Amherst, Hadley, South Hadley, Chicopee, Springfield and Longmeadow.

APPENDIX B PRE-CONSTRUCTION NOTIFICATION

U.S. Army Corps of Engineers (USACE), New England District (NAE)

PRE-CONSTRUCTION NOTIFICATION (PCN)**DATA REQUIRED BY THE PRIVACY ACT OF 1974**

Authority	Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Regulatory Programs of the Corps of Engineers; Final Rule 33 CFR 320-332.
Principal Purpose	The information provided will be used in evaluating activities under Pre-Construction Notification procedures within New England.
Routine Uses	This information may be shared with other federal, state, and local government agencies during the application review process. Submission of requested information is voluntary. However, if information is not provided the PCN application cannot be fully evaluated nor can USACE render a permit decision.
Disclosure	
Instructions	The applicant must complete ALL required sections of this document before their submission to USACE. The PCN submission to USACE shall include one set of drawings which show the location and character of the proposed activity, statements that address each required field below, and documentation that supports each field (e.g., emails, letters, description/narrative, phone calls, surveys, reports, etc.). Electronic submissions to the following address are strongly preferred: cenae-r-ma@usace.army.mil . The email subject line shall contain the following: General Permit #, PCN, City/Town, and date submitted. An application that is not completed in full will be returned.

(ITEMS 1 THRU 4 TO BE FILLED BY USACE)

1. APPLICATION NO.	2. FIELD OFFICE CODE	3. DATE RECEIVED	4. DATE APPLICATION COMPLETE
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(ITEMS BELOW TO BE FILLED BY APPLICANT)

5. APPLICANT'S NAME First - Middle - Last - Company - E-mail Address -	8. AUTHORIZED AGENT'S NAME AND TITLE (<i>agent is not required</i>) First - Middle - Last - Company - E-mail Address -
6. APPLICANT'S ADDRESS: Address- City - State - Zip - Country -	9. AGENT'S ADDRESS: Address- City - State - Zip - Country -
7. APPLICANT'S PHONE NOs. with AREA CODE a. Residence b. Business c. Fax d. Mobile	10. AGENT'S PHONE NOs. with AREA CODE a. Residence b. Business c. Fax d. Mobile

STATEMENT OF AUTHORIZATION

11. I hereby authorize, _____ to act on my behalf as my agent in the processing of this general permit PCN application and to furnish, upon request, supplemental information in support of this general permit PCN application.

SIGNATURE OF APPLICANT

DATE

NAME, LOCATION, AND DESCRIPTION OF PROJECT OR ACTIVITY

12. PROJECT NAME or TITLE (*see instructions*)

13. NAME OF WATERBODY, IF KNOWN (*if applicable*)

14. PROPOSED ACTIVITY STREET ADDRESS (*if applicable*)

15. LOCATION OF PROPOSED ACTIVITY (*see instructions*)

Latitude: °N Longitude: °W

City: State: Zip:

16. OTHER LOCATION DESCRIPTIONS, IF KNOWN (*see instructions*)

State Tax Parcel ID:

Municipality:

Section:

Township:

Range:

17. DIRECTIONS TO THE SITE.

18. IDENTIFY THE SPECIFIC GENERAL PERMIT(S) YOU PROPOSE TO USE:

19. DESCRIPTION OF PROPOSED GENERAL PERMIT ACTIVITY (*see instructions*)20. DESCRIPTION OF PROPOSED MITIGATION MEASURES (*see instructions*)21. PURPOSE OF GENERAL PERMIT ACTIVITY (*Describe the reason or purpose of the project, see instructions*)22. Quantity of Wetlands, Streams, or Other Types of Waters Directly Affected by Proposed General Permit Activity (*see instructions*)

Area (square feet)	Length (linear feet)	Volume (cubic yards)	Duration	Purpose

Each PCN must include a delineation of wetlands, other special aquatic sites, and other waters, such as lakes and ponds, and perennial, intermittent, and ephemeral streams, on the project site.

23. List any other GP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project on any related activity (*see instructions*)24. If the proposed activity will result in the loss of aquatic resources that exceed those identified in the New England District Compensatory Mitigation Thresholds, explain how the compensatory mitigation requirement will be satisfied. (*see instructions*)

25. Is Any Portion of the General Permit Activity Already Complete? <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, describe the completed work:			
26. List the name(s) of any species listed as endangered or threatened under the Endangered Species Act that might be affected by the proposed GP activity or utilize the designated critical habitat that might be affected by the proposed GP activity. (<i>see instructions</i>)			
27. List any historic properties that have the potential to be affected by the proposed GP activity or include a vicinity map indicating the location of the historic property or properties. Attach relevant project information, along with any responses received from project notifications to this submittal. (<i>see instructions</i>)			
28. For a proposed GP activity that will occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status, identify the Wild and Scenic River or the "study river":			
29. If the proposed GP activity also requires permission from the USACE pursuant to 33 U.S.C. 408 because it will alter or temporarily or permanently occupy or use a U.S. Army Corps of Engineers federally authorized civil works project, have you submitted a written request for section 408 permission from the USACE district having jurisdiction over that project? <input type="checkbox"/> Yes <input type="checkbox"/> No If "yes", please provide the date your request was submitted to the USACE District:			
30. Does the activity require a 401 Water Quality Certification (WQC)? If so, specify the type of 401 WQC that is required (general or individual). In cases where an individual 401 WQC is required, provide the date the 401 WQC certification request was submitted to the certifying authority and their contact information.			
31. If the terms of the GP(s) you want to use require additional information to be included in the PCN (i.e. sampling and analysis plan), please include that information in this space or provide it on an additional sheet of paper marked Block 30. (<i>see instructions</i>)			
32. I certify that the information in this pre-construction notification is complete and accurate. I further certify that I possess the authority to undertake the work described herein or am acting as the duly authorized agent of the applicant.			
_____ SIGNATURE OF APPLICANT		_____ DATE	
_____ SIGNATURE OF AGENT		_____ DATE	
The Pre-Construction Notification must be signed by the person who desires to undertake the proposed activity (applicant) and, if the statement in block 11 has been filled out and signed, the authorized agent. 18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals, or covers up any trick, scheme, or disguises a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statements or entry, shall be fined not more than \$10,000 or imprisoned not more than five years or both.			

**Instructions for Preparing a
Department of the Army
General Permit (GP) Pre-Construction Notification (PCN)**

Blocks 1 through 4. To be completed by the U.S. Army Corps of Engineers.

Block 5. Applicant' Name. Enter the name and the e-mail address of the responsible party or parties. If the responsible party is an agency, company, corporation, or other organization, indicate the name of the organization and responsible officer and title. If more than one party is associated with the PCN, please attach a sheet of paper with the necessary information marked Block 5.

Block 6. Address of Applicant. Please provide the full address of the party or parties responsible for the PCN. If more space is needed, attach an extra sheet of paper marked Block 6.

Block 7. Applicant Telephone Number(s). Please provide the telephone number where you can usually be reached during normal business hours.

Blocks 8 through 11. To be completed, if you choose to have an agent.

Block 8. Authorized Agent's Name and Title. Indicate name of individual or agency, designated by you, to represent you in this process. An agent can be an attorney, builder, contractor, engineer, consultant, or any other person or organization. Note: An agent is not required.

Blocks 9 and 10. Agent's Address and Telephone Number. Please provide the complete mailing address of the agent, along with the telephone number where they can be reached during normal business hours.

Block 11. Statement of Authorization. To be completed by the applicant, if an agent is to be employed.

Block 12. Proposed General Permit Activity Name or Title. Please provide a name identifying the proposed GP activity, e.g., Windward Marina, Rolling Hills Subdivision, or Smith Commercial Center.

Block 13. Name of Waterbody. Please provide the name (if it has a name) of any stream, lake, marsh, or other waterway to be directly impacted by the GP activity. If it is a minor (no name) stream, identify the waterbody the minor stream enters.

Block 14. Proposed Activity Street Address. If the proposed GP activity is located at a site having a street address (not a box number), enter it in Block 14.

Block 15. Location of Proposed Activity. Enter the latitude and longitude of where the proposed GP activity is located. Indicate whether the project location provided is the center of the project or whether the project location is provided as the latitude and longitude for each of the "corners" of the project area requiring evaluation. If there are multiple sites, please list the latitude and longitude of each site (center or corners) on a separate sheet of paper and mark as Block 15.

Block 16. Other Location Descriptions. If available, provide the Tax Parcel Identification number of the site, Section, Township, and Range of the site (if known), and / or local Municipality where the site is located.

Block 17. Directions to the Site. Provide directions to the site from a known location or landmark. Include highway and street numbers as well as names. Also provide distances from known locations and any other information that would assist in locating the site. You may also provide a description of the location of the proposed GP activity, such as lot numbers, tract numbers, or you may choose to locate the proposed GP activity site from a known point (such as the right descending bank of Smith Creek, one mile downstream from the Highway 14 bridge). If a large river or stream, include the river mile of the proposed GP activity site if known. If there are multiple locations, please indicate directions to each location on a separate sheet of paper and mark as Block 17.

Block 18. Identify the Specific General Permit(s) You Propose to Use. List the number(s) of the General Permit(s) you want to use to authorize the proposed activity (e.g., GP 4).

Block 19. Description of the Proposed General Permit Activity. Describe the proposed GP activity, including the direct and indirect adverse environmental effects of the proposed activity. The description of the proposed activity should be sufficiently detailed for USACE to determine that the adverse environmental effects of the activity will be no more than minimal. Identify the materials to be used in construction, as well as the methods by which the work is to be done.

Provide drawings to show that the proposed GP activity complies with the terms of the applicable GP(s). Drawings should contain sufficient detail to provide an illustrative description of the proposed GP activity, but do not need to be detailed engineering plans. The written descriptions and illustrations are an important part of the application. Please describe, in detail, what you wish to do. If more space is needed, attach an extra sheet of paper marked Block 19.

Block 20: Description of Proposed Mitigation Measures. Describe any proposed mitigation measures intended to reduce the adverse environmental effects caused by the proposed GP activity. The description of any proposed mitigation measures should be sufficiently detailed for USACE to determine how the measures would avoid and minimize adverse environmental effects. If adverse effects exceed the New England District compensatory mitigation thresholds, you must document how compensatory mitigation would be satisfied in Block 24.

Block 21. Purpose of General Permit Activity. Describe the purpose and need for the proposed GP activity. What will it be used for and why? Also include a brief description of any related activities associated with the proposed project. Provide the approximate dates you plan to begin and complete all work.

Block 22. Quantity of Wetlands, Streams, or Other Types of Waters Directly Affected by the Proposed General Permit Activity. For discharges of dredged or fill material into Waters of the U.S., provide the amount of wetlands, streams, or other types of waters filled, flooded, excavated, or drained by the proposed GP activity. For structures or work in Navigable Waters of the U.S. subject to Section 10 of the Rivers and Harbors Act of 1899, provide the amount of navigable waters filled, dredged, occupied by one or more structures (e.g., aids to navigation, mooring buoys) by the proposed GP activity. The area of impact includes the structures or fills with direct or indirect effects to waters of the U.S. The length of impact includes the length of a stream, including its banks, that are directly affected by the structures or fills. The duration of impact should be identified as temporary (xx days) or permanent. The impact purpose should briefly describe what structure or fill is responsible for the impact.

Block 23. Identify Any Other General Permit(s), Regional General Permit(s), or Individual Permit(s) Used to Authorize Any Part of Proposed Activity or Any Related Activity. List any other GP(s) or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity. For linear projects, list other separate and distant crossings of waters and wetlands authorized by these GPs that do not require PCNs. If more space is needed, attach an extra sheet of paper marked Block 23.

Block 24. Compensatory Mitigation Statement for Losses Greater Than the New England District Compensatory Mitigation Thresholds. New England District requires compensatory mitigation at a minimum one for one replacement ratio or greater for all aquatic resource losses that require a PCN and exceed the New England District Compensatory Mitigation Thresholds, unless USACE determines in writing that either some other form of mitigation is more environmentally appropriate or the adverse environmental effects of the proposed GP activity are no more than minimal without compensatory mitigation, and provides an activity specific waiver of this requirement. Describe the proposed compensatory mitigation for wetland losses greater than the New England District Compensatory Mitigation Thresholds or provide an explanation of why USACE should not require wetland compensatory mitigation for the proposed GP activity. If more space is needed, attach an extra sheet of paper marked Block 24.

Block 25. Is Any Portion of the General Permit Activity Already Complete? Describe any work that has already been completed for the GP activity.

Block 26. List the Name(s) of Any Species Listed As Endangered or Threatened under the Endangered Species Act that Might be Affected by the General Permit Activity. If you are not a federal agency, and if any listed species or designated critical habitat might be affected or is in the vicinity of the proposed GP activity, or if the proposed GP activity is located in designated critical habitat, list the name(s) of those endangered or threatened species that might be affected by the proposed GP activity or utilize the designated critical habitat that might be affected by the proposed GP activity. If you are a Federal agency, and the proposed GP activity requires a PCN, you must provide documentation demonstrating compliance with Section 7 of the Endangered Species Act.

Block 27. List Any Historic Properties that Have the Potential to be Affected by the General Permit Activity. If you are not a federal agency, and if any historic properties have the potential to be affected by the proposed GP activity, list the name(s) of those historic properties that have the potential to be affected by the proposed GP activity. Provide all relevant documentation about these historic properties in the PCN submittal. If you are a Federal agency, and the proposed GP activity requires a PCN, you must provide documentation demonstrating compliance with Section 106 of the National Historic Preservation Act.

Block 28. List the Wild and Scenic River or Congressionally Designated Study River if the General Permit Activity Would Occur in such a River. If the proposed GP activity will occur in a river in the National Wild and Scenic River System or in a river officially designated by Congress as a "study river" under the Wild and Scenic Rivers Act, provide the name of the river. For a list of Wild and Scenic Rivers and study rivers, please visit <http://www.rivers.gov/>

Block 29. General Permit Activities that also Require Permission from the USACE Under 33 U.S.C. 408. If the proposed GP activity also requires permission from the USACE under 33 U.S.C. 408 because it will temporarily or permanently alter, occupy, or use a USACE federal authorized civil works project, indicate whether you have submitted a written request for section 408 permission from the USACE district having jurisdiction over that project.

Block 30. 401 Water Quality Certification. As described above, specify if the activity requires a 401 WQC from the certifying authority.

Block 31. Other Information Required For General Permit Pre Construction Notifications. The terms of some of the General Permits include additional information requirements for preconstruction notifications:

- * Maintenance – information regarding the original design capacities and configurations of the outfalls, intakes, small impoundments, and canals.
- * Temporary Construction, Access, and Dewatering – a restoration plan showing how all temporary fills and structures will be removed and the area restored to pre-project conditions.
- * Repair of Uplands Damaged by Discrete Events – documentation, such as a recent topographic survey or photographs, to justify the extent of the proposed restoration.
- * Commercial Shellfish Aquaculture Activities – (1) a map showing the boundaries of the project area, with latitude and longitude coordinates for each corner of the project area; (2) the name(s) of the species that will be cultivated during the period this GP is in effect; (3) whether canopy predator nets will be used; (4) whether suspended cultivation techniques will be used; and (5) general water depths in the project area (a detailed survey is not required). Dredging – (1) a proposed sampling and analysis plan shall be provided to USACE for approval prior to its execution. Pre-application meetings are encouraged.
- * Beach Nourishment – sediment grain size should be determined for the length of the beach where nourishment is proposed. The frequency and locations of sediment sampling shall be sufficient to identify the sediment composition of the beach profile. This data shall be consolidated to generate a sediment gradation curve for each sampled transect. Each sampled transect should also be identified on the project plans (drawings).

If more space is needed, attach an extra sheet of paper marked Box 31.

Block 32. Signature of Applicant or Agent. The PCN must be signed by the person proposing to undertake the GP activity, and if applicable, the authorized party (agent) that prepared the PCN. The signature of the person proposing to undertake the GP activity shall be an affirmation that the party submitting the PCN possesses the requisite property rights to undertake the GP activity (including compliance with special conditions, mitigation, etc.).

DELINEATION OF WETLANDS, OTHER SPECIAL AQUATIC SITES, AND OTHER WATERS

Each PCN must include a delineation of wetlands, other special aquatic sites, and other waters, such as lakes and ponds, and perennial, intermittent, and ephemeral streams, on the project site. Wetland delineations must be prepared in accordance with the current wetland delineation manual and regional supplement published by the USACE. The permittee may ask the USACE to delineate the special aquatic sites and other waters on the project site, but there may be a delay if the USACE does the delineation, especially if the project site is large or contains many wetlands, other special aquatic sites, and other waters. The 60-day PCN review period will not start until a delineation has been completed.

DRAWINGS AND ILLUSTRATIONS

General Information.

Three types of illustrations are needed to properly depict the work to be undertaken. These illustrations or drawings are identified as a Vicinity Map, a Plan View or a Typical Cross Section Map. Identify each illustration with a figure or attachment number. For linear projects (e.g. roads, subsurface utility lines, etc.) gradient drawings should also be included. Please submit one copy of all drawings on 8½ x 11 inch plain white paper (electronic submissions preferred). Use the fewest number of sheets necessary for your drawings or illustrations. Each illustration should identify the project, the applicant, and the type of illustration (vicinity map, plan view, or cross section). While illustrations need not be professional (many small, private project illustrations are prepared by hand), they should be clear, accurate, and contain all necessary information.

ADDITIONAL INFORMATION AND REQUIREMENTS

For proposed GP activities that involve discharges into waters of the United States, water quality certification from the State, Tribe, or EPA must be obtained or waived. Some States, Tribes, or EPA have issued water quality certification for one or more GPs. Please check the New England District website to see if water quality certification has already been issued for the GP(s) you wish to use. For proposed GP activities in coastal states, state Coastal Zone Management Act consistency concurrence must be obtained, or a presumption of concurrence must occur. Some States have issued Coastal Zone Management Act consistency concurrences for one or more GPs. Please check the New England District website to see if Coastal Zone Management Act consistency concurrence has already been issued for the GP(s) you wish to use.

APPENDIX C SELF-VERIFICATION NOTIFICATION

U.S. Army Corps of Engineers (USACE)
SELF-VERIFICATION NOTIFICATION (SVN)

DATA REQUIRED BY THE PRIVACY ACT OF 1974

Authority	Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Regulatory Programs of the Corps of Engineers; Final Rule 33 CFR 320-332.
Principal Purpose	This information will be used in evaluating activities under Self-Verification procedures within Massachusetts.
Routine Uses	Routine uses will include: (1) Documenting compliance with the terms and conditions of the General Permit (GP) for activities that may require authorization pursuant to one or more of USACE's Regulatory authorities. (2) Records may be referred to other Federal, State, and local agencies for evaluation and enforcement purposes.
Disclosure	Failure to fully comply and abide by the GP terms and conditions prior to commencing work and after completion project may result in formal enforcement action, up to and including monetary penalties and/or legal action, pursuant to 33 CFR Part 326.
Instructions	The permittee must complete ALL required sections of this document before commencing USACE-regulated activities. A copy of this completed SVN must be kept on site during construction and be made available for review by USACE and other Federal, State, & Local regulatory authorities at any time. Within 30 days of initiating project construction, the permittee shall submit the completed SVN to USACE. The SVN shall be submitted to USACE as ONE signed document that includes project plans and documentation that supports each field (e.g., emails, letters, description, phone calls, surveys). Electronic submissions to the following address are strongly preferred: cenae-r-ma-sv@usace.army.mil . The email subject line shall contain the following: GP #, SVN, City/Town, and date submitted.

(ITEMS 1 THRU 3 TO BE FILLED BY USACE)

1. APPLICATION NO.	2. FIELD OFFICE CODE	3. DATE RECEIVED
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APPLICANT AND AGENT INFORMATION

4. APPLICANT'S NAME First - Middle - Last - Company - E-mail Address -	7. AGENT'S ADDRESS: First - Middle - Last - Company - E-mail Address -
5. APPLICANT'S ADDRESS: Address- City - State - Zip - Country -	8. AGENT'S ADDRESS: Address- City - State - Zip - Country -
6. APPLICANT'S PHONE NOs. w/AREA CODE a. Residence b. Business c. Fax	9. AGENTS PHONE NOs. w/AREA CODE a. Residence b. Business c. Fax

NAME, LOCATION, AND DESCRIPTION OF PROJECT SITE

10. PROJECT NAME OR TITLE	
11. FILE NUMBER(S) OF PREVIOUS USACE ACTIONS ON THE SITE (if applicable)	12. NAME OF WATERBODY
13. PROJECT COORDINATES (in decimal degrees) Latitude: °N Longitude: °W	14. PROJECT STREET ADDRESS (if applicable) Address City - State - Zip -

ACTIVITY TYPE, PROJECT IMPACTS, AVOIDANCE & MINIMIZATION

15. GENERAL PERMIT ACTIVITIES (CHECK ALL THAT APPLY) <div style="display: flex; flex-wrap: wrap;"> <div style="width: 50%;">1 _____</div> <div style="width: 50%;">6 _____</div> <div style="width: 50%;">11 _____</div> <div style="width: 50%;">16 _____</div> <div style="width: 50%;">21 _____</div> <div style="width: 50%;">2 _____</div> <div style="width: 50%;">7 _____</div> <div style="width: 50%;">12 _____</div> <div style="width: 50%;">17 _____</div> <div style="width: 50%;">22 _____</div> <div style="width: 50%;">3 _____</div> <div style="width: 50%;">8 _____</div> <div style="width: 50%;">13 _____</div> <div style="width: 50%;">18 _____</div> <div style="width: 50%;">23 _____</div> <div style="width: 50%;">4 _____</div> <div style="width: 50%;">9 _____</div> <div style="width: 50%;">14 _____</div> <div style="width: 50%;">19 _____</div> <div style="width: 50%;">24 _____</div> <div style="width: 50%;">5 _____</div> <div style="width: 50%;">10 _____</div> <div style="width: 50%;">15 _____</div> <div style="width: 50%;">20 _____</div> <div style="width: 50%;">25 _____</div> </div>	16. SUMMARY OF PROJECT IMPACTS (<i>see instructions</i>) <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th style="width: 25%;">Area (square feet)</th> <th style="width: 25%;">Length (linear feet)</th> <th style="width: 25%;">Volume (cubic yards)</th> <th style="width: 25%;">Duration</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>	Area (square feet)	Length (linear feet)	Volume (cubic yards)	Duration																								
Area (square feet)	Length (linear feet)	Volume (cubic yards)	Duration																										

17. PROJECT PLANS (BY CHECKING THE BOXES BELOW, YOU CERTIFY THESE ITEMS ARE COMPLETE) (*see instructions*)

- a. Plans shall at least contain the following: Vicinity Map, Plan View, and Typical Cross Section View of the proposed activity.
- b. All direct, indirect and secondary impacts from USACE regulated activities are shown on the project plans.
- c. The size of the impact area for each activity (acre, square feet, linear feet) are shown on the project plans.
- d. For discharges of fill material (§404), the volume of fill material is identified on the project plans.
- e. The duration of each impact, permanent or temporary (X days), is identified on the project plans.
- f. Do activities with permanent impacts result in the loss of waters? If so, this is identified on the project plans.
- g. All aquatic resources in the vicinity of the USACE regulated activities are delineated on the project plans.

18. AVOIDANCE & MINIMIZATION (BY CHECKING THE BOXES BELOW, YOU CERTIFY THESE CRITERIA ARE MET) (*see instructions*)

- a. The project has been designed to avoid and minimize impacts to aquatic resources.
- b. The footprint of activities in waters of the U.S. has been reduced to only what is necessary to achieve the overall project purpose.
- c. All practicable measures have been taken to avoid and minimize impacts to aquatic resources through construction techniques and site access (e.g., Best Management Practices, Time of Year Restrictions).
- d. All temporary impacts from USACE regulated activities will be restored upon completion of construction and the project area will be returned to pre-construction contours and conditions.

COMPLIANCE WITH FEDERAL REGULATIONS & SUPPLEMENTAL INFORMATION

19. DUE DILIGENCE (*see instructions*)

Complete the entries below to document compliance with the following Federal requirements. Construction may NOT begin if a PCN is/may be required, and you must contact USACE to determine permitting requirements. Documentation that demonstrates how the activity complies with each field below shall be submitted to the USACE as noted in the instructions block. See each General Condition (GC) in the GP for how to comply with each requirement.

- a. State Historic Preservation Officer
- b. Massachusetts BUAR
- c. Tribal Historic Preservation Officers
- d. Endangered Species Act - NOAA
- e. Endangered Species Act - USFWS
- f. Northern Long Eared Bat (ESA)
- g. Essential Fish Habitat
- h. Wild & Scenic Rivers
- i. 401 Water Quality Certification 401

401 WQC/OOC File Number:

OOC issued:

401 issued:

- j. Section 408 Permission
- k. Coastal Zone
- l. Construction Mats
- m. Time of Year Restrictions
- n. Vernal Pools
- o. Sediment & Erosion Controls
- p. Stream/Wetland Crossings

20. AQUACULTURE ACTIVITIES - GP 18 (*see instructions*)

- a. If required, an Aquaculture Certification from the Massachusetts Division of Marine Fisheries was obtained prior to commencing work.
- b. Coordination with the U.S. Coast Guard pursuant to Private Aids to Navigation has occurred prior to commencing work.
- c. If required, a MEPA Certificate was obtained from the Massachusetts Environmental Protection Agency prior to commencing work.
- d. The prospective permittee contacted local authorities (e.g. harbormaster, select board, shellfish constable) for authorization of their facility prior to commencing work.

21. ADDITIONAL INFORMATION/ATTACHMENTS (*see instructions*)

- a. The project plans are enclosed in this SVN submittal (see block 17).
- b. The activity funded through the Bipartisan Infrastructure Bill (also known as the Infrastructure Investment and Jobs Act).
- c. All required state, local and federal approvals were acquired prior to starting construction in USACE jurisdiction.
- d. After construction of the activity is completed, a complete Certificate of Compliance will be submitted to USACE.

22. IS THERE ANOTHER LEAD FEDERAL AGENCY:

YES NO

23. STATEMENT OF AUTHORIZATION (*see instructions*)

I certify that I possess the authority to undertake the work described herein or am acting as the duly authorized agent of the applicant.

SIGNATURE OF APPLICANT

DATE

SIGNATURE OF AGENT

DATE

24. SIGNATURES (*see instructions*)

I hereby certify that the information in this Self-Verification Notification is complete and accurate. As the applicant or their duly authorized agent, I certify the activity was completed in accordance with the terms and conditions of the GP. This includes all applicable terms, general conditions, and activity-specific GP criteria. I agree to allow the duly authorized representatives of the Corps of Engineers Regulatory Program and other regulatory or advisory agencies to enter upon the premises of the project site at reasonable times to evaluate inspect and photograph site conditions. This consent to enter the property is superior to, takes precedence over, and waives any communication to the contrary. For example, if the property is posted as "no trespassing" this consent specifically supersedes and waives that prohibition and grants permission to enter the property despite such posting.

SIGNATURE OF APPLICANT

DATE

SIGNATURE OF AGENT

DATE

18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals, or covers up any trick, scheme, or disguises a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statements or entry, shall be fined not more than \$10,000 or imprisoned not more than five years or both.

**Instructions for Preparing a
Department of the Army
General Permit (GP) Self-Verification**

Blocks 1 through 3. To be completed by the Corps of Engineers.

Block 4. Applicant' Name. Enter the name and the e-mail address of the responsible party or parties. If the responsible party is an agency, company, corporation, or other organization, indicate the name of the organization and responsible officer and title. If more than one party is associated with the self-verification, please attach a sheet of paper with the necessary information marked Block 4.

Block 5. Address of Applicant. Please provide the full address of the party or parties responsible for the self-verification. If more space is needed, attach an extra sheet of paper marked Block 5.

Block 6. Applicant Telephone Number(s). Please provide the telephone number where you can usually be reached during normal business hours.

Blocks 7 through 9. To be completed, if you choose to have an agent.

Block 7. Authorized Agent's Name and Title. Indicate name of individual or agency, designated by you, to represent you in this process. An agent can be an attorney, builder, contractor, engineer, consultant, or any other person or organization. Note: An agent is not required.

Blocks 8 and 9. Agent's Address and Telephone Number. Please provide the complete mailing address of the agent, along with the telephone number where they can be reached during normal business hours.

Block 10. Proposed General Permit Activity Name or Title. Please provide a name identifying the proposed GP activity, e.g., Windward Marina, Rolling Hills Subdivision, or Smith Commercial Center.

Block 11. File Number(s) of Previous USACE Actions on the Site Please provide any known USACE file number. If the activity does not have a known USACE file number, you may state N/A.

Block 12. Name of Waterbody. Please provide the name (if it has a name) of any stream, lake, marsh, or other waterway to be directly impacted by the GP activity. If it is a minor (no name) stream, identify the waterbody the minor stream enters.

Block 13. Proposed Activity Coordinates. Please enter the latitude and longitude of where the proposed GP activity is located. Indicate whether the project location provided is the center of the project or whether the project location is provided as the latitude and longitude for each of the "corners" of the project area. If there are multiple sites, please list the latitude and longitude of each site (center or corners) on a separate sheet of paper and mark as Block 13.

Block 14. Proposed Activity Street Address. If the proposed activity is located at a site having a street address (not a box number), enter it in Block 14.

Block 15. General Permit Activity Type. Please select all GP activity types that apply to the proposed activity. A list of GP activity types can be found in Section III of the GP.

Block 16. Summary of Project Impacts. Please provide ALL proposed impacts, both temporary and permanent in duration, that are located in Waters of the United States. The area of impact shall be provided in square feet (SF). When applicable, impacts that result in conversion of stream bank or shoreline must also be identified in linear feet (LF). Dredging or the discharge of dredged or fill material shall also include the volume, cubic yards (CY), of material removed from or placed into Waters of the U.S. If more entries are required, please attach a table matching the desired format in Block 16.

Block 17. Project Plans. Please verify that items a-g are included in the project plans. Three types of illustrations are necessary to properly depict the proposed work. These illustrations or drawings are identified as a Vicinity Map, a Plan View (Aerial view) and a Cross Section Map. For linear projects (e.g. roads, subsurface utility lines, etc.) gradient drawings (longitudinal profile) should also be included. Plans must accurately depict the existing conditions and all aspects of the proposed activity located in waters of the U.S. Please submit one copy of all drawings formatted to print on 8½ x 11 inch or 11 x 17 inch plain white paper. Use the fewest number of sheets necessary for your drawings or illustrations. Each illustration should identify the project, the applicant, and the type of illustration (vicinity map, plan view, or cross section). While illustrations need not be certified engineering sheets; they should be clear, accurate, contain all necessary information, and depict all proposed work. Each submission must also include a delineation of wetlands, other special aquatic sites, and other waters, such as lakes and ponds, and perennial, intermittent, and ephemeral streams, on the project site. Wetland delineations must be prepared in accordance with the current wetland delineation manual and regional supplement published by USACE.

Block 18. Avoidance & Minimization. Please verify that items a-d have been implemented for the proposed activity.

Block 19. Due Diligence. Please complete all the fields and submit documentation to USACE to demonstrate compliance with the above requirements. This Documentation may include emails, letters, meeting notes, phone call log, project narrative, project plans, a species list from the NOAA Section 7 Mapper, a completed copy of the IPAC determination keys, etc. Documentation should be limited to what is necessary to demonstrate how the proposed activity meets each requirement. Refer to the MA GP, Appendix A, for specific guidance on the identification of previously identified historic properties and previously unidentified historic properties. Endangered Species: *The applicant must be designated as the non-federal representative for the purposes of Section 7 consultation to select the Rangewide D-Key options. Otherwise, the applicant shall select the following option when IPAC indicates the NLEB is present: "The activity IS located within the NLEB Species Range (PCN Required)."

Block 20. Aquaculture Activities. Please verify that items a-d have been obtained or completed prior to commencing work in waters of the U.S.

Block 21. Additional Information/Attachments. Please verify that items a-d have been completed prior to commencing work in waters of the U.S.

Block 22. Lead Federal Agency. Please identify if there is another lead federal agency involved with the proposed activity. Enter the lead federal agency name (e.g., the Federal Emergency Management Agency, FEMA) and the agency's designated person of contact for the activity.

Block 23. Statement of Authorization. The applicant shall sign this section for all activities. If an agent is to be employed, the agent shall sign this section.

Block 24. Signatures. The SVN must be signed by the person proposing to undertake the GP activity, and if applicable, the authorized party (agent) that prepared the SVN. The signature of the person proposing to undertake the GP activity shall be an affirmation that the party submitting the SVN possesses the requisite property rights to undertake the GP activity.



**US Army Corps
of Engineers®**
New England District

APPENDIX D: PCN APPLICATION CHECKLIST

The following information shall be submitted for all PCNs for USACE to properly evaluate your application. Some applications may require more information and this checklist is offered as a tool to assist applicants with submitting a complete application.

SECTION 1: GENERAL APPLICATION INFORMATION

1. ☐ Complete the Pre-Construction Notification document (Appendix B).
2. ☐ Specify which local/state/federal authorizations are required for the project and if any have been obtained or applied for at the time of USACE application submittal.
3. ☐ Identify all funding sources the project will receive or has received to date. Provide any relevant information in the application submission.
4. ☐ Is this part of a larger project that is being implemented in phases? If so, describe the project schedule and how each phase will be implemented.
5. ☐ Describe the existing conditions on the site and the general land use in the vicinity of the project at the time application submittal.
6. ☐ Provide any historic information available that you may have of project area, e.g., existing USACE permit numbers, the names under which the permits were obtained if the permit numbers are unknown, construction dates and proof of prior existence (aerials, photos, town hall records, affidavits, state or local permits, etc.) to verify that the project predates regulation and is "vested".¹⁹
7. ☐ The anticipated start and end dates for construction.

SECTION 2: WETLAND DELINEATION

8. ☐ Data used to support aquatic resource boundary determinations (delineation forms, delineation map(s) that show the locations of each aquatic resource in the project area, aerial and ground photographs, LIDAR imagery, national wetland inventory maps, soil maps, national hydrography dataset maps, floodplain maps, historical imagery, etc.).
9. ☐ Photographs of the wetland(s) and/or waterway(s) where impacts are proposed. Photos at low tide are preferred for work in tidal waters.
10. ☐ Indicate the relationship of the project area to waters of the U.S., i.e., adjacent wetlands, tidal influence or hydraulic connectivity through culverts, or other conveyances, etc.
11. ☐ At minimum the delineation map/figure should include the following:
 - a. Contour lines showing topography.
 - b. North arrow.
 - c. Bar and text scale.
 - d. Legend.
 - e. Drawn project boundary.
 - f. High tide line, mean high water, mean low water, ordinary high water mark, and/or wetland boundaries.
 - g. Captions with a unique name for each aquatic resource and the area or length of the aquatic resource within the project area.

¹⁹ Vested is exempt (someone or something) from a new law or regulation.

- h. Appropriate landmarks and features (e.g., culverts, special aquatic sites, etc.).
- i. Points showing the paired upland and wetland delineation locations for tidal and non-tidal wetlands only.

SECTION 3: AVOIDANCE & MINIMIZATION

- 12. ☐ Describe specific measures taken to avoid impacts to aquatic resources or describe why aquatic resources could not be avoided while achieving the project purpose and need.
- 13. ☐ For impacts to aquatic resources that could not be avoided, describe specific considerations/ measures taken to minimize the area of proposed impacts to aquatic resources in designing the project.
- 14. ☐ Describe specific measures taken to avoid and minimize the proposed direct, indirect, and secondary impacts to aquatic resources and their functions through construction techniques and timing.
- 15. ☐ If applicable, provide a restoration plan that describes how all temporary fills and structures will be removed and the area restored to pre-impact conditions (see GC 22).
- 16. ☐ If applicable, provide an Invasive Species Control Plan (see GC 29). For sample control plans, see www.nae.usace.army.mil/missions/regulatory/invasive-species.
- 17. ☐ If applicable, describe how the proposed wetland/waterbody crossing is compliant with GC 31, Stream Work and Crossings, and Wetland Crossings.

SECTION 4A: PROJECT IMPACTS

- 18. ☐ Describe the overall project and the activities located in Waters of the U.S. (WOTUS) that you are seeking authorization for.
- 19. ☐ Identify the following for project impacts in WOTUS:
 - a. ☐ Direct, indirect, secondary impacts²⁰ within WOTUS.
 - b. ☐ The size of each impact (square feet or acres, or linear feet).
 - c. ☐ For discharges of fill material (§404), specify the volume of fill material to be discharged (cubic yards).
 - d. ☐ The impact duration from each activity, permanent or temporary (X days).

SECTION 4B: PROJECT PLANS

- 20. ☐ Submit project plans that depict all impacts in WOTUS. On the project plans, applicants shall provide:

General Information

- a. ☐ Plan view and typical cross-section view sheets that show the existing and proposed conditions. These illustrations should each be identified with a figure number, date of the map, the project title, the name of the applicant and the type of illustration (vicinity map, plan view, or cross section).
- b. ☐ Drawings, sketches, or plans that are legible, reproducible (color is encouraged, but features must be distinguishable in black and white), drawn to scale, and no larger than 11"x17" and 10 MB when submitted in digital format. Numeric and graphic/bar scales must agree, and plan details must be measurable using a standard engineer's scale on printed plans. Reduced plans are not acceptable.
- c. ☐ The north arrow and remove miscellaneous non-wetland or water project related features such as conduits, utility poles, guardrails, etc.

²⁰ See definitions section for the definitions of direct, indirect, secondary impacts.

- d. ☐ Clearly draw the overall limits of work, staging areas, disposal sites, access routes, and any permittee responsible mitigation sites. These areas may include both aquatic resources and upland areas.
- e. ☐ Names or numbers of all roads in the site's vicinity and ownership and numbers of abutting parcels.
- f. ☐ Datum in plan and elevation views. The horizontal datum shall be in the NAD 83 Massachusetts State Plane Coordinate System (INSERT) in U.S. survey feet. The vertical data in coastal projects shall be referenced to either MLLW or the North American Vertical Datum of 1988 (NAVD 88). Both the distance and depth units shall be U.S. survey feet and specified on the project plans.

Aquatic Resources & Project Impacts

- g. ☐ Delineation of all aquatic resource types on site including salt marsh; other special aquatic sites (vegetated shallows, mudflats, riffles and pools, coral reefs, and sanctuaries and refuges); other waters, such as lakes, ponds, vernal pools, natural rocky habitat (tidal only), and perennial, intermittent, and ephemeral streams.
- h. ☐ Identify the substrate type (cobble/gravel, organic detritus, sand/shell, silt, mud) and the approximate percentage of each substrate type on site. Grain sizes shall be based on Wentworth grain size classification scale for granules, pebbles, cobbles, and boulders. Sediment samples with a content of 10% or more of pebble-gravel-cobble and/or boulder in the top layer (6-12 inches) should be delineated and material with epifauna/macroalgae should be differentiated from bare pebble-gravel-cobble and boulder.
- i. ☐ The direction of ebb and flood in tidal waters and direction of flow in non-tidal waters.
- j. ☐ In tidal waters, the project boundary distance from special aquatic sites identified in 20g above if within 25 feet from that resource.
- k. ☐ USACE jurisdictional boundaries including ordinary high-water mark (OHWM), high tide line (HTL), mean high water (MHW). Other boundaries include mean low water (MLW), mean lower low water (MLLW), as applicable.
 - Non-tidal: OHWM and/or wetland boundaries.
 - Tidal (structures/work only): MHW, MLW.
 - Tidal (Fill and Structures/work): HTL, MHW, MLW.
 - Tidal (Dredging/Beach Nourishment): HTL, MHW, MLW, MLLW.
- l. ☐ Identification of each aquatic resource with a unique name (ex. Wetland 1, Wetland 2, Tributary 1, Beaver Brook, Atlantic Ocean) and the size of each aquatic resource within the project area (square feet or acres).
- m. ☐ Impacts to each aquatic resource with captions denoting the size of each impact (square feet, acres, or linear feet) and the duration of the impact (ex. Permanent, Temporary (X days)).

SECTION 4C: PROJECT PLANS - SPECIFIC PROJECT INFORMATION

- 21. ☐ For projects involving Navigation, Structures, Dredging, and/or Beach Nourishment, the applicant shall also address the following:

Navigation

- a. ☐ Identify the locations of adjacent Federal navigation project (FNP) and/or state/local navigation projects on the project plans.
- b. ☐ Specify the distance between the FNP and proposed project boundary, the authorized depths of the FNP, and state plane coordinates of seaward end(s) of project structures near an FNP.

Structures

- a. ☐ Identification of the piling type (steel, timber, concrete) and diameter to be removed and/or installed.
- b. ☐ Specify the minimal height of the structures' frame over saltmarsh. To meet the SV threshold, piers must be ≤ 4 feet in width and this minimal height must achieve a 1.5:1 ratio (i.e., a 4-foot-wide pier is 6 feet above a saltmarsh).
- c. ☐ For floats, the methods of securing them (piles, bottom anchors) and for keeping them off substrate (skids, stops) at low water. To meet the SV threshold, a minimum depth of 18-inches of water should be maintained below a floating dock/structure at lower tide levels.

Dredging

- a. ☐ The area (SF, acre) and volume (CY) of material to be dredged waterward of MHW for each dredge location.
- b. ☐ Dredge boundaries.
- c. ☐ Bathymetry for existing, proposed, and historical (include dates and USACE permits) dredge depths.
- d. ☐ The likely final angle of repose of the side cuts based on the physical characterization of the material to be dredged and based upon the high/ medium/low, wave or current energy of the location.
- e. ☐ Label area whether the dredging is new, maintenance, improvement, or a combination.
- f. ☐ Location of the disposal site (include location sheet). NOTE: For projects proposing open water, nearshore disposal, or beach nourishment, contact USACE as early as possible for sampling and testing protocols. Sediment testing, including physical (e.g., grain-size analysis), chemical and biological testing may be required. Sampling/testing of sediments without such contact should not occur and if done, will be at the applicant's risk.
- g. ☐ The methods and areas used to retain or prevent dredged material from running back into the wetland or waterway. Provide the capacity of the storage area and points of runback, including the overflow route, into the aquatic system.
- h. ☐ For open-water disposal, explain why inland or beneficial reuse sites are not practicable.
- i. ☐ Show the finished top elevation of the disposal site.

Beach Nourishment

- a. ☐ For beach nourishment, identify the disposal footprint, existing and proposed nourishment profiles (multiple profiles are appropriate if the site is more than 150 feet long or non-contiguous), total fill area (SF) and volume (CY), fill area and volume waterward of the HTL, and delineation of dunes, banks, existing beach vegetation, and contours.
- b. ☐ For beach nourishment identify the substrate type (fine sand, sand, cobble, boulder) and/or grain-size of existing material.

SECTION 5: STRUCTURES

22. ☐ For projects with the removal of existing pilings identify the number, type (steel, timber, concrete) and diameter of pilings to be removed and the methodology for removal (cut off at mud line, pulling, vibratory, etc.).
23. ☐ For projects with the installation of new pilings identify the number, type (steel, timber, concrete) and diameter of pilings to be installed and the methodology for installation (vibratory hammer, impact hammer etc.).
24. ☐ Identify any existing structures and moorings in waters adjacent to the proposed activity, their dimensions, and the distance to the limits and coordinates of any proposed mooring field or reconfiguration zone. For reconfiguration zone and mooring fields, provide the coordinates for all

corners based on the Massachusetts State Plane Coordinate System. Specify the maximum number of slips and/or moorings within proposed reconfiguration zones or anchorage areas.

25. ☐ The dimensions of the structure or work and extent of encroachment waterward of MHW and from affixed point on the shoreline or upland.
26. ☐ Shoreline of adjacent properties and property boundary offset for structures. In narrow waterbodies, the distance to opposite shoreline, waterway width, and structures across from proposed work.
27. ☐ For new commercial boating facilities, anchorage areas or reconfiguration zones, provide a description of the type of vessels that would use the facility, and any plans for sewage pump-out facilities, fueling facilities and contingency plans for oil spills.
28. ☐ See Sections 4A-C above.

SECTION 6: AQUACULTURE

29. ☐ Identify the coordinates for lease area corners and gear configuration area on the project plans.
30. ☐ Identify the proposed aquaculture gear type (buoys, floats, racks, trays, nets, lines, tubes, cages, containers, and other structures). Provide the impacts for each aquaculture gear type (see Section 4A 19a-d).
31. ☐ For a GP 18 to be valid, applicants must have (a) their MA DMF Aquaculture Certification letter for licensed shellfish aquaculture sites, (b) documentation that the applicant has coordinated with the U.S. Coast Guard regarding USCG Private Aids to Navigation standards, (c) their MEPA Certificate (if required), and (d) documentation that the applicant has contacted their local authorities (ex. harbormaster, select board, shellfish constable) for authorization of their facility.
32. Provide information on site the operation, maintenance, and access. Will the site be accessed via boat, kayak, etc.? Will cages be removed in the winter? How often will gear be checked on? Is there an operations plan for the proposed aquaculture area?
33. ☐ See Sections 4A-C above.

SECTION 7: DREDGING

34. ☐ Sampling plan requests for new, improvement or maintenance dredging must submit completed [Dredged Material Evaluation checklist found at Dredged Material Evaluation Checklist, Sampling and Analysis Plan Requirements from Applicant \(army.mil\)](#) and identify the method of handling/transporting the dredged material.
35. ☐ Identify grain-size of material to be dredged (e.g., silty sand) and provide any existing sediment grain size and bulk sediment chemistry data from the proposed project or nearby projects. Include information on any recent spills of oil and/or other hazardous materials and/or nearby outfalls. Document the information source, e.g., EPA database, the harbormaster or fire chief. If there are none, state "none".
36. ☐ See Section 4A, 4B and 4C, Dredging 21(a-i) above.

SECTION 8: WETLAND/WATERBODY CROSSINGS

37. ☐ For the stream crossing, identify the crossing methodology on the project plan (e.g., dam and pump, dry, wet, etc.). Submit a waterway crossing sequencing plan with the application.
38. ☐ If the project includes a permanent crossing of a tidal waterway, your project design should be modified to match the velocity, depth, cross-sectional area, and substrate of the existing waterbody adjacent to the crossing and provide documentation (hydraulic analysis including low lying property analysis) that the size of the crossing will not restrict tidal flow over the full natural tide range and will not adversely affect abutting infrastructure.

39. ☐ If the work includes a permanent crossing of a non-tidal stream, your project design should be modified to match the culvert gradient of the existing stream channel profile, provide clearance for ≥ 1.2 times bank full width and conveyance should be embedded ≥ 1 -2 feet for box culverts and pipe arches or ≥ 1 -2 feet and at least 25 percent for rounded pipes/culverts in accordance with the Massachusetts Stream Crossing Standards. Provide the basis for any variation to this requirement.
40. ☐ If the work includes a permanent crossing of a non-tidal stream, the structure should be designed to include a natural bottom substrate within the conveyance that matches the characteristics of the substrate in the natural stream channel and the character of the banks (mobility, slope, stability, confinement, grain and rock size). The conveyance should be designed with a minimum openness ratio ≥ 0.82 -feet (0.25-meters). For how to calculate openness ratio and stream simulation ecological approach for road and stream crossings, see <https://www.nae.usace.army.mil/Missions/Regulatory/Stream-and-River-Continuity/>.

SECTION 9: COMPENSATORY MITIGATION

41. ☐ Does the project require Compensatory Mitigation²¹ for impacts to Waters of the U.S.? (See Section V in the 2023 Massachusetts General Permit)
42. ☐ If the project requires mitigation, does the selected compensatory mitigation option (i.e., In-Lieu Fee, permittee-responsible mitigation) deviate from the order of the options presented in §332.3(b)(2)-(6)? If so, please explain why. <https://www.ecfr.gov/current/title-33/chapter-II/part-332/section-332.3>
43. ☐ For any compensatory mitigation that involves preservation, the applicant must use a site protection instrument to preserve the parcel in perpetuity. (Conservation Easement, Deed Restriction, etc.) <https://www.mass.gov/service-details/conservation-restriction-review-program>.

SECTION 10: HISTORIC PROPERTIES & NOTIFICATIONS TO SHPO, THPOs, BUAR

44. ☐ Notify the SHPO, Massachusetts Historical Commission, of the Project via Certified Mail and include proof of delivery or receipt in the application package (See Appendix A).
45. ☐ As applicable, notify the THPOs, Narragansett Indian Tribe, Wampanoag Tribe of Gay Head (Aquinnah), and Mashpee Wampanoag Tribe, of the Project via email OR mail and include proof of delivery or receipt in the application package (See Appendix A).
46. ☐ As applicable, notify the BUAR via email (*strongly preferred*) OR mail and include proof of delivery or receipt in the application package (See Appendix A).
47. ☐ Include responses to this notification in the permit application.
48. ☐ As applicable, information on historic properties (Tribal and Archaeological) within the project area should be provided in the permit application.

SECTION 11: ENDANGERED SPECIES & ESSENTIAL FISH HABITAT

49. ☐ Provide a USFWS Information for Planning and Consultation (IPaC) Official Species List from <https://ecos.fws.gov/ipac> and the email of the individual who generated the list (see GC 10 of the 2023 Massachusetts General Permit for more information).
50. ☐ Provide a species list from the NMFS Section 7 Endangered Species Act mapper at <https://noaa.maps.arcgis.com/apps/webappviewer/index.html>.
51. ☐ Provide a species list from the NMFS Essential Fish Habitat Mapper at https://www.habitat.noaa.gov/apps/efhmapper/?page=page_3.

²¹ Your mitigation proposal must be consistent with the December 29, 2020 Compensatory Mitigation Standard Operating Procedures at <https://www.nae.usace.army.mil/Portals/74/docs/regulatory/Mitigation/Compensatory-Mitigation-SOP-2020.pdf> and 2008 Mitigation Rule.

52. ☐ If the project will generate turbidity, describe the extent of turbidity and if erosion controls will be used to contain turbidity. If turbidity controls are not operationally feasible, explain the basis for your conclusion and identify any other measures that you will implement to minimize resuspension of sediment.
53. ☐ Identify the substrate type and any aquatic resources that will be affected by the proposed action. (SAV, salt marsh, sand, silt/clay, rocky/hard bottom)
54. ☐ For projects which will include the installation of pilings/sheet-piles, identify the substrate at the project site (sand, cobble, silt/mud/clay), the installation method (vibratory hammer, impact hammer, combination) and indicate whether the following “soft start” procedures at beginning of the workday and after a 30-minute period of rest will be deployed:
 - a. ☐ Vibratory Pile Installation: pile driving will be initiated for 15 seconds at reduced energy followed by a one-minute waiting period. This sequence of 15 seconds of reduced energy driving, one-minute waiting period will be repeated two additional times, followed immediately by pile-driving at full rate and energy.
 - b. ☐ Impact Pile Installation: pile driving will commence with an initial set of three strikes by the hammer at 40% energy, followed by a one-minute wait period, then two subsequent 3-strike sets at 40% energy, with one-minute waiting periods, before initiating continuous impact driving.
55. ☐ If the project involves dredging, describe any dredge history, number of dredge events to be covered by the permit, erosion/sediment controls, dredge type, intake structures (mesh screen size), dredged material disposal site.
56. ☐ For project activities associated with structures, identify the number, type (drill barge, work boat, tugboat, etc.), and size of any temporary vessels that will be used. Specify measures that will be implemented to ensure vessels are not berthed in shallow water or will “ground out” at low tide.
57. ☐ For aquaculture projects identify whether any component of the gear is seasonal (will be removed annually) or will be in place year-round. If gear will be present year-round and will be variably managed (e.g., floating in summer, bottom in winter) identify month/date for such configurations.
58. ☐ For aquaculture projects identify whether the project will involve use of an existing vessel or new vessel. Identify the length for all work vessels and identify the distance round trip from vessel berthing location and aquaculture area.
59. ☐ For project activities associated with docking structures (either commercial, industrial, or recreational) identify the number, type (motorized/non-motorized, jet-ski, sailboat, kayak, canoe, other that will be berthed there and the sizes of each.
60. ☐ Information required for Section 305(b)(2) of the Magnuson-Stevens Fishery Conservation and Management Act:
 - a. Results of an eelgrass survey completed per the INSERT.
 - b. Essential Fish Habitat Assessment to determine project-related impacts to essential fish habitat, using guidance developed by the National Marine Fisheries Service.
61. ☐ A document containing the following information (requirements of 50 CFR §600.920(e)(3)):
 - a. Description of proposed action.
 - b. Analysis of potential adverse effects on essential fish habitat.
 - c. Conclusions regarding the effects of the action on essential fish habitat.
 - d. If applicable, proposed mitigation.
 - e. Analysis of alternatives to the proposed action.
 - f. Other:

DOCUMENT A00841

MASSACHUSETTS
Department of Environmental Protection
Water Quality Certificate

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Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

100 Cambridge Street Suite 900 Boston, MA 02114 • 617-292-5500

Maura T. Healey
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Kimberley Driscoll
Lieutenant Governor

Rebecca L. Tepper
Secretary

Bonnie Heiple
Commissioner

May 12, 2025

Massachusetts Department of Transportation Highway Division
Ten Park Plaza, Suite 7360
Boston, MA 02116
Attn: Courtney Walker

RE: Section 401 Water Quality Certification
BRP WW11, Minor Fill Project
Bridge Preservation Project (C-21-002)
Berkshire Trail (ST 9/ ST 112) over East Branch Westfield River
Cummington, Massachusetts

401 WQC Filing No: 24-WW11-0045-APP
USACE Application No: NAE-2024-00658
MassDOT File No: 612514

Dear Ms. Walker:

The Massachusetts Department of Environmental Protection (MassDEP) has reviewed your application for a Water Quality Certification (WQC), as referenced above; this application was deemed complete on May 12, 2025. In accordance with the provisions of MGL Ch. 21, §§26-53 and Section 401 of the Federal Clean Water Act as amended (33 U.S.C. §1251 et seq.), it has been determined there is reasonable assurance the proposed project will be conducted in a manner which will not violate applicable water quality standards (314 CMR 4.00) and other applicable requirements of state law.

The proposed project is for the rehabilitation of the Dudley Manor Bridge (Bridge No. C-21-002) that carries Berkshire Trail (ST 9/ST 112) over the East Branch Westfield River in Cummington (the Project). Reconstruction of the roadway approaches and stormwater drainage improvements will also be completed. The bridge is stated as needing repair/replacement due to poor condition and various structural deficiencies.

The existing bridge is oriented east/west with the East Branch Westfield River flowing north to south under the bridge. The surveyed bankfull width of the river in the location of the bridge is 128 feet, the same as the bridge span width. Two reinforced concrete abutments comprise the substructure to support a tied arch superstructure. The 53.5-foot-wide bridge deck carries two travel lanes and one concrete sidewalk. The roadway approaches on either side of the bridge consist of two 12-foot-wide

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travel lanes flanked by 8-foot-wide shoulders. Stormwater discharges directly into the river without pretreatment via six bridge scuppers and is entirely country drainage along the approaches.

The East Branch Westfield River is a tributary of the Connecticut River and is designated as a National Wild and Scenic River by the National Park Service (NPS). In addition, the river is mapped as a Coldwater Fishery Critical Area. Bordering Vegetated Wetlands (BVWs) are present northeast and northwest of the bridge. The Project is located within a mapped 1% annual chance of flood zone with a Base Flood Elevation (BFE) of 990 feet NAVD; Zone AE.

The Project proposes to repair the existing substructure in place, retaining the length, width, and horizontal alignment of the bridge. Temporary sandbag cofferdams will be installed around each bridge abutment. The bridge deck, sidewalk, ornamental railings and curb rails will be replaced, and the arch structure will undergo steel repairs and painting. The roadway approaches 250 feet east and west of the bridge will be reconfigured to include two 12-foot-wide travel lanes with bike lanes and shoulders on either side. Americans with Disabilities Act (ADA)-compliant ramps will also be installed to access the sidewalk between the roadway approaches and bridge.

Placement of the sandbag cofferdams needed to complete bridge abutment repairs will require a total of 4,100 square feet (sf) of temporary impacts to Land Under Water (LUW). No permanent impact or dredging of LUW is proposed, nor will the Project result in temporary or permanent impact to BVWs. Following construction, the sandbag cofferdams will be removed and the streambed restored to pre-construction conditions.

The proposed ADA-compliant sidewalk and ramps will increase impervious surfaces in the Project area by 669 sf. Point source discharges will be eliminated through removal of the bridge scuppers. Six new deep sump catch basins are proposed that will connect to the existing drainage system and three existing outfalls. During the course of Project review, MassDOT revised the stormwater design to incorporate a new infiltration basin with sediment forebay southwest of the Berkshire Trail/Old Route 9 intersection which will receive runoff from an impervious area of 10,360 sf in the eastern half of the Project area via two new deep sump catch basins. Country drainage will be utilized for the remaining portions of the site.

The Project fully complies with Stormwater Standard 2 as the peak discharge rate for all storm events will decrease by an average of 0.28 cubic feet per second (cfs). Stormwater Standards 3 and 4 will be met to the maximum extent practicable with the new infiltration basin providing 55% of the required groundwater recharge volume, as well as 46% total suspended solids (TSS) removal when combined with the new sediment forebay and deep sump catch basins throughout the site.

The Project is located within Massachusetts Natural Heritage and Endangered Species Program (NHESP) Estimated and Priority Habitats of Rare Species (EH 11499 and PH 2064). Consultation with NHESP is ongoing regarding rare and endangered species that are present on the site. Any time of year (TOY) restrictions and other conditions issued by NHESP within a Conservation and Management Permit (CMP) or Conditional No-Take Determination to avoid a prohibited Take of state-listed species are conditioned herein.

Given the presence of lake chub (*Couesius plumbeus*) spawning habitat in the Project area, this WQC incorporates the TOY condition required by the NPS Wild and Scenic Rivers Program in their letter to the U.S. Army Corps of Engineers (USACE) dated May 6, 2025; please see Special Condition 31.

Public notice was provided in the Country Journal on May 20, 2024. No comment letters were received during the public comment period.

Based on a review of information provided by the applicant, MassDEP finds that this project complies with the standards described under 314 CMR 9.06. Therefore, based on information currently in the record, MassDEP grants a WQC for this project subject to the following conditions to maintain water quality, to minimize impact on waters and wetlands, and to ensure compliance with appropriate state law. MassDEP further certifies in accordance with 314 CMR 9.00 that there is reasonable assurance the project or activity will be conducted in a manner which will not violate applicable water quality standards (314 CMR 4.00) and other applicable requirements of state law. Finally, the Department has determined that upon satisfying the conditions and mitigation requirements of this approval, the project provides a level of water quality necessary to protect existing uses and accordingly finds that the project to be implemented satisfies the Surface Water Quality Standards at 314 CMR 4.00.

Pursuant to 314 CMR 9.09(1)(d); 314 CMR 9.06(6)(a); 310 CMR 9.06(2); 314 CMR 9.07; 314 CMR 9.07(1); 314 CMR 9.09(7)(5)(c); 314 CMR 9.11; and 314 CMR 9.09(1)(e), the following Special Conditions are necessary to ensure that construction practices and stormwater controls are implemented in such a manner as to prevent degradation to wetlands and waters; ensure that practicable steps have been taken which will avoid and minimize impacts to wetlands and waters; minimize turbidity and sediment caused by construction activities; ensure that water quality is not degraded, and that biology of the waters are not negatively impacted by potential discharges; and/or maintain a record of the dredged material for reference and to ensure accountability in its transportation.

Those Special Conditions that require direct submittals to MassDEP for either review, or review and approval, are denoted by the following notation (Submittal) at the end of the condition and are summarized in Attachment A. In addition, those conditions with the (Submittal) designation shall be included in the Special Provisions and, as applicable, reviewed at the Pre-Construction Meeting.

1. All work shall be performed in accordance with the following documents and plans:
 - Application for Water Quality Certification. Prepared by Benesch on behalf of MassDOT, dated May 17, 2024, with cover letter and attachments. 401 WQC Filing Number: 24-WW11-0045-APP.
 - Plans entitled: "ST 9/ST 112 over East Branch Westfield River (Segment ID MA32-04), Cummington, MA". Sheets 1 through 14. Prepared by Benesch. Last revised April 10, 2025.
 - MassDEP Administrative Completeness and Technical Deficiency Review. 401 Water Quality Certification Transmittal Nos: 24-WW11-0045-APP. ST 9/ST 112 (Berkshire Trail) over East Branch Westfield River. Dated June 11, 2024.
 - MassDOT Responses to MassDEP Technical Deficiency Review, with attachments. Prepared by Benesch on behalf of MassDOT. 401 Water Quality Certification Transmittal

Nos: 24-WW11-0045-APP. ST 9/ST 112 (Berkshire Trail) over East Branch Westfield River. Dated April 16, 2025.

- Letter from Andrew Petitdemange of the NPS Wild & Scenic Rivers Program to the USACE. Dated May 6, 2025.

Pre-Construction

2. Prior to the Pre-Construction Meeting required in Condition 3, the applicant shall provide MassDEP with the name and contact information of the Resident Engineer (RE) responsible for ensuring that all work complies with the conditions of this WQC. **(Submittal)**
3. A minimum of 21 days prior to the start of ground disturbance, MassDOT shall contact MassDEP to schedule an onsite Pre-Construction Meeting to review the approved plans and terms and conditions of this WQC. The RE, the construction contractor, a representative from the MassDOT Environmental Section and/or the District Environmental Engineer shall attend the Pre-Construction Meeting. **No work shall commence prior to the Pre-Construction Meeting.**
4. MassDEP shall be copied on applicable submittals to the U.S. Army Corps of Engineers (USACE). These include but are not limited to: Self-Verification Notification Form (SVNF); Pre-Construction Notification (PCN); Work-Start Notification Form; Mitigation Work-Start Notification Form; and Compliance Certification Form. The Work-Start Notification Form shall be submitted at least 14 days before the anticipated start of work and the Compliance Certification Form shall be submitted within 30 days following the completion of the authorized work. **(Submittal)**
5. A Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan (CP/PP) shall be developed and implemented as required by 314 CMR 9.06(6)(a)8. A minimum of 14 days prior to the start of work, MassDOT shall submit the CP/PP for review and approval. If the U.S. Environmental Protection Agency (EPA) Construction General Permit (CGP) applies, the Stormwater Pollution Prevention Plan (SWPPP) may serve as the CP/PP, providing it includes the measures required to be in the CP/PP per these Special Conditions, in addition to the measures specifically required by the CGP. Any subsequent changes to the Final CP/PP (defined herein as including the construction period SWPPP if applicable) must be approved by MassDEP. **(Submittal)**
6. Training regarding erosion and sedimentation controls is required. The RE, CP/PP Inspector, and any other relevant personnel responsible for erosion and sedimentation controls shall complete the EPA CGP Inspector Training, or other training that meets the CGP requirements, as well as complete a comprehensive review of the Final CP/PP. Proof of completion of the training shall be submitted to MassDEP prior to the start of work. **(Submittal)**
7. The CP/PP shall identify, but shall not be limited to, staging and laydown areas in relation to BVWs and LUW, proposed dewatering methods and locations, proposed stockpile locations and their proximity to catch basins or other drainage conveyances that discharge to wetland resource areas, and the location of construction-period erosion and sedimentation controls. Stockpiles shall be located no less than 50 feet from BVWs, IVWs, LUW, catch basins, or other drainage conveyances that discharge to BVWs, IVWs, or LUW.

8. A minimum of 14 days prior to the start of work, MassDOT shall submit a Control of Water Plan for review and approval. The Plan shall meet requirements of the CP/PP, be specific to the Project, and include the following **(Submittal)**:
 - a. A description of proposed methods to isolate and dewater work areas within streams, should it be required, while maintaining stream flow, including but not limited to the method of isolation (e.g., steel sheeting or sandbag cofferdams), dewatering methods and locations and specifications for stream bypass systems as applicable;
 - b. A plan depicting BVW and LUW boundaries, and the location of all relevant methods and materials which shall be located within the BVW and LUW impact areas approved herein; and
 - c. Proposed LUW restoration methods following removal of the cofferdams.
9. Dewatering and stream bypasses, as well as LUW restoration activities as needed, shall be conducted under the supervision of the RE or other project staff with knowledge of these practices and comply with the applicable conditions identified herein.
10. Prior to the start of work, approved erosion and sedimentation control measures shall be installed per the approved CP/PP and as applicable, the manufacturer specifications. Erosion and sedimentation control measures may consist of, but are not limited to, silt fence, staked straw bales, silt/turbidity curtains, compost filter tubes, etc.
11. Prior to the Pre-Construction Meeting, the boundaries of BVWs and LUW shall be re-flagged where they are within 50 feet of the limits of work. In the event BVWs and LUW boundaries overlap, the outermost boundary (i.e., closest to the proposed work) shall be flagged. All boundary markers, once in place, shall remain in place throughout construction until all disturbed surfaces have been permanently stabilized. Boundary markers shall be fully evaluated annually and refreshed where needed. Implementation of and compliance with this requirement shall be documented by the RE. All construction personnel shall be made aware of these markers.
12. Prior to any work within the 1% annual chance of flooding zone within Project limits, including mobilization or storage of equipment and materials, a Flood Contingency Plan shall be submitted to MassDEP for review and approval that includes at a minimum the following information and provisions **(Submittal)**:
 - a. The RE and/or Contractor shall monitor the National Weather Service forecast daily, and upon issuance of a flood watch or flood warning for the Project area, the Flood Contingency Plan shall be implemented.
 - b. Upon implementation of the Flood Contingency Plan, all construction equipment and materials located below the Base Flood Elevation (BFE) shall be removed and placed in an upland location above the BFE and outside of BVW and/or LUW.

- c. Anchored stationary equipment may remain below the BFE if demonstrated to be required and upon written approval from MassDEP. In the event semi-stationary equipment cannot be feasibly removed before the arrival of the storm, they shall be adequately secured and MassDEP shall be notified prior to the storm.
 - d. A requirement to inspect and maintain all erosion and sedimentation controls, and stabilize all exposed soils as needed below the BFE prior to the storm shall be included.
 - e. A plan depicting at a minimum, but not limited to, BVW and/or LUW boundaries, the Project limits, and the BFE boundary based on ground elevations shall be included.
 - f. Staff and materials must be available 24 hours per day, seven days per week to implement the Flood Contingency Plan. The name, affiliation, title, email address, and phone number of each person responsible for implementing the Flood Contingency Plan shall be included.
 - g. No work shall commence until the flood watch or flood warning has ended, all areas below the BFE have been inspected, and erosion and sedimentation controls are maintained as needed.
13. In the event that invasive species have spread into the Project area prior to construction, the Contractor shall develop an Invasive Plant Management Strategy (IPMS) to be submitted to MassDEP for review and approval prior to the Pre-Construction Meeting. The IPMS shall be implemented as approved. **(Submittal)**
14. If needed, use of herbicides to control invasive species shall be implemented in accordance with the approved IPMS and with the following requirements:
- a. Herbicides can only be applied by a Licensed Applicator;
 - b. Applicant must provide MassDEP Material Safety Data Sheets (MSDS) of the product being used and must also keep MSDS sheets on site;
 - c. Product registration in MA with Massachusetts Pesticide Product Registration Number must be confirmed with Massachusetts Department of Agricultural Resources Pesticide Division;
 - d. EPA Registration Number for the product must be identified;
 - e. Product label restricted use provisions must be followed; and
 - f. Applicant must contact MassDEP Wetlands Program, Dredge Unit to determine if a BRP WM 04 herbicide permit is required in waterbodies.

Construction Period

15. No more than **0 sf** of permanent and **4,100 sf** of temporary impacts to LUW shall occur. **No** permanent or temporary impacts to BVWs and **no** dredging in LUW shall occur. All work shall avoid unapproved impacts to BVW and LUW.

16. The Project shall identify one individual with at least three years of experience with construction period erosion and sedimentation control to be responsible for erosion and sedimentation control inspections (CP/PP Inspector). Under the direction of the CP/PP Inspector, inspection and maintenance of erosion and sediment controls in active work areas may be performed by both the Contractor and RE or other MassDOT project staff. Maintenance is the responsibility of the Contractor; however, the permittee shall be ultimately responsible for erosion and sedimentation control failure. The RE and/or contractor shall immediately notify MassDEP and the Cummington Conservation Commission if any unauthorized discharges to BVWs or LUW occur.
17. CP/PP inspections shall occur at least once every seven calendar days and within 24 hours of a storm event that produces 0.5 inches or more of rain within a 24-hour period, or at a more stringent frequency if the CP/PP requires.
18. Copies of CP/PP Inspection and Maintenance Log Forms shall be submitted to MassDEP within 14 days upon request.
19. Disturbed areas shall be stabilized immediately after activities have permanently ceased or will be temporarily inactive for 14 or more calendar days. The installation of stabilization measures shall be implemented as soon as practicable, but no later than 14 calendar days after stabilization has been initiated.
20. Work within LUW shall be conducted in low or no-flow conditions to the extent practicable. Notice shall be provided to MassDEP and the Cummington Conservation Commission within 24 hours prior to the commencement of dewatering, if required. Dewatering methods and location(s) shall be approved by the RE or other project staff with knowledge of these practices prior to use to ensure consistency with the approved Control of Water Plan, and shall be documented in the CP/PP. There shall be no discharge of untreated dewatered stormwater or groundwater to BVWs or LUW. Any discharges shall be visibly free of sediment.
21. Additional erosion and sedimentation control materials shall be stored on-site at all times for emergency and routine replacement. Materials shall be kept covered, dry, and accessible at all times. The CP/PP Inspector shall be responsible for anticipating the need for and installation of additional erosion and sedimentation controls and shall have the authority to require additional erosion control measures to protect wetland resource areas beyond what is shown on the plans if field conditions or professional judgment dictate that additional protection is necessary.
22. The Contractor shall monitor the National Weather Service forecast for updates, and upon issuance of a flood watch for the 1% annual chance of flooding zone, shall implement the flood contingency plan referenced in Condition 12.
23. Any storm drains with potential to receive discharge from stockpiled materials or construction operations shall be managed to inhibit the inflow of sediment while not increasing the likelihood of roadway flooding during periods of precipitation. The CP/PP shall specify measures to implement this. Filter fabric stretched under storm drain inlet grates are not acceptable for this purpose.

24. Stockpiles shall be located no less than 50 feet from BVWs, LUW, catch basins, or other drainage conveyances that discharge to BVWs or LUW.
25. The contractor shall have designated washout areas for concrete equipment that will be comprised of impermeable material and sized to contain project concrete wastes and wash water. Concrete wash out areas shall be located no less than 50 feet from BVWs, LUW, and catch basins or other drainage conveyances that discharge directly or indirectly to BVWs or LUW.
26. Refueling, washing, and cleaning of vehicles and other construction equipment shall not take place within 50 feet of BVWs or LUW and any wash water shall be contained such that it does not drain toward BVWs or LUW. MassDEP shall explicitly approve in writing any deviation to this condition for oversized stationary vehicles.
27. The contractor shall have spill containment kits on site. In the event of a release of fuels and/or oils, the local fire department, MassDEP Emergency Response and MassDEP Wetlands Program Highway Unit shall be contacted, and in addition, the MassDEP Bureau of Waste Site Cleanup shall be notified per the requirements of the Massachusetts Contingency Plan, 310 CMR 40.0000.
28. Construction vehicles or other vehicles or heavy equipment are prohibited from traversing over the proposed infiltration Stormwater Control Measures (SCMs) to avoid compaction of soils during construction. These areas shall be demarcated by silt fence with signage, or high visibility fencing. No vehicles or heavy equipment shall be permitted within the infiltration SCM following placement of the final materials without written approval from MassDEP. Proposed infiltration SCMs shall remain offline until final stabilization is achieved, unless written approval is obtained from MassDEP.
29. Construction vehicles and equipment shall not enter the BVW or LUW unless authorization is provided by way of this permit or amendment. The Contractor shall use equipment with boom reach capabilities and other measures to avoid inadvertent impacts to jurisdictional resource areas as a result of excavation, riprap placement, and/or bridge/pier demolition materials.
30. A temporary shielding or containment system shall be in place beneath the bridge structure prior to removal to prevent debris from falling into the water below. In the event that any debris accidentally enters the East Branch Westfield River, it shall be immediately retrieved. Notice shall be provided to MassDEP if debris enters the river and that it has been removed with photo-documentation (if practicable) submitted by email.
31. To the extent practicable, the TOY restriction for in-water work between the dates of June 1st to July 31st as described in the NPS letter dated May 6, 2025, referenced herein, is hereby incorporated into this WQC.
32. As the Project may subject to a CMP or Conditional No-Take Determination from NHESP, no work shall occur within Priority or Estimated Habitats of Rare Species until the CMP or Determination is issued by NHESP. All conditions imposed by NHESP to avoid a Take of state-listed species shall be implemented and are hereby incorporated into this WQC by reference.

Stream Mitigation

33. The RE shall oversee all LUW restoration, as necessary. The Control of Water Plan required in Condition 8 shall include measures to create no-flow conditions for this work such as a pump bypass system or other dewatering method, if needed.
34. Water shall be slowly introduced back into the restored, and if applicable, dewatered LUW work areas as to not cause erosion and sedimentation. This work shall be overseen by the RE.
35. MassDEP reserves the right to determine the success or failure of the LUW restoration areas and reserves the right to require additional measures deemed necessary to promote success.

Post-Construction

36. All temporary erosion controls shall be removed at the conclusion of work once the surrounding area has achieved final stabilization.

General Conditions

37. Any proposed alterations, minor plan changes, or amendment requests, as well as any required submittals shall be sent by email for review and approval to heidi.davis@mass.gov and jaime.iannelli@mass.gov. **(Submittal)**
38. This WQC remains in effect for the same duration as the Section 404 permit that requires it.
39. No Special Condition set forth herein shall be construed or operate to prohibit MassDEP from taking enforcement against MassDOT or its contractors for any failure to comply with the terms and requirements of this WQC.
40. No activity authorized by this WQC may begin prior to expiration of the 21-day appeal period, or until a final decision is issued by MassDEP in the event of an appeal.

Failure to comply with this Certification is grounds for enforcement, including civil and criminal penalties, under MGL Ch. 21 §42, MGL Ch. 21A §16, or other possible actions/penalties as authorized by the General Laws of the Commonwealth.

This Certification does not relieve the applicant of the obligation to comply with other appropriate state or federal statutes or regulations.

NOTICE OF APPEAL RIGHTS

a.) Appeal Rights and Time Limits

Certain persons shall have a right to request an adjudicatory hearing concerning certifications by MassDEP when an application is required: (a) the applicant or property owner; (b) any person aggrieved by the decision who has submitted written comments during the public comment period; any ten (10) persons of the Commonwealth pursuant to M.G.L. c.30A where a group member has submitted written

comments during the public comment period; or (d) any governmental body or private organization with a mandate to protect the environment which has submitted written comments during the public comment period. Any person aggrieved, any ten (10) persons of the Commonwealth, or a governmental body or private organization with a mandate to protect the environment may appeal without having submitted written comments during the public comment period only when the claim is based on new substantive issues arising from material changes to the scope or impact of the activity and not apparent at the time of public notice. To request an adjudicatory hearing pursuant to M.G.L. c.30A, § 10, a Notice of Claim must be made in writing, provided that the request is made by certified mail or hand delivery to MassDEP, with the appropriate filing fee specified within 310 CMR 4.10 along with a DEP Fee Transmittal Form within twenty-one (21) days from the date of issuance of this Certificate, and addressed to:

Case Administrator
Department of Environmental Protection
100 Cambridge Street, 9th Floor
Boston, MA 02114

A copy of the request shall at the same time be sent by certified mail or hand delivery to the Department of Environmental Protection at:

Department of Environmental Protection
Commissioner's Office
100 Cambridge Street, Suite 900
Boston, MA 02114

b.) Contents of Hearing Request

A Notice of Claim for Adjudicatory Hearing shall comply with MassDEP's Rules for Adjudicatory Proceedings, 310 CMR 1.01(6), and shall contain the following information pursuant to 314 CMR 9.10(3):

3. the 401 Certification Transmittal Number;
4. the complete name of the applicant and address of the project;
5. the complete name, address, and fax and telephone numbers of the party filing the request, and, if represented by counsel or other representative, the name, fax and telephone numbers, and address of the attorney;
6. if claiming to be a party aggrieved, the specific facts that demonstrate that the party satisfies the definition of "aggrieved person" found at 314 CMR 9.02;
7. a clear and concise statement that an adjudicatory hearing is being requested;
8. a clear and concise statement of (1) the facts which are grounds for the proceedings, (2) the objections to this Certificate, including specifically the manner in which it is alleged to be inconsistent with the MassDEP's Water Quality Regulations, 314 CMR 9.00, and (3) the relief sought through the adjudicatory hearing, including specifically the changes desired in the final written Certification; and
9. a statement that a copy of the request has been sent by certified mail or hand delivery to the applicant, the owner (if different from the applicant), the conservation commission of the city or town where the activity will occur, the Department of Conservation and Recreation (when the certificate concerns projects in Areas of Critical Environmental Concern), the public or private water supplier where the project is located (when the certificate concerns projects in

Outstanding Resource Waters), and any other entity with responsibility for the resource where the project is located.

c.) Filing Fee and Address

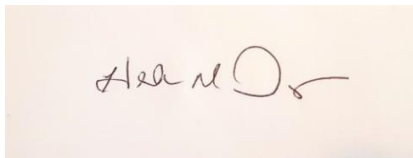
The hearing request along with a DEP Fee Transmittal Form and a valid check or money order payable to the Commonwealth of Massachusetts in the amount of one hundred dollars (\$100) must be mailed to:

Commonwealth of Massachusetts
Department of Environmental Protection
Commonwealth Master Lockbox
PO Box 4062
Boston, MA 02211

The request will be dismissed if the filing fee is not paid, unless the appellant is exempt or granted a waiver. The filing fee is not required if the appellant is a city or town (or municipal agency), county, or district of the Commonwealth of Massachusetts, or a municipal housing authority. MassDEP may waive the adjudicatory hearing filing fee pursuant to 310 CMR 4.06(2) for a person who shows that paying the fee will create an undue financial hardship. A person seeking a waiver must file an affidavit setting forth the facts believed to support the claim of undue financial hardship together with the hearing request as provided above.

Should you have any questions relative to this permit, please contact myself or Jaime Iannelli at heidi.davis@mass.gov and jaime.iannelli@mass.gov.

Very truly yours,

A handwritten signature in dark ink, appearing to read "Heidi M. Davis", is centered on a light-colored rectangular background.

Heidi M. Davis
Highway Unit Supervisor

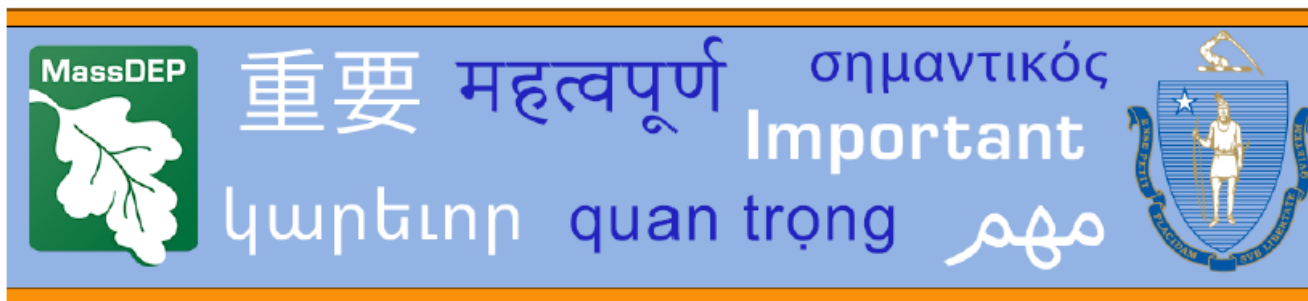
Ecc: DEP WERO – Michael McHugh
USACE – Dan Vasconcelos
USACE – Kevin Newton
MassDOT – Michael Joa
MassDOT – Stephen Soma
MassDOT – Amer Raza
Benesch – Ashley Bomely
Benesch – Peeyush Rohela
Cummington Conservation Commission – Sarah Fournier-Scanlon, Chair

**ATTACHMENT A
PRE-CONSTRUCTION SUBMITTAL CHECKLIST**

**Bridge Replacement (C-21-002), Berkshire Trail (ST 9/ST 112) over East Branch Westfield River
Cummington, Massachusetts**

THIS CHECKLIST MUST BE COMPLETED PRIOR TO THE START OF WORK; NOTE THAT SOME CONDITIONS REQUIRE THAT INFORMATION BE SUBMITTED A SPECIFIC NUMBER OF DAYS PRIOR TO THE START OF WORK OR THE PRE-CONSTRUCTION MEETING.

Condition	Required Submittal	Due Date	Date Submitted	Date Approved
PRE-CONSTRUCTION SUBMITTAL REQUIREMENTS				
2	Name and contact information of the RE	Prior to Pre-Construction Meeting		
4	USACE Work-Start Notification Form	14 days prior to work start		
5	CP/PP	14 days prior to work start		
6	Verification of CP/PP Training	Prior to work start		
8	Control of Water Plan	14 days prior to work start		
12	Flood Contingency Plan	Prior to any work within 1% annual chance of flooding zone		



Communication for Non-English-Speaking Parties

This document is important and should be translated immediately.

If you need this document translated, please contact MassDEP's Director of Environmental Justice at the telephone number listed below.

Español Spanish

Este documento es importante y debe ser traducido inmediatamente. Si necesita traducir este documento, póngase en contacto con el Director de Justicia Ambiental de MassDEP (*MassDEP's Director of Environmental Justice*) en el número de teléfono que figura más abajo.

Português Portuguese

Este documento é importante e deve ser traduzido imediatamente. Se você precisar traduzir este documento, entre em contato com o Diretor de Justiça Ambiental do MassDEP no número de telefone listado abaixo.

繁體中文 Chinese Traditional

本文檔很重要，需要即刻進行翻譯。
如需對本文檔進行翻譯，請透過如下列示電話號碼與 MassDEP 的環境司法總監聯絡。

简体中文 Chinese Simplified

这份文件非常重要，需要立即翻译。
如果您需要翻译这份文件，请通过下方电话与 MassDEP 环境司法主任联系。

Ayisyen Kreyòl Haitian Creole

Dokiman sa a enpòtan epi yo ta dwe tradui l imedyatman. Si w bezwen tradui dokiman sa a, tanpri kontakte Direktè. Jistis Anviwònmanal MassDEP a nan nimewo telefòn ki endike anba a.

Việt Vietnamese

Tài liệu này và quan trọng và phải được dịch ngay. Nếu quý vị cần bản dịch của tài liệu này, vui lòng liên hệ với Giám Đốc Phòng Công Lý Môi Trường của MassDEP theo số điện thoại được liệt kê bên dưới.

ប្រទេសកម្ពុជា Khmer/Cambodian

ឯកសារនេះមានសារៈសំខាន់
ហើយកម្មវិធីត្រូវបានបកប្រែភ្លាមៗ។
ប្រសិនបើអ្នកត្រូវការអោយឯកសារនេះបកប្រែ
សូមទាក់ទងនាយកផ្នែកយុត្តិធម៌បរិស្ថានរបស់
MassDEPតាមរយៈលេខទូរស័ព្ទដែលបានរាយដូចខាងក្រោម។

Kriolu Kabuverdianu Cape Verdean

Es dokumentu sta important i tenki ser tradusidu immediatamenti. Se nho ta presisa ke es dokumentu sta tradisidu, por favor kontata O Diretor di Justisia di Environman di DEP ku es numero di telefoni menxionadu di baixo.

Contact Deneen Simpson 857-406-0738

Massachusetts Department of Environmental Protection
100 Cambridge Street 9th Floor Boston, MA 02114

TTY# MassRelay Service 1-800-439-2370 • <https://www.mass.gov/environmental-justice>
(Version revised 8.2.2023) 310 CMR 1.03(5)(a)

Русский Russian

Это чрезвычайно важный документ, и он должен быть немедленно переведен. Если вам нужен перевод этого документа, обратитесь к директору Департамента экологического правосудия MassDEP (MassDEP's Director of Environmental Justice) по телефону, указанному ниже.

العربية Arabic

هذه الوثيقة مهمة وتجب ترجمتها على الفور.

إذا كنت بحاجة إلى ترجمة هذه الوثيقة، فيرجى الاتصال بمدير العدالة البيئية في MassDEP على رقم الهاتف المذكور أدناه.

한국어 Korean

이 문서는 중대하므로 즉시 번역되어야 합니다. 본 문서 번역이 필요하신 경우, 매사추세츠 환경보호부의 "환경정의" 담당자 분께 문의하십시오. 전화번호는 아래와 같습니다.

հայերեն Armenian

Այս փաստաթուղթը կարևոր է, և պետք է անհապաղ թարգմանել այն:
Եթե Ձեզ անհրաժեշտ է թարգմանել այս փաստաթուղթը, դիմեք Մասաչուսեթսի շրջակա միջավայրի պահպանության նախարարության (MassDEP) Բնապահպանական հարցերով արդարադատության ղեկավարին (Director of Environmental Justice)՝ ստորև նշված հեռախոսահամարով

فارسی Farsi Persian

این نوشتار بسیار مهمی است و باید فوراً ترجمه شود.
اگر نیاز به ترجمه این نوشتار دارید لطفاً با مدیر عدالت محیط زیستی MassDEP در شماره تلفن ذکر شده زیر تماس بگیرید.

Français French

Ce document est important et doit être traduit immédiatement. Si vous avez besoin d'une traduction de ce document, veuillez contacter le directeur de la justice environnementale du MassDEP au numéro de téléphone indiqué ci-dessous.

Deutsch German

Dieses Dokument ist wichtig und muss sofort übersetzt werden. Wenn Sie eine Übersetzung dieses Dokuments benötigen, wenden Sie sich bitte an MassDEP's Director of Environmental Justice (*Direktor für Umweltgerechtigkeit in Massachusetts*) unter der unten angegebenen Telefonnummer.

Ελληνική Greek

Το έγγραφο αυτό είναι πολύ σημαντικό και πρέπει να μεταφραστεί αμέσως. Αν χρειάζεστε μετάφραση του εγγράφου αυτού, παρακαλώ επικοινωνήστε με τον Διευθυντή του Τμήματος Περιβαλλοντικής Δικαιοσύνης της Μασαχουσέτης στον αριθμό τηλεφώνου που αναγράφεται παρακάτω

Italiano Italian

Questo documento è importante e deve essere tradotto immediatamente. Se hai bisogno di tradurre questo documento, contatta il Direttore della Giustizia Ambientale di MassDEP al numero di telefono sotto indicato.

Język Polski Polish

Ten dokument jest ważny i powinien zostać niezwłocznie przetłumaczony. Jeśli potrzebne jest tłumaczenie tego dokumentu, należy skontaktować się z dyrektorem ds. sprawiedliwości środowiskowej MassDEP pod numerem telefonu podanym poniżej.

हिन्दी Hindi

यह दस्तावेज महत्वपूर्ण है और इसका अनुवाद तुरंत किया जाना चाहिए। यदि आपको इस दस्तावेज का अनुवाद कराने की जरूरत है, तो कृपया नीचे दिए गए टेलीफोन नंबर पर MassDEP के पर्यावरणीय न्याय निदेशक से संपर्क करें।

Contact Deneen Simpson 857-406-0738

Massachusetts Department of Environmental Protection
100 Cambridge Street 9th Floor Boston, MA 02114

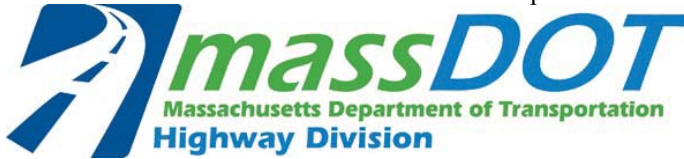
TTY# MassRelay Service 1-800-439-2370 • <https://www.mass.gov/environmental-justice>

(Version revised 8.2.2023) 310 CMR 1.03(5)(a)

DOCUMENT A00875

**POLICY DIRECTIVE P-22-001
AND
POLICY DIRECTIVE P-22-002**

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Number: P-22-001Date: 9/23/22

POLICY DIRECTIVE

Jonathan Gulliver (signature on original)

HIGHWAY ADMINISTRATOR

Off-Site Stockpiling of Soil from MassDOT Construction Projects

Purpose

The purpose of this Policy Directive is to formally establish a policy and procedures for managing and stockpiling soil generated and transported from MassDOT construction projects. This Policy Directive does not supersede any Federal, State, or Local regulations.

Date of Effect

This Policy Directive is effective immediately for all projects, including active construction projects.

For active construction projects and for other projects advertised prior to October 15, 2022, changes to the contract documents needed to implement the requirements of this Policy Directive will be considered on a case-by-case basis and shall be approved by the District Highway Director, as necessary.

For projects advertised on or after October 15, 2022, MassDOT will include the requirements and implementation procedures of this Policy Directive in the construction contract documents.

Policy Requirements

This policy is intended to prevent the off-site relocation of excavated soil generated from MassDOT projects to areas near residential receptors and to control potential fugitive dusts and/or contaminants. To that end, excavated soil may not be moved from the project site without knowledge of the content of the material. Knowledge may include visual field observations for presence of staining, odor, and/or debris, screening with a photoionization detector (PID), laboratory analysis, and/or site history. Pavement millings and other non-soil materials are not subject to the requirements of this Policy Directive.

Moving soil from a MassDOT project site to a temporary off-site storage location must be approved in writing by the District Highway Director.

The Contractor must select a storage location that is at least 500 feet away from residential receptors, as defined herein to include, but not be limited to, residential dwellings, residentially

zoned property, schools, daycare facilities, playgrounds, parks, recreational areas, hospitals, elderly housing and convalescent facilities.

Temporary off-site storage of excavated soil from a MassDOT project is only permissible at a location approved and permitted by MassDOT. The temporary storage location should be located within the same municipality where the soil was excavated, where possible. Stockpiled soil must be securely covered, and appropriate measures must be taken to minimize fugitive dust and erosion.

Signs indicating the source of the soil, the date the soil was generated, and contact information must be erected and maintained until the stockpiled soils are transported to a disposal facility or reused on the project site.

Implementation Procedures

To ensure that off-site storage of excavated soils is managed properly on MassDOT projects, this policy requires the following:

1. Off-Site Stockpile Storage Locations

- a. The Contractor shall provide proposed off-site storage locations to the Engineer for approval at least 30 days prior to transporting soil off site. Off-site storage locations should be in the same municipality as the work site.
- b. The Contractor shall keep excavated soil on site until adequately characterized to the satisfaction of the Engineer.
- c. The Contractor shall provide notification of the approved off-site storage location to the local Board of Health and the Town Manager's/Mayor's Office at least 7-days prior to transporting soil off site.
- d. The Contractor shall provide the Engineer with at least 3-days' notice prior to transporting soil off site.
- e. For off-site storage locations on MassDOT property, the Contractor is required to obtain an Access Permit through the District Permits Office prior to storage of soil or other materials. MassDOT will issue these permits at no cost to the Contractor. Information to be submitted by the Contractor as part of the permit application shall include:
 - i. A description of material to be stored off-site, including available analytical data;
 - ii. A figure of the location with distances to residences and residential receptors; and
 - iii. Anticipated duration of temporary storage.
- f. Stockpile locations should not be within 500 feet of residential receptors (e.g., residential dwellings, residentially zoned property, schools, daycare facilities, playgrounds, parks, recreational areas, hospitals, elderly housing and convalescent facilities).
 - i. If the stockpile location must be within 500 feet of residential receptors, then soil must be less than RCS-1 (per 310 CMR 40.1600) and free of potentially hazardous or regulated items.

- g. For off-site storage locations on non-MassDOT property, the Contractor must notify the property owner(s) at least 7 days prior to transporting material.
- h. Exceptions to these rules will be reviewed by MassDOT and may be approved by the District Highway Director on a case-by-case basis.

2. Off-Site Stockpile Management

- a. The Contractor shall keep soil stockpiles on impermeable surfaces (e.g., asphalt or concrete) or on 10-mil polyethylene sheeting.
- b. The Contractor shall cover soil stockpiles with 10-mil polyethylene sheeting and surround with a berm made of hay bales, straw wattles, or similar.
 - i. Piles that are actively being worked on must be covered and re-secured at the end of the work shift.
- c. The Contractor shall label stockpiles with signs, including:
 - i. Location of origin (including any Release Tracking Numbers)
 - ii. Stockpile ID number (including MassDOT District office-assigned tracking ID, if different)
 - iii. Date of initial accumulation
 - iv. Applicable telephone numbers for the Contractor and MassDOT.
- d. The Contractor shall mitigate fugitive dust at storage locations under the direction of an appropriately trained/certified environmental professional.
- e. The Contractor shall remedy noncompliance with this policy within 48 hours.
- f. The Contractor shall remedy noncompliance with this policy on the SAME DAY for potentially hazardous material, as determined by the Engineer.
- g. The Contractor shall handle excavated soil according to federal, state, and local regulations.
- h. The Contractor shall use appropriate shipping documents for all movements of excavated soil on public roadways (e.g., Bill of Lading, Material Shipping Record, Manifest, Asbestos Waste Shipment Record, etc.).

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Number: P-22-002Date: 9/23/22

POLICY DIRECTIVE

Jonathan Gulliver (signature on original)

HIGHWAY ADMINISTRATOR

Use of MassDOT Property for Staging and other Construction-Related Operations

Purpose

This Policy Directive is intended to address the use of MassDOT property by MassDOT Contractors for construction staging and other construction-related operations that are not specifically defined in the construction contract. Such use of MassDOT property will only be allowed if permitted by the District Office in accordance with 700 CMR 13.00, Approval of Access to MassDOT Highways and Other Property. This includes the use of MassDOT property for staging, laydown, and storage of equipment and materials, including soil excavated from a project site.

This Policy Directive requires the Contractor/applicant to obtain a Non-Vehicular Access Permit from MassDOT to use MassDOT property for these purposes.

This Policy Directive is effective immediately and applies to all MassDOT construction projects.

General Permit Considerations and Conditions

In addition to other normal MassDOT Access Permit procedures, MassDOT shall consider the following during the application, review, implementation and monitoring processes of Access Permits required by this Policy Directive:

- Storage and placement of the Contractor's equipment and materials should not be allowed within the clear zone of the roadway.
- Stockpiled soils should not be located within 500 feet of residential receptors, as defined herein to include, but not be limited to, residential dwellings, residentially zoned property, schools, daycare facilities, playgrounds, parks, recreational areas, hospitals, elderly housing and convalescent facilities.
- The Contractor/applicant shall identify the access/egress locations of the proposed storage areas. MassDOT will only approve locations determined to be safe for roadway users, construction workers and the general public.
- The Contractor may be required to submit a Traffic Management Plan and/or Lighting Plan for MassDOT review and approval as part of the permit application, depending on the proposed use of the area.

- The Contractor shall submit the permit application through MassDOT's online State Highway Access Permit System (SHAPS).
- MassDOT will waive the permit application fee for any application received from a MassDOT Contractor for any permit required by this Policy Directive and will waive any subsequent amendment and extension fees that may otherwise be required.
- MassDOT will review the permit application in accordance with applicable standard procedures and will apply standard permit terms and conditions, as necessary.
- The Resident Engineer will verify that the permit is approved before allowing the Contractor to use the affected area for the requested purpose.
- Areas permitted are for use by the approved applicant only and are not to be shared with or used by other vendors. Subcontractors specifically engaged with the applicant working on the specific MassDOT project will be allowed to use the area in accordance with the terms of the permit.
- Permits are issued on an annual basis and will require the Contractor to file for an extension each year to continue use.

Exemptions from Permit Requirements

Equipment and materials being used for active construction operations and located within the work zone of the construction contract are exempt from this permit requirement, provided they do not interfere with the safety or operation of the roadway or the work zone. Examples of these types of exempt uses are:

- Equipment and materials parked or stored within a protected (barriered) work zone.
- Materials placed in the work zone prior to same-day installation or use.
- Soils excavated temporarily and scheduled to be replaced, such as for trenching operations or for installation of drainage structures.

DOCUMENT A00881

**UNITED STATE DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE**

Not Likely to Adversely Affect (NLAA) Determination Letter

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United States Department of the Interior

FISH AND WILDLIFE SERVICE
New England Ecological Services Field Office
70 Commercial Street, Suite 300
Concord, NH 03301-5094
Phone: (603) 223-2541 Fax: (603) 223-0104



In Reply Refer To:

06/03/2025 19:10:50 UTC

Project code: 2024-0084984

Project Name: 612514 - CUMMINGTON- BRIDGE PRESERVATION, C-21-002, ROUTE 9
OVER WESTFIELD RIVER

Federal Nexus: yes

Federal Action Agency (if applicable): Federal Highway Administration

Subject: Federal agency coordination under the Endangered Species Act, Section 7 for
'612514 - CUMMINGTON- BRIDGE PRESERVATION, C-21-002, ROUTE 9
OVER WESTFIELD RIVER'

Dear Lindsey Forg:

This letter records your determination using the Information for Planning and Consultation (IPaC) system provided to the U.S. Fish and Wildlife Service (Service) on June 03, 2025, for '612514 - CUMMINGTON- BRIDGE PRESERVATION, C-21-002, ROUTE 9 OVER WESTFIELD RIVER' (here forward, Project). This project has been assigned Project Code 2024-0084984 and all future correspondence should clearly reference this number. **Please carefully review this letter. Your Endangered Species Act (Act) requirements may not be complete.**

Ensuring Accurate Determinations When Using IPaC

The Service developed the IPaC system and associated species' determination keys in accordance with the Endangered Species Act of 1973 (ESA; 87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.) and based on a standing analysis. All information submitted by the Project proponent into IPaC must accurately represent the full scope and details of the Project.

Failure to accurately represent or implement the Project as detailed in IPaC or the Northern Long-eared Bat and Tricolored Bat Range-wide Determination Key (DKey), invalidates this letter. ***Answers to certain questions in the DKey commit the project proponent to implementation of conservation measures that must be followed for the ESA determination to remain valid. Note that conservation measures for northern long-eared bat and tricolored bat may differ. If both bat species are present in the action area and the key suggests more conservative measures for one of the species for your Project, the Project may need to apply***

the most conservative measures in order to avoid adverse effects. If unsure which conservation measures should be applied, please contact the appropriate Ecological Services Field Office.

Determination for the Northern Long-Eared Bat and Tricolored Bat

Based on your IPaC submission and a standing analysis completed by the Service, you determined the proposed Project will have the following effect determinations:

Species	Listing Status	Determination
Tricolored Bat (<i>Perimyotis subflavus</i>)	Proposed Endangered	NLAA

Federal agencies must consult with U.S. Fish and Wildlife Service under section 7(a)(2) of the Endangered Species Act (ESA) when an action *may affect* a listed species. Tricolored bat is proposed for listing as endangered under the ESA, but not yet listed. For actions that may affect a proposed species, agencies cannot consult, but they can *confer* under the authority of section 7(a)(4) of the ESA. Such conferences can follow the procedures for a consultation and be adopted as such if and when the proposed species is listed. Should the tricolored bat be listed, agencies must review projects that are not yet complete, or projects with ongoing effects within the tricolored bat range that previously received a NE or NLAA determination from the key to confirm that the determination is still accurate.

Unless the Service advises you within 15 days of the date of this letter that your IPaC-assisted determination was incorrect, this letter verifies that consultation on the Action is complete for northern long-eared bat and/or tricolored bat and no further action is necessary unless either of the following occurs:

- new information reveals effects of the action that may affect the northern long-eared bat or tricolored bat in a manner or to an extent not previously considered; or,
- the identified action is subsequently modified in a manner that causes an effect to the northern long-eared bat or tricolored bat that was not considered when completing the determination key.

15-Day Review Period

As indicated above, the Service will notify you within 15 calendar days if we determine that this proposed Action does not meet the criteria for a “may affect, not likely to adversely affect” (NLAA) determination for the northern long-eared bat and/or tricolored bat. If we do not notify you within that timeframe, you may proceed with the Action under the terms of the NLAA concurrence provided here. This verification period allows the identified Ecological Services Field Office to apply local knowledge to evaluation of the Action, as we may identify a small subset of actions having impacts that we did not anticipate when developing the key. In such cases, the identified Ecological Services Field Office may request additional information to verify the effects determination reached through the Northern Long-eared Bat and Tricolored Bat DKey.

Other Species and Critical Habitat that May be Present in the Action Area

The IPaC-assisted determination key for the northern long-eared bat and tricolored bat does not apply to the following ESA-protected species and/or critical habitat that also may occur in your Action area:

- Monarch Butterfly *Danaus plexippus* Proposed Threatened

You may coordinate with our Office to determine whether the Action may affect the species and/or critical habitat listed above. Note that reinitiation of consultation would be necessary if a new species is listed or critical habitat designated that may be affected by the identified action before it is complete.

If you have any questions regarding this letter or need further assistance, please contact the New England Ecological Services Field Office and reference Project Code 2024-0084984 associated with this Project.

Action Description

You provided to IPaC the following name and description for the subject Action.

1. Name

612514 - CUMMINGTON- BRIDGE PRESERVATION, C-21-002, ROUTE 9 OVER WESTFIELD RIVER

2. Description

The following description was provided for the project '612514 - CUMMINGTON- BRIDGE PRESERVATION, C-21-002, ROUTE 9 OVER WESTFIELD RIVER':

612514 - CUMMINGTON- BRIDGE PRESERVATION, C-21-002, ROUTE 9 OVER WESTFIELD RIVER

Monarch Butterfly: Proposed Threatened Species only. The project action will not jeopardize the continued existence of the proposed species.

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@42.455915899999994,-72.88475009999999,14z>



DETERMINATION KEY RESULT

Based on the answers provided, the proposed Action is consistent with a determination of “may affect, but not likely to adversely affect” for a least one species covered by this determination key.

QUALIFICATION INTERVIEW

1. Does the proposed project include, or is it reasonably certain to cause, intentional take of listed bats or any other listed species?

Note: Intentional take is defined as take that is the intended result of a project. Intentional take could refer to research, direct species management, surveys, and/or studies that include intentional handling/encountering, harassment, collection, or capturing of any individual of a federally listed threatened, endangered or proposed species?

No

2. Is the action area wholly within Zone 2 of the year-round active area for northern long-eared bat and/or tricolored bat?

Automatically answered

No

3. Does the action area intersect Zone 1 of the year-round active area for northern long-eared bat and/or tricolored bat?

Automatically answered

No

4. Does any component of the action involve leasing, construction or operation of wind turbines? Answer 'yes' if the activities considered are conducted with the intention of gathering survey information to inform the leasing, construction, or operation of wind turbines.

Note: For federal actions, answer ‘yes’ if the construction or operation of wind power facilities is either (1) part of the federal action or (2) would not occur but for a federal agency action (federal permit, funding, etc.).

No

5. Is the proposed action authorized, permitted, licensed, funded, or being carried out by a Federal agency in whole or in part?

Yes

6. Is the Federal Highway Administration (FHWA), Federal Railroad Administration (FRA), or Federal Transit Administration (FTA) funding or authorizing the proposed action, in whole or in part?

Yes

7. Are you an employee of the federal action agency or have you been officially designated in writing by the agency as its designated non-federal representative for the purposes of Endangered Species Act Section 7 informal consultation per 50 CFR § 402.08?

Note: This key may be used for federal actions and for non-federal actions to facilitate section 7 consultation and to help determine whether an incidental take permit may be needed, respectively. This question is for information purposes only.

Yes

8. Is the lead federal action agency the Environmental Protection Agency (EPA) or Federal Communications Commission (FCC)? Is the Environmental Protection Agency (EPA) or Federal Communications Commission (FCC) funding or authorizing the proposed action, in whole or in part?

No

9. Is the lead federal action agency the Federal Energy Regulatory Commission (FERC)?

No

10. [Semantic] Is the action area located within 0.5 miles of a known bat hibernaculum? Note: The map queried for this question contains proprietary information and cannot be displayed. If you need additional information, please contact your State wildlife agency.

Automatically answered

No

11. Does the action area contain any winter roosts or caves (or associated sinkholes, fissures, or other karst features), mines, rocky outcroppings, or tunnels that could provide habitat for hibernating bats?

No

12. Does the action area contain (1) talus or (2) anthropogenic or naturally formed rock shelters or crevices in rocky outcrops, rock faces or cliffs?

No

13. Will the action cause effects to a bridge?

Note: Covered bridges should be considered as bridges in this question.

Yes

14. Has a site-specific bridge assessment following [USFWS guidelines](#) been completed?

Note: For information on conducting a bridge/structure assessment, please see Appendix K in the USFWS' Range-wide Indiana Bat and Northern Long-eared Bat Survey Guidelines at: <https://www.fws.gov/media/range-wide-indiana-bat-and-northern-long-eared-bat-survey-guidelines> Additional resources can be found at: <https://www.fws.gov/media/bats-and-transportation-structures-references-and-additional-resources> and a training video is located at: <https://www.youtube.com/watch?v=iuFwkT7q8Ws>.

Yes

15. Was evidence of bat use found during the bridge assessment?

No

SUBMITTED DOCUMENTS

- 612514_Cummington_Bridge_Assessment.pdf <https://ipac.ecosphere.fws.gov/project/GF53T3DTL5CKRLJZBC6JWQIQRU/projectDocuments/162769945>

16. Did you coordinate with your local Ecological Services Field Office (ESFO) and receive approval of the bridge assessment results? If NO, please contact the appropriate local ESFO before completing this determination key.

Yes

17. Will the action result in effects to a culvert or tunnel at any time of year?

No

18. Are trees present within 1000 feet of the action area?

Note: If there are trees within the action area that are of a sufficient size to be potential roosts for bats answer "Yes". If unsure, additional information defining suitable summer habitat for the northern long-eared bat and tricolored bat can be found in Appendix A of the USFWS' Range-wide Indiana Bat and Northern long-eared bat Survey Guidelines at: <https://www.fws.gov/media/range-wide-indiana-bat-and-northern-long-eared-bat-survey-guidelines>.

Yes

19. Does the action include the intentional exclusion of bats from a building or structure?

Note: Exclusion is conducted to deny bats' entry or reentry into a building. To be effective and to avoid harming bats, it should be done according to established standards. If your action includes bat exclusion and you are unsure whether northern long-eared bats or tricolored bats are present, answer "Yes." Answer "No" if there are no signs of bat use in the building/structure. If unsure, contact your local Ecological Services Field Office to help assess whether northern long-eared bats or tricolored bats may be present. Contact a Nuisance Wildlife Control Operator (NWCO) for help in how to exclude bats from a structure safely without causing harm to the bats (to find a NWCO certified in bat standards, search the Internet using the search term "National Wildlife Control Operators Association bats"). Also see the White-Nose Syndrome Response Team's guide for bat control in structures.

No

20. Does the action involve removal, modification, or maintenance of a human-made structure (barn, house, or other building) **known or suspected to contain roosting bats**?

No

21. Will the action cause construction of one or more new roads open to the public?

For federal actions, answer 'yes' when the construction or operation of these facilities is either (1) part of the federal action or (2) would not occur but for an action taken by a federal agency (federal permit, funding, etc.).

No

22. Will the action include or cause any construction or other activity that is reasonably certain to increase average night-time traffic permanently or temporarily on one or more existing roads? **Note:** For federal actions, answer 'yes' when the construction or operation of these facilities is either (1) part of the federal action or (2) would not occur but for an action taken by a federal agency (federal permit, funding, etc.). .

No

23. Will the action include or cause any construction or other activity that is reasonably certain to increase the number of travel lanes on an existing thoroughfare?

For federal actions, answer 'yes' when the construction or operation of these facilities is either (1) part of the federal action or (2) would not occur but for an action taken by a federal agency (federal permit, funding, etc.).

No

24. Will the proposed Action involve the creation of a new water-borne contaminant source (e.g., leachate pond, pits containing chemicals that are not NSF/ANSI 60 compliant)?

Note: For information regarding NSF/ANSI 60 please visit <https://www.nsf.org/knowledge-library/nsf-ansi-standard-60-drinking-water-treatment-chemicals-health-effects>

No

25. Will the proposed action involve the creation of a new point source discharge from a facility other than a water treatment plant or storm water system?

No

26. Will the action include drilling or blasting?

No

27. Will the action involve military training (e.g., smoke operations, obscurant operations, exploding munitions, artillery fire, range use, helicopter or fixed wing aircraft use)?

No

28. Will the proposed action involve the use of herbicides or other pesticides other than herbicides (e.g., fungicides, insecticides, or rodenticides)?

No

29. Will the action include or cause activities that are reasonably certain to cause chronic or intense nighttime noise (above current levels of ambient noise in the area) in suitable summer habitat for the northern long-eared bat or tricolored bat during the active season?

Chronic noise is noise that is continuous or occurs repeatedly again and again for a long time. Sources of chronic or intense noise that could cause adverse effects to bats may include, but are not limited to: road traffic; trains; aircraft; industrial activities; gas compressor stations; loud music; crowds; oil and gas extraction; construction; and mining.

Note: Additional information defining suitable summer habitat for the northern long-eared bat and tricolored bat can be found in Appendix A of the USFWS' Range-wide Indiana Bat and Northern long-eared bat Survey Guidelines at: <https://www.fws.gov/media/range-wide-indiana-bat-and-northern-long-eared-bat-survey-guidelines>.

No

30. Does the action include, or is it reasonably certain to cause, the use of permanent or temporary artificial lighting within 1000 feet of suitable northern long-eared bat or tricolored bat roosting habitat?

Note: Additional information defining suitable summer habitat for the northern long-eared bat and tricolored bat can be found in Appendix A of the USFWS' Range-wide Indiana Bat and Northern long-eared bat Survey Guidelines at: <https://www.fws.gov/media/range-wide-indiana-bat-and-northern-long-eared-bat-survey-guidelines>.

Yes

31. Will the action cause an increase in the extent of suitable forested habitat exposed to artificial lighting?

No

32. Will the action include tree cutting or other means of knocking down or bringing down trees, tree topping, or tree trimming?

Yes

33. Will the proposed action occur exclusively in an already established and currently maintained utility right-of-way?

No

34. Does the action include emergency cutting or trimming of hazard trees in order to remove an imminent threat to human safety or property? See hazard tree note at the bottom of the key for text that will be added to response letters

Note: A "hazard tree" is a tree that is an immediate threat to lives, public health and safety, or improved property.

No

35. Does the project intersect with the 0- 9.9% forest density category?

Automatically answered

No

36. Does the project intersect with the 10.0- 19.9% forest density category map?

Automatically answered

No

37. Does the project intersect with the 20.0- 29.9% forest density category map?

Automatically answered

No

38. Does the project intersect with the 30.0- 100% forest density category map?

Automatically answered

Yes

39. Will the action cause trees to be cut, knocked down, or otherwise brought down across an area greater than 100 acres in total extent?

No

40. Will the proposed action result in the use of prescribed fire?

Note: If the prescribed fire action includes other activities than application of fire (e.g., tree cutting, fire line preparation) please consider impacts from those activities within the previous representative questions in the key. This set of questions only considers impacts from flame and smoke.

No

41. Does the action area intersect the tricolored bat species list area?

Automatically answered

Yes

42. [Semantic] Is the action area located within 0.5 miles of radius of an entrance/opening to any known tricolored bat hibernacula? Note: The map queried for this question contains proprietary information and cannot be displayed. If you need additional information, please contact your State wildlife agency.

Automatically answered

No

43. [Semantic] Is the action area located within 0.25 miles of a culvert that is known to be occupied by northern long-eared or tricolored bats? **Note:** The map queried for this question contains proprietary information and cannot be displayed. If you need additional information, please contact your State wildlife agency.

Automatically answered

No

44. Has a presence/probable absence bat survey targeting the [tricolored bat and following the Service's Range-wide Indiana Bat and Northern Long-Eared Bat Survey Guidelines](#) been conducted within the project area?

Yes

45. Was the presence/probable absence survey conducted within the last 5 years?

Yes

46. Did you coordinate with your Ecological Services Field Office (ESFO) and receive approval of the results? If NO, please contact the appropriate local ESFO before completing this determination key - you may change your answer to 'yes' only after coordinating with the ESFO and uploading survey results.

Yes

47. Did survey results demonstrate the probable absence of tricolored bats?

No

48. Is suitable summer habitat for the tricolored bat present within 1000 feet of project activities?

(If unsure, answer ""Yes."")

Note: If there are trees within the action area that may provide potential roosts for tricolored bats (e.g., clusters of leaves in live and dead deciduous trees, Spanish moss (*Tillandsia usneoides*), clusters of dead pine needles of large live pines) answer ""Yes."" For a complete definition of suitable summer habitat for the tricolored bat, please see Appendix A in the [Service's Range-wide Indiana Bat and Northern long-eared Bat Survey Guidelines](#).

Yes

49. Do any of the trees proposed for cutting or other means of knocking down, bringing down, topping, or trimming provide potential roosts for tricolored bats (e.g., clusters of leaves in live and dead deciduous trees, Spanish moss (*Tillandsia usneoides*), clusters of dead pine needles of large live pine trees)?

Note: Additional information defining suitable summer habitat for the northern long-eared bat and tricolored bat can be found in Appendix A of the USFWS' Range-wide Indiana Bat and Northern long-eared bat Survey Guidelines at: <https://www.fws.gov/media/range-wide-indiana-bat-and-northern-long-eared-bat-survey-guidelines>.

Yes

50. Will any tree cutting/trimming or other knocking or bringing down of trees be conducted during the Pup Season for tricolored bat?

Note: Bat activity periods for your state can be found in Appendix L of the [Service's Range-wide Indiana Bat and Northern long-eared Bat Survey Guidelines](#).

No

51. Do you have any documents that you want to include with this submission?

Yes

SUBMITTED DOCUMENTS

- 612514_CUMMINGTON_acoustic_bridge_survey_reduced.pdf <https://ipac.ecosphere.fws.gov/project/GF53T3DTL5CKRLJZBC6JWQIQRU/projectDocuments/162769544>

PROJECT QUESTIONNAIRE

Enter the extent of the action area (in acres) from which trees will be removed - round up to the nearest tenth of an acre. For this question, include the entire area where tree removal will take place, even if some live or dead trees will be left standing.

0.3

IPAC USER CONTACT INFORMATION

Agency: Massachusetts Department of Transportation

Name: Lindsey Forg

Address: 10 Park Plaza

City: Boston

State: MA

Zip: 02116

Email lindsey.e.forg@dot.state.ma.us

Phone: 8572623378

LEAD AGENCY CONTACT INFORMATION

Lead Agency: Federal Highway Administration

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DOCUMENT B00420

PROPOSAL

CUMMINGTON

For: **Bridge Preservation, C-21-002, Route 9 over Westfield River**

COMMONWEALTH OF MASSACHUSETTS

LOCATION

The work referred to herein is in the Town of CUMMINGTON in Hampshire County, in the Commonwealth of Massachusetts, and is shown by the locus map (Document 00331) in the Proposal Pamphlet, the work locations extend as follows:

Bridge C-21-002 **Station 380+56.19 to Station 381+84.19**

Route 9

Beginning – Station 378+00.00 +/-

Ending –Station 384+50.00 +/-

The contract prices shall include the furnishing of all materials (except as otherwise herein specified), the performing of all the labor requisite or proper, the providing of all necessary machinery, tools, apparatus and other means of construction, the doing of all the abovementioned work in the manner set forth, described and shown in the specifications and on the drawings for the work, and in the form of contract, and the completion thereof within **1155 CALENDAR DAYS** upon receipt of a Notice to Proceed.

The Work of this project is described by the following Items and quantities.

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Project # 612514		Contract # 130933		
Location : CUMMINGTON				
Description : Bridge Preservation, C-21-002, Route 9 over Westfield River				
ITEM #	QUANTITY	ITEM WITH UNIT BID PRICE WRITTEN IN WORDS	UNIT PRICE	AMOUNT
101.	0.1	CLEARING AND GRUBBING AT _____ PER ACRE		
102.1	100	TREE TRIMMING AT _____ PER FOOT		
102.3	16	HERBICIDE TREATMENT OF INVASIVE PLANTS AT _____ PER HOUR		
102.33	8	INVASIVE PLANT MANAGEMENT STRATEGY AT _____ PER HOUR		
102.511	4	TREE PROTECTION - ARMORING AND PRUNING AT _____ EACH		
102.521	110	TREE AND PLANT PROTECTION FENCE AT _____ PER FOOT		
103.	1	TREE REMOVED - DIAMETER UNDER 24 INCHES AT _____ EACH		
107.971	15,000	STRUCTURAL STEEL REPAIR - STRINGER REPLACEMENT AT _____ PER POUND		
107.972	2,500	STRUCTURAL STEEL REPAIR - STRINGER STUBS AT _____ PER POUND		

Project # 612514		Contract # 130933		
Location : CUMMINGTON				
Description : Bridge Preservation, C-21-002, Route 9 over Westfield River				
ITEM #	QUANTITY	ITEM WITH UNIT BID PRICE WRITTEN IN WORDS	UNIT PRICE	AMOUNT
107.973	4,800	STRUCTURAL STEEL REPAIR - SIDEWALK STRINGER SW1 AT _____ PER POUND		
107.974	3,500	STRUCTURAL STEEL REPAIR - SIDEWALK STRINGER SW2 AT _____ PER POUND		
107.975	3,600	STRUCTURAL STEEL REPAIR - SIDEWALK STRINGER SW3 AT _____ PER POUND		
107.976	26,500	STRUCTURAL STEEL - REPAIRS AT _____ PER POUND		
107.980	75	RIVET REPLACEMENTS WITH HIGH STRENGTH BOLTS AT _____ EACH		
114.1	1	DEMOLITION OF SUPERSTRUCTURE OF BRIDGE NO. C-21-002 (0JJ) AT _____ LUMP SUM		
120.	280	EARTH EXCAVATION AT _____ PER CUBIC YARD		
121.	7	CLASS A ROCK EXCAVATION AT _____ PER CUBIC YARD		
127.12	8	REINFORCED CONCRETE EXCAVATION FOR REPAIRS AT _____ PER CUBIC YARD		

Project # 612514		Contract # 130933		
Location : CUMMINGTON				
Description : Bridge Preservation, C-21-002, Route 9 over Westfield River				
ITEM #	QUANTITY	ITEM WITH UNIT BID PRICE WRITTEN IN WORDS	UNIT PRICE	AMOUNT
140.	170	BRIDGE EXCAVATION AT _____ PER CUBIC YARD		
141.1	6	TEST PIT FOR EXPLORATION AT _____ PER CUBIC YARD		
142.	30	CLASS B TRENCH EXCAVATION AT _____ PER CUBIC YARD		
144.	2	CLASS B ROCK EXCAVATION AT _____ PER CUBIC YARD		
146.	3	DRAINAGE STRUCTURE REMOVED AT _____ EACH		
150.	5	ORDINARY BORROW AT _____ PER CUBIC YARD		
151.	65	GRAVEL BORROW AT _____ PER CUBIC YARD		
151.2	70	GRAVEL BORROW FOR BACKFILLING STRUCTURES AND PIPES AT _____ PER CUBIC YARD		
156.	110	CRUSHED STONE AT _____ PER TON		

Project # 612514		Contract # 130933		
Location : CUMMINGTON				
Description : Bridge Preservation, C-21-002, Route 9 over Westfield River				
ITEM #	QUANTITY	ITEM WITH UNIT BID PRICE WRITTEN IN WORDS	UNIT PRICE	AMOUNT
170.	100	FINE GRADING AND COMPACTING - SUBGRADE AREA AT _____ PER SQUARE YARD		
170.3	70	SCARIFYING AND RESHAPING FOR INFILTRATION AREAS AT _____ PER SQUARE YARD		
180.01	1	ENVIRONMENTAL HEALTH AND SAFETY PROGRAM AT _____ LUMP SUM		
180.02	40	PERSONAL PROTECTION LEVEL C UPGRADE AT _____ PER HOUR		
180.03	40	LICENSED SITE PROFESSIONAL SERVICES AT _____ PER HOUR		
181.11	45	DISPOSAL OF UNREGULATED SOIL AT _____ PER TON		
181.12	80	DISPOSAL OF REGULATED SOIL - IN-STATE FACILITY AT _____ PER TON		
181.13	310	DISPOSAL OF REGULATED SOIL - OUT-OF-STATE FACILITY AT _____ PER TON		
181.14	45	DISPOSAL OF HAZARDOUS WASTE AT _____ PER TON		

Project # 612514		Contract # 130933		
Location : CUMMINGTON				
Description : Bridge Preservation, C-21-002, Route 9 over Westfield River				
ITEM #	QUANTITY	ITEM WITH UNIT BID PRICE WRITTEN IN WORDS	UNIT PRICE	AMOUNT
201.	8	CATCH BASIN AT _____ EACH		
202.	4	MANHOLE AT _____ EACH		
204.	1	GUTTER INLET AT _____ EACH		
209.6	1	OUTLET CONTROL STRUCTURE AT _____ EACH		
221.1	5	FRAME AND COVER - SECURED AT _____ EACH		
222.1	10	FRAME AND GRATE - MASSDOT CASCADE TYPE AT _____ EACH		
223.2	3	FRAME AND GRATE (OR COVER) REMOVED AND DISCARDED AT _____ EACH		
227.3	10	REMOVAL OF DRAINAGE STRUCTURE SEDIMENT AT _____ PER CUBIC YARD		
227.31	240	REMOVAL OF DRAINAGE PIPE SEDIMENT AT _____ PER FOOT		

Project # 612514		Contract # 130933		
Location : CUMMINGTON				
Description : Bridge Preservation, C-21-002, Route 9 over Westfield River				
ITEM #	QUANTITY	ITEM WITH UNIT BID PRICE WRITTEN IN WORDS	UNIT PRICE	AMOUNT
234.12	300	12 INCH DRAINAGE PIPE - OPTION AT _____ PER FOOT		
235.12	2	12 INCH DRAINAGE PIPE FLARED END - OPTION AT _____ EACH		
238.12	130	12 INCH DUCTILE IRON PIPE AT _____ PER FOOT		
271.121	60	12 INCH AND UNDER PIPE REMOVED AND DISCARDED AT _____ PER FOOT		
402.5	45	IMPERVIOUS BARRIER MATERIAL AT _____ PER CUBIC YARD		
403.	2,640	RECLAIMED PAVEMENT FOR BASE COURSE AND/OR SUB-BASE AT _____ PER SQUARE YARD		
415.2	940	PAVEMENT FINE MILLING AT _____ PER SQUARE YARD		
443.	14.5	WATER FOR ROADWAY DUST CONTROL AT _____ PER 1000 GALLONS		
450.221	305	SUPERPAVE SURFACE COURSE - 9.5 POLYMER (SSC - 9.5 - P) AT _____ PER TON		

Project # 612514		Contract # 130933		
Location : CUMMINGTON				
Description : Bridge Preservation, C-21-002, Route 9 over Westfield River				
ITEM #	QUANTITY	ITEM WITH UNIT BID PRICE WRITTEN IN WORDS	UNIT PRICE	AMOUNT
450.31	300	SUPERPAVE INTERMEDIATE COURSE - 12.5 (SIC -12.5) AT _____ PER TON		
450.42	595	SUPERPAVE BASE COURSE - 37.5 (SBC - 37.5) AT _____ PER TON		
451.	5	HMA FOR PATCHING AT _____ PER TON		
452.	505	ASPHALT EMULSION FOR TACK COAT AT _____ PER GALLON		
453.	2,730	HMA JOINT ADHESIVE AT _____ PER FOOT		
467.1	230	HIGH FRICTION SURFACE - GREEN (BIKE LANES) AT _____ PER SQUARE FOOT		
472.	60	TEMPORARY ASPHALT PATCHING AT _____ PER TON		
477.1	710	MILLED RUMBLE STRIP (TYPE B) AT _____ PER FOOT		
477.2	540	MILLED RUMBLE STRIP (TYPE C) AT _____ PER FOOT		

Project # 612514		Contract # 130933		
Location : CUMMINGTON				
Description : Bridge Preservation, C-21-002, Route 9 over Westfield River				
ITEM #	QUANTITY	ITEM WITH UNIT BID PRICE WRITTEN IN WORDS	UNIT PRICE	AMOUNT
504.	755	GRANITE CURB TYPE VA4 - STRAIGHT AT _____ PER FOOT		
504.1	165	GRANITE CURB TYPE VA4 - CURVED AT _____ PER FOOT		
504.2	2	GRANITE CURB TYPE VA4 - SPLAYED END AT _____ EACH		
509.	15	GRANITE TRANSITION CURB FOR PEDESTRIAN CURB RAMPS - STRAIGHT AT _____ PER FOOT		
509.1	20	GRANITE TRANSITION CURB FOR PEDESTRIAN CURB RAMPS - CURVED AT _____ PER FOOT		
514.	3	GRANITE CURB INLET - STRAIGHT AT _____ EACH		
515.	1	GRANITE CURB INLET - CURVED AT _____ EACH		
594.	870	CURB REMOVED AND DISCARDED AT _____ PER FOOT		
595.	3	CURB INLET REMOVED AND DISCARDED AT _____ EACH		

Project # 612514		Contract # 130933		
Location : CUMMINGTON				
Description : Bridge Preservation, C-21-002, Route 9 over Westfield River				
ITEM #	QUANTITY	ITEM WITH UNIT BID PRICE WRITTEN IN WORDS	UNIT PRICE	AMOUNT
620.13	380	GUARDRAIL, TL-3 (SINGLE FACED) AT _____ PER FOOT		
620.33	50	GUARDRAIL - CURVED, TL-3 (SINGLE FACED) AT _____ PER FOOT		
627.1	1	TRAILING ANCHORAGE AT _____ EACH		
627.83	2	GUARDRAIL TANGENT END TREATMENT, TL-3 AT _____ EACH		
628.21	1	TRANSITION TO NCHRP 350 GUARDRAIL AT _____ EACH		
628.24	4	TRANSITION TO BRIDGE RAIL AT _____ EACH		
628.315	3	TEMPORARY IMPACT ATTENUATOR, REDIRECTIVE, TL-3 AT _____ EACH		
628.4	3	TEMPORARY IMPACT ATTENUATOR, REMOVED AND RESET AT _____ EACH		
628.5	1	BARRIER AND ATTENUATOR - REMOVED AND STACKED AT _____ LUMP SUM		

Project # 612514		Contract # 130933		
Location : CUMMINGTON				
Description : Bridge Preservation, C-21-002, Route 9 over Westfield River				
ITEM #	QUANTITY	ITEM WITH UNIT BID PRICE WRITTEN IN WORDS	UNIT PRICE	AMOUNT
630.2	95	HIGHWAY GUARD REMOVED AND DISCARDED AT _____ PER FOOT		
657.	350	TEMPORARY FENCE AT _____ PER FOOT		
697.1	16	SILT SACK AT _____ EACH		
698.3	40	GEOTEXTILE FABRIC FOR SEPARATION AT _____ PER SQUARE YARD		
701.	70	CEMENT CONCRETE SIDEWALK AT _____ PER SQUARE YARD		
701.2	25	CEMENT CONCRETE PEDESTRIAN CURB RAMP AT _____ PER SQUARE YARD		
702.	8	HOT MIX ASPHALT SIDEWALK OR DRIVEWAY AT _____ PER TON		
706.1	8	BRICK WALK REMOVED AND RELAID AT _____ PER SQUARE YARD		
722.3	1	SCHEDULE OF OPERATIONS (TYPE C) - FIXED PRICE \$57,000 AT Fifty Seven Thousand Dollars LUMP SUM	\$57,000.00	\$57,000.00

Project # 612514		Contract # 130933		
Location : CUMMINGTON				
Description : Bridge Preservation, C-21-002, Route 9 over Westfield River				
ITEM #	QUANTITY	ITEM WITH UNIT BID PRICE WRITTEN IN WORDS	UNIT PRICE	AMOUNT
740.	37	ENGINEER'S FIELD OFFICE AND EQUIPMENT (TYPE A) AT _____ PER MONTH		
748.	1	MOBILIZATION AT _____ LUMP SUM		
751.1	150	LOAM FOR LAWNS AT _____ PER CUBIC YARD		
756.1	1	CONSTRUCTION PERIOD POLLUTION PREVENTION AND EROSION AND SEDIMENTATION CONTROL PLAN AT _____ LUMP SUM		
765.	685	SEEDING AT _____ PER SQUARE YARD		
765.454	350	WETLAND/BASIN MIX - SEASONALLY FLOODED AT _____ PER SQUARE YARD		
767.121	1,025	SEDIMENT CONTROL BARRIER AT _____ PER FOOT		
769.	180	PAVEMENT MILLING MULCH UNDER GUARD RAIL AT _____ PER FOOT		
816.71	1	PORTABLE SOLAR POWERED TRAFFIC SIGNAL SYSTEM AT _____ LUMP SUM		

Project # 612514		Contract # 130933		
Location : CUMMINGTON				
Description : Bridge Preservation, C-21-002, Route 9 over Westfield River				
ITEM #	QUANTITY	ITEM WITH UNIT BID PRICE WRITTEN IN WORDS	UNIT PRICE	AMOUNT
832.	15	WARNING-REGULATORY AND ROUTE MARKER - ALUMINUM PANEL (TYPE A) AT _____ PER SQUARE FOOT		
833.7	3	DELINEATION FOR GUARD RAIL TERMINI AT _____ EACH		
847.1	5	SIGN SUP (N/GUIDE)+RTE MKR W/1 BRKWAY POST ASSEMBLY - STEEL AT _____ EACH		
848.1	2	SIGN SUP (N/GUIDE)+RTE MKR W/2 BRKWAY POST ASSEMBLIES-STEEL AT _____ EACH		
852.	635	SAFETY SIGNING FOR TRAFFIC MANAGEMENT AT _____ PER SQUARE FOOT		
853.1	7	PORTABLE BREAKAWAY BARRICADE TYPE III AT _____ EACH		
853.21	280	TEMPORARY BARRIER REMOVED AND RESET AT _____ PER FOOT		
853.33	780	TEMPORARY BARRIER - LIMITED DEFLECTION (TL-3) AT _____ PER FOOT		
853.403	20	TRUCK MOUNTED ATTENUATOR AT _____ PER DAY		

Project # 612514		Contract # 130933		
Location : CUMMINGTON				
Description : Bridge Preservation, C-21-002, Route 9 over Westfield River				
ITEM #	QUANTITY	ITEM WITH UNIT BID PRICE WRITTEN IN WORDS	UNIT PRICE	AMOUNT
853.8	5	TEMPORARY ILLUMINATION FOR WORK ZONE AT _____ PER DAY		
854.016	1,915	TEMPORARY PAVING MARKINGS - 6 INCH (PAINTED) AT _____ PER FOOT		
854.1	920	PAVEMENT MARKING REMOVAL AT _____ PER SQUARE FOOT		
856.	100	ARROW BOARD AT _____ PER DAY		
856.12	28	PORTABLE CHANGEABLE MESSAGE SIGN AT _____ PER DAY		
859.	27,000	REFLECTORIZED DRUM AT _____ PER DAY		
859.1	2,500	REFLECTORIZED DRUMS WITH SEQUENTIAL FLASHING WARNING LIGHTS AT _____ PER DAY		
864.04	60	PAVEMENT ARROWS AND LEGENDS REFLECTORIZED WHITE (THERMOPLASTIC) AT _____ PER SQUARE FOOT		
864.35	60	SLOTTED PAVEMENT MARKER TWO-WAY YELLOW/YELLOW AT _____ EACH		

Project # 612514		Contract # 130933		
Location : CUMMINGTON				
Description : Bridge Preservation, C-21-002, Route 9 over Westfield River				
ITEM #	QUANTITY	ITEM WITH UNIT BID PRICE WRITTEN IN WORDS	UNIT PRICE	AMOUNT
866.206	2,590	6 INCH REFLECTORIZED WHITE LINE (POLYUREA) (RECESSED) AT _____ PER FOOT		
866.212	80	12 INCH REFLECTORIZED WHITE LINE (POLYUREA) (RECESSED) AT _____ PER FOOT		
867.206	1,360	6 INCH REFLECTORIZED YELLOW LINE (POLYUREA) (RECESSED) AT _____ PER FOOT		
874.2	7	TRAFFIC SIGN REMOVED AND RESET AT _____ EACH		
905.	8	4000 PSI, 3/8 INCH, 660 CEMENT CONCRETE AT _____ PER CUBIC YARD		
909.2	100	CEMENTITIOUS MORTAR FOR PATCHING AT _____ PER SQUARE FOOT		
912.5	500	DRILLED AND GROUTED #5 DOWELS AT _____ EACH		
961.201	1	CLEAN (FULL REMOVAL) AND PAINT STEEL BRIDGE NO. C-21-002 AT _____ LUMP SUM		
983.521	1	STREAMBED RESTORATION AT _____ LUMP SUM		

Project # 612514		Contract # 130933		
Location : CUMMINGTON				
Description : Bridge Preservation, C-21-002, Route 9 over Westfield River				
ITEM #	QUANTITY	ITEM WITH UNIT BID PRICE WRITTEN IN WORDS	UNIT PRICE	AMOUNT
986.2	15	MODIFIED ROCKFILL AT _____ PER CUBIC YARD		
988.01	90	SEDIMENT FOREBAY PAVING AT _____ PER SQUARE FOOT		
991.1	1	CONTROL OF WATER - STRUCTURE NO. C-21-002 AT _____ LUMP SUM		
992.1	1	ALTERATION TO BRIDGE STRUCTURE NO. C-21-002 AT _____ LUMP SUM		
Total Qty: 112,506.6				

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DOCUMENT B00853

SCHEDULE OF PARTICIPATION BY DISADVANTAGED BUSINESS ENTERPRISES (DBES)

PRIME BIDDER: _____

DATE OF BID OPENING: _____ PROJECT NO.: 612514FEDERAL AID PROJECT NO. HIP(NGB)-003S(828)PROJECT LOCATION: CUMMINGTON

Name, Address, and Phone Number(s) of DBE	Name of Activity	(a) [†] DBE Contractor Activity Amount <i>Construction Work</i>	(b) DBE Other Business Amount <i>Services, Supplies, Material</i>	(c) Total amount eligible for credit under rules in Section 6 of Document 00719 - DBE Special Provisions
Total Bid Amount	TOTALS:	\$	\$	\$
\$	DBE Percentage of Total Bid:	%	%	%

[†]Column (a) must be at least one-half of the DBE participation goal. Attach additional sheets as necessary.Is MassDOT Document B00855 (Joint Check Approval) being submitted for any of the above? ☐ Yes ☐ No☐ Not Known at This TimeWill any of the contractors listed above be using a third party (i.e. manufacturer) to deliver materials or perform any portion of work by a third party? ☐ Yes ☐ No

CERTIFICATION: I HEREBY DECLARE, TO THE BEST OF MY KNOWLEDGE, THAT **I HAVE READ THE SPECIAL PROVISIONS FOR PARTICIPATION BY DISADVANTAGED BUSINESS ENTERPRISES - DOCUMENT 00719.** BOTH THIS SCHEDULE AND THE RELEVANT AND ACCOMPANYING LETTER(S) OF INTENT ARE IN FULL COMPLIANCE WITH THE PROVISIONS OF, AND IN ACCORDANCE WITH, TITLE 49 CODE OF FEDERAL REGULATIONS, PART 26 (49 CFR Part 26).

SIGNATURE: _____ DATE _____

NAME AND TITLE (*PRINT*): _____

EMAIL ADDRESS: _____ TEL NO.: _____

*** END OF DOCUMENT ***

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DOCUMENT B00854

DISADVANTAGED BUSINESS ENTERPRISES (DBE) PARTICIPATION
LETTER OF INTENT

(To be completed by the DBE – Page 1 of 2)

TO: _____ (Prime Bidder)

FROM: _____ (DBE Firm)

RE: PROJECT NO.: 612514 FEDERAL AID PROJECT NO.: HIP(NGB)-003S(828)PROJECT LOCATION: CUMMINGTON

DATE OF BID OPENING: _____

I, _____, *Print Name* authorized signatory of the above-referenced DBE firm hereby declare:

1. My company is currently certified as a Disadvantaged Business Enterprise (DBE) by the Massachusetts Supplier Diversity Office (“SDO”), formerly known as the State Office of Minority and Women Business Assistance (SOMWBA), as a: (check all applicable, see Section 1 of the Special Provisions For Participation By Disadvantaged Business Enterprises, MassDOT Document 00719 additional guidance is available at Title 49, Code of Federal Regulations, Part 26.55 (49 CFR Part 26.55)):
☐ CONTRACTOR ☐ REGULAR DEALER ☐ BROKER
☐ MANUFACTURER ☐ TRUCKING OPERATIONS ☐ PROFESSIONAL SERVICES
2. My firm has the ability to manage, supervise and perform the activity described on page 2 of this Letter of Intent. If you are awarded the contract, my company intends to enter into a contract with your firm to perform the items of work or other activity described on the following sheet for the prices indicated.
3. There have been no changes affecting the ownership, control or independence of my company since my last certification review on _____, 20____. If any such change is planned or occurs prior to my company's completion of this proposed work, I will give prior written notification to your firm and to the Massachusetts Department of Transportation (“MassDOT”) Office of Civil Rights and SDO.
4. I have read the MassDOT proposal for the Project which may be entitled “Project Contract Documents and Special Provisions” or the draft “Contract” which includes MassDOT Document 00719, and acknowledge that my company will comply with that document and the requirements of 49 CFR Part 26.
5. For the purpose of obtaining subcontractor approval from MassDOT, my firm will provide to you:
 - A. **The following construction work:**
 - (i) a resume, stating the qualifications and experience, of the superintendent or foreperson who will supervise on site-work;
 - (ii) a list of equipment owned or leased by my firm for use on this project; and
 - (iii) a list of all projects (public or private) upon which my firm is currently performing, is committed to perform, or intends to make a commitment to perform. I shall also include, for each project: the name and telephone number of a contact person for the contracting authority, person, or organization; the dollar value of the work; a description of the work; and my firm's work schedule for the project.
 - B. **The following services, materials or supplies:**
 - (i) a written agreement and invoices for the materials or supplies, and any other documents evidencing the terms of providing such items;
 - (ii) information concerning brokers fees and commissions for providing services or materials; and
 - (iii) a statement concerning whether my firm intends or will be required to use a joint check arrangement; and any other documents that may be required by MassDOT.

DBE Company Authorized Signature

Date _____

DISADVANTAGED BUSINESS ENTERPRISES (DBE) PARTICIPATION
LETTER OF INTENT

(To be completed by the DBE – Page 2 of 2)

DATE OF BID OPENING: _____

PROJECT NUMBER: 612514FEDERAL AID PROJECT NUMBER: HIP(NGB)-003S(828)PROJECT LOCATION: CUMMINGTON

PRIME BIDDER: _____

DBE COMPANY NAME: _____

<u>Item number</u> if applicable	<u>NAICS</u> <u>Code</u>	<u>Description of Activity</u> with notations such as Services, or Brokerage, Installation Only, Material Only, or Complete	<u>Quantity</u>	<u>Unit Price</u>	<u>Amount</u>
				TOTAL AMOUNT:	

Please give full explanations, attach additional sheets if necessary.

I HEREBY VERIFY THAT _____ WILL SOLELY
(DBE company name)
PERFORM THE WORK, OR PROVIDE THE SERVICES OR MATERIALS, AS DESCRIBED ABOVE.

DBE AUTHORIZED SIGNATURE: _____

NAME AND TITLE (PRINT): _____

TELEPHONE NUMBER: _____ FAX NUMBER: _____

EMAIL ADDRESS: _____

*** END OF DOCUMENT ***

Rev'd 9/20/19

DOCUMENT B00855

DBE JOINT CHECK ARRANGEMENT APPROVAL FORM

(to be submitted by Prime Contractor)

Contract No: 130933 Project No. 612514 Federal Aid No.: HIP(NGB)-003S(828)Location: CUMMINGTON Bid Opening Date: _____Project Description: Bridge Preservation, C-21-002, Route 9 over Westfield River

We have received the attached request for the use of a joint check arrangement from _____, a DBE on the above- referenced Contract and _____, a Material Supplier/Vendor for the subject Contract. The DBE has complied with the requirements of 49 CFR Part 26.55(c)(1). In particular, the DBE has:

- a written agreement with the material supplier/vendor;
- applied for credit with the subject material supplier and has supplied the vendor's response;
- shown that it will place all orders to the subject material supplier/vendor;
- made and retains all decision-making responsibilities concerning the materials; and
- provided a Joint Check Agreement that is acceptable to MassDOT;

As the Contractor for the Project, we agree to issue joint checks (made payable to the Material Supplier/Vendor and the DBE) for payment of sums due pursuant to invoices from the Supplier/Vendor and DBE.

Contractor:_____
Company Name_____
Signature
Duly Authorized_____
Printed Name_____
Date_____
Title**SubContractor:**_____
Company Name_____
Signature –
Duly Authorized_____
Printed Name_____
Date_____
Title

*** END OF DOCUMENT ***

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DOCUMENT B00856

JOINT VENTURE AFFIDAVIT

(All Firms)

- All Information Requested By This Schedule Must Be Answered. Additional Sheets May Be Attached.
- If, there is any change in the information submitted, the Joint Venture parties must inform MassDOT Pre-Qualifications Office (and, if one of the companies is a DBE, the Director of Contract Compliance, Office of Civil Rights) *prior* to such change, in writing, either directly or through the Prime Contractor if the Joint Venture is a subcontractor.
- If the Joint Venture Entity will be the bidder on a prime Contract, it must bid and submit all required documents (insurance, worker's compensation, bonds, etc.) in the name of the Joint Venture Entity.

I. Name of Joint Venture: _____

Type of Entity if applicable (Corp., LLC): _____ Filing State _____

Address of joint venture: _____

Phone No(s) for JV Entity: _____ E-mail: _____

Contact Person(s) _____

Tax ID/EIN of Joint Venture: _____ Vendor Code: _____

II. Identify each firm or party to the Joint Venture:

Name of Firm: _____

Address: _____

Phone : _____ E-mail: _____

Contact person(s) _____

Name of Firm: _____

Address: _____

Phone: _____ E-mail: _____

Contact Person(s) _____

III. Describe the role(s) of the each party to the Joint Venture:_____

- IV. Attach a copy of the Joint Venture Agreement.** The proposed Joint Venture Agreement should include specific details including, but not limited to: (1) the contributions of capital and equipment; (2) work items to be performed by each company's forces, (3) work items to be performed under the supervision of any DBE Venturer; (4) the commitment of management, supervisory and operative personnel employed by the DBE to be dedicated to the performance of the Project; and (5) warranty, guaranty, and indemnification clauses.

V. Attach any applicable Corporate or LLC Votes, Authorizations, etc.

VI. Ownership of the Joint Venture:

A. What is the percentage(s) of each company's ownership in the Joint Venture?

ownership percentage(s): _____

ownership percentage(s): _____

B. Specify percentages for each of the following (provide narrative descriptions and other detail as applicable):

1. Sharing of profit and loss: _____

2. Capital contributions:

(a) Dollar amounts of initial contribution: _____

(b) Dollar amounts of anticipated on-going contributions: _____

(c) Contributions of equipment (specify types, quality and quantities of equipment to be provided by each firm): _____

4. Other applicable ownership interests, including ownership options or other agreements, which restrict or limit ownership and/or control:

5. Provide copies of all other written agreements between firms concerning bidding and operation of this Project or projects or contracts.

6. Identify all current contracts and contracts completed during the past two (2) years by either of the Joint Venture partners to this Joint Venture:

VII. Control of and Participation in the Joint Venture. Identify by name and firm those individuals who are, or will be, responsible for and have the authority to engage in the following management functions and policy decisions. (Indicate any limitations to their authority such as dollar limits and co-signatory requirements.):

A. Joint Venture check signing:

B. Authority to enter Contracts on behalf of the Joint Venture:

C. Signing, co-signing and/or collateralizing loans:

D. Acquisition of lines of credit:

E. Acquisition and indemnification of payment and performance bonds:

F. Negotiating and signing labor agreements:

G. Management of contract performance. (*Identify by name and firm only*):

1. Supervision of field operations: _____
2. Major purchases: _____
3. Estimating: _____
4. Engineering: _____

VIII. Financial Controls of Joint Venture:

A. Which firm and/or individual will be responsible for keeping the books of account?

B. Identify the "Managing Partner," if any, and describe the means and measure of their compensation:

C. What authority does each firm have to commit or obligate the other to insurance and bonding companies, financing institutions, suppliers, subcontractors, and/or other parties participating in the performance of this Contract or the work of this Project?

IX. Personnel of Joint Venture: State the approximate number of personnel (by trade) needed to perform the Joint Venture's work under this Contract. Indicate whether they will be employees of the majority firm, DBE firm, or the Joint Venture.

	Firm 1 (number)	Firm 2 (number)	Joint Venture (number)
Trade			
Professional			
Administrative/Clerical			
Unskilled Labor			

Will any personnel proposed for this Project be employees of the Joint Venture?: _____

If so, who: _____

A. Are any proposed Joint Venture employees currently employed by either firm?

Employed by Firm 1: _____ Employed by firm 2 _____

B. Identify by name and firm the individual who will be responsible for Joint Venture hiring: _____

X. Additional Information. Please state any material facts and additional information pertinent to the control and structure of this Joint Venture.

XI. AFFIDAVIT OF JOINT VENTURE PARTIES. The undersigned affirm that the foregoing statements and attached documents are correct and include all material information necessary to identify and explain the terms and operations of our Joint Venture and the intended participation of each firm in the undertaking. Further, the undersigned covenant and agree to provide to MassDOT current, complete and accurate information regarding actual Joint Venture work, payments, and any proposed changes to any provisions of the Joint Venture, or the nature, character of each party to the Joint Venture. We understand that any material misrepresentation will be grounds for terminating any Contract awarded and for initiating action under Federal or State laws concerning false statements.

Firm 1

Firm 2

Signature
Duly Authorized

Signature
Duly Authorized

Printed Name and Title

Printed Name and Title

Date

Date

*** END OF DOCUMENT ***