AB

COMMONWEALTH OF MASSACHUSETTS

CONTRACT DOCUMENTS AND SPECIAL PROVISIONS

PROPOSAL NO.	610777-131930
P.V. =	$5,777,000.00
PLANS	YES

FOR

Federal Aid Project No. BFL(BR-OFF)-0031(020)
Bridge Replacement, A-04-038, Quality Street over Hoosic River

in the Town of

ADAMS

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

This Proposal to be opened and read: **TUESDAY, SEPTEMBER 16, 2025 at 2:00 P.M.**

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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, SEPTEMBER 16, 2025 at 2:00 P.M. **
ADAMS
Federal Aid Project No. BFL(BR-OFF)-0031(020)
Bridge Replacement, A-04-038, Quality Street over Hoosic River
****Date Subject to Change**

PROJECT VALUE = $5,777,000.00

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 $2.924 per gallon, and gasoline $2.449 per gallon, and Steel Base Price Index 354.8. 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, AUGUST 9, 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.

(d) Every contractor awarded a contract by the commonwealth or by any political subdivision thereof shall annually file with the commissioner of capital asset management and maintenance during the term of the contract a financial statement prepared by an independent certified public accountant on the basis of an audit by such accountant. The final statement filed shall include the date of final payment. All statements shall be accompanied by an accountant's report. Such statements shall be made available to the awarding authority upon request.

(e) The office of inspector general, the commissioner of capital asset management and maintenance and any other awarding authority shall enforce the provisions of this section. The commissioner of capital asset management and maintenance may after providing an opportunity for the inspector general and other interested parties to comment, promulgate pursuant to the provisions of chapter thirty A such rules, regulations and guidelines as are necessary to effectuate the purposes of this section. Such rules, regulations and guidelines may be applicable to all awarding authorities. A contractor's failure to satisfy any of the requirements of this section may be grounds for debarment pursuant to section forty-four C of chapter one hundred and forty-nine.

(f) Records and statements required to be made, kept or filed under the provisions of this section shall not be public records as defined in section seven of chapter four and shall not be open to public inspection; provided, however, that such records and statements shall be made available pursuant to the provisions of clause (2) of paragraph (b).

M.G.L. c. 30, § 39O: Suspension, Delay, or Interruption or Failure to Act by Awarding Authority; Adjustment in Contract Price; Submission of Claims.

Section 39O. Every contract subject to the provisions of section thirty-nine M of this chapter or subject to section forty-four A of chapter one hundred forty-nine shall contain the following provisions (a) and (b) in their entirety and, in the event a suspension, delay, interruption or failure to act of the awarding authority increases the cost of performance to any subcontractor, that subcontractor shall have the same rights against the general contractor for payment for an increase in the cost of his performance as provisions (a) and (b) give the general contractor against the awarding authority, but nothing in provisions (a) and (b) shall in any way change, modify or alter any other rights which the general contractor or the subcontractor may have against each other.

(a) The awarding authority may order the general contractor in writing to suspend, delay, or interrupt all or any part of the work for such period of time as it may determine to be appropriate for the convenience of the awarding authority; provided however, that if there is a suspension, delay or interruption for fifteen days or more or due to a failure of the awarding authority to act within the time specified in this contract, the awarding authority shall make an adjustment in the contract price for any increase in the cost of performance of this contract but shall not include any profit to the general contractor on such increase; and provided further, that the awarding authority shall not make any adjustment in the contract price under this provision for any suspension, delay, interruption or failure to act to the extent that such is due to any cause for which this contract provides for an equitable adjustment of the contract price under any other contract provisions.

(b) The general contractor must submit the amount of a claim under provision (a) to the awarding authority in writing as soon as practicable after the end of the suspension, delay, interruption or failure to act and, in any event, not later than the date of final payment under this contract and, except for costs due to a suspension order, the awarding authority shall not approve any costs in the claim incurred more than twenty days before the general contractor notified the awarding authority in writing of the act or failure to act involved in the claim.

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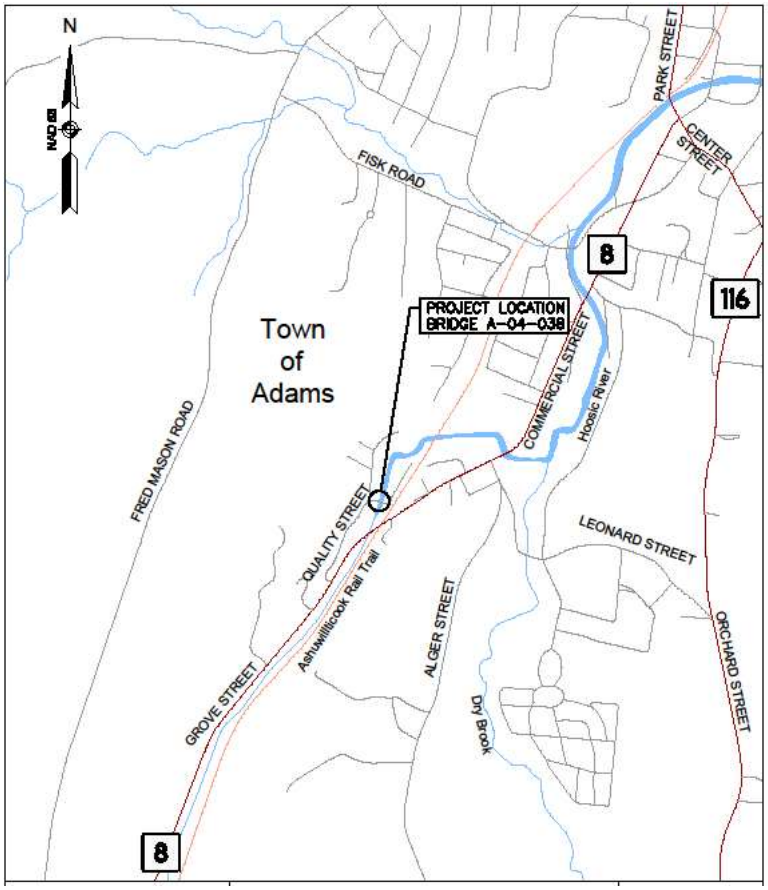
DOCUMENT 00331

LOCUS MAP

ADAMS
Federal Aid Project No. BFL(BR-OFF)-0031(020)
Bridge Replacement, A-04-038, Quality Street over Hoosic River



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DOCUMENT 00439

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/Date

Contractor 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):_____

_____

_____

CONTRACTOR 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 – 9:_____

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WORK NOT COMPLETED WITHIN SPECIFIED TIME: _____

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Revised: 04/28/17

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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: _____

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WORK NOT COMPLETED WITHIN SPECIFIED TIME: _____

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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

JUNE 30, 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'" .

DIVISION II

CONSTRUCTION DETAILS

SECTION 300: WATER SYSTEMS

SUBSECTION 301: WATER SYSTEMS

Subsection 301.60G: Laying Pipe
Revise the third paragraph to read as follows:

Pipe sections shall be laid with the bell on the upgrade end. Before laying the pipe, the outside of the spigot and the inside of the bell shall be wire brushed and wiped clean and dry.

Subsection 301.80: Method of Measurement
Delete the words cast iron in the first paragraph.

Replace the second paragraph with the following;

Fittings, consisting of bends, tees, caps, wyes, sleeves, reducers, increasers, blow-off fittings and other special fittings, apply only when new materials are necessary and which are not specifically provided for under other items in the Proposal. Fittings other than new will not be paid separately but only under the applicable pipe items. When new fittings are measured separately for payment, the length of pipe occupied by the fittings will not be measured for payment.

SECTION 800: TRAFFIC CONTROL DEVICES

SUBECTION 850: TRAFFIC CONTROLS FOR CONSTRUCTION AND MAINTENANCE OPERATIONS

Subsection 850.29: Temporary Barrier and Temporary Barrier Removed and Reset
Delete this subsection.

Subsection 850.49: Temporary Barrier
Delete this subsection.

Subsection 850.69: Temporary Barrier and Temporary Barrier Removed and Reset
Delete this subsection.

Subsection 850.80: Method of Measurement
Delete the fifth paragraph from the end of this subsection.

Subsection 850.81: Basis of Payment
Delete the sixth and seventh paragraphs from the end of this subsection.

SUBECTION 853: TEMPORARY BARRIER

Subsection 853.: Temporary Barrier
Add this new subsection:

DESCRIPTION

853.20: General

Work under this Subsection consists of furnishing, placing, adjusting, resetting, maintaining, and removing temporary barrier.

MATERIALS

853.40: General

Materials shall meet the requirements specified in the following Subsections of Division III, Materials:

Material	Section
Precast, Prestressed, and Prefabricated Concrete Products	M4.09.0
Temporary Barrier	M10.16.0
Limited Deflection Temporary Barrier	M10.16.1
Delineators for Temporary Barrier	M10.16.2

The Contractor shall supply a temporary barrier system that meets or exceeds the Test Level (TL) designated in the description of the bid item.

If the Contractor uses a proprietary temporary barrier system, it shall be listed on the QTCE.

Temporary barrier segments that appear to be damaged or in otherwise unsuitable condition may be rejected or ordered to be replaced by the Engineer at no additional cost.

853.41: Deflection

The deflection of a temporary barrier system is defined as the measured deflection, permanent and/or dynamic, during MASH Test Designation 2-11 (for TL-2) or Test Designation 3-11 (for TL-3).

The Contractor shall supply a temporary barrier system that is equal to or less than the maximum allowable deflection (permanent and/or dynamic) for each run of temporary barrier, as shown in the Plans or stated in the Special Provisions. If no distinction between permanent and temporary deflection is shown in the plans or Special Provisions, then dynamic deflection shall govern.

853.42: Precast Concrete Barriers

Precast Concrete Barriers used as temporary barriers shall be fabricated in accordance with M4.09.0: Precast, Prestressed, and Prefabricated Concrete Products. The Contractor shall submit a Certificate of Compliance (CoC) attesting to meeting this requirement.

853.43: Delineation

Delineators installed at 20-ft intervals throughout the entire barrier run shall be included. The delineators shall conform to M10.16.2: Delineators for Temporary Barrier. Delineators that may act as a washer on a bolted connection shall not be used unless specifically allowed by the barrier manufacturer. Delineators that are damaged, are no longer reflective, or go missing while temporary barrier is deployed shall be replaced in kind by the Contractor.

Delineators may be top or side-mounted to the barrier and oriented in a manner to maximize reflectivity to approaching traffic.

Temporary barrier placed on the right side of the travel way, or top-mounted and separating two or more lanes traveling in the same direction, shall use white delineators. Temporary barrier placed on the left side of the travel way shall use amber or yellow delineators; if separating two-way traffic and top-mounted, the delineator shall be double-sided.

853.44: Anchored Barrier

Temporary barrier systems that include an anchor system in order to meet performance requirements of the contract and/or meet MASH testing requirements may be accepted for use at the discretion of the Department.

Barrier that utilizes an anchor system shall use the same pattern, placement, and material of anchors that was used in MASH crash testing.

853.45: Shop Drawings

Within 30 days of the Notice to Proceed, the Contractor shall provide Shop Drawings showing the proposed temporary barrier system and confirming that it conforms to 853.40: General and will meet the allowable deflection requirements as described in 853.41: Deflection.

If anchors are proposed, the means, methods, pattern, placement, and materials for anchoring and subsequent pavement and/or deck repairs following removal of the temporary barrier system shall be included in the Shop Drawing submittal. If the use of an anchor system is rejected by the Department, the Contractor shall select an unanchored system that meets or exceeds the contract specified performance requirements, at no additional cost.

Shop Drawings for proprietary barrier systems shall include manufacturer's instructions for installation.

CONSTRUCTION METHODS

853.60: General

A Traffic Management Plan approved by the Department is required prior to the installation of the temporary barrier system.

The Contractor shall install temporary barrier systems in accordance with the Plans.

Barrier ends shall not be exposed to approaching traffic during installation. Crashworthy shielding or attenuation shall be provided at all times.

Proprietary temporary barrier systems shall be installed per the manufacturer's instructions.

The Contractor shall not place any breaks in the temporary barrier system that will result in sections that are shorter than the tested minimum length-of-need (LON) under MASH Test 2-11 (for TL-2) or 3-11 (for TL-3). Exceptions shall be allowed for gate systems or changeable length segments placed over expansion joints, if those barrier segment types have been determined to be crashworthy per MASH.

Temporary barrier shall not be placed on unpaved surfaces, unless otherwise shown in the Plans.

The Contractor shall not store materials, vehicles, or other equipment within the measured dynamic deflection envelope, as defined in 853.41: Deflection.

853.61: Temporary Barrier Removed and Reset

Temporary Barrier Removed and Reset consists of relocating a string of temporary barrier from one alignment to another to support the sequence and phasing of construction, as shown in the Plans.

Temporary Barrier Removed and Reset does not include moving all or a portion of the temporary barrier system to gain access to a work area, for the convenience of the Contractor, or to realign units that have moved due to construction activities or a traffic incident.

853.62: Quality Control Inspection

After temporary barrier installation is completed, the Contractor shall perform a Quality Control (QC) Inspection in the presence of the Engineer. QC Inspection activities shall include, but are not limited to the following reviews:

- Installation location per the approved Plans.
- Alignment and connection mechanism between adjacent barrier segments.
- Alignment and connection mechanism between barrier segment and attenuator, if present.
- Anchor system installation, if present.

For proprietary barrier systems, the QC Inspection shall also include any manufacturer-specific inspection details or criteria found in the installation instructions.

Work behind the barrier shall not commence until the QC Inspection has been accepted by the Engineer.

COMPENSATION

853.80: Method of Measurement

Temporary Barrier will be measured by the foot installed, in place.

Temporary Barrier Removed and Reset will be measured by the foot removed and reset.

853.81: Basis of Payment

Temporary Barrier will be paid for at the contract unit price per foot which shall provide full compensation for fabrication, storage, transport, furnishment, installation, delineation, alignment, maintenance, repair, and final removal of the temporary barrier.

Temporary Barrier Removed and Reset will be paid for at the contract unit price per foot which shall provide full compensation for removing, relocating, transporting, and installing new anchorage (if used). If more than one accepted temporary barrier system is approved for use in a single contract, the unit cost for Temporary Barrier Removed and Reset shall not differ among systems.

All costs associated with fabrication, installation, and maintenance of temporary barrier delineators shall be considered incidental to the cost of the item.

All costs associated with Shop Drawings and COCs shall be considered incidental to the item.

All costs associated with patching or repairing the road surface or bridge deck due to the installation and removal of temporary barrier and/or anchors for a temporary barrier system shall be considered incidental to the cost of the item.

853.82: Payment Items

Item number	Description	Unit
853.2	Temporary Barrier (TL-2)	Foot
853.21	Temporary Barrier Removed and Reset	Foot
853.23	Temporary Barrier (TL-3)	Foot
853.33	Temporary Barrier – Limited Deflection (TL-3)	Foot

SECTION 900: STRUCTURES

SUBECTION 902: ULTA HIGH PERFORMANCE CONCRETE

Subsection 902.32: Mockup
In Table 902.32-1 change the Link Slab width to 2 ft – 0 in. and change the Joint Header width to 0 ft – 6 in. .

Subsection 902.32: - 902.38
Renumber section 902.32 Surface Preparation to 902.33 Surface Preparation and renumber section 902.33 through 902.38 to 902.34 through 902.39.

DIVISION III

MATERIALS SPECIFICATIONS

SECTION M2: AGGREGATES AND RELATED MATERIALS

Subsection M2.01.0 Crushed Stone
Replace the fourth paragraph and the associated asterisk notes with the following;

The crushed stone shall have a maximum 45% wear as determined by the Los Angeles Abrasion Test (AASHTO T 96)

SECTION M5: PIPE, CULVERT SECTIONS AND CONDUIT

Subsection M5.01.0 Joint Materials for Pipe
Replace this subsection with the following;

- Jute or oakum furnished for use in pipe joints shall be of an accepted grade approved for common usage.
- Mortar shall conform to the requirements of M4.04.0: Cementitious Grout, Mortar and Concrete Products
- Standard couplers as approved by the manufacturer shall be used to join corrugated metal pipe
- Rubber ring or plastic gaskets for concrete pipe joints, or manholes section joints shall be of tough, flexible, chemical-resistant material, and of such size and shape as to ensure satisfactory pipe joints when incorporated in the work and shall conform to AWWA C153.
- Rubber gasket joints for ductile iron pipe shall be Styrene-Butadiene Rubber (SBR), Ethylene Propylene Diene Monomer (EPDM) or Nitrile and conform to AWWA C111

Subsection M5.05.03.B Gate Valves
Replace this subsection with the following;

Gate valves shall conform to the requirements of AWWA Standard C500 and/or to the type used by the municipality as specified in the Special Provisions.

SECTION M7: PAINTS, PROTECTIVE COATINGS AND PAVEMENT MARKINGS

Subsection M7.01.04 Fast Drying White and Yellow Waterborne Traffic Paint
Replace the subsection with the following;

Approved waterborne traffic paint shall be tested in accordance with AASHTO M 348 and be listed on the QCML The dry paint film shall be under the Toxicity Characteristic Leaching Procedure (TCLP) limits for all contaminants listed in 40 CFR 261.24. The markings shall be installed using reflective glass beads meeting the requirements of M7.01.07. For waterborne yellow paint use Organic Yellow No. 65 or No. 75 pigment.

SECTION M9: MISCELLANEOUS MATERIALS

Subsection M9.12.0 Reflectors for Barriers
Delete this subsection.

SECTION M10: TRAFFIC CONTROL DEVICES

Subsection M10.16.0: Temporary Barrier
Subsection M10.16.1: Limited Deflection Temporary Barrier
Subsection M10.16.2: Delineators for Temporary Barrier
Add these new subsections.

M10.16.0: Temporary Barrier

All Temporary Barrier shall be tested to MASH crash testing standards and the results of the following crash test designations must fall within the acceptable impact tolerances and evaluation criteria shown in Table 2-2A of MASH:

- Test Level 2: 2-10, 2-11
- Test Level 3: 3-10, 3-11

M10.16.1: Limited Deflection Temporary Barrier

To be classified as a Limited Deflection Temporary Barrier, the results of MASH Test Designation 3-11 must result in a measured dynamic deflection of 24 in. or less.

M10.16.2: Delineators for Temporary Barrier

Delineators for Temporary Barrier shall consist of a housing, retroreflective material, and an adhesive or mechanical fastener.

Housings for Delineators for Temporary Barrier shall be fabricated from a lightweight polymer material. Metal housings shall not be permitted.

Retroreflection shall be achieved using an acrylic reflector or retroreflective sheeting directly applied to the housing. If used, retroreflective sheeting shall be factory applied and conform to ASTM D4956 Type IV, Type V, or Type IX. A minimum of 8 $in.^2$ of reflective material shall be visible on any traffic-facing portion of the delineator.

Delineators shall be attached to temporary barriers using a manufacturer-approved adhesive or mechanical fastener.

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END OF SUPPLEMENTAL SPECIFICATIONS

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: Page 00719-

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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:

Type of Info	***Website***	***Description***
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 **15 %**
(*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.

(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 the 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.

(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 a use 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)

*** END OF DOCUMENT ***

DOCUMENT 00760

FHWA-1273 – Revised October 23, 2023

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 reprocurement 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/WHD/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 reprocurement 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.

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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

August 14, 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/Pound X 0.950 = $0.78/Pound

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

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	$0.55
2	ASTM A27 (AASHTO M103) Steel Castings, H-Pile Points & Pipe Pile Shoes (See Note below.)	$0.76
3	ASTM A668 / A668M (AASHTO M102) Steel Forgings	$0.76
4	ASTM A108 (AASHTO M169) Steel Forgings for Shear Studs	$0.78
5	ASTM A709/A709M Grade 36 / AASHTO M270M/M270 Grade 36 or 250 Structural Steel Plate	$0.82
6	ASTM A709/A709M Grade 36 / AASHTO M270M/M270 Grade 36 or 250 Structural Steel Shapes	$0.77
7	ASTM A709/A709M Grade 50 / AASHTO M270M/M270 Grade 50 or 345 Structural Steel Plate	$0.82
8	ASTM A709/A709M Grade 50 / AASHTO M270M/M270 Grade 50 or 345 Structural Steel Shapes	$0.77
9	ASTM A709/A709M Grade 50WT / AASHTO M270M/M270 Grade 50WT or 345WT Structural Steel Plate	$0.85
10	ASTM A709/A709M Grade 50WT / AASHTO M270M/M270 Grade 50WT or 345WT Structural Steel Shapes	$0.78
11	ASTM A709/A709M Grade 50W / AASHTO M270M/M270 Grade 50W 345W Structural Steel Plate	$0.85
12	ASTM A709/A709M Grade 50W / AASHTO M270M/M270 Grade 50W or 345W Structural Steel Shapes	$0.78
13	ASTM A709/A709M Grade HPS 50W / AASHTO M270M/M270 Grade HPS 50W or 345W Structural Steel Plate	$0.89
14	ASTM A709/A709M Grade HPS 70W / AASHTO M270M/M270 Grade HPS 70W or 485W Structural Steel Plate	$0.96
15	ASTM A514/A514M-05 Grade HPS 100W / AASHTO M270M/M270 Grade HPS 100W or 690W Structural Steel Plate	$1.47
16	ASTM A992/A992M Grade 50S / AASHTO M270M/M270 Grade 50S or 345S Structural Steel Plate	$0.85
17	ASTM A992/A992M Grade 50S / AASHTO M270M/M270 Grade 50S or 345S Structural Steel Shapes	$0.78
18	ASTM A276 Type 316 Stainless Steel	$4.42
19	ASTM A240 Type 316 Stainless Steel	$4.42
20	ASTM A148 Grade 80/50 Steel Castings (See Note below.)	$1.52
21	ASTM A53 Grade B Structural Steel Pipe	$0.96
22	ASTM A500 Grades A, B, 36 & 50 Structural Steel Pipe	$0.96
23	ASTM A252, Grades 240 (36 KSI) & 414 (60 KSI) Pipe Pile	$0.76
24	ASTM 252, Grade 2 Permanent Steel Casing	$0.76
25	ASTM A36 (AASHTO M183) for H-piles, steel supports and sign supports	$0.80
26	ASTM A328 / A328M, Grade 50 (AASHTO M202) Steel Sheetpiling	$1.45
27	ASTM A572 / A572M, Grade 50 Sheetpiling	$1.45
28	ASTM A36/36M, Grade 50	$0.82
29	ASTM A570, Grade 50	$0.80
30	ASTM A572 (AASHTO M223), Grade 50 H-Piles	$0.82
31	ASTM A1085 Grade A (50 KSI) Steel Hollow Structural Sections (HSS), heat-treated per ASTM A1085 Supplement S1	$0.96
32	AREA 140 LB Rail and Track Accessories	$0.50

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 l51 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.

*** END OF DOCUMENT ***

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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 Subcontractor

Contract No: 131930 **Project No.** 610777 **Federal Aid No.:** BFL(BR-OFF)-0031(020)

Location: ADAMS

Project Description: Bridge Replacement, A-04-038, Quality Street over Hoosic 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: _____
_____
_____
Telephone Number:_____
Federal I.D. Number:_____
Estimated Start Date:_____
Estimated Completion Date:_____
Estimated Dollar Amount:_____

_____
(Print Name and Title)

_____
(Authorized Signature)

_____
(Date)

Rev'd 09/02/22

*** END OF DOCUMENT ***

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 that two week 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:**	ADAMS
Contract Number:	131930		
Description of Work:	ADAMS - Federal Aid Project No. BFL(BR-OFF)-0031(020) Bridge Replacement, A-04-038, Quality Street over Hoosic River		
Job Location:	Quality St over Hoosic 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 form 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 TEAMSTERS JOINT COUNCIL NO. 10 TEAMSTERS JOINT COUNCIL NO. 10 ZONE B	6/1/2025	$40.95	$15.57	$20.17	$0.00	$0.00	$76.69
	12/1/2025	$40.95	$15.57	$21.78	$0.00	$0.00	$78.30
	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 TEAMSTERS JOINT COUNCIL NO. 10 TEAMSTERS JOINT COUNCIL NO. 10 ZONE B	6/1/2025	$41.02	$15.57	$20.17	$0.00	$0.00	$76.76
	12/1/2025	$41.02	$15.57	$21.78	$0.00	$0.00	$78.37
	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 TEAMSTERS JOINT COUNCIL NO. 10 TEAMSTERS JOINT COUNCIL NO. 10 ZONE B	6/1/2025	$41.14	$15.57	$20.17	$0.00	$0.00	$76.88
	12/1/2025	$41.14	$15.57	$21.78	$0.00	$0.00	$78.49
	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) HEAT & FROST INSULATORS LOCAL 6 HEAT & FROST INSULATORS LOCAL 6 (SPRINGFIELD)	6/1/2025	$39.42	$14.50	$4.30	$6.25	$0.00	$64.47
	12/1/2025	$40.32	$14.50	$4.30	$6.25	$0.00	$65.37
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 For apprentice rates see "Apprentice- OPERATING ENGINEERS"	12/1/2023	$39.56	$13.78	$12.15	$3.00	$0.00	$68.49
BACKHOE/FRONT-END LOADER OPERATOR OPERATING ENGINEERS LOCAL 98 OPERATING ENGINEERS LOCAL 98 For apprentice rates see "Apprentice- OPERATING ENGINEERS"	12/1/2023	$39.56	$13.78	$12.15	$3.00	$0.00	$68.49
BARCO-TYPE JUMPING TAMPER 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
BATCH/CEMENT PLANT - ON SITE OPERATING ENGINEERS LOCAL 98 OPERATING ENGINEERS LOCAL 98 For apprentice rates see "Apprentice- OPERATING ENGINEERS"	12/1/2023	$39.03	$13.78	$12.15	$3.00	$0.00	$67.96
BLOCK PAVER, RAMMER / CURB SETTER 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
BLOCK PAVER, RAMMER / CURB SETTER (HEAVY & HIGHWAY) LABORERS LABORERS - ZONE 4 (HEAVY & HIGHWAY) For apprentice rates see "Apprentice- LABORER (Heavy and 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
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) BRICKLAYERS LOCAL 3 BRICKLAYERS LOCAL 3 (SPRINGFIELD/PITTSFIELD)	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
	8/1/2026	$59.91	$11.49	$15.57	$5.89	$0.00	$92.86

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
	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: 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

Apprentice: BRICK/STONE/ARTIFICIAL MASONRY (INCL. MASONRY WATERPROOFING)

Effective Date: 2/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	$28.86	$11.49	$15.57	$5.89	$0.00	$61.81
2	60.00	$34.63	$11.49	$15.57	$5.89	$0.00	$67.58
3	70.00	$40.40	$11.49	$15.57	$5.89	$0.00	$73.35
4	80.00	$46.17	$11.49	$15.57	$5.89	$0.00	$79.12
5	90.00	$51.94	$11.49	$15.57	$5.89	$0.00	$84.89

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
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
CAISSON & UNDERPINNING BOTTOM MAN LABORERS LABORERS - FOUNDATION AND MARINE	6/1/2025	$48.85	$9.90	$9.25	$9.80	$0.00	$77.80
	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 LABORERS - FOUNDATION AND MARINE	6/1/2025	$47.70	$9.90	$9.25	$9.80	$0.00	$76.65
	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 LABORERS - FOUNDATION AND MARINE	6/1/2025	$48.03	$9.90	$9.25	$9.80	$0.00	$76.98
	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 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"							
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 - BERKSHIRE COUNTY	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: 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	$1.38	$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
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
2	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
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 BRICKLAYERS LOCAL 3 BRICKLAYERS LOCAL 3 (SPRINGFIELD/PITTSFIELD)	7/1/2024	$44.56	$13.20	$16.30	$2.93	$1.69	$78.68

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 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
COMPRESSOR OPERATOR OPERATING ENGINEERS LOCAL 98	12/1/2023	$39.03	$13.78	$12.15	$3.00	$0.00	$67.96

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
OPERATING ENGINEERS LOCAL 98							
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
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

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 LABORERS - ZONE 4 (BUILDING & SITE)	6/2/2025	$47.75	$9.90	$9.25	$9.65	$0.00	$76.55
	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 LABORERS - ZONE 4 (BUILDING & SITE)	6/2/2025	$48.75	$9.90	$9.25	$9.65	$0.00	$77.55
	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 LABORERS - ZONE 4 (BUILDING & SITE)	6/2/2025	$48.50	$9.90	$9.25	$9.65	$0.00	$77.30
	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
	12/7/2026	$53.05	$9.90	$9.25	$9.65	$0.00	$81.85

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
	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 LABORERS LABORERS - ZONE 4 (BUILDING & SITE)	6/2/2025	$48.75	$9.90	$9.25	$9.65	$0.00	$77.55
	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: JACKHAMMER OPERATOR LABORERS LABORERS - ZONE 4 (BUILDING & SITE)	6/2/2025	$48.50	$9.90	$9.25	$9.65	$0.00	$77.30
	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
	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 LABORERS LABORERS - ZONE 4 (BUILDING & SITE)	6/2/2025	$47.75	$9.90	$9.25	$9.65	$0.00	$76.55
	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"							
DIVER PILE DRIVER LOCAL 56 PILE DRIVER LOCAL 56 (ZONE 3)	8/1/2024	$78.11	$10.08	$11.62	$12.67	$0.00	$112.48
as of 8-1-24, Apprentices with diving licenses begin at second year. % of Diver wage 70/80/90 2A $69.83, 3A $91.79,4A $102.14 Total Rate							
DIVER TENDER PILE DRIVER LOCAL 56 PILE DRIVER LOCAL 56 (ZONE 3)	8/1/2024	$49.19	$10.08	$11.62	$12.67	$0.00	$83.56
as of 8-1-24, Apprentices with diving licenses begin at second year. % of Piledriver wage 70/80/90 2A $54.20, 3A $73.93,4A $82.05 Total Rate							
DIVER TENDER (EFFLUENT) PILE DRIVER LOCAL 56 PILE DRIVER LOCAL 56 (ZONE 3)	8/1/2024	$83.69	$10.08	$11.62	$12.67	$0.00	$118.06
For apprentice rates see "Apprentice- PILE DRIVER"							
DIVER/SLURRY (EFFLUENT)	8/1/2024	$117.16	$10.08	$11.62	$12.67	$0.00	$151.53

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
PILE DRIVER LOCAL 56 PILE DRIVER LOCAL 56 (ZONE 3) For apprentice rates see "Apprentice- PILE DRIVER"							
DRAWBRIDGE OPERATOR (Construction) DRAWBRIDGE - SEIU LOCAL 888 DRAWBRIDGE - SEIU LOCAL 888	7/1/2020	$26.77	$6.67	$3.93	$0.00	$0.16	$37.53
ELECTRICIAN (Including Core Drilling) ELECTRICIANS LOCAL 7 ELECTRICIANS LOCAL 7	6/29/2025	$52.16	$13.50	$8.31	$6.90	$0.00	$80.87
	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: 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

Apprentice: ELECTRICIAN (Including Core Drilling)

Effective Date: 12/28/2025

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	40.00	$21.30	$7.65	$0.63	$0.00	$0.00	$29.58
2	45.00	$23.97	$7.65	$0.70	$0.00	$0.00	$32.32
3	50.00	$26.63	$13.75	$7.53	$0.00	$0.00	$47.91
4	55.00	$29.29	$13.75	$7.61	$0.00	$0.00	$50.65
5	65.00	$34.62	$13.75	$9.84	$0.00	$0.00	$58.21
6	70.00	$37.28	$13.75	$11.30	$0.00	$0.00	$62.33

ELEVATOR CONSTRUCTOR ELEVATOR CONSTRUCTORS LOCAL 41 ELEVATOR CONSTRUCTORS LOCAL 41	1/1/2025	$62.83	$16.28	$10.96	$10.40	$0.00	$100.47
	1/1/2026	$63.68	$16.38	$11.06	$10.70	$0.00	$101.82
	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
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

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate

Apprentice: ELEVATOR CONSTRUCTOR

Effective Date: 1/1/2025

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
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

Apprentice: ELEVATOR CONSTRUCTOR

Effective Date: 1/1/2026

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 ELEVATOR CONSTRUCTORS LOCAL 41 ELEVATOR CONSTRUCTORS LOCAL 41	1/1/2025	$43.98	$16.28	$10.96	$10.40	$0.00	$81.62
	1/1/2026	$44.58	$16.38	$11.06	$10.70	$0.00	$82.72
	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 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"							
FENCE & GUARD RAIL ERECTOR (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)"							
FIELD ENG.INST/ROD-BLDG,SITE,HVY/HWY OPERATING ENGINEERS LOCAL 98 OPERATING ENGINEERS LOCAL 98	6/1/1999	$18.84	$4.80	$4.10	$0.00	$0.00	$27.74
FIELD ENG.PARTY CHIEF:BLDG,SITE,HVY/HWY OPERATING ENGINEERS LOCAL 98 OPERATING ENGINEERS LOCAL 98	6/1/1999	$21.33	$4.80	$4.10	$0.00	$0.00	$30.23
FIELD ENG.SURVEY CHIEF-BLDG,SITE,HVY/HWY OPERATING ENGINEERS LOCAL 98 OPERATING ENGINEERS LOCAL 98	6/1/1999	$22.33	$4.80	$4.10	$0.00	$0.00	$31.23
FIRE ALARM INSTALLER ELECTRICIANS LOCAL 7 ELECTRICIANS LOCAL 7	6/29/2025	$52.16	$13.50	$8.31	$6.90	$0.00	$80.87
	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

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
For apprentice rates see "Apprentice- ELECTRICIAN"							
FIRE ALARM REPAIR / MAINTENANCE / COMMISSIONING ELECTRICIANS LOCAL 7 ELECTRICIANS LOCAL 7	6/29/2025	$52.16	$13.50	$8.31	$6.90	$0.00	$80.87
	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- TELECOMMUNICATIONS TECHNICIAN"							
FIREMAN OPERATING ENGINEERS LOCAL 98 OPERATING ENGINEERS LOCAL 98	12/1/2023	$39.03	$13.78	$12.15	$3.00	$0.00	$67.96

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 LABORERS - ZONE 4 (HEAVY & HIGHWAY)	12/1/2025	$28.09	$9.90	$9.25	$6.60	$0.00	$53.84
	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 FLOORCOVERERS LOCAL 2168 FLOORCOVERERS LOCAL 2168 ZONE III	3/1/2025	$43.26	$7.91	$11.25	$6.90	$0.00	$69.32
	9/1/2025	$44.21	$7.91	$11.25	$6.90	$0.00	$70.27
	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
8	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

Apprentice: FLOORCOVERER

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

FORK LIFT OPERATING ENGINEERS LOCAL 98 OPERATING ENGINEERS LOCAL 98	12/1/2023	$39.25	$13.78	$12.15	$3.00	$0.00	$68.18
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
GENERATORS/LIGHTING PLANTS OPERATING ENGINEERS LOCAL 98 OPERATING ENGINEERS LOCAL 98	12/1/2023	$35.80	$13.78	$12.15	$3.00	$0.00	$64.73
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
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

Apprentice: GLAZIER (GLASS PLANK/AIR BARRIER/INTERIOR SYSTEMS)

Effective Date: 6/1/2020

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 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"							
HVAC (DUCTWORK) SHEETMETAL WORKERS LOCAL 63 SHEETMETAL WORKERS LOCAL 63	1/1/2025	$42.23	$12.20	$10.79	$7.95	$2.13	$75.30

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
For apprentice rates see "Apprentice- SHEET METAL WORKER"							
HVAC (ELECTRICAL CONTROLS)	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- 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)	7/14/2025	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
PLUMBERS & PIPEFITTERS LOCAL 104	9/17/2025	$53.01	$10.31	$10.85	$7.10	$0.00	$81.27
PLUMBERS & PIPEFITTERS LOCAL 104	3/17/2026	$55.01	$10.31	$10.85	$7.10	$0.00	$83.27
	9/17/2026	$57.01	$10.31	$10.85	$7.10	$0.00	$85.27
	3/17/2027	$59.01	$10.31	$10.85	$7.10	$0.00	$87.27
	9/17/2027	$61.01	$10.31	$10.85	$7.10	$0.00	$89.27
	3/17/2028	$63.01	$10.31	$10.85	$7.10	$0.00	$91.27
	9/17/2028	$65.01	$10.31	$10.85	$7.10	$0.00	$93.27
	3/17/2029	$67.01	$10.31	$10.85	$7.10	$0.00	$95.27
For apprentice rates see "Apprentice- PIPEFITTER" or "PLUMBER/PIPEFITTER"							
HVAC MECHANIC	3/17/2025	$51.01	$10.35	$10.85	$7.10	$0.00	$79.31
PLUMBERS & PIPEFITTERS LOCAL 104	9/17/2025	$53.01	$10.35	$10.85	$7.10	$0.00	$81.31
PLUMBERS & PIPEFITTERS LOCAL 104	3/17/2026	$55.01	$10.35	$10.85	$7.10	$0.00	$83.31
	9/17/2026	$57.01	$10.35	$10.85	$7.10	$0.00	$85.31
	3/17/2027	$59.01	$10.35	$10.85	$7.10	$0.00	$87.31
	9/17/2027	$61.01	$10.35	$10.85	$7.10	$0.00	$89.31
	3/17/2028	$63.01	$10.35	$10.85	$7.10	$0.00	$91.31
	9/17/2028	$65.01	$10.35	$10.85	$7.10	$0.00	$93.31
	3/17/2029	$67.01	$10.35	$10.85	$7.10	$0.00	$95.31
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

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate

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

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

IRONWORKER/WELDER — 7/1/2019 — $31.55 — $6.75 — $15.91 — $3.75 — $0.00 — $57.96
IRONWORKERS LOCAL 12
IRONWORKERS LOCAL 12

Apprentice: IRONWORKER/WELDER

Effective Date: 7/1/2019

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	60.00	$18.93	$6.75	$0.00	$3.50	$0.00	$29.18
2	70.00	$22.09	$6.75	$11.14	$3.50	$0.00	$43.48
3	80.00	$25.24	$6.75	$12.72	$3.50	$0.00	$48.21
4	90.00	$28.40	$6.75	$14.32	$3.50	$0.00	$52.97

JACKHAMMER & PAVING BREAKER 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"

LABORER — 12/1/2024 — $31.54 — $9.90 — $9.25 — $5.53 — $0.00 — $56.22
LABORERS
LABORERS - ZONE 4 (BUILDING & SITE)

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

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
Apprentice: LABORER							
Effective Date: 12/1/2024							
Step / Percent		**Apprentice Base Wage**					
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
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
Apprentice: LABORER (HEAVY & HIGHWAY)							
Effective Date: 6/1/2025							
Step / Percent		**Apprentice Base Wage**					
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**					
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

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
	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)	12/1/2024	$33.54	$9.90	$9.25	$5.53	$0.00	$58.22
For apprentice rates see "Apprentice- LABORER"							
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)"							
LABORER: MULTI-TRADE TENDER LABORERS LABORERS - ZONE 4 (BUILDING & SITE)	12/1/2024	$31.54	$9.90	$9.25	$5.53	$0.00	$56.22
For apprentice rates see "Apprentice- LABORER"							
LABORER: TREE REMOVER LABORERS LABORERS - ZONE 4 (BUILDING & SITE)	12/1/2024	$31.54	$9.90	$9.25	$5.53	$0.00	$56.22
This classification applies to the removal of standing trees, and the trimming and removal of branches and limbs when related to public works construction or site clearance incidental to construction . For apprentice rates see "Apprentice- LABORER"							
LASER BEAM OPERATOR 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"							
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	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: 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

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
Apprentice: MARBLE & TILE FINISHERS							
Effective Date: 8/1/2025							
Step / Percent		**Apprentice Base Wage**					
5 / 90.00		$40.28	$11.49	$15.10	$5.68	$0.00	$72.55
Apprentice: MARBLE & TILE FINISHERS							
Effective Date: 2/1/2026							
Step / Percent		**Apprentice Base Wage**					
1 / 50.00		$22.92	$11.49	$15.10	$5.68	$0.00	$55.19
2 / 60.00		$27.50	$11.49	$15.10	$5.68	$0.00	$59.77
3 / 70.00		$32.08	$11.49	$15.10	$5.68	$0.00	$64.35
4 / 80.00		$36.66	$11.49	$15.10	$5.68	$0.00	$68.93
5 / 90.00		$41.25	$11.49	$15.10	$5.68	$0.00	$73.52
MECH. SWEEPER OPERATOR (ON CONST. SITES) OPERATING ENGINEERS LOCAL 98 OPERATING ENGINEERS LOCAL 98 For apprentice rates see "Apprentice- OPERATING ENGINEERS"	12/1/2023	$39.56	$13.78	$12.15	$3.00	$0.00	$68.49
MECHANIC/WELDER/BOOM TRUCK OPERATING ENGINEERS LOCAL 98 OPERATING ENGINEERS LOCAL 98 For apprentice rates see "Apprentice- OPERATING ENGINEERS"	12/1/2023	$39.03	$13.78	$12.15	$3.00	$0.00	$67.96
MILLWRIGHT (Zone 3) MILLWRIGHTS LOCAL 1121	1/6/2025	$43.48	$10.08	$11.47	$9.75	$0.00	$74.78
MILLWRIGHTS LOCAL 1121 - Zone 3	1/5/2026	$45.76	$10.08	$11.47	$9.75	$0.00	$77.06
Apprentice: MILLWRIGHT (Zone 3)							
Effective Date: 1/6/2025							
Step / Percent		**Apprentice Base Wage**					
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**					
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

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
MORTAR MIXER 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
OILER OPERATING ENGINEERS LOCAL 98 OPERATING ENGINEERS LOCAL 98 For apprentice rates see "Apprentice- OPERATING ENGINEERS"	12/1/2023	$35.02	$13.78	$12.15	$3.00	$0.00	$63.95
OTHER POWER DRIVEN EQUIPMENT - CLASS VI OPERATING ENGINEERS LOCAL 98 OPERATING ENGINEERS LOCAL 98 For apprentice rates see "Apprentice- OPERATING ENGINEERS"	12/1/2023	$32.74	$13.78	$12.15	$3.00	$0.00	$61.67
PAINTER (BRIDGES/TANKS) PAINTERS LOCAL 35 PAINTERS LOCAL 35 - ZONE 3	1/1/2025	$58.46	$9.95	$11.85	$12.10	$0.00	$92.36

Apprentice: MILLWRIGHT (Zone 3)

Effective Date: 1/5/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
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

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

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
PAINTER (SPRAY OR SANDBLAST, NEW) * * If 30% or more of surfaces to be painted are new construction, NEW paint rate shall be used. PAINTERS LOCAL 35 PAINTERS LOCAL 35 - ZONE 3	1/1/2025	$41.23	$9.65	$11.85	$8.05	$0.00	$70.78

Apprentice: PAINTER (SPRAY OR SANDBLAST, NEW) *

Effective Date: 1/1/2025

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
PAINTER (SPRAY OR SANDBLAST, REPAINT) PAINTERS LOCAL 35 PAINTERS LOCAL 35 - ZONE 3	1/1/2025	$38.55	$9.95	$11.85	$8.05	$0.00	$68.40

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

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
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

PAINTER / TAPER (BRUSH, NEW) * * If 30% or more of surfaces to be painted are new construction, NEW paint rate shall be used. PAINTERS LOCAL 35 PAINTERS LOCAL 35 - ZONE 3	1/1/2025	$39.83	$9.95	$11.85	$8.05	$0.00	$69.68

Apprentice: PAINTER / TAPER (BRUSH, NEW) *

Effective Date: 1/1/2025

Step	Percent	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

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
Apprentice: PAINTER / TAPER (BRUSH, NEW) *							
Effective Date: 1/1/2025							
Step 8 — Percent 90.00 — Apprentice Base Wage		$35.85	$9.95	$11.85	$7.25	$0.00	$64.90
PAINTER / TAPER (BRUSH, REPAINT) PAINTERS LOCAL 35 PAINTERS LOCAL 35 - ZONE 3	1/1/2025	$37.15	$9.95	$11.85	$8.05	$0.00	$67.00
Apprentice: PAINTER / TAPER (BRUSH, REPAINT)							
Effective Date: 1/1/2025							
Step 1 — Percent 50.00 — Apprentice Base Wage		$18.58	$9.95	$0.00	$0.00	$0.00	$28.53
Step 2 — Percent 55.00 — Apprentice Base Wage		$20.43	$9.95	$0.00	$4.43	$0.00	$34.81
Step 3 — Percent 60.00 — Apprentice Base Wage		$22.29	$9.95	$0.00	$4.83	$0.00	$37.07
Step 4 — Percent 65.00 — Apprentice Base Wage		$24.15	$9.95	$0.00	$5.23	$0.00	$39.33
Step 5 — Percent 70.00 — Apprentice Base Wage		$26.01	$9.95	$11.85	$5.64	$0.00	$53.45
Step 6 — Percent 75.00 — Apprentice Base Wage		$27.86	$9.95	$11.85	$6.04	$0.00	$55.70
Step 7 — Percent 80.00 — Apprentice Base Wage		$29.72	$9.95	$11.85	$6.44	$0.00	$57.96
Step 8 — Percent 90.00 — Apprentice Base Wage		$33.44	$9.95	$11.85	$7.25	$0.00	$62.49
PAINTER TRAFFIC MARKINGS (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
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)							
PANEL & PICKUP TRUCKS DRIVER TEAMSTERS JOINT COUNCIL NO. 10 TEAMSTERS JOINT COUNCIL NO. 10 ZONE B	6/1/2025	$40.78	$15.57	$20.17	$0.00	$0.00	$76.52
	12/1/2025	$40.78	$15.57	$21.78	$0.00	$0.00	$78.13
	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) PILE DRIVER LOCAL 56 PILE DRIVER LOCAL 56 (ZONE 3)	8/1/2024	$49.19	$10.08	$11.62	$12.67	$0.00	$83.56
For apprentice rates see "Apprentice- PILE DRIVER"							
PILE DRIVER PILE DRIVER LOCAL 56 PILE DRIVER LOCAL 56 (ZONE 3)	8/1/2024	$49.19	$10.08	$11.62	$12.67	$0.00	$83.56

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
PIPELAYER 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"							
PIPELAYER (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)"							
PLUMBER & PIPEFITTER PLUMBERS & PIPEFITTERS LOCAL 104 PLUMBERS & PIPEFITTERS LOCAL 104	3/17/2025	$51.01	$10.35	$10.85	$7.10	$0.00	$79.31
	9/17/2025	$53.01	$10.35	$10.85	$7.10	$0.00	$81.31
	3/17/2026	$55.01	$10.35	$10.85	$7.10	$0.00	$83.31
	9/17/2026	$57.01	$10.35	$10.85	$7.10	$0.00	$85.31
	3/17/2027	$59.01	$10.35	$10.85	$7.10	$0.00	$87.31
	9/17/2027	$61.01	$10.35	$10.85	$7.10	$0.00	$89.31
	3/17/2028	$63.01	$10.35	$10.85	$7.10	$0.00	$91.31
	9/17/2028	$65.01	$10.35	$10.85	$7.10	$0.00	$93.31
	3/17/2029	$67.01	$10.35	$10.85	$7.10	$0.00	$95.31

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

Apprentice: PLUMBER & PIPEFITTER

Effective Date: 3/17/2025

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	45.00	$22.95	$10.35	$10.85	$0.00	$0.00	$44.15
2	50.00	$25.51	$10.35	$10.85	$0.00	$0.00	$46.71
3	55.00	$28.06	$10.35	$10.85	$0.00	$0.00	$49.26
4	60.00	$30.61	$10.35	$10.85	$0.00	$0.00	$51.81
5	65.00	$33.16	$10.35	$10.85	$0.00	$0.00	$54.36
6	70.00	$35.71	$10.35	$10.85	$0.00	$0.00	$56.91
7	75.00	$38.26	$10.35	$10.85	$0.00	$0.00	$59.46
8	80.00	$40.81	$10.35	$10.85	$0.00	$0.00	$62.01
9	85.00	$43.36	$10.35	$10.85	$7.10	$0.00	$71.66
10	85.00	$43.36	$10.35	$10.85	$7.10	$0.00	$71.66

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate

Apprentice: PLUMBER & PIPEFITTER

Effective Date: 9/17/2025

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	45.00	$23.85	$10.35	$0.00	$0.00	$0.00	$34.20
2	50.00	$26.51	$10.35	$0.00	$0.00	$0.00	$36.86
3	55.00	$29.16	$10.35	$10.85	$0.00	$0.00	$50.36
4	60.00	$31.81	$10.35	$10.85	$0.00	$0.00	$53.01
5	65.00	$34.46	$10.35	$10.85	$0.00	$0.00	$55.66
6	70.00	$37.11	$10.35	$10.85	$0.00	$0.00	$58.31
7	75.00	$39.76	$10.35	$10.85	$0.00	$0.00	$60.96
8	80.00	$42.41	$10.35	$10.85	$0.00	$0.00	$63.61
9	85.00	$45.06	$10.35	$10.85	$7.10	$0.00	$73.36
10	85.00	$45.06	$10.35	$10.85	$7.10	$0.00	$73.36

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
PNEUMATIC CONTROLS (TEMP.) PLUMBERS & PIPEFITTERS LOCAL 104 PLUMBERS & PIPEFITTERS LOCAL 104	3/17/2025	$51.01	$10.35	$10.85	$7.10	$0.00	$79.31
	9/17/2025	$53.01	$10.35	$10.85	$7.10	$0.00	$81.31
	3/17/2026	$55.01	$0.00	$10.85	$7.10	$0.00	$72.96
	9/17/2026	$57.01	$10.35	$10.85	$7.10	$0.00	$85.31
	3/17/2027	$59.01	$10.35	$10.85	$7.10	$0.00	$87.31
	9/17/2027	$61.01	$10.35	$10.85	$7.10	$0.00	$89.31
	3/17/2028	$63.01	$10.35	$10.85	$7.10	$0.00	$91.31
	9/17/2028	$65.01	$10.35	$10.85	$7.10	$0.00	$93.31
	3/17/2029	$67.01	$10.35	$10.85	$7.10	$0.00	$95.31
For apprentice rates see "Apprentice- PIPEFITTER" or "PLUMBER/PIPEFITTER"							
PNEUMATIC DRILL/TOOL 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)							
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 LABORERS - ZONE 4 (HEAVY & HIGHWAY)	6/1/2025	$36.23	$9.90	$9.25	$6.19	$0.00	$61.57
	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)	12/1/2023	$39.03	$13.78	$12.15	$3.00	$0.00	$67.96

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"							
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 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
ROLLER OPERATOR OPERATING ENGINEERS LOCAL 98 OPERATING ENGINEERS LOCAL 98 For apprentice rates see "Apprentice- OPERATING ENGINEERS"	12/1/2023	$38.42	$13.78	$12.15	$3.00	$0.00	$67.35
ROOFER (Coal tar pitch) ROOFERS LOCAL 248 ROOFERS LOCAL 248 For apprentice rates see "Apprentice- ROOFER"	7/16/2025	$43.88	$10.35	$8.70	$9.30	$0.00	$72.23
	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
ROOFER (Inc.Roofer Waterproofng &Roofer Damproofg) ROOFERS LOCAL 248 ROOFERS LOCAL 248	7/16/2025	$43.38	$10.35	$8.70	$9.30	$0.00	$71.73
	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
ROOFER SLATE / TILE / PRECAST CONCRETE ROOFERS LOCAL 248 ROOFERS LOCAL 248 For apprentice rates see "Apprentice- ROOFER"	7/16/2025	$43.88	$10.35	$8.70	$9.30	$0.00	$72.23
	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
SCRAPER OPERATING ENGINEERS LOCAL 98 OPERATING ENGINEERS LOCAL 98 For apprentice rates see "Apprentice- OPERATING ENGINEERS"	12/1/2023	$39.03	$13.78	$12.15	$3.00	$0.00	$67.96
SELF-POWERED ROLLERS AND COMPACTORS (TAMPERS) OPERATING ENGINEERS LOCAL 98 OPERATING ENGINEERS LOCAL 98 For apprentice rates see "Apprentice- OPERATING ENGINEERS"	12/1/2023	$38.42	$13.78	$12.15	$3.00	$0.00	$67.35
SELF-PROPELLED POWER BROOM 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
SHEETMETAL WORKER SHEETMETAL WORKERS LOCAL 63 SHEETMETAL WORKERS LOCAL 63	1/1/2025	$42.23	$12.20	$10.79	$7.95	$2.13	$75.30

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
Apprentice: SHEETMETAL WORKER							
Effective Date: 1/1/2025							
Step / Percent		**Apprentice Base Wage**					
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 TEAMSTERS JOINT COUNCIL NO. 10 TEAMSTERS JOINT COUNCIL NO. 10 ZONE B	6/1/2025	$41.24	$15.57	$20.17	$0.00	$0.00	$76.98
	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
SPECIALIZED EARTH MOVING EQUIP > 35 TONS TEAMSTERS JOINT COUNCIL NO. 10 TEAMSTERS JOINT COUNCIL NO. 10 ZONE B	6/1/2025	$41.53	$15.57	$20.17	$0.00	$0.00	$77.27
	12/1/2025	$41.53	$15.57	$21.78	$0.00	$0.00	$78.88
	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 SPRINKLER FITTERS LOCAL 669 SPRINKLER FITTERS LOCAL 669	4/1/2023	$47.43	$11.45	$7.20	$9.41	$0.00	$75.49
Apprentice: SPRINKLER FITTER							
Effective Date: 4/1/2023							
Step / Percent		**Apprentice Base Wage**					
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
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

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
TELECOMMUNICATION TECHNICIAN	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

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

Apprentice: TELECOMMUNICATION TECHNICIAN

Effective Date: 12/28/2025

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	40.00	$21.30	$7.65	$0.63	$0.00	$0.00	$29.58
2	40.00	$23.97	$7.65	$0.70	$0.00	$0.00	$32.32
3	26.63	$26.63	$13.75	$7.53	$0.00	$0.00	$47.91
4	55.00	$29.29	$13.75	$7.61	$0.00	$0.00	$50.65
5	65.00	$34.62	$13.75	$9.84	$0.00	$0.00	$58.21
6	70.00	$37.28	$13.75	$11.30	$0.00	$0.00	$62.33

TERRAZZO FINISHERS	8/1/2025	$66.89	$11.49	$15.57	$8.02	$0.00	$101.97
BRICKLAYERS LOCAL 3	2/10/2026	$68.24	$11.49	$15.57	$8.02	$0.00	$103.32
BRICKLAYERS LOCAL 3 (SPR/PITT) - MARBLE & TILE	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

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

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
TERRAZZO MECHANIC BRICKLAYERS LOCAL 3 BRICKLAYERS LOCAL 3 (SPR/PITT) - MARBLE & TILE	8/1/2025	$67.97	$11.49	$15.57	$7.99	$0.00	$103.02
	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 FINISHERS

Effective Date: 2/10/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	$34.12	$11.49	$15.57	$8.02	$0.00	$69.20
2	60.00	$40.94	$11.49	$15.57	$8.02	$0.00	$76.02
3	70.00	$47.77	$11.49	$15.57	$8.02	$0.00	$82.85
4	80.00	$54.59	$11.49	$15.57	$8.02	$0.00	$89.67
5	90.00	$61.42	$11.49	$15.57	$8.02	$0.00	$96.50

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
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

Apprentice: TERRAZZO MECHANIC

Effective Date: 2/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	$34.66	$11.49	$15.57	$7.99	$0.00	$69.71
2	60.00	$41.59	$11.49	$15.57	$7.99	$0.00	$76.64
3	70.00	$48.52	$11.49	$15.57	$7.99	$0.00	$83.57
4	80.00	$55.46	$11.49	$15.57	$7.99	$0.00	$90.51
5	90.00	$62.39	$11.49	$15.57	$7.99	$0.00	$97.44

TEST BORING DRILLER LABORERS LABORERS - FOUNDATION AND MARINE	6/1/2025	$51.70	$9.90	$9.25	$9.80	$0.00	$80.65
	12/1/2025	$53.20	$9.90	$9.25	$9.80	$0.00	$82.15
	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 LABORERS LABORERS - FOUNDATION AND MARINE	6/1/2025	$47.82	$9.90	$9.25	$9.80	$0.00	$76.77
	12/1/2025	$49.32	$9.90	$9.25	$9.80	$0.00	$78.27
	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

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
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"							
TUNNEL WORK - FREE AIR	6/1/2025	$52.00	$9.90	$9.25	$10.25	$0.00	$81.40
LABORERS	12/1/2025	$53.50	$9.90	$9.25	$10.25	$0.00	$82.90
LABORERS (FREE AIR TUNNEL)	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)	6/1/2025	$54.00	$9.90	$9.25	$10.25	$0.00	$83.40
LABORERS	12/1/2025	$55.50	$9.90	$9.25	$10.25	$0.00	$84.90
LABORERS (FREE AIR TUNNEL)	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	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

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
WAGON DRILL 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)							
WATER METER INSTALLER PLUMBERS & PIPEFITTERS LOCAL 104 PLUMBERS & PIPEFITTERS LOCAL 104	3/17/2025	$51.01	$10.35	$10.85	$7.10	$0.00	$79.31
	9/17/2025	$53.01	$10.35	$10.85	$7.10	$0.00	$81.31
	3/17/2026	$55.01	$10.35	$10.85	$7.10	$0.00	$83.31
	9/17/2026	$57.01	$10.35	$10.85	$7.10	$0.00	$85.31
	3/17/2027	$59.01	$10.35	$10.85	$7.10	$0.00	$87.31
	9/17/2027	$61.01	$10.35	$10.85	$7.10	$0.00	$89.31
	3/17/2028	$63.01	$10.35	$10.85	$7.10	$0.00	$91.31
	9/17/2028	$65.01	$10.35	$10.85	$7.10	$0.00	$93.31
	3/17/2029	$67.01	$10.35	$10.85	$7.10	$0.00	$95.31
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

Outside Electrical

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
EQUIPMENT OPERATOR OUTSIDE ELECTRICAL WORKERS - WEST LOCAL 42 OUTSIDE ELECTRICAL WORKERS - WEST LOCAL 42 For apprentice rates see "Apprentice- LINEMAN"	9/1/2019	$44.67	$8.00	$12.55	$0.00	$0.00	$65.22
GROUNDMAN OUTSIDE ELECTRICAL WORKERS - WEST LOCAL 42 OUTSIDE ELECTRICAL WORKERS - WEST LOCAL 42 For apprentice rates see "Apprentice- LINEMAN"	9/1/2019	$30.58	$8.00	$5.48	$0.00	$0.00	$44.06
GROUNDMAN / TRUCK DRIVER OUTSIDE ELECTRICAL WORKERS - WEST LOCAL 42 OUTSIDE ELECTRICAL WORKERS - WEST LOCAL 42 For apprentice rates see "Apprentice- LINEMAN"	9/1/2019	$39.97	$8.00	$10.96	$0.00	$0.00	$58.93
HEAVY EQUIPMENT OPERATOR OUTSIDE ELECTRICAL WORKERS - WEST LOCAL 42 OUTSIDE ELECTRICAL WORKERS - WEST LOCAL 42 For apprentice rates see "Apprentice- LINEMAN"	9/1/2019	$47.01	$8.00	$13.22	$0.00	$0.00	$68.23
JOURNEYMAN LINEMAN OUTSIDE ELECTRICAL WORKERS - WEST LOCAL 42 OUTSIDE ELECTRICAL WORKERS - WEST LOCAL 42	9/1/2019	$51.71	$8.00	$15.55	$0.00	$0.00	$75.26

Apprentice: JOURNEYMAN LINEMAN

Effective Date: 9/1/2019

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	60.00	$31.03	$8.00	$3.43	$0.00	$0.00	$42.46
2	65.00	$33.61	$8.00	$3.51	$0.00	$0.00	$45.12
3	70.00	$36.20	$8.00	$3.59	$0.00	$0.00	$47.79
4	75.00	$38.78	$8.00	$5.16	$0.00	$0.00	$51.94
5	80.00	$41.37	$8.00	$5.24	$0.00	$0.00	$54.61
6	85.00	$43.95	$8.00	$5.32	$0.00	$0.00	$57.27
7	90.00	$46.54	$8.00	$7.40	$0.00	$0.00	$61.94

TELEDATA CABLE SPLICER OUTSIDE ELECTRICAL WORKERS - WEST LOCAL 42 OUTSIDE ELECTRICAL WORKERS - WEST LOCAL 42	2/4/2019	$30.73	$4.70	$0.92	$2.25	$0.00	$38.60
TELEDATA LINEMAN/EQUIPMENT OPERATOR OUTSIDE ELECTRICAL WORKERS - WEST LOCAL 42 OUTSIDE ELECTRICAL WORKERS - WEST LOCAL 42	2/4/2019	$28.93	$4.70	$0.89	$2.25	$0.00	$36.77
TELEDATA WIREMAN/INSTALLER/TECHNICIAN OUTSIDE ELECTRICAL WORKERS - WEST LOCAL 42 OUTSIDE ELECTRICAL WORKERS - WEST LOCAL 42	2/4/2019	$28.93	$4.70	$0.89	$2.25	$0.00	$36.77
TRACTOR-TRAILER DRIVER OUTSIDE ELECTRICAL WORKERS - WEST LOCAL 42 OUTSIDE ELECTRICAL WORKERS - WEST LOCAL 42	9/1/2019	$44.67	$8.00	$12.55	$0.00	$0.00	$65.22

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 Timetables

Timetable	Goals (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 Areas

STATE:	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 MA Hampden, MA Hampshire	4.8
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 control, 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 contact, 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: MA20250016 08/15/2025

Superseded General Decision Number: MA20240016

State: Massachusetts

Construction Type: Highway

County: Berkshire 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	03/14/2025
2	05/16/2025
3	07/11/2025
4	07/18/2025
5	08/15/2025

ENGI0004-019 06/01/2025

	Rates	Fringes
POWER EQUIPMENT OPERATOR		
Group 1	$ 57.83	33.70
Group 2	$ 57.18	33.70

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; Loader
Group 2: Milling Machine; Paver (Asphalt, Aggregate, and Concrete)
Group 4: Roller

IRON0007-027 03/16/2025

	Rates	Fringes
IRONWORKER (ORNAMENTAL AND STRUCTURAL)	$ 41.15	33.25

LABO0473-007 12/01/2024

	Rates	Fringes
LABORER (Common or General)	$ 31.54	26.65
TRAFFIC CONTROL (Flagger)	$ 27.01	26.65

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* LABO0596-005 06/01/2025

	Rates	Fringes
LABORER (Form Work Only)	$ 35.00	26.91

PAIN0035-023 07/01/2024

	Rates	Fringes
PAINTER (Steel)	$ 56.76	36.00

SUMA2014-006 01/11/2017

	Rates	Fringes
CARPENTER	$ 44.11	21.41
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

LABORER: Landscape.....$ 36.62 16.00

OPERATOR: Forklift.....$ 51.63 0.00

OPERATOR: Mechanic.....$ 48.14 17.02

OPERATOR: Piledriver.....$ 43.87 18.04

PAINTER: Spray (Linestriping)....$ 38.30 17.43

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.....$ 38.94 12.00

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.

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"

"General Decision Number: MA20250010 08/15/2025

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
6	07/11/2025
7	07/18/2025
8	08/15/2025

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 06/29/2025

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

	Rates	Fringes
ELECTRICIAN	$ 52.16	29.56

* ELEC0007-003 06/29/2025

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

	Rates	Fringes
ELECTRICIAN	$ 52.16	29.56

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 03/16/2025

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

	Rates	Fringes
IRONWORKER	$ 41.15	33.25

IRON0012-003 07/01/2025

BERKSHIRE (Lee)

	Rates	Fringes
IRONWORKER	$ 40.75	31.91

IRON0012-004 07/01/2025

BERKSHIRE (Remainder of County)

	Rates	Fringes
Ironworkers:		
Sheeter	$ 41.00	31.91
Structural, Ornamental, Reinforcing, Fence Erector, Machinery Mover, Rigger, Rodman, Stone Derrickman	$ 40.75	31.91

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 tenders

GROUP 2: Asphalt raker; fence and guard rail erector; laser beam operator; mason tenmder; pipelayer; pneumatic drill operator; pneumatic tool operator; wagon drill operatorm jackhammer operator, pavement breaker, carbide core drilling machine, chain saw operator, barco type jumping tampers, concrete pump, motorized mortar miner, ride-on motorized buggy

GROUP 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

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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

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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

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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:		

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      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
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 PLUM0004-003 03/01/2025

FRANKLIN (Orange)

                                      Rates          Fringes

Plumber and Steamfitter..........$ 55.00             30.17
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 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

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 PLUM0104-009 03/17/2025

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


                                      Rates          Fringes
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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 06/01/2025

	Rates	Fringes
Truck drivers:		
Group 1	$ 40.78	37.35+a+b
Group 2	$ 40.95	37.35+a+b
Group 3	$ 41.02	37.35+a+b
Group 4	$ 41.14	37.35+a+b
Group 5	$ 41.24	37.35+a+b
Group 6	$ 41.53	37.35+a+b
Group 7	$ 41.82	37.35+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

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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"

"General Decision Number: MA20250006 02/21/2025

Superseded General Decision Number: MA20240006

State: Massachusetts

Construction Type: Heavy Dredging

Counties: Massachusetts Statewide.
STATEWIDE

Massacusetts 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.

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State Adopted Rate Identifiers

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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
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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
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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"

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DOCUMENT A00801

SPECIAL PROVISIONS

ADAMS
Federal Aid Project No. BFL(BR-OFF)-0031(020)
Bridge Replacement, A-04-038, Quality Street over Hoosic 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.

The work under this Contract consists of the bridge replacement of Quality Street over the Hoosic River, MassDOT Bridge No. A-04-038 (CEH), in the Town of Adams. It includes the demolition of the existing bridge superstructure, partial demolition of the existing substructure, and the construction of a new simple span bridge superstructure on a new substructure. The proposed bridge consists of prestressed concrete NEDBT beams with an integral deck and hot mix asphalt overlay on pile supported reinforced concrete integral abutments and wingwalls.

To facilitate construction, a temporary utility bridge is to be constructed north (downstream) of the existing bridge so that water utilities can be rerouted from the existing bridge prior to demolition. The temporary utility bridge consists of a panelized truss on reinforced concrete abutments founded on spread footings, with geogrid soil stabilization at the proposed temporary west abutment.

Work under this Contract also includes approach roadway work to the limits shown on the Plans, including, but not limited to, roadway reconstruction, mill and overlay, profile adjustment, roadway embankment work, highway guardrail, and other safety elements, as shown on the Plans. The project includes full roadway closure during construction with a temporary access road from Grove Street/Route 8 to be constructed across the Ashuwillticook Rail Trail.

The Contractor shall, as part of this work, coordinate with all utility owners before and during construction, including their temporary and permanent relocation requirements.

SCOPE OF WORK (Continued)

The Contractor shall satisfy themselves by their own investigation and research regarding conditions and measurements affecting the work to be done and shall make their bid in sole reliance thereon.

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.

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.

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.

HOLIDAY WORK RESTRICTIONS (Continued)

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.

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.

CONTRACTUAL MILESTONES

This Contract contains the following Contractual Milestones that are to be included in the Contractor's Baseline Contract Progress Schedule submission. The Contractor shall identify the completion of the work pertaining to each Contractual Milestone through the inclusion of a Finish Milestone and hammock activities in the accepted baseline Contract Progress Schedule using the stated description.

MS#01 – Contractor Field Completion: The Contractor shall achieve Contractor Completion within **1345 calendar days from Notice to Proceed**.

> **Contractor Field Completion** shall be defined as the date of completion of all physical contract work, including the punch list, and the contractor has fully de-mobilized from field operations. The Contractor Field Completion includes seeding conditional, interim, and final acceptance.

MS#02 –Substantial Completion: The Contractor shall achieve Substantial Completion within **737 calendar days from Notice to Proceed.**

> **Substantial Completion** shall be described as the date that a walkthrough of the entire contract work has been performed by the Resident Engineer and the work required by the contract, including paperwork, has been completed. This excludes work having a contract price of less than one percent of the adjusted contract price including overruns, underruns, and all contract amendments. All material submittals must be received by the District Materials Lab.

MS#03 – Full Beneficial Use: The Contractor shall achieve Full Beneficial Use (within **715 calendar days from Notice to Proceed**.

> **Full Beneficial Use (FBU)** Full Beneficial Use shall be described as the date that the majority of the contract work has been completed, and the asset(s) have 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 bridge. All anticipated lane takings have been completed, except for minor, short-term work items.

ACCESS RESTRAINTS

1. **Completion of Utility Operations Phase 1 Overhead Wires by National Grid, Charter, and Verizon for Full Road Closure:** In Phase 1 of the utility operations, the overhead wires for National Grid, Charter (CATV), and Verizon Telecommunications are relocated, allowing the partial access restriction to be lifted and enabling the full road closure needed for the existing bridge demolition.

2. **Completion of Utility Operations Phase 2 (Water line temporary reroute) for Full Road Closure:** In Phase 2 of the utility operations, a temporary utility bridge carrying temporary water main services is constructed and the water line is rerouted by the contractor with minimal coordination with the local Department of Public Works. This releases the remaining access restraint to demolish the existing bridge.

ACCESS RESTRAINTS (Continued)

3. **Completion of Utility Operations Phase 2 (Overhead Wires by National Grid, Charter, and Verizon for Bridge Approaches Construction).** In Phase 2 of the utility operations, once the bridge lower substructure and two westerly beams are completed, permanent gas line supports are installed, and the area of the proposed final gas relocation is brought to subgrade, the gas and water line are then rerouted onto their permanent locations onto the new bridge. This releases the access restraint to complete the approaches.

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.

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 Contactor 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.

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.

NATIONAL GRID EMERGENCY TELEPHONE NUMBERS

ELECTRIC:
Outage/ Emergency: 1-800-465-1212
New Service: 1-800-375-7405
Customer Support: 1-800-322-3223

BERKSHIRE GAS EMERGENCY TELEPHONE NUMBERS

GAS:
Outage/Emergency: 1-800-292-5012 or 413-499-1680
New Service: 1- 800-297-7144
Customer Support: 1-800-292-5012

ADAMS FIRE DISTRICT/WATER DEPARTMENT CONTACT INFORMATION

WATER:
John Barrett
Superintendent
Adams Fire District
3 Columbia Street
Adams, MA 01220
Phone: (413) 743-0978 Ext. 13

ADAMS DEPARTMENT OF PUBLIC WORKS CONTACT INFORMATION

SEWER:
Bob Rumbolt
Superintendent, Wastewater Treatment Facility
Department of Public Works
8 Park Street
Adams, MA 01220
Phone: (413) 743-8370

NOTIFICATION OF PUBLIC OFFICIALS & OWNERS OF UTILITIES

Town officials are shown at website https://www.mass.gov/lists/massachusetts-cities-and-towns and select the required Town website.

The Contractor shall be responsible for informing the following officials in each area that he is assigned to work in:

Town Administrator, DPW/Sewer, Police Department, Fire District/Water Department, Electric Company, Phone and Cable.

Utility contact information is available on the MassDOT website:

https://hwy.massdot.state.ma.us/webapps/utilities/select.asp

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 30µg/m3.

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.

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.

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.

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 1 Million 18-kip (80-kn) ESALs.

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 Engineer.

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. This project has been consulted with the USFWS through the Federal Highway Administration (FHWA), Federal Railroad Administration (FRA), and Federal Transit Administration (FTA) Programmatic Biological Opinion for Transportation Projects in the Range of the Indiana Bat and Northern Long-Eared Bat revised February 5, 2018 and amended March 31, 2023.

On July 21, 2023, BSC Group, on behalf of MassDOT Highway Division Environmental Services, conducted a northern long-eared bat summer presence/absence survey using acoustic detection methods, in accordance with the 2023 survey guidelines. The survey confirmed the presence of NLEB and/or TCB, and as stated within the survey guidelines, the survey is valid for five years. If additional stressor producing work is proposed by the Contractor past this date, additional review is required by the MassDOT Highway Division's Environmental Services Section, and additional review and restrictions may be required by the USFWS.

The project is eligible for a May Affect, Not Likely to Adversely Affect (NLAA) determination, with Avoidance and Minimizations Measures (AMMs), in accordance with the FHWA, FRA and FTA Range-wide Programmatic Consultation for Indiana Bat and Northern Long-eared Bat. On behalf of FHWA, the lead federal agency for Section 7 consultation, MassDOT submitted a Programmatic Consultation for Transportation Projects affecting NLEB or Indiana Bat to the USFWS through the Information for Planning and Consultation (IPaC) webpage and generated a NLAA documentation letter (see **Document A00855**). Therefore, the project has completed Section 7 consultation through 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 AMM

- 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.

Lighting AMMs

- Direct temporary lighting away from suitable habitat during the active season: **April 1 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 shall be conducted during the active season: **April 15 to October 31.**
- No tree cutting shall be conducted during the active season: **April 15 to October 31**, or if cutting inside of this timeframe is required, tree removal is limited to 10 or fewer trees per project at any time of year within 100 feet of existing road/rail surface and outside of documented roosting/foraging habitat or travel corridors; and a visual emergence survey must be conducted by *MassDOT Highway Division's Environmental Services Section or appointed representative* with no bats observed.
- Do not remove **documented** or NLEB and/or TCB roosts that are still suitable for roosting, or trees within 0.25 miles of roosts, or **documented** foraging habitat any time of year.
- 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 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 October 25, 2023, BSC Group, on behalf of 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 October 25, 2025, 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 October 25, 2025 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.

NATURAL HERITAGE AND ENDANGERED SPECIES PROGRAM CONDITIONS

The Massachusetts Natural Heritage & Endangered Species Program (NHESP) has reviewed MassDOT Project 610777 # - ADAMS- BRIDGE REPLACEMENT, A-04-038, QUALITY STREET OVER HOOSIC RIVER at the project's 100% design milestone and has determined that the project as proposed will occur within the actual habitat of Massachusetts state-listed species. Based on the information provided to NHESP, the project must be conditioned to avoid a prohibited Take of state listed species. The condition is as follows:

1. **Fisheries Protection**: To avoid impacts to state-listed fishes, no in water work shall occur during the period of **April 1 to July 31.** This includes the installation of water control measures.

If the limit-of-work or project scope changes, additional review is required by the MassDOT Highway Division's Environmental Services Section, and additional review and restrictions may be required by NHESP. The Contractor shall contact the MassDOT Environmental Services Unit (David Paulson, Wildlife and Endangered Species Supervisor, David.j.paulson@dot.state.ma.us, 857-262-3378) no later than 60 days prior to the desired start of in water work to ensure all NHESP permit conditions are implemented.

ENVIRONMENTAL PERMITTING

The proposed work occurs in jurisdiction 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/or 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 additional 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 Engineer in writing at least 60 days prior to desire commencement of the proposed activity. All environmental submittals, including and 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 some 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.

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.

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.

BUILD AMERICA BUY AMERICA PREFERENCE (Continued)

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.

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 provison 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 Crticial 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) = 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.

   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.

VALUE ENGINEERING CHANGE PROPOSAL (Continued)

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. VECPs 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.

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 100.9 BUILDING CONDITION SURVEY LUMP SUM

The work under this item shall include performing pre-construction survey and a post construction survey of the residential houses and garages/barns within the project area. There are eight structures that require a building condition survey. The residences to be evaluated are the homes located at 1 Quality Street, 3 Quality Street, 1B Pinnacle Drive, 1 Pinnacle Drive, 2 Pinnacle Drive, 2 South Willow Street, 4 South Willow Street, 6 South Willow Street, garages and/or barns necessary for each of the properties. The residences are in close proximity to Bridge No. A-04-038. Also included under this item is to perform a pre-construction video inspections of the basement walls and visible foundation.

CONSTRUCTION METHODS

Pre-Construction Building Survey

The Contractor shall retain and pay an experienced Professional Engineer registered in the Commonwealth of Massachusetts to perform a pre-construction survey of the structures. The purpose of the survey shall be to document the pre-construction conditions. This survey, as a minimum, shall locate, measure, photograph and otherwise document any visible cracks, defects, distortion, settlement, and other signs of distress prior to construction. The product shall be an original written report stamped and signed by the engineer performing the survey and four copies, including photographs, video tapes, plans, sketches and attachments, submitted to the Engineer a minimum of five (5) days prior to commencement of any construction activity.

Post-Construction Building Survey

A post-construction survey shall be performed within two weeks after construction at the site is complete. This shall be when all construction activities have been completed to the satisfaction of the Engineer. It shall consist of all measures described above for pre-construction surveys, along with a description and quantitative discussion of changes and/or movements observed between pre- construction and post-construction surveys.

Coordination

The Contractor shall coordinate with the property owners and Engineer to schedule the building survey.

POTENTIAL PROPERTY DAMAGE

It is the Contractor’s responsibility to repair any damage to the buildings caused by the construction activities. All costs associated with any repairs shall be the Contractors responsibility.

ITEM 100.9 (Continued)

BASIS OF PAYMENT

Item 100.9 will be paid for at the Contract Lump Sum price, which price shall include pre-construction and post-construction reports (with copies), pre-construction video inspections, reporting of damage as the work progresses, engineering services, all labor, materials, tools, equipment, and all incidental costs required to complete the work.

A sub-total of fifty percent (50%) of the Lump Sum price will be paid when the pre-construction report is submitted, and accepted by the Engineer.

The remaining (50%) will be paid when the post-construction report is submitted, and accepted by the Engineer.

ITEM 102.3 HERBICIDE TREATMENT OF INVASIVE PLANTS HOUR

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: Peter.R.Spellmeyer@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 IPMS.

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 incidentals 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

1. Company writing the IPMS and performing the herbicide application.
2. Date of site walk
3. Attendees at site walk
4. Expected end date of contract and expected last treatment (month/season)

II. Brief Description of Conditions

1. 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

1. Tree Work: Note coordination to be implemented with tree removal, clearing, and clearing and grubbing as applicable to the project.
2. Wetland Mitigation - Include management proposed for wetland mitigation areas in the IPMS, if and as required.
3. Planting: If there will be planting in areas proposed for treatment, propose treatment and schedule to avoid herbicide damage to plants.
4. Mowing: If coordination is required with state mowers, note need in IPMS.

IV. Soil Management

1. 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?).
2. Show stockpile locations on plan and include treatment schedule.
3. Note measures that will be implemented to avoid spread through equipment, including how and where equipment will be cleaned.

ITEM 102.33 (Continued)

V. Invasive Plant Treatment & Management

1. Proposed chemical and methods of treatment for each species or area.
2. Time of treatment based on target plant species.
3. Submit product label including application methods and rates (entire MSDS information need not be submitted if available online).
4. Proposed performance metrics or measure of treatment success if different from that specified under Item 102.3.
5. 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.
6. 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.

ITEM 102.33 (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. Interim Reports must include time and date stamped photos showing treated locations and species.

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 102.3 (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, described in Item 102.55. 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 102.513 AIR EXCAVATION AND ROOT PRUNING FOOT

Item 102.513 Air Excavation and Root Pruning is for the services of excavating soil with an air pressure tool in order to expose tree roots, and for associated services and materials necessary to complete the work of pruning, backfilling with existing soil, watering, mulching, and fertilizing. This item shall include the furnishing and operating the air excavating tool.

Associated Item: All references to Arborist herein shall refer to the Arborist under Item 102.55 Arborist. Arborist shall meet the requirements as specified under that Item and shall be compensated under that Item.

Trees to be air spaded shall be those shown on the plans and/or as determined necessary by the Engineer per the recommendations of the Arborist.

REFERENCES

The standards from American National Standards Institute (ANSI): A300 (Part 8)-2013 Root Management with special attention to Section 84 shall apply to this work. If requested, the Contractor shall provide to the Engineer one copy of this reference. Provision of reference shall be incidental to this item.

METHODS

Air excavation and pruning work shall be performed by or overseen by the Arborist.

Air excavation of soil and root pruning shall occur any time prior to equipment work within the root zone of marked trees.

Air excavation shall be done along the limit of proposed excavation. Trench shall be of sufficient width to observe and cut roots and shall be to the depth of proposed excavation. Immediately following air excavation, roots shall be pruned.

Following pruning, roots shall immediately be fully covered with backfill and immediately watered. Roots shall continue to be watered and fertilized as directed by the Arborist.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Item 102.513 will be measured and paid per foot where air spading, pruning, watering, and fertilizing are performed. This item will include full compensation for all labor, equipment, materials, and incidentals required for the satisfactory completion of the work.

Arborist services shall be per Item 102.55 Arborist and compensated under that Item.

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 including 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 preservations, 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.

ITEM 102.521 (Continued)

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.

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.

ITEM 102.531 TREE CARE - PRUNING EACH

The work under this item shall conform to the relevant provisions of Subsection 771 and shall be for when specialized or significant limb pruning is required. Pruning shall be to prevent injury to the tree from construction equipment and activities, pruning of dead limbs, and/or pruning for health and balance of the tree to mitigate impacts of construction activities on the root zone.

Trees to be pruned shall be those listed below.

Tree shall be a 36" Norway Maple, near temporary roadway at 41 Grove Street, Adams Massachusetts, 01220.

QUALIFICATIONS

Individuals performing the work must have, at a minimum, an ISA Certified Tree Worker or demonstrate equivalent training and experience. Certification shall be submitted to the Engineer for approval prior to work.

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.

METHODS OF WORK

Prior to construction activities, the Engineer, the Contractor, and the Arborist shall review trees noted on the plans and listed herein to be pruned. Final decision as to trees pruned shall be per the Engineer.

Pruning of limbs shall conform to the techniques and standards of the most recent ANSI A300 standards.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Item 102.531 will be measured and paid at the contract unit price per Each. This will include full compensation for all labor, equipment, tools, materials, and incidentals for the satisfactory completion of the work.

ITEM 102.533 TREE CARE - WATERING GALLON

The work under this item shall conform to the relevant provisions of Subsections 440 and 771 of the Standard Specifications and the following:

The purpose of this item is to provide watering for tree care during and after root pruning as directed by the Arborist. Watering shall occur during daytime hours only.

MATERIAL

Water shall be water from an approved source.

SUBMITTALS

Schedule for watering shall be determined in consultation with the arborist. Expected schedule shall be submitted to the Engineer. Source of the water shall be approved by the Engineer and included in the submittal.

Contractor shall submit metered record of water used or other measure approved by the Engineer. Record must show date of watering and quantity used.

METHODS

At least one day prior to watering on site, the contractor shall notify the Engineer.

Watering equipment shall be approved by the Engineer prior to watering under this item. Equipment shall be such that there is no water leaking from the tank, hoses, or any other parts. Water shall be pumped and have a minimum flow of 95 PSI. Gravity fed watering shall not be accepted under this item.

If water runs off root zone area due to slope, too high a flow rate, slow infiltration, or any other reason, water will not be approved for payment.

Watering method shall not damage plants or seeded areas or cause erosion. All damages shall be repaired at the Contractor's expense.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Item 102.533 shall be measured by the Gallon and shall be based on the submittals described herein. Payment shall be for all labor, equipment, and materials to complete the work specified.

Item 102.533 will be paid for at the Contract unit price per Gallon which price shall include all labor equipment, materials and incidental costs required to complete the work.

ITEM 102.55 **ARBORIST** **HOUR**

DESCRIPTION

The work under this Item is for the services of a Certified Arborist. Arborist shall be an International Society of Arboriculture (ISA) Certified Arborist or a Massachusetts Certified Arborist. The Arborist shall have at least 10 years of experience in tree care, including tree protection during construction, and shall demonstrate a familiarity with the American National Standards Institute (ANSI) A300 Standard Practices for Tree, Shrub, and Other Woody Plant Maintenance Part 1Pruning, Part 5 Construction Management Standards, and Part 9 Tree Risk Assessment.

The Arborist's general responsibilities include protecting high priority trees within and adjacent to the project limits, stating areas, and access routes; recommending removal of diseased, damaged or otherwise unhealthy trees that pose a potential safety hazard; evaluating effects of construction on future health of trees close to proposed work; and recommending and/or overseeing tree work and care.

The Arborist for this item shall not be from the same company as the company responsible for selective clearing or tree removal work.

For projects with multiple phases, projects where construction activities (work or stockpiling) shifts, or when otherwise directed by the Engineer, the Arborist shall re-evaluate conditions and provide follow-up recommendations.

SUBMITTALS

- Contractor shall submit to the Engineer for approval by MassDOT Landscape Design the qualifications and experience of the Arborist. Submittal shall include copy of current certification and a resume summarizing specific construction experience (including relevant MassDOT projects) for a minimum of five projects.
- Arborist's Report documenting recommendations shall be submitted to the Engineer and an electronic copy forwarded to MassDOT Landscape Design Section. Report shall include the following:

SCOPE OF WORK

The Arborist shall be responsible for the following tasks:

- Initial Evaluation and Report
  - recommend and prioritize trees that require removal as appropriate to contract scope, project limits, and project intent;
  - review and recommend protection measures for high priority trees;
  - submit a marked-up Construction Plan that briefly notes recommendations and decisions made in the field;
- Oversight
  - direct or execute pruning of branches and/or roots, air spading, and/or other tree care operations
- Monitoring and Inspections
  - submit inspection notes with relevant and dated photos to the Engineer.

ITEM 102.55 (Continued)

- Special Care
  - oversee tree pruning for health and aesthetics
  - recommend fertilization and amendments
  - recommend and oversee pest control

METHODS

Prior to any work, the Arborist shall walk the site with the Contractor, the Engineer, the Town Tree Warden, to review trees, limits of construction activities, and other concerns. Where required for proper assessment of tree impacts, limits of work shall be staked or otherwise marked in the field prior to the site walk.

Trees to be removed shall be painted or otherwise marked.

Trees to be retained shall be marked such that it does not mar or damage the tree and such that marker is not easily removed. As applicable to the work and scope of the project, trees designated for removal or to be retained shall be noted on the plan and/or in the arborist's report and photographed.

Trees designated to remain that are damaged or removed by construction activities shall be noted and photographed for inclusion in inspection reports submitted to the Engineer.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Item 102.55 will be measured for payment by the Hour of time spent onsite.

Item 102.55 will be paid at the contract unit price per hour upon submittal and acceptance of Reports described above.

ITEM 114.1 DEMOLITION OF SUPERSTRUCTURE OF BRIDGE NO. A-04-038 (ACD) 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 shall consist of the removal and disposal of the existing steel girder-floorbeam-stringer superstructure; including built-up steel through girders, built-up steel floorbeams, rolled steel stringers, bearings, reinforced concrete deck and safety walks, existing utility brackets, and any miscellaneous appurtenances or debris encountered during demolition. The Contractor shall submit his/her proposed method of demolition, including equipment, tools, devices, protection methods, etc., to the Engineer for approval. This item includes any removal and reinstallation of existing channel riprap needed to remove the existing substructure to the specified limits. The use of explosives for demolition purposes is strictly prohibited.

Temporary Protective shielding to be used in conjunction with this demolition is specified and paid for separately under Item 994.01. Any equipment, debris, or excavated material that falls into the river due to the Contractor's activities shall be promptly removed by the Contractor at their expense and as directed by the Engineer.

The Contractor is required to remove any debris, tools, or other material that falls into the Hoosic River immediately at their own expense.

All materials removed in this demolition shall become the property of the Contractor and shall be recycled, reused, or disposed of in accordance with all applicable Local, State, and Federal requirements. The Contractor shall be responsible for protecting the existing utilities that pass over, under, near, and/or are attached to the bridge from any damage. Water utilities are to be temporarily rerouted over a temporary utility bridge, as shown on the plans, prior to the demolition of the existing bridge superstructure.

The Contractor shall submit his/her proposed method of demolition, including equipment, tools, devices, protection methods, etc., to the Engineer for approval. The demolition procedure and any necessary calculations and drawings shall bear the stamp of a Professional Engineer registered in the Commonwealth of Massachusetts, certifying that all existing structural members are suitably braced and supported throughout the demolition process. Work shall not commence until the Engineer has given written approval of the demolition procedure.

ITEM 114.1 (Continued)

The Contractor shall also submit information pertaining to crane/equipment capacity, location, radii of movement, etc. to the Engineer for approval for all phases of demolition. The submittal shall specify that the requirements for equipment and all procedures utilized are in conformance with the intent of Subsection 960.61, Steel Erection, of the Standard Specifications. The submittal shall include drawings and calculations of all loads and selection of crane/equipment and lifting hardware and shall be stamped by a Professional Engineer registered in the Commonwealth of Massachusetts. If the Contractor intends to place cranes/excavators behind the existing abutments to facilitate the superstructure demolition, stability calculations shall be developed to check the existing abutments using all intended construction loads, and shall be included with the calculation package discussed herein.

The Contractor shall take care not to damage the adjacent temporary utility bridge, including the panelized truss, abutments, utilities, and attachments. Any damage shall be repaired by the Contractor to the satisfaction of the Engineer at the Contractor's expense.

MassDOT does not guarantee or represent that the bridge materials will coincide with any descriptions contained herein or represented on the Plans. The Contractor must satisfy themselves, by their own investigation and research, regarding all conditions and materials affecting the work to be done. All costs for permits, dump fees, special handling of hazardous materials, etc. shall be included in the bid price for this demolition item. No additional compensation beyond the Lump Sum Price Bid for this Item shall be awarded for situations in which the materials or work proves to be different from that inferred or described herein or on any Plans.

Surplus material not required for use on this project and all materials used under this item shall become the property of the Contractor unless otherwise stated in the Contract Documents and shall be removed from the job site at the Contractor's expense.

DUST CONTROL

Due to the proximity to residential housing, the Contractor shall control, contain, and/or prevent excessive airborne dust associated with demolition of the bridge materials, as designated on the Plans. This work shall be in accordance with these Special Provisions and the Standard Specifications.

ITEM 114.1 (Continued)

BASIS OF PAYMENT

Item 114.1 will be paid for at the Contract Lump Sum price, which price shall include all labor, materials, equipment, and all incidental costs required to complete the work.

No separate payment shall be made for miscellaneous removals and disposals that are not specifically listed for payment under another item but all costs in connection therewith shall be included in the Contract unit price bid, except as specified otherwise.

The contractor will make their own investigation of the structure to be demolished, including the materials that are part of or otherwise attached to the structure. No increase will be made to the bid price due to the nature of the materials involved in the demolition. All costs for permits, dump fees, taxes, special handling of hazardous materials, etc. shall be included in the bid price of the demolition item.

Any saw-cutting necessary to remove the superstructure, curbs, etc. shall be considered incidental to this item.

Complete and partial removal of reinforced concrete substructure elements, as shown on the plans, will be paid for separately under Item 127.1, Reinforced Concrete Excavation.

Dust Control shall be paid for under Item 443.

ITEM 127.1 REINFORCED CONCRETE EXCAVATION CUBIC YARD

The work under this Item shall conform to the relevant provisions of Subsections 112, 120, and 140 of the Standard Specifications and the following:

The work under Item 127.1, Reinforced Concrete Excavation, shall include saw-cutting, excavation, and removal of the existing reinforced and/or unreinforced concrete substructure, including abutment cross girders, beam seats, backwalls, supporting battered stem walls, and wingwalls to the limits shown on the Plans, or as directed by the Engineer. All work shall be completed *in the dry* via excavations behind existing riprap to remain and/or temporary Control of Water. Any Control of Water required to complete the concrete excavation work covered under this Item is specified and paid for separately under Item 991.1.

The Contractor shall be responsible for verifying and marking the limits of concrete excavation for the battered stem walls to be abandoned in place. The marked limits of reinforced concrete excavation shall be verified by the Engineer before reinforced concrete excavation of the walls commences.

All concrete materials removed shall become the property of the Contractor and shall be properly disposed of away from the work site. The use of explosives for concrete excavation/removal purposes is strictly prohibited.

The Contractor shall not remove any concrete beyond the limits shown on the Plans, unless ordered to do so by the Engineer.

The Contractor shall submit his/her proposed method of excavation, including equipment, tools, devices, protection methods, etc. to the Engineer for approval. The concrete excavation procedure and any necessary calculations and/or drawings shall bear the stamp of a Professional Engineer registered in the Commonwealth of Massachusetts and shall certify that all existing substructure elements are suitably braced and supported throughout the excavation process. Work shall not commence until the Engineer has given written approval of the concrete excavation procedure.

The Contractor’s operations shall not result in any damage to adjacent structures, utilities, or foundations, including the temporary utility bridge and support of excavation. Any damage to adjacent structures caused by the Contractor’s operations shall be repaired by the Contractor to the satisfaction of the Engineer at no additional expense.

ITEM 127.1 (Continued)

The Contractor shall ensure that concrete, reinforcing steel, other demolition materials, tools, and equipment will be prevented from falling or entering the Hoosic River below and shall submit a plan, schedule, and procedure for approval prior to performing the work.

METHOD OF MEASUREMENT

Item 127.1 will be measured for payment by the Cubic Yard of reinforced concrete excavated and removed.

BASIS OF PAYMENT

Item 127.1 will be paid for by the Contract unit price per Cubic Yard, which price shall include sawcutting, excavation, removal, disposal, all labor, materials, tools, equipment, engineering services, and all incidental costs required to complete the work.

Removal and proper disposal of any existing fittings, appurtenances, or elements attached to, embedded in, or abutting the concrete indicated for removal will be considered incidental to the work of this Item. Debris from construction must be carefully contained within the work zones and prevented from falling into the waterway below. No foreign material or debris resulting from the Contractor's operations shall be permitted to enter or remain in the waterway. The Contractor shall be required to remove any debris generated from construction from the site immediately and to restore portions of the site affected by the operation to their original undisturbed condition or better. Removal of debris generated by demolition and construction will be performed at the Contractor's own expense. Contractor shall be responsible for dust control as the result of the demolition operations. Dust control shall be paid for under Item 443.

All costs associated with saw-cutting shall be considered incidental to this Item.

Temporary Protective Shielding to be used in conjunction with this Item is specified and paid for separately under Item 994.01

ITEM 156.13 CRUSHED STONE FOR INTEGRAL ABUTMENT PILES TON

The work under this Item shall conform to the relevant provisions of Subsection 150 of the Standard Specifications and the following:

The work under this Item shall include furnishing and placing crushed stone for integral abutment piles.

Crushed stone shall be used to fill in the trenches below the integral abutments at the tops of the piles, as shown on the Plans. The trench shall be filled with crushed stone only after pile driving has been completed. Stone shall conform to the material requirement M2.01.6.

The crushed stone shall be placed as shown on the Plans and in conformance with the Standard Specifications.

METHOD OF MEASUREMENT

Item 156.13 will be measured for payment by the Ton of crushed stone for integral abutment piles, furnished and installed, complete in place.

BASIS OF PAYMENT

Item 156.13 will be paid for at the Contract unit price per Ton, which price shall include furnishing, placement, all labor, materials, tools, equipment, and all incidental costs required to complete the work.

ITEM 156.5 CRUSHED STONE FOR FILTER BLANKET CUBIC YARD

The work under this Item shall conform to the relevant provisions of Subsections 150 and 983 of the Standard Specifications and the following:

The work shall include furnishing and placing crushed stone for filter blanket to the limits shown on the Plans for use as a bedding for riprap. The crushed stone shall conform to Section M2.01.4 of the Standard Specifications.

The crushed stone shall be placed as shown on the Plans and in conformance with the Standard Specifications.

METHOD MEASUREMENT

Item 156.5 will be measured for payment by the Cubic Yard of crushed stone for filter blanket, furnished and placed, complete in place.

BASIS OF PAYMENT

Item 156.5 will be paid for at the Contract unit price per Cubic Yard, which price shall include furnishment, placement, all labor, materials, tools, equipment, and all incidental costs required to complete the work.

The associated geotextile fabric for erosion control will be paid for under Item 698.4 Geotextile Fabric for Permanent Erosion Control and riprap will be paid for under Item 983.12 Riprap with Gravel Packed Voids.

ITEM 173.1 SOIL REPLACEMENT OF FORMER PAVED AREAS FOR SEEDING SQUARE YARD

The work to be performed under this Item shall conform to the relevant provisions of Subsections 150 and 751 of the Standard Specifications, and the following:

The work to be performed under this Item shall include furnishing and placing ordinary borrow and loam borrow for the replacement of pavement and subgrade soils at previously paved areas to provide suitable soil conditions for successful seeding and grass establishment. Loam sample and test results shall be submitted as specified under Division III, Materials.

CONSTRUCTION METHODS

In areas of proposed seeding, HMA pavement plus subgrade shall be removed to a depth of twelve (12") inches and replaced with acceptable ordinary borrow, less the four (4") inch loam cover, to the lines and grades shown on the drawings or as directed by the Engineer. The Contractor shall remove excavated material from the project site unless approved for re-use elsewhere by the Engineer.

The Engineer must approve replacement and grading work prior to the commencement of seeding operations.

Following pavement and subgrade removal and replacement, the Contractor shall protect soil areas designated for seeding from damage including contamination and re-compaction due to other soil installation, planting operations, and/or operations by other Contractors. Re-compacted and/or unsuitable soil shall be loosened or replaced at the Contractor's expense.

METHOD OF MEASUREMENT

Item 173.1 will be measured for payment by the Square Yard of soil replacement of former paved areas for seeding, furnished and placed, complete in place.

BASIS OF PAYMENT

Item 173.1 will be paid for at the Contract unit price per Square Yard, which price shall include furnishing, placement, ordinary and loam borrow, all labor, materials, tools, equipment, and all incidental costs required to complete the work.

Seeding shall be paid for separately under the respective seeding Items.

Pavement removal shall be paid for separately under Item 120.

ITEM 173.2 SOIL DECOMPACTION SQUARE YARD

This work will include soil decompaction for planting and seeding areas by tilling. Locations shall be as shown on the plan or as delineated by the Engineer.

Work shall avoid decompaction activities under the canopy of existing trees unless approved by the Engineer.

SUBMITTALS

The Contractor shall submit equipment and methods for soil decompaction for approval by the Engineer.

METHODS

Following completion of construction work and removal of all materials, equipment, and debris from areas designated for decompaction, the soil shall be loosened by harrowing, raking, or tilling (referred to as tilling herein) to a depth of twelve (12) inches. All soil decompaction activities shall occur when soils are dry not damp or wet.

Upon completion of tilling work, the Engineer shall approve that the depth of tilling meets the specified depth.

Following soil decompaction, the contractor shall regrade the soil to surface elevations and grades shown on the drawings or as required by the Engineer. The Engineer shall approve regrading and final elevations upon completion.

Upon approval of the Engineer and when specified, seeding shall be applied per seeding requirements.

The Contractor shall protect decompacted soils from trespass by equipment, materials and personnel. Re-compacted soil shall be loosened or replaced at the Contractor's expense.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Item 173.1: Soil Decompaction for Planting will be measured for per Square Yard of soil decompacted.

Soil Decompaction for Planting 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.

Compost, soil amendments, and seed will be measured and paid for separately under their respective Items.

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 HOUR

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.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

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).

ITEM 181.11	**DISPOSAL OF UNREGULATED SOIL**	**TON**
ITEM 181.12	**DISPOSAL OF REGULATED SOIL - IN-STATE FACILITY**	**TON**
ITEM 181.13	**DISPOSAL OF REGULATED SOIL - OUT-OF-STATE FACILITY**	**TON**
ITEM 181.14	**DISPOSAL OF HAZARDOUS WASTE**	**TON**

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 271.12	**12 INCH AND UNDER PIPE REMOVED AND STACKED**	**FOOT**
ITEM 315.06	**6 INCH WATER MAIN REMOVED AND STACKED**	**FOOT**
ITEM 315.12	**12 INCH WATER MAIN REMOVED AND STACKED**	**FOOT**
ITEM 315.16	**16 INCH WATER MAIN REMOVED AND STACKED**	**FOOT**
ITEM 315.20	**20 INCH WATER MAIN REMOVED AND STACKED**	**FOOT**
ITEM 369.12	**12 X 12 INCH TAPPING SLEEVE, VALVE AND BOX**	**EACH**
ITEM 369.16	**16 X 16 INCH TAPPING SLEEVE, VALVE AND BOX**	**EACH**
ITEM 375.12	**12 INCH INSERTION VALVE AND BOX**	**EACH**
ITEM 375.16	**16 INCH INSERTION VALVE AND BOX**	**EACH**

The work under these items shall conform to the relevant provisions of Subsections 220, 300 and 301 of the Standard Specifications and the following:

The work under Item 271.12 shall include the furnishing and installation of all materials required to remove/stack existing pipe as shown on the plans or as required by the Engineer.

The work under Items 315.06, 315.12, 315.16, and 315.20 shall include the furnishing and installation of all materials required to remove/stack existing water main as shown on the plans or as required by the Engineer.

The work under Item 369.12 and 369.16 shall include the furnishing and installation of all materials required to install a new tapping sleeve, valve and box on the existing 12-inch and 16-inch water main respectively.

For Items 375.12 and 375.16, the Contractor shall be required to furnish and install in the existing water main, where indicated on the drawings, and while line is under pressure; an insertion gate valve and box for the purpose of controlling water flow in the existing main to allow work on the downstream sections of the water main. The Contractor shall be responsible for verifying the outside diameter of the existing water main prior to installation of the valve. The valve must be approved by the Town of Adams Water Division.

MATERIALS

APPROVAL OF MATERIALS

All materials must be manufacured and supplied in accordance with applicable ANSI/AWWA standards latest revisions and must be American Made.

All products that may have contact with drinking water must be certified to be in compliance with NSF/ANSI Standard 61(NSF 61) Annex G and must meet the weighted average lead content requirement and meet the new low lead requirements of the US. Safe Drinking Water Act of 2014. Note: NSF/ANSI Standard 61, Annex G (NSF 61-G) references NSF 372. Proof of certification must be furnished upon request.

ITEMS 271.12 through 375.16 (Continued)

All line stops shall be rated at minimum working pressure of 150 psi and hydrostatic test pressure of 300 psi. Lined waterways with fusion-bonded epoxy, EPA or NSF approved for potable water, minimum thickness of 12 mils, following AWWA C213. Exterior coating: Fusion bonded epoxy minimum thickness 12 mils, following AWWA C-213.

The Contractor shall submit the names of the material suppliers to the Engineer for approval prior to ordering any materials.

PIPE

Pipe shall be ANSI A21.4/AWWA C151 class 52 ductile iron cement lined minimum of 1/8-inch thick, ANSI A21.4/AWWA C104 and bituminous coated inside and outside per ANSI A21.4/AWWA C104. Joints shall be push-on unless otherwise approved in accordance with ANSI A21.51/AWWA C151 and gaskets conform to ANSI A21.11/AWWA C111. Maximum pipe length shall be 20 feet. Each pipe length and fitting shall be clearly identified by marking with: Manufacturer's name and trademark; nominal pipe size, and material designation.

FITTINGS

Fittings shall be ductile iron Class 53 conforming to applicable ANSI, NEWWA, and AWWA specifications with mechanical joint having ductile iron retainer gland per ANSI A21.51/AWWA C151. Retainer glands shall be designed to impart multiple wedging action against the pipe, increasing its resistance as the pressure increases. Glands shall be manufactured of ductile iron conforming to ASTM A536-80. Restraining devices shall be of ductile iron heat-treated to a minimum harness of 370BHN. Twist-off nuts shall be used to ensure proper actuating of the retainer gland. Dimensions of the gland shall be such that it can be used with the standard mechanical joint bell and tee-headed bolts conforming to ANSI/AWWA A21.1 and ANSI/AWWA 153/A21.5. The retainer gland shall have a working pressure of 250 psi with a minimum safety factor of 2:1 and shall be certified by the manufacturer to be compatible with the pipe class and pipe manufacturer for all sizes provided on the job. Fittings shall have minimum pressure rating of 250 psi for cast iron fittings and 350 psi for ductile iron fittings and cement lined with minimum 1/8-inch thickness per ANSI A21.4/AWWA C104 with bituminous coating inside and outside in accordance with ANSI A21.4/AWWA C104. Gaskets shall meet ANSI A21.11/AWWA C111. All flanged joints shall be 125-lb standard with neoprene rubber gaskets, minimum 1/8-inch thick.

COUPLINGS AND TRANSITION COUPLINGS

Couplings shall only be allowed when connecting standard outside diameter pipe to oversize or pit cast pipe. The coupling shall be of a type equal to Smith Blair, Style 441; Dresser, Style 153; 360 or Romac Style 501, or an approved equal. Couplings shall be provided with plain, Grade 27, rubber gaskets and with black, steel, track-head bolts with nuts. Couplings and transitional couplings for pipe less than or equal to 12 inches in diameter shall consist of a long body cast iron sleeve and shall have gaskets suitable for the pipe being joined. Transition couplings for pipe less than or equal to 12 inches in diameter shall be Dresser Style 162, Rockwell Type 441, Smith Blair Omni Style 442, or equal.

ITEMS 271.12 through 375.16 (Continued)

GATE VALVES

Gate valves are resilient seated and must meet or exceed the requirements of AWWA C509, sized from 6-inch through 12-inch, ductile iron mechanical joint with retainer glands, non-rising stem, minimum 200 psi working pressure, wrench nut operational open left (counterclockwise), bonnet bolting shall be stainless steel, and double “0” ring seal.

Tapping valves shall have flange on sleeve end and mechancial joint on outlet end.

GATE BOXES

Valve boxes shall be cast iron, heavy pattern, sliding adjustable type with cast iron cover. The upper section shall have a flange to prevent settling. Valve boxes shall have barrels not less than 5-inch inside diamter and lengths adapted to valve depth. The barrels shall lap at least 6 inches when in the most extended position. The work “WATER” shall be cast into the cover. The bottom of the lower section shall enclose the valve bonnet and operating nut.

RESTRAINED END CAPS

Restrained End Caps shall be ductile iron casting ASTM A536 Grade 65-45-12 and manufactured in the United States of America.

LINESTOPS

The Tapping Saddle Assembly shall be of full encirclement, consisting of, at minimum, upper saddle plate with anchor neck, lower saddle plate, tapping flange and nozzle with gland or gasket for pressure tight seal suitable for potable water ranging in temperature from 32 degrees F to 100 degrees F. All components properly shaped and adequate strength to ensure proper mounting and pressure tight seal around existing pipe. The Saddle plates shall be manufactured from ASTM A283 Grade C, ATSM A36 or equal steel, clean and sound without defects that impact their service. No plugging or welding of such defects will be allowed. The outlet flange manufactured of same material as tapping saddle assemblies: Flat face and drill following ANSI B16.5, Class 150 flange. Provide suitable independently operating locking device in periphery of flange to secure completion plug. All waterways shall be Dye-penetrant inspected for watertightness.

The Completion Plug shall be manufactured from ASTM A283 Grade C, ASTM A36 or equal steel. It shall be equipped with two grooves; one to receive the locking device from flange, and second to contain compressible "O" ring to seal pressure tight against interior diameter of nozzle.

The Blind Flange is to seal tapping saddle assembly upon removal of tapping and linestop equipment. It shall be manufactured from AWWA C207, Class D steel and drilled to match bolt circle of nozzle of tapping saddle assembly.

ITEMS 271.12 through 375.16 (Continued)

The Tapping Equipment Fabricator/Installer shall furnish folding plug head linestop capable of pressure tight seal against inside diameter of existing pipe. The linestop shall advance into and retract from pipeline by means of hydraulic or mechanical actuator. When retracted the folding plug head to be housed in pressure tight chamber between the actuator and tapping valve.

The folding plug shall be capable of displacing accumulated grit deposits in interior of the pipe while advancing to its linestopping position and have molded polyurethane sealing element around its perimeter and supply workable seal with interior diameter when fully advanced.

CONSTRUCTION METHODS

PIPE INSTALLATION

The Contractor shall make all necessary arrangements with the Town of Adams Water and Fire Departments for the necessary shutdowns of service.

The Town of Adams Water Department may establish the time of shutdown to be within the normal daily low demand period.

Care shall be taken in loading, transporting, and unloading to prevent injury to the pipes or coatings. Pipe and fittings shall not be dropped. All pipe or fittings shall be examined before laying and no piece shall be installed which is found to be defective, as determined by the Engineer. Any damage to the pipe coatings shall be repaired as directed by the Engineer. Any pipe found to be defective, as determined by the Engineer, before or after laying, shall be removed and replaced with sound pipe at no additional cost. All pipe and fittings shall be thoroughly cleaned before laying and shall be kept clean until installed.

All pipe and fittings shall be installed in conformance with AWWA Standard Specifications C600, except as otherwise provided herein. All pipe and fittings shall be sound and shall be laid in a dry trench on a shaped bedding providing uniform, firm support over the entire length of each section barrel. BLOCKING WILL NOT BE PERMITTED. The select bedding material shall be placed and tamped along the sides of the pipe to complete the bedding.

Pipe shall be laid in alignment and at a uniform 5-foot depth to top of pipe below proposed grade except where extra depth is required to clear other utilities and to connect to existing pipes, valves or fittings. Joint deflection shall not exceed that recommended by the manufacturer.

Additional fittings shall be furnished and installed as required to cross existing utilities. Solid sleeves shall be used only where approved by the Engineer.

When pipe laying is stopped for any length of time, including short periods, the open ends of the pipe and fittings shall be closed with a watertight plug or cap. At no time shall water in the trench be permitted to flow into the pipe.

ITEMS 271.12 through 375.16 (Continued)

Necessary pipe cutting shall be accomplished by power saw and shall leave a smooth cut at right angles to the axis of the pipe, as approved by the Engineer. Cut ends of pipe to be used with a push-on bell shall be beveled to conform to the manufactured spigot end. Cement lining shall be undamaged.

Mechanical joints shall be installed in accordance with the "Notes of Method of Installation" of ANSI A21.11 and the instructions of the manufacturer. The Contractor shall thoroughly clean the joint surfaces and rubber gasket with soapy water before tightening the bolts. Bolts shall be tight to the specified torques. Under no condition shall extension wrenches or pipe over handle or ordinary ratchet wrench be used to secure greater leverage.

TAPPING SLEEVES AND VALVES

The Contractor shall install the tapping sleeves on the existing mains for the relocation of existing pipes under the supervision of the Town of Adams Water Department. Tapping sleeves shall be installed at least 3 feet from an existing pipe joint and shall be squarely centered on the existing pipe.

Adequate support shall be provided under the sleeve and valve during the tapping operation. After completing the tap, the valve shall be flushed to ensure that the valve seat is clean.

Tapping operations shall be conducted by workmen thoroughly experienced in the installation procedures.

Valves shall be set vertically with valve boxes adequately supported, centered on the valve and vertical.

Concrete thrust blocks shall be installed behind each tapping sleeve.

INSERTION VALVES AND BOXES

Before backfilling, all exposed portions of any bolts used to secure the two halves of the tapping sleeve shall be heavily coated with two coats of a bituminous protective coating. The coating shall be a coal tar or asphalt-based bituminous paint designed for corrosion protection of buried ferrous metal components and shall be comparable in performance to AWWA C203 standards for coal-tar coatings or equivalent.

ITEMS 271.12 through 375.16 (Continued)

The Contractor shall arrange for and furnish, at his own expense, the services of a qualified representative from the manufacturer to supervise the operation of the inserting equipment and the installation of the insertion valve. Prior to construction operations at the relocation site, the Contractor shall submit to the Engineer for approval, the recommendations of the manufacturer's representative including limits of excavation and method of backfill. After the installation of the device, and prior to any backfilling, the representative shall inspect the installation. The services of the representative for the operation of the inserting equipment, installation of the valve, adjustments, and testing shall be furnished for the number of days required to properly perform the required services including any necessary testing of the installation. All costs in connection with the services of the manufacturer's representative including transportation, hotel, meals, etc. from the time the representative leaves his permanent work area until his return are the Contractor's responsibility.

Methods of securing the insertion valve will require the submission of detailed plans and calculations verifying at least an equal level of service and must be approved in writing by the Engineer.

A valve box is required and installed by the Contractor as part of this item.

LINE STOPS

Before ordering line stops tapping saddle assembly, the Contractor shall clean existing pipe, make circumferential measurement of pipe and check for roundness to verify sleeve will fit.

The Contractor shall repair any damage to existing pipe coating with suitable coating material to original line of coating as directed by pipe manufacturer's technical representative at no additional expense before backfilling.

The Contractor shall excavate around existing pipe so as not to disturb thrust blocking. Clean existing pipe. Check pipe outside diameter and roundness to verify assembly will fit. Provide all materials and equipment, to perform installation of linestop. Provide blocking/support following Drawings.

Approved Tapping Equipment Fabricator/Installer to install tapping saddle assembly to pipe and to insert linestop into pipe for line isolation.

After linestop is no longer required, approved Tapping Equipment Fabricator/Installer to remove linestop and install completion plug and blind flange.

TESTING

The Contractor shall provide all necessary equipment and conduct hydrostatic pressure and leakage tests on the new water system installed under the Contract in conformance with AWWA 600, the regulations of the Massachusetts State Board of Health and the following:

ITEMS 271.12 through 375.16 (Continued)

The water system shall be subjected to a hydrostatic pressure of 200 psi and this pressure shall be maintained for at least one hour. The leakage test shall be conducted at a pressure of 150 psi and this pressure shall be maintained for at least two hours.

Permitted leakage shall conform to AWWA C600. Leaks exceeding this standard shall be located and all defective pipe, fittings, pipe joints, valves and other material removed and replaced with new material to correct the leak, as directed by the Engineer, at no additional cost to the Owner.

All testing shall be done in a manner, which prevents the entrance of contaminated water or pollutants into the existing water system.

DISINFECTION

After completion of testing, and any necessary leak repairs, the new water system shall be chlorinated in conformance with AWWA C601. The procedure and location of chlorination and sampling points shall be approved by the Engineer before beginning disinfection.

Immediately prior to disinfection, the system shall be flushed at the maximum velocity that can be developed, but not less than 2.5 feet per second. All flushing shall be done in the presence of the Engineer and wastewater shall be directed into the drainage system.

Chlorine shall be introduced into the system in a dosage which provides a minimum concentration of 50 parts per million of available chlorine. The chlorine solution shall remain in the system for at least 24 hours and the residual chlorine concentration in any portion of the system after this period shall not be less than 25 parts per million.

During disinfection, all valves and hydrants shall be operated to ensure that all appurtenances are disinfected.

Following disinfection, the chlorine solution shall be flushed from the system and the system refilled. The City will take samples and tests for bacteriologic quality and the absence of coliform organisms. The Contractor will be required to re-chlorinate, if necessary, and the lines shall not be placed in service until the requirements of the City and State Board of Health are met.

PIPELINE REMOVED AND STACKED

The deactivation of the water mains shall be done upon completion of:

1. Installation and successful testing of the new pipeline including all valves and appurtenances.
2. Reconnection of existing pipelines to the new pipelines.
3. Approval for the removal and stacking of the water mains by the Engineer or Owner.

ITEMS 271.12 through 375.16 (Continued)

The Contractor shall excavate and remove sections of the existing water main as shown on the Drawings or as needed to complete proposed drainage work for the Contractor's convenience. If the open end of the water main to be abandoned is subject to line pressure, the end of the pipe shall be sealed with a mechanical joint cap or plug. If the open end of the water main to be abandoned is not subject to line pressure, the end of the pipe shall be sealed with a concrete plug with a length no less than 2 times the pipe diameter. For example, an 8-inch diameter pipe will require that a minimum 16-inch-long plug be installed inside the barrel of the abandoned pipe.

After the pipe to be removed has been plugged, the top sections of all gate boxes shall be removed and stacked, the holes filled in with suitable backfill material and patched with bituminous concrete in the area of the gate box.

The Contractor shall contact the local Fire District to determine if the town requires Removed and Stacked water mains to be delivered to the Well Location at 286 Eastview Drive, Cheshire, MA. Contractor shall coordinate delivery with the Fire District Superintendent. All water mains that are not to be delivered to the town shall be considered a contactor owned salvaged material.

METHOD OF MEASUREMENT

Items 271.12, 315.06, 315.12, 315.16, and 315.20 will be measured for payment by the respective Foot of pipe and water main removed and stacked, complete in place.

Items 369.12, 369.16, 375.12, and 375.16 will be measured for payment by the respective Each tapping sleeve, valve and box, and insertion valve and box, furnished and installed, complete in place and approved by the Engineer.

BASIS OF PAYMENT

Items 271.12, 315.06, 315.12, 315.16, and 315.20 will be paid for at the respective Contract unit prices per Foot, which prices shall include removal, stacking, all labor, materials, tools, equipment, and all incidental costs required to complete the work.

Items 369.12, 369.16, 375.12, and 375.16 will be paid for at the respective prices per Each, which prices shall include furnishing, installation, all labor, materials, tools, equipment, and all incidental costs required to complete the work.

No separate payment will be made for excavation, gravel borrow and crushed stone bedding and backfill, testing and disinfection, including installation of pipe taps necessary for chlorination or taking samples and including paying for bacteriological testing by an approved independent laboratory, but all costs in connection therewith shall be included in the unit prices bid for the respective items unless otherwise noted herein.

ITEMS 271.12 through 375.16 (Continued)

No separate payment will be made for the removal, transporting and disposal of existing salvaged materials, but all costs in connection therewith shall be included in the unit prices bid for the respective items. Salvaged materials shall become property of the contractor and removed from the site and disposed of in a legal manner at the contractor's expense.

Controlled Low-Strength Material will be paid under Item 160.3

Temporary patching of roadway will be paid under Item 472.

Permanent patching of roadway will be paid under the respective permanent HMA Items.

All thrust blocks will be paid under Item 903.

ITEM 303.14 14 INCH DUCTILE IRON WATER PIPE (MECHANICAL JOINT) FOOT

The work under this Item shall conform to Section 300 of the Standard Specifications, the latest American Water Works Association standards related to water supply materials and installation, and the following:

The work under this Item shall include furnishing and installing 14-inch ductile iron water pipe with mechanical joint fittings as shown on the plans or as directed by the Engineer. Construction shall include all materials, excavation, bedding, jointing, testing, disinfection, and associated appurtenances.

MATERIALS

- **Pipe**: Ductile iron pipe conforming to ANSI/AWWA C151/A21.51, nominal 14-inch diameter, minimum Class 350 rating, cement-mortar lined per AWWA C104/A21.4, bituminous seal-coated externally.
- **Joints**: Mechanical joints per ANSI/AWWA C111/A21.11, using vulcanized rubber gaskets approved by AWWA standards.
- **Fittings**: Ductile iron fittings (teess, bends, reducers, solid sleeves, plugs) meeting ANSI/AWWA C153/A21.53 or C110/A21.10; all fittings to be mechanical joint type and restrained where indicated.
- **Bolts/Nuts**: High-strength corrosion-resistant bolts and nuts per ANSI/AWWA C111/A21.11.
- **Polyethylene Encasement**: Where specified, install per AWWA C105/A21.5.

APPROVAL OF MATERIALS

Submit names of suppliers, product data, shop drawings, and certificates of compliance (Contractor's Material and Test Certificate) for pipe, fittings, joints, gaskets, bolts, etc., to the Engineer for review prior to ordering or installation.

CONSTRUCTION METHODS

- **Coordination**: Coordinate with the municipal water authority; notify them and affected residents/businesses at least 48 hours in advance of any shutdown or valve operation, under their direction.
- **Trenching**: Install pipe in trench configuration per MassDOT Trench Excavation Section 140 and Water Works Section 260.
- **Handling**: Protect pipe, lining, and coating from damage during storage and installation.
- **Joint Assembly**: Assemble joints per manufacturer instructions and AWWA C600.
- **Restraints**: Provide thrust blocks or restrained joints at all locations with unbalanced thrust (bends, tees, plugs) as shown or directed.
- **Cleaning**: Prior to laying, clean interior of the pipe to remove debris and foreign matter.

ITEM 303.14 (Continued)

TESTING AND DISINFECTION

- **Hydrostatic Testing**: Conduct hydrostatic pressure test per AWWA C600, at minimum 150 psi for two hours unless otherwise directed.
- **Leakage Limits**: Acceptable leakage shall not exceed limits established in AWWA C600.
- **Disinfection**: Perform disinfection according to AWWA C651 procedures.

METHOD OF MEASUREMENT

Item 303.14 will be measured for payment by the linear foot along the centerline of installed 14-inch ductile iron pipe, complete in place, including all joints and mechanical joint fittings.

BASIS OF PAYMENT

Items 303.14 will be paid for at the Contract unit price per Foot, which price shall include all labor, materials, tools, equipment, and all incidental costs required to complete the work.

The prices shall also include all excavation (except rock) to a maximum depth of 5 feet (as measured from the top of the trench to the bottom of the pipe barrel).

Trench excavation greater than 5 feet, and rock excavation, will be paid for a specified in Subsection 140.81: Basis of Payment for Class B Trench Excavation and Class B Rock Excavation.

Backfill for trenches 5 feet or less in depth shall be included in the various items of pipe. Backfill for that part of a trench which is more than 5 feet in depth shall be included in the item for Class B Trench Excavation.

The prices shall also include all disinfection and testing of the water pipeline system.

Temporary patching of roadway will be paid under Item 472.

Permanent patching of roadway will be paid under the respective permanent HMA Items.

All thrust blocks will be paid under Item 903.

ITEM 402.13 PAVEMENT MILLING MULCH FOR SHOULDERS FOOT

Work to be done shall conform to the relevant provisions of Subsection 769 of the Standard Specifications and the following:

The work consists of earthworks to install pavement millings mulch for shoulders at the edge of pavement. The existing shoulder shall be prepared for pavement milling mulch as necessary and directed by the Engineer. The work shall consist of excavation and leveling shoulder area to be mulched. The excavation and leveling of shoulder shall be pushed back down slope on embankment and/or excavated and disposed of on-site level and compacted as directed by the Engineer. Milling mulch shall be graded and compacted to a width of 3 feet and a depth of 4 inches level with the edge of the pavement, top of edging or curb or as directed by the Engineer.

No geotextile fabric under the pavement millings shall be installed.

MATERIALS

Pavement milling mulch shall be smaller than the Standard 1-1/2 inch sieve.

The on-site recycling of pavement millings sourced from the project is encouraged. All pavement milling mulch for shoulders will be accepted based on visual inspection by the Engineer. Mulch material greater than 1 ½ inch shall be removed off-site by the Contractor.

METHOD OF MEASUREMENT

Item 402.13 will be measured per FOOT in the longitudinal direction parallel to the edge of road, complete in place.

BASIS OF PAYMENT

Item 402.13 will be paid per FOOT of material installed which price includes materials, excavation, grading and leveling and disposing on site, compacting and all incidental costs required to complete the work to the satisfaction of the Engineer.

ITEM 628.241 TRANSITION TO BRIDGE RAIL - CURVED EACH

The work under this Item shall conform to the relevant provisions of Section 600 of the Standard Specifications and the following:

The work under this Item shall include furnishing and installing curved transitions to bridge rail.

CONSTRUCTION METHODS

Transition to Bridge Rail - Curved shall be installed at a radius of approximately 32-ft (northeast transition) and 58-ft (southeast transition) to transition the bridge rail to thrie beam highway guardrail at the residential gravel driveway, as shown on the plans and as directed by the engineer.

Northeast Transition:

- Total length of the transition to bridge rail shall be 51'-7.5"
- Length of thrie beam shall be 45'-4.5"
- Length of thrie beam transition panel shall be 6'-3"

Southeast Transition:

- Total length of the transition to bridge rail shall be 69'-7"
- Length of thrie beam shall be 63'-4"
- Length of thrie beam transition panel shall be 6'-3"

METHOD OF MEASUREMENT

Item 628.241 will be measured for payment by the Each transition to bridge rail – curved, furnished and installed, complete in place and approved by the Engineer.

BASIS OF PAYMENT

Item 628.241 will be paid for at the Contract unit price per Each, which price shall include furnishment, installation, all labor, materials, equipment and all incidental costs required to complete the work.

ITEM 630.41 STEEL BACKED WOOD GUARDRAIL - DOUBLE SIDED REMOVED AND RESET FOOT

The work under this Item shall conform to the relevant provisions of Subsection 630 of the Standard Specifications, and the following:

The work under this Item shall consist of removing double steel-backed timber rail elements, wood posts, and accessories as shown on the plans and as directed by the Engineer to allow the construction of the temporary access road across the Ashuwillticook Rail Trail. The Contractor shall accept and be responsible for the removal, handling, and stacking at a convenient location until the temporary access road is removed and the steel backed wood guardrail double sided, wood posts, and accessories are reinstalled.

Components shall be the responsibility of the contractor, and no additional compensation will be paid for replacement and disposal of components damaged or degraded by the Contractor's operations, as identified by the Engineer.

METHOD OF MEASUREMENT

Item 630.41 will be measured for payment by the Foot of double sided steel backed wood guardrail removed and reset, complete in place and approved by the Engineer.

Measurement shall be taken along the top of the double sided rail between centers of posts.

BASIS OF PAYMENT

Item 630.41 will be paid for at the Contract unit price per Foot, which price shall include removal, resetting, replacement of components, disposal of damaged components, handling and stacking of wood posts, backing rails and accessory items, all labor, materials, tools, equipment, and all incidental costs required to complete the work.

ITEM 643. WOODEN FENCE REMOVED AND RESET FOOT

The work under this Item shall conform to the relevant provisions of Subsection 665 of the Standard Specifications, and the following:

The work under this Item shall include removal and resetting of wooden fence at the locations noted on the Plans, and as required by the Engineer.

The contractor shall be responsible for documenting the present condition of the fence prior to construction activities. All new materials required shall be equal in quality and design to the materials in the present fence.

If repainting of fences which have been painted originally is required, such work shall be done as directed. Any paint used in the painting of fences shall match the present fence in color.

METHOD OF MEASUREMENT

Item 643. will be measured for payment by the Foot of wooden fence removed and reset, as measured from outside to outside of the end posts, complete, in place, and approved by the Engineer.

BASIS OF PAYMENT

Item 643. will be paid for at the Contract unit price per Foot, which price shall include removal, resetting, all labor, materials, tools, equipment, and all incidental costs required to complete the work.

No separate payment will be made for painting, post excavation, post foundations, or any new materials required to replace or repair missing, damaged, or lost materials during or subsequent to removal.

No separate payment will be made for any repainting of fences required by the Engineer.

ITEM 657. TEMPORARY FENCE FOOT
ITEM 657.5 TEMPORARY FENCE REMOVED AND RESET FOOT

The work under these Items shall conform to the relevant provisions of Subsection 644 of the Standard Specifications, and the following:

The work under these Items consists of furnishing, installing, removing and resetting, and, subsequently, removing a temporary chain link fence to close off a construction work area from the general public, to be located and secured as shown on the Plans, and as directed by the Engineer.

All posts, including end, corner and intermediate brace posts and all gates and gate posts shall be included in the linear foot cost. The fencing height shall be 72 inches minimum. Material need not be new, but shall not be deteriorated nor in any way jeopardize the security purposes intended. All fencing shall meet the approval of the Engineer.

The Contractor shall be responsible for maintenance of the temporary fence; be responsible and cognizant that it remains secure, and that the area is sealed off to the general public at all times.

It may be necessary to move sections of temporary fence at times during construction. Fence fabric shall be placed on the face of the post away from the work area. The top edge of the fabric shall be finished with a "Knuckled" selvage.

The contractor shall be responsible for maintaining access to the gravel driveway at all times of day and night during the duration of the project.

METHOD OF MEASUREMENT

Item 657. will be measured for payment by the Foot of temporary fence furnished and installed, complete in place.

Item 657.5 will be measured for payment by the Foot of temporary fence removed and reset.

BASIS OF PAYMENT

Item 657. will be paid for at the Contract unit price per Foot, which price shall include furnishing, installation, final removal, stacking, all labor, materials, tools, equipment, and all incidental costs required to complete the work.

Item 657.5 will be paid for at the Contract unit price per Foot, which price shall include removal and resetting, all labor, materials, tools, equipment, and all incidental costs required to complete the work.

No additional compensation will be paid for work required to maintain access to the gravel driveway throughout construction.

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 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 Subsection 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 698.4 GEOTEXTILE FABRIC FOR PERMANENT EROSION CONTROL SQUARE YARD

The work under this Item shall consist of furnishing and installing geotextile fabric on steep slopes (3:1 or greater), to encase and contain the crushed stone bedding for riprap, or as otherwise shown on the Plans or required by the Engineer.

The geotextile fabric shall conform to the requirements of AASHTO M288, Class 2, for fabric used for permanent erosion control and must be selected from the pre-approved products on the MassDOT QCML. Construction and installation shall be in accordance with AASHTO M288, including Appendix A, and the following specifications. Atmospheric exposure of the geotextile fabric to the elements following lay down shall be limited to a maximum of 14 days. The geotextile fabric shall be made of organic material.

For seams that are sewn in the field, colored thread must be used. The Contractor shall provide at least a six-foot length of sample sewn seam for the approval of the Engineer before the geotextile fabric is installed. The seams sewn for sampling shall be sewn using the same type of equipment and procedures as will be used for the production seams. If seams are sewn in both the machine and cross machine direction, samples of seams for both directions shall be provided. The seam assembly description shall be submitted by the Contractor along with the seam samples. This description shall include the seam type, stitch type, sewing thread, and stitch density.

Geotextile shall be placed in direct contact with soils without wrinkles or folds, and shall be anchored on a smooth graded surface approved by the Engineer. The geotextile shall be placed in such a manner that placement of the overlaying materials will not excessively stretch or tear it. Adjacent geotextile sheets shall be joined by either sewing or overlapping. At roll ends, overlapped seams shall overlap a minimum of 12-inches, except when placed under water, where they shall overlap a minimum of 3-feet. Adjacent rolls shall overlap a minimum of 12-inches.

Care shall be taken during installation to avoid damage to the geotextile as a result of the installation process. Should the geotextile be damaged, a geotextile patch shall be placed over the damaged area extending a minimum of 3-feet beyond the limits of the damage in all directions.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Item 698.4 will be measured by the Square Yard of geotextile fabric for permanent erosion control installed, complete in place and accepted, as needed for steep slopes (3:1 or greater), riprap bedding, or as shown on the Plans. Geotextile fabric placed outside the specified limits will not be measured or paid for, and the Contractor may be required to remove and dispose of the excess material without cost to the Owner. No additional measurement shall be made for lap material.

Item 698.4 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. Overlaps and fold-overs, excluding the 3-foot fold back at the toe of the riprap, are considered incidental to the unit price and shall not be measured separately for cost.

Associated riprap costs will be paid for under Item 156.5 Crushed Stone for Filter Blanket for the crushed stone bedding and Item 983.12 Riprap with Gravel Packed Voids for the riprap.

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:
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
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
- LCD touch panel display
- 50 page reversing automatic document feeder (RADF)
- Reduction/enlargement capability
- Ability to copy and print 11" x 17" paper size
- email and network pc connectivity
- Microsoft and Apple compatibility
- ability to overwrite latent images on hard drive
- 600 x 600 dpi capability
- 30 pages per minute print speed (color),
- 4 Paper Trays Standard (not including the bypass tray)
- Automatic duplexing
- Finisher with staple functions
- Standard Ethernet. Print Controller
- Scan documents to PDF, PC and USB
- 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.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

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 751.7 COMPOST BLANKET CUBIC YARD

The work under this Item shall conform to the relevant provisions of Subsection 751 and M1.06.0 Compost of the Standard Specifications and the following:

Work shall consist of furnishing and pneumatically applying compost as a thin mulch blanket (1/2-1 inch depth) over prepared soil to provide temporary soil stabilization and organic matter for plant growth.

SUBMITTALS AND MATERIALS

No materials shall be delivered until the required submittals have been approved by the Engineer. Delivered materials shall match the approved samples. Approval of test results does not constitute final acceptance.

Contractor shall submit to the Engineer samples and certified test results no sooner than 60 days prior to application of compost. Vender certification that material delivered meets the test results shall be submitted if requested.

Compost shall meet the requirements for M1.06.0: Compost, Type 2, as referenced in the MassDOT– Highway Division Standard Specifications for Highways and Bridges, Division III: Materials Specifications, latest edition.

The Engineer shall approve the Contractor's equipment for application.

CONSTRUCTION METHODS

Application of compost material shall not begin until the Engineer has approved the site and soil conditions. Soil preparation shall be as specified under the applicable item for soil placement or for seeding. The Contractor shall notify the Engineer when areas are ready for inspection and application of compost.

Compost blanket shall be pneumatically applied (blown on) to a minimum depth of one half to one inch. Where shown on the plans or when directed by the Engineer depth may be increased to provide berms for sediment control or to otherwise prevent slope erosion.

When compost blanket is proposed with seeding, seed shall be broadcast and shall occur in conjunction with compost blanket, as specified under the relevant item for seeding.

When compost blanket is proposed for areas with planting, compost (and seed if applicable) shall be applied after planting. If compost and seed occur prior to planting, areas shall be regraded and compost and seed reapplied to the satisfaction of the Engineer and at the Contractor’s expense.

ITEM 751.7 (Continued)

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Item 751.7 will be measured and paid for at the Contract unit price per Cubic Yard which price shall include all labor, materials, equipment, and all incidental costs required to complete the work of pneumatically applying compost.

Surface preparation of substrate receiving compost blanket shall be compensated under the applicable item for placement of loam, sand, ordinary borrow, wetland soil, topsoil rehandled and spread, tilled existing soil, or other specified substrate.

Seeding, if utilized, will be compensated for under the appropriate seeding items.

ITEM 765.21 ANNUAL COVER CROP FOR NATIVE SEEDING POUND

Work under this item shall conform to the relevant provisions of Subsection 765 of the Standard Specifications and the following.

DESCRIPTION

Work consists of furnishing and applying the appropriate annual grass to be seeded as a cover crop in conjunction with upland native seeding and at the rate specified herein.

A cover crop shall be used for following conditions:

- when specified under Application Rate for the permanent native upland seed mix
- for slopes 2:1 or steeper and an annual is not already specified as part of the permanent mix
- when seeding out of season and the native seed mix does not already specify an annual
- as required to prevent erosion until the permanent seed establishes.

A cover crop is not necessary for wetland seeding and is not typically necessary for soil stabilization when seeding in conjunction with a compost blanket application.

Annual rye (*Lolium multiflorum*) will not be accepted as an annual cover crop.

Using annual rye or exceeding the application rate such that a dense stand of annual grasses prevents germination of the native grasses will require mowing of annual grasses. In this instance, mowing of cover crop will be incidental to this item.

Seed and Application Rate

Add 30 pounds/acre of the following seed based on seeding season:

Avena sativa (Grain Oats):	1 January to 31 July
Cecale cereale (Grain Rye):	1 August to 31 December

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Annual Cover Crop will be measured for payment per pound of seed, complete in place.

Annual Cover Crop will be paid at the contract unit price per pound upon approval of seed bag tags or other documentation of correct application rate and species, and upon acceptance of a satisfactory stand of annual grasses three weeks following seeding.

Application and care of cover crop will be paid for separately under Item 765.635 Native Seeding and Establishment.

ITEM 765.451 PART SHADE ROADSIDE MIX POUND

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.

   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

ITEM 765.451 (Continued)

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% x [78 + 10 + 2]% = 81% PLS.

Therefore, each pound of PLS would need 1 pound / 0.81 = 1.2 pounds of seed with a 90% purity and 90% total germination

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.

ITEM 765.451 (Continued)

Mix A: Part Shade Roadside Mix

Botanical Name	Common Name	% Mix By Weight (PLS)
Grass		
Elymus virginicus	Virginia Wild Rye	35.0%
Schizachyrium scoparium	Little Blue Stem	20.0%
Tridens flavus	Purpletop	10.0%
Panicum virgatum	Switch Grass	8.0%
Agrostis perennans	Upland Bentgrass	5.0%
Panicum clandestinum 'Tioga'	Deer Tongue 'Tioga'	5.0%
Carex vulpinoidea	Fox Sedge	3.0%
Juncus tenuis	Path Rush	2.0%
Carex lurida	Shallow Sedge	1.5%
		89.5%
Herb/Forb		
Chamaecrista fasciculata	Partridge Pea	4.0%
Penstemon digitalis	Beard-tongue	1.0%
Zizia aurea	Golden Alexanders	0.8%
Rudbeckia hirta-VT ecotype	Black-eyed Susan-VT ecotype	0.6%
Aster divaricatus	White Wood Aster	0.5%
Solidago caesia	Woodland Goldenrod	0.4%
Pycnanthemum tenuifolium	Slender Mountain Mint	0.3%
Monarda fistulosa	Wild Bergamot	0.3%
Heliopsis helianthoides	Ox-Eye Sunflower	0.3%
Desmodium canadense	Showy Tick Trefoil	0.3%
Verbena hastata	Blue Vervain	0.3%
Eupatorium purpureum	Purple Joe Pye Weed	0.3%
Solidago bicolor	White Goldenrod	0.3%
Solidago odora	Licorice Scented Goldenrod	0.2%
Eupatorium perfoliatum	Boneset	0.2%
Aster lateriflorus	Calico Aster	0.2%
Aster novae-angliae	New England Aster	0.2%
Aquilegia canadensis	Eastern Columbine	0.2%
Lobelia cardinalis	Cardinal Flower	0.1%
		10.5%
Seeding Rate: 25.0 lbs PLS/Acre		**100.0%**

ITEM 765.451 (Continued)

Application Rate

Part Shade Roadside Mix: ____25__ lbs/acre PLS. In addition, apply 30 pounds of cover crop (grain oats or grain rye) as appropriate to the season. Option 2: 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.

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).

ITEM 765.451 (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 **P**ure **L**ive **S**eed (PLS[1]):

_____ **Total Pounds PLS**

Engineer: Verification at Time of Application

Number pounds delivered to site[2]: _____ 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).*
[2]*Quantity delivered should match pounds* ***Total Pounds PLS*** *and* ***Verification of Seed Delivery****. Pounds should be shown on each Seed Tag.*

ITEM 765.451 (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 765.451 (Continued)

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Seed Description will be measured for payment by the pound of Pure Live Seed delivered and complete in place.

Seed Description 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.

Cover crop not included as part of the permanent mix composition will be paid for under Item 765.21, Annual Cover Crop.

Application and care of native seed mix will be paid for separately under Item 735.635 Native Seeding and Establishment.

ITEM 765.553 WETLAND SEEDING RIPARIAN MIX POUND

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.

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.

ITEM 765.553 (Continued)

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% x [78 + 10 + 2]% = 81% PLS.

Therefore, each pound of PLS would need 1 pound / 0.81 = 1.2 pounds of seed with a 90% purity and 90% total germination

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.

ITEM 765.553 (Continued)

Wetland Seed - Riparian Mix

765.553 Wetland - Riparian Mix			
	Botanical Name	Common Name	% PLS by Weight
Grass			
	Sorghastrum nutans NY Eco	Indiangrass NY Ecotype	14.00%
	Schizachyrium scoparium	Little Blue Stem	14.00%
	Elymus riparius	Riverbank Wild Rye	10.00%
	Elymus virginicus	Virginia Wild Rye	10.00%
	Panicum clandestinum 'Tioga'	Deer Tongue 'Tioga'	9.00%
	Andropogon gerardii NY Eco	Big Bluestem NY Eco	8.00%
	Carex vulpinoidea	Fox Sedge	7.00%
	Panicum virgatum	Switchgrass	3.00%
	Juncus effusus	Soft Rush	2.00%
	Agrostis perennans	Upland Bentgrass	2.00%
	Scirpus atrovirens	Green Bulrush	1.00%
			80.00%
Herb/Forb			
	Chamaecrista fasciculata	Partridge Pea	3.00%
	Verbena hastata	Blue Vervain	3.00%
	Asclepias incarnata	Swamp Milkweed	3.00%
	Heliopsis helianthoides	Ox-Eye Sunflower	2.00%
	Eupatorium perfoliatum	Boneset	2.00%
	Aster umbellatus	Flat Topped White Aster	1.00%
	Aster prenanthoides	Zig Zag Aster	1.00%
	Aster puniceus	Aster – Swamp	1.00%
	Aster novae-angliae	New England Aster	1.00%
	Eupatorium maculatum	Joe-pye Weed	1.00%
	Monarda fistulosa	Wild Bergamot	1.00%
	Vernonia noveboracensis	New York Ironweed	1.00%
			20.00%
			100.00%
	Seeding Rate: 20.0 lbs PLS/Acre		

Application Rate

Wetland - Riparian Mix: 20 lbs/acre PLS. In addition, apply 30 pounds of cover crop (grain oats or grain rye) as appropriate to the season.

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 765.553 (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).

ITEM 765.553 (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 **P**ure **L**ive **S**eed (PLS[1]):

_____ **Total Pounds PLS**

Engineer: Verification at Time of Application

Number pounds delivered to site[2]: _____ 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).
*[2]Quantity delivered should match pounds **Total Pounds PLS** and **Verification of Seed Delivery**. Pounds should be shown on each Seed Tag.*

ITEM 765.553 (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 765.553 (Continued)

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Wetland Seeding Riparian Mix will be measured for payment by the pound of Pure Live Seed delivered and complete in place.

Wetland Seeding Riparian Mix 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.

Cover crop not included as part of the permanent mix composition will be paid for under Item 765.21, Annual Cover Crop.

Application and care of native seed mix will be paid for separately under Item 765.635 Native Seeding and Establishment.

ITEM 765.554 **WETLAND SEED – SEASONALLY FLOODED MIX** **POUND**

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.

   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.

ITEM 765.554 (Continued)

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% x [78 + 10 + 2]% = 81% PLS.

Therefore, each pound of PLS would need 1 pound / 0.81 = 1.2 pounds of seed with a 90% purity and 90% total germination

Wetland Seed Mix – Seasonally Flooded Mix shall be as specified below. Ecotypes and cultivars shall be as close to Massachusetts as possible and appropriate to the site conditions.

ITEM 765.554 (Continued)

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%
		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%
		11.00%
		100.00%

Application Rate

Wetland Seed Mix – Seasonally Flooded Mix 20 lbs/acre PLS.

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 765.554 (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 AND BASIS OF PAYMENT

Wetland Seed Mix – Seasonally Flooded Mix will be measured for payment by the pound of Pure Live Seed delivered and complete in place.

Wetland Seed Mix – Seasonally Flooded Mix 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.

Application and care of native seed mix will be paid for separately under Item 765.635 Native Seeding and Establishment.

ITEM 765.635 NATIVE SEEDING AND ESTABLISHMENT SQUARE YARD

Work shall conform to the relevant provisions of Subsections 765 and 767 of the Standard Specifications and the following:

The work under this item shall consist of seeding, mowing, and other care to establish 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.

QUALIFICATIONS

Seeding shall be done by a company having a minimum of five years of experience with native seed establishment. Prior to beginning work, the seeding Contractor shall furnish proof of qualifications to the Engineer for approval. Proof of qualifications shall include providing documentation (photos and contacts) to demonstrate knowledge and expertise with native seeding and establishment and proof of having completed successful native seeding projects.

SEEDING SEASON

Seeding seasons for native mixes is April 1 - May 15 and October 1 - December 1 for dormant seeding. Written approval must be obtained for seeding outside the seeding season and, if approved, the permanent seed rate shall be increased by 50%.

Seeding season for cover crops shall be grain oats January 1 – July 31 and grain rye August 1 – December 1.

MATERIAL AND SUBMITTALS

Seed Mixes and Submittals shall be per the item(s) for permanent and annual (cover crop) seed mixes.

Compost Blanket, if used, shall meet the material and submittal requirements for that item.

Hydromulch shall be wood fiber or straw applied per the Standard Specifications and at the rates specified below and per the manufacturer.

A certified statement shall be furnished, prior to start of work, to the Engineer by the Contractor as to the number of pounds of hydromulch, tackifier, and seed, per 100 gallons of water and as applicable to products used. This statement should also specify the number of square yards of seeding that can be covered with the solution specified above.

Fertilizer

No fertilizers shall be applied.

ITEM 765.635 (Continued)

Water

Water, including hose and all other watering equipment required for the work, shall be furnished by the Contractor to the site at no additional cost. Water shall be suitable for irrigation and free from ingredients harmful to plant life. All plants injured or work damaged due to the lack of water or the use of too much water shall be the Contractor's responsibility to correct.

SEEDING

Hand broadcast method shall be used for all areas smaller than half an acre and when specified on the plans for areas over half an acre.

Seeding shall occur within 72 hours of placement of loam and final grading or the Contractor shall propose a reasonable, alternative schedule that shall be approved by the Engineer.

Surface Preparation

No seeding or soil preparation shall be done if soils are muddy or dry and compacted. Bare soils shall be raked to remove large stiff clods, lumps, brush, roots, stumps, litter and other foreign matter. Ruts and depressions shall be filled with additional loam or compost and the soil shall be re-graded to a relatively smooth finish corresponding to the required grades.

When seeding over existing or compacted soil or soil that has sat bare for more than 30 days, surface will be prepared by tilling or raking to a minimum depth of 2 inches prior to seeding and prior to Compost Blanket application (when applied).

Surface preparation shall be compensated for under for loam placement or topsoil rehandled and spread as appropriate to the project.

Jute or coir mesh, when specified in the contract, shall be placed after seeding and per the Standard Specifications and the manufacturer’s instruction.

Surface preparation shall be approved by the Engineer prior to seeding.

Seeding over Various Substrates

Loam: Seeding shall occur within 72 hours of loam placement to prevent loss of topsoil. Seed shall be manually broadcast for areas less than half an acre (each area, not cumulative area) and when specified on the plans. Broadcasting shall be immediately followed by hydromulching as specified below. When not specified on the plans, larger areas may be hydroseeded as specified below.

Compost Blanket: Compost Blanket shall be applied as specified under that item. Seed should be hand broadcast at the same time as compost application to ensure a thin cover of compost over seed.

ITEM 765.635 (Continued)

When seeding is done after application of Compost Blanket the rate shall be increased by 50%. If the Compost Blanket is applied after December 1, seed shall be broadcast or hydroseeding over the compost in the Spring and the rate increased by 50% specified under Seed Application.

Compost Mulch over Modified Rock: Compost Mulch and seed shall be applied as specified under that item. No hydromulch is required.

Cover Crop

Cover crop shall be used when seeding out of season, when specified with the permanent native seed mix under that item, and as required to prevent erosion until the permanent seed establishes.
A cover crop should not be used with a steep slope mix or other permanent mix which already contains either cereal rye or oats in the composition of the mix. A cover crop is not necessary for wetland seeding and is not typically necessary for soil stabilization when seeding in conjunction with a compost blanket application.

Seed Application

All seed shall be mulched as specified herein.

Seed application shall be by broadcast seeding or by hydroseeding as described below.

Broadcast Seeding

Seed shall be broadcast spread using a cyclone or whirlwind seeder or hand broadcast. Small or light-seeded species such as bluestem may be mixed with approved filler to achieve an even distribution. Seed shall not be broadcast when wind velocities are greater than 15 mph.

Broadcast seeding shall be undertaken in two separate passes at ninety degrees to each other. One-half the seeding rate shall be applied in each direction (horizontally and vertically). To ensure seed to soil contact with broadcasting of seed, seeding shall be followed by rolling or tracking with equipment approved by the Engineer.

Broadcast seed shall be mulched with weed-free straw mulch unless seeding is done as part of Compost Blanket in which case it shall be as specified above under seeding with Compost Blanket application. Hydromulching shall be as specified under Hydromulching.

Hydroseeding and Hydromulching

Hydroseed and mulching shall be per the manufacturer's directions and as follows.

Hydroseeding shall only be used for sites over half an acre in size or with permission of the Engineer.

ITEM 765.635 (Continued)

Tank and hoses shall be cleaned from all previous hydroseeding and hydromulching projects. Seed shall be mixed into the slurry immediately before application and slurry applied within 30 minutes after seeds have been placed in the tank. Once seed has been placed in the tank, tank shall be agitated only enough to mix the seeds and keep slurry from separating.

A 2-step process shall be used for seeding in conjunction with hydromulch. Seed shall be applied with 500 lbs/acre of hydromulch in the first pass. A second pass with 1,000 lbs/ acre of hydromulch shall be applied in a second pass. Each pass shall be applied in a different direction.

Once the seed has been added to the tank mixture a one-hour time limit is set for spreading the mixture on the soil. Once the one hour has passed the excess mixture must be discarded.

For broadcast seeding, hydromulch shall be applied immediately following seeding at a rate of 1,000 lbs/acre. Tank shall be cleaned from any previous hydroseeding.

CARE DURING GERMINATION AND ESTABLISHMENT

Contractor shall care for seeded areas as necessary for successful germination. Care will include watering and weed control as necessary to achieve establishment of the specified seeded species after one growing season as specified below.

The contractor shall maintain the stand of grasses to ensure healthy growth of the seeded species. Work shall include mowing or weed-whacking for weed control, watering if necessary, and removal of invasive plants.

Watering shall be sufficient to achieve soil moisture to a depth of 2 inches or more and such moisture is uniform. Method of watering shall not erode or damage soil or grassed surfaces.

General Weed Control: Unless otherwise directed, mowing shall be as specified under Mowing for Weed Control for seed establishment. Weeds shall be mowed prior to weeds setting seed (by the end of July unless otherwise approved).

Control of Invasive and Aggressive Weeds: Invasive and aggressive weeds, including but not limited to mugwort, ragweed, knapweed, foxtail, crabgrass, and chicory must be cut or treated prior to going to seed. Herbicide treatment must be coordinated with MassDOT. Undesired species (such as chicory) introduced due to use of incorrect seed mix shall be removed at the Contractor's expense.

MOWING FOR WEED CONTROL

Mowing for weed control shall be completed after weeds have sprouted and show leaf and bud growth, but prior to setting seed, generally between July 7th and August 1st, unless directed otherwise by the MassDOT Landscape Architect and the Engineer.

ITEM 765.635 (Continued)

Mowing height shall be as needed for weed control, generally to a height of 8 inches and not below 4 inches, unless directed otherwise. Mowing shall be with a brush hog mower or string trimmer other approved equipment. Conventional lawn mowers which cannot achieve the appropriate cut shall not be used.

Contractor shall give 48-hour notice prior to mowing work. Mowing shall only occur in dry sunny weather. Litter pickup should occur prior to mowing in all areas. If required, cut grass shall be raked and removed. Litter pickup and raking and removal of grass shall be incidental to the work.

Mowing equipment shall be approved by the Engineer prior to work.

OVER-SEEDING

Areas of bare ground greater than 2-3 feet in diameter shall be over-seeded with the specified mix during the appropriate season for seeding. Where required for overseeding mowing shall be as close to the soil as possible. Soil that is compacted shall be raked or otherwise roughened prior to over-seeding.

Over-seeding rates and methods shall those specified above under Materials and Methods. Following over-seeding, soil shall be lightly tamped to ensure seed to soil contact and areas shall be mulched with straw mulch and watered with a fine mist to moisten soil to a depth of at least 2 inches.

Over-seeding, mulch, watering, and all work for over-seeding shall be incidental.

DETERMINING SATISFACTORY GRASS ESTABLISHMENT

A well-established stand of the specified seeded species as determined by the Engineer and the MassDOT Landscape Architect will be required for Final Acceptance. The expectation is that an acceptable number and variety of the desired permanent seeded species (not the cover crop) will be visible. Generally:

- A minimum of 75% coverage by the specified permanent seeded species after one growing season. Of that percentage, generally, depending on the mix species:
    - At least 3 types of the permanent seeded grass species shall be visible.
    - At least 3 species of wildflowers shall be visible.
- There will be no significant gaps or bare soil (generally 2-3 feet in diameter or greater).
- There will be no more than 25% coverage by weed species.
- All soil shall be stabilized and there shall be no channeling or erosion.
- There will be no invasive or aggressive species within the stand at the time of acceptance.
- There shall be no evidence of seed from non-native mixes (i.e., clover) due to failure to clean the hydroseeding tank or using incorrect mix.

Invasive and aggressive weeds (such as mugwort, ragweed, knapweed, and chicory) must be cut or treated prior to going to seed for Interim Acceptance. Herbicide treatment must be coordinated with MassDOT.

ITEM 765.635 (Continued)

A warm-season grass mix with perennials will not have uniform growth. A uniform stand of grass may indicate use of an incorrect mix.

ACCEPTANCE OF SEEDING AND ESTABLISHMENT WORK

Conditional Acceptance shall be based on proper application of seed as specified herein.

Interim Acceptance of Care. Seeding will be inspected by mid-July to assess germination and Establishment conditions as described above. When necessary for Interim Acceptance, areas shall be mowed prior to weed species producing seed and as specified above under Weed Control. ***Areas requiring weed control that are not mowed prior to weed seed dispersal will not be approved for Interim Acceptance.*** Seeding that shows good germination and is determined by the Engineer and Landscape Architect to not require weed control at time of inspection shall be accepted for Interim Acceptance payment.

Final Acceptance of Establishment shall be given upon satisfactory Establishment as described above.

If the seeded area fails to meet the requirements of Establishment by the end of the growing season, contractor shall propose and implement remediations and site shall be inspected during the following growing season after July 1st. All remediation shall be at the contractor's expense.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Native Seeding and Establishment will be measured for payment by the square yard, complete in place.

Native Seeding and Establishment will be paid at the Contract unit price by the square yard upon Conditional, Interim, and Final Acceptances as described above. This price shall include all submittals, seeding, rolling to ensure seed-to-soil contact, weed control other than mowing, water, over-seeding, labor, materials, equipment, and all incidental costs required to complete the work of establishing a satisfactory stand of grass.

Native seed and cover crop mixes shall be compensated under the respective items.

Site preparation, including raking, tilling, removal of debris and stones, and other work to the prepare site for seeding shall be compensated under loam placement or topsoil rehandled and spread as relevant to the project. Compost Blanket shall be compensated under Item 751.7.

Option 1: Mowing for weed control shall be considered incidental to this item.

Schedule of payment shall be as follows:

30% upon Conditional Acceptance

20% upon Interim Acceptance of Care, except this amount will be reduced to zero and final payment will be reduced accordingly when areas requiring weed control are not mowed as specified in the Interim Acceptance criteria.

50% upon Final Acceptance of Establishment

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)

Sedimentation Fence

Materials and Installation shall be per Section 670.40 and 670.60 of the Standard Specifications and the following:

Sedimentation fence shall only be used if shown on the plans or when specified by Orders of Condition or other permit requirements.

When used with compost filter tubes, the tube shall be placed on a minimum of 8 inches of folded fabric on the upslope side of the fence. Fabric does not need to be trenched.

When used with straw bales, an 8-inch deep and 4-inch wide trench or V-trench shall be dug on the upslope side of the fence line. One foot of fabric shall be placed in the bottom of the trench followed by backfilling with compacted earth or gravel. Stakes shall be on the down slope side of the trench and shall be spaced such that the fence remains vertical and effective.

Width of fabric shall be sufficient to provide a 36-inch high barrier after fabric is folded or trenched. Sagging fabric will require additional staking or other anchoring.

MAINTENANCE

Maintenance of the sediment control barrier shall be per Section 670.60 of the Standard Specifications 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.

ITEM 767.121 (Continued)

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 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 damage by construction activities shall be repaired or replaced as directed by the Engineer at the Contractors expense.

ITEM 942.102 STEEL PILE HP 10×57 FOOT

The work under this Item shall conform to the relevant provisions of Subsections 940 and 960 of the Standard Specifications and the following:

CONSTRUCTION

The piles shall conform to the requirements of AASHTO M270 Grade 50.

The pile size shall be HP10×57. No substitution of pile size shall be permitted. If pile splices are required, they shall be completed as shown on the Plans and in accordance with Subsections 940.66 and applicable portions of 960.61. The use of splices will require the approval of the Engineer. The cost of splices shall be incidental to Item 942.102.

Prior to any pile installation driving operations, the Contractor shall submit a schedule of his/her proposed methods and equipment for all related installation procedures to the Engineer for review and approval. At the integral abutments, the Contractor shall include all pertinent details of the procedure to properly install the piles according to the Contract Documents in his/her submittal for this Item.

Pre-drilling at each integral abutment pile location is required in accordance with Item 944.2. Pre-Drilling for Piles is specified and paid for separately under Item 944.2.

Prior to ordering piles for the project, the Contractor shall have a Professional Engineer licensed in the Commonwealth of Massachusetts perform a Wave Equation Analysis of Pile driving (WEAP) in accordance with sub-section 940.61.B. The analysis shall be submitted to the Department for approval and no work shall commence until the Contractor is notified of the acceptance of the Wave Equation Analysis. The analysis shall demonstrate to the Engineer that the selected pile-driving hammer is capable of installing the pile to practical refusal (ten blows to produce a total penetration of ½ inch) without overstress and that the allowable driving stresses in the pile will not be exceeded during driving with the proposed hammer/pile system. It shall take into account the equipment to be used, the pile properties, and soil characteristics.

Dynamic Load Tests shall be performed in accordance with Item 948.41 “Dynamic Load Test By Contractor.” PDA and CAPWAP analysis are to be completed on the tested piles a minimum of 48 hours after installation to verify that the piles have been driven to the required nominal geotechnical driving resistance. All piles require restrike. Please note that all piles require restrike after allowing them to set up for 12 - 24 hours according to the MassDOT Standard Specifications. It is recommended that the indicator piles are monitored to ensure that pile driving stresses in the piles are within allowable limits. Dynamic Load Test by Contractor is paid for separately under Item 948.41.

Pile-driving shoes shall be required to protect the pile tip during driving operations. Pile Shoes are paid for separately under Item 948.5.

The selected pile hammer shall be an approved power hammer of the single acting, double acting, differential acting type, or closed end or open-end diesel hammer. Vibratory, gravity (drop), and sonic hammers shall not be permitted.

ITEM 942.102 (Continued)

The integral abutment piles are required to be driven to bedrock with minimum pile lengths below the bottom of abutment of 30.5-feet at the west abutment and 21.5-feet at the east abutment, as shown on the Plans. The estimated pile tip elevation shall be the deepest of EL. 834.0' at the west abutment, EL. 843.0' at the east abutment, the top of bedrock, or the depth required to achieve the total nominal geotechnical resistance. Under no circumstance shall piles be driven to a depth less than 18.5-feet below the bottom of the integral abutments and the Engineer shall be notified immediately if bedrock is encountered at or above the minimum pile tip EL. 846'.

If an obstruction is encountered prior to reaching the minimum tip elevation, then the piles shall be removed and Drilling for Pile Obstructions (Item 944.3) shall be used, as necessary, to drill through obstructions to specified tip elevations.

The Contractor shall submit a pile driving procedure to the Engineer for review and approval. The proposed driving hammer, equipment, procedure, and criteria shall be approved by the Engineer before any piles are ordered for the project. The procedure shall detail the process for extracting obstructed piles, drilling the holes, removing the obstructions, maintaining the diameter of the holes, and filling the holes with sand borrow prior to redriving.

The procedure for driving piles shall conform to Subsection 940.65 of the Standard Specifications, except that the accuracy of driving shall be superseded by the following:

Prior to driving piles, the Contractor shall set up appropriate templates to locate the piles to within 1 inch of the locations shown on the Plans. Piles shall be installed so that their weak axis is parallel to the centerline of the abutment. The driving shall be stopped at appropriate intervals in order to check the proper axial alignment of the pile. Driving may not be resumed without the approval of the Engineer.

At the setup of a pile, it shall be surveyed after being set in the template to verify that it is plumb. During driving, each pile shall be monitored to verify that it remains plumb. If it falls out of plumb by more than 1 inch in 10 feet of length, the pile shall be pulled and re-driven.

Pile driving shall be stopped at appropriate intervals to check the proper axial alignment and location of the pile. Pulling laterally on the piles and/or heat treating of piles to correct misalignment is strictly forbidden. After each pile is in place, the Engineer shall inspect the pile for any damage due to driving such as twisting, buckling and loss of section. If, in the judgement of the Engineer, such damage exists, the pile shall be removed and replaced in its entirety without additional compensation. Each pile shall be installed so that its horizontal alignment at cutoff elevation is within the tolerances shown on the Plans.

Piles shall be installed so that the top of piles at cut-off elevations shall be within 3 inches of the locations shown on the plans.

ITEM 942.102 (Continued)

After the pile is driven and cut, the pile shall be surveyed and its location with respect to the Plans shall be recorded. If the pile after driving is more than 3 inches from the proposed plan location, the Contractor shall remove the misaligned pile in its entirety and re-drive a replacement pile to concur with the proposed plan locations and the tolerances specified in these Special Provisions.

The cost for corrective work shall be borne solely by the Contractor with no additional compensation from the Department.

The Contractor shall keep a record, independent of any which may be made by the Engineer, of all pertinent field data relative to the installation of each pile. This record shall be available for the Engineer's inspection, being transmitted to him/her as directed. As a minimum, this record shall include for each pile:

1. Date and time of installation.
2. Type and size of hammer and the pressure and speed at which it is operated.
3. Total penetration to the closest 2 inches, shown by point elevation and cutoff elevation.
4. Blows for the entire pile depth and blows per the last 4 inches of penetration.
5. Pertinent notes as to any unusual behavior of the pile.

METHOD OF MEASUREMENT

Item 942.102 will be measured for payment by the Foot of Steel Pile HP10x57, complete in place. Dynamic Load Test by Contractor will be measured and paid under Item 948.41. No payment shall be made for the length of pile installed but subsequently removed to allow for obstruction removal (Item 944.3).

BASIS OF PAYMENT

Item 942.102 will be paid for at the Contract unit price per Foot, which price shall include all labor, materials, equipment and incidental costs required to complete the work.

Crushed stone placed within the 3-foot trench below the integral abutment pile cap will be paid for under Crushed Stone for Integral Abutment Piles, Item 156.13.

Pile Shoes will be paid for under Pile Shoes, Item 948.5.

Drilling for Pile Obstructions will be paid for under Drilling for Pile Obstructions, Item 944.3.

ITEM 944.2 PRE-DRILLING FOR PILES FOOT

The work under this item shall conform to the relevant provisions of Subsections 120, 150 and 940 of the Standard Specifications, M1.04.0 Type a, the Plans, and the following:

CONSTRUCTION

The work under this item shall consist of pre-drilling at each integral abutment pile location. The Contractor shall ensure that each hole is drilled vertically within the horizontal tolerances specified in Subsection 940.65. The Contractor is advised of the potential existence of obstructions (cobbles, boulders, etc.) at this site. Pre-Drilling for Piles shall be used to drill from the proposed pile cap bottom elevations down to 30.5 feet below the bottom of the west abutment pile cap elevation (27.5 feet below the bottom of the crushed stone trench) and 21.5 feet below the bottom of the east abutment pile cap elevation (18.5 feet below the bottom of the crushed stone trench).

The Contractor shall include in his/her submittal under this Item all pertinent details of the necessary procedures for drilling the holes, removing obstructions, and maintaining the diameter of the holes for review and approval by the Engineer.

It is anticipated that pre-drilling will be performed with a 4-inch diameter casing similar to that used during geotechnical boring operations. During the pre-drilling, the Contractor shall keep a record of the start and end elevations of any obstructions encountered. Obstructions are to be drilled through and paid for in accordance with the provisions of Item 944.3 Drilling For Pile Obstructions. If obstructions are not encountered at the end of the pre-drilling, the hole shall be filled with clean Sand Borrow; see Item 944.3 for details. The price for filling the hole with clean Sand Borrow, M1.04.0 Type a, shall be incidental to Item 944.2, with no additional payment provided.

Material resulting from drilling holes shall be disposed of in accordance with Subsection 120 and as directed by the Engineer. No additional payment will be provided for disposal.

The Contractor is permitted to drive piles without pre-drilling. However, if obstructions are encountered prior to achieving the proposed pile tip elevation, the Contractor will be required to extract the pile, drill through the obstruction, replace damaged portions of the pile, and re-drive the pile at their own expense.

METHOD OF MEASUREMENT

Item 944.2 will be measured for payment by the Foot of pre-drilling for piles, complete in place.

Measurement will be made along the centerline of each pre-drilled hole from a point located at the intersection of the hole and the bottom of the trench to the bottom of the pre-drilled hole.

BASIS OF PAYMENT

Item 944.2 will be paid for at the Contract unit price per Foot, which price shall include pre-drilling; furnishing, installing and final removal of temporary casing; disposal of material, all labor, materials, tools, equipment, and all incidental costs required to complete the work.

ITEM 944.3 DRILLING FOR PILE OBSTRUCTIONS FOOT

The work under this Item shall conform to the relevant provisions of Subsections 150 and 940 of the Standard Specifications, and the following:

CONSTRUCTION

The work under this item shall consist of drilling a hole where obstructions are encountered at each pre-drilled hole advanced in accordance with Item 944.2, or at locations where piles have been driven without pre-drilling and have been removed due to encountered obstructions. The hole drilled for this item shall be no greater than the diagonal width of the pile unless otherwise approved by the Engineer. The Contractor shall drill completely through obstructions to a depth of 30.5 feet below the bottom of the west abutment pile cap elevation (27.5 feet below the bottom of the crushed stone trench) and 21.5 feet below the bottom of the east abutment pile cap elevation (18.5 feet below the bottom of the crushed stone trench).

The Contractor shall ensure that each hole is drilled vertically within the horizontal tolerances specified in Subsection 940.65, and that the specified diameter of the hole is continuously maintained for the full depth, regardless of the characteristics of the material being penetrated. The purpose of drilling for pile obstructions is to drill through the extents of the obstructions, to EL. 834.0' at the West Abutment and EL. 843.0' at the East Abutment, to allow piles to be driven without damage and within alignment tolerances.

The Contractor shall submit for review and approval by the Engineer all pertinent details of the necessary procedures for extracting the obstructed piles (if holes are not pre-drilled per Item 944.2), drilling the holes, removing obstructions, maintaining the diameter of the holes, and filling the holes with Sand Borrow prior to re-driving of the pile. The price for filling the hole with clean Sand Borrow, M1.04.0 Type a, or approved equivalent shall be incidental to Item 944.3 with no additional payment provided.

The Contractor shall simultaneously install at each hole a temporary steel casing to the bottom of the drilled hole having the required strength and size to maintain the specified diameter (14”) and location. Unless specifically authorized in writing by the Engineer, the Contractor shall carefully extract the full length of each temporary steel casing while the hole is simultaneously being filled with Sand Borrow and without allowing the penetrated soil materials to collapse, or otherwise reduce the specified diameter of the hole. If the Sand Borrow settles in any hole during subsequent pile driving, the hole shall be refilled with Sand Borrow.

The procedures for re-driving the piles shall conform to the relevant provision outlined in Item 942.102. The pile shall be re-driven to the required total nominal geotechnical resistance. The Contractor shall perform a Wave Equation Analysis to determine the capacity of the re-driven pile. If directed by the Engineer, additional dynamic load test(s) shall be performed on the re-driven pile to verify its capacity. The additional dynamic load test will be paid for under Item 948.41.

ITEM 944.3 (Continued)

METHOD OF MEASUREMENT

Item 944.3 will be measured for payment by the Foot of drilling for pile obstructions, complete in place.

Measurement will not be made unless a steel pile encounters an obstruction that, in the opinion of the Engineer, would endanger the load carrying capacity of the pile if driving were continued. Measurement is for the actual drilled length of the obstruction removed, and not the total amount of drilling required from the ground surface.

BASIS OF PAYMENT

Item 944.3 will be paid for at the Contract unit price per Foot, which price shall include furnishing and operating equipment, drilling through and removal of obstructions, clearance for drilling, furnishing casing, all labor, materials, tools, equipment, and all incidental costs required to complete the work.

If the Contractor chooses to drive piles without pre-drilling and encounters obstructions prior to achieving the proposed pile tip elevation, the Contractor will be required to extract the pile, drill through the obstruction, replace damaged portions of the pile, and re-drive the pile at their own expense. Costs for pre-drilling the piles, if any, will be paid for under Item 944.2 Pre-Drilling for Piles.

The cost for furnishing and installing the steel piles will be paid for under Item 942.102 Steel Pile HP10×57.

ITEM 950.32 TEMPORARY EARTH SUPPORT SYSTEM LUMP SUM

The work under this Item shall conform to the relevant provisions of Subsection 950 of the Standard Specifications, and the following:

Work under this Item shall consist of furnishing, placing, and removing temporary support of open cut excavations while maintaining traffic on the existing roadway during construction, as indicated on the Plans. Temporary earth support systems are intended to be installed adjacent to northeast and northwest corners of the existing bridge, along the north side of the approach roadway, to facilitate excavations for construction and demolition of the temporary utility bridge abutments.

The design of the temporary excavation support system is the responsibility of the Contractor. The Contractor shall prepare calculations and working drawings, in accordance with performance requirements specified hereafter and the details shown on the Plans. The design calculations and drawings shall be prepared, stamped, and signed by a Professional Engineer registered in the Commonwealth of Massachusetts who is experienced in designing excavation support systems. All components of the excavation support system shall be sized for the maximum forces during excavation and removal stages. Excavation support systems shall be selected and arranged in a manner to permit safe and expeditious construction of temporary and permanent structures. Excavation support systems shall be designed to limit ground movement and the effects on adjacent structures, roadways, and utilities.

The temporary excavation support system shall be designed to support the temporary highway barrier and vehicular surcharge load and resist associated vehicular impact loads. Alternative independent barriers and/or traffic control devices may be used in lieu of designing the excavation support system to carry a temporary highway barrier and associated impact loads, provided that resulting load effects from such barriers and devices are incorporated into the excavation support system design, as required.

Plans and calculations of the temporary excavation support system shall be prepared and submitted to the Engineer for approval. Any work done or materials ordered for the work prior to the approval of the design calculations, plans, and detail drawings shall be at the Contractor's own risk. The Contractor designed temporary earth support systems shall meet the minimum following requirements:

1. The Contractor is responsible for selecting, designing, furnishing, installing and maintaining the temporary earth support systems.

2. The Contractor shall submit for review and approval, plans and calculations of the proposed system. All plans and calculations submitted shall bear the seal of a Professional Engineer registered in Massachusetts. The submittal shall indicate installation and removal procedures, specify equipment to be used, and provide material specifications.

ITEM 950.32 (Continued)

3. The temporary earth support system shall be designed to safely resist all anticipated loads it may be subjected to while in place, including any expected surcharge from construction vehicles (i.e. cranes) and/or vehicular impact loads. The allowable design stresses shall be in accordance with AASHTO Standards Specifications for Highway Bridges and AASHTO Guide Specification for Bridge Temporary Works.

4. All materials used for the temporary earth support systems shall be in good condition as determined be the engineer.

5. The Temporary earth support system shall remain in place until the temporary utility bridge is completely demolished and backfilled.

The Contractor shall review the boring information and the geotechnical report prior to developing plans and details for any required temporary earth support system.

The existing and proposed approximate location of several overhead and underground utilities are depicted on the construction plans. In no case shall any temporary earth support systems installed using impact driving in close proximity to underground utilities.

BASIS OF PAYMENT

Item 950.32 will be paid for at the Contract Lump Sum price, which price shall include furnishing, placing, and final removal of the temporary earth support system, designing and submission approval, all labor, materials, tools, equipment, and all incidental costs required to complete the work.

Partial payments shall be made at the following percentages:

Approval of Temporary Earth Support System submittal	10%
Accepted installation of Temporary Earth Support System	60%
Satisfactory removal/cutting of the Temporary Earth Support System	30%

ITEM 983.12 RIPRAP WITH GRAVEL PACKED VOIDS TON

The work under this Item shall conform to the relevant provisions of Subsection 983 of the Standard Specifications, and the following:

The work to be performed under this Item shall include furnishing and placing riprap with gravel pack voids at the locations designated on the Plans and as required by the Engineer.

Riprap shall conform to the requirements of M2.02.0 Materials Specification. Riprap shall be placed on the areas, depths, contours, and grades designated on the Plans in a manner that will produce a well-graded mass of stone with the minimum practicable percentage of voids. Riprap protection shall be placed to its full thickness in one operation in such a manner to avoid displacing the underlying material. Placing of riprap in layers by dumping into chutes or by placing by similar methods that are likely to cause segregation will not be permitted.

The riprap will be placed in accordance with the relevant provisions of Subsection 983. After the riprap has been placed, gravel will be used to pack any voids that are present.

CONSTRUCTION METHODS

Riprap shall be placed upon an approved bed of crushed stone over geotextile fabric to the lines and grades shown on the Plans and as directed by the Engineer.

DESCRIPTION – GEOTEXTILE FABRIC

Geotextile fabric shall conform to the requirements and installation procedure of Item 698.4 Geotextile Fabric for Permanent Erosion Control.

When stone or riprap is placed over the geotextile fabric, the stone placement shall begin at the toe and proceed up the slope. Care shall be taken during stone or riprap placement to avoid stretching and tearing of the geotextile fabric. Stone shall not be dropped from a height exceeding 12-inches.

Field monitoring shall be performed to verify that the crushed stone or riprap placement does not damage the geotextile. Any geotextile damaged during backfill placement shall be replaced as directed by the Engineer, at the Contractor's expense, as specified in the provisions of Item 698.4. All costs associated with the material and placement of the material shall be paid for under Item 698.4 Geotextile Fabric for Permanent Erosion Control.

DESCRIPTION – GRAVEL

The finished surface shall be free of voids and shall be approved by the Engineer. Gravel shall conform to MassDOT Standard Specification Item 151. Gravel Borrow (M1.03.0 Type d). All costs associated with the material and placement of the material shall be considered incidental to this item.

The crushed stone layer placed under the riprap shall be paid under Item 156.5.

ITEM 983.12 (Continued)

METHOD OF MEASUREMENT

Item 983.12 will be measured for payment by the Cubic Yard of riprap with gravel packed voids furnished and placed, complete in place, and approved by the Engineer.

BASIS OF PAYMENT

Item 983.12 will be paid for at the Contract unit price per Cubic Yard, which price shall include furnishing and placement of riprap, any required removal of existing riprap, all labor, materials, tools, equipment, and all incidental costs required to complete the work.

Gravel borrow to pack voids, rock for riprap, any additional excavation beyond that required to construct the proposed substructures, any necessary removal of existing riprap, as determined by the Engineer, and all work related to the installation of riprap shall be included in the bid price for Riprap with Gravel Packed Voids. No additional payment will be provided. Said price shall be considered full compensation for all labor, tools, equipment, and material necessary for the completion of the work.

The cost for geotextile fabric will be paid for under Item 698.4 Geotextile Fabric for Permanent Erosion Control.

The cost for crushed stone for the riprap bedding will be paid for under Item 156.5 Crushed Stone for Filter Blanket.

ITEM 991.1 **CONTROL OF WATER – STRUCTURE NO. A-04-038** **LUMP SUM**

The work under this Item shall conform to the relevant provisions of Subsection 140 of the Standard Specifications and the following:

This Item includes all dewatering necessary to accomplish the demolition and removal of the existing bridge, construction of the proposed bridge, and installation of the proposed slope protection (i.e. riprap). While the intent is to excavate for demolition of the existing bridge substructure and construction of the proposed bridge integral abutments behind existing riprap slope protection, channel diversions may be required to prevent groundwater infiltration through the slope to remain.

Any pumping and dewatering measures to construct the proposed bridge and temporary utility bridge; demolish the existing bridge and temporary utility bridge; and install riprap, crushed stone, geotextile fabric etc. shall be considered incidental to this item.

Channel diversions and dewatering of excavation shall be conducted to ensure that removal and construction of bridge substructures and installation of the proposed slope protection are done "*in the dry.*"

Additionally, the contractor is responsible for locating and providing the necessary protection for any utilities that will remain in service during the demolition/construction phases. The existing and proposed approximate location of several overhead and underground utilities are depicted on the construction plans. Under no circumstances shall sheet piling, soldier piles, and/or other systems that protrude into the soils be installed using impact driving in close proximity to underground utilities. Locating and protecting utilities is considered incidental to Item 991.1 and will not be considered for additional compensation.

As part of the work under this Item, it is the responsibility of the Contractor to determine the need and extent of channel diversions, sedimentation basin and dewatering techniques, and sedimentation controls needed to control water and sediment at the site. Prior to starting the excavation and demolition operations, the Contractor shall submit working drawings and design calculations, as required, specifying the methods and materials they propose to use for the Engineer's review and approval. These plans and calculations shall be in conformance with the Plans and these Specifications.

The Contractor shall install all erosion control measures and turbidity barriers prior to proceeding with the approved water control plans. The materials and methods not specifically mentioned under this Item shall comply with the Standard Specifications where applicable.

Approval of the working drawings does not relieve the Contractor of the responsibility of providing for the safety and successful completion of the work.

ITEM 991.1 (Continued)

CONSTRUCTION METHODS

Plans and calculations for dewatering measures shall be developed by the Contractor for this Item, and shall be prepared and stamped by a Professional Engineer registered in the Commonwealth of Massachusetts. The proposed dewatering procedure and calculations shall be submitted to the Engineer for review and approval prior to the start of construction.

Stream restrictions shall be conducted in such a manner as to minimize siltation and prevent contamination of the waterway.

Maximum screen sizes on the inlet side of all pumps shall not exceed ½ in (12.7 mm).

Recommended devices to control water at the site include, but are not limited to:

- Sheet Piles.
- Sandbag dams or bulk storage bag cofferdams.
- Installation of precast concrete median barriers or blocks covered with sedimentation fabric and sandbags to reduce water infiltration.
- Portable cofferdam system comprised of steel frames covered by an impervious fabric membrane.

The Contractor is advised that the effectiveness of the water control method used will vary based on the field conditions and the time at which the actual excavation work is being performed. The Engineer has the right to order the Contractor to stop all excavation operations when in his/her judgment the Contractor's water control operations are failing to produce adequate results or are posing a threat to the environment.

The Contractor shall provide the means of removing all sediment from water pumped from the excavation areas; this shall include the use of filter bags, sedimentation basins, check dams, sedimentation fences or tanks.

BASIS FOR PAYMENT

Item 991.1 will be paid for at the Lump Sum Contract Unit Price, which price shall include all labor, materials, equipment and incidental costs required to complete the work.

Partial payments shall be made at the following percentages:

Approval of the Control of Water submittal	10%
Accepted installation of Control of Water	60%
Satisfactory removal/cutting of the Control of Water	30%

ITEM 993.12 TEMPORARY UTILITY BRIDGE LUMP SUM

The work under this Item shall conform to the relevant provisions of Subsections 112, 901, and 960 of the Standard Specifications, and the following:

The work under this item shall consist of constructing the Temporary Utility Bridge in accordance with the Plans and these Specifications to the lines and grades shown on the Plans, and in accordance with guidelines of the manufacturer's technical handbook. The work includes construction and demolition of temporary reinforced concrete abutments as well as the purchase/rent, transportation, assembly, maintenance, and erection of the temporary panelized bridge, including bearings, decking, utility supports, and associated hardware. Work shall also include the following: Excavation, installation of timber decking and utility supports not included in the panelized truss rental/purchase, crane rental for installation and removal, completely dismantling and removing the panelized temporary superstructure, return freight, and demolition and removal of the concrete substructure.

The Lump Sum payment for Item 993.12 includes all rental costs, materials, labor, tools, and equipment required to complete the work as described on the Plans and in these Specifications. The Contractor may, at his/her discretion, purchase the panelized truss instead of renting for the duration of construction. If purchased, the panelized truss will be the property of the Contractor and shall be removed in its entirety from the work site at the conclusion of construction.

The intention is to construct a single-span structure that will clear the Hoosic River. The Temporary Utility Bridge will be located as shown on the Plans, to the north of the existing bridge, and will carry temporary water utilities as shown. The Contractor shall coordinate with the utility companies for installation of all pipes and conduits and conduit/pipe support types, sizes, spacing.

The temporary abutments shown on the Plans have been designed per the specified design assumptions. The location and details of the substructure conform to the environmental permits secured for the project and are intended to be constructed beyond the limits of the river. The Contractor may select and design alternate substructures that conform to the design criteria shown on the Plans and listed in this Special Provision. The Contractor’s design shall have equal or greater capacity than the temporary abutments shown on the Plans and maintain a minimum of 4-feet of earth cover for frost protection. Additional borings, if deemed necessary by the Contractor for his design of the temporary utility bridge foundations, shall be considered incidental to the work of this Item.

The calculations shall be developed specifically for this project and site conditions and stamped by a Professional Engineer registered in the Commonwealth of Massachusetts. The design costs for redesign of the substructures shall be the responsibility of the Contractor. The Contractor will also be responsible (including any costs) for securing all right of way and modifying environmental permits, if required by his/her design. No Contract Time Extension will be granted as a result of modified temporary substructure designs.

All substructures for the temporary bridge are to be removed in their entirety after the temporary bridge is removed.

ITEM 993.12 (Continued)

The Contractor shall select and design the system they propose for the temporary bridge superstructure. The substructure has been designed for the loads and assumptions shown on the Plans. The Contractor shall verify the design of the substructure to handle the loads from the proposed superstructure by calculating the loading from the proposed bridge and comparing with the specified design loads. The calculations shall be developed specifically for this project and site conditions and stamped by a Professional Engineer registered in the Commonwealth of Massachusetts. Calculations that show that proposed loads exceed those shown on the Plans will require the Contractor to notify the Engineer so that the substructure design can be checked with the larger superstructure loads. If the substructure design shown on the Plans cannot accommodate the loads of the proposed superstructure, it is the Contractor's responsibility to redesign the abutment accordingly.

After complete removal of the utility bridge and foundations, the disturbed site should be returned to a minimum of preconstruction conditions, as approved by the Engineer, which shall be considered incidental to Item 993.12 at no additional cost.

The Contractor is also responsible for the inspection and maintenance of the temporary utility bridge.

SUBMITTALS

The plans and details for the pre-engineered panelized temporary bridge shown on the Plans are generic and are presented for illustrative purposes to indicate the concept and to define the bridge geometry. The Contractor shall provide a panelized bridge system consistent with the overall geometry shown on the plans.

Suggested panelized bridge manufacturers include the following or an approved equal:

Acrow Corporation of America 181 New Road – Suite 202 Parsippany, NJ 07054 (973) 244-0080	Bailey Bridges, Inc. 119 40th St NE Fort Payne, AL 35967 (256) 845-7575	U.S. Bridge. 201 Wheeling Ave P.O. Box 757 Cambridge, OH 43725 (888) 872-7434

Use of an Acrow, Bailey, or U.S. Bridge system may require modifications to the temporary utility bridge design shown on the Plans. All proposed changes to details or geometry shown on the Plans must be submitted to and approved by the Engineer. The Temporary Utility Bridge elevations and invert elevations shall be maintained.

The Contractor shall submit to the Engineer, at a minimum, the following information prior to the start of construction:

ITEM 993.12 (Continued)

1. Forty-five (45) days prior to commencing the erection of the panelized bridge, the Contractor shall prepare and submit to the Engineer for review and approval a complete set of design calculations for the panelized bridge, complete assembly and erection plans, elevations, details, part lists, erection sequence, and installation procedures. All submittals shall be stamped by a Professional Engineer registered in the Commonwealth of Massachusetts. Design elements shall include, but not be limited to, bridge superstructure, bearings, anchor bolts, baseplates, and connection details.

2. Design elements shall also include any embedded plates, headed anchors, and any additional steel, with the exception of reinforcing steel, located in the abutments required to facilitate erection of the panelized bridge. Erection may not commence until assembly and erection plans have been approved by the Engineer.

3. The Contractor shall also submit their proposed erection procedures and methods to be used, including crane capacity and location, equipment, tools, devices, 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 Steel Erection of the Standard Specifications for Highways and Bridges. Erection procedures and any necessary calculations and drawings shall be stamped by a Professional Engineer registered in the Commonwealth of Massachusetts certifying that all structural members are suitably braced and supported throughout the erection process. Work under this item may not commence until the Engineer has given written approval.

4. Manufacturer's shop drawings and design calculations of the temporary panelized bridge superstructure, which shall illustrate the work to be performed, shall be developed specifically for this project and site conditions, and stamped by a Professional Engineer registered in the Commonwealth of Massachusetts. The drawings shall include details of all connections, brackets and fasteners. The temporary panelized bridge shall be designed in accordance with the latest AASHTO LRFD Guide Specifications including vibration evaluations.

5. Shop drawings required for the temporary substructures and foundations.

6. A demolition plan for the removal of the Temporary Utility Bridge after it is no longer required shall also be submitted for review and approval in accordance with Subsection 112 of the Standard Specifications. The plan shall be prepared and stamped by a Professional Engineer registered in the Commonwealth of Massachusetts. If the new bridge is to be used for any of the demolition or lifting operations, calculations will be required to verify the adequacy of the bridge components at inventory stress levels.

FABRICATION

All work including fabrication and shop connections shall be in accordance with the latest edition of the AASHTO LRFD Bridge Construction Specifications. Pre-qualified and certified welders shall perform all welding.

ITEM 993.12 (Continued)

MATERIALS

Structural composite lumber and sawn lumber shall comply and conform to the requirements of ASTM D-5456 and AASHTO M168, respectively. The minimum thickness of the structural composite lumber shall be ¾-inch.

5000 PSI, CEMENT CONCRETE

The work to be done hereunder shall include all concrete components of the temporary bridge substructure. The work shall conform to the relevant provisions of Subsection 901, and the following:

All materials complete and in place at construction joints, and all other work considered incidental to the work involved in furnishing and placing the concrete. The abutment foundations shall be level. All concrete shall be placed in the dry. Bearing seat elevations, including base plate configuration and installation, shall be verified by the Contractor prior to forming concrete, and shall be adjusted accordingly based on the specific type of superstructure to be installed. The height of the backwalls will be based on the type of superstructure selected.

Shop drawings are required for the temporary spread footing supported abutments.

STEEL REINFORCEMENT FOR STRUCTURE

The work under this heading shall conform to relevant provisions of Subsection 901.

Shop drawings are required for the temporary abutment reinforcement.

STRUCTURAL STEEL

Structural Steel shall conform to the requirements of AASHTO M270 Grade 50. All structural steel shall be galvanized in accordance with AASHTO M111. Bolts, carriage bolts, screw anchors, nuts and washers shall be galvanized in accordance with AASHTO M232. Anchor bolts at the bearing locations shall conform to ASTM F1554 Grade 105. High strength bolts, washers and nuts shall conform to the requirements of the latest MassDOT Standard Specifications.

All damaged areas of the galvanized components shall be cleaned of any oil, grease, rust, scale, loose rust, or other foreign material, then touched-up with zinc-rich paint meeting MassDOT Specification M7.04.11 (Paint, High Zinc Dust Content, Galvanizing Repair).

PROCUREMENT, ASSEMBLY, AND ERECTION OF TEMPORARY PANELIZED BRIDGE

The work under this heading shall consist of the rental or purchase of required parts from the supplier and the transportation, assembly, and erection of a temporary panelized utility bridge, including bridge components, bearings, and accessories as shown on the Plans and specified herein. All costs for transportation, purchase, erection, and assembly of the panelized bridge shall be included in the Lump Sum Payment for Item 993.12.

The panelized temporary bridge system shall be pre-engineered and pre-fabricated by either Acrow Corporation of America, Bailey Bridges, Inc., U.S. Bridge, or an approved equal.

ITEM 993.12 (Continued)

Technical Advisor

The Contractor shall hire a technical representative from the selected bridge manufacturer to advise and assist the Contractor during the transport, assembly, and erection phases of the temporary panelized bridge.

The Contractor shall be completely responsible for the expense of the services of the required technical advisor and the bid contract price shall include full compensation for all costs in connection therewith. The services of the technical representative are in addition to the Contractor's staff. The technical advisor shall be present during the erection of the temporary panelized bridge.

Assembly and Erection

Assembly and erection shall be performed in accordance with the approved Contractor assembly and erection submittals, manufacturer's direction, and the requirements of the Standard Specifications. The Contractor shall ensure the stability of the structure during erection.

The Contractor shall not allow debris, tools, or incidental equipment of any kind to swing over areas where vehicular or pedestrian traffic exists. The crane pick, swing, and placement shall not occur over active vehicular or pedestrian traffic, and if crane placement necessitates such a lift over the roadway, traffic is to be stopped and access restricted during such operations.

The Contractor shall not permit any debris, tools, materials, etc. to fall into Hoosic River. The Contractor shall provide every precaution to ensure that the river is adequately protected for the duration of construction. Costs of protection shall be considered incidental to Item 993.12. Any material that accidentally falls into the river shall be removed immediately at the Contractor's expense.

INSPECTION AND MAINTENANCE

The work under this heading includes the furnishing of skilled personnel, tools and equipment required to inspect, repair and maintain the temporary utility bridge for the duration of its use and shall be considered incidental to Item 993.12. This work shall include the following items:

1. Inspect all components of the bridge above ground bimonthly or as directed by the Engineer.
2. Repair, replace or otherwise maintain all bridge components as required to keep the bridge in acceptable condition throughout the duration of construction. Repairs shall be made within 24 hours of inspection or discovery of defect.
3. Tighten or replace all loose and missing fasteners as required.

REMOVAL OF TEMPORARY BRIDGE

The work to be done under this heading shall conform to the relevant provisions of Subsection 112 of the Standard Specifications, and the following:

A demolition plan for the removal and disassembly of the Temporary Utility Bridge after it is no longer required shall also be submitted for review and approval in accordance with Subsection 112 of the Standard Specifications and the submittal requirements specified above.

ITEM 993.12 (Continued)

All material shall become the property of the Contractor and shall be properly disposed of or otherwise removed from the site. If rented, the panelized temporary bridge is to be returned to the manufacturer. The Contractor is responsible for any costs imposed by the manufacturer for damages, as well as return freight costs.

REMOVAL OF TEMPORARY SUBSTRUCTURE

The work under this heading includes the removal and satisfactory disposal of all the temporary substructure materials in their entirety. All material shall become the property of the Contractor and shall be properly disposed of away from the work site.

BASIS OF PAYMENT

Item 993.12 will be paid for at the Lump Sum Contract Unit Price Bid, which price shall include all costs associated with the rental/purchase of the Temporary Utility Bridge, engineering design/redesign, labor, excavation, materials (including: concrete, reinforcing steel, timber decking, utility supports, and other materials as required by the Engineer) and all necessary hardware, equipment, delivery, off-loading, all replacement parts and incidental costs required to complete the work. Portions of the existing site and grade that are altered and/or disturbed by the construction and removal of the substructure shall be restored to their original conditions, which is considered incidental to the work for this Item with no additional payment provided.

Any required timber mats used during construction and demolition procedures shall also be considered incidental to Item 993.12.

Payment of 75% of the lump sum bid price of this item will be made upon complete installation. The remaining 25% of the lump sum bid price of this Item will be paid following complete removal and restoration of altered/disturbed areas, as determined by the Engineer.

ITEM 994.01 TEMPORARY PROTECTIVE SHIELDING LUMP SUM
BRIDGE NO. A-04-038

Work under this item shall consist of designing, furnishing, fabricating, erecting, maintaining, and subsequent removal of temporary shielding on the underside of the deck and abutment. The design shall be performed by a Professional Engineer registered in the Commonwealth of Massachusetts. Temporary deck underside and abutment protective shielding shall be utilized to provide for the protection of the river beneath the bridge from falling debris during the demolition. Protective shielding shall be placed beneath the existing superstructure prior to demolition of the superstructure and deck.

SUBMITTALS

The Contractor shall submit shop drawings, working drawings, and associated design calculations, stamped by a Professional Engineer registered in the Commonwealth of Massachusetts, of all proposed shielding to the Engineer for review and approval prior to installation. The drawings shall include details of all connections, brackets, and fasteners. The protective shielding shall be designed to support all construction and dead loads safely; and to be sealed tightly at all joints. The shielding shall be placed in a manner as to prevent it from being blown out by the wind. If, in the opinion of the Engineer, the shielding is not secure, then the Contractor shall remove it and install it to the satisfaction of the Engineer at no additional cost.

All shielding shall meet the following minimum requirements:

1. Protective shielding shall not be installed until the Engineer's review has been completed. No portion of the bridge deck shall be saw-cut or removed until the Temporary Protective Shielding is in place and complete.

2. The shielding shall extend a sufficient distance beyond the deck limits and have vertical walls sufficient to contain any debris. The shielding shall extend the full length of the bridge span. The Contractor may use the existing abutments/wingwalls as supports for the protective shielding, provided that design calculations for the shielding show that the existing components are adequate for such purposes. All spaces along the perimeter of the shielding and at the seams shall be sealed to prevent dust and debris from escaping and falling into the river below.

3. Shielding shall be designed to safely withstand all loads it would be subjected to during construction. The design shall also include a complete description of the equipment and construction methods proposed for the deck removal and the maximum size of deck area excavated. Calculations shall include assumed maximum drop heights for debris, maximum size of debris allowed to be dropped onto the shielding, and requirements for clearing of debris to prevent overloading of the shielding.

4. The shielding shall be maintained and remain in place until the superstructure is completely removed. Shielding shall be removed only upon approval of the Engineer. All materials used in the shielding systems shall become the property of the Contractor and shall be properly removed from the site at the completion of the project.

ITEM 994.01 (Continued)

BASIS OF PAYMENT

Item 994.01 will be paid for at the Contract Lump Sum price, which price shall include designing, furnishing, fabricating, erecting, maintaining, and final removal of the temporary protective shielding, all labor, materials, tools, equipment, and all incidental costs required to complete the work.

50% of the Lump Sum value shall be paid upon completion of Temporary Protective Shielding installation. The remaining 50% shall be paid upon completion of removal of existing bridge superstructure and substructure, including removal of the Temporary Protective Shielding.

ITEM 995.01 BRIDGE STRUCTURE, BRIDGE NO. A-04-038 LUMP SUM

The work under this Item shall conform to the relevant provisions of Subsection 995 of the Standard Specifications, and the following:

The work under this Item shall include all materials, equipment and labor needed for the construction of the following components and items included hereinafter under Basis of Partial Payments.

Payment for materials shown on the Plans as being part of this bridge structure or which may be incidental to its construction and are not specifically included for payment under another Item shall be considered incidental to the work performed under this Item and shall be included in the unit price of the component of which they are a part:

- Cast-in-place concrete integral abutments.
- Cast-in-place concrete approach slabs.
- Cast-in-place concrete curtain walls.
- Cast-in-place concrete wingwalls.
- Cast-in-place concrete safety curbs.
- Steel reinforcement for structures, epoxy coated.
- Prestressed concrete deck bulb tee beams (NEDBT 48).
- Metal Bridge Railing (3 Rail), Steel (Type S3-TL4).
- Precast concrete guardrail transitions.
- Damp-proofing.
- Membrane Waterproofing for Bridge Decks.
- Sawing and Sealing joints in asphalt pavement.
- Structural Steel-Coated Steel for Utility Support & Integral Abutment Sleeve

PRESTRESSED CONCRETE NEDBT 48 BEAMS

A. General.

The work under this Heading consists of fabricating, transporting and installing prestressed concrete NEDBT 48 beams, and includes all necessary labor, materials, and equipment to complete the work as shown on the Plans. The Precast, Prestressed, and Prefabricated Concrete Elements shall meet the requirements of Section M4: Cement Concrete and Related Materials.

MATERIALS

A. Materials.

Materials shall conform to M4.09.1 and the following:

Non-Shrink Grout Products	M4.04.5
Prestressing Strands	AASHTO M 203
Welded Steel Wire Fabric	M8.01.2
Mechanical Reinforcing Bar Splicer	M8.01.9
Strand Chuck	M8.15.0
Lifting Devices	PCI MNL-116

ITEM 995.01 (Continued)

1. Reinforcement and Prestressing Strands.

The size and grade of steel reinforcement and prestressing strands shall be as indicated on the plans. All reinforcing steel shall be epoxy coated, Grade 60. All prestressing strands shall be uncoated.

2. Threaded Inserts

Threaded inserts are permissible in Prestressed Concrete Beams for installing formwork, utility supports, or deck drains. Threaded inserts shall be hot dip galvanized or made of stainless steel and shall not come in contact with the reinforcing steel. The number of threaded inserts installed for the Contractor's convenience shall be kept to a minimum.

CONSTRUCTION METHODS – PLANT FABRICATION

A. 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 M4.09.4 *Department Acceptance*), and at least seven (7) days prior to the scheduled casting of any Prestressed Concrete Beam or control section. The Contractor shall schedule the meeting, which shall include representatives of the Fabricator and MassDOT.

B. Reinforcement.

The reinforcing bars shall be installed in accordance with Subsection 901.35 of the Standard 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.

C. Placing and Tensioning Strands.

Placing and tensioning strands shall be in accordance with PCI MNL-116. The location of all prestressing strands shall be as indicated on the plans.

D. Tolerances.

Fabrication shall comply with tolerances specified on the plans. Tolerances for steel reinforcement placement shall be in accordance with Subsection 901.35. In the absence of specifications on the plans, tolerances shall comply with the latest version of the PCI MNL 135, Precast Tolerance Manual.

ITEM 995.01 (Continued)

E. Forms.

Concrete shall be cast in rigidly constructed forms, which will maintain the Prestressed Concrete Beams 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. 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.

CONSTRUCTION METHODS – FIELD CONSTRUCTION

A. General.

All of the Contractor's field personnel involved in the erection and assembly of the Prestressed Concrete Beams shall have knowledge of and follow the approved Erection Procedure and Quality Control Plan for Prestressed Concrete Beam Assembly.

Prior to installation, the following documentation shall be reviewed and confirmed by the MassDOT Resident Engineer or designee:

(a) QC Compressive Strength Test Report Forms attaining Design Strength, f'_c for the Prestressed Concrete Beam'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.

Field construction staff shall verify that the Resident Engineer has accepted all Prestressed Concrete Beams prior to installation.

B. Erection Procedure and Quality Control Plan for Prestressed Concrete Beam Assembly.

Prior to the erection, the Contractor shall submit an Erection Procedure and a Quality Control Plan for Prestressed Concrete Beam Assembly for approval by the Engineer. This submittal shall include computations and drawings for the transport, hoisting, erection and handling of the Prestressed Concrete Beams. The Erection Procedure and Quality Control Plan for Prestressed Concrete Beam Assembly 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 and Quality Control Plan for Prestressed Concrete Beam Assembly shall, at a minimum, include the following:

1. Erection Procedure

The Erection Procedure shall be prepared to conform to the requirements of 960.61, Design, Fabrication and Erection and the applicable sections in Chapter 8 of the PCI Design Handbook (eighth edition) for handling, erection, and bracing requirements. At a minimum, the Erection Procedure shall provide:

ITEM 995.01 (Continued)

(a) Steel reinforcing details, and location and details of lifting devices
(b) Minimum concrete compressive strength for handling the Prestressed Concrete Beams.
(c) Concrete stresses during handling, transport, and erection.
(d) Crane capacities, pick radii, sling geometry, and lifting hardware.
(e) Verification that the equipment can handle all pick loads and weights with the required factor of safety.
(f) Evaluation of construction sequence and evaluation of any geometric conflicts in the lifting of the Prestressed Concrete Beams and setting them on the abutments and piers.
(g) Design of crane supports including verification of subgrade for support.
(h) Location and design of all temporary bracing that will be required during erection.

2. Quality Control Plan for Prestressed Concrete Beam Assembly

The Quality Control Plan for Prestressed Concrete Beam Assembly is a document prepared and submitted by the Contractor prior to the start of work which requires the Contractor to identify and detail the sequence of construction in accordance with the project schedule and which clearly identifies all stages of field construction. The assembly procedures for the Prestressed Concrete Beams shall be submitted in PDF format on 24"x36" sheets. This document will be treated as a Construction Procedure and will be reviewed by both the Designer and the District Construction Office.

At a minimum, the Quality Control Plan for Prestressed Concrete Beam Assembly shall include the following:

(a) Listing of the equipment, materials, and personnel including their assigned responsibilities that will be used to erect and assemble the Prestressed Concrete Beams on site.
(b) Documentation of all preparatory work necessary for moving personnel, equipment, supplies, and incidentals to the project site before beginning work.
(c) Detailed schedule showing the sequence of operations that the Contractor will follow to complete the field construction from setting working points and working lines to the casting of closure pours and the curing of the closure pour concrete, as described below and as called for on the plans.
(d) Contractor's means for ensuring that the Prestressed Concrete Beam shall align to the roadway profile and cross slope and means for adjusting the final deck slab elevation.
(e) Timeline and descriptions of Quality Control activities to be followed throughout the field construction operations including methods and procedures for controlling tolerance limits both horizontally and vertically.

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.

ITEM 995.01 (Continued)

D. Prestressed NEDBT Beams.

1. Beam Layout and Erection.

Prestressed concrete beams shall be installed to the line and grade shown on the plans in accordance with the Contractor's approved Erection Procedure and Assembly Plan. As the beams are being erected, temporary blocking or bracing shall be installed to prevent the beams from tipping over. The detail and calculations for this bracing shall be included with the erection procedure submittal.

Immediately prior to erecting the beams, the surfaces of the closure pours shall be cleaned at the job site of all dust, dirt, and carbonation using a high-pressure water blast. In addition, the surfaces of closure pours 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.

As the beams are being erected, the Contractor shall monitor the width of the closure pours and the out-to-out width of the beams top flanges so that, after all beams are erected, the actual overall width of the bridge deck shall not deviate from the dimension shown on the plans beyond a tolerance of +0 inches and -1 inches. In order to achieve this, the Contractor may vary the width of the closure pours within the tolerances specified on the plans.

2. Diaphragms.

After the intermediate reinforced concrete diaphragms have been poured and allowed to reach a minimum of 70% of the required 28-day strength, the temporary bracing may be removed. The placement of the deck concrete will not be permitted until these concrete diaphragms have been installed and have reached this minimum strength.

The sequence for placing the abutment end diaphragm, integral abutment diaphragm and the pier diaphragm concrete shall be as shown on the plans.

3. Closure Pour Concrete Placement.

Prior to placing the closure pour concrete, the abutments and piers shall be prepared for the placement of the closure pour concrete as called for on the plans.

The surfaces of the closure pours shall be free of materials such as paint, oil, curing compound, bond breaker, dirt etc. that will inhibit bonding. The surfaces of the closure pours shall be hydro-blasted with equipment that can remove asphaltic material, oils, dirt, rubber, curing compounds, paint carbonation, laitance, and other potentially detrimental materials, which may interfere with the bonding of the closure pour concrete and precast concrete.

The exposed reinforcing steel shall be protected from damage during the cleaning of the surfaces of the closure pours . Damaged epoxy coating of steel reinforcement shall be repaired, and the reinforcing steel shall be cleaned as directed by the Engineer.

The Contractor shall cut the lifting devices off below the top of the beam, and the recesses shall be filled with mortar (M4.04.5). The Contractor shall also remove projections and fill all depressions in the tops of the beams with mortar (M4.04.5).

After the formwork has been removed, all threaded inserts that have been cast into the beams for support of the formwork shall be plugged with a grout of the same color as that of the precast concrete.

ITEM 995.01 (Continued)

SAWING AND SEALING JOINTS IN ASPHALT PAVEMENT AT BRIDGES

The work to be done under this Item consists of making a sealed kerf across the full width of the finished asphalt pavement at bridge abutments where called for on the Plans. The shape, width, and depth of the kerf shall be as shown on the Plans.

Prior to the start of the asphalt pavement operation, the Contractor shall place a mark on each curb or barrier on either side of the paved roadway. These marks shall be aligned with the actual end of the bridge deck and shall be placed so that they will not be covered or otherwise obscured by the asphalt pavement.

After the completion of the paving operation, the Contractor shall snap a straight chalk line on the pavement between these two marks. The Contractor shall then saw cut the pavement along this line to the depth, width and shape as shown on the Plans. The equipment shall be approved by the Engineer prior to commencing work.

After completing the saw cutting, the Contractor shall clean the saw groove of any dust and debris with an oil free air blast. If the groove was wet sawn, the groove shall be cleaned with a water blast to remove any remaining slurry and debris, vacuumed with a Wet-or-Dry vacuum to remove any standing water, and then dried with an air blast from a Hot-Air-Lance.

Once the groove is clean and dry, the Contractor shall fill it completely with a Hot Applied Crack Sealer meeting the requirements of M3.05.2 in accordance with the manufacturer's application instructions and restrictions regarding ambient and material temperatures. The crack sealer shall be thoroughly cured prior to opening the road to traffic. To reduce tackiness, only boiler slag aggregate (black beauty) shall be scattered over the sealer when required by the Engineer. Conventional sand shall not be used for this purpose.

PRECAST CONCRETE GUARDRAIL TRANSITIONS

A. General.

The work under this Heading consists of fabricating, transporting and installing Precast Concrete Guardrail Transitions and includes all necessary labor, materials, and equipment to complete the work as shown on the Plans. The Precast Concrete Bridge Elements shall meet the requirements of Section M4: Cement Concrete and Related Materials.

MATERIALS

A. Materials.

Materials shall conform to M4.09.1 and the following:

Non-Shrink Grout Products	M4.04.5
Controlled Low-Strength Material – Structural Non-Excavatable	M4.08.0
Welded Steel Wire Fabric	M8.01.2
Mechanical Reinforcing Bar Splicer	M8.01.9
Lifting Devices	PCI MNL-116
Corrugated Metal Pipe	AASHTO M 36

ITEM 995.01 (Continued)

1. 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.

2. 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.

3. 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. 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 specifications, shop drawings, curing plan, schedule, and discuss any specific requirements. The meeting shall be held prior to scheduling a MassDOT Inspector (refer to M4.09.4 *Department Acceptance*), 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.

B. Reinforcement.

The reinforcing bars shall be installed in accordance with Subsection 901.35, 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.

C. Tolerances.

Fabrication shall comply with tolerances specified on the plans. Tolerances for steel reinforcement placement shall be in accordance with Subsection 901.35. In the absence of specifications on the plans, tolerances shall comply with the latest version of the PCI MNL 135, Precast Tolerance Manual.

ITEM 995.01 (Continued)

D. 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. 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.

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 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.

Field construction staff shall verify that the Resident 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, Design, Fabrication and Erection and the applicable sections in Chapter 8 of the PCI Design Handbook (eighth edition) for handling, erection, and bracing requirements. At a minimum, the Erection Procedure shall provide:

ITEM 995.01 (Continued)

(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 Low-Strength Material – Structural Non-Excavatable to the limits as shown on the plans. Add additional grout ports in the footings to facilitate the bedding process if required.

Except in approach slabs, 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.

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 Pours and Grouted Keyways.

Immediately prior to erecting the Precast Concrete Bridge Elements, the closure pours and grouted keyways 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 or grout and precast concrete using a high-pressure water blast. Any 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 closure pours and grouted keyways 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.

ITEM 995.01 (Continued)

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.

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.

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 Mortar (M4.04.5).

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 995.01 (Continued)

SCHEDULE OF BASIS FOR PARTIAL PAYMENT

Within 10 days from the date of the Notice to Proceed, the Contractor shall submit, on Contractor's Proposal Form, a schedule of unit prices for the major component sub-items that make up Item 995.01. The bridge structure Lump Sum breakdown quantities provided in the proposal form are estimated and are not guaranteed. The total of all partial payments for this item 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 995.01, no further compensation will be allowed. The schedule on the proposal form applies only to Bridge No. A-04-038 (CEH). 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.

BRIDGE STRUCTURE NO. A-04-038 (CEH)

SUB-ITEM NO.	ITEM DESCRIPTION	QTY.	UNIT	UNIT PRICE	TOTAL
482.31	SAWING AND SEALING JOINTS IN ASPHALT PAVEMENT AT BRIDGES	60	FT		
904.3	5000 PSI, ¾ INCH, 685 HP CEMENT CONCRETE	190	CY		
910.1	STEEL REINFORCEMENT FOR STRUCTURES – EPOXY COATED	43,400	LB		
916.002	PRECAST HIGHWAY GUARDRAIL TRANSITION	4	EA		
931.06	PRESTRESSED CONCRETE DECK BULB TEE BEAMS (NEDBT 48)	500	FT		
960.1	STRUCTURAL STEEL – COATED STEEL	5,500	LB		
965.	MEMBRANE WATERPROOFING FOR BRIDGE DECKS	5,000	SF		
970.	DAMP-PROOFING	1,500	SF		
975.1	METAL BRIDGE RAILING (3 RAIL), STEEL (TYPE S3-TL4)	250	FT		

END OF DOCUMENT
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DOCUMENT A00802

DETAIL SHEETS

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—PRELIMINARY ESTIMATE OF QUANTITIES — DETAIL SHEET—

CITY/TOWN:	ADAMS	YEAR:	2025
STA:	MA.	ROAD:	QUALITY STREET
TYPE OF PROJECT:	BRIDGE REPLACEMENT OVER HOOSIC RIVER	CLASS:	
		DATE:	APRIL 2025

Earth Excavation 570.00 CY	Gravel Borrow 400.00 CY
Pavement Standard Milling 600.00 SY	Test Pit for Exploration 60.00 CY
Loam for Roadsides 130.00 CY	
Class A Rock Excavation 8.00 CY	
Class B Rock Excavation 60.00 CY	
Channel Excavation 100.00 CY	

SURFACE AREAS

PROPOSED FULL DEPTH PAVEMENT = 1,039 SY

TEMPORARY ROAD = 389 SY

PERMANENT ROAD = 650 SY

PROPOSED PAVEMENT – BRIDGE = 289 SY

PROPOSED FULL DEPTH CONSTRUCTION

SURFACE:	1-½" SUPERPAVE SURFACE COURSE - 9.5 (SSC - 9.5) OVER
	0.06-0.08 GAL/SY TACK COAT OVER
INTERMEDIATE:	2-½" SUPERPAVE INTERMEDIATE COURSE - 12.5 (SIC – 12.5) OVER
	0.06-0.08 GAL/SY TACK COAT OVER
BASE:	12" GRAVEL BORROW (M1.03.0 TYPE b)

BRIDGE PAVEMENT CONSTRUCTION

SURFACE:	1-½" SUPERPAVE BRIDGE SURFACE COURSE - 9.5 POLYMER (SSC-B - 9.5 – P) OVER
	0.07-0.09 GAL/SY TACK COAT OVER
INTERMEDIATE:	1-½" SUPERPAVE BRIDGE PROTECTIVE COURSE – 9.5 POLYMER (SPC-B – 9.5 - P) OVER
	0.06-0.08 GAL/SY TACK COAT OVER
	MEMBRANE WATERPROOFING

MILL AND OVERLAY PAVEMENT CONSTRUCTION

SURFACE:	1-½" SUPERPAVE SURFACE COURSE - 9.5 (SSC - 9.5) OVER
	0.06-0.08 GAL/SY TACK COAT OVER

PROPOSED BOX WIDENING (LESS THAN 4')

SURFACE:	1-½" SUPERPAVE SURFACE COURSE - 9.5 (SSC - 9.5) OVER
	0.06-0.08 GAL/SY TACK COAT OVER
INTERMEDIATE:	2-½" SUPERPAVE INTERMEDIATE COURSE - 12.5 (SIC – 12.5) OVER
	0.06-0.08 GAL/SY TACK COAT OVER
SUBBASE:	6" HIGH EARLY STRENGTH CEMENT CONCRETE
BASE:	12" GRAVEL BORROW (M1.03.0 TYPE b)

HOT MIX ASPHALT SIDEWALK

SURFACE:	1-¼" SURFACE COURSE OVER
INTERMEDIATE:	2-¾" INTERMEDIATE COURSE OVER
BASE:	8" GRAVEL BORROW (M1.03.0 TYPE b)

ITEM 102.521 TREE AND PLANT PROTECTION FENCE

To be used in areas of 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.

Additionally to be used as shown on the plans at the following location:

Temporary Road BL:
Sta. 400+90 to Sta. 402+04 LT

ITEM 103. TREE REMOVED – DIAMETER UNDER 24 INCHES

Sta. 300+12 LT – 10" triple arb
Sta. 300+17 LT – 10" arb
Sta. 300+22 LT – 10" arb
Sta. 300+60 LT – 20" pine
Sta. 300+80 LT – 8" spruce*
Sta. 301+76 LT – 12" magnolia
Sta. 302+16 LT – 12" maple
Sta. 302+59 RT – 12" maple
Sta. 302+60 LT – 8" maple
Sta. 302+73 LT – 10" maple
Sta. 302+84 LT – 12" maple

*Assumed to be 9" at time of removal.

Additional units to be used as required by the Engineer.

ITEM 104. TREE REMOVED – DIAMETER 24 INCHES AND OVER

Sta. 300+35 LT – 24" pine
Sta. 300+47 LT – 30" pine
Sta. 300+73 LT – 30" pine

ITEM 121. CLASS A ROCK EXCAVATION

This item is included as contingency of Item 120.

ITEM 144. CLASS B ROCK EXCAVATION

Included as a contingency item.

ITEM 146. DRAINAGE STRUCTURE REMOVED

Sta. 201+13
Sta. 201+31

ITEM 151. GRAVEL BORROW

Use for the following work:

- Sub-base for full depth pavement areas.
- Sub-base for temporary sidewalk.
- Curb setting.
- Elsewhere as directed.

ITEM 201. CATCH BASIN

Sta. 201+26.20
Sta. 201+31.50

ITEM 202. MANHOLE

Sta. 201+40.30

ITEM 243.12 12 INCH REINFORCED CONCRETE PIPE CLASS IV

Sta. 201+26.56
Sta. 201+33.35

ITEM 271.12 12 INCH AND UNDER PIPE REMOVED AND STACKED

Sta. 201+13.96
Sta. 201+32.98

ITEM 303.06 6 INCH DUCTILE IRON PIPE (MECHANICAL JOINT)

Sta. 302+22 (temporary)
Sta. 302+14 (permanent)

ITEM 303.08 8 INCH DUCTILE IRON PIPE (MECHANICAL JOINT)

Sta. 300+26 (temporary)
Sta. 300+23 (permanent)

ITEM 303.12 12 INCH DUCTILE IRON PIPE (MECHANICAL JOINT)

Sta. 300+11 (temporary)
Sta. 302+32 (temporary)
Sta. 300+15 (permanent)
Sta. 302+19 (permanent)

ITEM 303.14 14 INCH DUCTILE IRON PIPE (MECHANICAL JOINT)

Sta. 202+17 (temporary)
Sta. 302+26 (temporary)
Sta. 300+15 (permanent)
Sta. 302+13 (permanent)

ITEM 303.16 16 INCH DUCTILE IRON PIPE (MECHANICAL JOINT)

Sta. 201+47 to Sta. 202+18 (temporary)
Sta. 302+10 (temporary)
Sta. 201+55 to 202+27 (permanent)
Sta. 302+00 (permanent)

ITEM 303.20 20 INCH DUCTILE IRON PIPE (MECHANICAL JOINT)

Sta. 300+15 to Sta. 302+15 (temporary)
Sta. 300+17 to Sta. 302+02 (permanent)

ITEM 315.06 6 INCH WATER MAIN REMOVED AND STACKED

Sta. 302+25

ITEM 315.12 12 INCH WATER MAIN REMOVED AND STACKED

Sta. 300+09
Sta. 302+24

ITEM 315.16 16 INCH WATER MAIN REMOVED AND STACKED

Sta. 201+47 to Sta. 202+18 (temporary)
Sta. 302+25

ITEM 315.20 20 INCH WATER MAIN REMOVED AND STACKED

Sta. 300+15 to Sta. 302+23

ITEM 350.06 6 INCH GATE AND GATE BOX

Sta. 302+30

ITEM 350.08 8 INCH GATE AND GATE BOX

Sta. 300+27
Sta. 300+22

ITEM 350.12 12 INCH GATE AND GATE BOX

Sta. 300+09
Sta. 300+09
Sta. 302+28

ITEM 350.16 16 INCH GATE AND GATE BOX

Sta. 201+50
Sta. 302+06

ITEM 358. GATE BOX ADJUSTED

Sta. 201+35 (16” WG)
Sta. 202+07 (16” WG)
Sta. 201+72 (12” WG)

ITEM 367.12 12 INCH CAST IRON PLUG

Sta. 300+10
Sta. 300+12
Sta. 302+23

ITEM 367.16 16 INCH CAST IRON PLUG

Sta. 201+52
Sta. 302+03
Sta. 201+47
Sta. 302+08

ITEM 369.12 12 X 12 INCH TAPPING SLEEVE, VALVE AND BOX

Sta. 202+23
Sta. 302+29

ITEM 369.16 16 X 16 INCH TAPPING SLEEVE, VALVE AND BOX

Sta. 201+47
Sta. 302+08

ITEM 373.20 20 INCH WATER PIPE INSULATION

Sta. 300+42 to Sta. 302+06
Sta. 300+36 to Sta 301+94

ITEM 375.12 12 INCH INSERTION VALVE AND BOX

Sta. 300+09
Sta. 302+31

ITEM 375.16 16 INCH INSERTION VALVE AND BOX

Sta. 201+47
Sta. 302+08

ITEM 451. HMA FOR PATCHING

Added as a contingency item.

ITEM 503. GRANITE CURB TYPE VA3 – STRAIGHT

Sta. 300+50 to Sta. 300+62 LT
Sta. 300+47 to Sta. 300+66 RT
Sta. 301+92 to Sta. 302+04 LT
Sta. 301+86 to Sta. 301+95 RT

ITEM 503.1 GRANITE CURB TYPE VA3 – CURVED

Sta. 301+92 to Sta. 302+16 LT
Sta. 301+92 to Sta. 302+16 RT

ITEM 570.3 HOT MIXED ASPHALT CURB TYPE 3

For length of Temporary Road; one side of road.
Sta. 400+12 to Sta. 402+07

ITEM 620.12 GUARDRAIL, TL-2 (SINGLE FACED)

Sta. 201+55 to Sta. 201+94 RT
Sta. 300+23 to Sta. 300+63 LT
Sta. 300+30 to Sta. 300+61 RT
Sta. 302+56 to Sta. 302+76 LT
Sta. 302+40 to Sta. 302+53 RT

ITEM 620.32 GUARDRAIL – CURVED, TL-2 (SINGLE FACED)

Sta. 201+94 to Sta. 202+15 RT
Sta. 301+94 to Sta. 302+56 LT
Sta. 301+96 to Sta. 302+40 RT

ITEM 628.21 TRANSITION TO NCHRP 350 GUARDRAIL

Sta. 300+63 LT
Sta. 300+61 RT
Sta. 301+94 LT
Sta. 301+96 RT

ITEM 630.2 HIGHWAY GUARD REMOVED AND DISCARDED

Sta. 300+35 to Sta. 300+85 LT
Sta. 300+58 to Sta. 300+86 RT
Sta. 301+74 to Sta. 302+74 LT
Sta. 301+72 to Sta. 302+65 RT

ITEM 630.41 STEEL BACKED WOOD GUARDRAIL – DOUBLE SIDED REMOVE AND RESET

Sta. 10+36

ITEM 669. FENCE REMOVED AND STACKED

Sta. 302+74 to Sta. 303+22 LT.

ITEM 702. HOT MIX ASPHALT SIDEWALK OR DRIVEWAY

Sta. 400+19 to Sta. 400+44 LT
Sta. 400+54 to Sta. 402+06 LT

ITEM 769. PAVEMENT MILLING MULCH UNDER GUARD RAIL

For use under Guardrail items 620.12, 620.32.

ITEM 772.038 ARBORVITAE 7-8 FEET

For replacement of removed Arborvitae trees. To be placed as directed by the Arborist and Engineer.

ITEM 833.7 DELINEATION FOR GUARD RAIL TERMINI

Sta. 201+55, RT
Sta. 300+22, LT
Sta. 302+54, RT
Sta. 302+77, LT

ITEM 853.1 PORTABLE BREAKAWAY BARRICADE TYPE III

For traffic management.

Sta. 300+25
Sta. 302+70

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DOCUMENT A00808

PROJECT UTILITY COORDINATION FORM

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Project Utilities Coordination (PUC) Form

CONTACTS AND GENERAL UTILITY INFORMATION

Printed: 6/23/2025

City/Town:	Project File #:	PUC Completed by:	Utility Pole Set:	
Adams	610777	Justin Daigle, EIT	National Grid	
Route/Street:	**Resident Engineer:**	**Mass DOT PM:**	**Scheduled Ad Date:**	**Total Poles Relocated:**
Quality Street	*TBD*	Gautam Sen	8/9/2025	3 TEMP, 2 PERM

Consultant:	Contact:	Cell #	Office #	Email
BSC Group	Micah Morrison	(617) 896-4356		mmorrison@bscgroup.com

Utility Company	Contact	Office #	Cell #	Email	Scope, Budget, Duration Submitted		Reimbursement			Potential for District Initiated Early Relocation *		Utilities On Bridge/Structure		Utilities Underground (UG) /Aerial (OH)	
					Yes	No	Agreement	Non-Reimb'le	Notes	YES	NO	YES	NO	UG	OH
National Grid	Mike Tatro		(413) 582-7421	michael.tatro@nationalgrid.com	X		X				X		X		X
Charter Communication	John Leone	(518) 640-8864	(518) 469-3549	john.leone@charter.com	X		X				X		X		X
Verizon	Steve Klaubert	(413) 397-3625	(413 246-9792	Sklaubert@pike.com	X		X				X		X		X
Berkshire Gas	Wesley Scalise	(413) 445-0383		wscalise@berkshiregas.com	X		X				X	X		X	
National Grid	Casey Silva	(617)-429-7797		casey.silva@nationalgrid.com							X		X		X
Verizon	Paul Styspeck	(413) 787-1845	(413) 575-7058	paul.m.styspeck@verizon.com							X		X		X

Utility Relocation Notes for MassDOT Contractor

Unless otherwise noted by Contract, the MassDOT Contractor is to provide the District Construction Office with 7 Calendar Days advance notification in order to validate the current progress and provide the required 30 Days advance notice-to-proceed for the first Utility - and each subsequent Utility. These advance notifications are to be identified in the Contractor's Schedules (Pre-Con preparation, Baseline, Subnets, and Updated/Monthly Schedules) as specified in Subsection 8.02 (for DBB Contracts) and/or Section 9 (of DB Contracts). Note: The durations included below do not include these lead-times. See Additional 'Important Basis notes for Contractor' - on last PUC Form page.

Additional notes:

It should be noted that due to supply chain issues, National Grid has requested an advanced lead time of 90 days instead of the usual 30 days.

Suggested Sequence of Relocation (Based on Consultant proposed construction staging)

The sequence as detailed on the following pages is based on the consultants proposed staging plan. This information was compiled through meetings that included all of the utilities listed below along with the designer and the Town of Adams. The information provided is the best available information prior to project advertisement.

Is 'enabling' (prep) work, by the Contractor, necessary prior to the start of the first series of utility relocations:	Yes	No
	X	

Has any of the Utility work been identified to work concurrently	Yes	No
		X

6/23/2025
PRINTED

massDOT Massachusetts Department of Transportation Highway Division

	RESPONSIBLE PARTY		DESCRIPTION - Utility Relocation Phases, Tasks and Activities	Estimated Duration (Work Days) by Utilities (Lead time not included)	Concurrent / Exclusive Utility Work				Access Restraint & Limitations of Operations Notes	
					Contractor note: In planning and executing the work, the Access Restraints listed in the Special Provisions, takes precedence over the checklist in these 4 columns.				Should an AR be considered for the Contractor ?	
					Exclusive Utility on site	Concurrent Utilities	Contractor Off-Site	Contractor Concurrent		
	C = Contractor	U = Utility Co.			Utility working with no other Utilities in vicinity	Utility working with other Utilities on site	No Contractor physical construction operations on-site (while Utility is	Contractor and Utility are working on-site - but NOT in the same vicinity	Potential Access Restraint (Yes/No)	Reason/Note (optional)
Phase 1	C		Enabling work by the Contractor includes: * 90-day initial lead time required prior to first pole set / scheduled move due to supply shortages. * Site clearing must be completed prior to DOT staking pole locations. * DOT will stake pole locations within 5 workdays of being notified clearing has been completed. * N. Grid requires 5 workdays after the staking for the poles to clear their DIG-SAFE. * Contractor to schedule a utility meeting to confirm all poles are staked correctly at least 30 days prior to first pole set / scheduled move. * The contractor is responsible for providing acceptable access for N. Grid to both set the temporary poles and for Verizon to remove the permanent poles.								
Task: 1			***Utility Co. - National Grid***							
		U	Install 3 Temp poles and anchors	5	X		X		Yes	
		U	Install 1PH Primary & Neutral wires, 465 ft each	5	X		X		Yes	
		U	Remove 1/0 Primary & Neutral wires 512 ft each	5	X		X		Yes	
			Sub-Total	**15**						
Task: 2			***Utility Co. - Charter Communications***							
		U	Put new strand and Cable up	3	X		X		Yes	
		U	Splice New Cables	3	X		X		Yes	
		U	Signal Balance the Lines	3	X		X		Yes	
		U	Wreckout old Cable Lines	3	X		X		Yes	
			Sub-Total	**12**						
Task: 3			***Utility Co. - Verizon***							
		U	Verizon places temporary pole to anchor guy's	1	X		X		Yes	
		U	Verizon construction places temporary path strand & cables, transfer equipment onto new P5 1/2	4	X		X		Yes	
		U	Verizon to splice temporary cables and trim out old copper cables	6	X		X		Yes	
		U	Verizon construction to remove old cables & terminals	2	X		X		Yes	
		U	Verizon remove old PAG's, anchors & poles	2	X		X		Yes	
			Sub-Total	**15**						
Phase 2	C		Enabling work by the Contractor includes: * Contractor to complete bridge construction. * District Survey to stake phase 2 pole locations within 5 workdays of being notified the site is ready. *Contractor to schedule site meeting at least 30 days before expected start of phase 2 utility work for scheduling purposes. * NGrid requires 5 workdays after the staking for the poles to clear their DIG-SAFE. * Contractor shall construct permanent access road and complete additional site clearing identified at the phase 2 site walk. (The contractor is responsible for providing acceptable access for both N. Grid to set the permanent poles and for Verizon to remove the temporary poles.)								
Task: 1			***Utility Co. - National Grid***							
		U	Relocate 2 poles and anchors (2 new permanent poles being installed)	5	X		X		Yes	
		U	Install 1/0 Primary & Neutral wires 512 ft each	5	X		X		Yes	
		U	Remove 1PH Primary & Neutral wires, 465 ft each	5	X		X		Yes	
			Sub-Total	**15**						
Task: 2			***Utility Co. - Charter Communications***							
		U	Put new strand and Cable up	3	X		X		Yes	
		U	Splice New Cables	3	X		X		Yes	
		U	Signal Balance the Lines	3	X		X		Yes	
		U	Wreckout old Cable Lines	3	X		X		Yes	
			Sub-Total	**12**						
Task: 3			***Utility Co. - Verizon***							
		U	Verizon construction places new strand & cables	3	X		X		Yes	
		U	Verizon splice new cables and trim out temporary copper cables	7	X		X		Yes	
		U	Verizon construction to remove temporary cables & terminals	1	X		X		Yes	
		U	Verizon remove temporary PAG's, anchors & poles	2	X		X		Yes	
			Sub-Total	**13**						

Proposal No. 610777-131930

	RESPONSIBLE PARTY		DESCRIPTION - Utility Relocation Phases, Tasks and Activities	Estimated Duration (Work Days) by Utilities (Lead time not included)	Concurrent / Exclusive Utility Work Contractor note: In planning and executing the work, the Access Restraints listed in the Special Provisions, takes precedence over the checklist in these 4 columns.				Access Restraint & Limitations of Operations Notes Should an AR be considered for the Contractor ?	
	C = Contractor	U = Utility Co.			Exclusive Utility on site: Utility working with no other Utilities in vicinity	Concurrent Utilities: Utility working with other Utilities on site	Contractor Off-Site: No Contractor physical construction operations on-site (while Utility is	Contractor Concurrent: Contractor and Utility are working on-site - but NOT in the same vicinity	Potential Access Restraint (Yes/No)	Reason/Note (optional)
Phase 1a	C		Enabling' work by the Contractor - Contractor to complete tree clearing for temporary roadway and installation of sediment barrier. Relocation of gas main shall occur after clearing of trees for temporary roadway and before closing of the Quality Street bridge.							
			UTILITY OPERATIONS - Gas Relocation							
Task: 1			***Utility Co. - Berkshire Gas***							
		U	Gas Main Installation - Install 150' of 4" IP HD Plastic Main on Grove St. to S. Willow St.	5	X		X		Yes	
		U	Gas Main Relocation - Abandon 215' of 2" Steel Main	3	X		X		Yes	
			Sub-Total	**8**						
Phase 2a	C		Enabling' work by the Contractor - Contractor to complete beam placement, bridge to rail transition installation, and installation of brackets supplied by Berkshire Gas. (Berkshire Gas may request guardrail post layout to avoid location of proposed posts with underground gas main)							
			UTILITY OPERATIONS - Gas Relocation							
Task: 1			***Utility Co. - Berkshire Gas***							
		U	Gas Main Installation - Install 220' of 4" IP Coated Steel Main on Quality St. Bridge	19	X		X		Yes	
		U	Contingency	3	X		X		Yes	
			Sub-Total	**22**						

IMPORTANT BASIS NOTES - FOR CONTRACTOR

1	Unless otherwise specified in the MassDOT Construction Contract, or unless specifically noted within this PUC Form, these durations (herein) are based upon the Contractor providing *unimpeded access* to the Utility company to perform Utility relocations (see Note 5 - Access).
2	"Concurrent Utilities" operations noted herein, are to signify those Utility Company operations that can be worked concurrently (e.g. Utility A and Utility B work on-site together) - MassDOT and the Contractor are to prepare NTPs to Utilities accordingly.
3	"Potential Access Restraints" noted within this PUC Form are for planning purposes. See MassDOT Contract for Contractual Access Restraints (refer to Subsections 8.02, 8.03, and/or 8.06 for Design Bid Build Contracts and Volume II Section 9 for Design Build Contracts).
4	Utility non-work periods - For planning purposes, the durations above contain some non work days (contingency) for New England conditions (precipitation, high temperatures, low temperatures, snow, ice). Gas line work and underground conduit installations however, typically have a seasonal restriction and can NOT be installed from 15-November to 15-March. Municipally Owned Electric and Gas Utilities are also restricted from proceeding from 15-November to 15-March. The Contractor shall (and the CTD plan) reflect this calendar restriction within the schedule (unless otherwise note).
5	Access - Unless otherwise noted in the Contract, and in addition to the 'enabling' notes above, the Contractor must provide safe and unimpeded access (for trucks, lifts, cranes, etc.) to the Utilities, to allow for the proposed relocation(s) - including but not limited to snow removal, clearing and grubbing, guard rail removal, barrier removal, tree removal, and grading. Any costs associated with these tasks are deemed to be incidental to the project.
6	For all MassDOT construction contracts issued after January 2014, the new Utility Coordination/documentation specification is required. This is Section 8.14 in Design-Bid-Build Contracts (see Design-Build index reference for applicable section #).
7	Prior to starting any and all enabling work for Utilities, the Contractor is to plan in advance with submittals and approved durations.
8	* Potential District Initiated Early Utility Relocation - if noted herein, the District reserves the right to initiate early utility relocation in advance of the Contract NTP. In submitting a bid price and in the development/basis of the Baseline Schedule, the Contractor shall not plan the Work with the potential benefit of any form of 'early utility relocation.' As a requirement of the Baseline submission, unless otherwise noted in this Specification, the earliest that the first Utility company is to receive the 30 days advance notification to mobilize to the site, will be 7 calendar days after the pre-construction meeting and never sooner than 7 days after the Contract NTP.

Proposal No. 610777-131930

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DOCUMENT A00810

MassDOT Herbicide Use Report

Proposal No. 610777-131930

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: _____	Name: _____	Name: _____
EPA Reg. No: _____	EPA Reg. No: _____	EPA Reg. No: _____
% Active Ingredient	% Active Ingredient	% Active Ingredient
Dry: _____	Dry: _____	Dry: _____
Liquid: _____	Liquid: _____	Liquid: _____
Formulation (dilution rate): _____	Formulation (dilution rate): _____	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:

Plant Locations/s: (Attach planting plan/s as necessary)

Notes:

	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

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: ADAMS Project File Number: 610777

Contract Number: 131930

Project Description: Bridge Replacement, A-04-038, Quality Street over Hoosic 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 A00835

ARMY CORPS OF ENGINEERS

SELF-VERIFICATION NOTIFICATION

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MassDOT # 610777 Quality Street Over Hoosic River (A-04-038) Bridge Replacement Project

Adams, Massachusetts

USACE Self-Verification Notification

February 2025

PREPARED FOR

Massachusetts Department of Transportation (MassDOT)
Highway Division
10 Park Plaza, Boston, MA 02116

PREPARED BY

BSC GROUP
BUILD | SUPPORT | CONNECT
1 Mercantile Street,
Suite 610,
Worcester, MA 01606

Maura Healey, Governor
Kimberley Driscoll, Lieutenant Governor
Monica Tibbits-Nutt, Secretary & CEO
Jonathan L. Gulliver, Highway Administrator

massDOT
Massachusetts Department of Transportation
Highway Division

January 31, 2025

Dan Vasconcelos, Environmental Scientist
U.S. Army Corps of Engineers, Regulatory Division
New England District
696 Virginia Road
Concord, MA 01742-2751

SUBJECT: MassDOT Project 610777
Quality Street over Hoosic River (A-04-038)
Bridge Replacement Project
Adams, Massachusetts
Section 404 MA General Permit Self-Verification (SV) Notification

Dear Mr. Vasconcelos,

The Massachusetts Department of Transportation – Highway Division (MassDOT) (the Applicant) is submitting this application for a Section 404 Self-Verification (SV) Notification under the Federal Clean Water Act (CWA). This application is being submitted to the U.S. Army Corps of Engineers (USACE), to request authorization for project activities associated with the replacement of the structurally deficient bridge (A-04-038) that carries Quality Street over the Hoosic River in Adams, MA (42.608989 N, 73.131334 W). The bridge replacement design is substantially the functional equivalent of, and in similar alignment to, the existing bridge.

The SV is being submitted under the General Permits (GPs) for the Commonwealth of Massachusetts for activities resulting in temporary fill to jurisdictional Waters of the United States (WOTUS). This project is eligible under General Permit 23 – Linear Transportation Projects and Stream Crossings. As a result of the proposed work, approximately 431 square feet (sf) of temporary impacts below the Ordinary High Water (OHW) Mark of the stream are anticipated due to the installation of temporary water control measures. Impacts will be the result of temporary construction needs for control of water. The proposed work will result in 109 lf of temporary/in-kind bank impact from dewatering and access to remove and replace riprap. Efforts have been made to avoid, minimize, and mitigate impacts where possible.

The project proponent hereby certifies that all information contained herein is true, accurate, and complete to the best of my knowledge and belief.

Ten Park Plaza, Suite 7360, Boston, MA 02116
Tel: 857-368-4636, TTY: 857-368-0655
mass.gov/massdot

If you have questions regarding the subject project, please contact me by email at courtney.l.walker@dot.state.ma.us, or at (857) 262-0757.

Sincerely

Courtney Walker

Courtney Walker, Wetlands and Water Resources Coordinator (Bridges)
MassDOT - Highway Division, Environmental Services

CC:
Gautam Sen, MassDOT (Project Manager)
Heidi Davis, (MassDEP)
Tyler Lewis (MassDEP)
Adams Conservation Commission
Sara Kreisel, PWS, BSC Group
Kevin Newton (USACE)
Ryan Hale (MassDEP)
Michael Joa (MassDOT Wetlands)
Micah Morrison, PE, BSC Group
Diana Walden, BSC Group

Ten Park Plaza, Suite 7360, Boston, MA 02116
Tel: 857-368-4636, TTY: 857-368-0655
mass.gov/massdot

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MassDOT Project No. 610777
Quality Street over the Hoosic River
Bridge Replacement Project
USACE Self-Verification Notification

USACE Application Form, SV Appendix C

Attachment A USGS Locus Map
Environmental Resources Map
Site Photographs

Attachment B USFWS Programmatic Biological Opinion (NLAA)

Attachment C MA Historical Coordination
Tribal Coordination

Attachment D Project Plans
Construction Details
Specifications

BSC GROUP
BUILD | SUPPORT | CONNECT

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

APPLICANT AND AGENT INFORMATION

4. APPLICANT'S NAME	7. AGENT'S ADDRESS:
First - Courtney Middle - Last - Walker	First - Sara Middle - Last - Kreisel
Company - MassDOT - Highway Division	Company - BSC Group, Inc
E-mail Address - Courtney.I.Walker@dot.state.ma.us	E-mail Address - skreisel@bscgroup.com
5. APPLICANT'S ADDRESS:	8. AGENT'S ADDRESS:
Address- 10 Park Plaza, Room 7360	Address- 1 Mercantile Street, Suite 610
City - Boston State - MA Zip - 02116 Country - USA	City - Worcester State - MA Zip - 01608 Country - USA
6. APPLICANT'S PHONE NOs. w/AREA CODE	9. AGENTS PHONE NOs. w/AREA CODE
a. Residence b. Business c. Fax	a. Residence b. Business c. Fax
857-262-0757	617-896-4579

NAME, LOCATION, AND DESCRIPTION OF PROJECT SITE

10. PROJECT NAME OR TITLE

MassDOT Project 610777 - Quality Street over Hoosic River Bridge Replacement Project, Adams MA

11. FILE NUMBER(S) OF PREVIOUS USACE ACTIONS ON THE SITE (if applicable)	12. NAME OF WATERBODY
	Hoosic River
13. PROJECT COORDINATES (in decimal degrees)	14. PROJECT STREET ADDRESS (if applicable)
Latitude: ◦N Longitude: ◦W	Address Quality Street
42.608989 73.131334	City - Adams State - MA Zip - 01220

ACTIVITY TYPE, PROJECT IMPACTS, AVOIDANCE & MINIMIZATION

15. GENERAL PERMIT ACTIVITIES (CHECK ALL THAT APPLY)

1 ☐	6 ☐	11 ☐	16 ☐	21 ☐
2 ☐	7 ☐	12 ☐	17 ☐	22 ☐
3 ☐	8 ☐	13 ☐	18 ☐	23 ☑
4 ☐	9 ☐	14 ☐	19 ☐	24 ☐
5 ☐	10 ☐	15 ☐	20 ☐	25 ☐

16. SUMMARY OF PROJECT IMPACTS (*see instructions*)

Area (square feet)	Length (linear feet)	Volume (cubic yards)	Duration
431 (WOTUS)	109 (Bank)		Temporary

17. PROJECT PLANS (BY CHECKING THE BOXES BELOW, YOU CERTIFY THESE ITEMS ARE COMPLETE) (*see instructions*)

- [x] a. Plans shall at least contain the following: Vicinity Map, Plan View, and Typical Cross Section View of the proposed activity.
- [x] b. All direct, indirect and secondary impacts from USACE regulated activities are shown on the project plans.
- [x] c. The size of the impact area for each activity (acre, square feet, linear feet) are shown on the project plans.
- [x] d. For discharges of fill material (§404), the volume of fill material is identified on the project plans.
- [x] e. The duration of each impact, permanent or temporary (X days), is identified on the project plans.
- [x] f. Do activities with permanent impacts result in the loss of waters? If so, this is identified on the project plans.
- [x] 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*)

- [x] a. The project has been designed to avoid and minimize impacts to aquatic resources.
- [x] 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.
- [x] 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).
- [x] 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	Per Appendix A, the activity has no potential to affect historic properties.
b. Massachusetts BUAR	Per Appendix A, BUAR was notified and they did not respond with concerns within 30 days.
c. Tribal Historic Preservation Officers	The Tribe(s) were notified and they didn't respond with concerns within 30 days.
d. Endangered Species Act - NOAA	The activity is not located within the ESA-listed Species Range.
e. Endangered Species Act - USFWS	The activity is not located within the ESA-listed Species Range.
f. Northern Long Eared Bat (ESA)	NLAA determination reached with the Rangewide D-Key. See Instructions below.*
g. Essential Fish Habitat	The project footprint does not contain EFH (see EFH definition in the MA GP).
h. Wild & Scenic Rivers	There are no WSR's within 0.25 miles of the project area.
i. 401 Water Quality Certification 401	The activity qualifies under the general 401 WQC for the 2023 MA GPs.
	401 WQC/OOC File Number: OOC issued: 401 issued:
j. Section 408 Permission	Not Required per GC 15a-f, no Federal Projects are within the project vicinity.
k. Coastal Zone	The project is not located within the coastal zone.
l. Construction Mats	N/A, the activity does not require the installation of construction mats.
m.Time of Year Restrictions	N/A, the project is not located in a waterbody that has TOY restrictions.
n. Vernal Pools	Per GC 28, the project is not located in a vernal pool.
o. Sediment & Erosion Controls	Per GC 25, the activity uses BMPs to avoid/minimize sedimentation & erosion.
p. Stream/Wetland Crossings	The activity complies with all applicable terms in GC 31.

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. Select Option
- [ ] 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*)

- [x] a. The project plans are enclosed in this SVN submittal (see block 17).
- [x] b. The activity IS funded through the Bipartisan Infrastructure Bill (also known as the Infrastructure Investment and Jobs Act).
- [x] c. All required state, local and federal approvals were acquired prior to starting construction in USACE jurisdiction.
- [x] 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:

- [x] YES [ ] NO FHWA

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.

Courtney Walker	2/4/25		1/31/25
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.

Courtney Walker	2/4/25		1/31/25
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.

Attachment A

MassDOT Project no. 610777
Quality Street over the Hoosic River
Bridge Replacement Project
USACE Self-Verification Notification

USGS Locus Map
Environmental Resources Map
Site Photographs

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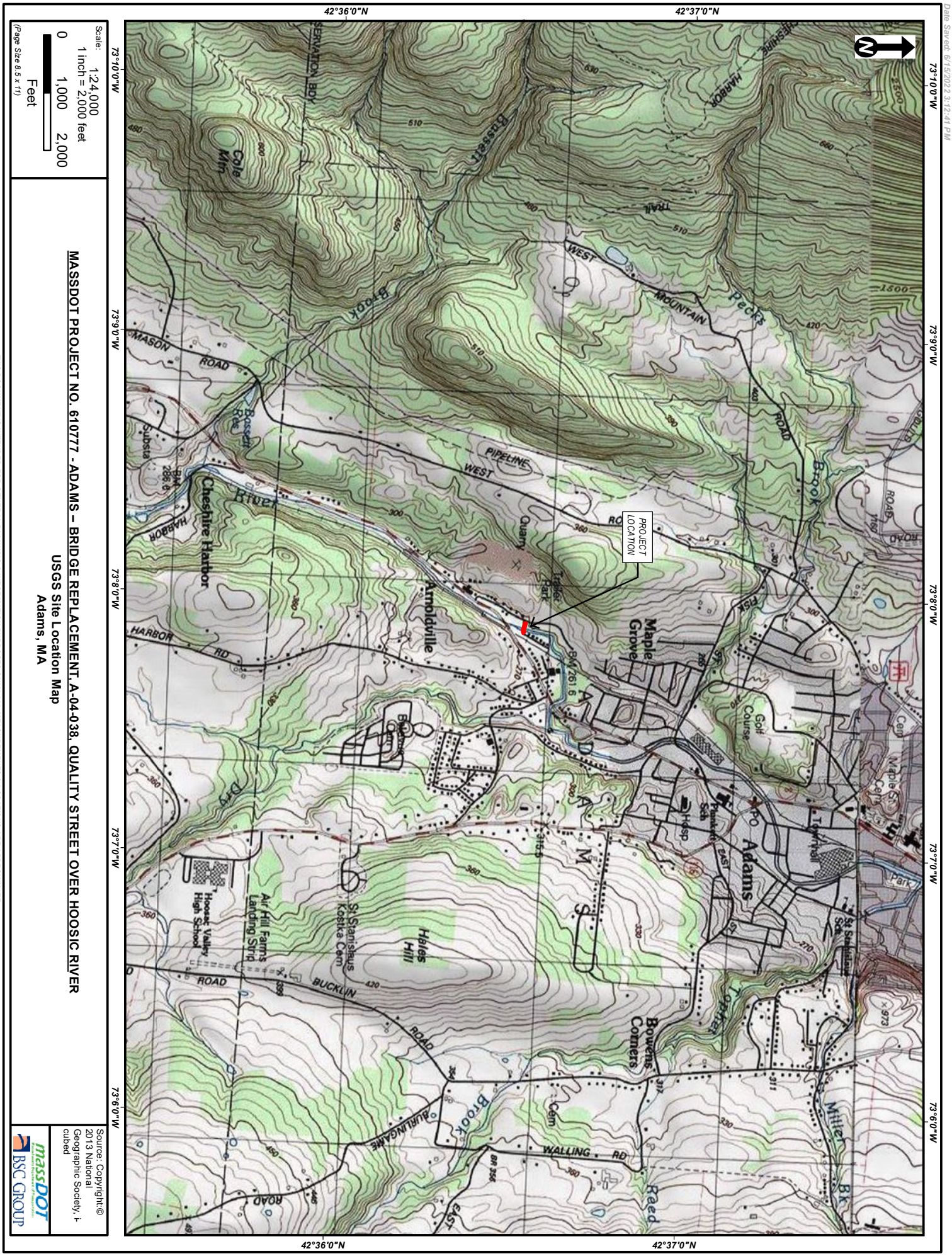

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1 inch = 2,000 feet
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Feet
(Page Size 8.5 x 11)

MASSDOT PROJECT NO. 610777 - ADAMS – BRIDGE REPLACEMENT, A-04-038, QUALITY STREET OVER HOOSIC RIVER

USGS Site Location Map

Adams, MA

THIS DOCUMENT IS INTENDED FOR GENERAL PLANNING & INFORMATION PURPOSES ONLY. ALL MEASUREMENTS & LOCATIONS ARE APPROXIMATE.

massDOT
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Source: Copyright © 2013 National Geographic Society, i-cubed

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Date Saved: 6/15/2022 3:12:41 PM

Proposal No. 610777-131930

MASSDOT PROJECT NO. 610777 - ADAMS – BRIDGE REPLACEMENT, A-04-038, QUALITY STREET OVER HOOSIC RIVER

USGS Site Location Map
Adams, MA

Source: Copyright:© 2013 National Geographic Society, i-cubed

massDOT Massachusetts Department of Transportation

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(Page Size 8.5 x 11)

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A00835 - 12

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Date Saved: 6/15/2022 3:07:43 PM

Proposal No. 610777-131930

A00835 - 13

PINNACLE PT
PINNACLE DR
Hoosic River
BF-#124
BF-#224
BF-#123
BF-#223
BF-#222
BF-#122
BF-#221
BF-#121
BF-#220
BF-#120
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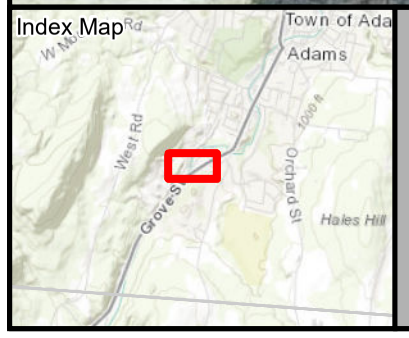
BF-#104
BF-#203
BF-#202
BF-#103
BF-#101
BF-#201
BF-#102
BF-#101
BF-#200
BF-#100
PROJECT LOCATION BRIDGE A-04-038
TEMPORARY ACCESS ROAD
S WILLOW ST
ADAMS
TEMPORARY BRIDGE FOR UTILITIES
GROVE ST
8
INCOME EJ POPULATION
Quality Street Field
QUALITY ST

Resource Areas Reviewed:
MADEP Tier Classified Oil and/or Hazardous Material Sites (21E); MADEP Oil and/or Hazardous Material Sites with Activity and Use Limitations; Certified Vernal Pools; Potential Vernal Pools; NHESP Priority Habitats; NHESP Estimated Habitats; NHESP Restricted Data; Wild & Scenic Rivers; NHD Hydrography; Census 2000 Streams; MADEP Hydrologic Connections; MADEP Wetlands; FEMA 100yr Floodplain; NRCS Hydric Soils; Public Water Supply; Zone II Wellhead Protection Area; Interim Wellhead Protection Area; Surface Water Protection Zone; Outstanding Resource Water; Areas of Critical Environmental Concern; Watershed Protection Act Zones; Ch. 91 Tidelands Jurisdiction; Article 97 Land; Landfills ([Not]Capped, [Un]Lined, [In]Active, Closed)

Index Map



Legend

- Limit of Work
- Field Delineated Bank Flag
- Field Delineated Bank
- Field Delineated Stream Centerline
- Field Delineated Stream Area
- Coldwater Fisheries Resources
- MADEP Hydrologic Connections
- MADEP Open Water*
- 100ft Buffer to Wetlands & Streams
- 200ft Riverfront Area
- FEMA 100yr Floodplain - Zone AE (1997)
- NHESP Priority & Estimated Habitats
- MHC Historic Point
- MHC Historic Area*
- Culvert

Environmental Justice Populations 2020

- Income

Article 97 Lands

- Municipal

N

1 inch = 100 feet
0 50 100
Feet

*Indicates Layers Set to Transparency

MASSDOT PROJECT NO. 610777 - ADAMS – BRIDGE REPLACEMENT, A-04-038, QUALITY STREET OVER HOOSIC RIVER

Environmental Resources Map

Adams, MA

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

massDOT Massachusetts Department of Transportation
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THIS DOCUMENT IS INTENDED FOR GENERAL PLANNING & INFORMATION PURPOSES ONLY. ALL MEASUREMENTS & LOCATIONS ARE APPROXIMATE.

Proposal No. 610777-131930

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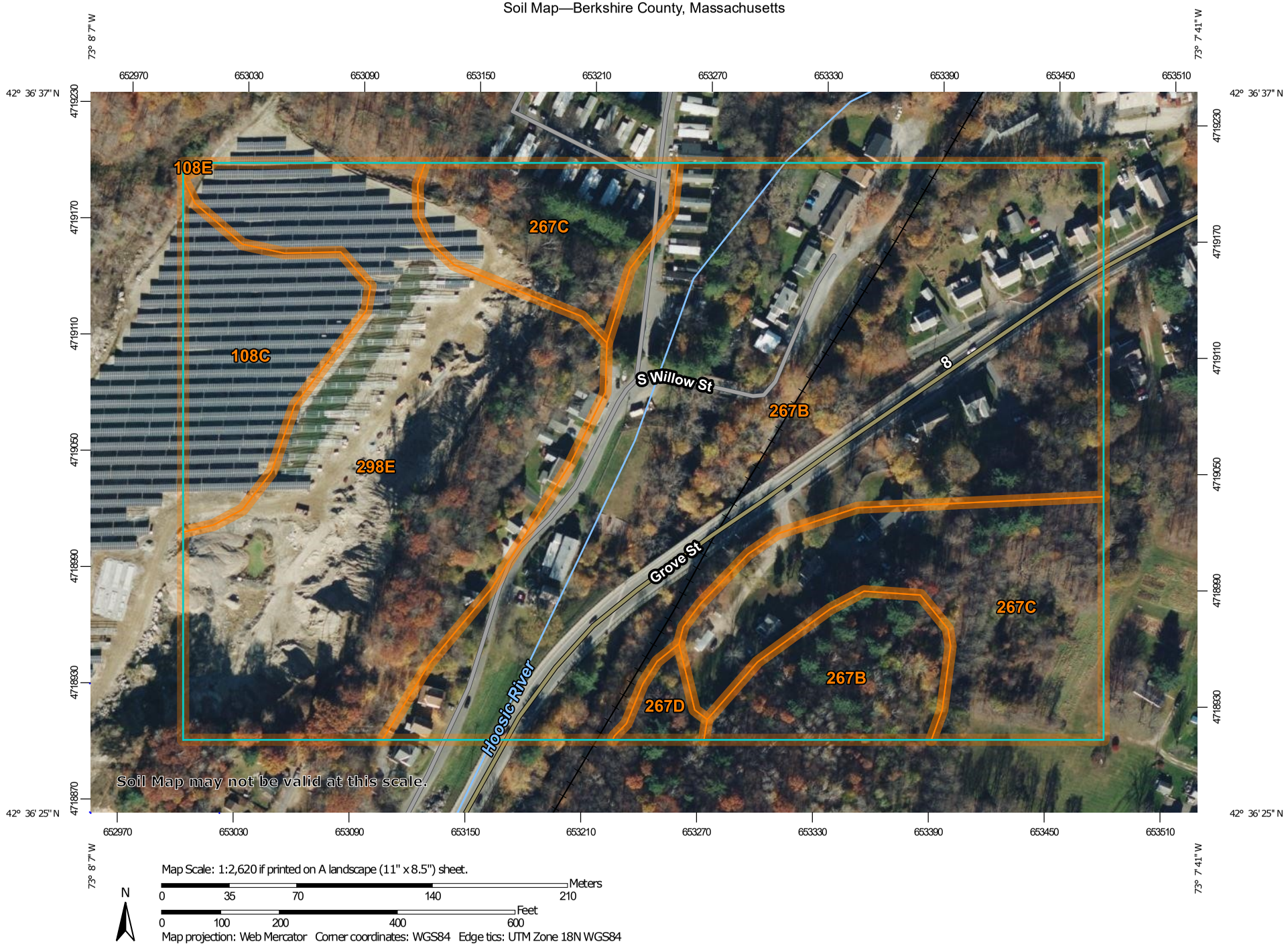
Soil Map—Berkshire County, Massachusetts



Map Scale: 1:2,620 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 35 70 140 210

Feet: 0 100 200 400 600

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

Proposal No. 610777-131930

A00835 - 15

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:25,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Berkshire County, Massachusetts
Survey Area Data: Version 19, Aug 27, 2024

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

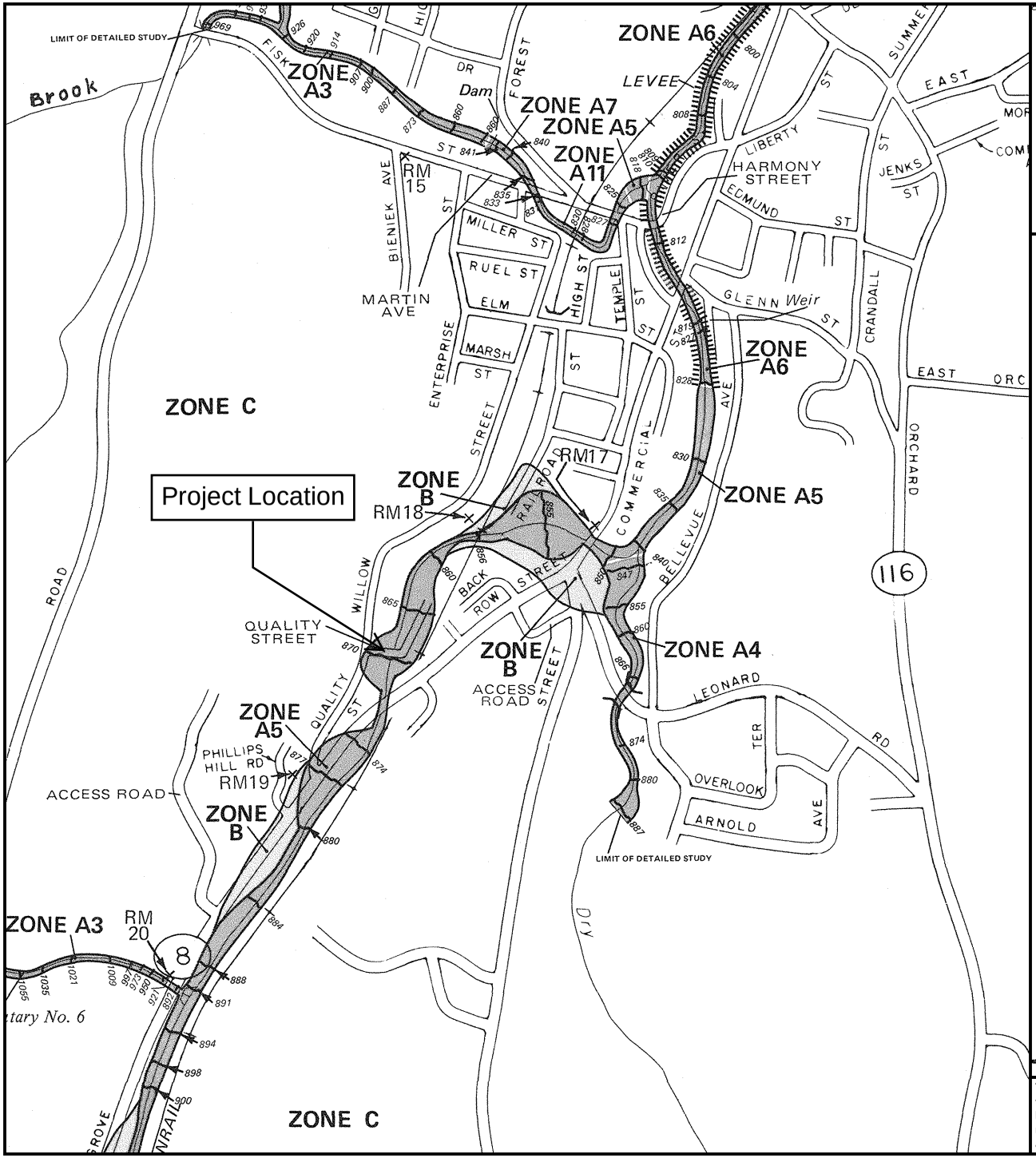
Date(s) aerial images were photographed: Aug 15, 2021—Nov 8, 2021

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
108C	Farmington-Rock outcrop complex, 3 to 15 percent slopes	2.4	6.9%
108E	Farmington-Rock outcrop complex, 15 to 35 percent slopes	0.0	0.0%
267B	Copake fine sandy loam, 3 to 8 percent slopes	16.4	46.6%
267C	Copake fine sandy loam, 8 to 15 percent slopes	6.3	17.8%
267D	Copake fine sandy loam, 15 to 25 percent slopes	0.3	0.9%
298E	Groton and Hinckley soils, 25 to 35 percent slopes	9.7	27.7%
Totals for Area of Interest		**35.2**	**100.0%**

Proposal No. 610777-131930



APPROXIMATE SCALE

1000 0 1000 FEET

NATIONAL FLOOD INSURANCE PROGRAM

FIRM

FLOOD INSURANCE RATE MAP

TOWN OF
ADAMS,
MASSACHUSETTS
BERKSHIRE COUNTY

ONLY PANEL PRINTED

COMMUNITY-PANEL NUMBER
250016 0005 B

EFFECTIVE DATE:
AUGUST 1, 1983

Federal Emergency Management Agency

This is an official FIRMette showing a portion of the above-referenced flood map created from the MSC FIRMette Web tool. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For additional information about how to make sure the map is current, please see the Flood Hazard Mapping Updates Overview Fact Sheet available on the FEMA Flood Map Service Center home page at https://msc.fema.gov.

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Massdot Project #610777, Adams Bridge replacement
Quality Street Over Hoosic river
Adams, MA
Site Photographs
November 2020

Photo #1: View west of proposed Quality Street Bridge over the Hoosic River, proposed for replacement. Site work is proposed within the 100-ft Buffer to Bank and the 200-ft Riverfront Area of the Hoosic River; however, minimal in-water work is proposed.

Photo #2: View east of culvert and accompanying intermittent stream that flows west into the Hoosic River. This feature is located upstream and beyond the project limits of the proposed Quality Street bridge replacement.

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Photo #3: View south of proposed Quality Street bridge replacement location looking upstream along the Hoosic River. In-water work will be avoided through the installation of new abutments behind the existing abutments. Existing utilities will need to be maintained in a temporary utility bridge/conduit during replacement.

Photo #4: View north of proposed Quality Street bridge replacement location looking downstream along the Hoosic River.

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Photo #5: View west of the existing Quality Street bridge, protective stone, and existing abutments. Minimal in-water work is proposed as existing abutments will be cut down behind the protective stone and new abutments installed beyond that.

Photo #6: View east of the existing Quality Street bridge.

Attachment B

MassDOT Project no. 610777
Quality Street over the Hoosic River
Bridge Replacement Project
USACE Self-Verification Notification

USFWS Programmatic Biological Opinion (NLAA)

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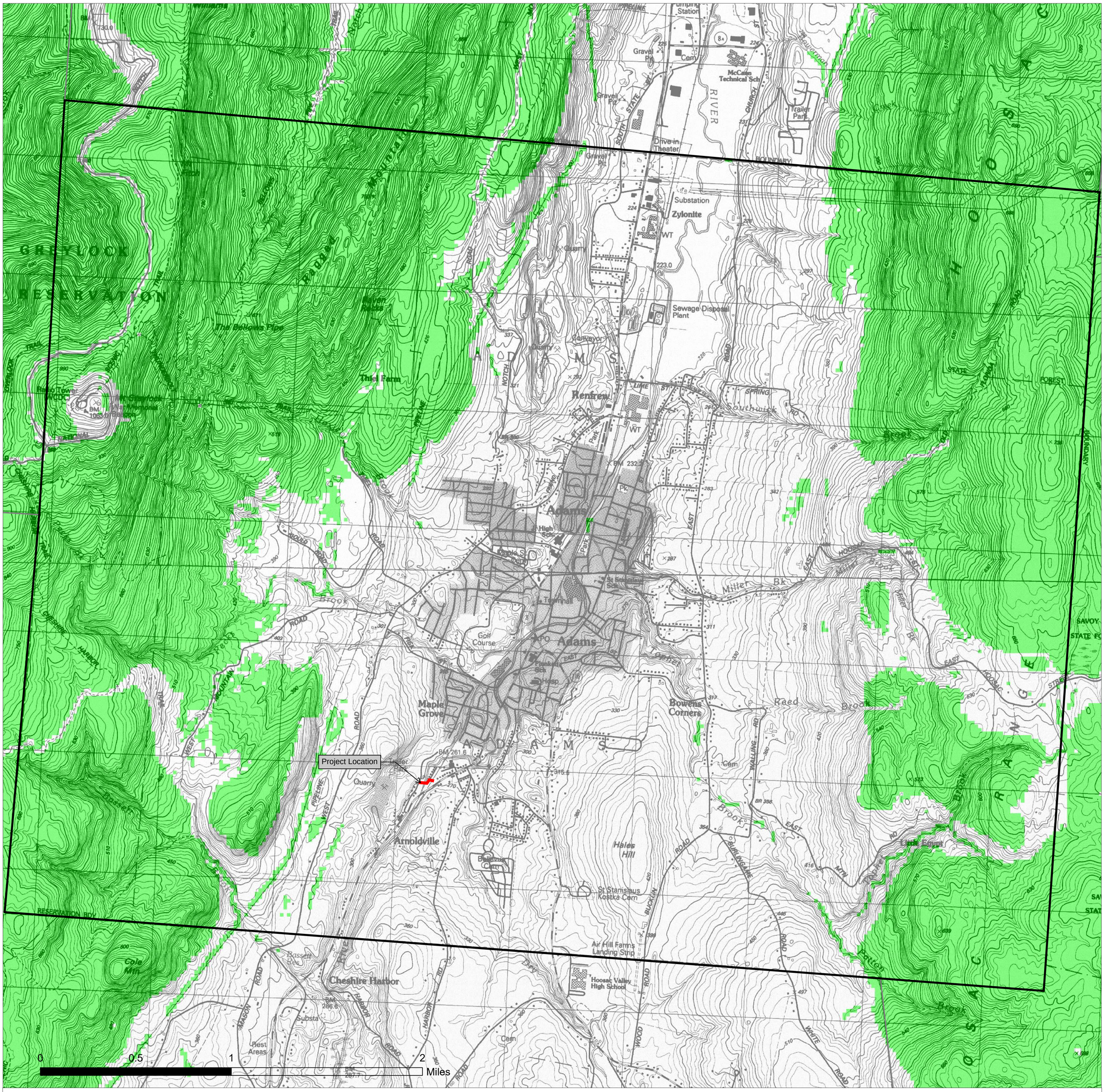
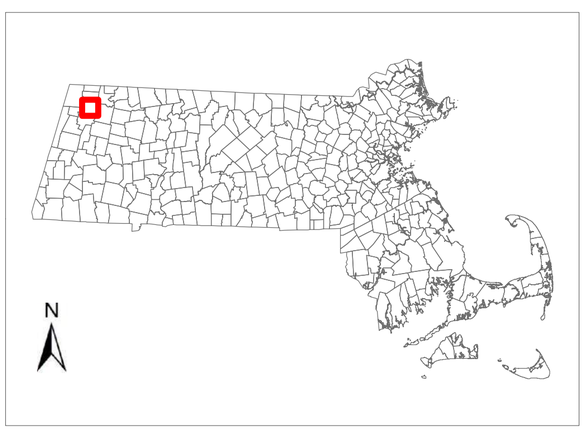
Habitat of Potential Regional or Statewide Importance
Town of ADAMS, MA



Habitat of Potential Regional or Statewide Importance



Updated January 9, 2024

MassDEP's Massachusetts Wildlife Habitat Protection Guidance for Inland Wetlands (June 2006) adopted a new approach for assessing wildlife habitat impacts associated with work in wetlands. This approach utilizes maps developed at the University of Massachusetts Amherst using the Conservation Assessment and Prioritization System (CAPS). The maps depict Habitat of Potential Regional or Statewide Importance that may trigger more intensive review under the MA Wetlands Protection Act. For more information on how to assess wildlife habitat impacts, see Section III of the Guidance document: https://www.mass.gov/doc/massachusetts-wildlife-habitat-protection-guidance-for-inland-wetlands/download.

CAPS is an approach to prioritizing land for conservation/protection based on the assessment of ecological integrity for various ecological communities (e.g. forested wetland, shrub swamp, headwater stream) within an area. The CAPS model assesses ecological integrity of the Massachusetts landscape as influenced by environmental stressor metrics (e.g. pollution, fragmentation). It relies on data that are broadly available across Massachusetts. Ecological features which are not consistently surveyed or uniformly available, such as certified vernal pools, rare species habitat, and contamination sites are not included in the CAPS analysis. When available, this more specific ecological information may be used in conjunction with the CAPS outputs to better understand particular sites in Massachusetts and support informed conservation decision-making. For more information on the statewide maps produced by the CAPS model, see: http://www.umasscaps.org.

These maps were prepared by the University of Massachusetts Amherst, with funding from the Massachusetts Department of Environmental Protection.

UMass Amherst

MassDEP

UMass Extension
CENTER FOR AGRICULTURE

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: 04/19/2024 19:51:16 UTC
Project code: 2024-0079744
Project Name: 610777 ADAMS- BRIDGE REPLACEMENT, A-04-038, QUALITY STREET OVER HOOSIC RIVER

Subject: Concurrence verification letter for the '610777 ADAMS- BRIDGE REPLACEMENT, A-04-038, QUALITY STREET OVER HOOSIC 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 April 19, 2024 to verify that the **610777 ADAMS- BRIDGE REPLACEMENT, A-04-038, QUALITY STREET OVER HOOSIC RIVER** (Proposed Action) may rely on the concurrence provided in 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 is within the scope and adheres to the criteria of the PBO, including the adoption of applicable avoidance and minimization measures. **At least one of the qualification interview questions indicated an activity or portion of your project is consistent with a not likely to adversely affect determination therefore, the overall determination for your project is, may affect, and is not likely to adversely affect (NLAA) the endangered Indiana bat (*Myotis sodalis*) and/or the endangered northern long-eared bat (*Myotis septentrionalis*)**. Consultation with the Service pursuant to section 7(a)(2) of ESA (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq*.) is required.

The Service has 14 calendar days to notify the lead Federal action agency or designated non-federal representative if we determine that the Proposed Action does not meet the criteria for a NLAA determination under the PBO. If we do not notify the lead Federal action agency or designated non-federal representative within that timeframe, you may proceed with the Proposed

Action under the terms of the NLAA concurrence provided in the PBO. This verification period allows Service Field Offices to apply local knowledge to implementation of the PBO, as we may identify a small subset of actions having impacts that were unanticipated. In such instances, Service Field Offices may request additional information that is necessary to verify inclusion of the proposed action under the PBO.

For Proposed Actions that include bridge/culvert or structure removal, replacement, and/or maintenance activities: If your initial bridge/culvert or structure assessment documented signs of bat use or occupancy, or an assessment failed to detect Indiana bats and/or NLEBs, yet are 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 any potential take. In these instances, potential incidental take of Indiana bats and/or NLEBs is covered under the Incidental Take Statement in the 2018 FHWA, FRA, FTA PBO (provided that the take is reported to the Service).

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 assessments failed to detect Indiana bats and/or NLEB use or occupancy, yet bats are 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 any 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 contact this Service Office.

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

610777 ADAMS- BRIDGE REPLACEMENT, A-04-038, QUALITY STREET OVER HOOSIC RIVER

DESCRIPTION

610777 ADAMS- BRIDGE REPLACEMENT, A-04-038, QUALITY STREET OVER HOOSIC RIVER

The proposed design begins at the roadway's intersection with Pinnacle Drive. The intersection pavement will be rebuilt to match the existing conditions. The roadway pavement courses and base will be reconstructed and graded to match the proposed profile. The project also involves rebuilding an old temporary road alignment to allow residents access to the north side of South Willow Street by car or by foot during construction. The temporary road pavement will be excavated and replaced with loam and seed after completion of the project.

Monarch Butterfly: Candidate Species only, no conservation measures at this time.

Tricolored Bat: Proposed Endangered Species only. At this time, no formal USFWS consultation is required.

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@42.6090676,-73.13165719909115,14z

DETERMINATION KEY RESULT

Based on your answers provided, this project(s) may affect, but is not likely to adversely affect the endangered Indiana bat and/or the endangered northern long-eared bat, therefore, 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. However, also based on your answers provided, this project may rely on the concurrence provided in 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.

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. Which Federal Agency is the lead for the action?

   A) Federal Highway Administration (FHWA)

4. Are *all* project activities limited to non-construction[1] activities only? (examples of non-construction activities include: bridge/abandoned structure assessments, surveys, planning and technical studies, property inspections, and property sales)

   [1] Construction refers to activities involving ground disturbance, percussive noise, and/or lighting.

   No

5. Does the project include *any* activities that are **greater than** 300 feet from existing road/rail surfaces[1]?

   [1] Road surface is defined as the actively used [e.g. motorized vehicles] driving surface and shoulders [may be pavement, gravel, etc.] and rail surface is defined as the edge of the actively used rail ballast.

   No

6. Does the project include *any* activities **within** 0.5 miles of a known Indiana bat and/or NLEB hibernaculum[1]?

   [1] For the purpose of this consultation, a hibernaculum is a site, most often a cave or mine, where bats hibernate during the winter (see suitable habitat), but could also include bridges and structures if bats are found to be hibernating there during the winter.

   No

7. Is the project located **within** a karst area?

   No

8. Is there *any* suitable[1] summer habitat for Indiana Bat or NLEB **within** the project action area[2]? (includes any trees suitable for maternity, roosting, foraging, or travelling habitat)

   [1] See the Service's summer survey guidance for our current definitions of suitable habitat.

   [2] The action area is defined as all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action (50 CFR Section 402.02). Further clarification is provided by the User's Guide for the Range-wide Programmatic Consultation for Indiana Bat and Northern Long-eared Bat.

   Yes

9. Will the project remove *any* suitable summer habitat[1] and/or remove/trim any existing trees **within** suitable summer habitat?

   [1] See the Service's summer survey guidance for our current definitions of suitable habitat.

   Yes

10. Will the project clear more than 20 acres of suitable habitat per 5-mile section of road/rail?

    No

11. Have presence/probable absence (P/A) summer surveys[1][2] been conducted[3][4] **within** the suitable habitat located within your project action area?

    [1] See the Service's summer survey guidance for our current definitions of suitable habitat.

    [2] Presence/probable absence summer surveys conducted within the fall swarming/spring emergence home range of a documented Indiana bat hibernaculum (contact local Service Field Office for appropriate distance from hibernacula) that result in a negative finding requires additional consultation with the local Service Field Office to determine if clearing of forested habitat is appropriate and/or if seasonal clearing restrictions are needed to avoid and minimize potential adverse effects on fall swarming and spring emerging Indiana bats.

    [3] For projects within the range of either the Indiana bat or NLEB in which suitable habitat is present, and no bat surveys have been conducted, the transportation agency will assume presence of the appropriate species. This assumption of presence should be based upon the presence of suitable habitat and the capability of bats to occupy it because of their mobility.

    [4] Negative presence/probable absence survey results obtained using the summer survey guidance are valid for a minimum of two years from the completion of the survey unless new information (e.g., other nearby surveys) suggest otherwise.

    Yes

SUBMITTED DOCUMENTS

- *610777_Adams_MassDOT_NLEB_Report.pdf https://ipac.ecosphere.fws.gov/project/K7FJ26T7PVETDELXPQKXN4RXUI/projectDocuments/142058359*

12. Did the presence/probable absence (P/A) summer surveys detect Indiana bats and/or NLEB[1]?

    [1] P/A summer surveys conducted within the fall swarming/spring emergence home range of a documented Indiana bat hibernaculum (contact local Service Field Office for appropriate home range) that result in a negative finding requires additional consultation with the local Service Field Office to determine if clearing of forested habitat is appropriate and/or if seasonal clearing restrictions are needed to avoid and minimize potential adverse effects on fall swarming and spring emerging Indiana bats.

    No

13. Were the P/A summer surveys conducted **within** the fall swarming/spring emergence range of a documented Indiana bat hibernaculum[1]?

    [1] Contact the local Service Field Office for appropriate distance from hibernacula.

    No

14. Does the project include activities **within documented NLEB habitat**[1][2]?

    [1] Documented roosting or foraging habitat – for the purposes of this consultation, we are considering documented habitat as that where Indiana bats and/or NLEB have actually been captured and tracked using (1) radio telemetry to roosts; (2) radio telemetry biangulation/triangulation to estimate foraging areas; or (3) foraging areas with repeated use documented using acoustics. Documented roosting habitat is also considered as suitable summer habitat within 0.25 miles of documented roosts.)

    [2] For the purposes of this key, we are considering documented corridors as that where Indiana bats and/or NLEB have actually been captured and tracked to using (1) radio telemetry; or (2) treed corridors located directly between documented roosting and foraging habitat.

    No

15. Will the removal or trimming of habitat or trees occur **within** suitable but **undocumented NLEB** roosting/foraging habitat or travel corridors?

    Yes

16. What time of year will the removal or trimming of habitat or trees **within** suitable but **undocumented NLEB** roosting/foraging habitat or travel corridors occur?

    B) During the inactive season

17. Will *any* tree trimming or removal occur **within** 100 feet of existing road/rail surfaces?

    Yes

18. Will *any* tree trimming or removal occur **between** 100-300 feet of existing road/rail surfaces?

    No

19. Are *all* trees that are being removed clearly demarcated?

    Yes

20. Will the removal of habitat or the removal/trimming of trees include installing new or replacing existing **permanent** lighting?

    No

21. Does the project include wetland or stream protection activities associated with compensatory wetland mitigation?

    No

22. Does the project include slash pile burning?

    No

23. Does the project include *any* bridge removal, replacement, and/or maintenance activities (e.g., any bridge repair, retrofit, maintenance, and/or rehabilitation work)?

    Yes

24. Is there *any* suitable habitat[1] for Indiana bat or NLEB **within** 1,000 feet of the bridge? (includes any trees suitable for maternity, roosting, foraging, or travelling habitat)

    [1] See the Service's current summer survey guidance for our current definitions of suitable habitat.

    Yes

25. Has a bridge assessment[1] been conducted **within** the last 24 months[2] to determine if the bridge is being used by bats?

    [1] See User Guide Appendix D for bridge/structure assessment guidance

    [2] Assessments must be completed no more than 2 years prior to conducting any work below the deck surface on all bridges that meet the physical characteristics described in the Programmatic Consultation, regardless of whether assessments have been conducted in the past. Due to the transitory nature of bat use, a negative result in one year does not guarantee that bats will not use that bridge/structure in subsequent years.

    Yes

    SUBMITTED DOCUMENTS

    - *610777_Adams_MassDOT_NLEB_Report.pdf https://ipac.ecosphere.fws.gov/project/K7FJ26T7PVETDELXPQKXN4RXUI/projectDocuments/142058359*

26. Did the bridge assessment detect *any* signs of Indiana bats and/or NLEBs roosting in/under the bridge (bats, guano, etc.)[1]?

    [1] If bridge assessment detects signs of *any* species of bats, coordination with the local FWS office is needed to identify potential threatened or endangered bat species. Additional studies may be undertaken to try to identify which bat species may be utilizing the bridge prior to allowing *any* work to proceed.

    Note: There is a small chance bridge assessments for bat occupancy do not detect bats. Should a small number of bats be observed roosting on a bridge just prior to or during construction, such that take is likely to occur or does occur in the form of harassment, injury or death, the PBO requires the action agency to report the take. Report all unanticipated take within 2 working days of the incident to the USFWS. Construction activities may continue without delay provided the take is reported to the USFWS and is limited to 5 bats per project.

    No

27. Will the bridge removal, replacement, and/or maintenance activities include installing new or replacing existing **permanent** lighting?

    No

28. Does the project include the removal, replacement, and/or maintenance of *any* structure other than a bridge? (e.g., rest areas, offices, sheds, outbuildings, barns, parking garages, etc.)

    No

29. Will the project involve the use of **temporary** lighting *during* the active season?

    Yes

30. Is there *any* suitable habitat **within** 1,000 feet of the location(s) where **temporary** lighting will be used?

    Yes

31. Will the project install new or replace existing **permanent** lighting?

    No

32. Does the project include percussives or other activities (**not including tree removal/ trimming or bridge/structure work**) that will increase noise levels above existing traffic/ background levels?

    Yes

33. Will the activities that use percussives (**not including tree removal/trimming or bridge/ structure work**) and/or increase noise levels above existing traffic/background levels be conducted *during* the active season[1]?

    [1] Coordinate with the local Service Field Office for appropriate dates.

    Yes

34. Will *any* activities that use percussives (**not including tree removal/trimming or bridge/ structure work**) and/or increase noise levels above existing traffic/background levels be conducted *during* the inactive season[1]?

    [1] Coordinate with the local Service Field Office for appropriate dates.

    Yes

35. Are *all* project activities that are **not associated with** habitat removal, tree removal/ trimming, bridge and/or structure activities, temporary or permanent lighting, or use of percussives, limited to actions that DO NOT cause any additional stressors to the bat species?

    Examples: lining roadways, unlighted signage , rail road crossing signals, signal lighting, and minor road repair such as asphalt fill of potholes, etc.

    Yes

36. Will the project raise the road profile **above the tree canopy**?

    No

37. Are the project activities that use percussives (not including tree removal/trimming or bridge/structure work) consistent with a Not Likely to Adversely Affect determination in this key?

    Automatically answered
    Yes, because the activities are within 300 feet of the existing road/rail surface, greater than 0.5 miles from a hibernacula, and conducted during the active season within undocumented habitat.

38. Are the project activities that use percussives (not including tree removal/trimming or bridge/structure work) and/or increase noise levels above existing traffic/background levels consistent with a No Effect determination in this key?

    Automatically answered
    Yes, because the activities are within 300 feet of the existing road/rail surface, greater than 0.5 miles from a hibernacula, and conducted during the inactive season

39. Is the location of this project consistent with a Not Likely to Adversely Affect determination in this key?

    Automatically answered
    Yes, because no bats were detected during presence/probable absence surveys conducted during the summer survey season and outside of the fall swarming/spring emergence periods. Additionally, all activities were at least 0.5 miles from any hibernaculum.

40. Is the bridge removal, replacement, or maintenance activities portion of this project consistent with a No Effect determination in this key?

    Automatically answered
    Yes, because the bridge has been assessed using the criteria documented in the BA and no signs of bats were detected

41. **General AMM 1**
    Will the project ensure *all* operators, employees, and contractors working in areas of known or presumed bat habitat are aware of *all* FHWA/FRA/FTA (Transportation Agencies) environmental commitments, including all applicable Avoidance and Minimization Measures?

    Yes

PROJECT QUESTIONNAIRE

1. Have you made a No Effect determination for *all* other species indicated on the FWS IPaC generated species list?

   N/A

2. Have you made a May Affect determination for *any* other species on the FWS IPaC generated species list?

   N/A

3. How many acres[1] of trees are proposed for removal between 0-100 feet of the existing road/rail surface?

   [1] If described as number of trees, multiply by 0.09 to convert to acreage and enter that number.

1.75

4. Please describe the proposed bridge work:

   The bridge has been identified as having deteriorated superstructure elements requiring replacement. The bridge deck will be 29 feet, 3 inches wide and will accommodate two 11-foot side travel lanes, 2-foot shoulders and safety curbs with railings. The structural single span length will be increased from 82'-0" to 96'-0" in order to relocate the substructure behind the existing abutment footings. The hydraulic opening is slightly increased, while the abutment skew is maintained.

5. Please state the timing of all proposed bridge work:

   Spring 2025 - Spring 2027

6. Please enter the date of the bridge assessment:

   10/25/2023

AVOIDANCE AND MINIMIZATION MEASURES (AMMS)

This determination key result includes the committment to implement the following Avoidance and Minimization Measures (AMMs):

GENERAL AMM 1

Ensure all operators, employees, and contractors working in areas of known or presumed bat habitat are aware of all FHWA/FRA/FTA (Transportation Agencies) environmental commitments, including all applicable AMMs.

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

Attachment C

MassDOT Project no. 610777
Quality Street over the Hoosic River
Bridge Replacement Project
USACE Self-Verification Notification

MA Historical Coordination
Tribal Coordination

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CULTURAL RESOURCES PROJECT RECORD

City/Town	Adams	Project #	610777	Date Cleared	1/3/2024
Project Name	Bridge Replacement, A-04-038, Quality Street/South Willow Street over Hoosic River	Date Filed	1/3/2024	Finding Under Review	☐
		FHWA to MHC			
Project Type	Bridge Replacement	Early Coord. Letter Sent:	☑		
Review	Section 106 (PA)	Comment Received: ☐ MHC ☐ LHC		Reviewer	MA
Finding:	Stip VB - No historic properties affected			Consultant	
Comment	The project work is exempt from SMTHPO review under the conditions of the amended 2017 MOU with the tribe.				

Determination based on: ☑ Scope of Work ☑ Plan ☑ Inventory ☐ Site Visit ☐ Archaeological Survey

Attach appropriate documentation for checked items

Projects Requiring No Massachusetts SHPO Review

Programmatic Agreement, Appendix 1 (check all that apply) :

- ☐ 1) Interstate bridge or roadway projects
- ☐ 2) Resurfacing, repair existing roadways
- * ☐ 3) Reconstruction on existing roadway
- * ☐ 4) Roadway geometrics, intersections
- * ☐ 5) Curbs and sidewalks
- ☐ 6) Pavement markings, rumble strips, etc
- ☐ 7) Curbs, sidewalks (MAAB, ADA)
- * ☐ 8) Removal of trees
- ☐ 9) Landscaping
- ☐ 10) Utilities
- ☐ 11) Railroad crossing
- ☐ 12) Stream stabilization and restoration
- ☐ 13) Wetland mitigation area
- * ☐ 14) Bridge (NR "Not Eligible" or "Conditionally Not Eligible")
- * ☐ 15) Bridge (concrete slab post 1900, steel stringer)
- ☐ 16) Bridge (less than 20' span)
- * ☐ 17) Highway safety improvement
- ☐ 18) Drainage system element
- * ☐ 19) Traffic signal, safety improvement
- * ☐ 20) Intelligent Transportation System project
- ☐ 21) Rest area, maintenance facility
- * ☐ 22) Bicycle, pedestrian lane, path or facility
- ☐ 23) Lighting system
- ☐ 24) Sign
- ☐ 25) Hazardous waste
- ☐ 26) Highway fencing
- ☐ 27) Emergency repair
- ☐ 28) Erosion control
- ☐ 29) Noise barrier

* National Register eligibility evaluation required

-OR-

No Historic Properties Affected
Programmatic Agreement Stipulation V.B. (check one):

- ☑ No NR listed or -eligible properties within Area of Potential Effect
- ☐ No effect on National Register listed or -eligible properties

Reviewer's Initials: MJA JMH

CULTURAL RESOURCES PROJECT RECORD

Summary of MassDOT Highway Division Finding
(Appendix 1 and Section V.B. Projects only)

MassDOT proposes to replace Bridge A-04-038 in Adams, which carries the two-lane South Willow Street over the Hoosic River and provides access to houses along the dead-end residential South Willow Street from Quality Street to the southwest. The bridge was constructed in 1950 and consists of a steel single-span half-through girder-floor beam superstructure supported by concrete abutments and riprap walls. The bridge is not inventoried in MACRIS and was reviewed by Kurt Jergensen, Historic Bridge Specialist, and determined to be ineligible for listing in the National Register (NR), as an example of a typical mid-20th century steel girder design with standard design details and little architectural character.

The proposed work consists of full bridge replacement on the existing alignment with a single-span steel girder superstructure supported by integral concrete abutments set on pilings with integral concrete wingwalls with striated faces and precast approach slabs. The proposed bridge will consist of a structure approximately the same length and width, 96-feet (ft) long and 29-ft 3-inches (in) wide, as the existing bridge. It will consist of 11-ft-wide travel lanes in either direction, 2-ft wide shoulders, 19.5-in curbs, and painted steel S3-TL4 railings. The project will include full-depth pavement reconstruction and grading of the approach roadway to extend approximately 80-ft west of the bridge along Quality Street and approximately 150-ft east of the bridge along South Willow Street; removal and replacement of existing and extension of guardrails along the bridge approaches, as needed; replacement and updates to existing traffic control and pavement markings; and installation of temporary erosion and sedimentation controls.

A temporary road and utility bridge will be constructed as part of the project to minimize disruption to the community on temporary land easements. The temporary road will be constructed between South Willow and an existing spur of Grove Street and will cross the Ashuwillticook Rail Trail. The proposed temporary road follows the approximate road layout that was used when the extant bridge was constructed in 1950. The temporary utility bridge will be installed immediately north of the extant bridge to carry water and gas lines over the river. Following completion of the new bridge, the temporary road will be removed and replaced with loam and seed and the temporary utility bridge will be removed with utility lines carried beneath the deck of the road bridge.

A review of MACRIS revealed no NR-listed or NR-eligible districts or individual properties within or adjacent to the project area. The closest previously inventoried properties to the project are two previously inventoried individual properties, the Adams Brothers Manufacturing Company Worker Housing at 4–6 and 8–10 South Willow Street (ADA.222 and 225), northeast of the bridge and along the west side of South Willow Street. The two houses were constructed in 1894 as worker housing for the nearby Adams Brothers mill complex, approximately 0.15 miles northeast of bridge and inventoried residences. The mill complex is within the Maple Grove Village Area (ADA.V), which was previously evaluated as eligible for listing in the NR as a historic district and does not include the inventoried houses. The project work has no potential to affect the inventoried properties.

A review of the MHC's archaeological maps in MACRIS revealed no recorded sites in the vicinity of the project area. The proposed project work will be confined to disturbed and/or unfavorable areas within an existing roadway footprint and adjacent roadside areas. It is the opinion of the MassDOT Archaeologist that low sensitivity can be ascribed to the project's area of potential effect based on the impacts of urban development, including bridge, railroad and road construction, as well as nearby residential development. The proposed work, including the bridge construction and road work, will be confined to the existing bridge alignment and roadway footprint, as well as disturbed areas adjacent to and within the Ashuwillticook Rail Trail. Soil borings indicate the bridge approaches are elevated on 7.8-ft. - 17.5-ft of fill to carry the bridge over the river.

A letter was sent on 08/12/2022 to the Adams Historical Commission by the MassDOT consultant, BSC Group and copies were forwarded to the MHC, with a follow-up letter sent in January 2024. No response has been received to date. As required by a Section 404 permit, a PNF was submitted to the BUAR, Aquinnah THPO, Mashpee THPO, Stockbridge-Munsee THPO, and BUAR on 3/14/2024. Bridge projects cleared in-house under 106 are exempt from SHPO notification per 2013 Corps letter.

Reviewer's Initials: _____

BSC GROUP
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Engineers
Environmental Scientists
Software Developers
Landscape Architects
Planners
Surveyors

August 12, 2022

Adams Historical Commission
8 Park Street
Adams, MA 01220

RE: Bridge Replacement, A-04-038, Quality Street over Hoosic River
MassDOT Project File No. 610777
Early Environmental Design Coordination
Adams, MA

Dear Commissioners:

The Massachusetts Department of Transportation (MassDOT) is proposing the replacement of bridge A-04-038 on Quality Street over the Hoosic River in Adams, due to deteriorated superstructure elements. The proposed project consists of full replacement of the existing simple span and the bridge will be reconstructed on a similar alignment as the existing bridge. The proposed substructure will be located behind the existing abutment footings and protective stone to avoid in-water work. The proposed bridge will provide two 11-foot travel lanes of traffic, two 2-foot shoulders and two safety-curbs, with standard MassDOT S3-TL4 bridge rail for a total width of 29'-3".

Existing water and gas mains currently carried by the bridge will be supported by a temporary utility bridge during construction. The utilities will be reattached to the new bridge following replacement. Quality Street will be closed to vehicular and pedestrian traffic at the bridge site for the full construction duration. Access to the residences on South Willow Street will be maintained from Grove Street (Route 8), through a temporary crossing of the Ashuwillticook Rail Trail. It is anticipated that a portion of the project will be supported in part with federal funds and will require review as part of the MassDOT Early Environmental Design Coordination process.

MassDOT requests that the Commission review the provided information at your earliest convenience and solicits any comments that the members wish to make regarding the project purpose, need, and scope. Written comments should be directed to Carrie Lavalee, P.E., Chief Engineer, MassDOT Highway Division, 10 Park Plaza, Boston, MA 02116, ATTN: Gautam Sen or gautam.sen@dot.state.ma.us. Please note that copies of this letter have been provided to the Massachusetts Historical Commission.

A USGS Locus Map and further details describing the Project scope have been enclosed to facilitate your review and demonstrate the limits of work. If you have any questions, please do not hesitate to contact Gautam Sen (857-368-9330) of MassDOT's Highway Division's Project Management Section or me at skreisel@bscgroup.com, or (617) 896-4579.

Sincerely,
BSC Group, Inc.

Sara Kreisel, PWS
Ecological Project Manager

803 Summer Street, Third Floor / Boston, MA 02127 / 617-896-4300

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www.bscgroup.com

January 3, 2024

Adams Historical Commission
8 Park Street
Adams, MA 01220

RE: Bridge Replacement, A-04-038, Quality Street over Hoosic River
MassDOT Project 610777
Early Environmental Design Coordination
Adams, MA

Dear Commissioners:

The Massachusetts Department of Transportation (MassDOT) is proposing the replacement of bridge A-04-038 on Quality Street over the Hoosic River in Adams, due to deteriorated superstructure elements. The proposed project consists of full replacement of the existing simple span and the bridge will be reconstructed on a similar alignment as the existing bridge. The proposed substructure will be located behind the existing abutment footings and protective stone to avoid in-water work to the extent practicable. The proposed bridge will provide two 11-foot travel lanes of traffic, two 2-foot shoulders and two safety-curbs, with standard MassDOT S3-TL4 bridge rail for a total width of 29'-3".

Existing water and gas mains currently carried by the bridge will be supported by a temporary utility bridge during construction. The utilities will be reattached to the new bridge following replacement. Quality Street will be closed to vehicular and pedestrian traffic at the bridge site for the full construction duration. Access to the residences on South Willow Street will be maintained from Grove Street (Route 8), through a temporary crossing of the Ashuwillticook Rail Trail. It is anticipated that a portion of the project will be supported in part with federal funds and will require review as part of the MassDOT Early Environmental Design Coordination process.

MassDOT requests that the Commission review the provided information at your earliest convenience and solicits any comments that the members wish to make regarding the project purpose, need, and scope. Written comments should be directed to Carrie Lavalee, P.E., Chief Engineer, MassDOT Highway Division, 10 Park Plaza, Boston, MA 02116, ATTN: Gautam Sen, or gautam.sen@dot.state.ma.us. Please note that project solicitation has also been requested from key Municipal Departments and the Police and Fire Departments.

BSC GROUP

A USGS Locus Map and further details describing the Project scope have been enclosed to facilitate your review and demonstrate the limits of work. If you have any questions, please do not hesitate to contact Gautam Sen (857-368-9330) of MassDOT's Highway Division's Project Management Section, or me at skreisel@bscgroup.com, or at (617) 896-4579.

Sincerely,
BSC Group, Inc.

Sara Kreisel, PWS
Ecological Project Manager, Associate

Enclosures: USGS Site Location Map
Project Description

cc: Massachusetts Historical Commission
MassDOT Highway Division Envi. Services Cultural Resources Unit
MassDOT Project Manager

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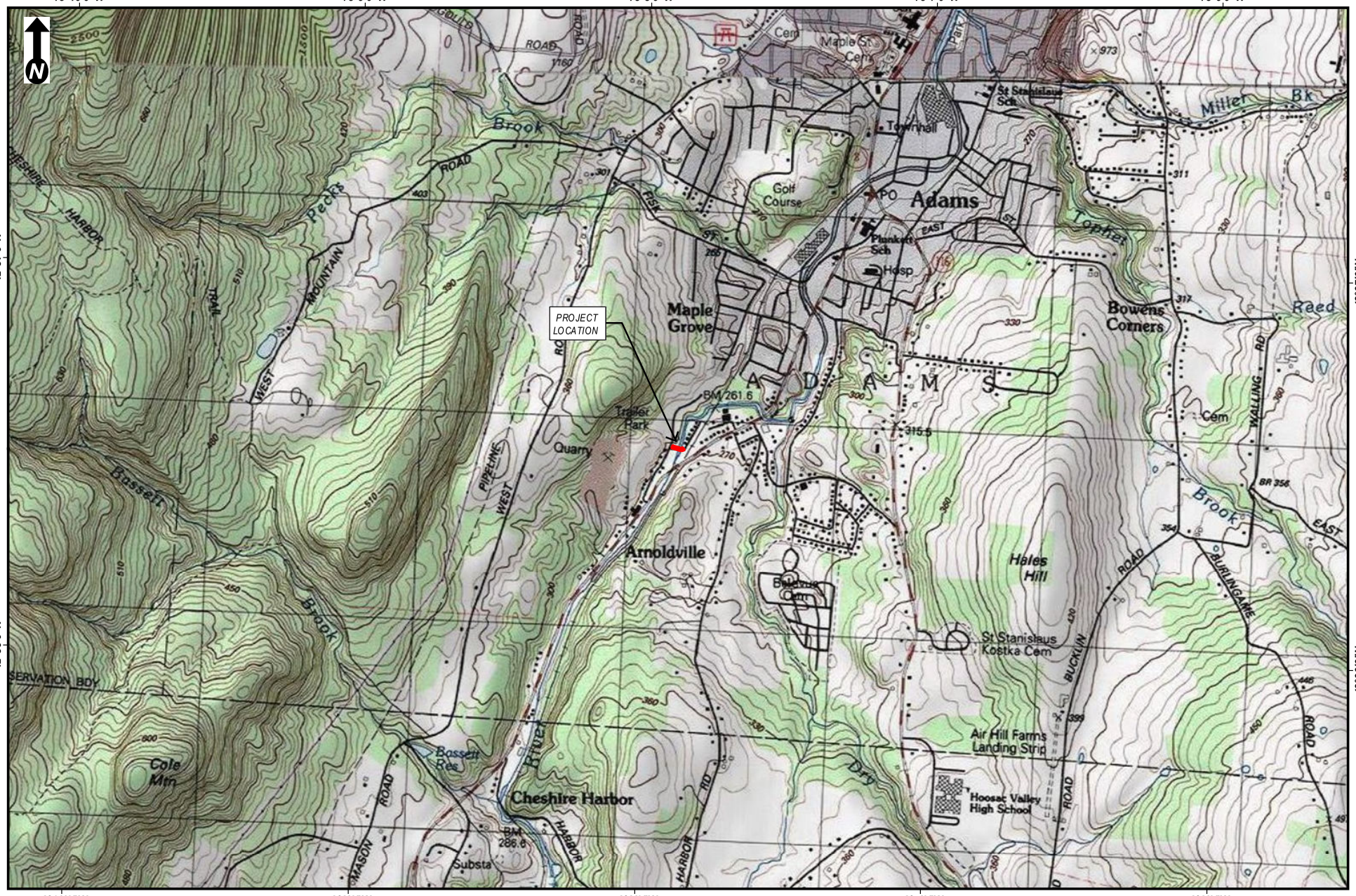

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MASSDOT PROJECT NO. 610777 - ADAMS – BRIDGE REPLACEMENT, A-04-038, QUALITY STREET OVER HOOSIC RIVER

USGS Site Location Map
Adams, MA

Source: Copyright© 2013 National Geographic Society, i-cubed

massDOT Massachusetts Department of Transportation
BSC GROUP

THIS DOCUMENT IS INTENDED FOR GENERAL PLANNING & INFORMATION PURPOSES ONLY. ALL MEASUREMENTS & LOCATIONS ARE APPROXIMATE.

Proposal No. 610777-131930

A00835 - 42

Adams – Bridge Replacement, A-04-038, Quality Street Over Hoosic River
MassDOT Project #610777

Project Scope

The Massachusetts Department of Transportation (MassDOT) is proposing the replacement of the A-04-038 bridge, that carries Quality Street over the Hoosic River in the Town of Adams. Quality Street is classified as an Urban Local Road, but currently does not carry a sidewalk due to the extremely limited vehicular and pedestrian traffic. A sidewalk is not proposed as part of the replacement project for the same reasons. The bridge has been identified as having deteriorated superstructure elements requiring replacement. The bridge deck will be 29 feet, 3 inches wide and will accommodate two 11-foot side travel lanes, 2-foot shoulders and safety curbs with railings. The structural single span length will be increased from 82'-0" to 96'-0" in order to relocate the substructure behind the existing abutment footings. The hydraulic opening is slightly increased, while the abutment skew is maintained. While this does not increase or significantly change the hydraulic openness for the stream crossing, the partial substructure demolition allows the existing large stone slope protection to remain in place and avoids extensive excavation. Direct impacts to wetlands and waterbodies are also avoided through this replacement technique to the extent practicable; however, excavation behind the stone will need to extend towards the limits and elevation of Ordinary High Water (OHW) with the potential for minimal, direct impacts to the stream channel. The existing abutments will be cut down and voids will be filled with appropriate material. Sandbags may be required to stabilize the top of the riprap, upgradient from the bank flags and OHW.

A temporary utility bridge/conduit will be constructed adjacent to the bridge in order to carry existing mains across the Hoosic River while the construction phases occur. The utilities will be placed back with the bridge structure when the replacement occurs. Overhead lines must be relocated to a new easement just downstream from the bridge. An approximately 50-foot wide temporary access road easement will be required across the Ashuwillticook Rail Trail right-of-way and other private parcels, for the isolated residences of South Willow Street to reach Route 8 while the bridge is out. The Project occurs immediately north of the Town of Adams Quality Street Field. Temporary access may be required at the edge of the Field parcel for a laydown area and equipment access near the roadway, but the use of the ballfield will not be directly affected by the proposed project.

Permanent and/or temporary easements will be required on five affected properties. The majority of the easements are temporary for staging, driveway apron restoration, or the temporary access crossing for residences to Route 8. Easements are needed for guardrails, water mains, and utilities. The use of the properties will not be affected, but coordination and access permits will be required for the temporary crossing of the Ashuwillticook Rail Trail to ensure continued, safe usage during the length of construction.

Purpose and Need

The purpose of the project is to improve infrastructure on Quality Street by replacing the structurally deficient, functionally obsolete bridge structure. This project is planned to be funded through the 2025 Transportation Improvement Program for the Berkshire Metropolitan Planning Organization.

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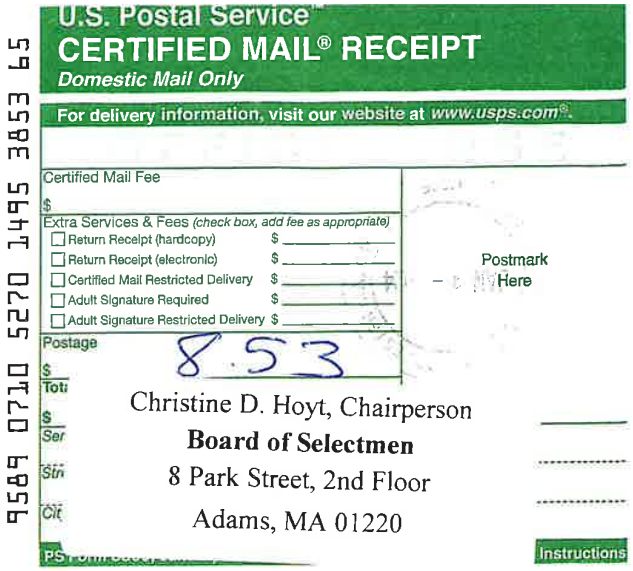
MA Historical Commission
Secretary of the Commonwealth
Massachusetts Historical Commission
220 Morrissey Boulevard
Boston, MA 02125-3314
PS Form 3800, January 2023 PSN 7530-02-000-9047 See Reverse for Instructions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Christine D. Hoyt, Chairperson
Board of Selectmen
8 Park Street, 2nd Floor
Adams, MA 01220
Instructions

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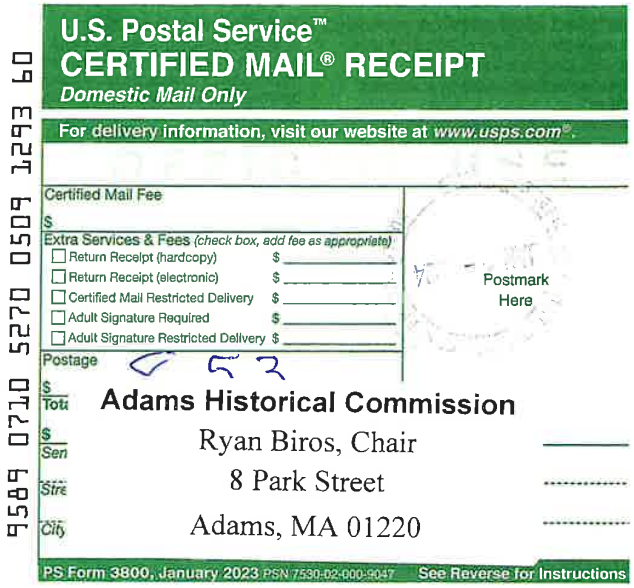
Jay R. Green, Town Administrator
8 Park Street, 2nd Floor
Adams, MA 01220
PS Form 3800, January 2023 PSN 7530-02-000-9047 See Reverse for Instructions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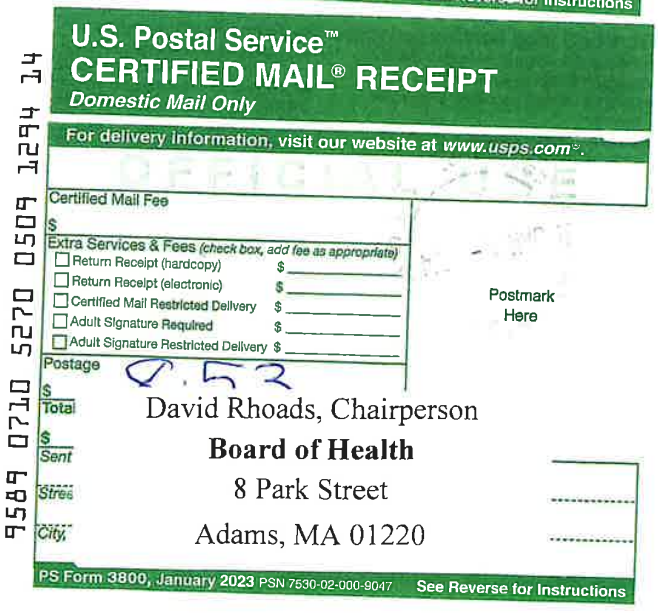
Adams Historical Commission
Ryan Biros, Chair
8 Park Street
Adams, MA 01220
PS Form 3800, January 2023 PSN 7530-02-000-9047 See Reverse for Instructions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David Rhoads, Chairperson
Board of Health
8 Park Street
Adams, MA 01220
PS Form 3800, January 2023 PSN 7530-02-000-9047 See Reverse for Instructions

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Kyomi Belanger, Admin.
Conservation Commission
8 Park St., Adams, MA 01220
PS Form 3800, January 2023 PSN 7530-02-000-9047 See Reverse for Instructions

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:	Bridge Replacement and Related Work, Bridge A-04-038 (MassDOT Project #610777)
Location /Address:	South Willow Street over Hoosic River
City/Town:	Adams

Project Proponent

Name:	Massachusetts Department of Transportation
Address:	10 Park Plaza
City/Town/Zip/Telephone:	Boston, MA 02116

Agency license or funding for the project (list all licenses, permits, approvals, grants or other entitlements being sought from state and federal agencies).

Agency Name	**Type of License or funding (specify)**
FHWA	Federal funding/undertaking (FHWA is lead federal agency)
USACO	Section 404 permit

Project Description (narrative):

MassDOT proposes to replace Bridge A-04-038 in Adams, which carries the two-lane South Willow Street over the Hoosic River. The proposed work consists of full bridge replacement on the existing alignment with a single-span steel girder superstructure supported by integral concrete abutments set on pilings with integral concrete wingwalls and precast approach slabs. The bridge will be approximately the same length and width, 96-feet (ft) long and 29-ft 3-inches (in) wide, as the existing bridge. The project includes full-depth pavement reconstruction and grading of the approach roadway to extend approximately 80-ft west of the bridge along Quality Street and approximately 150-ft east of the bridge along South Willow Street; removal and replacement of existing and extension of guardrails along the bridge approaches, as needed; replacement and updates to existing traffic control and pavement markings; and installation of temporary erosion and sedimentation controls.

A temporary road and utility bridge will be constructed on temporary easements as part of the project to minimize disruption to the community. The temporary road will be constructed between South Willow Street and an existing spur of Grove Street and will cross the Ashuwillticook Rail Trail. The proposed temporary road follows the approximate road layout that was used when the extant bridge was constructed in 1950. The temporary utility bridge will be installed immediately north of the extant bridge to carry water and gas lines over the river. Following completion of the new bridge, the temporary road will be removed and replaced with loam and seed and the temporary bridge will be removed with utility lines carried beneath the deck of the road bridge.

APPENDIX A (continued)

Does the project include demolition? If so, specify nature of demolition and describe the building(s) which are proposed for demolition.

Bridge A-04-038 will be demolished as part of the project. The bridge was constructed in 1950 and consists of a steel single-span half-through girder-floor beam superstructure supported by concrete abutments and riprap walls. The bridge is not inventoried in MACRIS and was reviewed by Kurt Jergensen, Historic Bridge Specialist, and determined to be ineligible for listing in the National Register (NR), as an example of a typical mid-20th century steel girder design with standard design details and little architectural character.

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).

See plans

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.

A review of MACRIS revealed no NR-listed or -eligible districts and individual properties within or adjacent to the project area. The closest previously inventoried properties are the Adams Brothers Manufacturing Company Worker Housing at 4–6 and 8–10 South Willow Street (ADA.222 and 225), which are northeast of the bridge and project area, along the west side of South Willow Street. The two houses were constructed in 1894 as worker housing for the nearby Adams Brothers mill complex, approximately 0.15 miles northeast of the project and two inventoried residences. The mill complex is within the Maple Grove Village Area (ADA.V), which is eligible for listing in the NR as a historic district and does not include the worker housing on South Willow Street. The project work has no potential to affect the inventoried properties or the NR-eligible area.

A review of the MHC's archaeological maps in MACRIS revealed no recorded sites in the vicinity of the project area. The proposed project work will be confined to disturbed and/or unfavorable areas within an existing roadway footprint and adjacent roadside areas. It is the opinion of the MassDOT Archaeologist that low sensitivity can be ascribed to the project's area of potential effect based on the impacts of urban development, including bridge, railroad and road construction, as well as nearby residential development. The proposed work, including the bridge construction and road work, will be confined to the existing bridge alignment and roadway footprint, as well as disturbed areas adjacent to and within the Ashuwillticook Rail Trail.

What is the total acreage of the project area?

Woodland	_____	acres	Productive Resources:		
Wetland	_____	acres	Agriculture	_____	acres
Floodplain	_____	acres	Forestry	_____	acres
Open Space	_____	acres	Mining/Extraction	_____	acres
Developed	_____	acres	Total Project Acreage	_____	acres

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APPENDIX A (continued)

What is the acreage of the proposed new construction? N/A acres

What is the present land use of the project area?

The project is in a dense residential and former industrial setting. The bridge and road provide access to a handful of houses along the dead-end residential South Willow Street from Quality Street to the southwest.

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: Melissa Andrade **Date:** 03/14/2024

Name: Melissa Andrade

Address: 10 Park Plaza, Suite 7130

City/Town/Zip: Boston, MA 02116

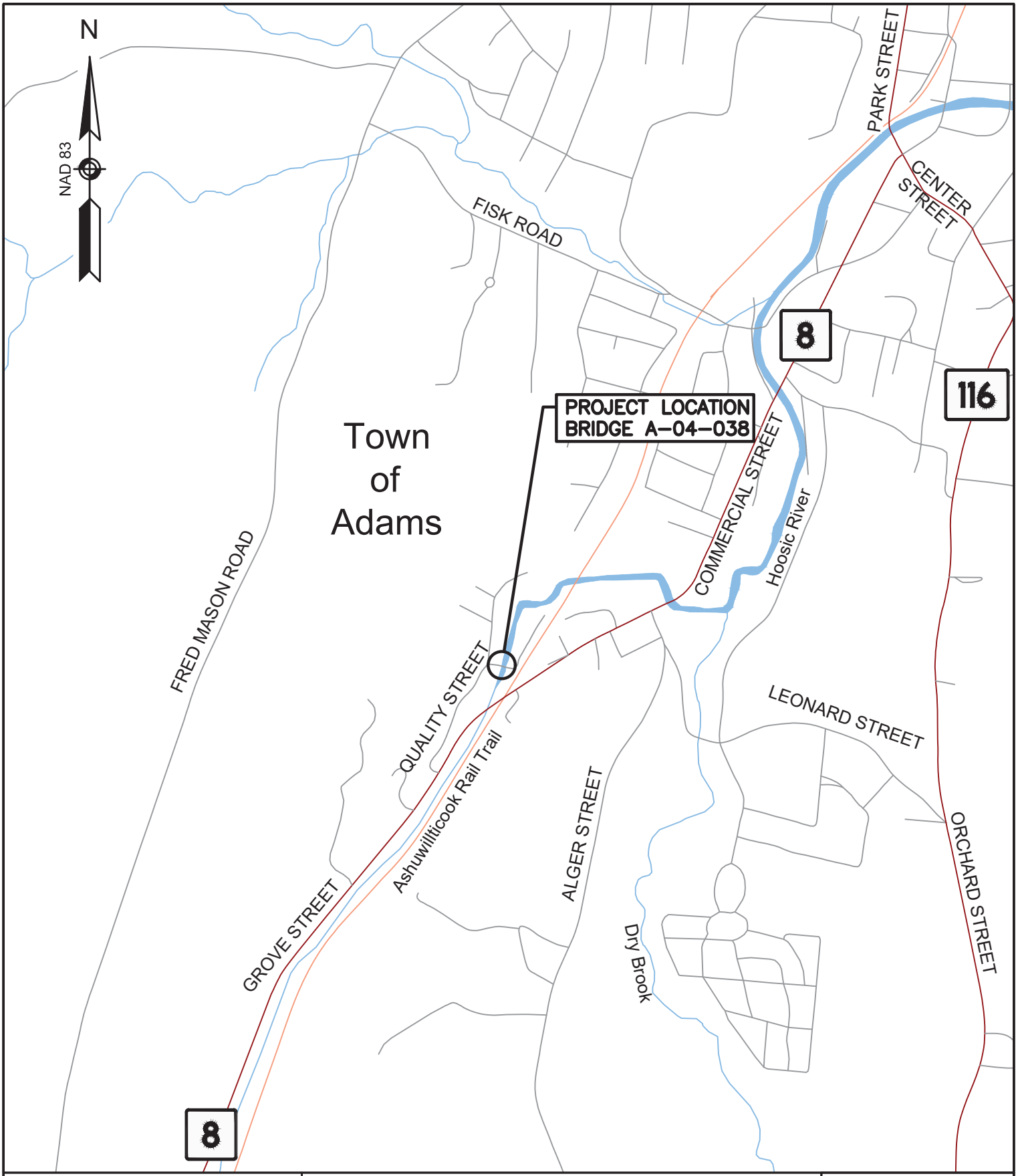
Telephone: Email: melissa.j.andrade@dot.state.ma.us

REGULATORY AUTHORITY

950 CMR 71.00: M.G.L. c. 9, §§ 26-27C as amended by St. 1988, c. 254.

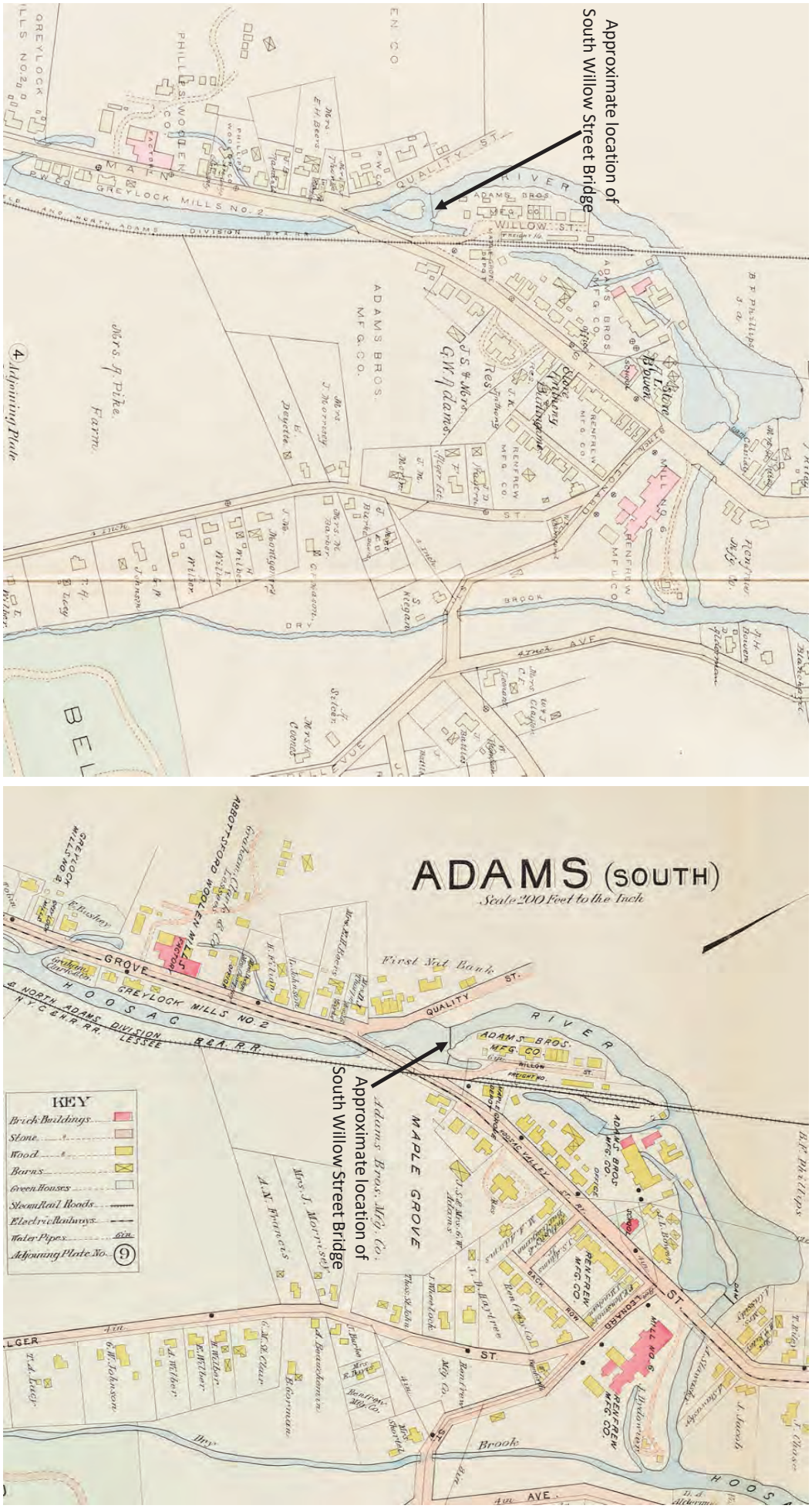
CC

CC:

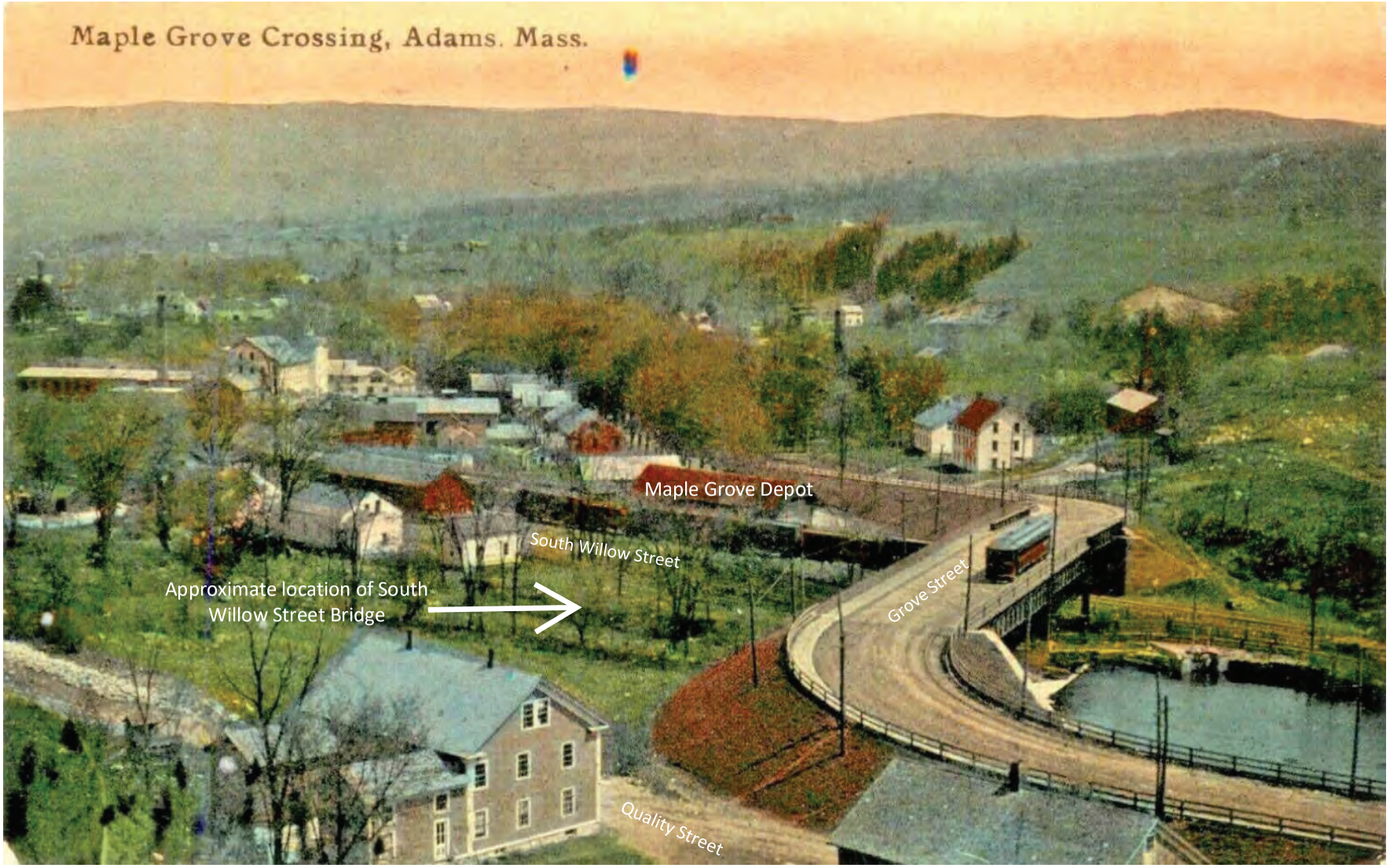


massDOT Massachusetts Department of Transportation Highway Division	PROJECT: QUALITY STREET OVER HOOSIC RIVER BRIDGE REPLACEMENT	FIGURE 1
	SUBJECT: LOCUS MAP SCALE: 1" = 1000'	LOCUS MAP

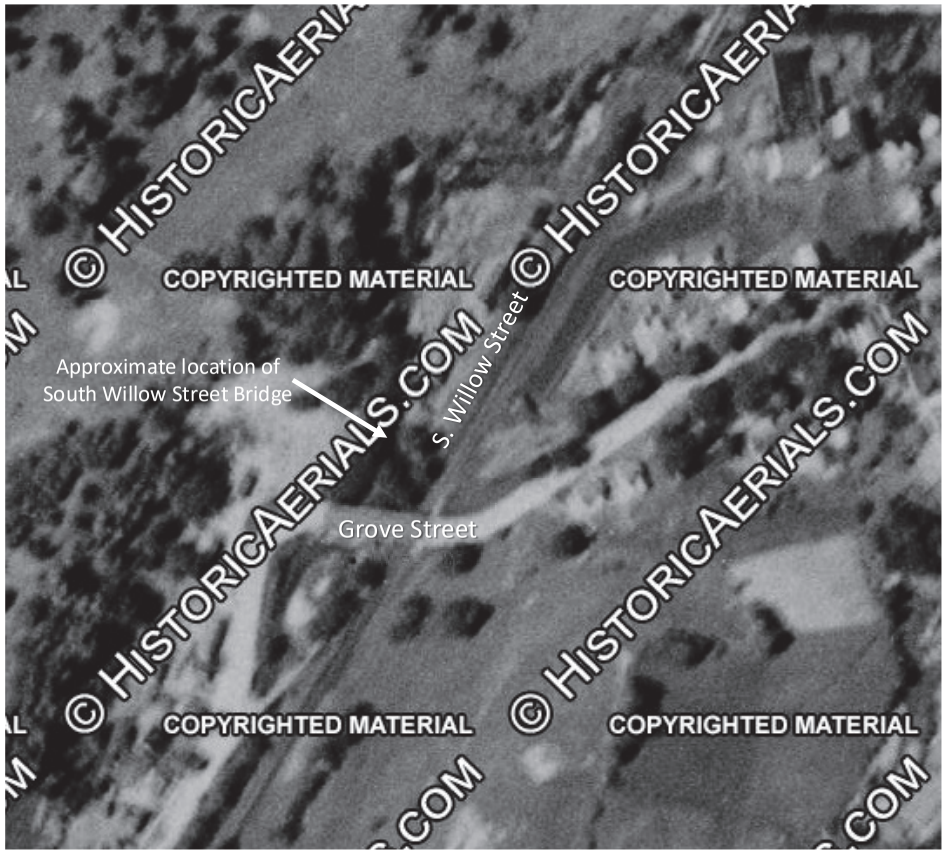
MACRIS Map showing inventoried properties and areas within vicinity of the project.



1894 map of Adams (Plate 12) and 1904 map of Adams (Plate 56) (left to right), showing Maple Grove village and Willow Street (later named South Willow Street.



Ca. 1907–1915 postcard, looking northeast toward Maple Grove village. South Willow Street in center midground, Grove Street and Grove Street Bridge on right.



1940 aerial, showing no South Willow Street Bridge

1959 aerial, showing South Willow Street Bridge and realigned Grove Street and bridge

Proposal No. 610777-131930

PUB ROAD DIV. No.	STATE	FED AID PROJ. No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
1	MASS.	(5)(1)(2)(3)	19	23	62

GENERAL NOTES

FOUNDATIONS :
MAY BE ALTERED IF NECESSARY TO SUIT CONDITIONS OF CONSTRUCTION

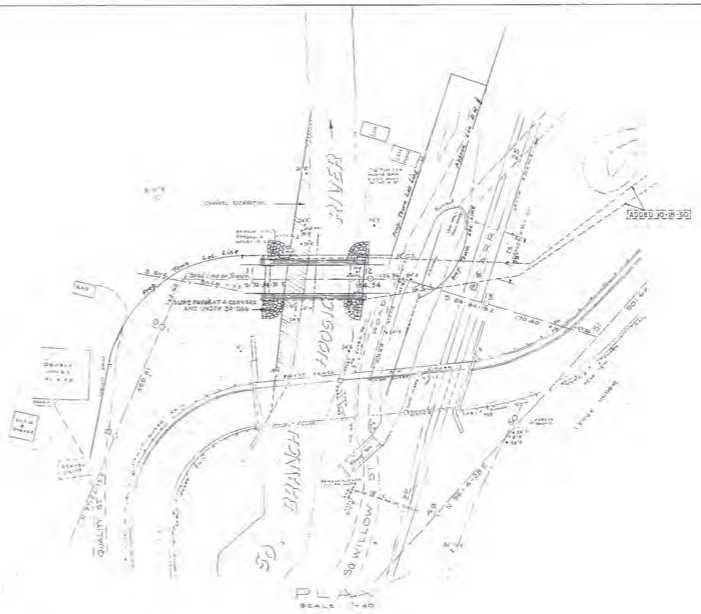
DESIGN :
ACCORDING TO SPECIFICATIONS OF AMERICAN ASSOCIATION OF STATE HIGHWAY OFFICIALS (1949 ED.) FOR H-15-44 LOADING.

BENCH MARK :
STA. 30+09 (GROVE ST. LINE &) RT. 8' U.S.C.&G. CHISEL □ MAPLE GROVE BRIDGE " 12.02 S.E. PIER EL. 871.81

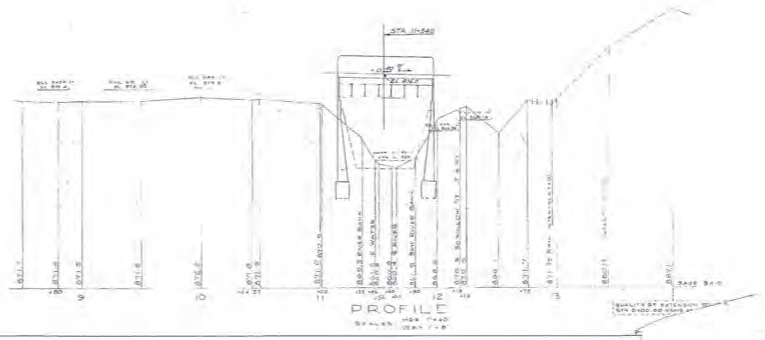
HYDRAULIC DATA
SIZE OF DRAINAGE AREA 20.5 SQ. MI.
BRIDGE OPENING PROVIDED FOR MAJOR FLOOD
ESTIMATED DISCHARGE 8300 CU. FT./SEC.
VELOCITY OF FLOOD FLOW 11.0 FT./SEC.

ESTIMATED QUANTITIES
(NOT GUARANTEED)

CLASS A ROCK EXCAVATION	20	CU. YDS.
BRIDGE EXCAVATION	200	CU. YDS.
CHANNEL EXCAVATION	850	CU. YDS.
CLASS B ROCK EXCAVATION	10	CU. YDS.
CLASS A CEM. CONC. MASONRY	165	CU. YDS.
STEEL REINF. FOR STRUCTURES	20,000	POUNDS.
STRUCTURAL STEEL	2000	POUNDS.
SLOPE PAVING	125	CU. YDS.
STEEL ERECTED FOR BRIDGE (2)		
QUALITY ST. EXTENSION	1	LUMP SUM



PLAN
SCALE 1"=40'



PROFILE
SCALES HOR. 1"=40'
VERT. 1"=8'

DATE	SHEET NOS.	DESCRIPTION
10-18-50	1	PIPE LOCATIONS ADDED TO PLAN

LIST OF REVISIONS - USE ONLY PRINTS OF LATEST DATE

ADVERTISING 6-20-50 CONSTRUCTION 6-20-50

THE COMMONWEALTH OF MASSACHUSETTS
PROPOSED BRIDGE

ADAMS

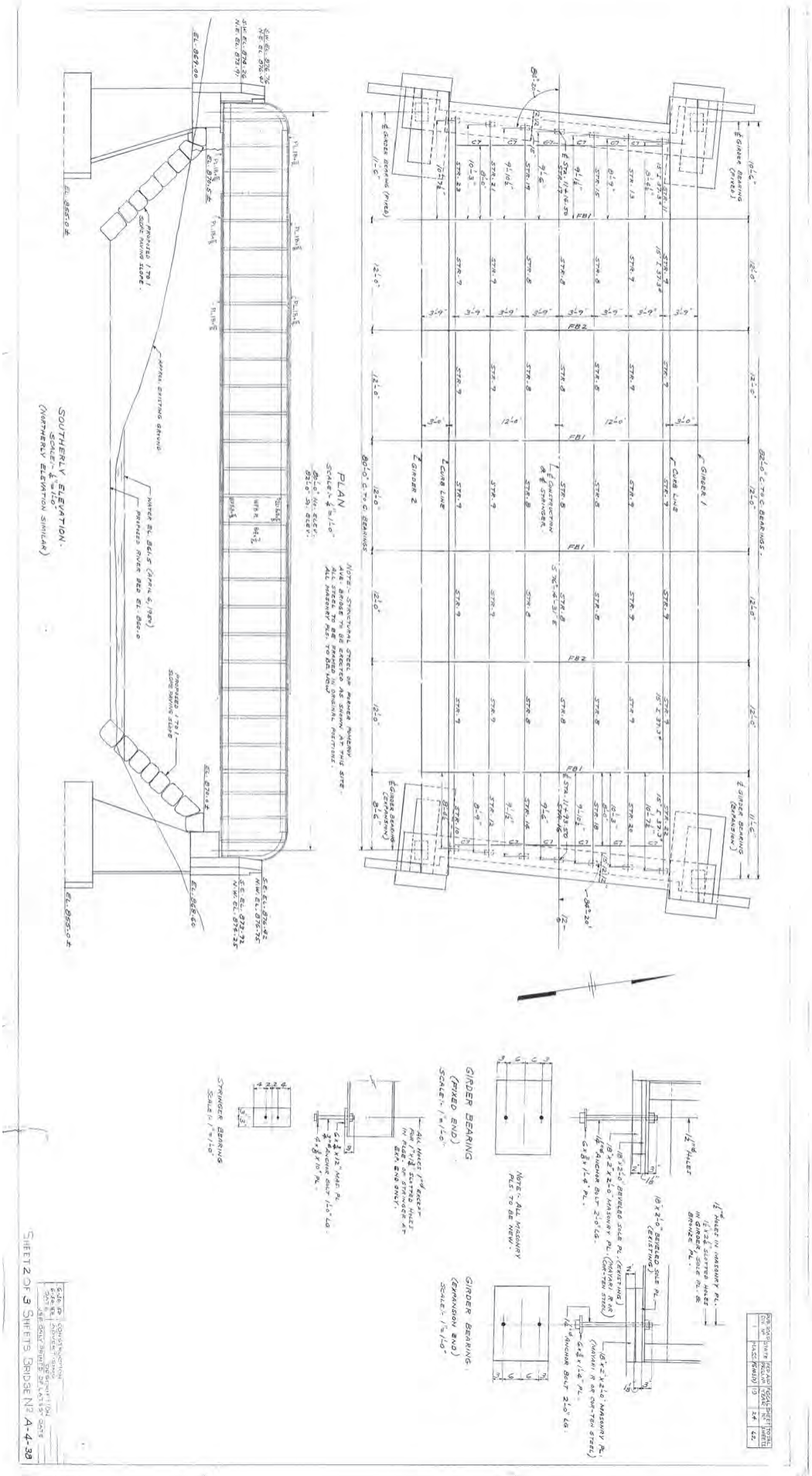
QUALITY ST. EXTENSION STA. 11+540
OVER SOUTH BRANCH HOOSIC RIVER
SCALES AS NOTED
OFFICE OF
DEPARTMENT OF PUBLIC WORKS
100 NASHUA ST. BOSTON MASS.
MAY 1950

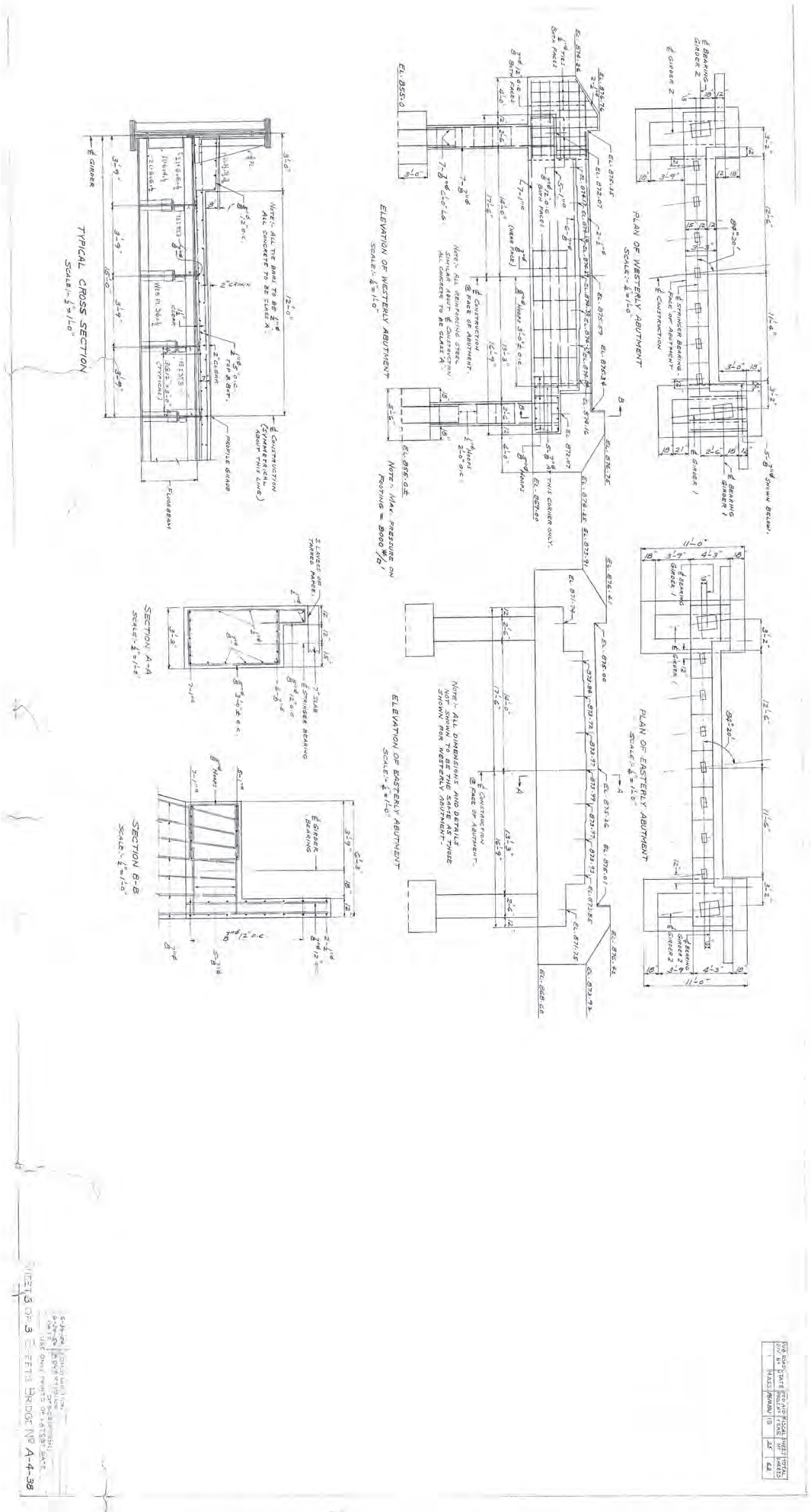
BRIDGE ENGINEER — CHIEF ENGINEER

DESIGNED BY L.H.R. DRAWN BY L.H.R.-A.M.T. CHECKED BY J.R.B.

SHEET 1 OF 3 SHEETS BRIDGE No. A-4-38

A00835 - 53


SOUTHERLY ELEVATION.
SCALE: 1/4"=1'-0"
(NORTHERLY ELEVATION SIMILAR)
PLAN
SCALE: 1/4"=1'-0"
GIRDER BEARING
(FIXED END)
SCALE: 1"=1'-0"
GIRDER BEARING
(EXPANSION END)
SCALE: 1"=1'-0"
STRINGER BEARING
SCALE: 1"=1'-0"
SHEET 2 OF 3 SHEETS BRIDGE NO. A-4-33


TYPICAL CROSS SECTION
SCALE: 1/4"=1'-0"
ELEVATION OF WESTERLY ABUTMENT
SCALE: 1/4"=1'-0"
PLAN OF WESTERLY ABUTMENT
SCALE: 1/4"=1'-0"
ELEVATION OF EASTERLY ABUTMENT
SCALE: 1/4"=1'-0"
PLAN OF EASTERLY ABUTMENT
SCALE: 1/4"=1'-0"
SECTION A-A
SCALE: 1/4"=1'-0"
SECTION B-B
SCALE: 1/4"=1'-0"
SHEET 3 OF 3 SHEETS BRIDGE NO A-4-38

From:	Microsoft Outlook
To:	106review@mwtribe-nsn.gov; David.weeden@mwtribe-nsn.gov
Subject:	Relayed: MassDOT Project #610777 - Adams A-04-038
Date:	Thursday, March 14, 2024 11:02:19 AM
Attachments:	MassDOT Project #610777 - Adams A-04-038.msg

Delivery to these recipients or groups is complete, but no delivery notification was sent by the destination server:
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David.weeden@mwtribe-nsn.gov (David.weeden@mwtribe-nsn.gov) <mailto:David.weeden@mwtribe-nsn.gov>
Subject: MassDOT Project #610777 - Adams A-04-038

From:	Microsoft Outlook
To:	Robinson, David S (EEA)
Subject:	Delivered: MassDOT Project #610777 - Adams A-04-038
Date:	Thursday, March 14, 2024 11:02:58 AM
Attachments:	MassDOT Project #610777 - Adams A-04-038.msg

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: MassDOT Project #610777 - Adams A-04-038

From:	Microsoft Outlook
To:	thpo@wampanoagtribe-nsn.gov
Subject:	Relayed: MassDOT Project #610777 - Adams A-04-038
Date:	Thursday, March 14, 2024 11:04:11 AM
Attachments:	MassDOT Project #610777 - Adams A-04-038.msg

Delivery to these recipients or groups is complete, but no delivery notification was sent by the destination server:
thpo@wampanoagtribe-nsn.gov (thpo@wampanoagtribe-nsn.gov) <mailto:thpo@wampanoagtribe-nsn.gov>
Subject: MassDOT Project #610777 - Adams A-04-038

From:	Microsoft Outlook
To:	thpo@mohican-nsn.gov
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Date:	Thursday, March 14, 2024 11:04:16 AM
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thpo@mohican-nsn.gov (thpo@mohican-nsn.gov) <mailto:thpo@mohican-nsn.gov>
Subject: MassDOT Project #610777 - Adams A-04-038

Attachment D

MassDOT Project no. 610777
Quality Street over the Hoosic River
Bridge Replacement Project
USACE Self-Verification Notification

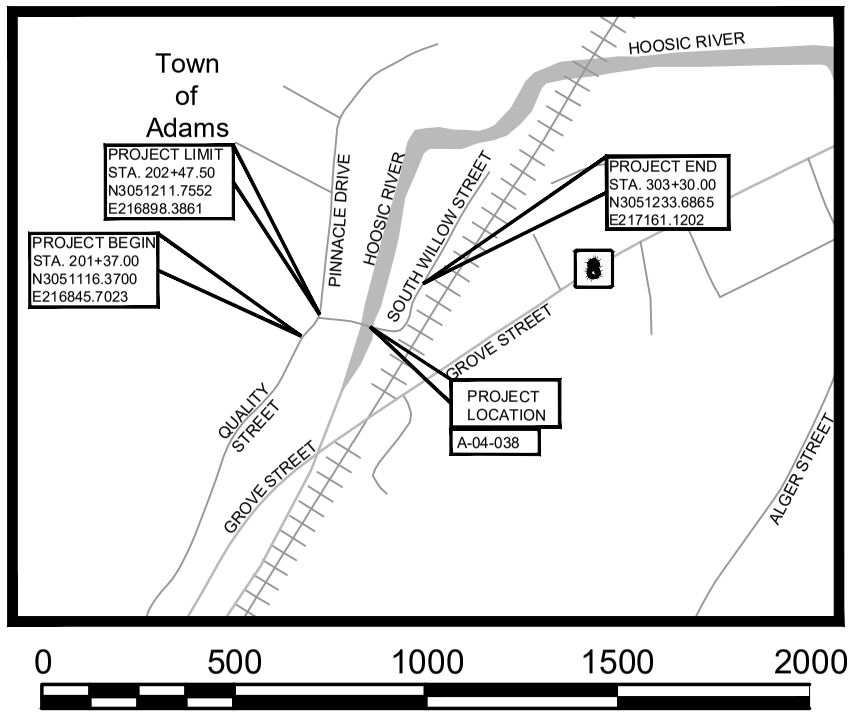
Project Plans
Construction Details
Specifications

BSC GROUP
BUILD | SUPPORT | CONNECT

Proposal No. 610777-131930

PERMIT PLANS

INDEX	
SHEET NO.	DESCRIPTION
1	INDEX
2	EXISTING CONDITIONS
3	PROPOSED CONDITIONS
4	EXISTING SOUTH ELEVATION
5	PROPOSED SOUTH ELEVATION
6	PROPOSED ROADWAY PROFILE
7	IMPACTS
8 - 12	CONTROL OF WATER
13	DRAINAGE & SEDIMENT CONTROL DETAILS



SCALE: 1" = 500'

LENGTH OF PROJECT = 417.68 FEET = 0.079 MILES

IMPACTS TO WATERS OF THE UNITED STATES			
WATERS OF THE US	PERMANENT IMPACT	0	SF
	TEMPORARY IMPACT	431	SF
	PERMANENT IMPACT - DREDGE / FILL	0 / 0	CY
	TEMPORARY IMPACT - DREDGE / FILL	0 / 0	CY
BANK/ ORDINARY HIGH WATER (OHW)	PERMANENT IMPACT	0	LF
	TEMPORARY IMPACT	109	LF

NOTES:
1. HORIZONTAL DATUM IS BASED OFF OF THE NORTH AMERICAN DATUM (NAD) 1983
2. ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88)

A00835 - 61

PREPARED FOR:
massDOT Massachusetts Department of Transportation Highway Division
MASSDOT HIGHWAY DIVISION
10 PARK PLAZA, BOSTON, MA 02116

Source:

INDEX

BRIDGE REPLACEMENT PROJECT
QUALITY STREET OVER HOOSIC RIVER,
ADAMS, MA
BERKSHIRE COUNTY

Job No.: 610777 Date: 1/30/2025
Scale: N/A Revised:
Description: INDEX Figure: 1 OF 13

BSC GROUP
BUILD | SUPPORT | CONNECT
803 SUMMER STREET
BOSTON, MASSACHUSETTS 02127
617-896-4300 | www.bscgroup.com

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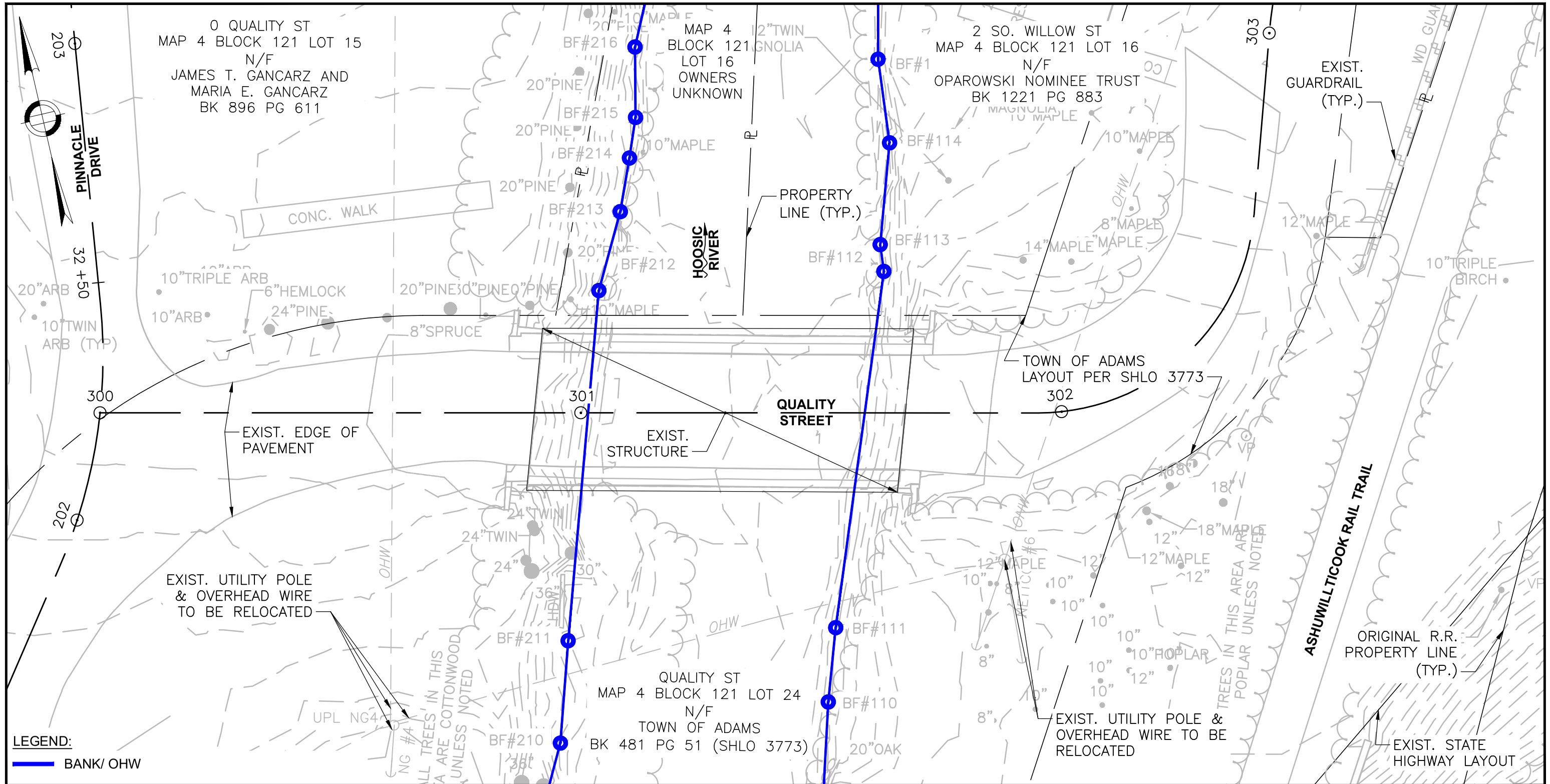

PREPARED FOR:

massDOT Massachusetts Department of Transportation Highway Division

MASSDOT HIGHWAY DIVISION
10 PARK PLAZA, BOSTON, MA 02116

Source:

EXISTING CONDITIONS

BRIDGE REPLACEMENT PROJECT
QUALITY STREET OVER HOOSIC RIVER,
ADAMS, MA
BERKSHIRE COUNTY

Job No.: 610777 Date: 1/30/2025

Scale: 1" = 20' Revised:

Description: EX. COND. Figure: 2 OF 13

BSC GROUP
BUILD | SUPPORT | CONNECT
803 SUMMER STREET
BOSTON, MASSACHUSETTS 02127
617-896-4300 | www.bscgroup.com

File: P:\2830428\Environmental\Drawings\3 - 2830428_(EC).dwg

PINNACLE DRIVE

0 QUALITY ST
MAP 4 BLOCK 121 LOT 15
N/F
JAMES T. GANCARZ AND
MARIA E. GANCARZ
BK 896 PG 611

MAP 4
BLOCK 121
LOT 16
OWNERS
UNKNOWN

2 SO. WILLOW ST
MAP 4 BLOCK 121 LOT 16
N/F
OPAROWSKI NOMINEE TRUST
BK 1221 PG 883

BF#216
BF#215
BF#214
BF#213
BF#212
BF#211
BF#210
BF#1
BF#114
BF#113
BF#112
BF#111
BF#110

PROP. UTILITY POLE (TYP.)

PROP. UTILITY POLE & OVERHEAD WIRE (TYP.)

HOOSIC RIVER

PROP. EDGE OF PAVEMENT (TYP.)

PORTION OF EXIST. ABUT. (TYP.)

QUALITY STREET

PROP. WATER LINE

PROP. BRIDGE

SEDIMENT CONTROL BARRIER (TYP.)

LIMIT OF WORK (TYP.)

PROP. GUARDRAIL (TYP.)

ASHUWILLTICOOK RAIL TRAIL

QUALITY ST
MAP 4 BLOCK 121 LOT 24
N/F
TOWN OF ADAMS
BK 481 PG 51 (SHLO 3773)

LEGEND:
- PROPOSED BRIDGE ABUTMENT/ WINGWALL
- EXIST BRIDGE FOUNDATION (TO BE RETAINED)
- BANK/ OHW
- SEDIMENT CONTROL BARRIER
- PROP LIMIT OF WORK
- RIPRAP WITH GRAVEL PACKED VOIDS

PREPARED FOR:
massDOT
Massachusetts Department of Transportation
Highway Division

MASSDOT HIGHWAY DIVISION
10 PARK PLAZA, BOSTON, MA 02116

Source:

PROPOSED CONDITIONS

BRIDGE REPLACEMENT PROJECT
QUALITY STREET OVER HOOSIC RIVER,
ADAMS, MA
BERKSHIRE COUNTY

Job No.: 610777 Date: 1/30/2025

Scale: 1" = 20' Revised:

Description: PR. COND. Figure: 3 OF 13

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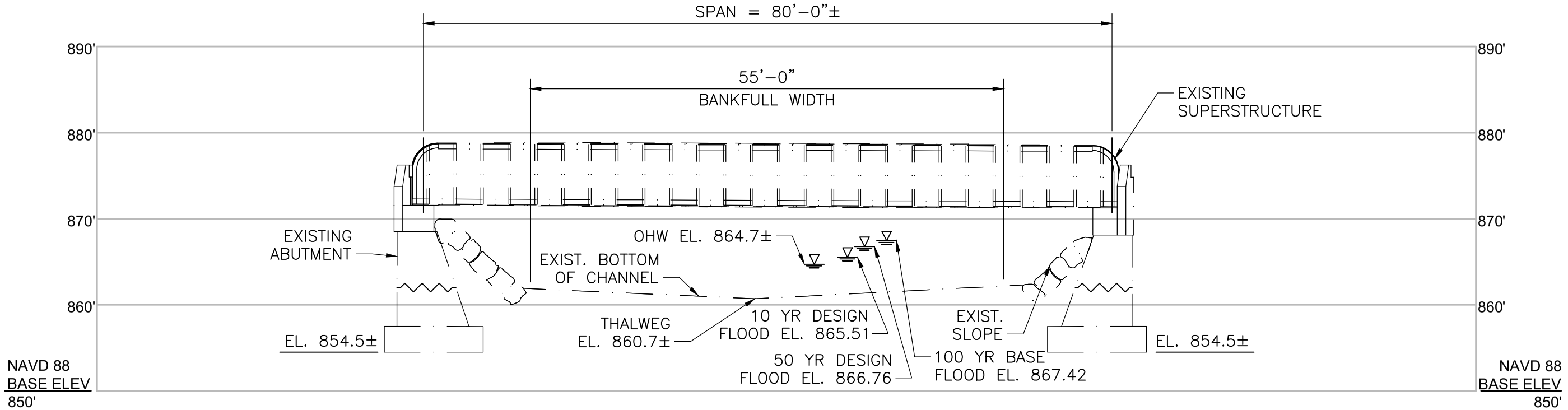
Proposal No. 610777-131930



A00835 - 64

PREPARED FOR:
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Massachusetts Department of Transportation
Highway Division
MASSDOT HIGHWAY DIVISION
10 PARK PLAZA, BOSTON, MA 02116

Source:

EXISTING SOUTH ELEVATION

BRIDGE REPLACEMENT PROJECT
QUALITY STREET OVER HOOSIC RIVER,
ADAMS, MA
BERKSHIRE COUNTY

Job No.: 610777 Date: 1/30/2025
Scale: 1" = 150' Revised:
Description: EX. ELEV. Figure: 4 OF 13

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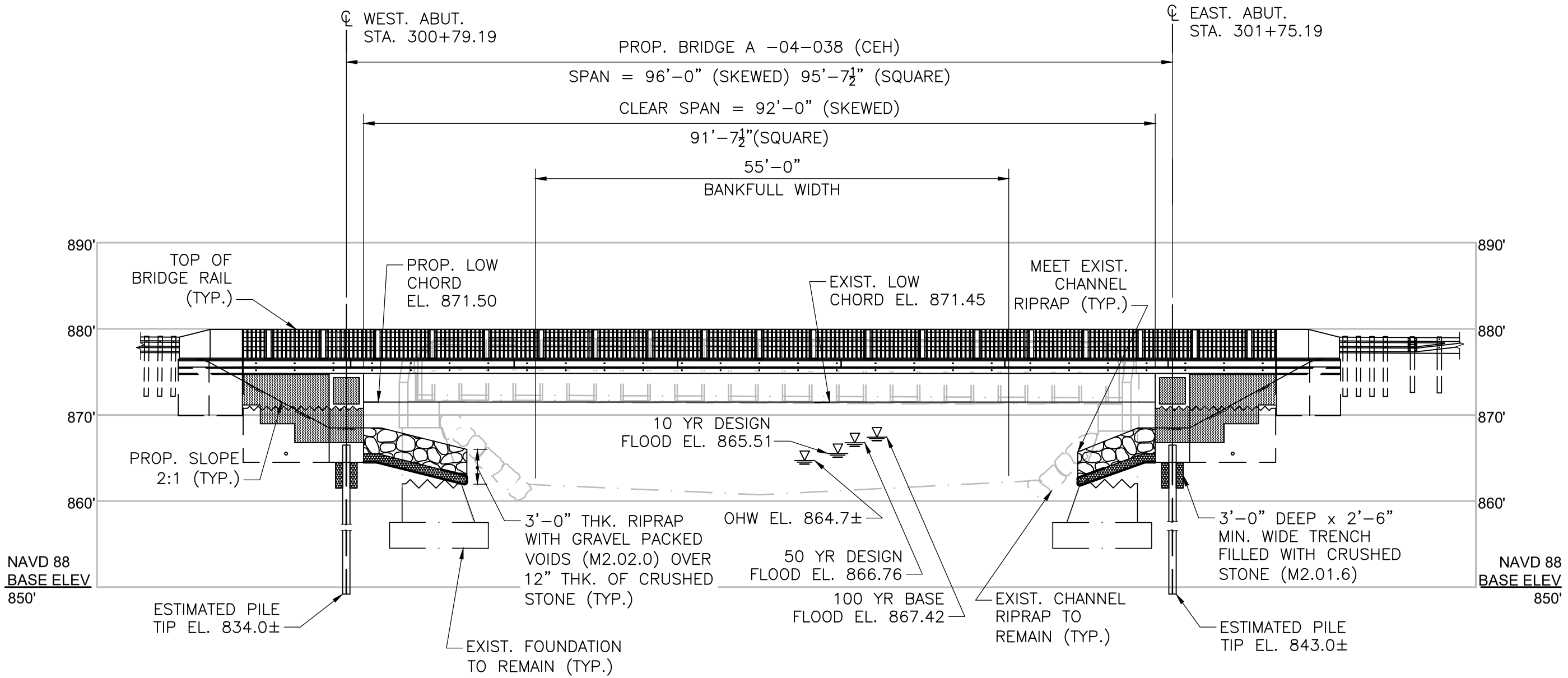

A00835 - 65

PREPARED FOR:
massDOT Massachusetts Department of Transportation Highway Division
MASSDOT HIGHWAY DIVISION
10 PARK PLAZA, BOSTON, MA 02116

Source:

PROPOSED SOUTH ELEVATION

BRIDGE REPLACEMENT PROJECT
QUALITY STREET OVER HOOSIC RIVER,
ADAMS, MA
BERKSHIRE COUNTY

Job No.: 610777 Date: 1/30/2025
Scale: 1" = 150' Revised:
Description: PR. ELEV. Figure: 5 OF 13

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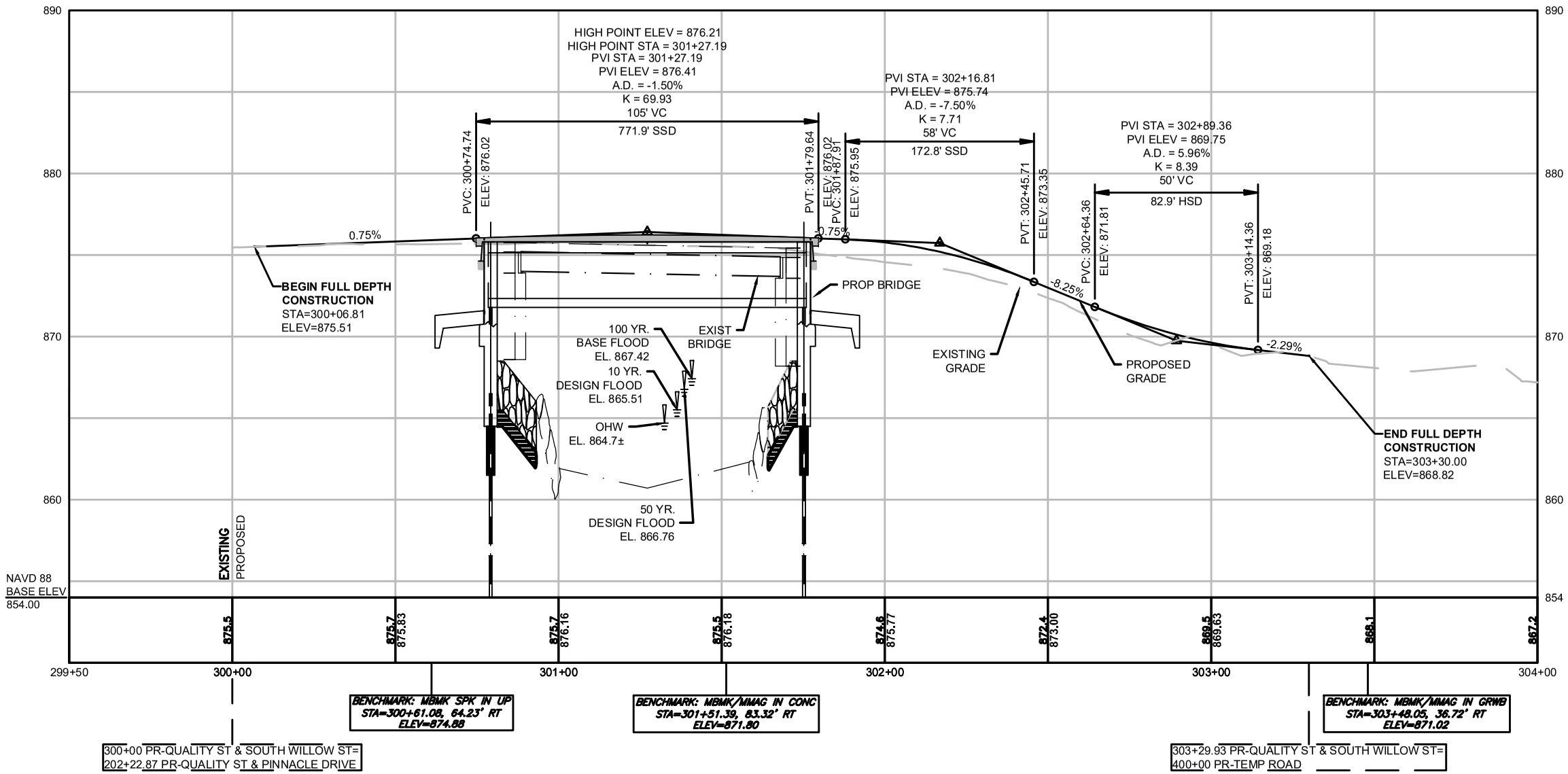
Proposal No. 610777-131930

A00835 - 66

PR-QUALITY ST & SOUTH WILLOW ST



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Massachusetts Department of Transportation
Highway Division

MASSDOT HIGHWAY DIVISION
10 PARK PLAZA, BOSTON, MA 02116

Source:

PROPOSED ROADWAY PROFILE

BRIDGE REPLACEMENT PROJECT
QUALITY STREET OVER HOOSIC RIVER,
ADAMS, MA
BERKSHIRE COUNTY

Job No.: 610777 Date: 1/30/2025

Scale: NOT TO SCALE Revised:

Description: PROFILE Figure: 6 OF 13

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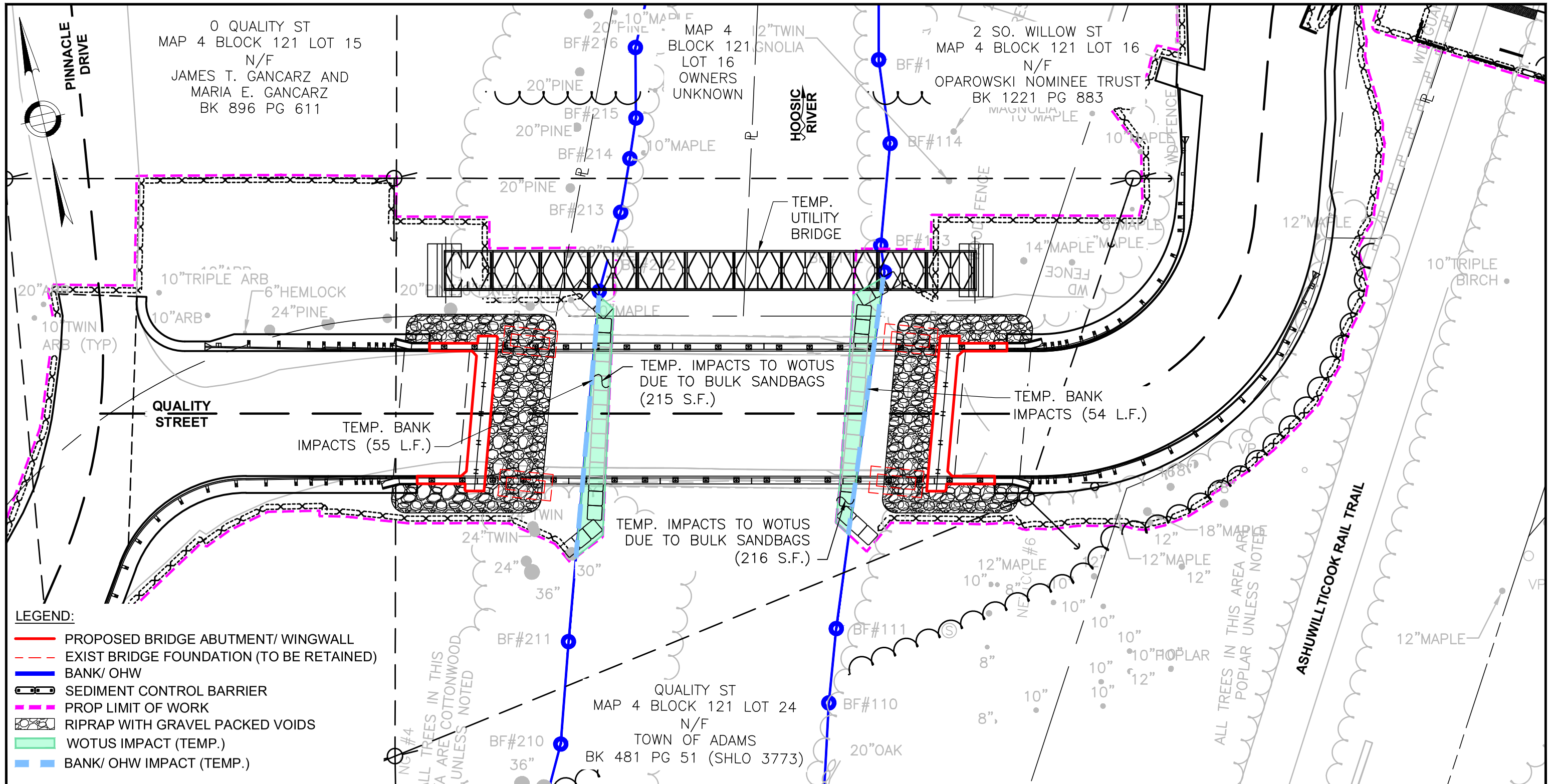

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Massachusetts Department of Transportation
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10 PARK PLAZA, BOSTON, MA 02116

Source:

IMPACTS

BRIDGE REPLACEMENT PROJECT
QUALITY STREET OVER HOOSIC RIVER,
ADAMS, MA
BERKSHIRE COUNTY

Job No.: 610777 Date: 1/30/2025

Scale: 1" = 20' Revised:

Description: IMPACTS Figure: 7 OF 13

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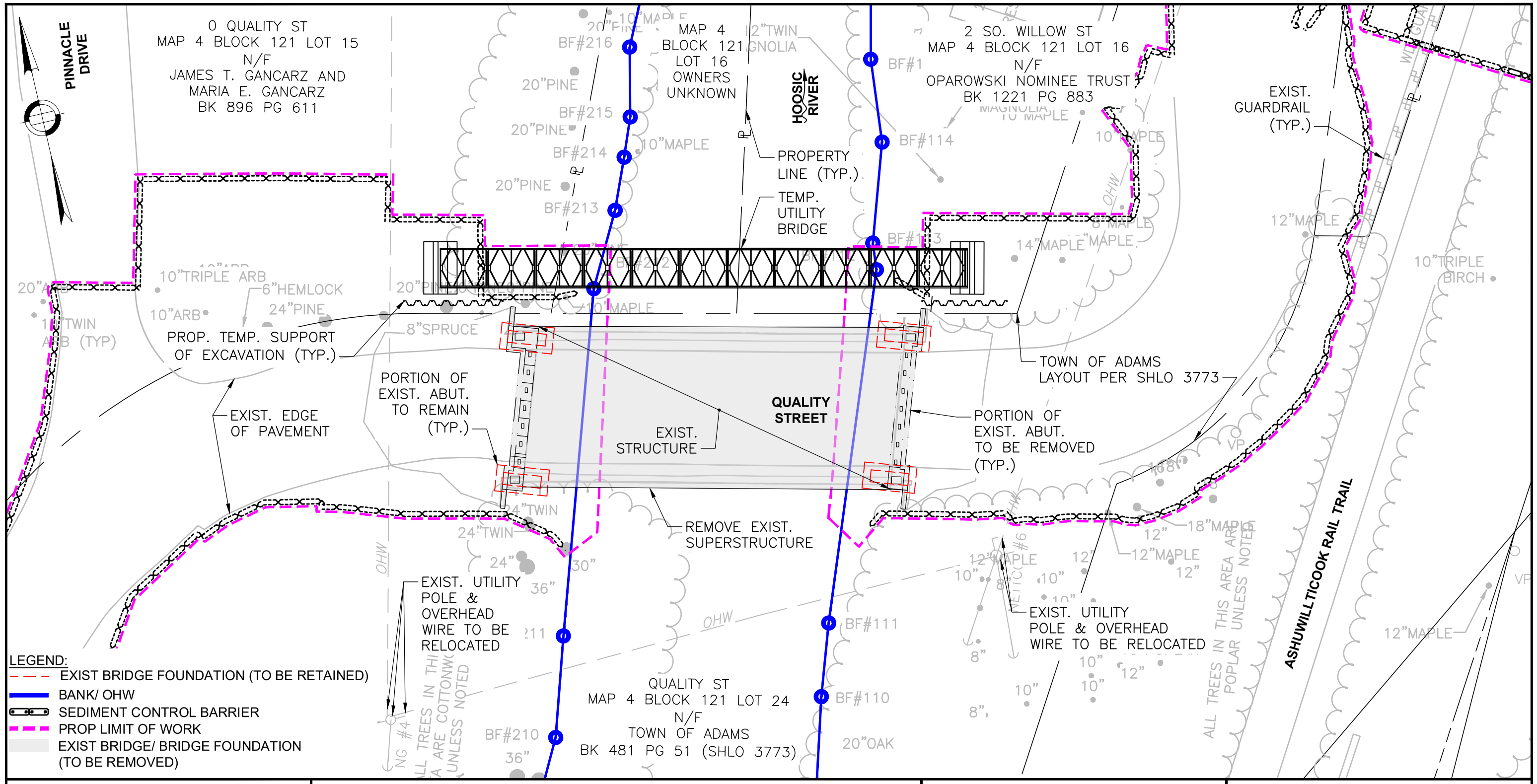

PREPARED FOR:

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Massachusetts Department of Transportation
Highway Division

MASSDOT HIGHWAY DIVISION
10 PARK PLAZA, BOSTON, MA 02116

Source:

STAGE 1 CONTROL OF WATER PLAN

BRIDGE REPLACEMENT PROJECT
QUALITY STREET OVER HOOSIC RIVER,
ADAMS, MA
BERKSHIRE COUNTY

Job No.: 610777 Date: 1/30/2025

Scale: 1" = 20' Revised:

Description: COW Figure: 8 OF 13

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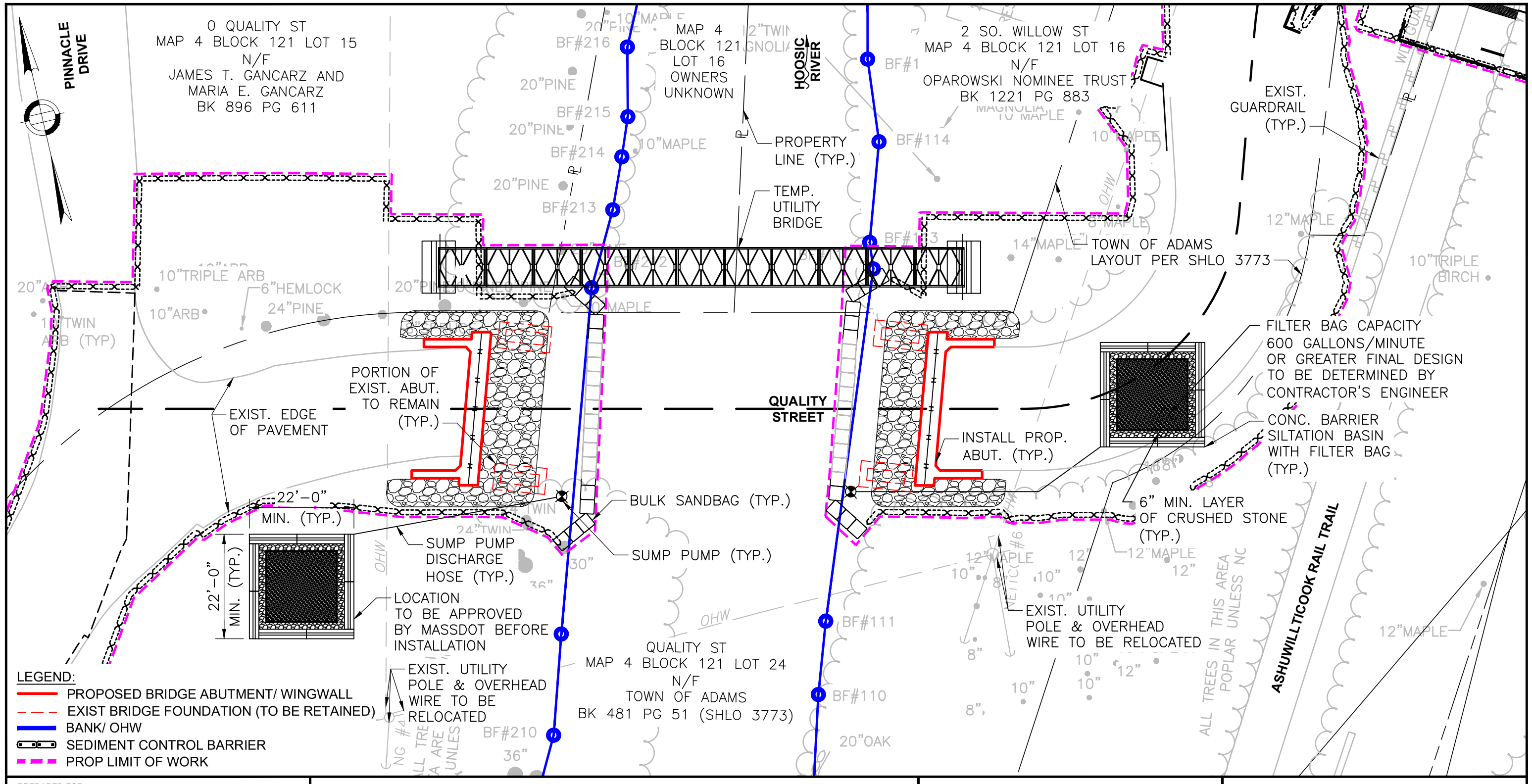

PREPARED FOR:

massDOT
Massachusetts Department of Transportation
Highway Division

MASSDOT HIGHWAY DIVISION
10 PARK PLAZA, BOSTON, MA 02116

Source:

STAGE 2 CONTROL OF WATER PLAN

BRIDGE REPLACEMENT PROJECT
QUALITY STREET OVER HOOSIC RIVER,
ADAMS, MA
BERKSHIRE COUNTY

Job No.: 610777 Date: 1/30/2025

Scale: 1" = 20' Revised:

Description: COW Figure: 9 OF 13

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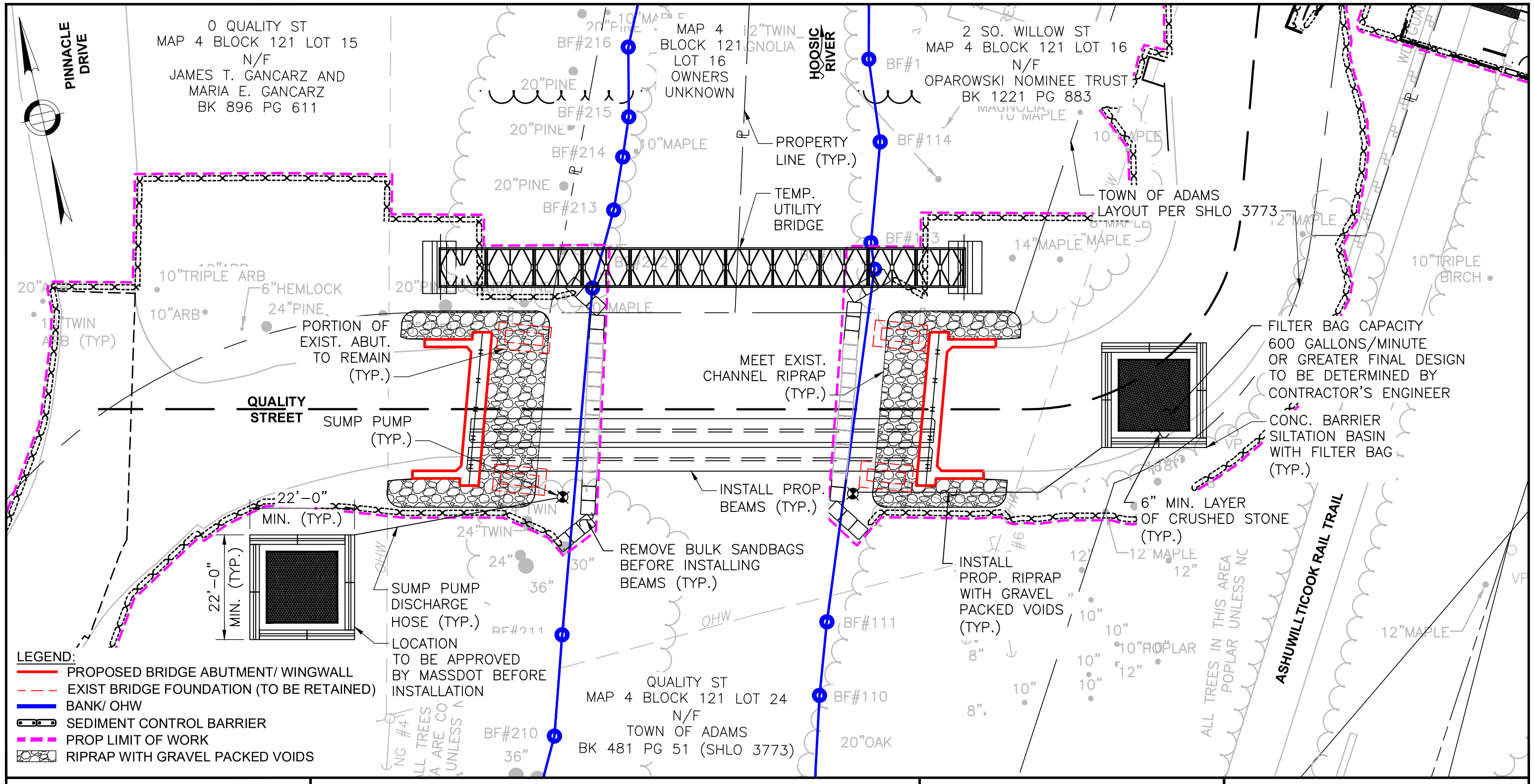
Proposal No. 610777-131930



PREPARED FOR:

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Massachusetts Department of Transportation
Highway Division

MASSDOT HIGHWAY DIVISION
10 PARK PLAZA, BOSTON, MA 02116

Source:

STAGE 3 CONTROL OF WATER PLAN

BRIDGE REPLACEMENT PROJECT
QUALITY STREET OVER HOOSIC RIVER,
ADAMS, MA
BERKSHIRE COUNTY

Job No.: 610777 Date: 1/30/2025

Scale: 1" = 20' Revised:

Description: COW Figure: 10 OF 13

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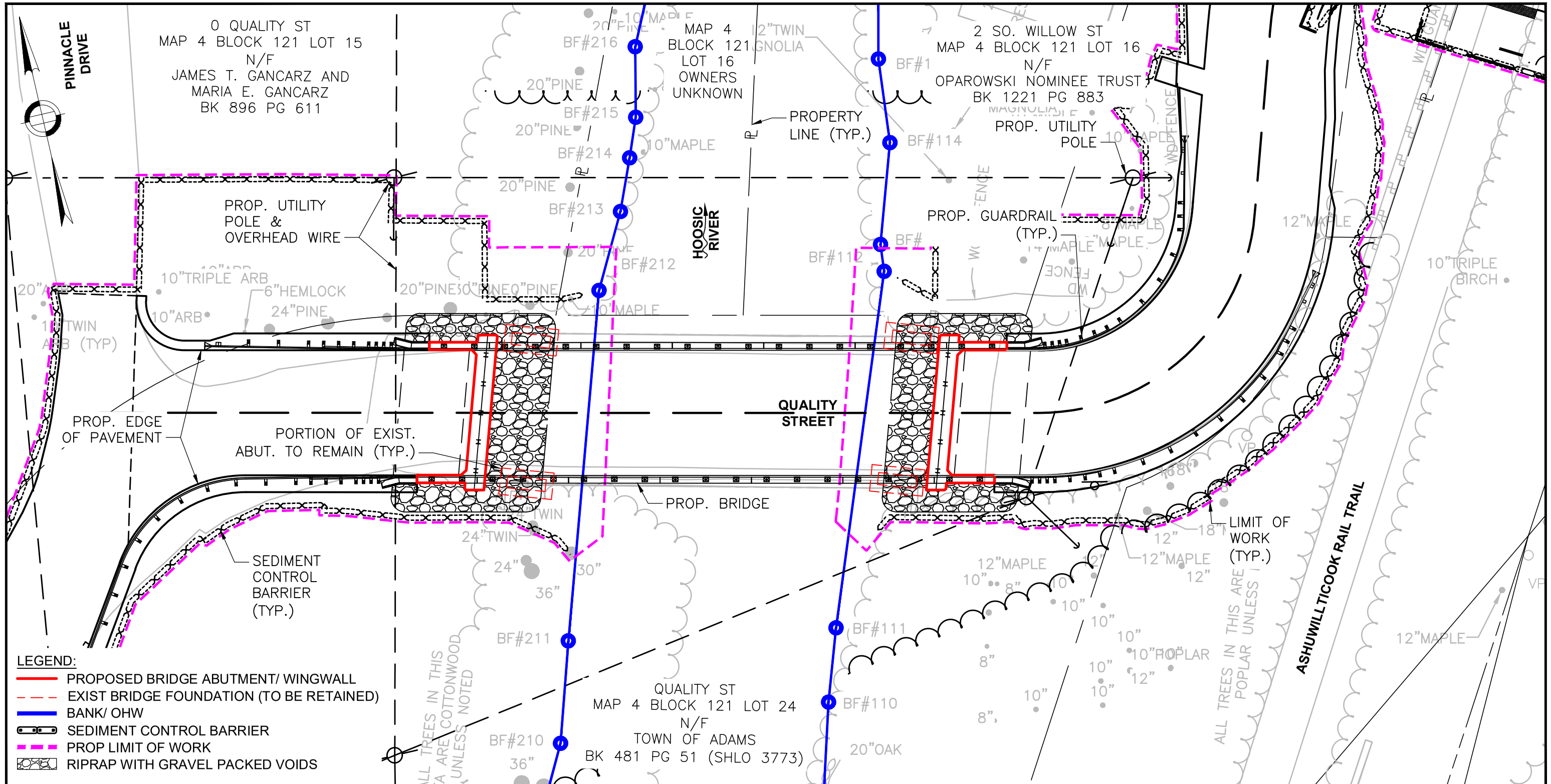

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Highway Division

MASSDOT HIGHWAY DIVISION
10 PARK PLAZA, BOSTON, MA 02116

Source:

STAGE 4 CONTROL OF WATER PLAN

BRIDGE REPLACEMENT PROJECT
QUALITY STREET OVER HOOSIC RIVER,
ADAMS, MA
BERKSHIRE COUNTY

Job No.: 610777 Date: 1/30/2025

Scale: 1" = 20' Revised:

Description: COW Figure: 11 OF 13

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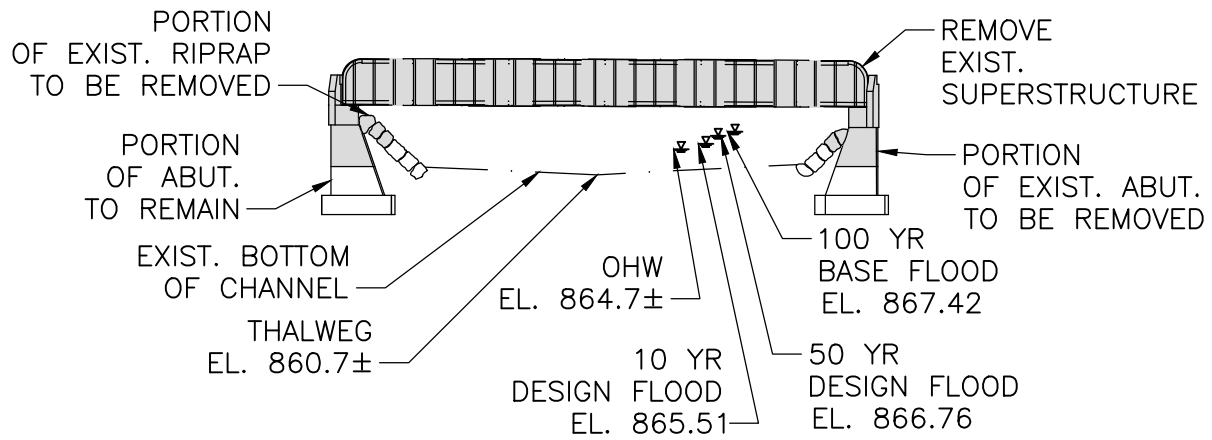
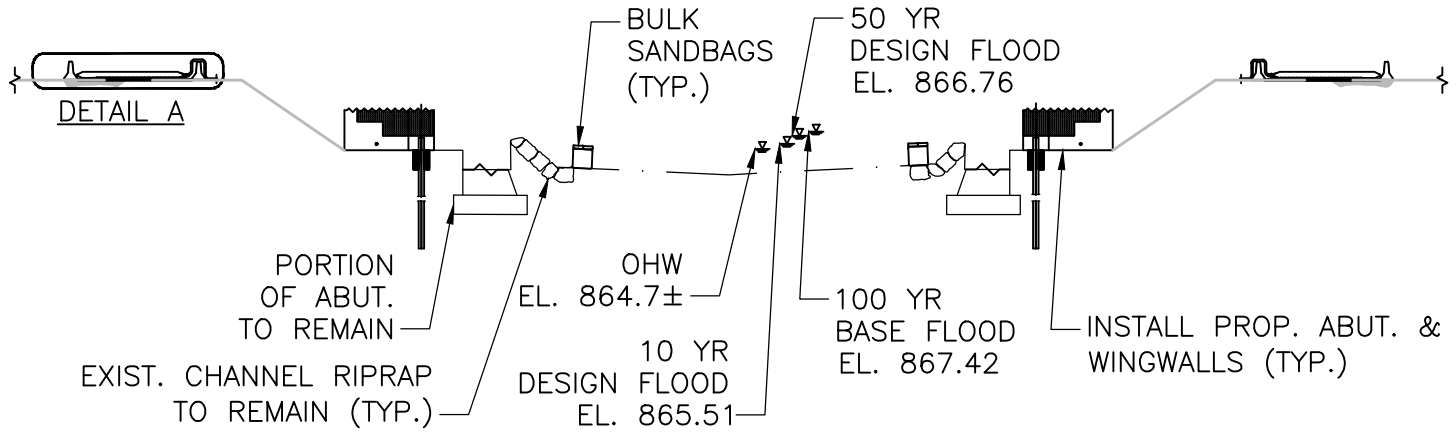


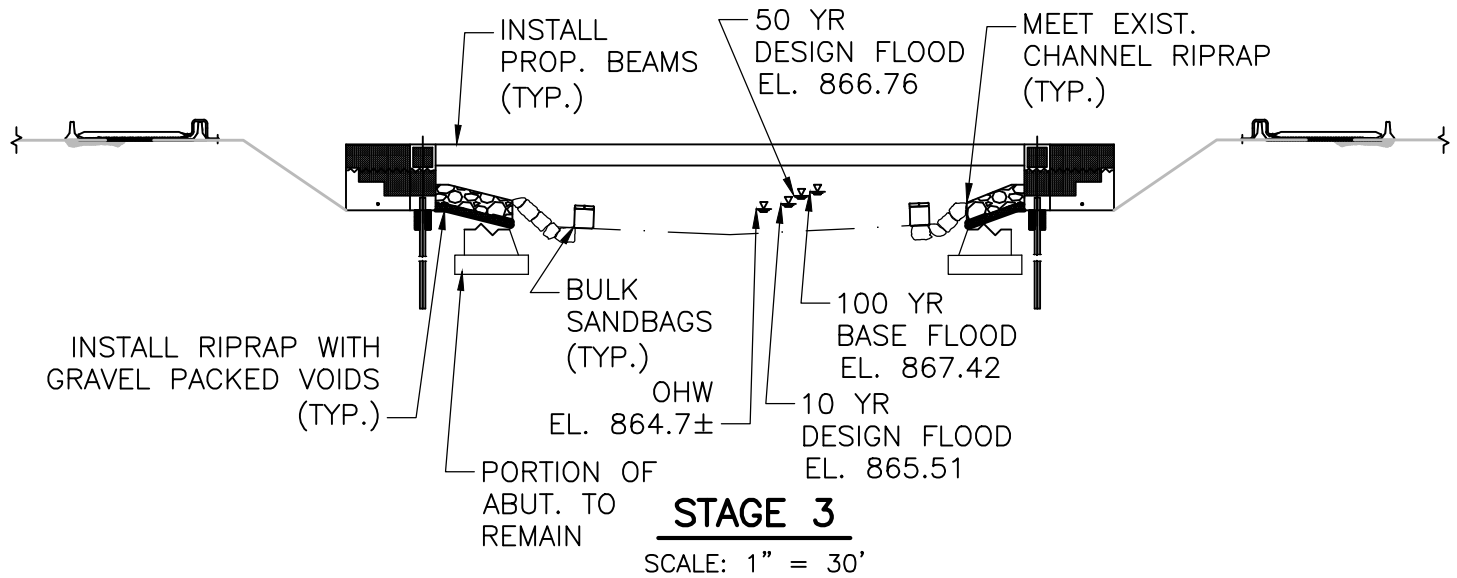
STAGE 1

SCALE: 1" = 30'



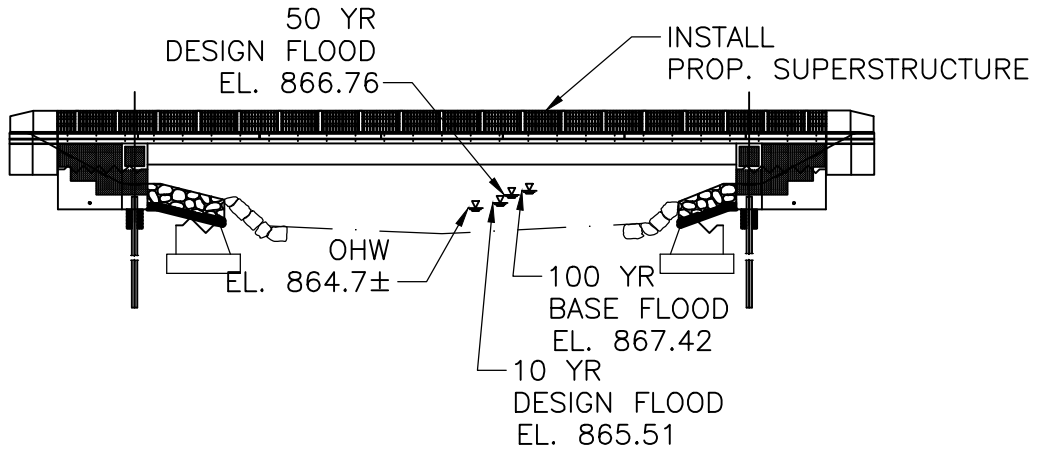
STAGE 2

SCALE: 1" = 30'



STAGE 3

SCALE: 1" = 30'



STAGE 4

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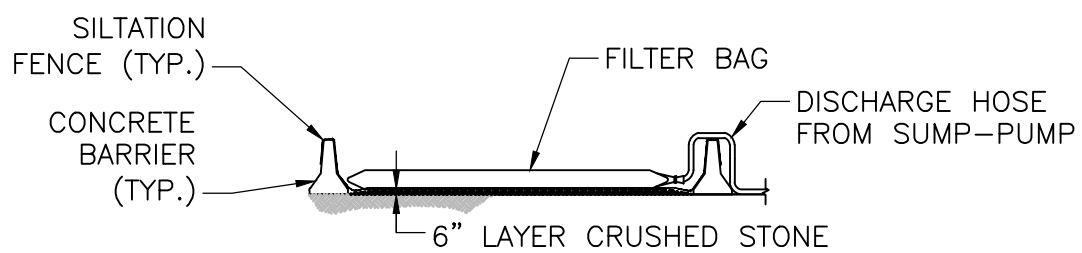

DETAIL A

SCALE: 1" = 10'

PREPARED FOR:

massDOT Massachusetts Department of Transportation Highway Division

MASSDOT HIGHWAY DIVISION
10 PARK PLAZA, BOSTON, MA 02116

STAGE 1-4 CONTROL OF WATER ELEVATIONS

Source:

BRIDGE REPLACEMENT PROJECT
QUALITY STREET OVER HOOSIC RIVER,
ADAMS, MA
BERKSHIRE COUNTY

Job No.: 610777 Date: 1/30/2025

Scale: 1" = 30' Revised:

Description: COW Figure: 12 OF 13

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Proposal No. 610777-131930

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Proposal No. 610777-131930

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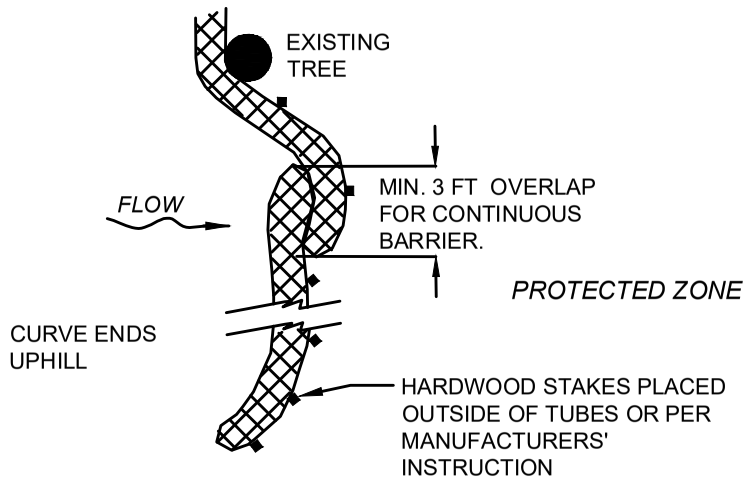


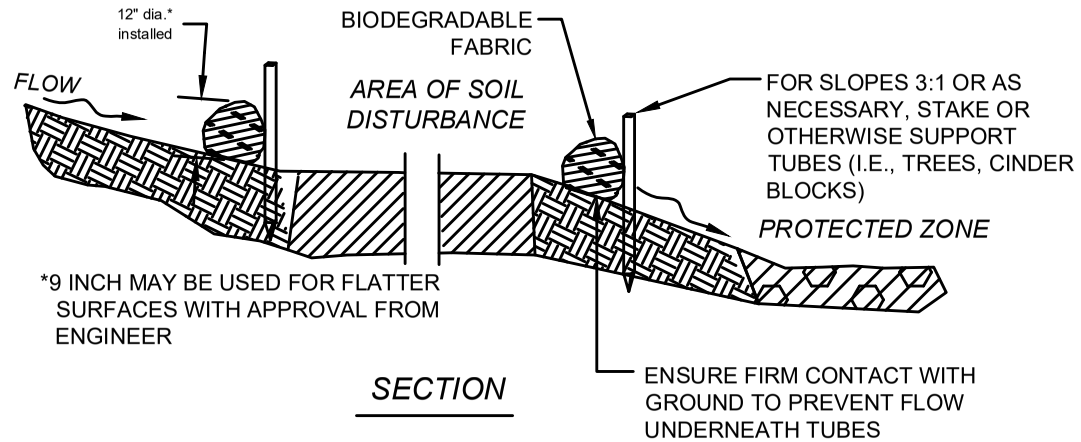
PLACE TUBE AS CLOSE TO LIMIT OF SOIL DISTURBANCE AS POSSIBLE, ALONG CONTOURS, AND PERPENDICULAR TO FLOW.

ADJUST LOCATION AS REQUIRED FOR OPTIMUM EFFECTIVENESS. DO NOT INSTALL IN WATERWAYS.

PLAN VIEW

REDUCE HIGH WATER FLOW ONTO WORK ZONE

CAPTURE SEDIMENT AND PREVENT FLOW OFF SITE



SECTION

SEDIMENT BARRIER - COMPOST FILTER TUBE

NOT TO SCALE

PREPARED FOR:
massDOT Massachusetts Department of Transportation Highway Division
MASSDOT HIGHWAY DIVISION
10 PARK PLAZA, BOSTON, MA 02116

DRAINAGE & SEDIMENT CONTROL DETAILS

Source:

BRIDGE REPLACEMENT PROJECT
QUALITY STREET OVER HOOSIC RIVER,
ADAMS, MA
BERKSHIRE COUNTY

Job No.: 610777 Date: 1/30/2025
Scale: NOT TO SCALE Revised:
Description: DETAILS Figure: 13 OF 13

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DOCUMENT A00840

MASSACHUSETTS
Department of Environmental Protection

Water Quality Certificate Application

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MassDOT #610777 Quality Street Over Hoosic River (A-04-038) Bridge Replacement Project

Adams, Massachusetts

401 WQC Application

February 2025

PREPARED FOR

Massachusetts Department of Transportation (MassDOT)
Highway Division
10 Park Plaza, Boston, MA 02116

PREPARED BY

BSC GROUP
BUILD | SUPPORT | CONNECT
1 Mercantile Street,
Suite 610,
Worcester, MA 01606

Maura Healey, Governor
Kimberley Driscoll, Lieutenant Governor
Monica Tibbits-Nutt, Secretary & CEO
Jonathan L. Gulliver, Highway Administrator

MassDOT
Massachusetts Department of Transportation
Highway Division

January 31, 2025

Heidi Davis, Senior Environmental Analyst & Highway Unit Supervisor
Massachusetts Department of Environmental Protection
Wetlands and Waterways Program
100 Cambridge Street, Suite 900
Boston, MA 02114

SUBJECT: MassDOT Project 610777
Quality Street over Hoosic River (A-04-038)
Bridge Replacement Project
Adams, Massachusetts
401 WQC

Dear Ms. Davis,

The Massachusetts Department of Transportation – Highway Division (MassDOT) (the Applicant) is submitting this application for a Massachusetts Section 401 Water Quality Certification (401 WQC) (BRP WW 11 – Minor Project Certification). This application is being submitted to the Massachusetts Department of Environmental Protection (MassDEP) to request authorization for project activities associated with the replacement of the structurally deficient bridge (A-04-038) that carries Quality Street over the Hoosic River in Adams, MA (42.608989 N, 73.131334 W). This project is being filed under the MassDOT bridge exemption as specified in the 2014 Transportation Bond Bill. The bridge replacement design is substantially the functional equivalent of, and in similar alignment to, the existing bridge. MassDOT held a prefiling meeting on January 8, 2025.

As a result of the proposed work, approximately 431 square feet (sf) of temporary impacts below the Ordinary High Water (OHW) Mark of the stream are anticipated. Impacts will be the result of temporary construction needs for control of water. The proposed work will result in 109 lf of temporary/in-kind bank impact from dewatering and access to remove and replace riprap. Efforts have been made to avoid, minimize, and mitigate impacts where possible.

The project proponent 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.

If you have questions regarding the subject project, please contact me by email at courtney.l.walker@dot.state.ma.us, or at (857) 262-0757.

Sincerely

Ten Park Plaza, Suite 7360, Boston, MA 02116
Tel: 857-368-4636, TTY: 857-368-0655
mass.gov/massdot

Courtney Walker

Courtney Walker, Wetlands and Water Resources Coordinator (Bridges)
MassDOT - Highway Division, Environmental Services

CC: Gautam Sen, MassDOT (Project Manager)
Ryan Hale (MassDEP)
Dan Vasconcelos, USACE
Michael Joa (MassDOT Wetlands)
Sara Kreisel, PWS, BSC Group
Adams Conservation Commission
Tyler Lewis (MassDEP)
Kevin Newton (USACE)
Micah Morrison, PE, BSC Group
Diana Walden, BSC Group

Ten Park Plaza, Suite 7360, Boston, MA 02116
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Quality Street over the Hoosic River
Bridge Replacement Project
401 WQC Application

---

401 WQC Form - BRP – WW 11 Minor Project Certification

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Attachment B
USGS Locus Map
Aerial Locus Map
Environmental Resources Map
Soils Map
FEMA FIRMette
Site Photographs

Attachment C
Alternatives Analysis /
Stream Crossing Evaluation Worksheet
USGS Stream Stats

Attachment D
Habitat Assessment Map
NHESP – MESA Checklist and Supplemental Materials
USFWS Programmatic Biological Opinion (NLAA)

Attachment E
MA Historical Coordination
Tribal Coordination

Attachment F Stormwater Management Memo

Attachment G
Project Plans
Construction Details
Specifications

BSC GROUP
BUILD | SUPPORT | CONNECT

Attachment A

MassDOT Project no. 610777
Quality Street over the Hoosic River
Bridge Replacement Project
401 WQC Application

Project Narrative

BSC GROUP
BUILD | SUPPORT | CONNECT

1. Introduction

The Massachusetts Department of Transportation – Highway Division (MassDOT) (the Applicant) is submitting this application for a Massachusetts 401 Water Quality Certification (401 WQC) BRP WW 11 – Minor Project Certification. This Project is also being submitted as a Section 404 Self-Verification (SV) Notification under the Federal Clean Water Act (CWA). This application is being submitted to the Massachusetts Department of Environmental Protection (MassDEP) to request authorization for project activities associated with the replacement of the bridge that carries Quality Street over the Hoosic River (Bridge No. A-04-038) (hereby referred to as "the bridge") in Adams, MA (See **Attachment B** for Site Figures and Photographs). The existing bridge is structurally deficient. The Applicant proposes to replace it with a new bridge in a similar horizontal and vertical alignment, therefore, this application is being filed under the 2014 Massachusetts Transportation Bond Bill's Bridge Exemption The project involves mitigation measures intended to address existing structural and hydraulic deficiencies, while also minimizing disturbances to the surrounding environment and improving openness.

Due to the nature of the bridge replacement activities, impacts to jurisdictional resource areas are unavoidable. As a result of the proposed work, approximately 431 square feet (sf) of temporary impacts to Waters of the United States (WOTUS) and 109 linear feet (lf) of temporary bank impacts are anticipated for the placement of sandbags for dewatering and phasing of water control along, and below the Ordinary High Water Mark (OHWM) of the river. Efforts have been made to avoid and minimize impacts where possible, and mitigation measures will be implemented to minimize disturbance during construction, and the resource areas will be returned to preconstruction conditions to the extent practicable.

The following sections detail the site conditions and the proposed project activities. As a bridge replacement project, the project has been designed to comply to the maximum extent practicable, with the Massachusetts Stream Crossing Standards as referenced in the general conditions of the USACE General Permits (GPs) for the Commonwealth of Massachusetts. The project was designed to be in full compliance with the Standards where the design improves openness and habitat connectivity. Authorization is being requested pursuant to GP 23: Linear Transportation Projects and Stream Crossings.

Please refer to Project Site Plans (**Attachment G**) for additional detail.

2. Existing Conditions

The project site is located on Quality Street, located just east of Grove Street (Route 8) and south of the Adams town center in Adams, MA. Quality Street is classified as an Urban Local Road according to MassDOT guidelines. It is a two-lane paved road situated in a north-south orientation. Land classification in the area of the project location generally consists of transportation corridors, forests, open water, and open space/recreation. The project area is limited to previously disturbed existing roadway and embankments. The adjacent jurisdictional resource areas are encumbered by the existing bridge and crossing. The project area relies on country drainage, whereby stormwater flow travels along the approach roadway and informally runs off down the side slopes. Overhead utilities and existing utilities carried by

the bridge (water mains and a gas line) will need to be temporarily relocated. The project area occurs entirely within the existing state roadway layout.

The existing structure consists of a single span measuring 82 feet long. The existing roadway is a two-lane, two-way road approximately 24 ft wide with no pavement markings to indicate lane or shoulder width. There is 11,599 sf impervious area within the project limits.

Waters of the United States

BSC Group, Inc. (BSC) Wetland Scientists delineated the boundary of existing jurisdictional resource areas within and in the immediate vicinity of the bridge in March 2021, and then re-reviewed in May 2022. Wetlands were delineated in accordance with the methods in the USACE 1987 Wetland Delineation Manual and 2012 Northcentral and Northeast Regional Supplement. Existing conditions, stream banks, and vegetated wetlands, in relation to the proposed activities are shown in mapping and photos in **Attachment B** and Project Site Plans in **Attachment G**.

Waterbody/Waters of the US

Hoosic River (Stream 1):

The Hoosic River (Stream 1) is a Coldwater Fisheries Resource (CFR) that generally flows from south to north. The Hoosic River is a tributary of the Hudson River Watershed. According to the USGS StreamStats Report for this area, the drainage area at the project area crossing is approximately 35.9 square miles. The Hoosic River was directly observed as having a bankfull width of approximately 55-feet upstream and downstream of the existing crossing, and a bankfull depth of approximately 3-feet deep or more with relatively fast-moving flow. The banks of the Hoosic River are comprised almost entirely of riprap at the crossing, are littered with detritus, and overall are well-vegetated with shrubs and a mature woody canopy cover in the riparian corridor. The streambed of the Hoosic River is generally characterized by cobbles. The OHWM of the Hoosic River is established at the observed bankfull conditions, and all areas below this limit are jurisdictional WOTUS with a direct, relatively permanent connection to traditional navigable waters.

Vegetated Wetlands / Waters of the US

No vegetated wetlands were delineated within the project limits.

FEMA Floodplain

The 100-year floodplain is the estimated maximum lateral extent of flood water which will theoretically result from the statistical 100-year or 1% annual chance frequency storm. According to the FEMA Flood Insurance Rate Maps for Adams (Community Panel Number 250016 005 B dated August 1, 1983), the project lies within a mapped Zone A floodplain.

Rare, Threatened, and Endangered Species and Habitat

Based on review of MassMapper, which contains most-recently published, publicly available data issued by the Natural Heritage and Endangered Species Program (NHESP), the project area is located within mapped priority habitat for state-listed rare and endangered species (PH 1827 and EH 1201), specifically, the longnose sucker (*Catostomus catostomus*). No certified or potential vernal pools (CVP or PVP) are mapped near this crossing. MassDOT has submitted a Massachusetts Endangered species Act (MESA) Checklist to NHESP to ensure the project does not affect any state-listed species. A copy of this submittal is included in **Attachment D**.

According to the US Fish and Wildlife Service (USFWS) Information for Planning and Consulting (IPaC) tool, only the tricolored bat (*Perimyotis subflavus*) is listed as *proposed endangered* within the limits of the project area (USFWS IPaC Species List). A bridge assessment was completed in October 2023 and no guano was identified. The MassDOT Wildlife and Endangered Species Unit received a Not Likely to Adversely Affect (NLAA) concurrence determination under the Programmatic Biological Opinion (PBO) that the project action will not jeopardize the continued existence of a proposed species (Included in **Attachment D**). In anticipation of the 2023 up-listing of the northern long-eared bat (NLEB) (M*yotis septentrionalis*), MassDOT performed an acoustic survey in July 2023 and did not detect any NLEBs. Additionally, since

the project is not within mapped habitat for the NLEB, no further action is required to have ESA compliance at this time. The project will minimize disturbance to additional vegetation to the maximum extent practicable. The FHWA, FRA, FTA Programmatic Consultation for Transportation Projects affecting NLEB or Indiana Bat, NLAA Letter is included in **Attachment D.**

The IPaC also identified the Monarch Butterfly (*Danaus plexippus*) within the project area. However, it is currently listed as *proposed* threatened by USFWS; therefore, no conservation measures are required at this time.

The project does not occur within Essential Fish Habitat (EFH) mapped locations.

Other Environmental Resources

According to MassGIS data layers and classifications provided in 314 CMR 4.00, the project area does not fall within an Outstanding Resource Waters (ORW) nor Areas of Critical Environmental Concern (ACEC) (301 CMR 12.00). The Hoosic River is considered a Coldwater Fisheries Resource (CFR) and is therefore a Critical Area for stormwater management calculations. It is listed as an EPA Category 5/303(d) impaired waterbody requiring a restorative plan, such as the establishment of a Total Maximum Daily Load (TMDL).

The project does not occur within or 0.25 miles from, a National Wild and Scenic River or any bordering or contiguous wetlands thereof. There are no National Wildlife Refuges, National Forests, National Marine Sanctuaries, National Parks, nor any other areas administered by the National Park Service, U.S. Fish and Wildlife Service, or U.S. Forest Service, and USACE project lands and easements within the project vicinity.

The project does occur adjacent to the Quality Street Field, an Article 97 property owned by the Town of Adams. The Project will not be impacting the recreational field or resulting in any take of the Article 97 parcel. The Ashuwillticook Rail Trail also runs parallel to the Hoosic River in the Project area. While not specifically mapped as Article 97, it is land owned by MassDOT and managed by the Department of Conservation and Recreation (DCR) for public transportation and recreation. A two-year temporary easement will be required to build a roadway detour over the trail between South Willow Street and Route 8. Otherwise, a number of homes on South Willow Street would be fully isolated while the Quality Street bridge is under construction. A permanent utility easement is also being reviewed for realigning a buried natural gas pipeline that services the homes.

3. Alternative Analysis

The existing bridge over the Hoosic River has been determined to be structurally deficient.

The design of the proposed bridge has been analyzed by engineers with four possible alternatives: a no build alternative, a proposed bridge replacement with prestressed concrete northeast deck bulb tee (NEDBT) beams (Alternative 1, *Preferred Alternative*), a proposed bridge replacement with steel beams (Alternative 2), or a proposed bridge replacement with precast concrete box beams (Alternative 3). Please refer to **Attachment C** for a detailed analysis of the different stream crossing alternatives and their abilities to meet Stream Crossing Standards (no build versus the preferred alternative). The option of the bridge replacement (Alternative 1) meets the standards and was selected for the time of construction, cost, and limited environmental impacts proposed.

No-Build Alternative

While the no-build alternative fully meets stream crossing standards and would not result in any impacts to wetland resource areas, it is necessary to replace the bridge in order to reduce the risk of damage or injury from any type of bridge failure. This will restore the full capacity of the roadway. Therefore, a no-build alternative would result in

continued deterioration to the point that the bridge and roadway connection would be closed.

Alternative 1 - Bridge Replacement - Prestressed Concrete Northeast Deck Bulb Tee (NEDBT) Beams (*Preferred Alternative*)

The option of the bridge replacement with NESBT beams (Alternative 1) meets the Stream Crossing Standards and was selected for the reduced time of construction, cost, reduced future maintenance needs, and limited environmental impacts proposed. Retaining the base of the existing abutments allows extensive excavation avoidance within the project footprint. In total, there are approximately 431 sf of temporary impacts to the streambed, and no impacts to vegetated wetlands.

Alternative 2 - Bridge Replacement – Steel Beams

The option of the bridge replacement with steel beams (Alternative 2) meets the Stream Crossing Standards. This alternative was not selected due to the increased cost and increased future maintenance that would be required. The abutments would have been removed to the same extent as Alternative 1; therefore, there would have been similar environmental impacts of approximately 431 sf of temporary impacts to the streambed, and no impacts to vegetated wetlands.

Alternative 3 - Bridge Replacement - Precast Concrete Box Beams

The option of the bridge replacement with precast concrete box beams (Alternative 3) meets the Stream Crossing Standards. This alternative was not selected due to the limited space that would have been provided for future utilities. The abutments would have been removed to the same extent as Alternative 1; therefore, there would have been similar environmental impacts of approximately 431 sf of temporary impacts to the streambed, and no impacts to vegetated wetlands.

4. Proposed Project

The purpose of the project is to replace a structurally deficient bridge with a new bridge along a similar horizontal and vertical alignment. The project activities include the replacement of the bridge over the Hoosic River with a portion of the existing bridge abutments to remain. The full sequence of project construction activities will take two construction seasons (approximately two years) to complete. The project involves mitigation measures intended to address existing structural deficiencies, while also minimizing disturbances to the surrounding environment and improving openness. Approximately 0.20 acres of tree-clearing, grubbing, and trimming is proposed. The roadway is proposed to be re-striped with two 11-foot travel lanes with 2-foot shoulders and safety curbs and railings. The overall width of the proposed bridge will decrease by approximately 2-feet. Roadway reconstruction of Quality Street will occur 164-feet to the west of the bridge and 156-feet to the east for improved roadway approaches. The total length of the project area is approximately 416-feet. Overall, impervious area within the project area will increase from 11,599 sf to 13,395 sf. The following project components detail the proposed project activities. Please refer to Project Site Plans (**Attachment G**) for additional details.

- Proposed Bridge – The proposed bridge is a prestressed concrete beam structure that will follow a similar horizontal and vertical alignment as the existing bridge. The proposed structure span will increase from 82 feet to 96 feet, and the proposed clear span length will increase from 80-feet to 92-feet. The overall transverse width of the bridge will be 29.25-feet to accommodate safety improvements. The proposed bridge will be supported by integral abutments while a portion of the existing bridge abutments and existing channel riprap will remain in place.

- Temporary Utility Bridge – There are two water mains and a gas line on the bridge that need to be relocated during demolition and construction. In order for the water mains and the gas line to remain in continuous service, a temporary utility bridge needs to be built during construction. The temporary utility bridge consists of a panelized truss structure supported by two reinforced concrete abutments. These abutments will be constructed above the OHW elevation.
- Channel Scour Protection – The proposed scour protection will consist of 36-inches of riprap with gravel packed voids. In terms of riprap, each stone shall weigh not less than 50 lb and at least 75% of the volume shall consist of stones weighing not less than 500 lb each. In addition, 12-inches of crushed stone is proposed below the riprap. The proposed riprap with gravel packed voids will meet the existing channel riprap to remain.
- Roadway Reconstruction – Portions of the road will be widened, and the slopes reduced. However, in areas where slopes with a 1:2 vertical: horizontal ratio or less exist, they will be regraded (without impacting the river).

Work in Waterbody

The bridge replacement project is considered a redevelopment project. Impacts to WOTUS are unavoidable; however, upon completion of the project, slopes will be stabilized, and temporary impacts to streambank and bed will be restored into the natural stream channel. In order to reduce impacts to the Hoosic River, the clear span will increase from 80 feet to 92 feet, portions of the existing abutments are proposed to be left in-place, as is the majority of the existing riprap scour protection. The existing abutments are proposed to be cut-down in-place, and the riprap to be maintained which will reduce environmental impacts adjacent to the bank, as well as to the bank and waterbody itself. Additionally, the selection of the proposed pile-supported abutments significantly decreases the amount of excavation and impacts required for the new structure.

No work is proposed within vegetated wetlands at the Project site. A description of the impacts to the waterbody is provided below.

Table 1 below provides an overview of impacts with regard to each feature:

Table 1 – Summary Waterbody Impacts

Resource Area	Impact Type	Surface Area Impacts Square Feet (SF) / Linear Feet (LF)
Waterbody/Waters of the US (WOTUS)	Permanent	0 sf
	Temporary	431 sf
Bank	Permanent	0 lf
	Temporary	109 lf *

*Due to access/dewatering at each bank/bridge wall while removing the abutment.

Hoosic River: Waterbody/Water of the US

The existing banks will be impacted to some extent as a result of the temporary proposed placement of water control sandbags. The banks will generally be reconstructed to tie-into the existing channel at the completion of construction, to the maximum extent practicable. Additionally, a total of approximately 431 sf temporary impacts below the OHWM of the Hoosic River (WOTUS) are proposed due to temporary construction needs for control of water. The main existing channel will not be disturbed. Sandbags will be used during construction to create a safe dry-working environment for the existing abutments to be removed and allows water to continue to flow through the channel. The sandbags will result in 431 sf of temporary impacts to the streambed and 109 lf of temporary impacts to the bank. Existing riprap scour protection material will be stockpiled and reused as practicable during restoration. Upon completion of the proposed bridge replacement activities, the streambed elevation will be restored to its pre-construction condition and profile. No dredge or fill of the streambed is proposed. Please refer to Project Site Plans (**Attachment G**) for additional details.

Proposed impacts to the waterbody will be avoided and mitigated to the maximum extent practicable by keeping the riprap and existing abutments from the existing structure in-place and constructing the new abutments behind the existing abutments.

5. Stormwater Management

MassDEP's stormwater management standards were incorporated into the 401 WQC Regulations on January 2, 2008 (see 314 CMR 9.06(6)(a)). According to the Regulations, the proposed work is considered a redevelopment project. The Project area currently exhibits country drainage where stormwater flows across the bridge and informally runs off down the side slopes. Just outside the limit of work, two existing catch basins collect runoff from Quality Street, and they discharge into the Hoosic River via a 12-inch reinforced concrete pipe (RCP) through a headwall with existing stone protection. The limited existing space within the state-owned roadway layout makes it difficult to significantly alter existing conditions to accommodate new stormwater control measures.

Overall, impervious area within the project area will increase from 11,599 sf to 13,395 sf. Since the proposed bridge replacement is considered a redevelopment project and will not significantly increase the amount of impervious area at the site, the project should meet all applicable standards of the MassDEP Stormwater Management Handbook to the maximum extent practicable and to improve upon existing conditions. In accordance with the DEP Stormwater Management Handbook, Standards 1,8, 9, and 10 must be met fully, while the remaining standards must be met to the maximum extent practicable. With Critical Areas present in some portions of the project area, Standard #6 also requires that direct discharges are pulled back and the best treatment available is provided.

A comprehensive review of the site was performed to identify stormwater control measures (SCMs) and Low Impact Development Techniques (LIDs) that could be incorporated to provide improvements over existing conditions. Due to the limited increase in impervious areas, as well as the limited area within the highway layout, it is not feasible to incorporate SCMs or LIDs. Due to limited right-of-way, side slopes are proposed within close proximity to both sides of the roadway. The site currently utilizes country drainage, with runoff sheet flowing off the roadway, and is proposed to be maintained. In this situation, the increased bridge span allows for greater stormwater infiltration via country drainage to occur further away from the rivers' edge than is currently occurring. Two catch basins to the west of the bridge and at the western project limits will be replaced with deep sump catch basins. The area surrounding the proposed structure will be loamed and seeded to the extent practicable to support greater infiltration. A Stormwater Management Memorandum which addressed compliance with each Stormwater Standard, has been prepared for this project, and is included in **Attachment F**. The memorandum also includes an SCM alternatives analysis graphic provided as Figure 6, which reviews the locations considered for stormwater improvement.

6. Construction Considerations and Sequencing

Installation of the recommended scour protection will require a control of water system during construction. Control of water during construction typically includes water diversion and dewatering operations to maintain dry conditions during scour protection placement. The final design of the control of water system is the responsibility of the Contractor.

Typical systems for water diversion primarily include cofferdams, which can incorporate large sandbags or other proprietary systems. The implemented control of water system will be based on site constraints, actual flowrates during construction, and specific project permitting requirements. For the purpose of the permit applications, it is assumed that sandbag diversions will be adequate and preferrable. Final means and methods are up to the Contractor.

The temporary excavation support system will be designed by the Contractor. The Contractor will design the support of excavation based on site constraints, traffic control plan and other methods of construction.

Typical construction equipment that may be used to complete the project may include backhoes, excavators, bobcats, cranes, trucks/dump trucks, tractor trailers, asphalt pavers, material transfer machines, compactors, miscellaneous support vehicles and hand tools, etc. The limits of work shown should be sufficient for demolition/construction and staging. A temporary access road from Route 8 will be required as noted on the plans.

The construction sequence is generally proposed as outlined below:

- A construction start notification will be made to required Agencies prior to the start of work.
- Meeting of construction personnel, site inspectors, and a wetland scientist will occur to discuss expectations and environmental permit requirements.
- At the start of construction activities, the limits of the adjacent existing jurisdictional resource areas will be marked in the field using brightly colored flagging.
- Install erosion controls for temporary work.
- Install temporary access road and temporary utility bridge.
- Temporarily relocate utilities (water, gas and overhead wires) to be supported by temporary utility bridge.
- Install detour signage.
- Closure of existing roadway.
- Installation of erosion controls (Construction Phase 1).
- Removal of existing superstructure of bridge and portions of the abutments (Construction Phase 1).
- Installation of cofferdams/sandbags (Construction Phase 2).
- Water control and dewatering.
- Installation of proposed abutment and wingwalls
- Placement of riprap for scour protection / placement natural substrate in streambed (Construction Phase 3).
- Removal of cofferdams/sandbags.
- Installation of new bridge superstructure (Construction Phase 4).
- Construction and pavement of roadway approaches and related work.
- Site restoration including removal of temporary access road and temporary utility bridge as well as site stabilization and seeding.
- Remove detour signs and open new bridge to traffic.
- Remove erosion and sedimentation controls.

7. Mitigation Measures

The proposed project will occur within the jurisdictional limits of WOTUS; therefore, the project has been designed to incorporate construction Best Management Practices (BMPs) to ensure adequate protection to jurisdictional areas within proximity of the project location. This will be achieved specifically by phasing project activities and limiting alteration within resource areas to the maximum extent practicable. Disturbed areas within affected resources will be stabilized and restored following the completion of project activities.

Erosion and Sedimentation Controls

Sedimentation barriers, such as compost filter tubes, or similar, will be installed at the limits of work. Sedimentation barriers will be checked on a weekly basis and following significant storm / rainfall events. Sediment controls will remain in-place during all phases of the project and will be removed once the area is sufficiently stabilized. Please refer to **Attachment G** (Site Plans) for erosion and sedimentation control details and the proposed locations of controls.

Construction Stockpiling Locations and Staging Areas

All stockpile and staging areas will be located within the existing roadway layout or within MassDOT approved locations; and while locations are to be determined by the Contractor, they will all require approval by MassDOT prior to use. In the event stockpiled materials must be left on site overnight, the piles will be covered with tarps and surrounded by sediment control measures (e.g. compost filter tubes). Staging and storage areas will be outside of all jurisdictional resource areas where feasible and practicable.

Water Control Measures and Dewatering

Prior to in-water work, cofferdams will be installed to allow construction activities to occur in dry conditions. As such, work may require dewatering. The contractor will be required to develop and maintain a Construction Water Management Plan that is prepared in accordance with all requirements, including but not limited to the MassDOT contract design documents. The means and methods of dewatering shall be as determined by the contractor, pending MassDOT review and acceptance. Flow shall be maintained within the existing channel.

All discharge resulting from dewatering activities shall be directed to temporary sedimentation basins/filter bags as specified by the contractor to control turbidity. At no time shall the discharge be directly released into adjacent resource areas, nor will any settling tank/basin be located within a jurisdictional resource area. If stone or other erosion control is utilized at the outlet of the settling tank/basin, this material will be removed, and the area will be restored to existing conditions prior to the completion of the project. Please refer to **Attachment G**, Project Site Plans for additional detail on proposed water control measures.

8. Stream Crossing General Standards Compliance

The proposed project design complies with the Massachusetts Stream Crossing Standards. The proposed design mitigates for the existing scouring and will not act as a physical barrier to fish and wildlife passage. Please refer to **Attachment C** for further stream crossing alternate analyses and compliance with Stream Crossing Standards.

The following outlines compliance with the Stream Crossing General Standards:

1. *Spans (bridges, 3-sided box culverts, open-bottom culverts or arches) that preserve the natural stream channel are strongly preferred.*

   Meets standard. The existing and proposed structures are span bridges, and the natural stream channel will be returned to preconstruction conditions.

2. *If a culvert, then it should be embedded:*

   - *a minimum of 2 feet for all culverts,*
   - *a minimum of 2 feet and at least 25 percent for round pipe culverts*
   - *When embedment material includes elements > 15 inches in diameter, embedment depths should be at least twice the D84 (particle width larger than 84 % of particles) of the embedment material.*

   N/A, the proposed replacement is a span bridge not a culvert.

3. *Spans channel width (a minimum of 1.2 times the bankfull width).*

   Meets standard. According to field measurements, bankfull width is 55 feet. To meet the Standard, the crossing would need to be 66 feet wide, and the proposed clear span of the bridge will exceed this measurement at 92 feet. Even with the USGS StreamStats report estimate of an approximately 72-foot wide bankfull width, the proposed bridge replacement would meet the 1.2 times standard span.

4. *Natural bottom substrate within the structure.*

   Meets Standard, no permanent impacts to the streambed are proposed, the existing natural bottom substrate below the span bridge will remain. The streambed will be returned to pre-construction conditions.

5. *Designed with appropriate bed forms and streambed characteristics so that water depths and velocities are comparable to those found in the natural channel at a variety of flows.*

   Meets Standard. Improved flow conditions through the bridge, with increased hydraulic opening to be able to handle required flow. The proposed streambed will be restored with appropriate natural streambed conditions and characteristics.

6. *Openness> 0.82 feet (0.25 meters).*

   Meets Standard. The existing openness ratio is well above optimal standards and the proposed openness ratio is 25.89.

7. *Banks should be present on each side of the stream matching the horizontal profile of the existing stream and banks.*

   Meets Standard. The proposed design will not alter the horizontal profile of the existing stream and associated banks.

9. Summary

MassDOT is proposing to replace a structurally deficient, and structurally deficient bridge at Quality Street over the Hoosic River. The design approach taken was to first avoid impacts to WOTUS where feasible, and where unavoidable, to minimize the impacts to the extent practicable and mitigate where applicable. The application further demonstrates that the project can be constructed in accordance with the Massachusetts Stream Crossing Standards. Throughout the project design process, the project team has carefully considered development alternatives and has moved forward with the alternative that has the least impact to WOTUS while satisfying the project goals. Reasonable measures have been taken to avoid, minimize, and mitigate potential adverse impacts which will be temporary in nature and will not constrict the river flow during construction.

Attachment B

MassDOT Project no. 610777
Quality Street over the Hoosic River
Bridge Replacement Project
401 WQC Application

USGS Locus Map
Aerial Locus Map
Environmental Resources Map
Soils Map
FEMA Firmette
Site Photographs

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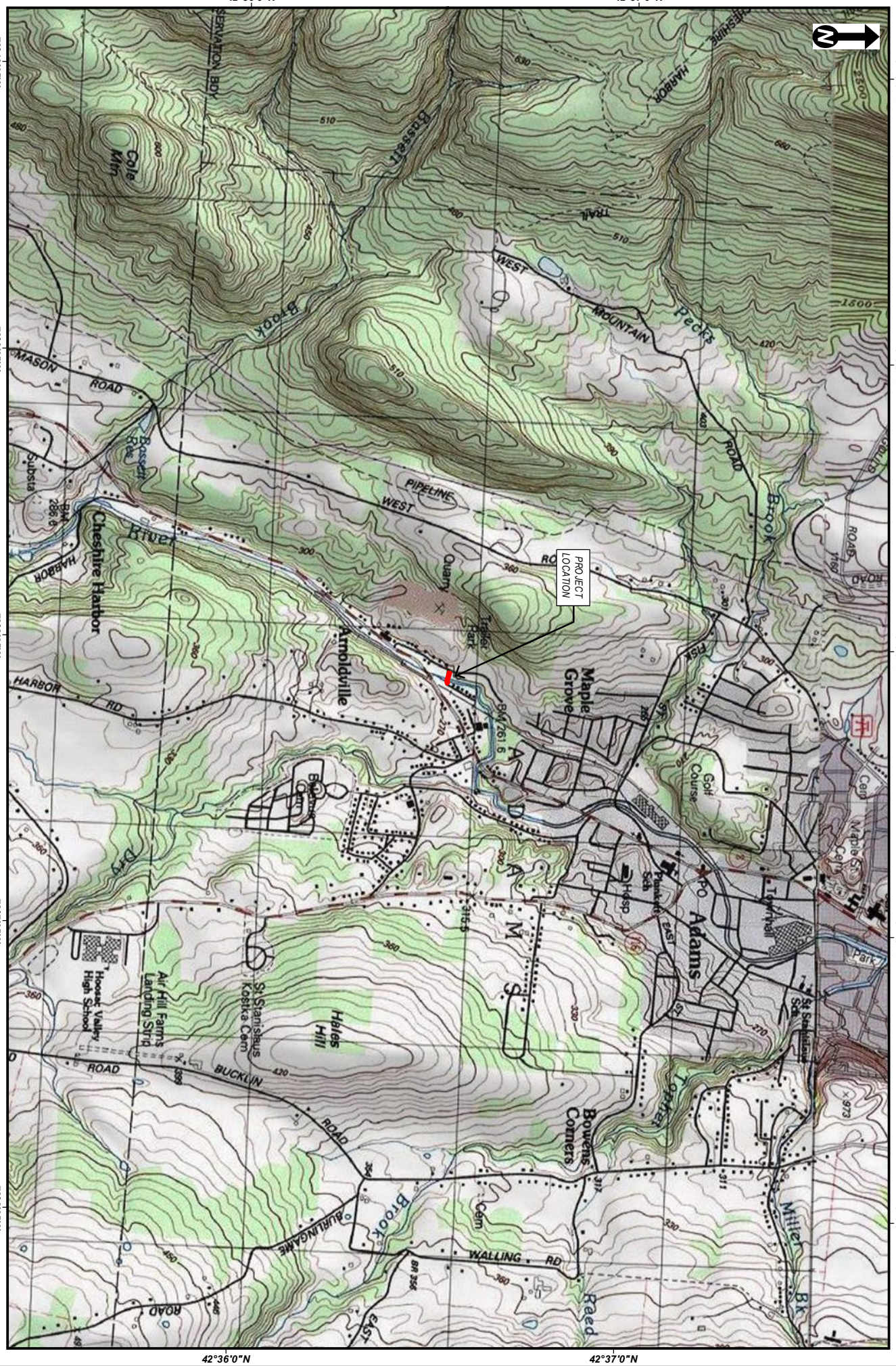

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1 inch = 2,000 feet
0 1,000 2,000
Feet
(Page Size 8.5 x 11)

MASSDOT PROJECT NO. 610777 - ADAMS – BRIDGE REPLACEMENT, A-04-038, QUALITY STREET OVER HOOSIC RIVER

USGS Site Location Map

Adams, MA

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Date Saved: 6/15/2022 3:12:41 PM

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MASSDOT PROJECT NO. 610777 - ADAMS – BRIDGE REPLACEMENT, A-04-038, QUALITY STREET OVER HOOSIC RIVER

USGS Site Location Map
Adams, MA

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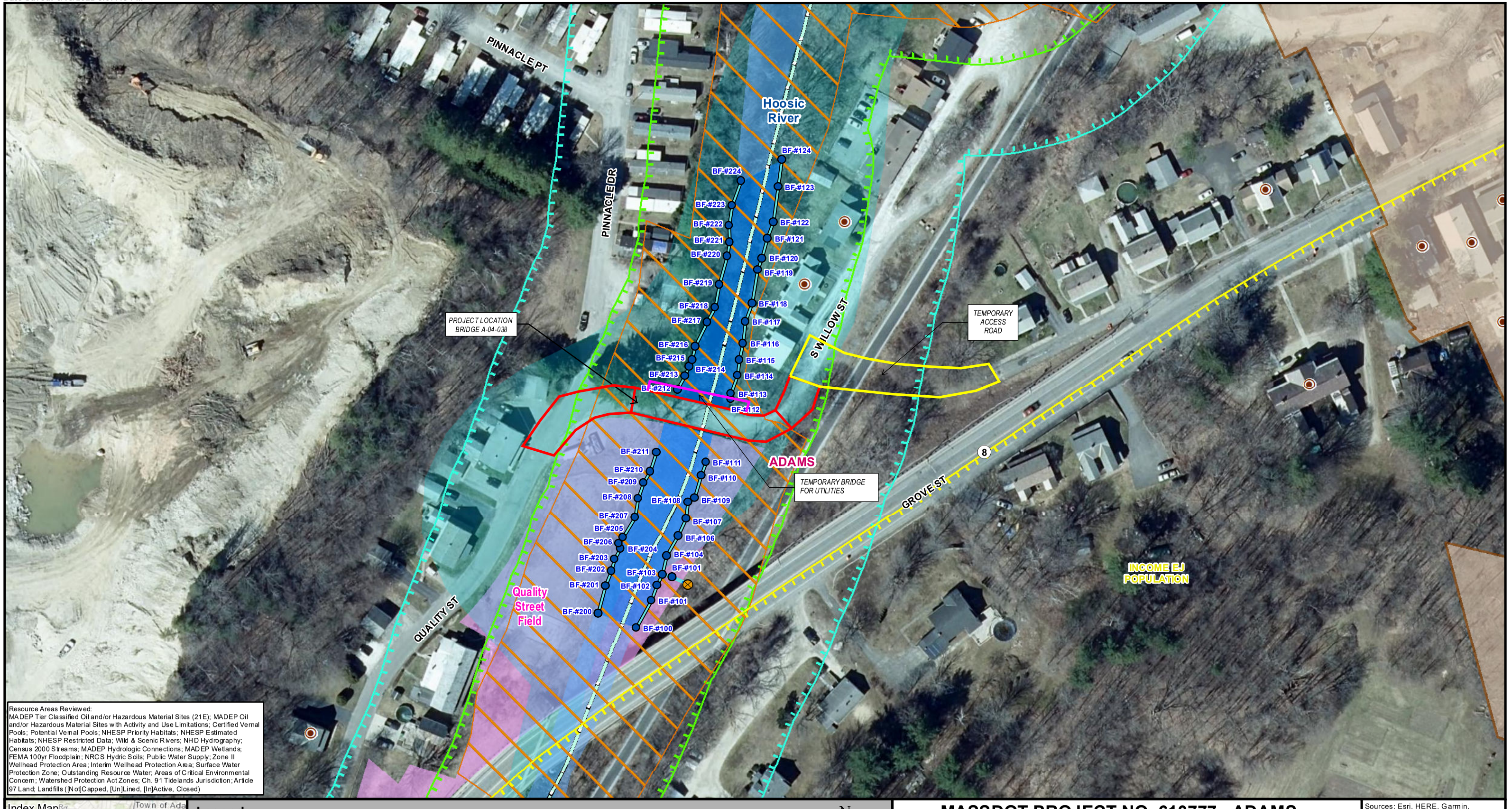
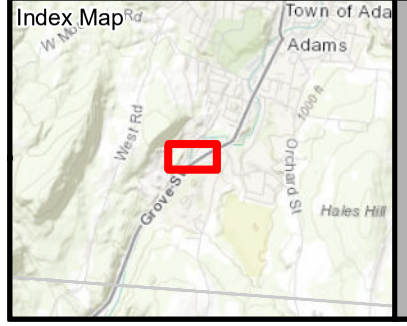


Resource Areas Reviewed:
MADEP Tier Classified Oil and/or Hazardous Material Sites (21E); MADEP Oil and/or Hazardous Material Sites with Activity and Use Limitations; Certified Vernal Pools; Potential Vernal Pools; NHESP Priority Habitats; NHESP Estimated Habitats; NHESP Restricted Data; Wild & Scenic Rivers; NHD Hydrography; Census 2000 Streams; MADEP Hydrologic Connections; MADEP Wetlands; FEMA 100yr Floodplain; NRCS Hydric Soils; Public Water Supply; Zone II Wellhead Protection Area; Interim Wellhead Protection Area; Surface Water Protection Zone; Outstanding Resource Water; Areas of Critical Environmental Concern; Watershed Protection Act Zones; Ch. 91 Tidelands Jurisdiction; Article 97 Land; Landfills ([Not]Capped, [Un]Lined, [In]Active, Closed)

Index Map



Legend

- Limit of Work
- Field Delineated Bank Flag
- Field Delineated Bank
- Field Delineated Stream Centerline
- Field Delineated Stream Area
- Coldwater Fisheries Resources
- MADEP Hydrologic Connections
- MADEP Open Water*
- 100ft Buffer to Wetlands & Streams
- 200ft Riverfront Area
- FEMA 100yr Floodplain - Zone AE (1997)
- NHESP Priority & Estimated Habitats
- MHC Historic Point
- MHC Historic Area*
- Culvert

Environmental Justice Populations 2020

- Income

Article 97 Lands

- Municipal

N

1 inch = 100 feet
0 50 100
Feet

Indicates Layers Set to Transparency

MASSDOT PROJECT NO. 610777 - ADAMS – BRIDGE REPLACEMENT, A-04-038, QUALITY STREET OVER HOOSIC RIVER

Environmental Resources Map

Adams, MA

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

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Proposal No. 610777-131930

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Soil Map—Berkshire County, Massachusetts

Map Scale: 1:2,620 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 35 70 140 210

Feet: 0 100 200 400 600

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

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MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:25,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Berkshire County, Massachusetts
Survey Area Data: Version 19, Aug 27, 2024

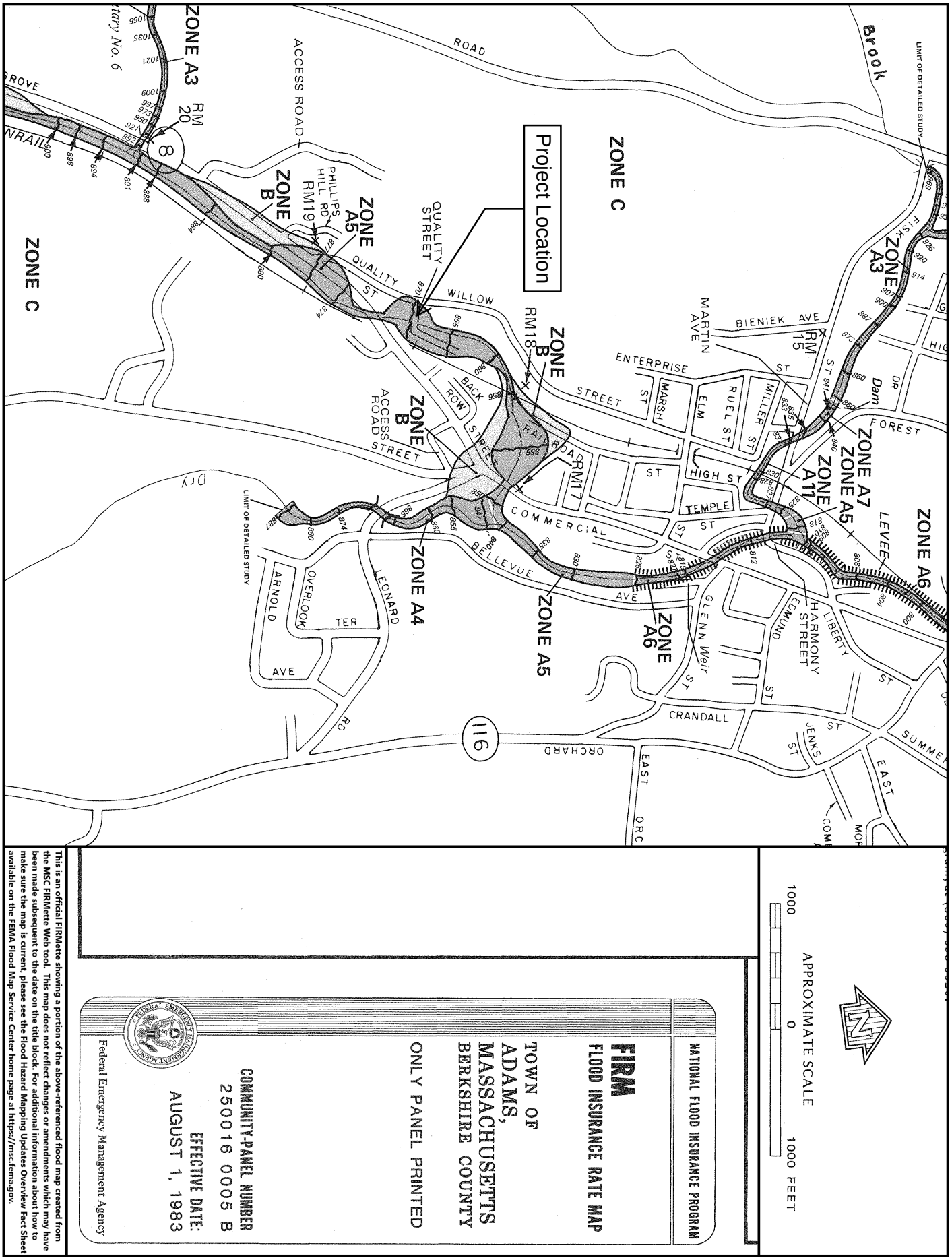
Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Aug 15, 2021—Nov 8, 2021

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
108C	Farmington-Rock outcrop complex, 3 to 15 percent slopes	2.4	6.9%
108E	Farmington-Rock outcrop complex, 15 to 35 percent slopes	0.0	0.0%
267B	Copake fine sandy loam, 3 to 8 percent slopes	16.4	46.6%
267C	Copake fine sandy loam, 8 to 15 percent slopes	6.3	17.8%
267D	Copake fine sandy loam, 15 to 25 percent slopes	0.3	0.9%
298E	Groton and Hinckley soils, 25 to 35 percent slopes	9.7	27.7%
Totals for Area of Interest		**35.2**	**100.0%**



This is an official FIRMette showing a portion of the above-referenced flood map created from the MSC FIRMette Web tool. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For additional information about how to make sure the map is current, please see the Flood Hazard Mapping Updates Overview Fact Sheet available on the FEMA Flood Map Service Center home page at https://msc.fema.gov.

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Massdot Project #610777, Adams Bridge replacement
Quality Street Over Hoosic river
Adams, MA
Site Photographs
November 2020

Photo #1: View west of proposed Quality Street Bridge over the Hoosic River, proposed for replacement. Site work is proposed within the 100-ft Buffer to Bank and the 200-ft Riverfront Area of the Hoosic River; however, minimal in-water work is proposed.

Photo #2: View east of culvert and accompanying intermittent stream that flows west into the Hoosic River. This feature is located upstream and beyond the project limits of the proposed Quality Street bridge replacement.

Photo #3: View south of proposed Quality Street bridge replacement location looking upstream along the Hoosic River. In-water work will be avoided through the installation of new abutments behind the existing abutments. Existing utilities will need to be maintained in a temporary utility bridge/conduit during replacement.

Photo #4: View north of proposed Quality Street bridge replacement location looking downstream along the Hoosic River.

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Massdot Project #610777, Adams Bridge replacement
Quality Street Over Hoosic river
Adams, MA
Site Photographs
November 2020

Photo #5: View west of the existing Quality Street bridge, protective stone, and existing abutments. Minimal in-water work is proposed as existing abutments will be cut down behind the protective stone and new abutments installed beyond that.

Photo #6: View east of the existing Quality Street bridge.

Attachment C

MassDOT Project no. 610777
Quality Street over the Hoosic River
Bridge Replacement Project
401 WQC Application

Alternatives Analysis / Stream Crossing Evaluation Worksheet
USGS Stream Stats

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MassDEP Wetlands Program: Replacement Stream Crossing Evaluation Worksheet

Bridge Replacement Project – Quality Street over Hoosic River – Alternatives Analysis

The proposed project has been designed to be in full compliance with the Massachusetts Stream Crossing Standards.

The following description provides an overview of the bridge design and is followed by an Alternatives Analysis and an evaluation of compliance with the Stream Crossing Standards.

Table 1.0 – Existing Crossing Data

Stream Crossing Standard	Existing Conditions
Type of Crossing	Through-Plate Girder Structure with Reinforced Concrete Abutments
Size	Width: **82-feet** Height: **10.75-feet** Crossing Length: **31.58-feet** Cross Sectional Area: **678 sq. ft.**
Bankfull Width (From field observations)	**55-feet** (From field observations, drainage area = 35.9 square miles from StreamStats)
Openness Ratio	**21.46**
Water Level	Ordinary High Water Elevation: 864.7 ±

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MassDEP Wetlands Program: Replacement Stream Crossing Evaluation Worksheet

Table 2.0 – Proposed Crossing Conditions

Alternative 1 – Prestressed Concrete Northeast Deck Bulb Tee (NEDBT) Beams (*Proposed Bridge Replacement*)		
Stream Crossing Standard	**Meets Standard?**	**Comment**
Type of Crossing – Prestressed Concrete NEDBT Beams	Yes	Proposed Prestressed Concrete NEDBT Beam Bridge Width: **92-feet** (Measured between inside faces of integral abutments) Height: **10.8-feet** (Measured from proposed low chord to bottom of streambed) Crossing Length: **29.25-feet** Cross Sectional Area: **758 sq. ft.**
Embedment	Yes	The proposed structure is a bottomless bridge structure, not a culvert.
Crossing Span (1.2 Bankfull Width)[1]	Yes	Bankfull Width: **55-feet** (From field observations, drainage area = 35.9 square miles from StreamStats) Minimum Bankfull Width for Compliance: **66-feet** The clear span of the bridge measures **92-feet**.
Openness Ratio (Cross Sectional Area / Crossing Length) General = 0.82 feet Optimum = 1.64 feet	Yes	Proposed Cross Sectional Area: **758 sq. ft.** Proposed Openness Ratio: **25.89**
Substrate	Yes	**3-foot** thickness of riprap with gravel-packed voids throughout the full length of the bridge. Constructed stream grades will meet existing scour protection and match existing (pre-construction) conditions.
Water Depth and Velocity	Yes	Improved flow conditions through the bridge, with an increased hydraulic opening to handle the required flow.

[1] Per the Massachusetts River & Stream Crossing Standards (March 1, 2011, Revised March 8, 2012), Page 18, Item #2 - If it is not possible to meet all of the applicable standards, replacement crossings should be designed to avoid or mitigate the following problems: (1) Inlet drops; (2) Outlet drops; (3) Flow contraction that produces significant turbulence; (4) Tailwater armoring; (5) Tailwater scour pools; (6) Physical barriers to fish and wildlife passage.

Proposal No. 610777-131930

A00840 - 31

MassDEP Wetlands Program: Replacement Stream Crossing Evaluation Worksheet

Evaluation Criteria	No Build Alternative	Alternative 1 *Preferred Alternative*: Meets General Performance and Stream Crossing Standards, Bank, and LUW / WOTUS [2] Prestressed Concrete NEDBT Beams 92'W X 10.8'H X 29.25'L (dimensions)
1) potential for downstream flooding	No change	The proposed opening will not increase downstream water surface elevations.
2) upstream and downstream habitat	No improvement	Improved flow conditions. Additional scour protection to be installed. Decreased downstream sediment and turbidity.
3) potential for erosion and head-cutting	No change	Erosion and head-cutting issues improved.
4) stream stability	No change	Improved flow conditions through the bridge, with increased hydraulic opening. Potential scour issues addressed. Scour protection material sized for stability at the design event, is provided through the full length of the proposed bridge.
5) habitat fragmentation caused by the crossing	No change	Increased openness and establishment of bank improves habitat connectivity.
6) amount of stream mileage made accessible	No change	Improved stream continuity.

Proposal No. 610777-131930

A00840 - 32

[2] Bank Standards at 310 CMR 10.54 and LUW Standards at 310 CMR 10.56 (LUW = Land Under Waterbodies & Waterways)

Evaluation Criteria	**No Build Alternative**	**Alternative 1 *Preferred Alternative*: Meets General Performance and Stream Crossing Standards, Bank, and LUW / WOTUS**[3] **Prestressed Concrete NEDBT Beams 92'W X 10.8'H X 29.25'L (dimensions)**
7) storm flow conveyance	100-year event water Cross Sectional Area: **678 sq. ft.**	100-year event water Cross Sectional Area: **758 sq. ft.**
8) engineering design constraints	No change, no improvements	Temporary utility bridge needs to be installed to support water and gas utility during construction of the vehicular bridge.
9) hydrologic constraints	No change	Passes Design storm
10) impacts to wetlands that would occur	No construction impacts to adjacent wetland resource areas.	Minimal construction impacts to wetlands due to the installation of sandbags to limit water seepage into bridge foundation excavation.
11) potential to affect property and infrastructure	Likely bridge failure	Permanent and temporary easements required for construction of proposed structure and temporary utility bridge.
12) cost of replacement	N/A	Proposed Cost: **$4,850,000**

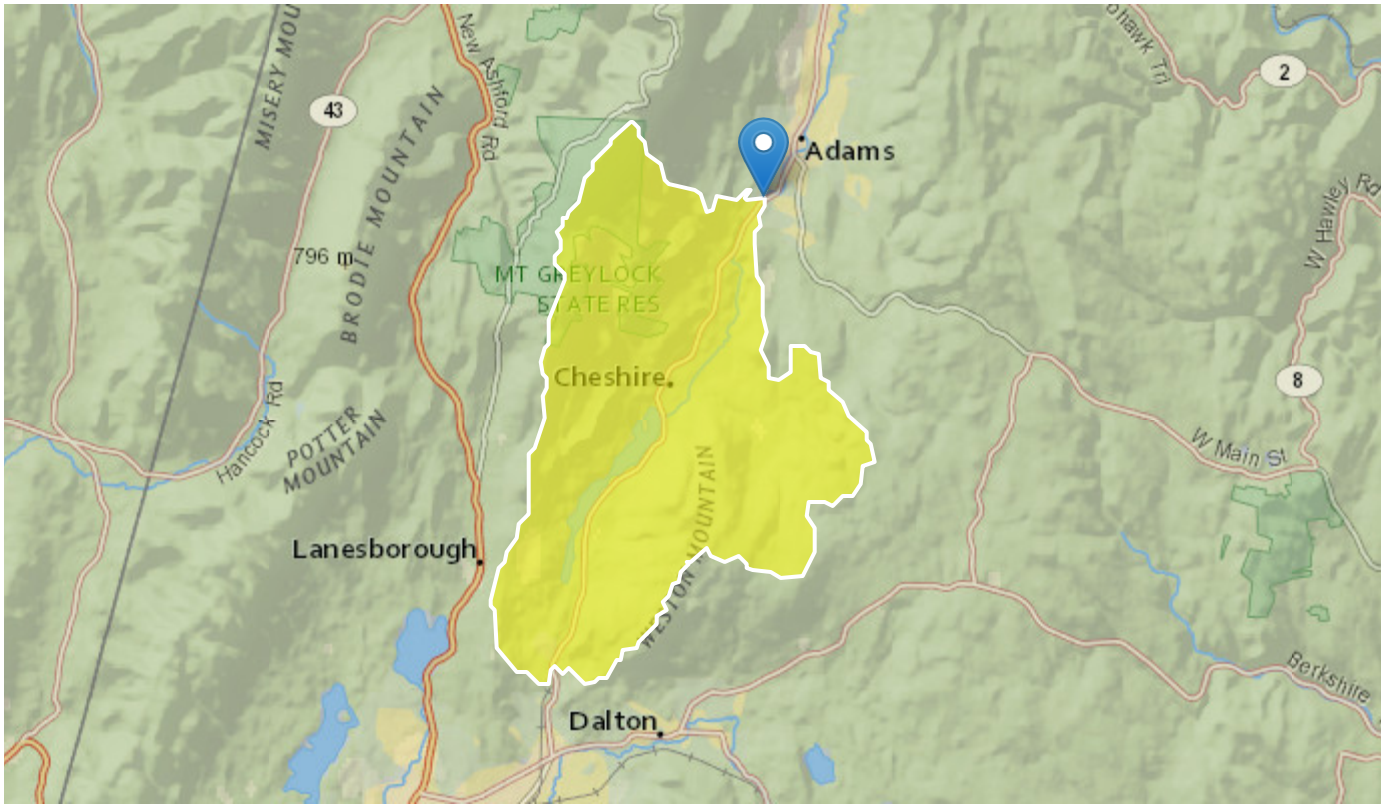
[3] Bank Standards at 310 CMR 10.54 and LUW Standards at 310 CMR 10.56 (LUW = Land Under Waterbodies & Waterways)

Proposal No. 610777-131930

A00840 - 33

StreamStats Report

Region ID: MA
Workspace ID: MA20240716163251062000
Clicked Point (Latitude, Longitude): 42.60903, -73.13127
Time: 2024-07-16 12:33:09 -0400



Collapse All

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
BSLDEM10M	Mean basin slope computed from 10 m DEM	17.008	percent
BSLDEM250	Mean basin slope computed from 1:250K DEM	12.388	percent
DRFTPERSTR	Area of stratified drift per unit of stream length	0.0827	square mile per mile
DRNAREA	Area that drains to a point on a stream	35.9	square miles

Parameter Code	Parameter Description	Value	Unit
ELEV	Mean Basin Elevation	1540	feet
FOREST	Percentage of area covered by forest	73.47	percent
LC06STOR	Percentage of water bodies and wetlands determined from the NLCD 2006	3.76	percent
MAREGION	Region of Massachusetts 0 for Eastern 1 for Western	1	dimensionless
PCTSNDGRV	Percentage of land surface underlain by sand and gravel deposits	15.01	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	35.9	square miles	0.16	512
ELEV	Mean Basin Elevation	1540	feet	80.6	1948
LC06STOR	Percent Storage from NLCD2006	3.76	percent	0	32.3

Peak-Flow Statistics Flow Report [Peak Statewide 2016 5156]

PIL: Lower 90% Prediction Interval, PIU: Upper 90% Prediction Interval, ASEp: Average Standard Error of Prediction, SE: Standard Error, PC: Percent Correct (other -- see report)

Statistic	Value	Unit	PIL	PIU	ASEp
50-percent AEP flood	1290	ft^3/s	619	2690	42.3
20-percent AEP flood	2170	ft^3/s	1020	4600	43.4
10-percent AEP flood	2900	ft^3/s	1330	6320	44.7
4-percent AEP flood	4010	ft^3/s	1770	9090	47.1
2-percent AEP flood	4960	ft^3/s	2110	11700	49.4
1-percent AEP flood	5980	ft^3/s	2450	14600	51.8
0.5-percent AEP flood	7130	ft^3/s	2830	18000	54.1

Statistic	Value	Unit	PIL	PIU	ASEp
0.2-percent AEP flood	8810	ft^3/s	3310	23400	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	35.9	square miles	1.61	149
BSLDEM250	Mean Basin Slope from 250K DEM	12.388	percent	0.32	24.6
DRFTPERSTR	Stratified Drift per Stream Length	0.0827	square mile per mile	0	1.29
MAREGION	Massachusetts Region	1	dimensionless	0	1

Low-Flow Statistics Flow Report [Statewide Low Flow WRIR00 4135]

PIL: Lower 90% Prediction Interval, PIU: Upper 90% Prediction Interval, ASEp: Average Standard Error of Prediction, SE: Standard Error, PC: Percent Correct (other -- see report)

Statistic	Value	Unit	PIL	PIU	SE	ASEp
7 Day 2 Year Low Flow	7.21	ft^3/s	2.63	19	49.5	49.5
7 Day 10 Year Low Flow	4.71	ft^3/s	1.34	15.4	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	35.9	square miles	1.61	149
DRFTPERSTR	Stratified Drift per Stream Length	0.0827	square mile per mile	0	1.29
MAREGION	Massachusetts Region	1	dimensionless	0	1
BSLDEM250	Mean Basin Slope from 250K DEM	12.388	percent	0.32	24.6

Flow-Duration Statistics Flow Report [Statewide Low Flow WRIR00 4135]

PIL: Lower 90% Prediction Interval, PIU: Upper 90% Prediction Interval, ASEp: Average Standard Error of Prediction, SE: Standard Error, PC: Percent Correct (other -- see report)

Statistic	Value	Unit	PIL	PIU	SE	ASEp
50 Percent Duration	36.8	ft^3/s	21.5	62.5	17.6	17.6
60 Percent Duration	26.6	ft^3/s	15.2	46.2	19.8	19.8
70 Percent Duration	20.2	ft^3/s	10.8	37.4	23.5	23.5
75 Percent Duration	16.8	ft^3/s	8.79	31.7	25.8	25.8
80 Percent Duration	15.7	ft^3/s	7.29	33.3	28.4	28.4
85 Percent Duration	13.5	ft^3/s	6.06	29.6	31.9	31.9
90 Percent Duration	11.5	ft^3/s	4.97	26	36.6	36.6
95 Percent Duration	8.45	ft^3/s	3.25	21.2	45.6	45.6
98 Percent Duration	5.74	ft^3/s	1.86	16.8	60.3	60.3
99 Percent Duration	4.62	ft^3/s	1.39	14.5	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	35.9	square miles	1.61	149
BSLDEM250	Mean Basin Slope from 250K DEM	12.388	percent	0.32	24.6
DRFTPERSTR	Stratified Drift per Stream Length	0.0827	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]

PIL: Lower 90% Prediction Interval, PIU: Upper 90% Prediction Interval, ASEp: Average Standard Error of Prediction, SE: Standard Error, PC: Percent Correct (other -- see report)

Statistic	Value	Unit	PIL	PIU	SE	ASEp
August 50 Percent Duration	13.6	ft^3/s	6.04	30.1	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	35.9	square miles	0.6	329
BSLDEM10M	Mean Basin Slope from 10m DEM	17.008	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	35.9	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	35.9	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	35.9	square miles	0.07722	59927.7393

Bankfull Statistics Flow Report [Bankfull Statewide SIR2013 5155]

PIL: Lower 90% Prediction Interval, PIU: Upper 90% Prediction Interval, ASEp: Average Standard Error of Prediction, SE: Standard Error, PC: Percent Correct (other -- see report)

Statistic	Value	Unit	ASEp
Bankfull Width	71.7	ft	21.3
Bankfull Depth	3	ft	19.8
Bankfull Area	214	ft^2	29
Bankfull Streamflow	1080	ft^3/s	55

Bankfull Statistics Flow Report [Appalachian Highlands D Bieger 2015]

Statistic	Value	Unit
Bieger_D_channel_width	67.1	ft
Bieger_D_channel_depth	3.13	ft
Bieger_D_channel_cross_sectional_area	214	ft^2

Bankfull Statistics Flow Report [New England P Bieger 2015]

Statistic	Value	Unit
Bieger_P_channel_width	68.9	ft
Bieger_P_channel_depth	3.02	ft

Statistic	Value	Unit
Bieger_P_channel_cross_sectional_area	215	ft^2

Bankfull Statistics Flow Report [USA Bieger 2015]

Statistic	Value	Unit
Bieger_USA_channel_width	43.7	ft
Bieger_USA_channel_depth	2.58	ft
Bieger_USA_channel_cross_sectional_area	118	ft^2

Bankfull Statistics Flow Report [Area-Averaged]

PIL: Lower 90% Prediction Interval, PIU: Upper 90% Prediction Interval, ASEp: Average Standard Error of Prediction, SE: Standard Error, PC: Percent Correct (other -- see report)

Statistic	Value	Unit	ASEp
Bankfull Width	71.7	ft	21.3
Bankfull Depth	3	ft	19.8
Bankfull Area	214	ft^2	29
Bankfull Streamflow	1080	ft^3/s	55
Bieger_D_channel_width	67.1	ft	
Bieger_D_channel_depth	3.13	ft	
Bieger_D_channel_cross_sectional_area	214	ft^2	
Bieger_P_channel_width	68.9	ft	
Bieger_P_channel_depth	3.02	ft	
Bieger_P_channel_cross_sectional_area	215	ft^2	
Bieger_USA_channel_width	43.7	ft	
Bieger_USA_channel_depth	2.58	ft	
Bieger_USA_channel_cross_sectional_area	118	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_

Probability Statistics

Probability Statistics Parameters [Perennial Flow Probability]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	35.9	square miles	0.01	1.99
PCTSNDGRV	Percent Underlain By Sand And Gravel	15.01	percent	0	100
FOREST	Percent Forest	73.47	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)

Maximum Probable Flood Statistics

Maximum Probable Flood Statistics Parameters [Crippen Bue Region 1]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	35.9	square miles	0.1	10000

Maximum Probable Flood Statistics Flow Report [Crippen Bue Region 1]

Statistic	Value	Unit
Maximum Flood Crippen Bue Regional	42700	ft^3/s

Maximum Probable Flood Statistics Citations

Crippen, J.R. and Bue, Conrad D.1977, Maximum Floodflows in the Conterminous United States, Geological Survey Water-Supply Paper 1887, 52p. (https://pubs.usgs.gov/wsp/1887/report.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: 4.21.0
StreamStats Services Version: 1.2.22
NSS Services Version: 2.2.1

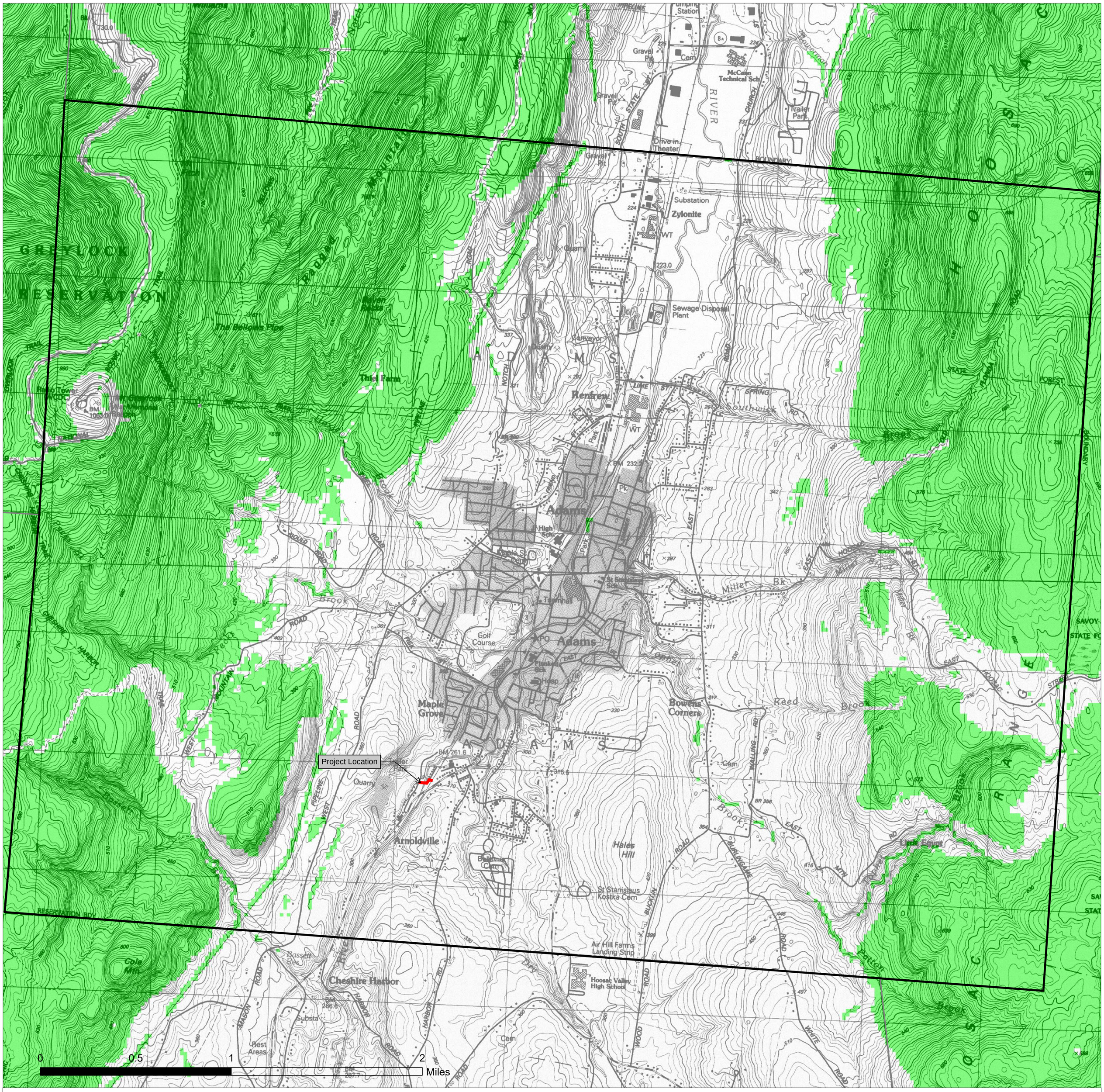
Attachment D

MassDOT Project no. 610777
Quality Street over the Hoosic River
Bridge Replacement Project
401 WQC Application

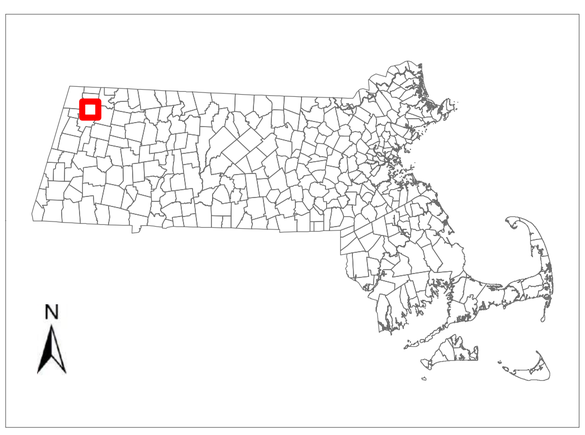
Habitat Assessment Map
NHESP – MESA Checklist and Supplemental Materials
USFWS Programmatic Biological Opinion (NLAA)

BSC GROUP
BUILD | SUPPORT | CONNECT

Habitat of Potential Regional or Statewide Importance
Town of ADAMS, MA



Habitat of Potential Regional or Statewide Importance



Updated January 9, 2024

MassDEP's Massachusetts Wildlife Habitat Protection Guidance for Inland Wetlands (June 2006) adopted a new approach for assessing wildlife habitat impacts associated with work in wetlands. This approach utilizes maps developed at the University of Massachusetts Amherst using the Conservation Assessment and Prioritization System (CAPS). The maps depict Habitat of Potential Regional or Statewide Importance that may trigger more intensive review under the MA Wetlands Protection Act. For more information on how to assess wildlife habitat impacts, see Section III of the Guidance document: https://www.mass.gov/doc/massachusetts-wildlife-habitat-protection-guidance-for-inland-wetlands/download.

CAPS is an approach to prioritizing land for conservation/protection based on the assessment of ecological integrity for various ecological communities (e.g. forested wetland, shrub swamp, headwater stream) within an area. The CAPS model assesses ecological integrity of the Massachusetts landscape as influenced by environmental stressor metrics (e.g. pollution, fragmentation). It relies on data that are broadly available across Massachusetts. Ecological features which are not consistently surveyed or uniformly available, such as certified vernal pools, rare species habitat, and contamination sites are not included in the CAPS analysis. When available, this more specific ecological information may be used in conjunction with the CAPS outputs to better understand particular sites in Massachusetts and support informed conservation decision-making. For more information on the statewide maps produced by the CAPS model, see: http://www.umasscaps.org.

These maps were prepared by the University of Massachusetts Amherst, with funding from the Massachusetts Department of Environmental Protection.

UMass Amherst

MassDEP

UMass Extension
CENTER FOR AGRICULTURE

Massachusetts Endangered Species Act M.G.L. c.131A and Regulations (321 CMR 10.00)

Project Details

***Project or Site Name:** _____

***Street Address/Location:** _____

***Town(s):** _____

***Total Site Acreage:** _____ ***Acreage of Disturbance**[1]**:** _____

Parcel/lot number: _____ **Assessors map/plat number:** _____

Project Description (If necessary, a project/site description can also be provided as an attachment)**:** _____

_____

_____

_____

Registry of deeds information[2]

Registry: _____ **Certificate #** (if registered land)**:** _____

Book: _____ **Page Number:** _____

Do you have a previous NHESP Tracking number? (Yes / No) If yes, please provide: _____

Will this project require a filing with the Conservation Commission and/or DEP pursuant to the Wetlands Protection Act (WPA)? (Yes / No)

Map

***Required:** Enclose a map with the site location clearly marked and centered on the page.

Landowner Info

***Are you the Record Owner**[3] **of the property? (Yes / No)**

***If No, are you a representative of the Record Owner or do you have permission from the Record Owner to submit this request or filing?**[4] **(Yes / No)**

***Landowner Name**	**Organization (if applicable)**

***Street Address/Location**	***City/Town**	***State**	***Zip Code**

Email	**Telephone**

Comments/Purpose of request[5]**:**

_____

_____

[1] Please disclose the full acreage of disturbance associated with the project, including areas outside of Priority Habitat.
[2] If your project contains more than one registered property, please attach a document listing the Registry information for each.
[3] Record Owner means any person or entity holding a legal or equitable interest, right or title to real property, as reflected in a written instrument or recorded deed, or any person authorized in writing by such person.
[4] If you are not the record owner, a statement or proof that you are authorized by the record owner must be attached.
[5] Provide the authorization you have to submit this request if you are not the record owner and not a representative of the record owner.

Applicant Info

Applicant Name (if different from Landowner) **Organization (if applicable)**

Street Address/Location **City/Town** **State** **Zip Code**

Email (if available) **Telephone**

Representative Info

Representative Name (if different from Landowner) **Organization (if applicable)**

Street Address/Location **City/Town** **State** **Zip Code**

Email (if available) **Telephone**

**Required Documents*

- ☐ USGS map (1:24,000 or 1:25,000) with property boundary clearly outlined
- ☐ Project plans for entire site (including wetland Resource Areas, showing existing and proposed conditions, existing and proposed tree/vegetation clearing line, and clearly demarcated limits of work)
- ☐ Assessor's map or right-of-way plan of site
- ☐ Statement/proof that applicant is the Record Owner or that applicant is a person authorized in writing by the record owner to submit this filing
- ☐ Photographs representative of the site

Projects altering 10 or more acres, must also submit:

- ☐ A vegetation cover type map of the site
- ☐ Project plans showing Priority Habitat boundaries

The Division will notify you within 30 days if the materials submitted do not satisfy the filing requirements under 321 CMR 10.20. The Division may request additional information, such as, but not limited to, species and habitat surveys. A request for additional information would come within 30 days of receiving a complete filing.

**Filing Fee*

Fee schedule is available at https://www.mass.gov/how-to/how-to-file-for-a-mesa-project-review

***Total MESA Fee Enclosed:** _____ Payable via check to **Comm. of MA - NHESP**

**Required Signatures*

I hereby certify under the pains and penalties of perjury that the information contained is true and complete to the best of my knowledge.

Signature of Property Owner/Record Owner of Property Date

Signature of Applicant (if different from Owner) Date

Please mail this completed form, with the required document and fee to:
NHESP Regulatory Review | MassWildlife Field Headquarters | 1 Rabbit Hill Road | Westborough, MA 01581

August 2, 2024

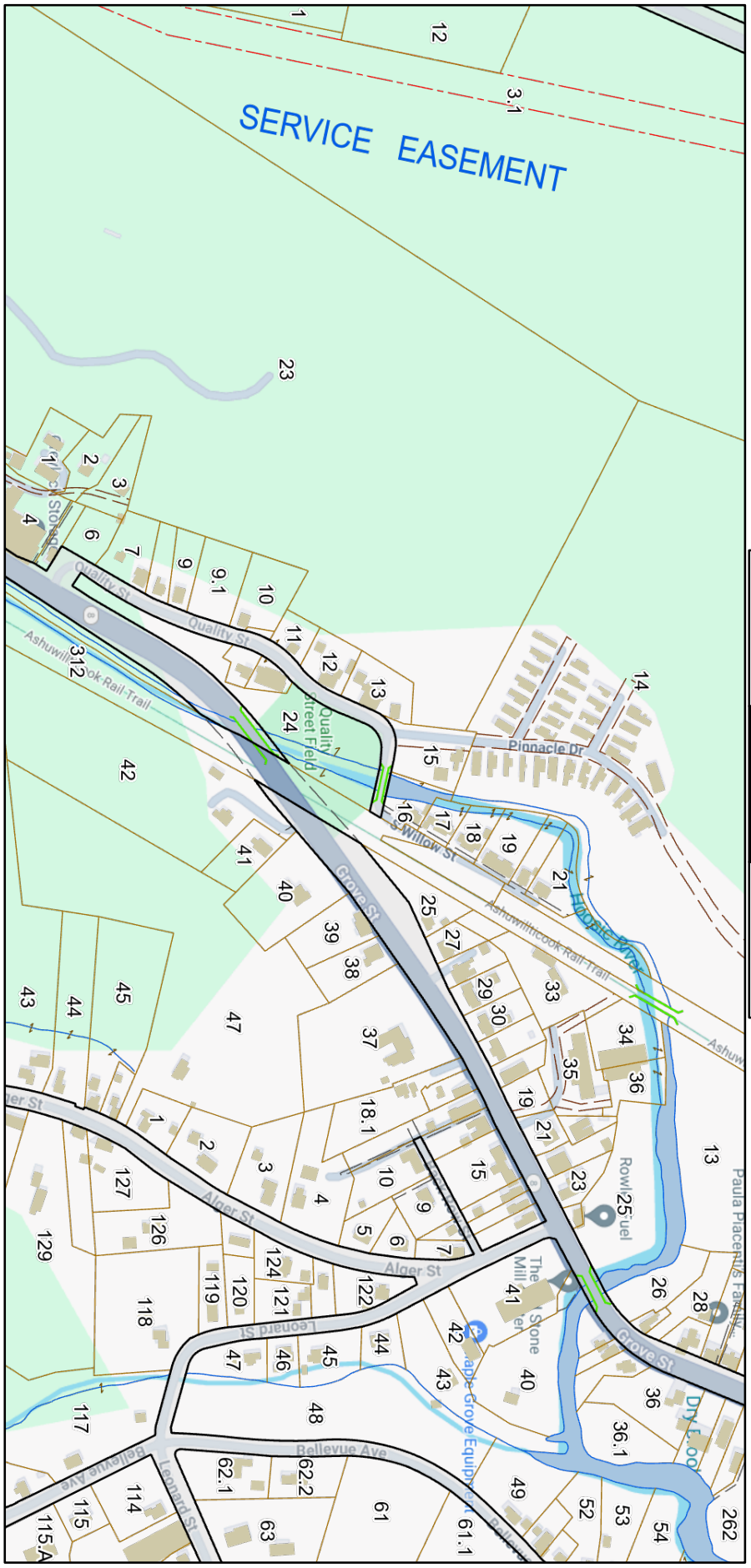
Town of Adams, MA

1 inch = 400 Feet

0 400 800 1200

www.cai-tech.com

CAI Technologies
Precision Mapping Geospatial Solutions



PWater
Property Line
Public Road
Private Road ROW
Right of Way
Utility
Bridge
Property Hook
WaterLines
Buildings
Right of Ways
Water-poly

Data shown on this map is provided for planning and informational purposes only. The municipality and CAI Technologies are not responsible for any use for other purposes or misuse or misrepresentation of this map.

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: 04/19/2024 19:51:16 UTC
Project code: 2024-0079744
Project Name: 610777 ADAMS- BRIDGE REPLACEMENT, A-04-038, QUALITY STREET OVER HOOSIC RIVER

Subject: Concurrence verification letter for the '610777 ADAMS- BRIDGE REPLACEMENT, A-04-038, QUALITY STREET OVER HOOSIC 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 April 19, 2024 to verify that the **610777 ADAMS- BRIDGE REPLACEMENT, A-04-038, QUALITY STREET OVER HOOSIC RIVER** (Proposed Action) may rely on the concurrence provided in 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 is within the scope and adheres to the criteria of the PBO, including the adoption of applicable avoidance and minimization measures. **At least one of the qualification interview questions indicated an activity or portion of your project is consistent with a not likely to adversely affect determination therefore, the overall determination for your project is, may affect, and is not likely to adversely affect (NLAA) the endangered Indiana bat (*Myotis sodalis*) and/or the endangered northern long-eared bat (*Myotis septentrionalis*)**. Consultation with the Service pursuant to section 7(a)(2) of ESA (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*) is required.

The Service has 14 calendar days to notify the lead Federal action agency or designated non-federal representative if we determine that the Proposed Action does not meet the criteria for a NLAA determination under the PBO. If we do not notify the lead Federal action agency or designated non-federal representative within that timeframe, you may proceed with the Proposed

Action under the terms of the NLAA concurrence provided in the PBO. This verification period allows Service Field Offices to apply local knowledge to implementation of the PBO, as we may identify a small subset of actions having impacts that were unanticipated. In such instances, Service Field Offices may request additional information that is necessary to verify inclusion of the proposed action under the PBO.

For Proposed Actions that include bridge/culvert or structure removal, replacement, and/or maintenance activities: If your initial bridge/culvert or structure assessment documented signs of bat use or occupancy, or an assessment failed to detect Indiana bats and/or NLEBs, yet are 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 any potential take. In these instances, potential incidental take of Indiana bats and/or NLEBs is covered under the Incidental Take Statement in the 2018 FHWA, FRA, FTA PBO (provided that the take is reported to the Service).

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 assessments failed to detect Indiana bats and/or NLEB use or occupancy, yet bats are 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 any 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 contact this Service Office.

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

610777 ADAMS- BRIDGE REPLACEMENT, A-04-038, QUALITY STREET OVER HOOSIC RIVER

DESCRIPTION

610777 ADAMS- BRIDGE REPLACEMENT, A-04-038, QUALITY STREET OVER HOOSIC RIVER

The proposed design begins at the roadway's intersection with Pinnacle Drive. The intersection pavement will be rebuilt to match the existing conditions. The roadway pavement courses and base will be reconstructed and graded to match the proposed profile. The project also involves rebuilding an old temporary road alignment to allow residents access to the north side of South Willow Street by car or by foot during construction. The temporary road pavement will be excavated and replaced with loam and seed after completion of the project.

Monarch Butterfly: Candidate Species only, no conservation measures at this time.

Tricolored Bat: Proposed Endangered Species only. At this time, no formal USFWS consultation is required.

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@42.6090676,-73.13165719909115,14z

DETERMINATION KEY RESULT

Based on your answers provided, this project(s) may affect, but is not likely to adversely affect the endangered Indiana bat and/or the endangered northern long-eared bat, therefore, 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. However, also based on your answers provided, this project may rely on the concurrence provided in 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.

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. Which Federal Agency is the lead for the action?

   A) Federal Highway Administration (FHWA)

4. Are *all* project activities limited to non-construction[1] activities only? (examples of non-construction activities include: bridge/abandoned structure assessments, surveys, planning and technical studies, property inspections, and property sales)

   [1] Construction refers to activities involving ground disturbance, percussive noise, and/or lighting.

   No

5. Does the project include *any* activities that are **greater than** 300 feet from existing road/rail surfaces[1]?

   [1] Road surface is defined as the actively used [e.g. motorized vehicles] driving surface and shoulders [may be pavement, gravel, etc.] and rail surface is defined as the edge of the actively used rail ballast.

   No

6. Does the project include *any* activities **within** 0.5 miles of a known Indiana bat and/or NLEB hibernaculum[1]?

   [1] For the purpose of this consultation, a hibernaculum is a site, most often a cave or mine, where bats hibernate during the winter (see suitable habitat), but could also include bridges and structures if bats are found to be hibernating there during the winter.

   No

7. Is the project located **within** a karst area?

   No

8. Is there *any* suitable[1] summer habitat for Indiana Bat or NLEB **within** the project action area[2]? (includes any trees suitable for maternity, roosting, foraging, or travelling habitat)

   [1] See the Service's summer survey guidance for our current definitions of suitable habitat.

   [2] The action area is defined as all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action (50 CFR Section 402.02). Further clarification is provided by the User's Guide for the Range-wide Programmatic Consultation for Indiana Bat and Northern Long-eared Bat.

   Yes

9. Will the project remove *any* suitable summer habitat[1] and/or remove/trim any existing trees **within** suitable summer habitat?

   [1] See the Service's summer survey guidance for our current definitions of suitable habitat.

   Yes

10. Will the project clear more than 20 acres of suitable habitat per 5-mile section of road/rail?

    No

11. Have presence/probable absence (P/A) summer surveys[1][2] been conducted[3][4] **within** the suitable habitat located within your project action area?

    [1] See the Service's summer survey guidance for our current definitions of suitable habitat.

    [2] Presence/probable absence summer surveys conducted within the fall swarming/spring emergence home range of a documented Indiana bat hibernaculum (contact local Service Field Office for appropriate distance from hibernacula) that result in a negative finding requires additional consultation with the local Service Field Office to determine if clearing of forested habitat is appropriate and/or if seasonal clearing restrictions are needed to avoid and minimize potential adverse effects on fall swarming and spring emerging Indiana bats.

    [3] For projects within the range of either the Indiana bat or NLEB in which suitable habitat is present, and no bat surveys have been conducted, the transportation agency will assume presence of the appropriate species. This assumption of presence should be based upon the presence of suitable habitat and the capability of bats to occupy it because of their mobility.

    [4] Negative presence/probable absence survey results obtained using the summer survey guidance are valid for a minimum of two years from the completion of the survey unless new information (e.g., other nearby surveys) suggest otherwise.

    Yes

SUBMITTED DOCUMENTS

- *610777_Adams_MassDOT_NLEB_Report.pdf https://ipac.ecosphere.fws.gov/project/K7FJ26T7PVETDELXPQKXN4RXUI/projectDocuments/142058359*

12. Did the presence/probable absence (P/A) summer surveys detect Indiana bats and/or NLEB[1]?

    [1] P/A summer surveys conducted within the fall swarming/spring emergence home range of a documented Indiana bat hibernaculum (contact local Service Field Office for appropriate home range) that result in a negative finding requires additional consultation with the local Service Field Office to determine if clearing of forested habitat is appropriate and/or if seasonal clearing restrictions are needed to avoid and minimize potential adverse effects on fall swarming and spring emerging Indiana bats.

    No

13. Were the P/A summer surveys conducted **within** the fall swarming/spring emergence range of a documented Indiana bat hibernaculum[1]?

    [1] Contact the local Service Field Office for appropriate distance from hibernacula.

    No

14. Does the project include activities **within documented NLEB habitat**[1][2]?

    [1] Documented roosting or foraging habitat – for the purposes of this consultation, we are considering documented habitat as that where Indiana bats and/or NLEB have actually been captured and tracked using (1) radio telemetry to roosts; (2) radio telemetry biangulation/triangulation to estimate foraging areas; or (3) foraging areas with repeated use documented using acoustics. Documented roosting habitat is also considered as suitable summer habitat within 0.25 miles of documented roosts.)

    [2] For the purposes of this key, we are considering documented corridors as that where Indiana bats and/or NLEB have actually been captured and tracked to using (1) radio telemetry; or (2) treed corridors located directly between documented roosting and foraging habitat.

    No

15. Will the removal or trimming of habitat or trees occur **within** suitable but **undocumented NLEB** roosting/foraging habitat or travel corridors?

    Yes

16. What time of year will the removal or trimming of habitat or trees **within** suitable but **undocumented NLEB** roosting/foraging habitat or travel corridors occur?

    B) During the inactive season

17. Will *any* tree trimming or removal occur **within** 100 feet of existing road/rail surfaces?

    Yes

18. Will *any* tree trimming or removal occur **between** 100-300 feet of existing road/rail surfaces?

    No

19. Are *all* trees that are being removed clearly demarcated?

    Yes

20. Will the removal of habitat or the removal/trimming of trees include installing new or replacing existing **permanent** lighting?

    No

21. Does the project include wetland or stream protection activities associated with compensatory wetland mitigation?

    No

22. Does the project include slash pile burning?

    No

23. Does the project include *any* bridge removal, replacement, and/or maintenance activities (e.g., any bridge repair, retrofit, maintenance, and/or rehabilitation work)?

    Yes

24. Is there *any* suitable habitat[1] for Indiana bat or NLEB **within** 1,000 feet of the bridge? (includes any trees suitable for maternity, roosting, foraging, or travelling habitat)

    [1] See the Service's current summer survey guidance for our current definitions of suitable habitat.

    Yes

25. Has a bridge assessment[1] been conducted **within** the last 24 months[2] to determine if the bridge is being used by bats?

    [1] See User Guide Appendix D for bridge/structure assessment guidance

    [2] Assessments must be completed no more than 2 years prior to conducting any work below the deck surface on all bridges that meet the physical characteristics described in the Programmatic Consultation, regardless of whether assessments have been conducted in the past. Due to the transitory nature of bat use, a negative result in one year does not guarantee that bats will not use that bridge/structure in subsequent years.

    Yes

    SUBMITTED DOCUMENTS

    - *610777_Adams_MassDOT_NLEB_Report.pdf https://ipac.ecosphere.fws.gov/project/K7FJ26T7PVETDELXPQKXN4RXUI/projectDocuments/142058359*

26. Did the bridge assessment detect *any* signs of Indiana bats and/or NLEBs roosting in/under the bridge (bats, guano, etc.)[1]?

    [1] If bridge assessment detects signs of *any* species of bats, coordination with the local FWS office is needed to identify potential threatened or endangered bat species. Additional studies may be undertaken to try to identify which bat species may be utilizing the bridge prior to allowing *any* work to proceed.

    Note: There is a small chance bridge assessments for bat occupancy do not detect bats. Should a small number of bats be observed roosting on a bridge just prior to or during construction, such that take is likely to occur or does occur in the form of harassment, injury or death, the PBO requires the action agency to report the take. Report all unanticipated take within 2 working days of the incident to the USFWS. Construction activities may continue without delay provided the take is reported to the USFWS and is limited to 5 bats per project.

    No

27. Will the bridge removal, replacement, and/or maintenance activities include installing new or replacing existing **permanent** lighting?

    No

28. Does the project include the removal, replacement, and/or maintenance of *any* structure other than a bridge? (e.g., rest areas, offices, sheds, outbuildings, barns, parking garages, etc.)

    No

29. Will the project involve the use of **temporary** lighting *during* the active season?

    Yes

30. Is there *any* suitable habitat **within** 1,000 feet of the location(s) where **temporary** lighting will be used?

    Yes

31. Will the project install new or replace existing **permanent** lighting?

    No

32. Does the project include percussives or other activities (**not including tree removal/ trimming or bridge/structure work**) that will increase noise levels above existing traffic/ background levels?

    Yes

33. Will the activities that use percussives (**not including tree removal/trimming or bridge/ structure work**) and/or increase noise levels above existing traffic/background levels be conducted *during* the active season[1]?

    [1] Coordinate with the local Service Field Office for appropriate dates.

    Yes

34. Will *any* activities that use percussives (**not including tree removal/trimming or bridge/ structure work**) and/or increase noise levels above existing traffic/background levels be conducted *during* the inactive season[1]?

    [1] Coordinate with the local Service Field Office for appropriate dates.

    Yes

35. Are *all* project activities that are **not associated with** habitat removal, tree removal/ trimming, bridge and/or structure activities, temporary or permanent lighting, or use of percussives, limited to actions that DO NOT cause any additional stressors to the bat species?

    Examples: lining roadways, unlighted signage , rail road crossing signals, signal lighting, and minor road repair such as asphalt fill of potholes, etc.

    Yes

36. Will the project raise the road profile **above the tree canopy**?

    No

37. Are the project activities that use percussives (not including tree removal/trimming or bridge/structure work) consistent with a Not Likely to Adversely Affect determination in this key?

    Automatically answered
    Yes, because the activities are within 300 feet of the existing road/rail surface, greater than 0.5 miles from a hibernacula, and conducted during the active season within undocumented habitat.

38. Are the project activities that use percussives (not including tree removal/trimming or bridge/structure work) and/or increase noise levels above existing traffic/background levels consistent with a No Effect determination in this key?

    Automatically answered
    Yes, because the activities are within 300 feet of the existing road/rail surface, greater than 0.5 miles from a hibernacula, and conducted during the inactive season

39. Is the location of this project consistent with a Not Likely to Adversely Affect determination in this key?

    Automatically answered
    Yes, because no bats were detected during presence/probable absence surveys conducted during the summer survey season and outside of the fall swarming/spring emergence periods. Additionally, all activities were at least 0.5 miles from any hibernaculum.

40. Is the bridge removal, replacement, or maintenance activities portion of this project consistent with a No Effect determination in this key?

    Automatically answered
    Yes, because the bridge has been assessed using the criteria documented in the BA and no signs of bats were detected

41. **General AMM 1**
    Will the project ensure *all* operators, employees, and contractors working in areas of known or presumed bat habitat are aware of *all* FHWA/FRA/FTA (Transportation Agencies) environmental commitments, including all applicable Avoidance and Minimization Measures?

    Yes

PROJECT QUESTIONNAIRE

1. Have you made a No Effect determination for *all* other species indicated on the FWS IPaC generated species list?

   N/A

2. Have you made a May Affect determination for *any* other species on the FWS IPaC generated species list?

   N/A

3. How many acres[1] of trees are proposed for removal between 0-100 feet of the existing road/rail surface?

   [1] If described as number of trees, multiply by 0.09 to convert to acreage and enter that number.

1.75

4. Please describe the proposed bridge work:

   The bridge has been identified as having deteriorated superstructure elements requiring replacement. The bridge deck will be 29 feet, 3 inches wide and will accommodate two 11-foot side travel lanes, 2-foot shoulders and safety curbs with railings. The structural single span length will be increased from 82'-0" to 96'-0" in order to relocate the substructure behind the existing abutment footings. The hydraulic opening is slightly increased, while the abutment skew is maintained.

5. Please state the timing of all proposed bridge work:

   Spring 2025 - Spring 2027

6. Please enter the date of the bridge assessment:

   10/25/2023

AVOIDANCE AND MINIMIZATION MEASURES (AMMS)

This determination key result includes the committment to implement the following Avoidance and Minimization Measures (AMMs):

GENERAL AMM 1

Ensure all operators, employees, and contractors working in areas of known or presumed bat habitat are aware of all FHWA/FRA/FTA (Transportation Agencies) environmental commitments, including all applicable AMMs.

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

Attachment E

MassDOT Project no. 610777
Quality Street over the Hoosic River
Bridge Replacement Project
401 WQC Application

MA Historical Coordination
Tribal Coordination

BSC GROUP
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CULTURAL RESOURCES PROJECT RECORD

City/Town	Adams	Project #	610777	Date Cleared	1/3/2024
Project Name	Bridge Replacement, A-04-038, Quality Street/South Willow Street over Hoosic River	Date Filed	1/3/2024	Finding Under Review	☐
		FHWA to MHC			
Project Type	Bridge Replacement	Early Coord. Letter Sent:	☑		
Review	Section 106 (PA)	Comment Received: ☐ MHC ☐ LHC		Reviewer	MA
Finding:	Stip VB - No historic properties affected			Consultant	
Comment	The project work is exempt from SMTHPO review under the conditions of the amended 2017 MOU with the tribe.				

Determination based on: ☑ Scope of Work ☑ Plan ☑ Inventory ☐ Site Visit ☐ Archaeological Survey

Attach appropriate documentation for checked items

Projects Requiring No Massachusetts SHPO Review

Programmatic Agreement, Appendix 1 (check all that apply) :

- ☐ 1) Interstate bridge or roadway projects
- ☐ 2) Resurfacing, repair existing roadways
- * ☐ 3) Reconstruction on existing roadway
- * ☐ 4) Roadway geometrics, intersections
- * ☐ 5) Curbs and sidewalks
- ☐ 6) Pavement markings, rumble strips, etc
- ☐ 7) Curbs, sidewalks (MAAB, ADA)
- * ☐ 8) Removal of trees
- ☐ 9) Landscaping
- ☐ 10) Utilities
- ☐ 11) Railroad crossing
- ☐ 12) Stream stabilization and restoration
- ☐ 13) Wetland mitigation area
- * ☐ 14) Bridge (NR "Not Eligible" or "Conditionally Not Eligible")
- * ☐ 15) Bridge (concrete slab post 1900, steel stringer)
- ☐ 16) Bridge (less than 20' span)
- * ☐ 17) Highway safety improvement
- ☐ 18) Drainage system element
- * ☐ 19) Traffic signal, safety improvement
- * ☐ 20) Intelligent Transportation System project
- ☐ 21) Rest area, maintenance facility
- * ☐ 22) Bicycle, pedestrian lane, path or facility
- ☐ 23) Lighting system
- ☐ 24) Sign
- ☐ 25) Hazardous waste
- ☐ 26) Highway fencing
- ☐ 27) Emergency repair
- ☐ 28) Erosion control
- ☐ 29) Noise barrier

* National Register eligibility evaluation required

-OR-

No Historic Properties Affected
Programmatic Agreement Stipulation V.B. (check one):

- ☑ No NR listed or -eligible properties within Area of Potential Effect
- ☐ No effect on National Register listed or -eligible properties

Reviewer's Initials: MJA JMH

CULTURAL RESOURCES PROJECT RECORD

Summary of MassDOT Highway Division Finding
(Appendix 1 and Section V.B. Projects only)

MassDOT proposes to replace Bridge A-04-038 in Adams, which carries the two-lane South Willow Street over the Hoosic River and provides access to houses along the dead-end residential South Willow Street from Quality Street to the southwest. The bridge was constructed in 1950 and consists of a steel single-span half-through girder-floor beam superstructure supported by concrete abutments and riprap walls. The bridge is not inventoried in MACRIS and was reviewed by Kurt Jergensen, Historic Bridge Specialist, and determined to be ineligible for listing in the National Register (NR), as an example of a typical mid-20th century steel girder design with standard design details and little architectural character.

The proposed work consists of full bridge replacement on the existing alignment with a single-span steel girder superstructure supported by integral concrete abutments set on pilings with integral concrete wingwalls with striated faces and precast approach slabs. The proposed bridge will consist of a structure approximately the same length and width, 96-feet (ft) long and 29-ft 3-inches (in) wide, as the existing bridge. It will consist of 11-ft-wide travel lanes in either direction, 2-ft wide shoulders, 19.5-in curbs, and painted steel S3-TL4 railings. The project will include full-depth pavement reconstruction and grading of the approach roadway to extend approximately 80-ft west of the bridge along Quality Street and approximately 150-ft east of the bridge along South Willow Street; removal and replacement of existing and extension of guardrails along the bridge approaches, as needed; replacement and updates to existing traffic control and pavement markings; and installation of temporary erosion and sedimentation controls.

A temporary road and utility bridge will be constructed as part of the project to minimize disruption to the community on temporary land easements. The temporary road will be constructed between South Willow and an existing spur of Grove Street and will cross the Ashuwillticook Rail Trail. The proposed temporary road follows the approximate road layout that was used when the extant bridge was constructed in 1950. The temporary utility bridge will be installed immediately north of the extant bridge to carry water and gas lines over the river. Following completion of the new bridge, the temporary road will be removed and replaced with loam and seed and the temporary utility bridge will be removed with utility lines carried beneath the deck of the road bridge.

A review of MACRIS revealed no NR-listed or NR-eligible districts or individual properties within or adjacent to the project area. The closest previously inventoried properties to the project are two previously inventoried individual properties, the Adams Brothers Manufacturing Company Worker Housing at 4–6 and 8–10 South Willow Street (ADA.222 and 225), northeast of the bridge and along the west side of South Willow Street. The two houses were constructed in 1894 as worker housing for the nearby Adams Brothers mill complex, approximately 0.15 miles northeast of bridge and inventoried residences. The mill complex is within the Maple Grove Village Area (ADA.V), which was previously evaluated as eligible for listing in the NR as a historic district and does not include the inventoried houses. The project work has no potential to affect the inventoried properties.

A review of the MHC's archaeological maps in MACRIS revealed no recorded sites in the vicinity of the project area. The proposed project work will be confined to disturbed and/or unfavorable areas within an existing roadway footprint and adjacent roadside areas. It is the opinion of the MassDOT Archaeologist that low sensitivity can be ascribed to the project's area of potential effect based on the impacts of urban development, including bridge, railroad and road construction, as well as nearby residential development. The proposed work, including the bridge construction and road work, will be confined to the existing bridge alignment and roadway footprint, as well as disturbed areas adjacent to and within the Ashuwillticook Rail Trail. Soil borings indicate the bridge approaches are elevated on 7.8-ft. - 17.5-ft of fill to carry the bridge over the river.

A letter was sent on 08/12/2022 to the Adams Historical Commission by the MassDOT consultant, BSC Group and copies were forwarded to the MHC, with a follow-up letter sent in January 2024. No response has been received to date. As required by a Section 404 permit, a PNF was submitted to the BUAR, Aquinnah THPO, Mashpee THPO, Stockbridge-Munsee THPO, and BUAR on 3/14/2024. Bridge projects cleared in-house under 106 are exempt from SHPO notification per 2013 Corps letter.

Reviewer's Initials: _____

BSC GROUP
BUILD | SUPPORT | CONNECT

Engineers
Environmental Scientists
Software Developers
Landscape Architects
Planners
Surveyors

August 12, 2022

Adams Historical Commission
8 Park Street
Adams, MA 01220

RE: Bridge Replacement, A-04-038, Quality Street over Hoosic River
MassDOT Project File No. 610777
Early Environmental Design Coordination
Adams, MA

Dear Commissioners:

The Massachusetts Department of Transportation (MassDOT) is proposing the replacement of bridge A-04-038 on Quality Street over the Hoosic River in Adams, due to deteriorated superstructure elements. The proposed project consists of full replacement of the existing simple span and the bridge will be reconstructed on a similar alignment as the existing bridge. The proposed substructure will be located behind the existing abutment footings and protective stone to avoid in-water work. The proposed bridge will provide two 11-foot travel lanes of traffic, two 2-foot shoulders and two safety-curbs, with standard MassDOT S3-TL4 bridge rail for a total width of 29'-3".

Existing water and gas mains currently carried by the bridge will be supported by a temporary utility bridge during construction. The utilities will be reattached to the new bridge following replacement. Quality Street will be closed to vehicular and pedestrian traffic at the bridge site for the full construction duration. Access to the residences on South Willow Street will be maintained from Grove Street (Route 8), through a temporary crossing of the Ashuwillticook Rail Trail. It is anticipated that a portion of the project will be supported in part with federal funds and will require review as part of the MassDOT Early Environmental Design Coordination process.

MassDOT requests that the Commission review the provided information at your earliest convenience and solicits any comments that the members wish to make regarding the project purpose, need, and scope. Written comments should be directed to Carrie Lavalee, P.E., Chief Engineer, MassDOT Highway Division, 10 Park Plaza, Boston, MA 02116, ATTN: Gautam Sen or gautam.sen@dot.state.ma.us. Please note that copies of this letter have been provided to the Massachusetts Historical Commission.

A USGS Locus Map and further details describing the Project scope have been enclosed to facilitate your review and demonstrate the limits of work. If you have any questions, please do not hesitate to contact Gautam Sen (857-368-9330) of MassDOT's Highway Division's Project Management Section or me at skreisel@bscgroup.com, or (617) 896-4579.

Sincerely,
BSC Group, Inc.

Sara Kreisel, PWS
Ecological Project Manager

803 Summer Street, Third Floor / Boston, MA 02127 / 617-896-4300

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www.bscgroup.com

January 3, 2024

Adams Historical Commission
8 Park Street
Adams, MA 01220

RE: Bridge Replacement, A-04-038, Quality Street over Hoosic River
MassDOT Project 610777
Early Environmental Design Coordination
Adams, MA

Dear Commissioners:

The Massachusetts Department of Transportation (MassDOT) is proposing the replacement of bridge A-04-038 on Quality Street over the Hoosic River in Adams, due to deteriorated superstructure elements. The proposed project consists of full replacement of the existing simple span and the bridge will be reconstructed on a similar alignment as the existing bridge. The proposed substructure will be located behind the existing abutment footings and protective stone to avoid in-water work to the extent practicable. The proposed bridge will provide two 11-foot travel lanes of traffic, two 2-foot shoulders and two safety-curbs, with standard MassDOT S3-TL4 bridge rail for a total width of 29'-3".

Existing water and gas mains currently carried by the bridge will be supported by a temporary utility bridge during construction. The utilities will be reattached to the new bridge following replacement. Quality Street will be closed to vehicular and pedestrian traffic at the bridge site for the full construction duration. Access to the residences on South Willow Street will be maintained from Grove Street (Route 8), through a temporary crossing of the Ashuwillticook Rail Trail. It is anticipated that a portion of the project will be supported in part with federal funds and will require review as part of the MassDOT Early Environmental Design Coordination process.

MassDOT requests that the Commission review the provided information at your earliest convenience and solicits any comments that the members wish to make regarding the project purpose, need, and scope. Written comments should be directed to Carrie Lavalee, P.E., Chief Engineer, MassDOT Highway Division, 10 Park Plaza, Boston, MA 02116, ATTN: Gautam Sen, or gautam.sen@dot.state.ma.us. Please note that project solicitation has also been requested from key Municipal Departments and the Police and Fire Departments.

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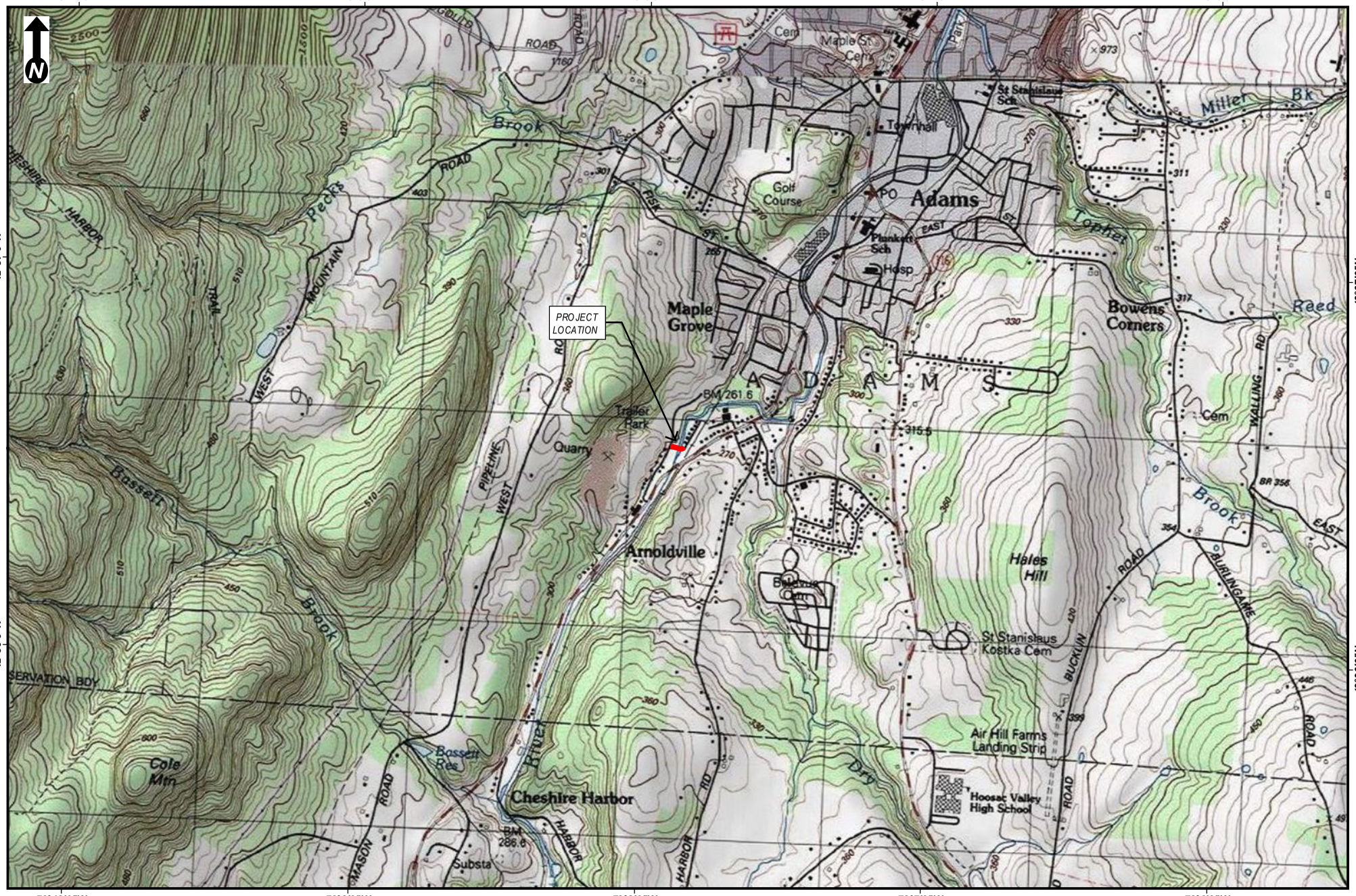
A USGS Locus Map and further details describing the Project scope have been enclosed to facilitate your review and demonstrate the limits of work. If you have any questions, please do not hesitate to contact Gautam Sen (857-368-9330) of MassDOT's Highway Division's Project Management Section, or me at skreisel@bscgroup.com, or at (617) 896-4579.

Sincerely,
BSC Group, Inc.

Sara Kreisel, PWS
Ecological Project Manager, Associate

Enclosures: USGS Site Location Map
Project Description

cc: Massachusetts Historical Commission
MassDOT Highway Division Envi. Services Cultural Resources Unit
MassDOT Project Manager



Scale: 1:24,000
1 inch = 2,000 feet
0 1,000 2,000
Feet
(Page Size 8.5 x 11)

MASSDOT PROJECT NO. 610777 - ADAMS – BRIDGE REPLACEMENT, A-04-038, QUALITY STREET OVER HOOSIC RIVER

USGS Site Location Map
Adams, MA

Source: Copyright:© 2013 National Geographic Society, i-cubed

massDOT
BSC GROUP

THIS DOCUMENT IS INTENDED FOR GENERAL PLANNING & INFORMATION PURPOSES ONLY. ALL MEASUREMENTS & LOCATIONS ARE APPROXIMATE.

Adams – Bridge Replacement, A-04-038, Quality Street Over Hoosic River
MassDOT Project #610777

Project Scope

The Massachusetts Department of Transportation (MassDOT) is proposing the replacement of the A-04-038 bridge, that carries Quality Street over the Hoosic River in the Town of Adams. Quality Street is classified as an Urban Local Road, but currently does not carry a sidewalk due to the extremely limited vehicular and pedestrian traffic. A sidewalk is not proposed as part of the replacement project for the same reasons. The bridge has been identified as having deteriorated superstructure elements requiring replacement. The bridge deck will be 29 feet, 3 inches wide and will accommodate two 11-foot side travel lanes, 2-foot shoulders and safety curbs with railings. The structural single span length will be increased from 82'-0" to 96'-0" in order to relocate the substructure behind the existing abutment footings. The hydraulic opening is slightly increased, while the abutment skew is maintained. While this does not increase or significantly change the hydraulic openness for the stream crossing, the partial substructure demolition allows the existing large stone slope protection to remain in place and avoids extensive excavation. Direct impacts to wetlands and waterbodies are also avoided through this replacement technique to the extent practicable; however, excavation behind the stone will need to extend towards the limits and elevation of Ordinary High Water (OHW) with the potential for minimal, direct impacts to the stream channel. The existing abutments will be cut down and voids will be filled with appropriate material. Sandbags may be required to stabilize the top of the riprap, upgradient from the bank flags and OHW.

A temporary utility bridge/conduit will be constructed adjacent to the bridge in order to carry existing mains across the Hoosic River while the construction phases occur. The utilities will be placed back with the bridge structure when the replacement occurs. Overhead lines must be relocated to a new easement just downstream from the bridge. An approximately 50-foot wide temporary access road easement will be required across the Ashuwillticook Rail Trail right-of-way and other private parcels, for the isolated residences of South Willow Street to reach Route 8 while the bridge is out. The Project occurs immediately north of the Town of Adams Quality Street Field. Temporary access may be required at the edge of the Field parcel for a laydown area and equipment access near the roadway, but the use of the ballfield will not be directly affected by the proposed project.

Permanent and/or temporary easements will be required on five affected properties. The majority of the easements are temporary for staging, driveway apron restoration, or the temporary access crossing for residences to Route 8. Easements are needed for guardrails, water mains, and utilities. The use of the properties will not be affected, but coordination and access permits will be required for the temporary crossing of the Ashuwillticook Rail Trail to ensure continued, safe usage during the length of construction.

Purpose and Need

The purpose of the project is to improve infrastructure on Quality Street by replacing the structurally deficient, functionally obsolete bridge structure. This project is planned to be funded through the 2025 Transportation Improvement Program for the Berkshire Metropolitan Planning Organization.

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MA Historical Commission
Secretary of the Commonwealth
Massachusetts Historical Commission
220 Morrissey Boulevard
Boston, MA 02125-3314

PS Form 3800, January 2023 PSN 7530-02-000-9047 See Reverse for Instructions

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Christine D. Hoyt, Chairperson
Board of Selectmen
8 Park Street, 2nd Floor
Adams, MA 01220

Instructions

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Jay R. Green, **Town Administrator**
8 Park Street, 2nd Floor
Adams, MA 01220

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Adams Historical Commission
Ryan Biros, Chair
8 Park Street
Adams, MA 01220

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David Rhoads, Chairperson
Board of Health
8 Park Street
Adams, MA 01220

PS Form 3800, January 2023 PSN 7530-02-000-9047 See Reverse for Instructions

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Postmark Here

Kyomi Belanger, Admin.
Conservation Commission
8 Park St., Adams, MA 01220

PS Form 3800, January 2023 PSN 7530-02-000-9047 See Reverse for Instructions

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:	Bridge Replacement and Related Work, Bridge A-04-038 (MassDOT Project #610777)
Location /Address:	South Willow Street over Hoosic River
City/Town:	Adams

Project Proponent

Name:	Massachusetts Department of Transportation
Address:	10 Park Plaza
City/Town/Zip/Telephone:	Boston, MA 02116

Agency license or funding for the project (list all licenses, permits, approvals, grants or other entitlements being sought from state and federal agencies).

Agency Name	**Type of License or funding (specify)**
FHWA	Federal funding/undertaking (FHWA is lead federal agency)
USACO	Section 404 permit

Project Description (narrative):

MassDOT proposes to replace Bridge A-04-038 in Adams, which carries the two-lane South Willow Street over the Hoosic River. The proposed work consists of full bridge replacement on the existing alignment with a single-span steel girder superstructure supported by integral concrete abutments set on pilings with integral concrete wingwalls and precast approach slabs. The bridge will be approximately the same length and width, 96-feet (ft) long and 29-ft 3-inches (in) wide, as the existing bridge. The project includes full-depth pavement reconstruction and grading of the approach roadway to extend approximately 80-ft west of the bridge along Quality Street and approximately 150-ft east of the bridge along South Willow Street; removal and replacement of existing and extension of guardrails along the bridge approaches, as needed; replacement and updates to existing traffic control and pavement markings; and installation of temporary erosion and sedimentation controls.

A temporary road and utility bridge will be constructed on temporary easements as part of the project to minimize disruption to the community. The temporary road will be constructed between South Willow Street and an existing spur of Grove Street and will cross the Ashuwillticook Rail Trail. The proposed temporary road follows the approximate road layout that was used when the extant bridge was constructed in 1950. The temporary utility bridge will be installed immediately north of the extant bridge to carry water and gas lines over the river. Following completion of the new bridge, the temporary road will be removed and replaced with loam and seed and the temporary bridge will be removed with utility lines carried beneath the deck of the road bridge.

APPENDIX A (continued)

Does the project include demolition? If so, specify nature of demolition and describe the building(s) which are proposed for demolition.

Bridge A-04-038 will be demolished as part of the project. The bridge was constructed in 1950 and consists of a steel single-span half-through girder-floor beam superstructure supported by concrete abutments and riprap walls. The bridge is not inventoried in MACRIS and was reviewed by Kurt Jergensen, Historic Bridge Specialist, and determined to be ineligible for listing in the National Register (NR), as an example of a typical mid-20th century steel girder design with standard design details and little architectural character.

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).

See plans

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.

A review of MACRIS revealed no NR-listed or -eligible districts and individual properties within or adjacent to the project area. The closest previously inventoried properties are the Adams Brothers Manufacturing Company Worker Housing at 4–6 and 8–10 South Willow Street (ADA.222 and 225), which are northeast of the bridge and project area, along the west side of South Willow Street. The two houses were constructed in 1894 as worker housing for the nearby Adams Brothers mill complex, approximately 0.15 miles northeast of the project and two inventoried residences. The mill complex is within the Maple Grove Village Area (ADA.V), which is eligible for listing in the NR as a historic district and does not include the worker housing on South Willow Street. The project work has no potential to affect the inventoried properties or the NR-eligible area.

A review of the MHC's archaeological maps in MACRIS revealed no recorded sites in the vicinity of the project area. The proposed project work will be confined to disturbed and/or unfavorable areas within an existing roadway footprint and adjacent roadside areas. It is the opinion of the MassDOT Archaeologist that low sensitivity can be ascribed to the project's area of potential effect based on the impacts of urban development, including bridge, railroad and road construction, as well as nearby residential development. The proposed work, including the bridge construction and road work, will be confined to the existing bridge alignment and roadway footprint, as well as disturbed areas adjacent to and within the Ashuwillticook Rail Trail.

What is the total acreage of the project area?

Woodland	_____	acres	Productive Resources:		
Wetland	_____	acres	Agriculture	_____	acres
Floodplain	_____	acres	Forestry	_____	acres
Open Space	_____	acres	Mining/Extraction	_____	acres
Developed	_____	acres	Total Project Acreage	_____	acres

950 CMR: OFFICE OF THE SECRETARY OF THE COMMONWEALTH

APPENDIX A (continued)

What is the acreage of the proposed new construction? N/A acres

What is the present land use of the project area?

The project is in a dense residential and former industrial setting. The bridge and road provide access to a handful of houses along the dead-end residential South Willow Street from Quality Street to the southwest.

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: Melissa Andrade **Date:** 03/14/2024

Name: Melissa Andrade

Address: 10 Park Plaza, Suite 7130

City/Town/Zip: Boston, MA 02116

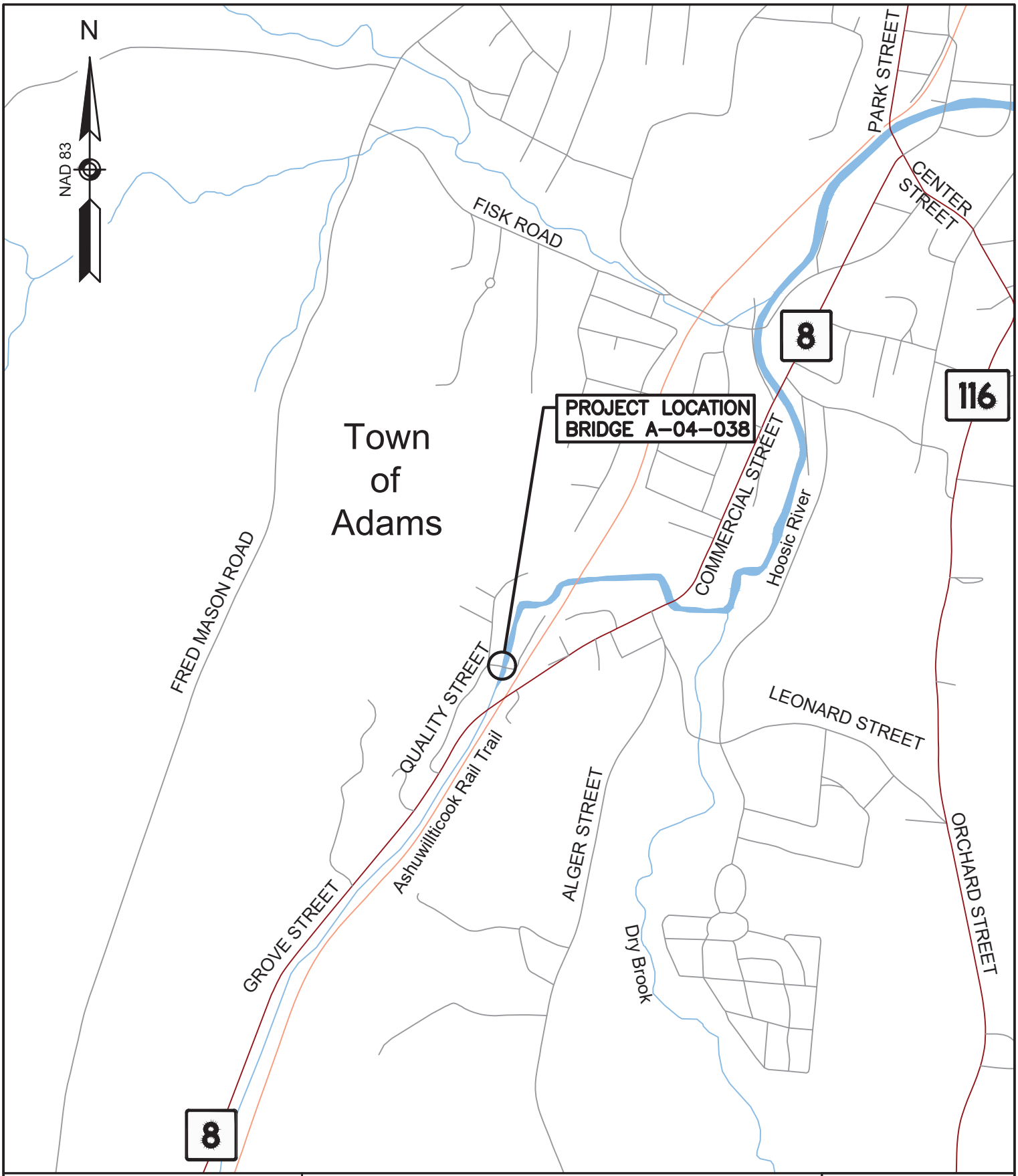
Telephone: Email: melissa.j.andrade@dot.state.ma.us

REGULATORY AUTHORITY

950 CMR 71.00: M.G.L. c. 9, §§ 26-27C as amended by St. 1988, c. 254.

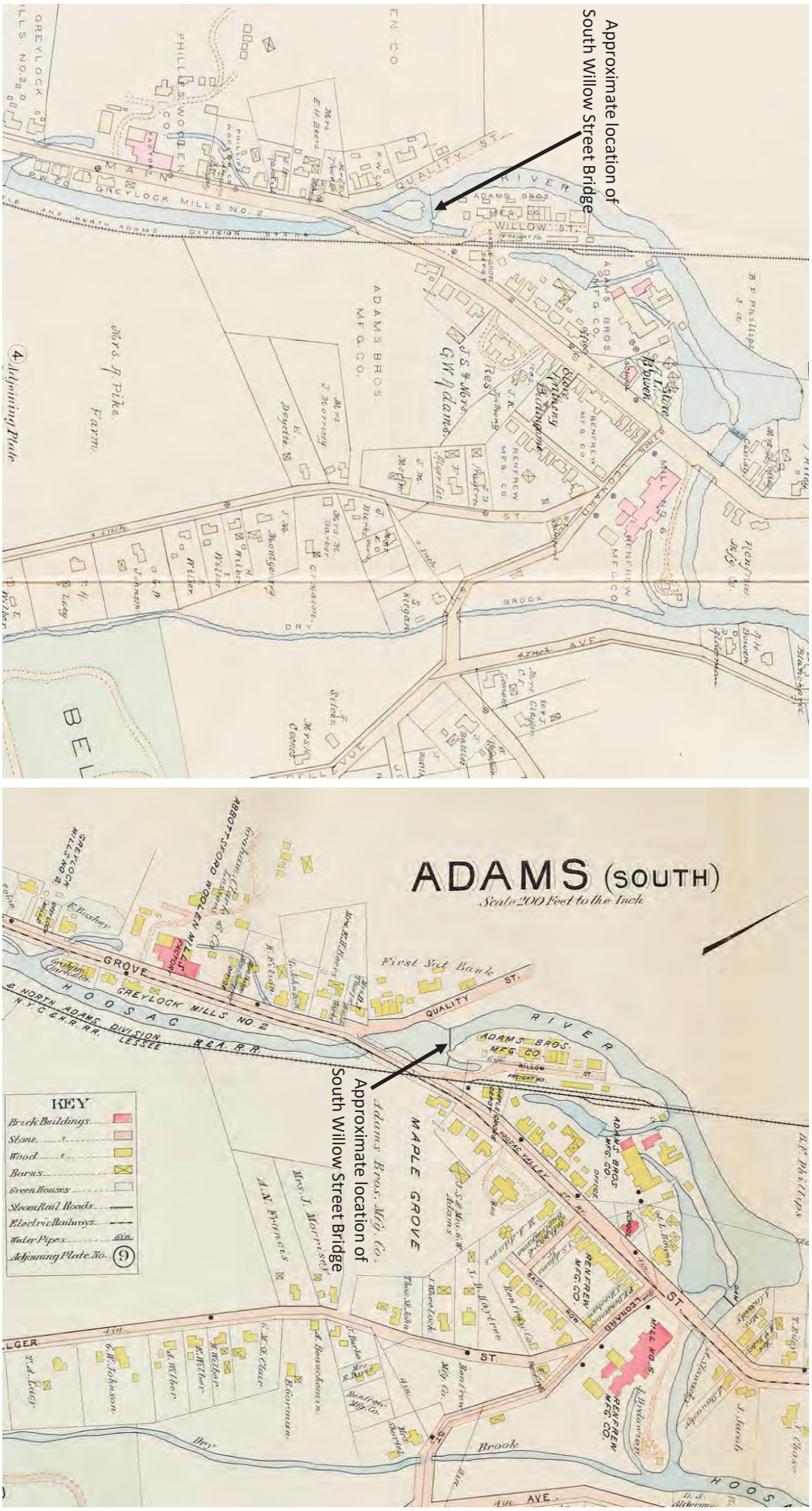
CC

CC:

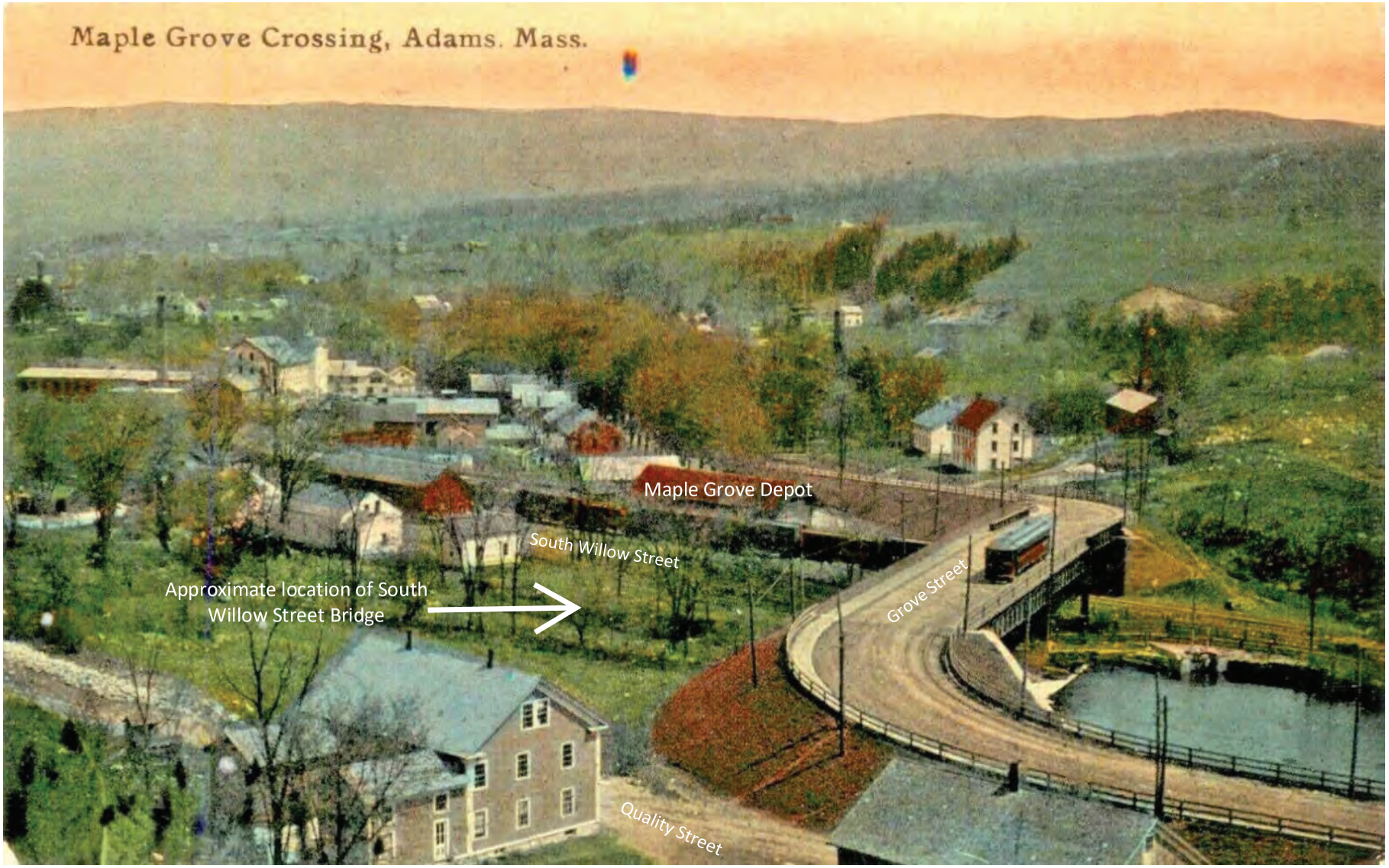


massDOT Massachusetts Department of Transportation Highway Division	PROJECT: QUALITY STREET OVER HOOSIC RIVER BRIDGE REPLACEMENT	FIGURE 1
	SUBJECT: LOCUS MAP SCALE: 1" = 1000'	LOCUS MAP

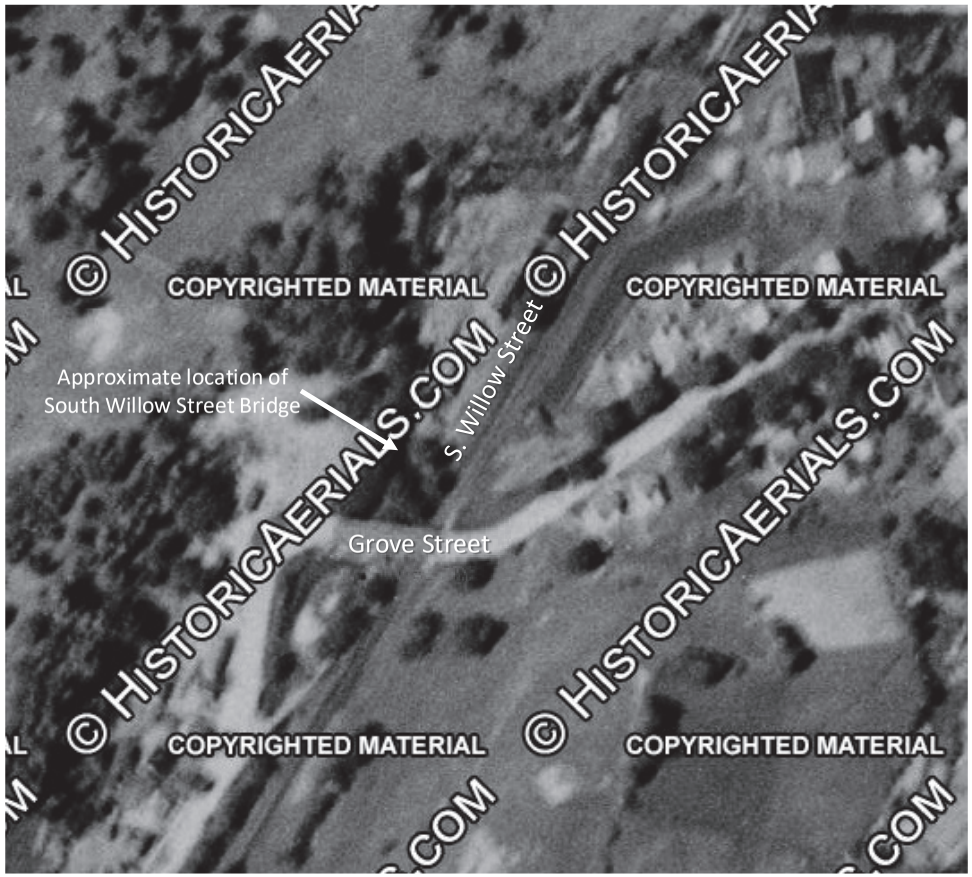
MACRIS Map showing inventoried properties and areas within vicinity of the project.



1894 map of Adams (Plate 12) and 1904 map of Adams (Plate 56) (left to right), showing Maple Grove village and Willow Street (later named South Willow Street.



Ca. 1907–1915 postcard, looking northeast toward Maple Grove village. South Willow Street in center midground, Grove Street and Grove Street Bridge on right.



1940 aerial, showing no South Willow Street Bridge

1959 aerial, showing South Willow Street Bridge and realigned Grove Street and bridge

Proposal No. 610777-131930

A00840 - 78

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
1	MASS.	[illegible]	19	23	62

GENERAL NOTES

FOUNDATIONS :
MAY BE ALTERED IF NECESSARY TO SUIT CONDITIONS OF CONSTRUCTION

DESIGN :
ACCORDING TO SPECIFICATIONS OF AMERICAN ASSOCIATION OF STATE HIGHWAY OFFICIALS (1949 ED.) FOR H-15-44 LOADING.

BENCH MARK :
STA. 30+09 (GROVE ST. LINE "B") RT. 8' U.S.C.&G. CHISEL ☐ MAPLE GROVE BRIDGE " 12.02 S.E. PIER EL. 871.81

HYDRAULIC DATA
SIZE OF DRAINAGE AREA : 20.5 SQ. MI.
BRIDGE OPENING PROVIDED FOR MAJOR FLOOD.
ESTIMATED DISCHARGE : 8500 CU. FT./SEC.
VELOCITY OF WATER FLOW : 11.0 FT./SEC.

ESTIMATED QUANTITIES
(NOT GUARANTEED)

CLASS A ROCK EXCAVATION	20	CU. YDS.
BRIDGE EXCAVATION	200	CU. YDS.
CHANNEL EXCAVATION	850	CU. YDS.
CLASS B ROCK EXCAVATION	10	CU. YDS.
CLASS A CEM. CONC. MASONRY	165	CU. YDS.
STEEL REINF. FOR STRUCTURES	29,700	POUNDS.
STRUCTURAL STEEL	2900	POUNDS.
SLOPE PAVING	125	CU. YDS.
STEEL ERECTED FOR BRIDGE (2)		
QUALITY ST. EXTENSION	1	LUMP SUM

PLAN
SCALE 1"=40'

PROFILE
SCALES HOR. 1"=40'
VERT. 1"=8'

DATE	SHEET NOS.	DESCRIPTION
10-18-50	1	PIPE LOCATIONS ADDED TO PLAN

LIST OF REVISIONS-USE ONLY PRINTS OF LATEST DATE
ADVERTISING 6-26-50 CONSTRUCTION 6-26-50

THE COMMONWEALTH OF MASSACHUSETTS
PROPOSED BRIDGE
ADAMS
QUALITY ST. EXTENSION STA. 11+540
OVER SOUTH BRANCH HOOSIC RIVER
SCALES AS NOTED
OFFICE OF
DEPARTMENT OF PUBLIC WORKS
100 NASHUA ST. BOSTON MASS.
MAY 1950

BRIDGE ENGINEER — CHIEF ENGINEER

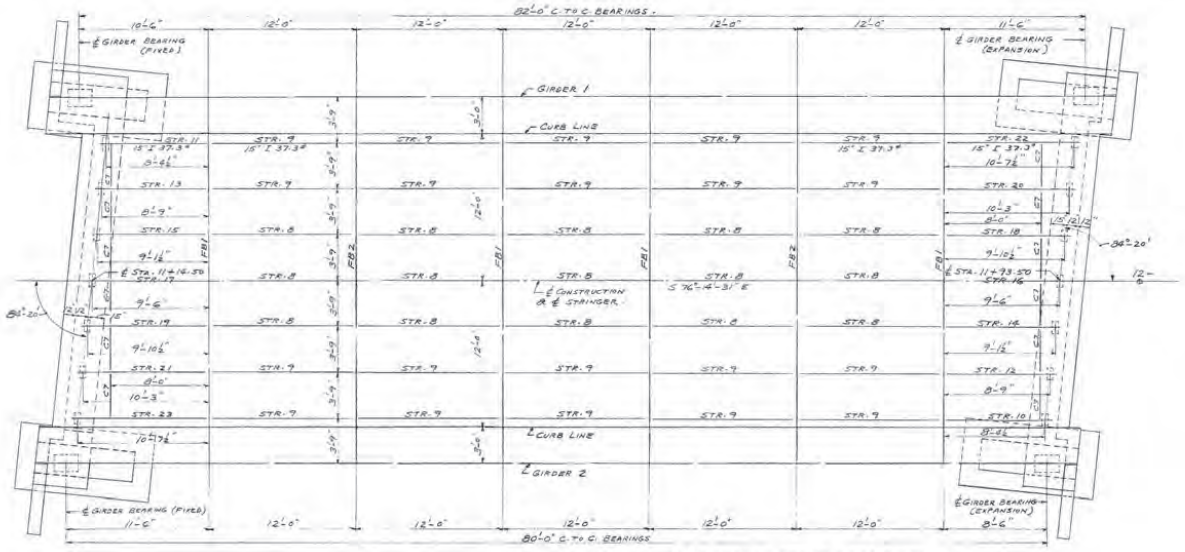
DESIGNED BY L.H.R. DRAWN BY L.H.R. & M.T. CHECKED BY J.R.B.

SHEET 1 OF 3 SHEETS BRIDGE NO. A-4-38

Proposal No. 610777-131930

A00840 - 79

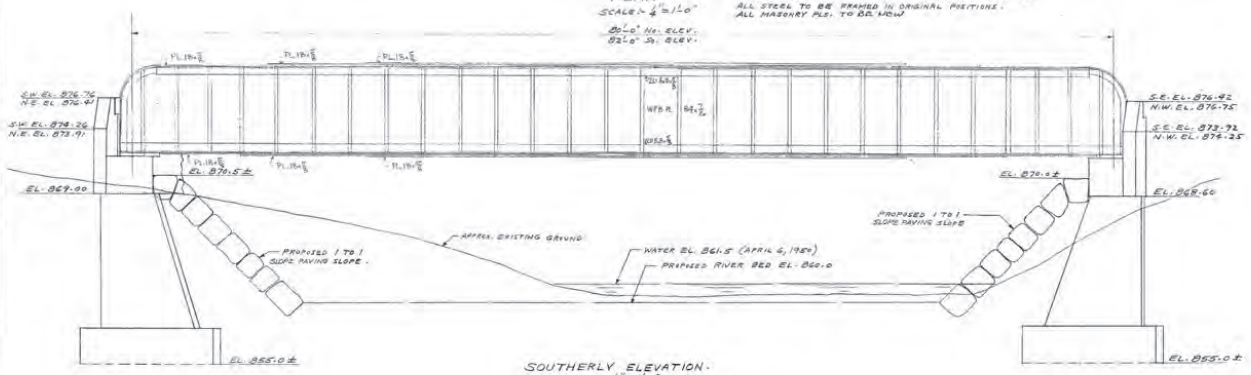
AVB. BOARD DIV. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
1	MASS. (61613)		19	24	42



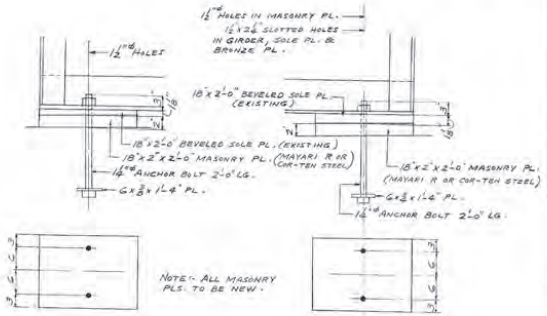
PLAN
SCALE:- 1/8"=1'-0"

NOTE:- STRUCTURAL STEEL OR FORMER POMERAY AVE. BRIDGE TO BE ERECTED AS SHOWN AT THIS SITE. ALL STEEL TO BE FRAMED IN ORIGINAL POSITIONS. ALL MASONRY PLS. TO BE NEW.

80'-0" No. ELEV.
82'-0" So. ELEV.

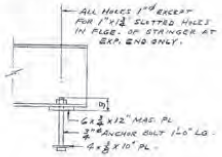


SOUTHERLY ELEVATION.
SCALE:- 1/8"=1'-0"
(NORTHERLY ELEVATION SIMILAR)



GIRDER BEARING
(FIXED END)
SCALE:- 1"=1'-0"

GIRDER BEARING
(EXPANSION END)
SCALE:- 1"=1'-0"

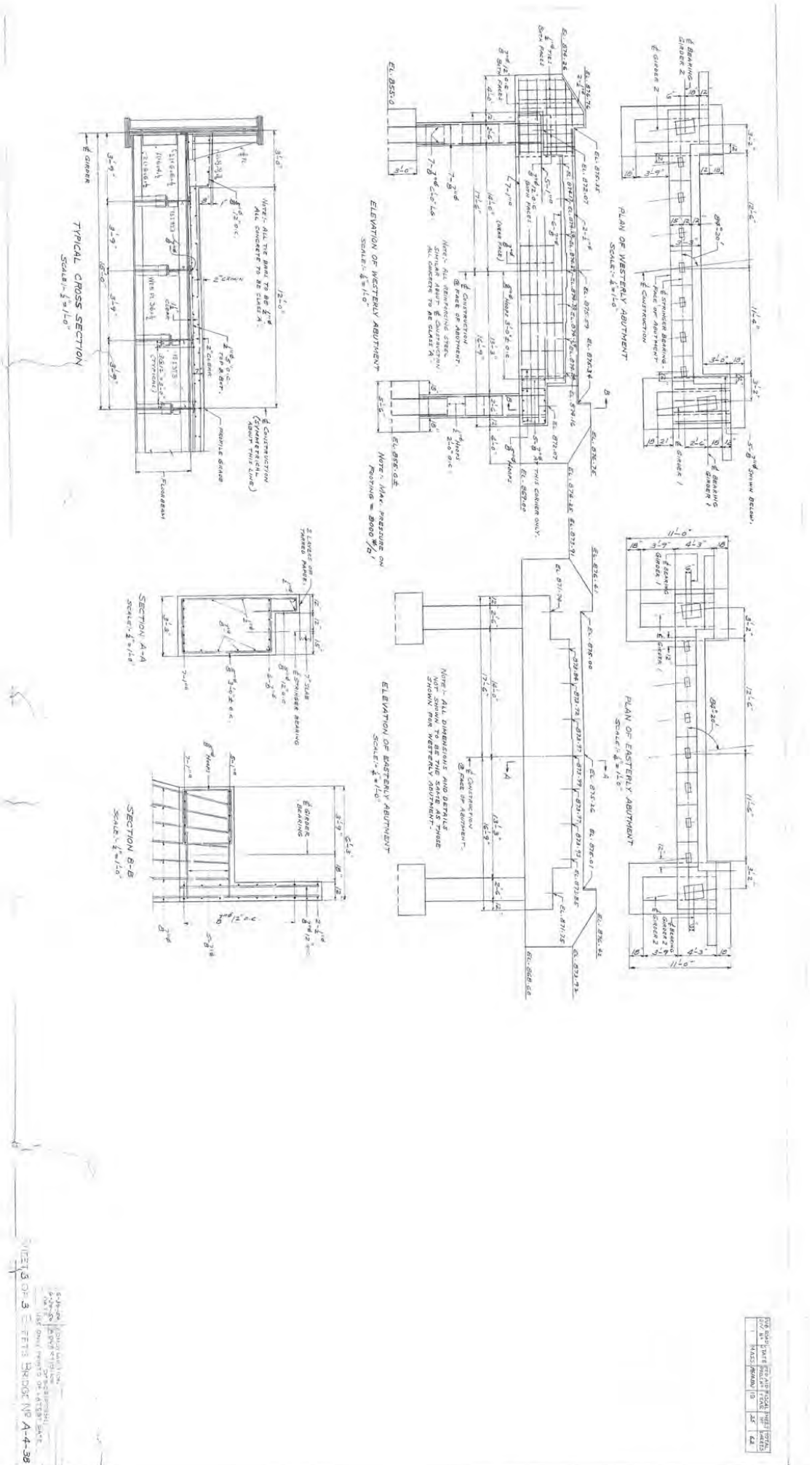


STRINGER BEARING
SCALE:- 1"=1'-0"

6-30-82	CONSTRUCTION	
6-20-83	ADVERT. SIGNS	
DATE	DESCRIPTION	

USE ONLY PRINTS OF LATEST DATE

SHEET 2 OF 3 SHEETS. BRIDGE NO. A-4-38


TYPICAL CROSS SECTION
SCALE: 1/2"=1'-0"
ELEVATION OF WESTERLY ABUTMENT
SCALE: 1/2"=1'-0"
PLAN OF WESTERLY ABUTMENT
SCALE: 1/2"=1'-0"
ELEVATION OF EASTERLY ABUTMENT
SCALE: 1/2"=1'-0"
PLAN OF EASTERLY ABUTMENT
SCALE: 1/2"=1'-0"
SECTION A-A
SCALE: 1/2"=1'-0"
SECTION B-B
SCALE: 1/2"=1'-0"

From: Microsoft Outlook
To: 106review@mwtribe-nsn.gov; David.weeden@mwtribe-nsn.gov
Subject: Relayed: MassDOT Project #610777 - Adams A-04-038
Date: Thursday, March 14, 2024 11:02:19 AM
Attachments: MassDOT Project #610777 - Adams A-04-038.msg

Delivery to these recipients or groups is complete, but no delivery notification was sent by the destination server:
106review@mwtribe-nsn.gov (106review@mwtribe-nsn.gov) <mailto:106review@mwtribe-nsn.gov>
David.weeden@mwtribe-nsn.gov (David.weeden@mwtribe-nsn.gov) <mailto:David.weeden@mwtribe-nsn.gov>
Subject: MassDOT Project #610777 - Adams A-04-038

From:	Microsoft Outlook
To:	Robinson, David S (EEA)
Subject:	Delivered: MassDOT Project #610777 - Adams A-04-038
Date:	Thursday, March 14, 2024 11:02:58 AM
Attachments:	MassDOT Project #610777 - Adams A-04-038.msg

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: MassDOT Project #610777 - Adams A-04-038

From: Microsoft Outlook
To: thpo@wampanoagtribe-nsn.gov
Subject: Relayed: MassDOT Project #610777 - Adams A-04-038
Date: Thursday, March 14, 2024 11:04:11 AM
Attachments: MassDOT Project #610777 - Adams A-04-038.msg

Delivery to these recipients or groups is complete, but no delivery notification was sent by the destination server:
thpo@wampanoagtribe-nsn.gov (thpo@wampanoagtribe-nsn.gov) <mailto:thpo@wampanoagtribe-nsn.gov>
Subject: MassDOT Project #610777 - Adams A-04-038

From:	Microsoft Outlook
To:	thpo@mohican-nsn.gov
Subject:	Relayed: MassDOT Project #610777 - Adams A-04-038
Date:	Thursday, March 14, 2024 11:04:16 AM
Attachments:	MassDOT Project #610777 - Adams A-04-038 .msg

Delivery to these recipients or groups is complete, but no delivery notification was sent by the destination server:
thpo@mohican-nsn.gov (thpo@mohican-nsn.gov) <mailto:thpo@mohican-nsn.gov>
Subject: MassDOT Project #610777 - Adams A-04-038

Attachment F

MassDOT Project no. 610777
Quality Street over the Hoosic River
Bridge Replacement Project
401 WQC Application

Stormwater Management Memo

BSC GROUP
BUILD | SUPPORT | CONNECT

Template Version: November 2023

To: MassDOT

Date: January 24, 2025

Project #: 610777

From: BSC Group

Re: Bridge A-04-038 Replacement

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 610777 to construct a bridge replacement (the Project) located in Adams, MA. As proposed, the Project consists of replacing bridge # A-04-038, carrying South Willow Street over the Hoosic River. The Project will include related highway work required to install the proposed bridge such as mill and overlay transitions, full depth pavement reconstruction and utility upgrades.

Existing and Proposed Drainage Conditions

The existing roadway is a 2-lane, 2-way road which is classified as an Urban Local Road situated in a north-south orientation. The area for the proposed replacement of Bridge A-04-038 consists of approximately 332 feet of roadway along South Willow Street centered on the bridge over Hoosic River, as well as approximately 85 feet of roadway along Quality Street. The bridge is located approximately 1.6 miles west of the intersection where a portion of Grove Street splits off onto a side street. The roadway is approximately 24' wide with no pavement markings to indicate lane or shoulder width and averages 129 vehicles per day.

The proposed conditions of the site will increase roadway width to 26' wide but it will decrease the overall bridge width by approximately 2-feet. The proposed clear span width will increase from 82-feet to 92-feet. The project also involves milling and overlaying a portion of Quality Street, as well as removing existing pavement to allow for an increased radius of the right-turn approaching the bridge from Quality Street and installing associated guardrail.

The project area is 21,133 SF. In existing conditions, 11,599 SF is impervious area. The Project proposes to increase the impervious area by 1,796 SF to 13,395 SF. The approximately 13.5% increase in impervious area is largely due to the roadway reconstruction for improved roadway approaches.

The existing roadway solely relies on country drainage to facilitate flow to the Hoosic River. There are no existing drainage structures or drainage pipes within the limit of work. Just outside the limit of work, there are two existing catch basins collecting runoff from Quality Street that then discharge into the Hoosic River via a 12" reinforced concrete pipe (RCP) through a headwall with stone protection. There are two abandoned 6" PVC outfalls just outside of the project limits. There are no proposed changes to these existing outlets in the proposed conditions since they are outside of the limit of work.

South Willow Street slopes from higher elevations in the east to lower elevations northwest. Runoff that does not continue down the roadway will ultimately discharge down the side slopes into the Hoosic River. The river is tributary of the Hudson watershed.

Existing watershed patterns remain effectively unchanged in the proposed condition. In the existing and proposed conditions, the roadway is slightly crowned, and stormwater runs off the roadway via country drainage. The length of curbing required for bridge rail to guardrail transitions will increase at each corner of the bridge by less than 23'. The increased length of guardrail is necessary in order to protect against hazards that would otherwise be within the clear zone required due to the raised profile. In the existing condition, roadway runoff sheet flows past the end of the curb, and either passes down the 1:1 slope towards the river

or continues to sheet flow down South Willow Street until it ultimately discharges into the Hoosic River as well. There is no existing erosion control protecting the slope down to the river. In the proposed conditions, channel scour protection shall be constructed at the side slopes from the bridge to the streambed. In addition, in areas where the existing slope exceeds a 1:2 vertical slope, regrading is proposed to prevent erosion and scour. There is only one discharge point within the project area, the Hoosic River. Overall, the drainage patterns are either maintained or improved due to the proposed rip-rap for erosion control.

There are no existing or proposed stormwater control measures (SCM). Four options were evaluated to determine the feasibility of SCMs within the project area. Option 1 proposes a bioretention area north of Quality Street Field at the corner of Quality Street and South Willow Street. This location is the only area within the project limits large enough to propose a SCM. The surface grades from this area to the roadway are nearly flat, making it difficult to connect any structures on the roadway into the SCM. In order to get the invert into the SCM to work, significant excavation would be required. Due to the multiple existing utilities in this area, excavation would be very difficult. Although an SCM is not feasible in this location, the existing compacted soil in this area will be loamed and seeded to improve upon existing conditions. Option 2 evaluated the wooded area north of where South Willow Street bends to the north. This location is private property so it would be infeasible to propose any SCMs here. Option 3 evaluated the potential for a SCM along South Willow Road east of the proposed bridge. However, this portion of the project slopes northeast away from the Hoosic River; therefore, having no effect on the water quality for the project. Option 4 evaluated the potential to replace the two existing catch basins on Quality Street, just south and outside of the limit of work, with 4' deep sump catch basins. Both catch basins discharge into the Hoosic River via a 12" RCP that outfalls through a concrete headwall. By replacing these catch basins and proposing 4' sumps, 25% of Total Suspended Solids (TSS) will be removed; therefore, improving the overall water quality in proposed conditions. See Figure 6 of this memo for the Alternatives Analysis plan.

The project limits were designed to minimize impacts to the environmental resources in the area. No work is proposed within vegetated wetlands at the Project site. There are no Areas of Critical Environmental Concern or Outstanding Resource Waters located within or near the project area.

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 is structurally deficient and functionally obsolete. The proposed bridge replacement is considered maintenance which is required to maintain the function, safety, and longevity of the roadway. Increased impervious area is required to facilitate the maintenance of the bridge, improve overall water quality, and provide a safe corridor for vehicular traffic. The proposed features that increase impervious cover are larger radii at roadway approaches. The overall width of the bridge will decrease by approximately 2-feet. 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.

No new stormwater outfalls are proposed for the Project. In the existing conditions, all runoff within the project area flows toward the Hoosic River via country drainage. All runoff will continue to discharge into the river in proposed conditions. Just outside the limit of work, there are two existing catch basins collecting runoff from Quality Street that then discharge into the Hoosic River via a 12" reinforced concrete pipe (RCP) through a headwall with stone protection. This outfall is outside the limit of work; therefore, no changes are proposed. There is no existing erosion control treating stormwater as it flows down toward the river. In proposed conditions, channel scour protection will be installed to treat the stormwater runoff flowing from the bridge prior to discharging into the river.

No new outfalls are proposed.

See Standard 4 for the water quality treatment provided by the Project.

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.

Watershed modeling was performed using HydroCAD Stormwater Modeling Software version 10.00, a computer aided design program that combines SCS runoff methodology with standard hydraulic calculations. A model of the site's hydrology was developed for both pre- and post-development conditions to assess the effects of the proposed redevelopment of the project site and surrounding areas. One (1) design point was selected - the Hoosic River.

Since the project proposes an 1,848 SF increase in impervious area, and therefore a minor increase in peak flows, there are no increased flooding concerns. This increase is required to provide adequate roadway transitions on both ends of the improved bridge structure. Considering the minor increase of this area, the

project will have a negligible effect on the existing peak rate, the receiving water body, and down stream flooding.

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 (%)
11,599	13,395	1,796	13.5

Table 2: Peak Flow Discharge Rates

Storm Event	Pre-Development Peak Discharge Rate (cfs)	Post-Development Peak Discharge Rate (cfs)	Change In Peak Discharge Rate (cfs)
2-Year	0.52	0.79	0.27
10-Year	0.98	1.30	0.32
100-Year	1.88	2.26	0.36

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.

The Project proposes to loam and seed the densely compacted dirt located at the corner of South Willow Street and Quality Street. The improvements to the existing ground surface condition will allow for an increased volume of stormwater to be recharged to groundwater; therefore, improving existing 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.

There is no existing treatment of total suspended solids within the project limits. In proposed conditions, there is still no TSS removal provided. Stormwater treatment measures are not feasible due to limited open space and steep grades within the project limits. In addition, there are multiple existing utilities within the project limits that cause the addition of any stormwater control measures to be infeasible. However, the proposed channel scour protection will limit sediment uptake into the river, therefore improving the overall water quality in the proposed condition.

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 is located within a Critical Area, the Hoosic River is identified as a Cold-Water Fishery. The proposed channel scour protection will provide increased treatment to surface runoff over existing conditions.

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.

As a bridge improvement, the Project is considered a redevelopment and has been designed to comply with the Stormwater Management Standards to the maximum extent practicable. Standards 2, 3, and 4 have been met to the maximum extent practicable, while Standards 1, 5, 6, 7, 8, 9, and 10 have been met fully.

Standard 8: Construction Period Pollution Prevention and Erosion and Sedimentation Controls

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 and include sediment control barriers and channel scour protection. The proposed E&S measures will be provided on both Quality Street and South Willow Street and will minimize the impact of sediment and debris on the stream from construction activities.

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.

The bridge included in this project is not owned by MassDOT. The O&M Plan will be implemented by the municipality. Appendix B included the O&M Plan for this project.

Long-term pollution prevention for this 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:

Figure 1 – Existing Watershed Map
Figure 2 – Existing HydroCAD Calculations
Figure 3 – Proposed Watershed Map
Figure 4 – Proposed HydroCAD Calculations
Figure 5 – NRCS Web Soil Survey
Figure 6 – Alternatives Analysis

Appendix A – Stormwater Checklist
Appendix B – O&M Plan

Figure 1 – Existing Watershed Map

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BRIDGE NO. A-04-038 REPLACEMENT

QUALITY STREET &
SOUTH WILLOW STREET
IN
ADAMS
MASSACHUSETTS
(BERSHIRE COUNTY)

EXISTING CONDITIONS WATERSHED MAP

JANUARY 24, 2025

REVISIONS:

NO.	DATE	DESC.

PREPARED FOR:
MASSDOT
270 MAIN STREET
LENOX, MA 01240

BSC GROUP
BUILD | SUPPORT | CONNECT
803 Summer Street
Boston, Massachusetts
02127
617 896 4300

© 2024 BSC Group, Inc.

SCALE: 1" = 20'
0 10 20 40 FEET

FILE:
DWG.:
JOB. NO: 28304.28
SHEET 1 OF 2

ISSUED FOR PERMITTING
NOT FOR CONSTRUCTION

EX1

DP1

HYDRAULIC SOIL GROUP A
COPAKE FINE SANDY LOAM

PINNACLE DRIVE
PRIVATE ACCESS DRIVE

QUALITY STREET
(WIDTH VARIES, PUBLIC)
1950 SHLO NO. 3773

SOUTH WILLOW STREET
1950 SHLO NO. 3773

ASHUWILLTICOOK RAIL TRAIL (DCR)

BASELINE 1950 SHLO NO. 3773

ORIGINAL R.R. PROPERTY LINE

HOOSIC RIVER

AUXILIARY BASELINE

10' WIDE WATERLINE EASEMENT
SEE ADAMS FIRE DISTRICT PLAN OF LOCATION
OF PROPOSED TAKING FOR WATER MAINS ACROSS
PITTSFIELD & NORTH ADAMS R.R. LOCATION OCT. 5, 1950"

101 GROVE ST
MAP 4 BLOCK 124 LOT 23
N/F
JOHN D. DUQUETTE, JR.
BK 1438 PG 482

56
N: 3051282.515'
E: 216883.415'
EL: 879.264'
SWC

0 QUALITY ST
MAP 4 BLOCK 121 LOT 15
N/F
JAMES T. GANCARZ AND
MARIA E. GANCARZ
BK 896 PG 611

QUALITY ST
MAP 4 BLOCK 121 LOT 14
N/F
JAMES T. GANCARZ
BK 896 PG 611

MAP 4 BLOCK 121 LOT 16
OWNERS UNKNOWN

2 SO. WILLOW ST
MAP 4 BLOCK 121 LOT 16
N/F
OPAROWSKI NOMINEE TRUST
BK 1221 PG 883

2 SOUTH WILLOW STREET
MAP 4 BLOCK 121 LOT 17
N/F
OPAROWSKI NOMINEE TRUST
BK 1221 PG 883

8 SOUTH WILLOW STREET
MAP 4 BLOCK 121 LOT 18
N/F
ALBERT J. SAWYER
BK 672 PG 666

8 SOUTH WILLOW STREET
MAP 4 BLOCK 121 LOT 21.2
N/F
ALBERT J. SAWYER
BK 727 PG 444

54
N: 3051368.172'
E: 217116.319'
EL: 864.906'
SWC

4
N: 3051310.483'
E: 217224.538'
EL: 867.830'
IRWC

1-3 QUALITY ST
MAP 4 BLOCK 121 LOT 13
N/F
JEFFREY R. MULLEN
BK 1540 PG 310

7-9 QUALITY ST
MAP 4 BLOCK 121 LOT 12
N/F
MARK G. HARRINGTON
BK 1034 PG 847

0 QUALITY ST
MAP 4 BLOCK 121 LOT 24
N/F
TOWN OF ADAMS
RK 481 PG 51 (SHLO 3773)

N/F
DEPARTMENT OF
TRANSPORTATION
BK 860 PG 1194
DRAWER 8 PLAN 587

46 GROVE ST
MAP 4 BLOCK 121 LOT 40
N/F
MICHAEL W. MECZYWOR AND
KRISTY B. MECZYWOR
BK 1586 PG 1051

51
N: 3051167.069'
E: 216858.757'
EL: 873.212'
MMAG

57
N: 3051137.955'
E: 216990.761'
EL: 862.728'
SWC

52
N: 3050993.941'
E: 216991.805'
EL: 868.088'
SWC

50
N: 3051096.420'
E: 217052.753'
EL: 869.591'
SWC

1
N: 3050994.310'
E: 216857.067'
EL: 875.370'
IRWC

2
N: 3051164.166'
E: 217138.38'
EL: 867.38'
MMAG

BENCHMARK: MAG NAIL
IN 20" SPRUCE
EL=873.40'

BENCHMARK: MAG NAIL
IN 20" SHLO GUARDRAIL
EL=871.02'

BENCHMARK:
SPK IN UP
EL=874.88'

BENCHMARK:
MAG NAIL IN CONC.
EL=871.80'

N24°47'52"E 118.04'

S56°11'15"E 30.81'

S21°12'45"E 127.43'

N51°48'45"E 160.00'

S37°45'53"W 182.92'

N54°15'07"E 207.30'

N54°15'07"E 414.04'

N28°05'02"E 245.21'

N51°38'26"E 315.23'

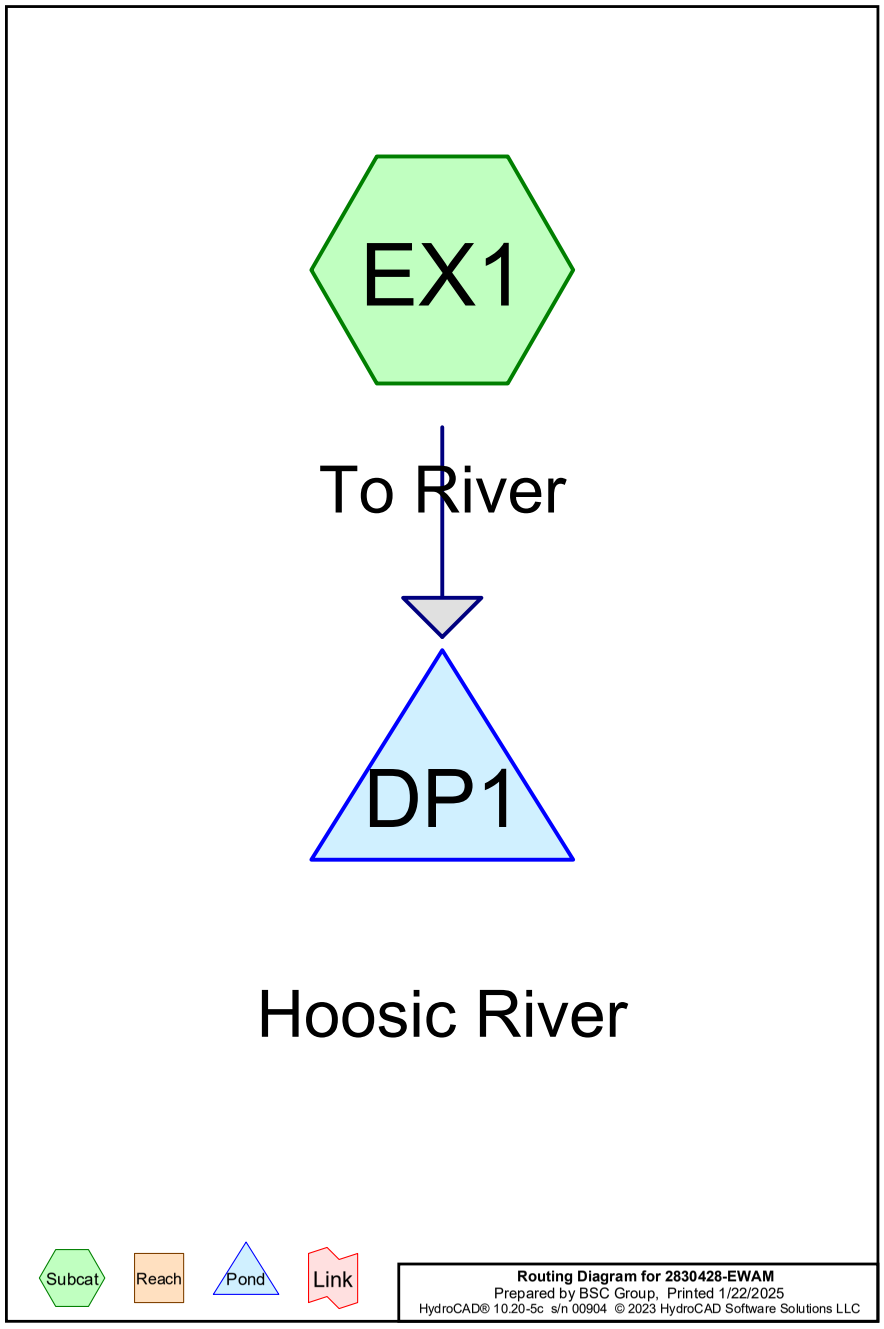
S89°52'42"E 134.68'

R=115.00'

R=65.00' L=70.06'

R=150.00' L=61.52'

Figure 2 – Existing HydroCAD Calculations



Rainfall Events Listing

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	2-year	Type III 24-hr		Default	24.00	1	3.02	2
2	10-year	Type III 24-hr		Default	24.00	1	4.10	2
3	100-year	Type III 24-hr		Default	24.00	1	6.03	2

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Area Listing (all nodes)

Area (sq-ft)	CN	Description (subcatchment-numbers)
8,094	39	>75% Grass cover, Good, HSG A (EX1)
444	72	Dirt roads, HSG A (EX1)
11,599	98	Paved parking, HSG A (EX1)
996	98	Water Surface, HSG A (EX1)
21,133	**75**	**TOTAL AREA**

Soil Listing (all nodes)

Area (sq-ft)	Soil Group	Subcatchment Numbers
21,133	HSG A	EX1
0	HSG B	
0	HSG C	
0	HSG D	
0	Other	
21,133		**TOTAL AREA**

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Ground Covers (all nodes)

HSG-A (sq-ft)	HSG-B (sq-ft)	HSG-C (sq-ft)	HSG-D (sq-ft)	Other (sq-ft)	Total (sq-ft)	Ground Cover
8,094	0	0	0	0	8,094	>75% Grass cover, Good
444	0	0	0	0	444	Dirt roads
11,599	0	0	0	0	11,599	Paved parking
996	0	0	0	0	996	Water Surface
21,133	**0**	**0**	**0**	**0**	**21,133**	**TOTAL AREA**

Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment EX1: To River Runoff Area=21,133 sf 59.60% Impervious Runoff Depth>0.97"
Tc=6.0 min CN=75 Runoff=0.52 cfs 1,712 cf

Pond DP1: Hoosic River Inflow=0.52 cfs 1,712 cf
Primary=0.52 cfs 1,712 cf

Total Runoff Area = 21,133 sf Runoff Volume = 1,712 cf Average Runoff Depth = 0.97"
40.40% Pervious = 8,538 sf 59.60% Impervious = 12,595 sf

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Summary for Subcatchment EX1: To River

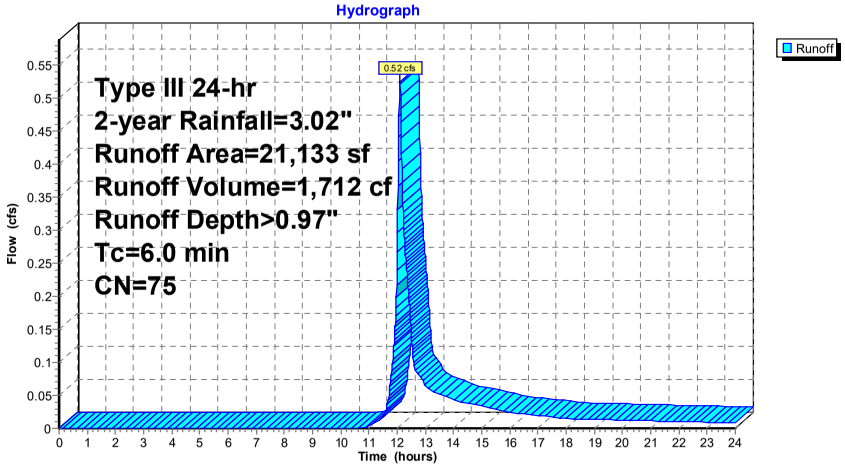
Runoff = 0.52 cfs @ 12.10 hrs, Volume= 1,712 cf, Depth> 0.97"
Routed to Pond DP1 : Hoosic River

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=3.02"

Area (sf)	CN	Description
11,599	98	Paved parking, HSG A
8,094	39	>75% Grass cover, Good, HSG A
996	98	Water Surface, HSG A
444	72	Dirt roads, HSG A
21,133	75	Weighted Average
8,538		40.40% Pervious Area
12,595		59.60% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment EX1: To River

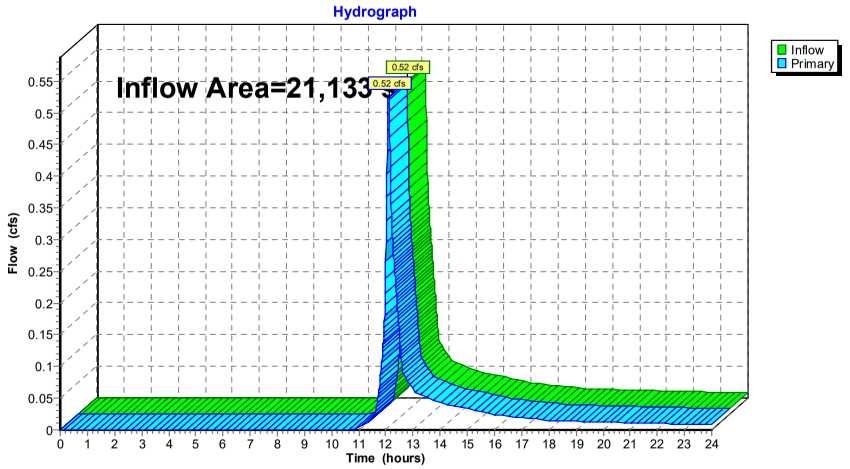


Summary for Pond DP1: Hoosic River

Inflow Area = 21,133 sf, 59.60% Impervious, Inflow Depth > 0.97" for 2-year event
Inflow = 0.52 cfs @ 12.10 hrs, Volume= 1,712 cf
Primary = 0.52 cfs @ 12.10 hrs, Volume= 1,712 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Pond DP1: Hoosic River



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Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

SubcatchmentEX1: To River Runoff Area=21,133 sf 59.60% Impervious Runoff Depth>1.74"
Tc=6.0 min CN=75 Runoff=0.98 cfs 3,064 cf

Pond DP1: Hoosic River Inflow=0.98 cfs 3,064 cf
Primary=0.98 cfs 3,064 cf

Total Runoff Area = 21,133 sf Runoff Volume = 3,064 cf Average Runoff Depth = 1.74"
40.40% Pervious = 8,538 sf 59.60% Impervious = 12,595 sf

Summary for Subcatchment EX1: To River

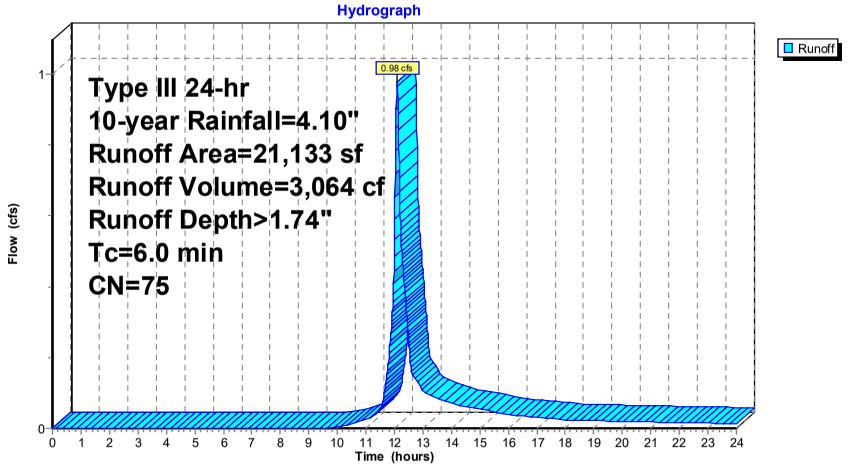
Runoff = 0.98 cfs @ 12.09 hrs, Volume= 3,064 cf, Depth> 1.74"
Routed to Pond DP1 : Hoosic River

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.10"

Area (sf)	CN	Description
11,599	98	Paved parking, HSG A
8,094	39	>75% Grass cover, Good, HSG A
996	98	Water Surface, HSG A
444	72	Dirt roads, HSG A
21,133	75	Weighted Average
8,538		40.40% Pervious Area
12,595		59.60% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment EX1: To River



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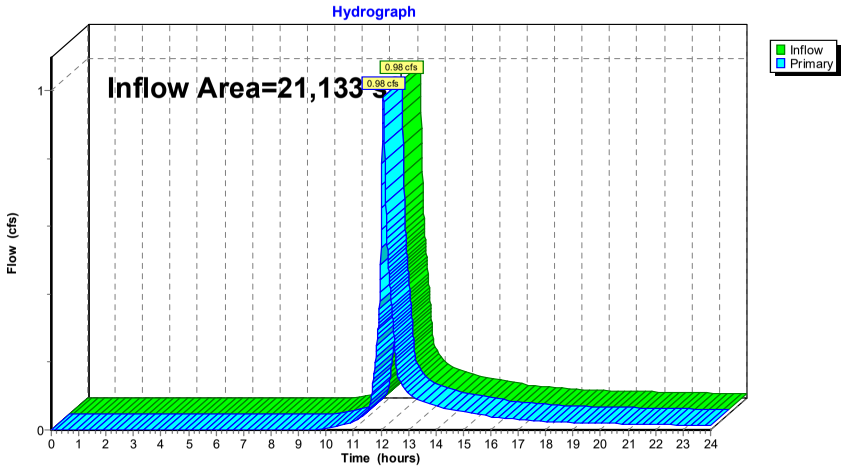
Summary for Pond DP1: Hoosic River

Inflow Area = 21,133 sf, 59.60% Impervious, Inflow Depth > 1.74" for 10-year event
Inflow = 0.98 cfs @ 12.09 hrs, Volume= 3,064 cf
Primary = 0.98 cfs @ 12.09 hrs, Volume= 3,064 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Pond DP1: Hoosic River



Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment EX1: To River Runoff Area=21,133 sf 59.60% Impervious Runoff Depth>3.30"
Tc=6.0 min CN=75 Runoff=1.88 cfs 5,818 cf

Pond DP1: Hoosic River Inflow=1.88 cfs 5,818 cf
Primary=1.88 cfs 5,818 cf

Total Runoff Area = 21,133 sf Runoff Volume = 5,818 cf Average Runoff Depth = 3.30"
40.40% Pervious = 8,538 sf 59.60% Impervious = 12,595 sf

Proposal No. 610777-131930
A00840 - 101

Summary for Subcatchment EX1: To River

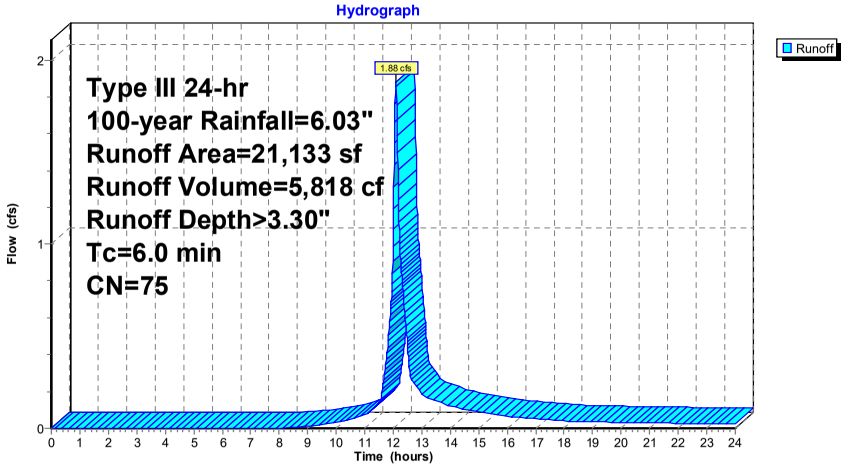
Runoff = 1.88 cfs @ 12.09 hrs, Volume= 5,818 cf, Depth> 3.30"
Routed to Pond DP1 : Hoosic River

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-year Rainfall=6.03"

Area (sf)	CN	Description
11,599	98	Paved parking, HSG A
8,094	39	>75% Grass cover, Good, HSG A
996	98	Water Surface, HSG A
444	72	Dirt roads, HSG A
21,133	75	Weighted Average
8,538		40.40% Pervious Area
12,595		59.60% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment EX1: To River



Summary for Pond DP1: Hoosic River

Inflow Area = 21,133 sf, 59.60% Impervious, Inflow Depth > 3.30" for 100-year event
Inflow = 1.88 cfs @ 12.09 hrs, Volume= 5,818 cf
Primary = 1.88 cfs @ 12.09 hrs, Volume= 5,818 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Pond DP1: Hoosic River

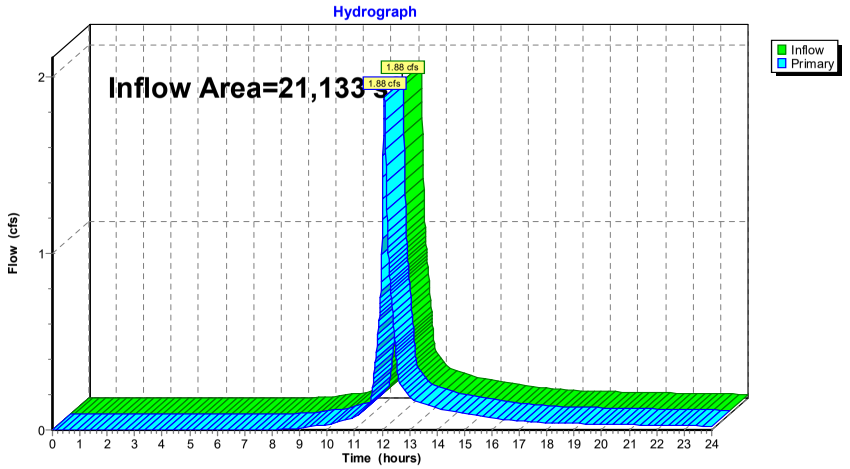


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Figure 3 – Proposed Watershed Map

Proposal No. 610777-131930

A00840 - 104

BRIDGE NO. A-04-038 REPLACEMENT

QUALITY STREET &
SOUTH WILLOW STREET
IN
ADAMS
MASSACHUSETTS
(BERSHIRE COUNTY)

PROPOSED CONDITIONS WATERSHED MAP

JANUARY 24, 2025

REVISIONS:

NO.	DATE	DESC.

PREPARED FOR:
MASSDOT
270 MAIN STREET
LENOX, MA 01240

BSC GROUP
BUILD | SUPPORT | CONNECT
803 Summer Street
Boston, Massachusetts
02127
617 896 4300

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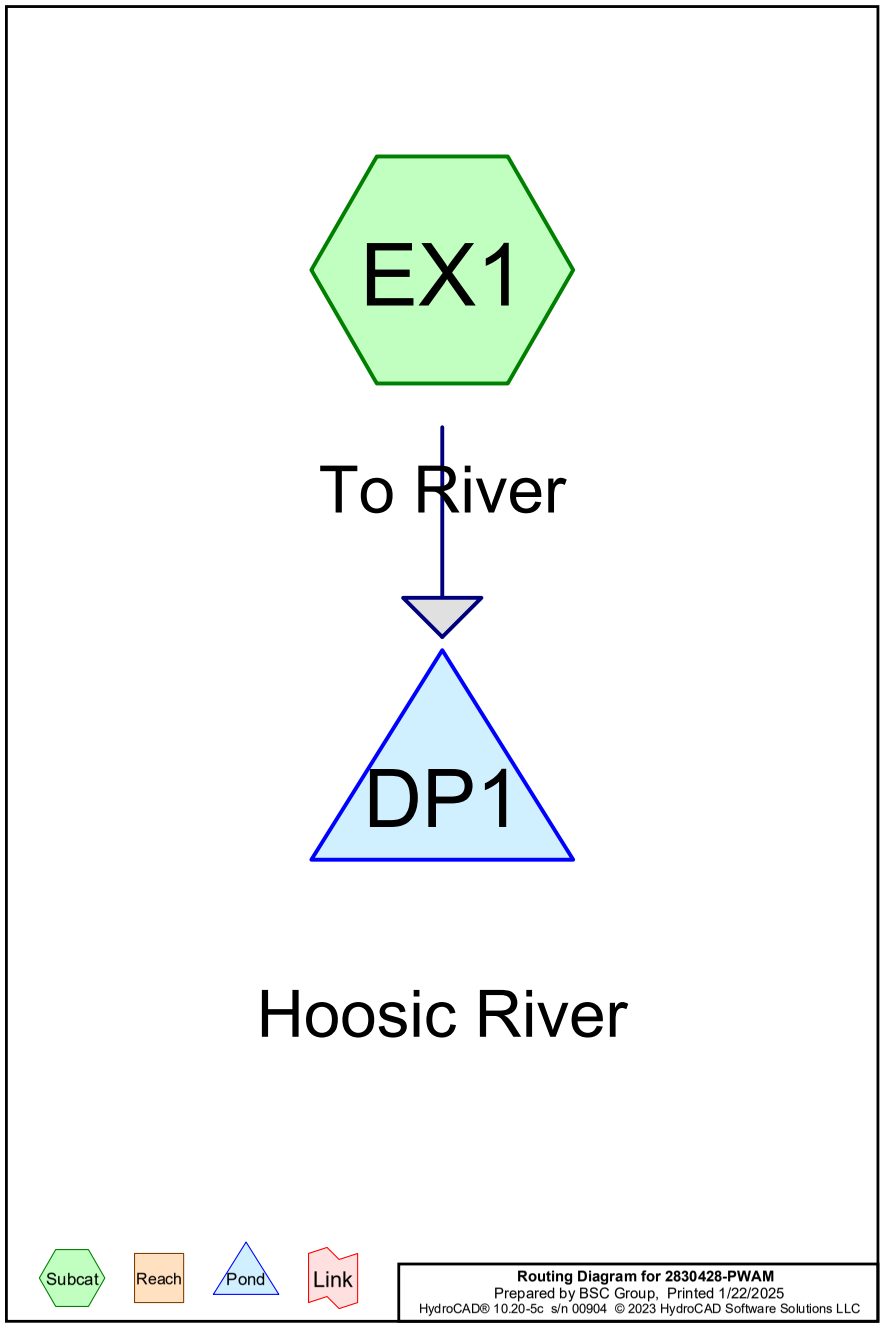
SCALE: 1" = 20'
0 10 20 40 FEET

FILE:
DWG.:
JOB. NO: 28304.28
SHEET 2 OF 2

ISSUED FOR PERMITTING
NOT FOR CONSTRUCTION

Figure 4 – Proposed HydroCAD Calculations

2830428-PWAM
Prepared by BSC Group
Printed 1/22/2025
HydroCAD® 10.20-5c s/n 00904 © 2023 HydroCAD Software Solutions LLC



Rainfall Events Listing

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	2-year	Type III 24-hr		Default	24.00	1	3.02	2
2	10-year	Type III 24-hr		Default	24.00	1	4.10	2
3	100-year	Type III 24-hr		Default	24.00	1	6.03	2

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Area Listing (all nodes)

Area (sq-ft)	CN	Description (subcatchment-numbers)
5,864	39	>75% Grass cover, Good, HSG A (EX1)
659	96	Gravel surface, HSG A (EX1)
13,395	98	Paved parking, HSG A (EX1)
1,215	98	Water Surface, HSG A (EX1)
21,133	**82**	**TOTAL AREA**

Soil Listing (all nodes)

Area (sq-ft)	Soil Group	Subcatchment Numbers
21,133	HSG A	EX1
0	HSG B	
0	HSG C	
0	HSG D	
0	Other	
21,133		**TOTAL AREA**

Proposal No. 610777-131930

Ground Covers (all nodes)

HSG-A (sq-ft)	HSG-B (sq-ft)	HSG-C (sq-ft)	HSG-D (sq-ft)	Other (sq-ft)	Total (sq-ft)	Ground Cover
5,864	0	0	0	0	5,864	>75% Grass cover, Good
659	0	0	0	0	659	Gravel surface
13,395	0	0	0	0	13,395	Paved parking
1,215	0	0	0	0	1,215	Water Surface
21,133	**0**	**0**	**0**	**0**	**21,133**	**TOTAL AREA**

Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment EX1: To River Runoff Area=21,133 sf 69.13% Impervious Runoff Depth>1.39"
Tc=6.0 min CN=82 Runoff=0.79 cfs 2,453 cf

Pond DP1: Hoosic River Inflow=0.79 cfs 2,453 cf
Primary=0.79 cfs 2,453 cf

Total Runoff Area = 21,133 sf Runoff Volume = 2,453 cf Average Runoff Depth = 1.39"
30.87% Pervious = 6,523 sf 69.13% Impervious = 14,610 sf

Proposal No. 610777-131930

Summary for Subcatchment EX1: To River

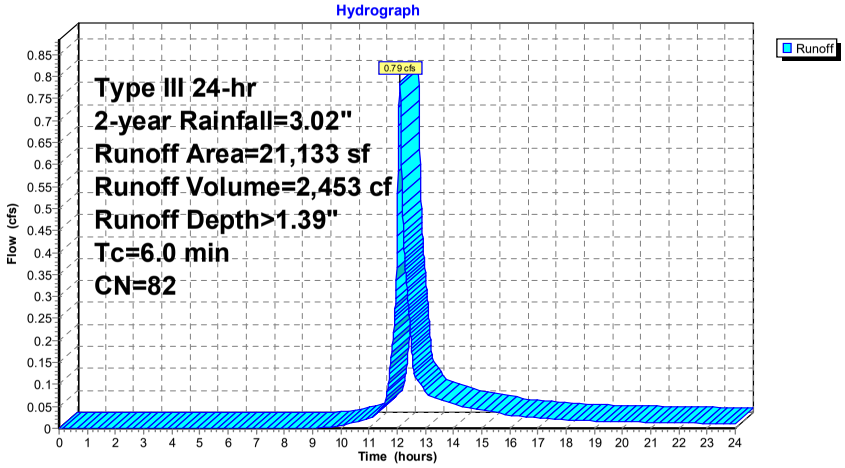
Runoff = 0.79 cfs @ 12.09 hrs, Volume= 2,453 cf, Depth> 1.39"
Routed to Pond DP1 : Hoosic River

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=3.02"

Area (sf)	CN	Description
13,395	98	Paved parking, HSG A
5,864	39	>75% Grass cover, Good, HSG A
1,215	98	Water Surface, HSG A
659	96	Gravel surface, HSG A
21,133	82	Weighted Average
6,523		30.87% Pervious Area
14,610		69.13% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment EX1: To River

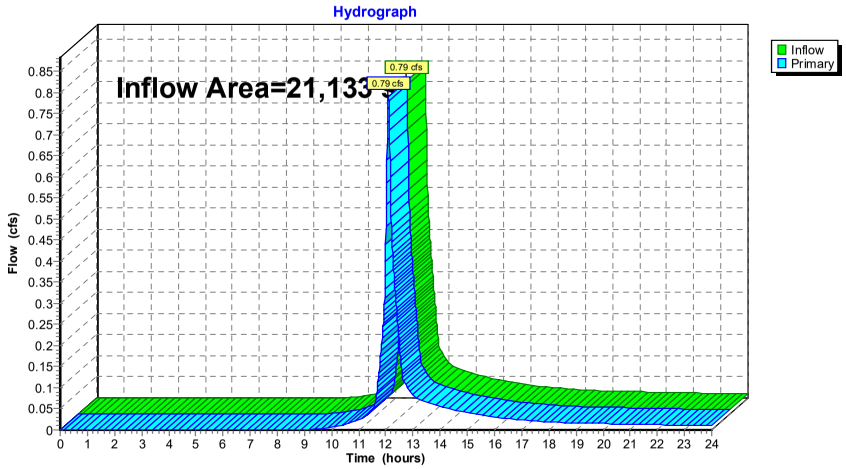


Summary for Pond DP1: Hoosic River

Inflow Area = 21,133 sf, 69.13% Impervious, Inflow Depth > 1.39" for 2-year event
Inflow = 0.79 cfs @ 12.09 hrs, Volume= 2,453 cf
Primary = 0.79 cfs @ 12.09 hrs, Volume= 2,453 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Pond DP1: Hoosic River



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Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

SubcatchmentEX1: To River Runoff Area=21,133 sf 69.13% Impervious Runoff Depth>2.29"
Tc=6.0 min CN=82 Runoff=1.30 cfs 4,026 cf

Pond DP1: Hoosic River Inflow=1.30 cfs 4,026 cf
Primary=1.30 cfs 4,026 cf

Total Runoff Area = 21,133 sf Runoff Volume = 4,026 cf Average Runoff Depth = 2.29"
30.87% Pervious = 6,523 sf 69.13% Impervious = 14,610 sf

Summary for Subcatchment EX1: To River

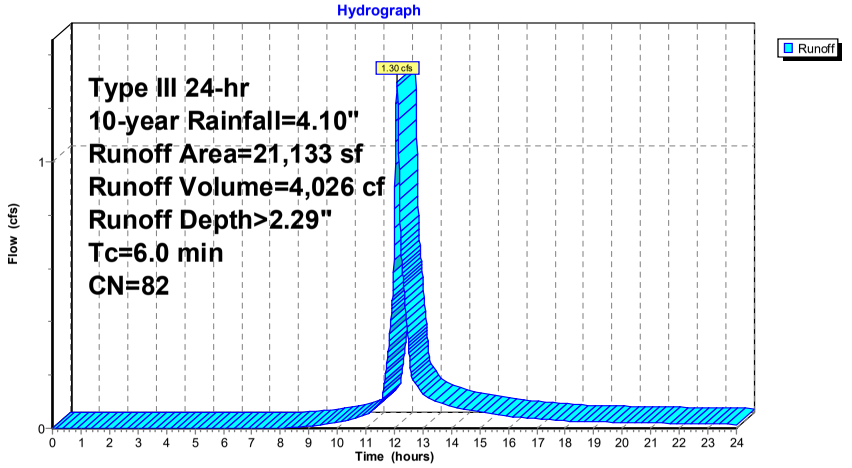
Runoff = 1.30 cfs @ 12.09 hrs, Volume= 4,026 cf, Depth> 2.29"
Routed to Pond DP1 : Hoosic River

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.10"

Area (sf)	CN	Description
13,395	98	Paved parking, HSG A
5,864	39	>75% Grass cover, Good, HSG A
1,215	98	Water Surface, HSG A
659	96	Gravel surface, HSG A
21,133	82	Weighted Average
6,523		30.87% Pervious Area
14,610		69.13% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment EX1: To River



Proposal No. 610777-131930
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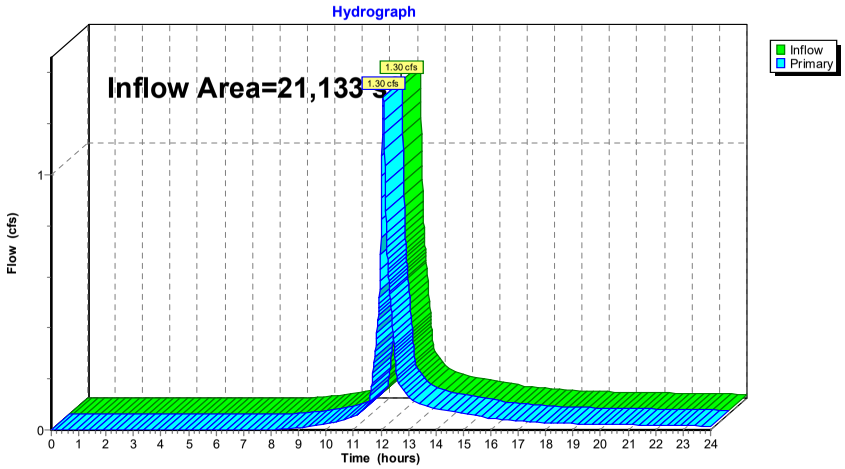
Summary for Pond DP1: Hoosic River

Inflow Area = 21,133 sf, 69.13% Impervious, Inflow Depth > 2.29" for 10-year event
Inflow = 1.30 cfs @ 12.09 hrs, Volume= 4,026 cf
Primary = 1.30 cfs @ 12.09 hrs, Volume= 4,026 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Pond DP1: Hoosic River



Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment EX1: To River Runoff Area=21,133 sf 69.13% Impervious Runoff Depth>4.01"
Tc=6.0 min CN=82 Runoff=2.26 cfs 7,063 cf

Pond DP1: Hoosic River Inflow=2.26 cfs 7,063 cf
Primary=2.26 cfs 7,063 cf

Total Runoff Area = 21,133 sf Runoff Volume = 7,063 cf Average Runoff Depth = 4.01"
30.87% Pervious = 6,523 sf 69.13% Impervious = 14,610 sf

Proposal No. 610777-131930
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Summary for Subcatchment EX1: To River

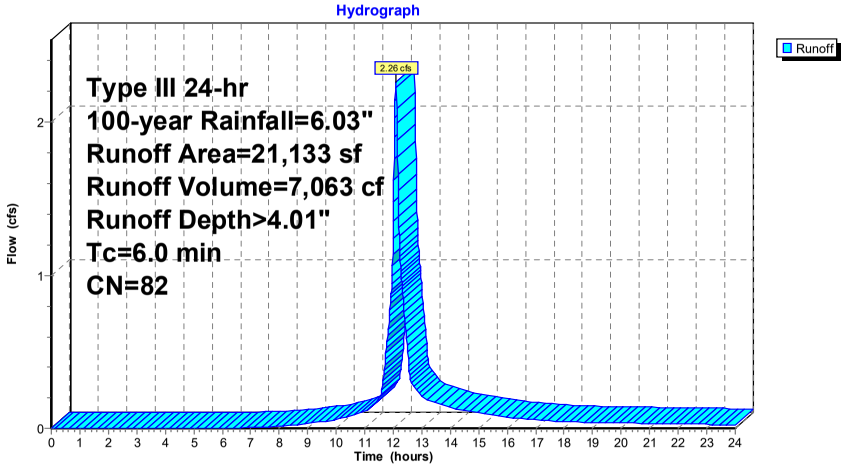
Runoff = 2.26 cfs @ 12.09 hrs, Volume= 7,063 cf, Depth> 4.01"
Routed to Pond DP1 : Hoosic River

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-year Rainfall=6.03"

Area (sf)	CN	Description
13,395	98	Paved parking, HSG A
5,864	39	>75% Grass cover, Good, HSG A
1,215	98	Water Surface, HSG A
659	96	Gravel surface, HSG A
21,133	82	Weighted Average
6,523		30.87% Pervious Area
14,610		69.13% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment EX1: To River

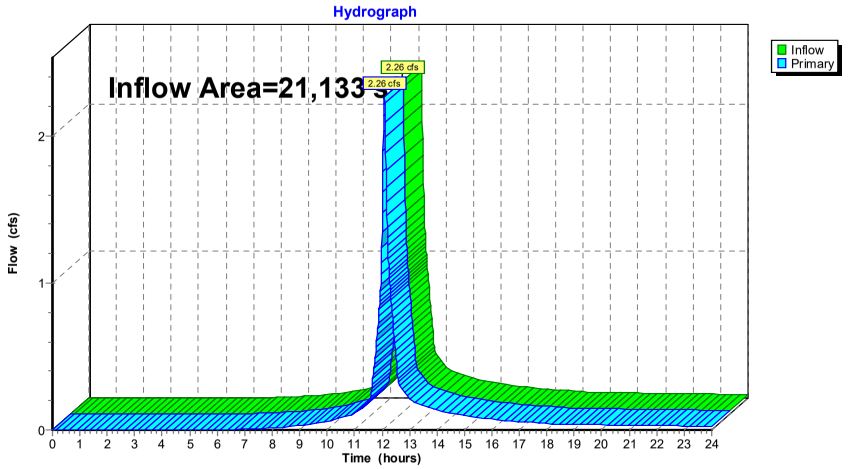


Summary for Pond DP1: Hoosic River

Inflow Area = 21,133 sf, 69.13% Impervious, Inflow Depth > 4.01" for 100-year event
Inflow = 2.26 cfs @ 12.09 hrs, Volume= 7,063 cf
Primary = 2.26 cfs @ 12.09 hrs, Volume= 7,063 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Pond DP1: Hoosic River



Proposal No. 610777-131930
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Figure 5 – NRCS Web Soil Survey

Proposal No. 610777-131930

A00840 - 114

Hydrologic Soil Group—Berkshire County, Massachusetts

Map Scale: 1:1,230 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 15 30 60 90

Feet: 0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils

Soil Rating Polygons
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Lines
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Points
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:25,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Berkshire County, Massachusetts
Survey Area Data: Version 18, Sep 12, 2023

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Aug 15, 2021—Nov 8, 2021

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Proposal No. 610777-131930

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Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
267B	Copake fine sandy loam, 3 to 8 percent slopes	A	5.9	77.3%
267C	Copake fine sandy loam, 8 to 15 percent slopes	A	0.6	8.4%
298E	Groton and Hinckley soils, 25 to 35 percent slopes	A	1.1	14.4%
Totals for Area of Interest			**7.6**	**100.0%**

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Figure 6 – Alternative Analysis

Proposal No. 610777-131930

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BRIDGE NO. A-04-038 REPLACEMENT

QUALITY STREET &
SOUTH WILLOW STREET
IN
ADAMS
MASSACHUSETTS
(BERSHIRE COUNTY)

ALTERNATIVES ANALYSIS

JANUARY 6, 2025

REVISIONS:

NO.	DATE	DESC.

PREPARED FOR:
MASSDOT
270 MAIN STREET
LENOX, MA 01240

BSC GROUP
BUILD | SUPPORT | CONNECT
803 Summer Street
Boston, Massachusetts
02127
617 896 4300

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SCALE: 1" = 20'
0 10 20 40 FEET

FILE:
DWG.:
JOB. NO: 28304.28
SHEET 1 OF 1

ISSUED FOR PERMITTING
NOT FOR CONSTRUCTION

Appendix A – 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 8[2]
- 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
Bureau of Resource Protection - Wetlands Program

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.

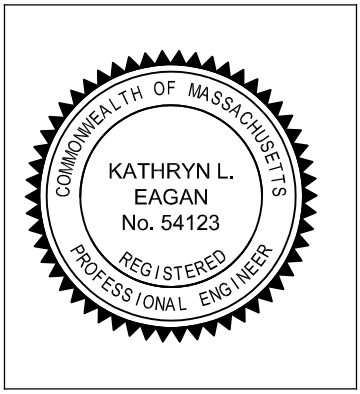
Note: Because stormwater requirements vary from project to project, it is possible that a complete Stormwater Report may not include information on some of the subjects specified in the Checklist. If it is determined that a specific item does not apply to the project under review, please note that the 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



2/3/25
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
Bureau of Resource Protection - Wetlands Program

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 Field[1]

☐ 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
Bureau of Resource Protection - Wetlands Program

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
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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.

Appendix B – O&M Plan

Bridge A-04-038 Replacement

Stormwater Management System Operation and Maintenance Plan and Long-Term Pollution Prevention Plan

Adams, MA

PREPARED FOR

10 Park Plaza
Boston, MA 02116

PREPARED BY

803 Summer Street
Boston, MA, 02127
01/24/2025

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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 to minimize contaminant loading for the Bridge A-04-038 Replacement, on South Willow Street in Adams, MA. 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

The Town of Adams will be responsible for the operation and maintenance of all stormwater management systems within the project area. Questions or concerns regarding activities associated with this O&M Plan should be address to Town of Adams Department of Public Works, Highway Division located at 8 Park Street Adams, MA 01220, phone (413) 743-8300 ext. 172.

1.2 Inspection and Maintenance Measures and Record-Keeping

See the Permit Plans for the existing stormwater system within the project limits, there are no systems proposed. The stormwater management system covered by this O&M Plan consists of the following measures:

- Two (2) drop inlets
- Fourty (40) feet of polyvinyl chloride (PVC) pipe
- One hundred and fifty three (153) feet of reinforced concrete pipe
- One (1) headwall with stone protection

Overall, the Town will 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.

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	› Catch basins	› Sediment accumulation › Trash/Debris accumulation › Signs of contamination › Frame and grate condition › Overall structure condition
Storm Discharge Points	› Pipe Outlets	› Presence of flow › Signs of contaminated flow › Sediment accumulation › Level of erosion › Pipe condition › Scour protection condition › Overall structure condition

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:

- Clear inlet and remove and properly dispose of sediment, trash, leaf litter, debris, and vegetation.
- Regrade areas that show signs of ponding and channelization.
- Repair or replace structural componenents.
- Repair damaged or eroded areas.
- Provide or rehabilitate erosion control at the outlet.
- Regrade and replace the channel materials.
- Remove woody growth.
- Stabilize or reconstruct eroded areas.

Based on the results of the inspection, the Town will make repairs in accordance with 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

The Town performs maintenance for stormwater management systems as part of their routine operation and maintenance budget for roadways and bridges. Budgets are managed by the Town 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 the Bridge A-04-038 Replacement, Adams, MA. 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),

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.

- good housekeeping;
- storing materials and waste products inside or under cover;
- vehicle washing;
- routine inspections and maintenance of SCMs;
- spill prevention and response;
- maintenance of lawns, gardens, and other landscaped areas;
- storage and use of fertilizers, herbicides, and pesticides;
- pet waste management;
- operation and management of septic systems; and
- proper management of deicing chemicals and snow.

2.1.1 Litter Pick-up

The Town 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

The Town will conduct inspection and maintenance of drainage infrastructure 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 the Town of Adams Vegetation Management Plan (VMP).

The Town does minimize the reliance on herbicides. Only herbicides listed on the Town's current ROW Sensitive Areas Materials List will be used.

2.1.4 Snow and Ice Management

Snow and Ice Management will be conducted consistent with the practices outlined in the Town of Adams Streets and Sidewalks Bylaw, Section 105-2.

2.1.5 Street Sweeping

Routine roadway cleaning, will be conducted in accordance with the Towns standard practices.

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 Project. Should an interconnection to the stormwater management system be identified, the highway division will confirm if the connections are authorized. For unauthorized connections, the highway division will investigate the connections and if they are determined to be illicit, the connections will be managed through the Town's Illicit Discharge Detection and Elimination (IDDE) program and/or through other agencies.

Attachment G

MassDOT Project no. 610777
Quality Street over the Hoosic River
Bridge Replacement Project
401 WQC Application

Project Plans
Construction Details
Specifications

BSC GROUP
BUILD | SUPPORT | CONNECT

Proposal No. 610777-131930

PERMIT PLANS

INDEX

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1	INDEX
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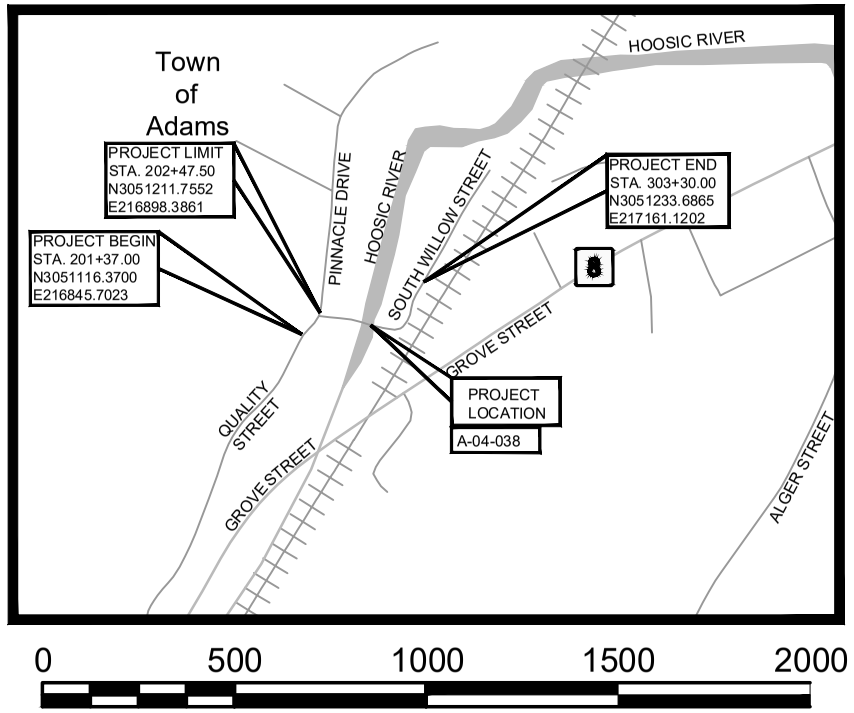
3	PROPOSED CONDITIONS
4	EXISTING SOUTH ELEVATION
5	PROPOSED SOUTH ELEVATION
6	PROPOSED ROADWAY PROFILE
7	IMPACTS
8 - 12	CONTROL OF WATER
13	DRAINAGE & SEDIMENT CONTROL DETAILS



SCALE: 1" = 500'

LENGTH OF PROJECT = 417.68 FEET = 0.079 MILES

IMPACTS TO WATERS OF THE UNITED STATES

WATERS OF THE US	PERMANENT IMPACT	0	SF
	TEMPORARY IMPACT	431	SF
	PERMANENT IMPACT - DREDGE / FILL	0 / 0	CY
	TEMPORARY IMPACT - DREDGE / FILL	0 / 0	CY
BANK/ ORDINARY HIGH WATER (OHW)	PERMANENT IMPACT	0	LF
	TEMPORARY IMPACT	109	LF

NOTES:
1. HORIZONTAL DATUM IS BASED OFF OF THE NORTH AMERICAN DATUM (NAD) 1983
2. ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88)

PREPARED FOR:
massDOT Massachusetts Department of Transportation Highway Division
MASSDOT HIGHWAY DIVISION
10 PARK PLAZA, BOSTON, MA 02116

Source:

INDEX

BRIDGE REPLACEMENT PROJECT
QUALITY STREET OVER HOOSIC RIVER,
ADAMS, MA
BERKSHIRE COUNTY

Job No.: 610777 Date: 1/30/2025
Scale: N/A Revised:
Description: INDEX Figure: 1 OF 13

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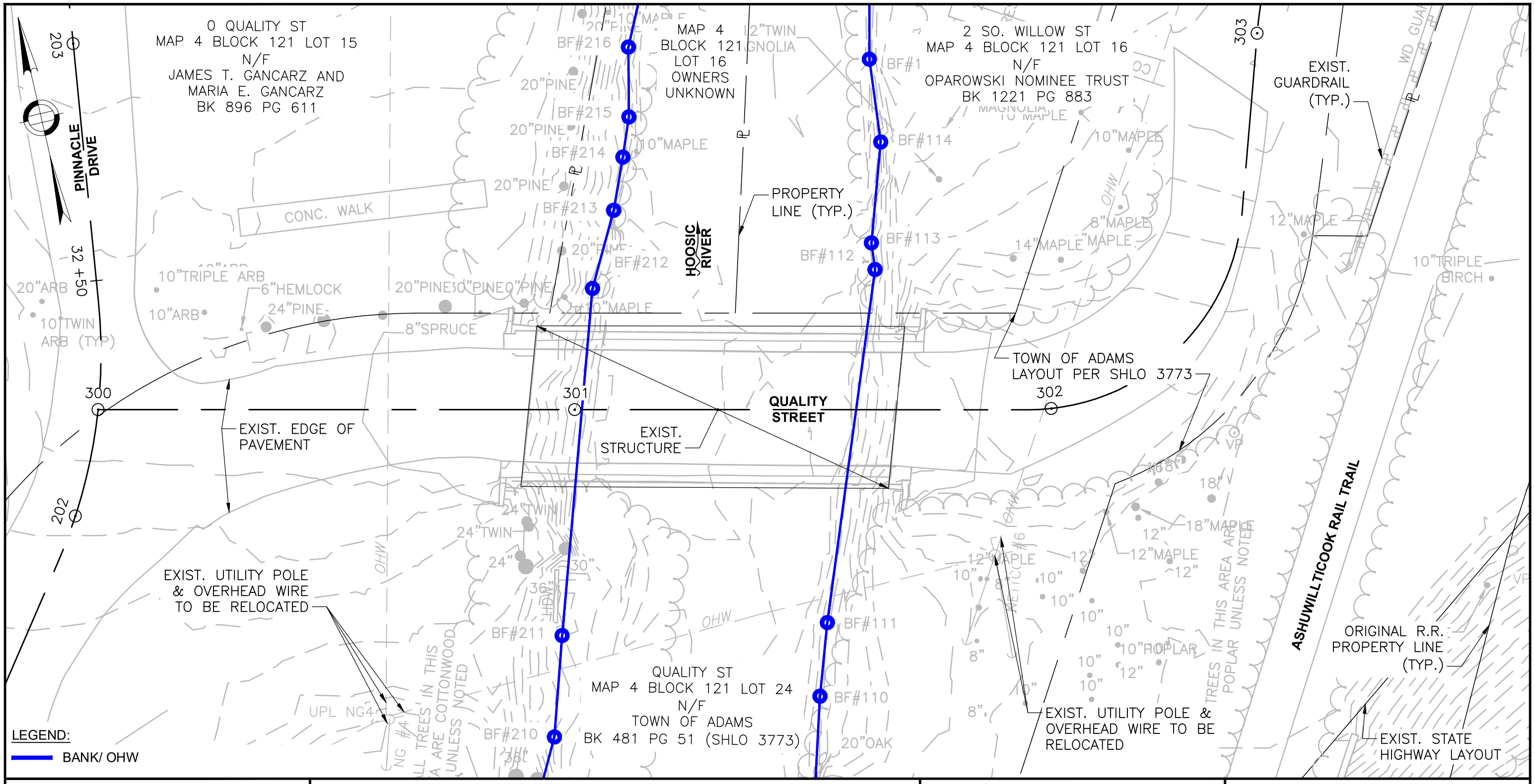
A00840 - 138

Proposal No. 610777-131930

A00840 - 139



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Massachusetts Department of Transportation
Highway Division

MASSDOT HIGHWAY DIVISION
10 PARK PLAZA, BOSTON, MA 02116

Source:

EXISTING CONDITIONS

BRIDGE REPLACEMENT PROJECT
QUALITY STREET OVER HOOSIC RIVER,
ADAMS, MA
BERKSHIRE COUNTY

Job No.: 610777 Date: 1/30/2025

Scale: 1" = 20' Revised:

Description: EX. COND. Figure: 2 OF 13

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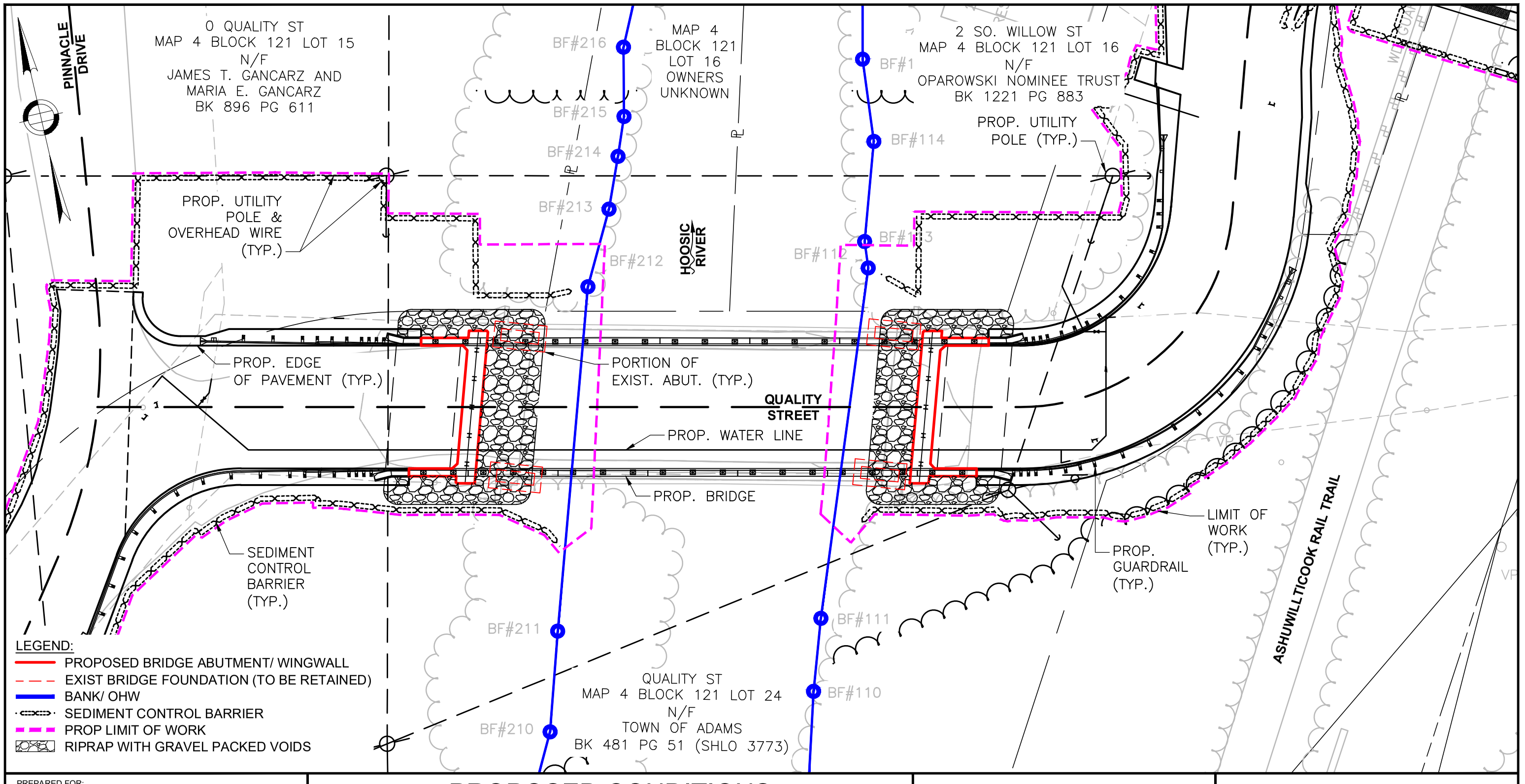

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Source:

PROPOSED CONDITIONS

BRIDGE REPLACEMENT PROJECT
QUALITY STREET OVER HOOSIC RIVER,
ADAMS, MA
BERKSHIRE COUNTY

Job No.: 610777 Date: 1/30/2025

Scale: 1" = 20' Revised:

Description: PR. COND. Figure: 3 OF 13

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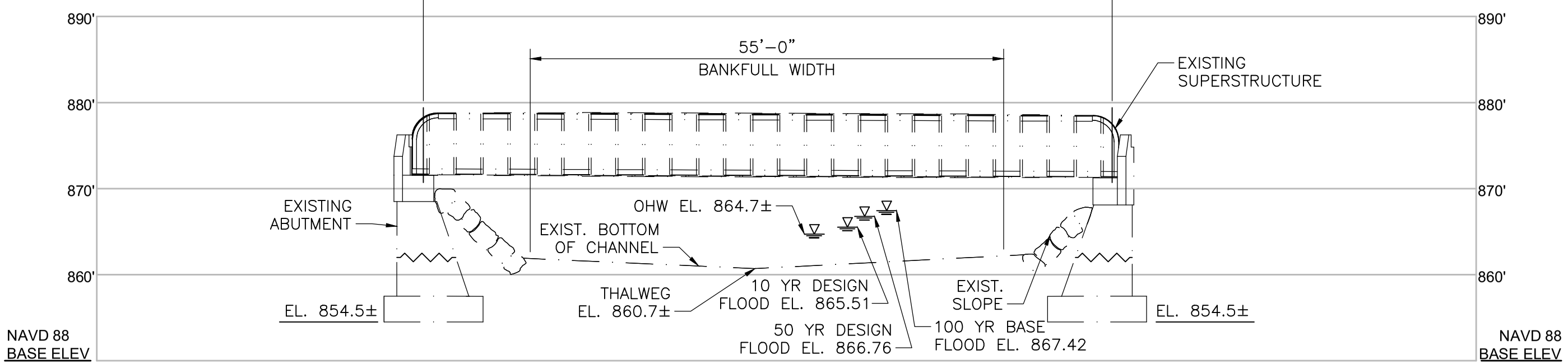
A00840 - 141



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Massachusetts Department of Transportation
Highway Division

MASSDOT HIGHWAY DIVISION
10 PARK PLAZA, BOSTON, MA 02116

Source:

EXISTING SOUTH ELEVATION

BRIDGE REPLACEMENT PROJECT
QUALITY STREET OVER HOOSIC RIVER,
ADAMS, MA
BERKSHIRE COUNTY

Job No.: 610777 Date: 1/30/2025

Scale: 1" = 150' Revised:

Description: EX. ELEV. Figure: 4 OF 13

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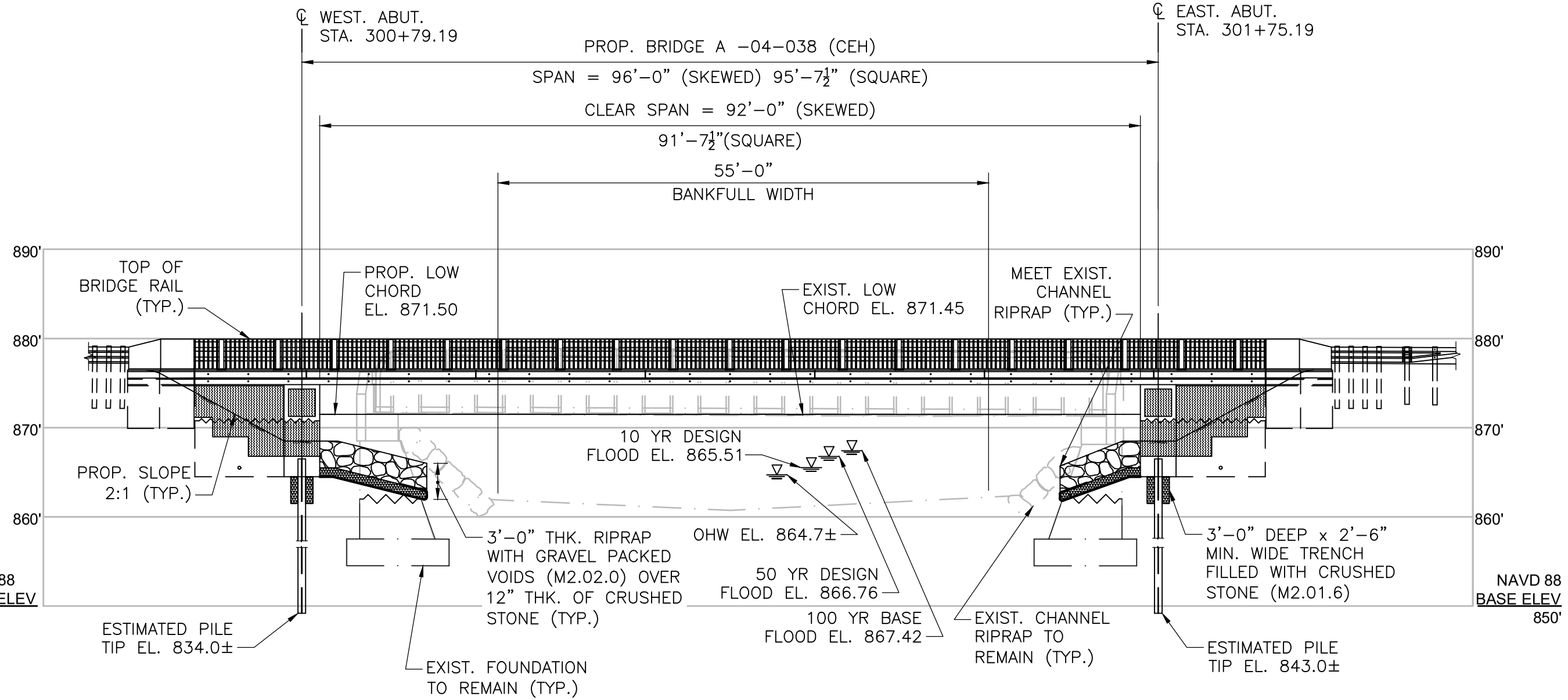
Proposal No. 610777-131930



PREPARED FOR:
massDOT Massachusetts Department of Transportation Highway Division
MASSDOT HIGHWAY DIVISION
10 PARK PLAZA, BOSTON, MA 02116

Source:

PROPOSED SOUTH ELEVATION

BRIDGE REPLACEMENT PROJECT
QUALITY STREET OVER HOOSIC RIVER,
ADAMS, MA
BERKSHIRE COUNTY

Job No.: 610777 Date: 1/30/2025
Scale: 1" = 150' Revised:
Description: PR. ELEV. Figure: 5 OF 13

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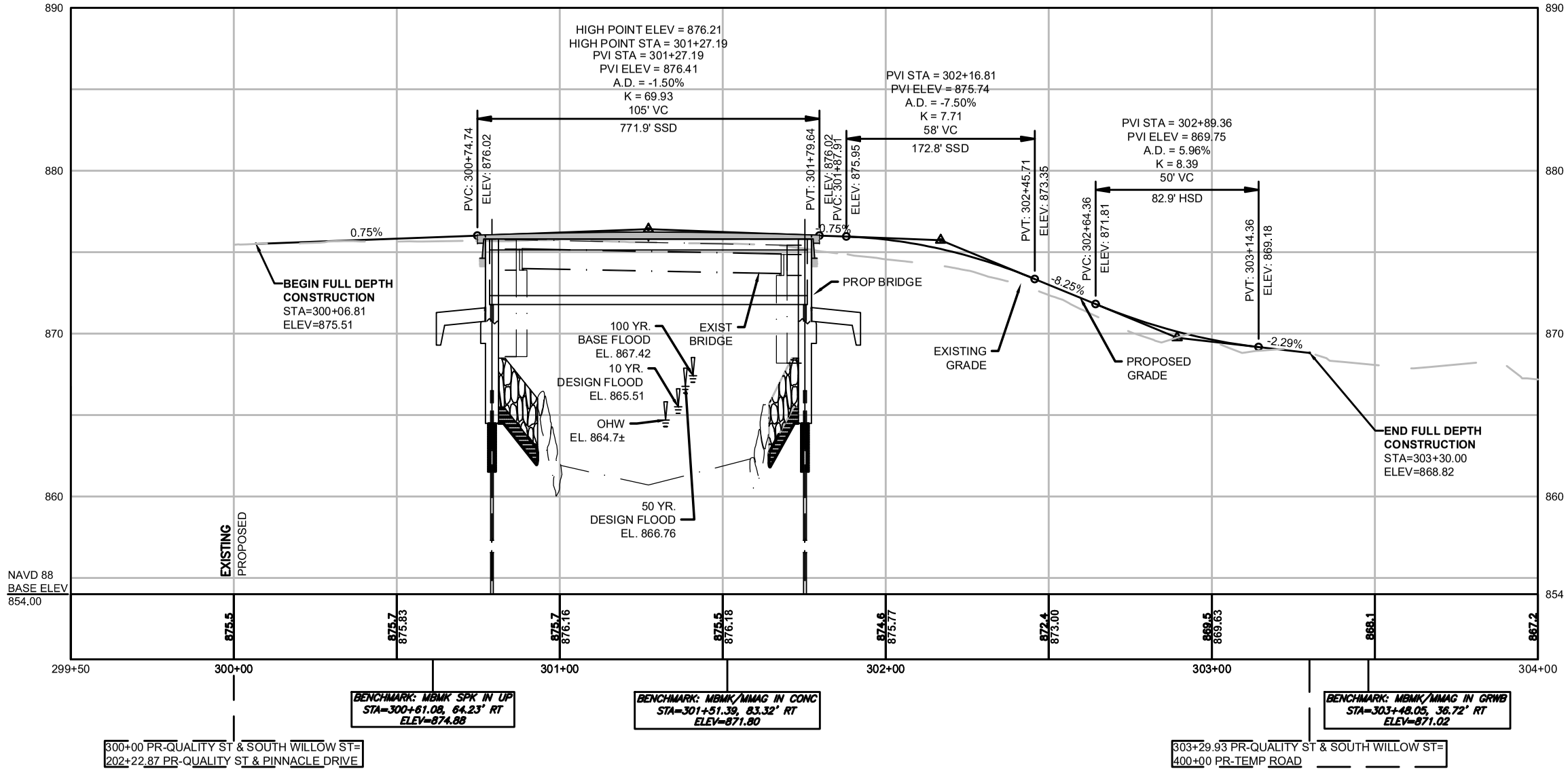
PR-QUALITY ST & SOUTH WILLOW ST



PREPARED FOR:

massDOT
Massachusetts Department of Transportation
Highway Division

MASSDOT HIGHWAY DIVISION
10 PARK PLAZA, BOSTON, MA 02116

Source:

PROPOSED ROADWAY PROFILE

BRIDGE REPLACEMENT PROJECT
QUALITY STREET OVER HOOSIC RIVER,
ADAMS, MA
BERKSHIRE COUNTY

Job No.: 610777 Date: 1/30/2025

Scale: NOT TO SCALE Revised:

Description: PROFILE Figure: 6 OF 13

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Proposal No. 610777-131930
A00840 - 143

Proposal No. 610777-131930

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PINNACLE DRIVE

0 QUALITY ST
MAP 4 BLOCK 121 LOT 15
N/F
JAMES T. GANCARZ AND
MARIA E. GANCARZ
BK 896 PG 611

MAP 4
BLOCK 121
LOT 16
OWNERS
UNKNOWN

2 SO. WILLOW ST
MAP 4 BLOCK 121 LOT 16
N/F
OPAROWSKI NOMINEE TRUST
BK 1221 PG 883

HOOSIC RIVER

TEMP. UTILITY BRIDGE

QUALITY STREET

TEMP. IMPACTS TO WOTUS DUE TO BULK SANDBAGS (215 S.F.)

TEMP. BANK IMPACTS (55 L.F.)

TEMP. BANK IMPACTS (54 L.F.)

TEMP. IMPACTS TO WOTUS DUE TO BULK SANDBAGS (216 S.F.)

QUALITY ST
MAP 4 BLOCK 121 LOT 24
N/F
TOWN OF ADAMS
BK 481 PG 51 (SHLO 3773)

ASHUWILLTICOOK RAIL TRAIL

LEGEND:

- PROPOSED BRIDGE ABUTMENT/ WINGWALL
- EXIST BRIDGE FOUNDATION (TO BE RETAINED)
- BANK/ OHW
- SEDIMENT CONTROL BARRIER
- PROP LIMIT OF WORK
- RIPRAP WITH GRAVEL PACKED VOIDS
- WOTUS IMPACT (TEMP.)
- BANK/ OHW IMPACT (TEMP.)

PREPARED FOR:
massDOT
Massachusetts Department of Transportation
Highway Division

MASSDOT HIGHWAY DIVISION
10 PARK PLAZA, BOSTON, MA 02116

Source:

IMPACTS

BRIDGE REPLACEMENT PROJECT
QUALITY STREET OVER HOOSIC RIVER,
ADAMS, MA
BERKSHIRE COUNTY

Job No.: 610777 Date: 1/30/2025

Scale: 1" = 20' Revised:

Description: IMPACTS Figure: 7 OF 13

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Proposal No. 610777-131930

A00840 - 145

PINNACLE DRIVE

0 QUALITY ST
MAP 4 BLOCK 121 LOT 15
N/F
JAMES T. GANCARZ AND
MARIA E. GANCARZ
BK 896 PG 611

MAP 4
BLOCK 121
LOT 16
OWNERS
UNKNOWN

HOOSIC RIVER

2 SO. WILLOW ST
MAP 4 BLOCK 121 LOT 16
N/F
OPAROWSKI NOMINEE TRUST
BK 1221 PG 883

PROPERTY LINE (TYP.)

TEMP. UTILITY BRIDGE

EXIST. GUARDRAIL (TYP.)

PROP. TEMP. SUPPORT OF EXCAVATION (TYP.)

EXIST. EDGE OF PAVEMENT

PORTION OF EXIST. ABUT. TO REMAIN (TYP.)

EXIST. STRUCTURE

QUALITY STREET

PORTION OF EXIST. ABUT. TO BE REMOVED (TYP.)

TOWN OF ADAMS LAYOUT PER SHLO 3773

REMOVE EXIST. SUPERSTRUCTURE

EXIST. UTILITY POLE & OVERHEAD WIRE TO BE RELOCATED

EXIST. UTILITY POLE & OVERHEAD WIRE TO BE RELOCATED

QUALITY ST
MAP 4 BLOCK 121 LOT 24
N/F
TOWN OF ADAMS
BK 481 PG 51 (SHLO 3773)

ASHUWILLTICOOK RAIL TRAIL

ALL TREES IN THIS AREA ARE COTTONWOOD UNLESS NOTED

ALL TREES IN THIS AREA ARE POPLAR UNLESS NOTED

LEGEND:
- EXIST BRIDGE FOUNDATION (TO BE RETAINED)
- BANK/ OHW
- SEDIMENT CONTROL BARRIER
- PROP LIMIT OF WORK
- EXIST BRIDGE/ BRIDGE FOUNDATION (TO BE REMOVED)

PREPARED FOR:
massDOT
Massachusetts Department of Transportation
Highway Division

MASSDOT HIGHWAY DIVISION
10 PARK PLAZA, BOSTON, MA 02116

Source:

STAGE 1 CONTROL OF WATER PLAN

BRIDGE REPLACEMENT PROJECT
QUALITY STREET OVER HOOSIC RIVER,
ADAMS, MA
BERKSHIRE COUNTY

Job No.: 610777 Date: 1/30/2025

Scale: 1" = 20' Revised:

Description: COW Figure: 8 OF 13

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PINNACLE DRIVE

0 QUALITY ST
MAP 4 BLOCK 121 LOT 15
N/F
JAMES T. GANCARZ AND
MARIA E. GANCARZ
BK 896 PG 611

MAP 4
BLOCK 121
LOT 16
OWNERS
UNKNOWN

HOOSIC RIVER

2 SO. WILLOW ST
MAP 4 BLOCK 121 LOT 16
N/F
OPAROWSKI NOMINEE TRUST
BK 1221 PG 883

PROPERTY LINE (TYP.)

TEMP. UTILITY BRIDGE

EXIST. GUARDRAIL (TYP.)

TOWN OF ADAMS LAYOUT PER SHLO 3773

FILTER BAG CAPACITY 600 GALLONS/MINUTE OR GREATER FINAL DESIGN TO BE DETERMINED BY CONTRACTOR'S ENGINEER

CONC. BARRIER SILTATION BASIN WITH FILTER BAG (TYP.)

PORTION OF EXIST. ABUT. TO REMAIN (TYP.)

EXIST. EDGE OF PAVEMENT

QUALITY STREET

INSTALL PROP. ABUT. (TYP.)

22'-0" MIN. (TYP.)

22'-0" MIN. (TYP.)

BULK SANDBAG (TYP.)

SUMP PUMP (TYP.)

SUMP PUMP DISCHARGE HOSE (TYP.)

6" MIN. LAYER OF CRUSHED STONE (TYP.)

LOCATION TO BE APPROVED BY MASSDOT BEFORE INSTALLATION

EXIST. UTILITY POLE & OVERHEAD WIRE TO BE RELOCATED

EXIST. UTILITY POLE & OVERHEAD WIRE TO BE RELOCATED

QUALITY ST
MAP 4 BLOCK 121 LOT 24
N/F
TOWN OF ADAMS
BK 481 PG 51 (SHLO 3773)

ASHUWILLTICOOK RAIL TRAIL

ALL TREES IN THIS AREA ARE POPLAR UNLESS NOTED

LEGEND:
- PROPOSED BRIDGE ABUTMENT/ WINGWALL
- EXIST BRIDGE FOUNDATION (TO BE RETAINED)
- BANK/ OHW
- SEDIMENT CONTROL BARRIER
- PROP LIMIT OF WORK

PREPARED FOR:
massDOT
Massachusetts Department of Transportation
Highway Division

MASSDOT HIGHWAY DIVISION
10 PARK PLAZA, BOSTON, MA 02116

Source:

STAGE 2 CONTROL OF WATER PLAN

BRIDGE REPLACEMENT PROJECT
QUALITY STREET OVER HOOSIC RIVER,
ADAMS, MA
BERKSHIRE COUNTY

Job No.: 610777 Date: 1/30/2025

Scale: 1" = 20' Revised:

Description: COW Figure: 9 OF 13

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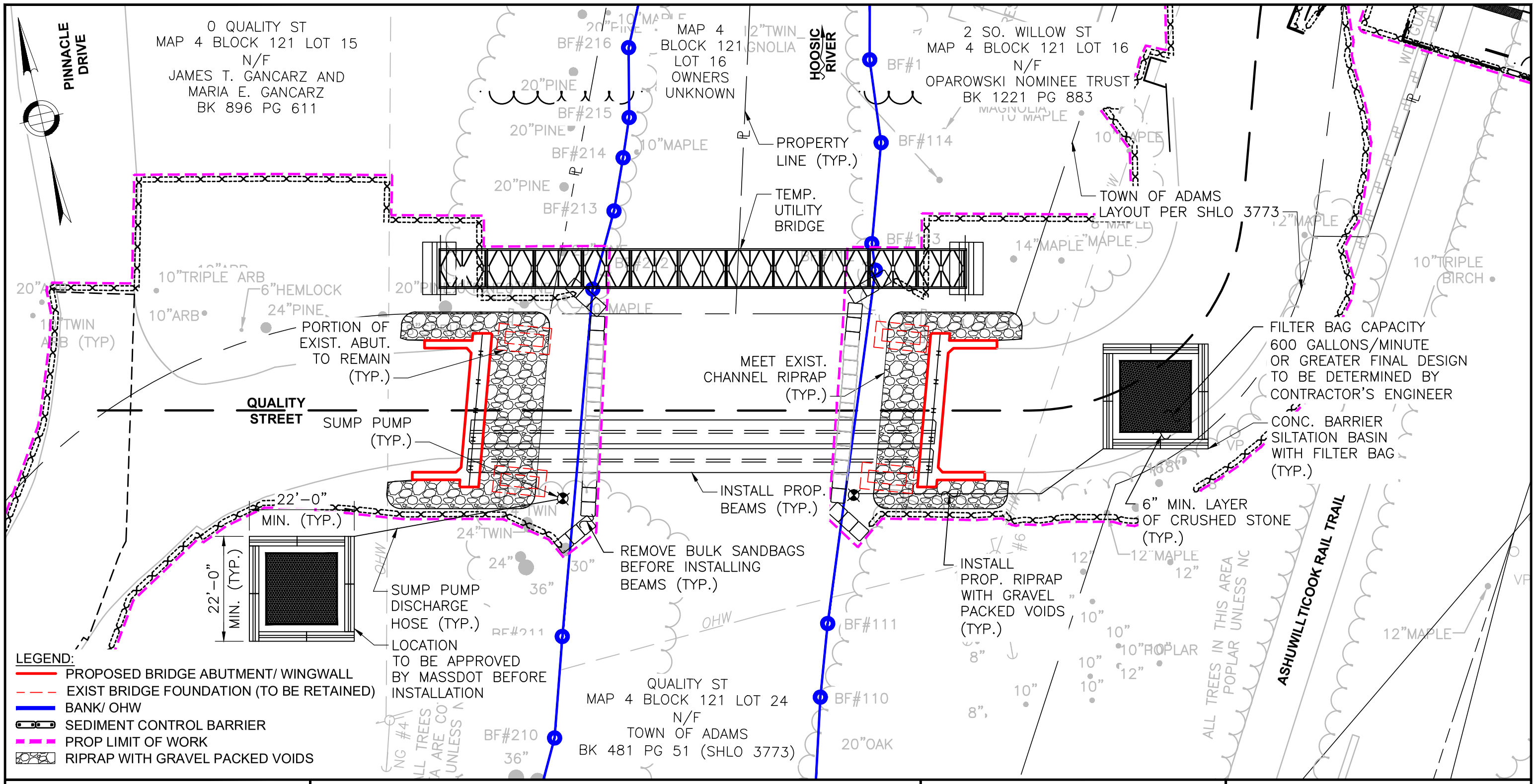
Proposal No. 610777-131930

A00840 - 147



PREPARED FOR:

massDOT Massachusetts Department of Transportation Highway Division

MASSDOT HIGHWAY DIVISION
10 PARK PLAZA, BOSTON, MA 02116

Source:

STAGE 3 CONTROL OF WATER PLAN

BRIDGE REPLACEMENT PROJECT
QUALITY STREET OVER HOOSIC RIVER,
ADAMS, MA
BERKSHIRE COUNTY

Job No.: 610777 Date: 1/30/2025

Scale: 1" = 20' Revised:

Description: COW Figure: 10 OF 13

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Proposal No. 610777-131930

A00840 - 148

PINNACLE DRIVE

0 QUALITY ST
MAP 4 BLOCK 121 LOT 15
N/F
JAMES T. GANCARZ AND
MARIA E. GANCARZ
BK 896 PG 611

MAP 4
BLOCK 121
LOT 16
OWNERS
UNKNOWN

2 SO. WILLOW ST
MAP 4 BLOCK 121 LOT 16
N/F
OPAROWSKI NOMINEE TRUST
BK 1221 PG 883

PROPERTY LINE (TYP.)

PROP. UTILITY POLE

PROP. UTILITY POLE & OVERHEAD WIRE

PROP. GUARDRAIL (TYP.)

HOOSIC RIVER

QUALITY STREET

PROP. EDGE OF PAVEMENT

PORTION OF EXIST. ABUT. TO REMAIN (TYP.)

PROP. BRIDGE

LIMIT OF WORK (TYP.)

ASHUWILLTICOOK RAIL TRAIL

SEDIMENT CONTROL BARRIER (TYP.)

QUALITY ST
MAP 4 BLOCK 121 LOT 24
N/F
TOWN OF ADAMS
BK 481 PG 51 (SHLO 3773)

ALL TREES IN THIS AREA ARE COTTONWOOD UNLESS NOTED

ALL TREES IN THIS AREA ARE POPLAR UNLESS NOTED

LEGEND:
- PROPOSED BRIDGE ABUTMENT/ WINGWALL
- EXIST BRIDGE FOUNDATION (TO BE RETAINED)
- BANK/ OHW
- SEDIMENT CONTROL BARRIER
- PROP LIMIT OF WORK
- RIPRAP WITH GRAVEL PACKED VOIDS

PREPARED FOR:
massDOT
Massachusetts Department of Transportation
Highway Division
MASSDOT HIGHWAY DIVISION
10 PARK PLAZA, BOSTON, MA 02116

Source:

STAGE 4 CONTROL OF WATER PLAN

BRIDGE REPLACEMENT PROJECT
QUALITY STREET OVER HOOSIC RIVER,
ADAMS, MA
BERKSHIRE COUNTY

Job No.: 610777 Date: 1/30/2025
Scale: 1" = 20' Revised:
Description: COW Figure: 11 OF 13

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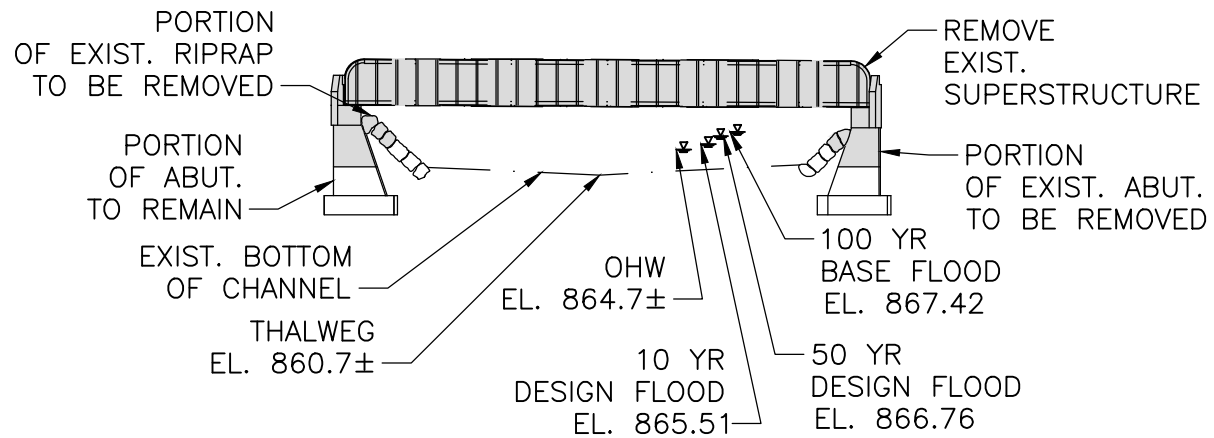
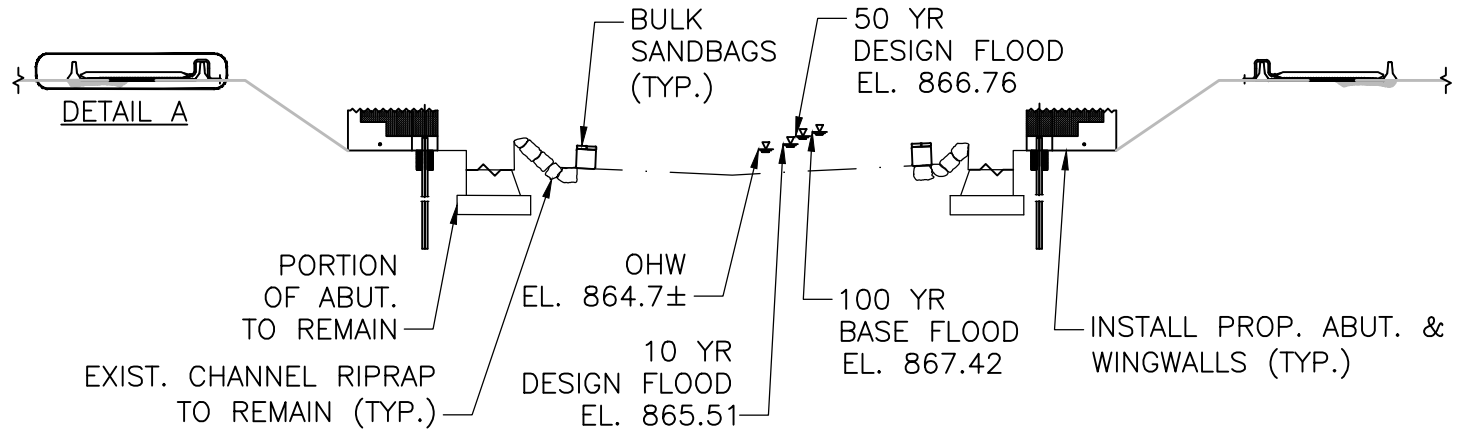


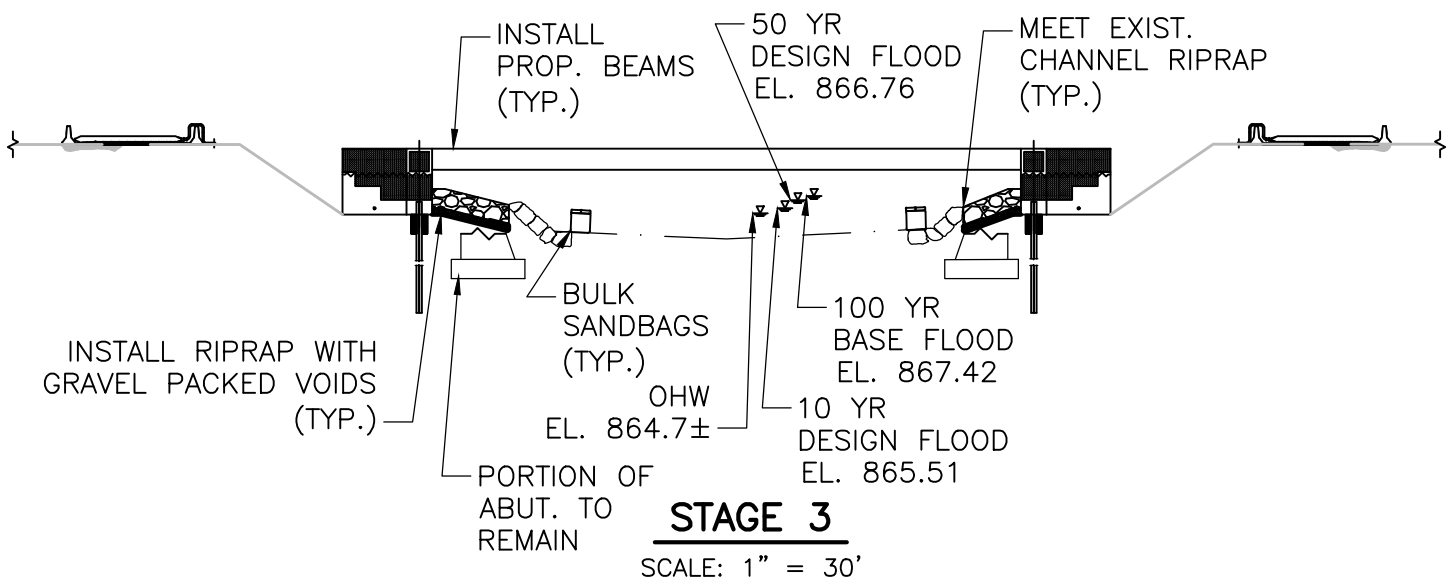
STAGE 1

SCALE: 1" = 30'



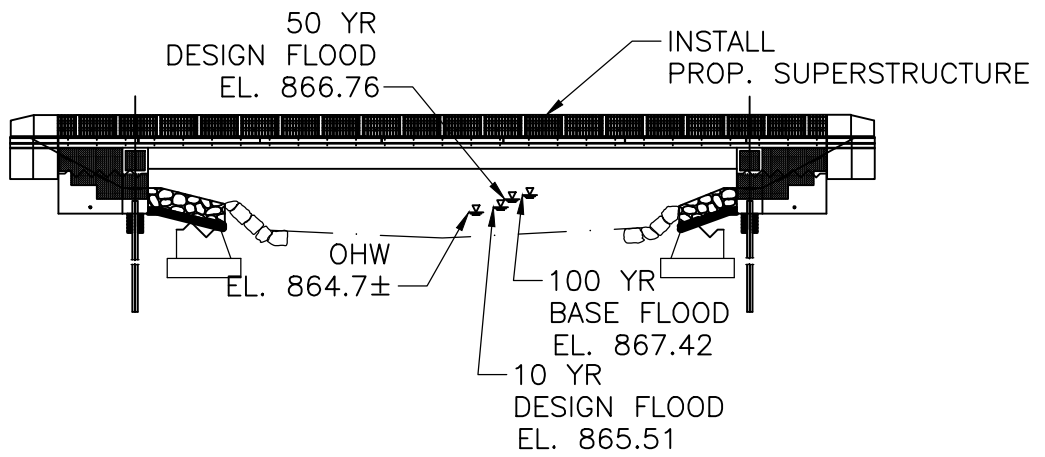
STAGE 2

SCALE: 1" = 30'



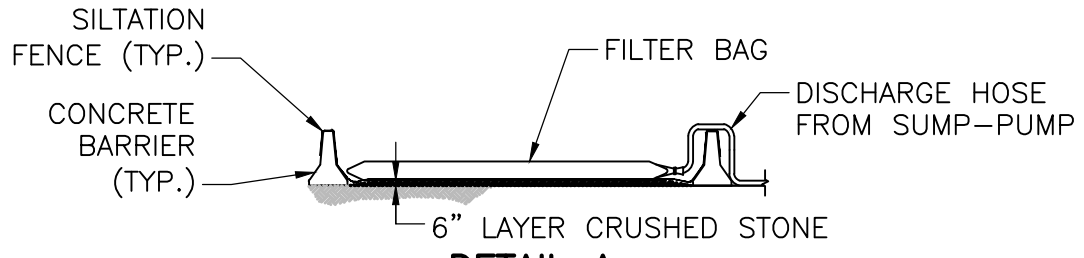
STAGE 3

SCALE: 1" = 30'



STAGE 4

SCALE: 1" = 30'



DETAIL A

SCALE: 1" = 10'

PREPARED FOR:
massDOT Massachusetts Department of Transportation Highway Division
MASSDOT HIGHWAY DIVISION
10 PARK PLAZA, BOSTON, MA 02116

STAGE 1-4 CONTROL OF WATER ELEVATIONS

Source:

BRIDGE REPLACEMENT PROJECT
QUALITY STREET OVER HOOSIC RIVER,
ADAMS, MA
BERKSHIRE COUNTY

Job No.: 610777 Date: 1/30/2025
Scale: 1" = 30' Revised:
Description: COW Figure: 12 OF 13

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Proposal No. 610777-131930
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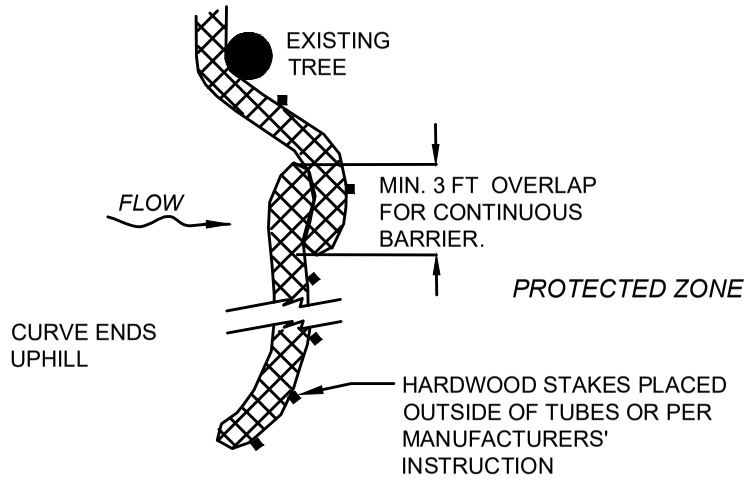


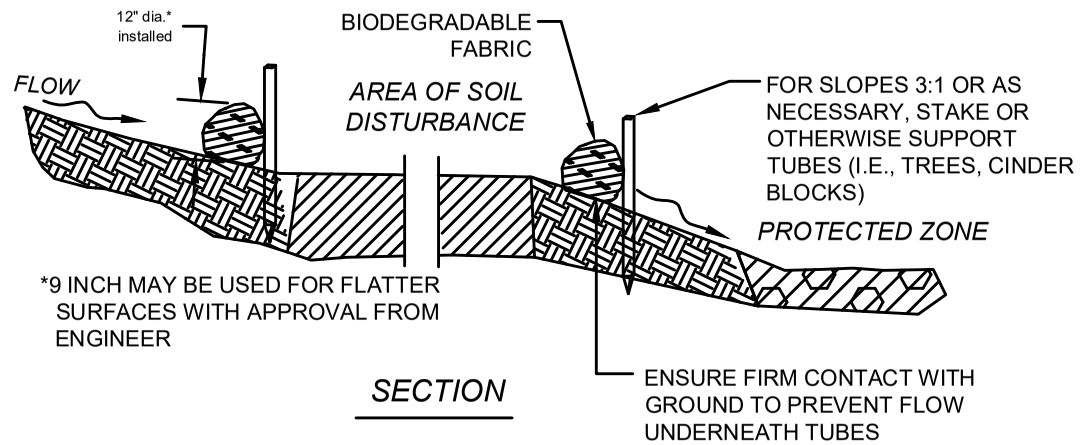
PLACE TUBE AS CLOSE TO LIMIT OF SOIL DISTURBANCE AS POSSIBLE, ALONG CONTOURS, AND PERPENDICULAR TO FLOW.

ADJUST LOCATION AS REQUIRED FOR OPTIMUM EFFECTIVENESS. DO NOT INSTALL IN WATERWAYS.

PLAN VIEW

REDUCE HIGH WATER FLOW ONTO WORK ZONE

CAPTURE SEDIMENT AND PREVENT FLOW OFF SITE



SECTION

SEDIMENT BARRIER - COMPOST FILTER TUBE

NOT TO SCALE

PREPARED FOR:
MASSDOT HIGHWAY DIVISION
10 PARK PLAZA, BOSTON, MA 02116

Source:

DRAINAGE & SEDIMENT CONTROL DETAILS

BRIDGE REPLACEMENT PROJECT
QUALITY STREET OVER HOOSIC RIVER,
ADAMS, MA
BERKSHIRE COUNTY

Job No.: 610777 Date: 1/30/2025
Scale: NOT TO SCALE Revised:
Description: DETAILS Figure: 13 OF 13

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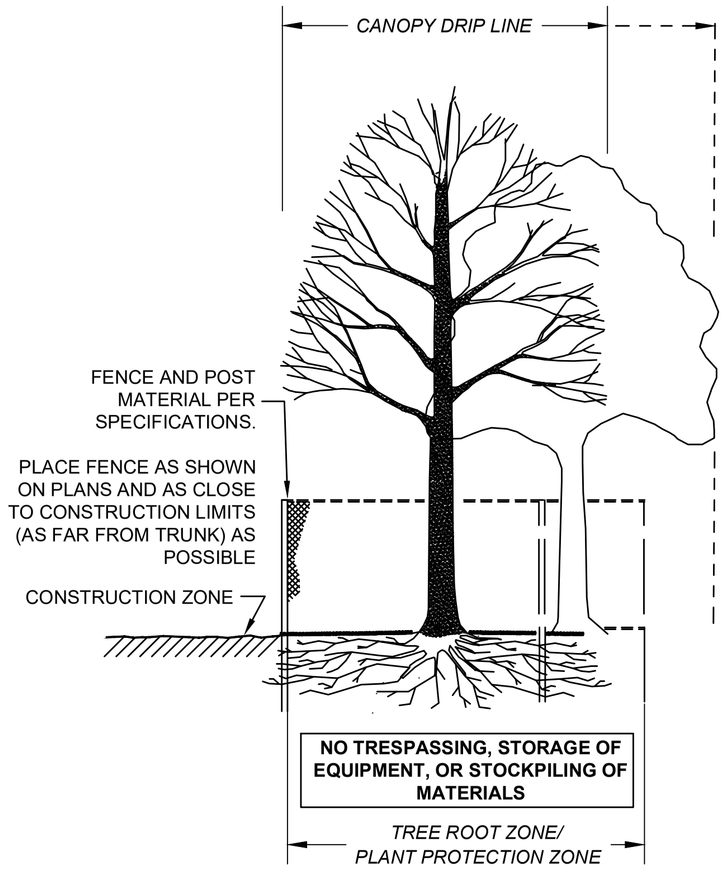
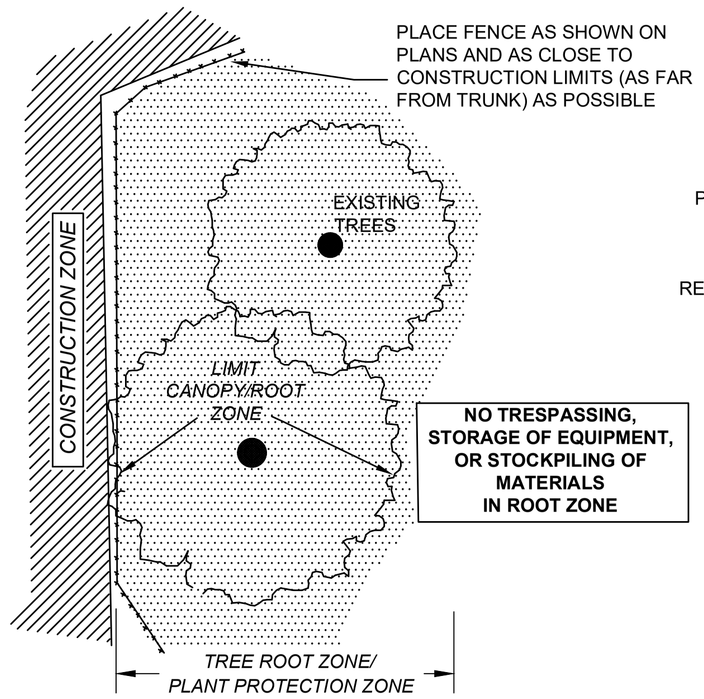
Proposal No. 610777-131930
A00840 - 150



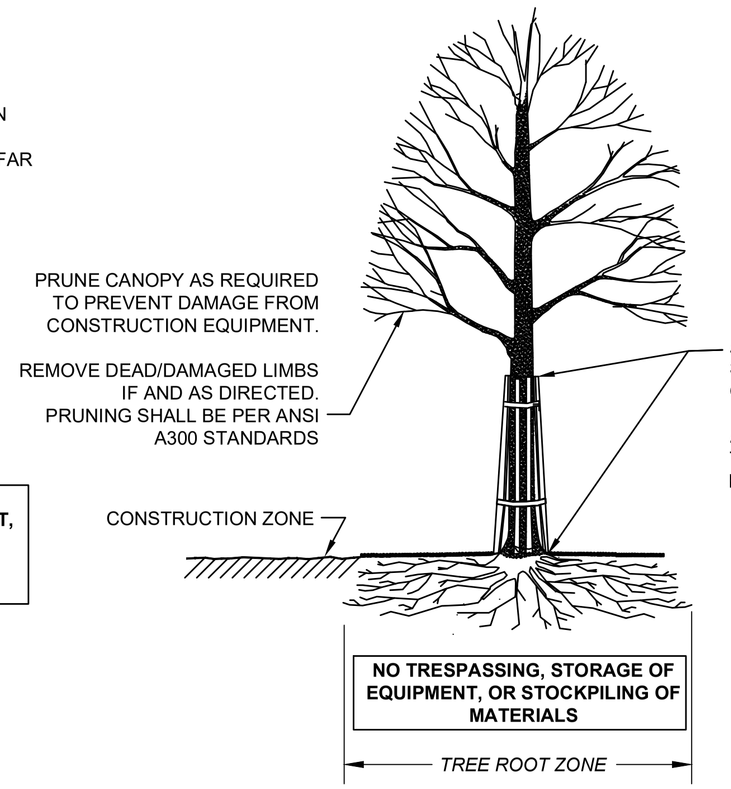
SECTION - FENCE PROTECTION OF ROOT ZONE



PLAN VIEW - FENCE PROTECTION OF ROOT ZONE

TREE PROTECTION - ROOT ZONE

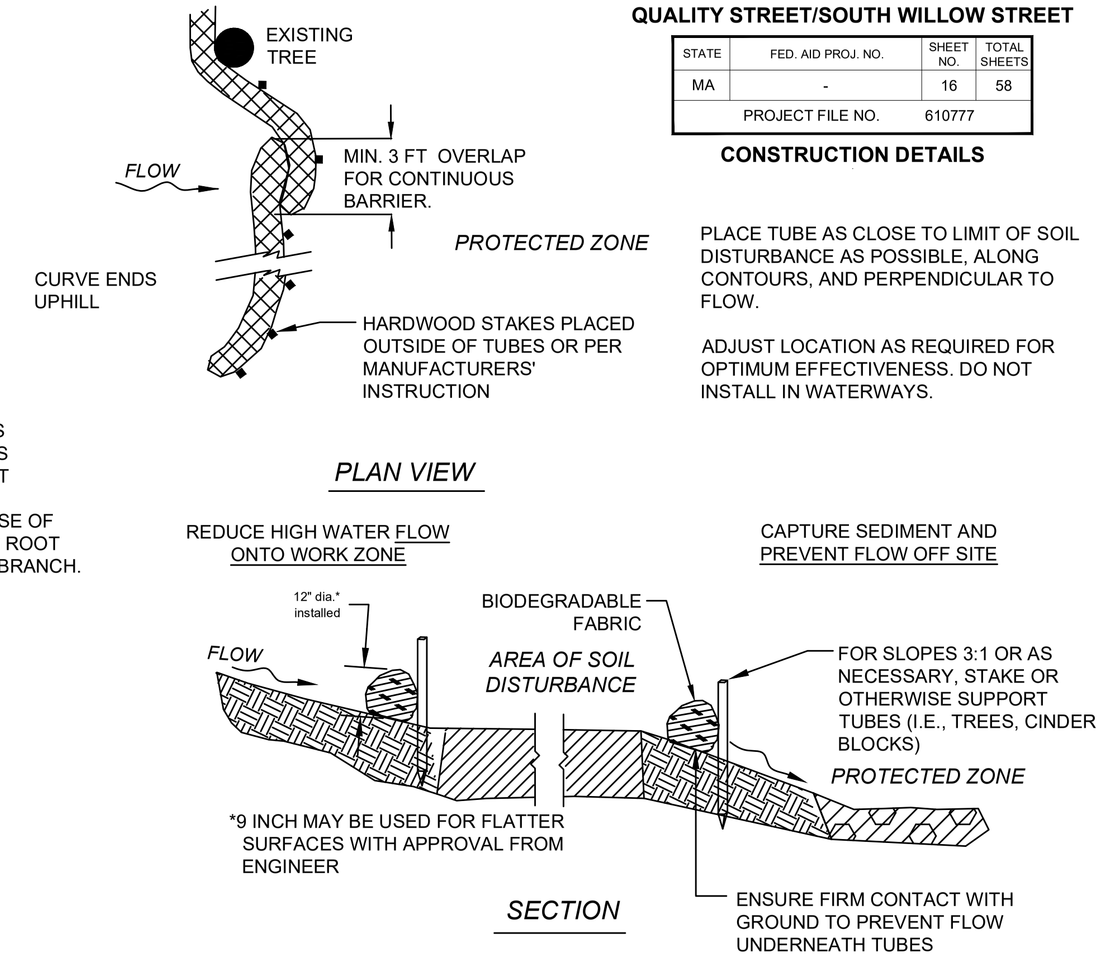
NOT TO SCALE



SECTION - TRUNK ARMORING & PRUNING

TREE PROTECTION - TRUNK

NOT TO SCALE



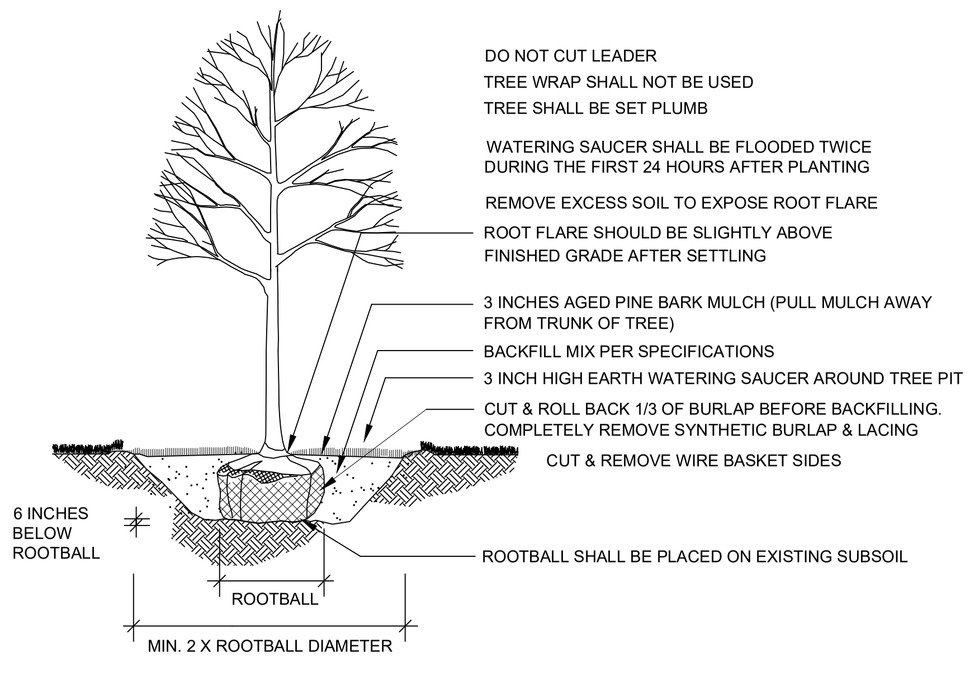
CONSTRUCTION DETAILS

PLACE TUBE AS CLOSE TO LIMIT OF SOIL DISTURBANCE AS POSSIBLE, ALONG CONTOURS, AND PERPENDICULAR TO FLOW.

ADJUST LOCATION AS REQUIRED FOR OPTIMUM EFFECTIVENESS. DO NOT INSTALL IN WATERWAYS.

SEDIMENT BARRIER - COMPOST FILTER TUBE

NOT TO SCALE



DECIDUOUS TREE PLANTING

NOT TO SCALE

TREE PROTECTION TABLE			
STA	OFFSET	SIZE	TYPE
202+43.98	13.92 LT	10"	TWIN ARB
202+46.76	11.76 LT	20"	ARB
300+97.30	33.35 LT	20"	PINE
302+06.05	23.45 RT	12"	MAPLE
302+09.95	26.50 RT	12"	MAPLE
302+10.09	24.12 RT	18"	MAPLE
302+19.61	29.35 RT	18"	MAPLE
302+80.35	35.45 LT	10"	MAPLE
302+83.75	24.96 LT	12"	MAPLE

TREE REMOVAL TABLE			
STA	OFFSET	SIZE	TYPE
300+12.24	25.14 LT	10"	TRIPLE ARB
300+16.86	21.12 LT	10"	ARB
300+22.32	20.42 LT	10"	ARB
300+30.10	16.88 LT	6"	HEMLOCK
300+35.24	17.37 LT	24"	PINE
300+47.39	18.73 LT	30"	PINE
300+59.69	19.82 LT	20"	PINE
300+72.85	21.66 LT	30"	PINE
300+80.23	20.40 LT	8"	SPRUCE
300+88.59	30.69 RT	24"	MAPLE
300+89.38	22.36 LT	20"	PINE
300+89.80	33.53 RT	36"	MAPLE
300+89.96	23.51 RT	24"	TWIN MAPLE
300+97.72	46.92 LT	20"	PINE
300+97.90	23.59 LT	10"	MAPLE
300+98.04	29.17 RT	30"	MAPLE
301+12.98	54.21 LT	10"	MAPLE
301+76.44	48.36 LT	12"	TWIN MAGNOLIA
301+91.97	31.79 LT	12"	MAPLE
302+14.33	21.11 RT	16"	MAPLE
302+16.22	29.81 LT	12"	MAPLE
302+18.84	19.15 RT	18"	MAPLE
302+59.52	13.39 RT	12"	MAPLE
302+60.10	25.50 LT	8"	MAPLE
302+73.27	24.82 LT	10"	MAPLE

Proposal No. 610777-131930
610777_HD9(DETAILS).DWG Plotted on 11-Sep-2024 10:40 AM
A00840 - 151

ITEM 102.511 TREE PROTECTION – ARMORING & PRUNING EACH

REV. 2024.07.27 (REV. DATE TO BE REMOVED BY CONTRACTS)

The work under this item shall conform to the relevant provisions of Sections 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).

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, described in Item 102.55. 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, 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

REV. 2024.07.27 (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 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.

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 including 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 preservations, 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.

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 Section 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.

Payment for work under this item will be scheduled as follows:

- Forty (40) percent of the value payment will be made upon installation of TPPZ fencing.
- Sixty (60) percent of the value payment will be made when TPPZ 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.

ITEM 102.55 **ARBORIST** **HOUR**

REV. 2022.01.01 (REV. DATE TO BE REMOVED BY CONTRACTS)

DESCRIPTION

The work under this Item is for the services of a Certified Arborist. Arborist shall be an International Society of Arboriculture (ISA) Certified Arborist or a Massachusetts Certified Arborist. The Arborist shall have at least 10 years of experience in tree care, including tree protection during construction, and shall demonstrate a familiarity with the American National Standards Institute (ANSI) A300 Standard Practices for Tree, Shrub, and Other Woody Plant Maintenance Part 1Pruning, Part 5 Construction Management Standards, and Part 9 Tree Risk Assessment.

The Arborist's general responsibilities include protecting high priority trees within and adjacent to the project limits, stating areas, and access routes; recommending removal of diseased, damaged or otherwise unhealthy trees that pose a potential safety hazard; evaluating effects of construction on future health of trees close to proposed work; and recommending and/or overseeing tree work and care.

The Arborist for this item shall not be from the same company as the company responsible for selective clearing or tree removal work.

For projects with multiple phases, projects where construction activities (work or stockpiling) shifts, or when otherwise directed by the Engineer, the Arborist shall re-evaluate conditions and provide follow-up recommendations.

SUBMITTALS

- Contractor shall submit to the Engineer for approval by MassDOT Landscape Design the qualifications and experience of the Arborist. Submittal shall include copy of current certification and a resume summarizing specific construction experience (including relevant MassDOT projects) for a minimum of five projects.
- Arborist's Report documenting recommendations shall be submitted to the Engineer and an electronic copy forwarded to MassDOT Landscape Design Section. Report shall include the following:

SCOPE OF WORK

The Arborist shall be responsible for the following tasks:

- Initial Evaluation and Report
  - recommend and prioritize trees that require removal as appropriate to contract scope, project limits, and project intent;
  - review and modify, if necessary, tree protection measures shown on the drawings
  - review and mark limits of protective fencing for trees and groups of trees to be retained;
  - review and recommend protection measures for high priority trees;
  - submit a marked-up Construction Plan that briefly notes recommendations and decisions made in the field;
  - submit a corresponding report including photo documentation;

- Oversight
  - direct or execute pruning of branches and/or roots, air spading, and/or other tree care operations
- Monitoring and Inspections
  - periodically inspect fencing and ensure root zones are properly protected and clear of equipment and materials as required by the Engineer
  - reevaluate tree protection measures for various phases of a project
  - submit inspection notes with relevant and dated photos to the Engineer.
- Special Care
  - oversee tree pruning for health and aesthetics
  - recommend fertilization and amendments
  - recommend and oversee pest control

METHODS

Prior to any work, the Arborist shall walk the site with the Contractor, the Engineer, the Town Tree Warden, and, if specified, the MassDOT Landscape Architect, to review trees, limits of construction activities, and other concerns. Where required for proper assessment of tree impacts, limits of work shall be staked or otherwise marked in the field prior to the site walk.

Trees to be removed shall be painted or otherwise marked.

Trees to be retained shall be marked such that it does not mar or damage the tree and such that marker is not easily removed. As applicable to the work and scope of the project, trees designated for removal or to be retained shall be noted on the plan and/or in the arborist's report and photographed.

Trees designated to remain that are damaged or removed by construction activities shall be noted and photographed for inclusion in inspection reports submitted to the Engineer.

MEASUREMENT AND BASIS OF PAYMENT

Item 102.55 will be measured for payment by the Hour of time spent onsite.

Item 102.55 will be paid at the contract unit price per hour upon submittal and acceptance of Reports described above.

ITEM 698.4 GEOTEXTILE FABRIC FOR PERMANENT EROSION CONTROL SQUARE YARD

DESCRIPTION

The work performed under this Item shall consist of furnishing and installing geotextile fabric on steep slopes (3:1 or greater), to encase and contain the crushed stone bedding for riprap, or as otherwise shown on the Plans or required by the Engineer.

The geotextile fabric shall conform to the requirements of AASHTO M288, Class 2, for fabric used for permanent erosion control and must be selected from the pre-approved products on the MassDOT QCML. Construction and installation shall be in accordance with AASHTO M288, including Appendix A, and the following specifications. Atmospheric exposure of the geotextile fabric to the elements following lay down shall be limited to a maximum of 14 days. The geotextile fabric shall be made of organic material.

For seams that are sewn in the field, colored thread must be used. The Contractor shall provide at least a six-foot length of sample sewn seam for the approval of the Engineer before the geotextile fabric is installed. The seams sewn for sampling shall be sewn using the same type of equipment and procedures as will be used for the production seams. If seams are sewn in both the machine and cross machine direction, samples of seams for both directions shall be provided. The seam assembly description shall be submitted by the Contractor along with the seam samples. This description shall include the seam type, stitch type, sewing thread, and stitch density.

Geotextile shall be placed in direct contact with soils without wrinkles or folds, and shall be anchored on a smooth graded surface approved by the Engineer. The geotextile shall be placed in such a manner that placement of the overlaying materials will not excessively stretch or tear it. Adjacent geotextile sheets shall be joined by either sewing or overlapping. At roll ends, overlapped seams shall overlap a minimum of 12-inches, except when placed under water, where they shall overlap a minimum of 3-feet. Adjacent rolls shall overlap a minimum of 12-inches.

Care shall be taken during installation to avoid damage to the geotextile as a result of the installation process. Should the geotextile be damaged, a geotextile patch shall be placed over the damaged area extending a minimum of 3-feet beyond the limits of the damage in all directions.

COMPENSATION

Geotextile Fabric for Permanent Erosion Control will be measured per Square Yard, complete in place and accepted, as needed for steep slopes (3:1 or greater), riprap bedding, or as shown on the Plans. Geotextile fabric placed outside the specified limits will not be measured or paid for, and the Contractor may be required to remove and dispose of the excess material without cost to the Owner. No additional measurement shall be made for necessary lap material.

Geotextile Fabric for Permanent Erosion Control will be paid for at the Unit Price per Square Yard, which shall include all labor, materials, equipment and incidental costs required to complete the work. Overlaps and fold-overs, excluding the 3-foot fold back at the toe of the riprap, are considered incidental to the unit price and shall not be measured separately for cost.

Associated riprap costs will be paid for under Item 156.5 Crushed Stone for Filter Blanket for the crushed stone bedding and Item 983.12 Riprap with Gravel Packed Voids for the riprap.

765.21 ANNUAL COVER CROP FOR NATIVE SEEDING POUND

Work under this item shall conform to the relevant provisions of Subsection 765 of the Standard Specifications and the following.

DESCRIPTION

Work consists of furnishing and applying the appropriate annual grass to be seeded as a cover crop in conjunction with upland native seeding and at the rate specified herein.

A cover crop shall be used for following conditions:

- when specified under Application Rate for the permanent native upland seed mix
- for slopes 2:1 or steeper and an annual is not already specified as part of the permanent mix
- when seeding out of season and the native seed mix does not already specify an annual
- as required to prevent erosion until the permanent seed establishes.

A cover crop is not necessary for wetland seeding and is not typically necessary for soil stabilization when seeding in conjunction with a compost blanket application.

Annual rye (*Lolium multiflorum*) will not be accepted as an annual cover crop.

Using annual rye or exceeding the application rate such that a dense stand of annual grasses prevents germination of the native grasses will require mowing of annual grasses. In this instance, mowing of cover crop will be incidental to this item.

Seed and Application Rate

Add 30 pounds/acre of the following seed based on seeding season:

Avena sativa (Grain Oats):	1 January to 31 July
Cecale cereale (Grain Rye):	1 August to 31 December

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Annual Cover Crop will be measured for payment per pound of seed, complete in place.

Annual Cover Crop will be paid at the contract unit price per pound upon approval of seed bag tags or other documentation of correct application rate and species, and upon acceptance of a satisfactory stand of annual grasses three weeks following seeding.

Application and care of cover crop will be paid for separately under Item 765.635 Native Seeding and Establishment.

ITEM 765.451 PART SHADE ROADSIDE MIX POUND

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.

   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% x [78 + 10 + 2]% = 81% PLS.

Therefore, each pound of PLS would need 1 pound / 0.81 = 1.2 pounds of seed with a 90% purity and 90% total germination

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.

Mix A: Part Shade Roadside Mix

Botanical Name	Common Name	% Mix By Weight (PLS)
Grass		
Elymus virginicus	Virginia Wild Rye	35.0%
Schizachyrium scoparium	Little Blue Stem	23.6%
Tridens flavus	Purpletop	12.0%
Panicum virgatum	Switch Grass	10.0%
Panicum clandestinum 'Tioga'	Deer Tongue 'Tioga'	5.0%
Agrostis perennans	Upland Bentgrass	2.0%
Carex vulpinoidea	Fox Sedge	2.0%
Juncus effusus	Soft Rush	0.2%
		89.8%
Herb/Forb		
Chamaecrista fasciculata	Partridge Pea	4.0%
Penstemon digitalis	Beard-tongue	1.0%
Zizia aurea	Golden Alexanders	0.8%
Rudbeckia hirta-VT ecotype	Black-eyed Susan-VT ecotype	0.6%
Aster divaricatus	White Wood Aster	0.4%
Solidago caesia	Woodland Goldenrod	0.4%
Pycnanthemum tenuifolium	Slender Mountain Mint	0.3%
Monarda fistulosa	Wild Bergamot	0.3%
Eupatorium purpureum	Purple Joe Pye Weed	0.3%
Heliopsis helianthoides	Ox-Eye Sunflower	0.3%
Desmodium canadense	Showy Tick Trefoil	0.3%
Solidago bicolor	White Goldenrod	0.3%
Solidago odora	Licorice Scented Goldenrod	0.2%
Eupatorium perfoliatum	Boneset	0.2%
Aster novae-angliae	New England Aster	0.2%
Aster lateriflorus	Calico Aster	0.2%
Verbena hastata	Blue Vervain	0.2%
Lobelia siphilitica	Great blue lobelia	0.2%
		10.2%
Seeding Rate: 15.0 lbs PLS/Acre		**100.0%**

Application Rate

Mix A: ____15__ lbs/acre PLS. In addition, apply 30 pounds of cover crop (grain oats or grain rye) as appropriate to the season. Option 2: 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.

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 AND BASIS OF PAYMENT

Seed Description will be measured for payment by the pound of Pure Live Seed delivered and complete in place.

Seed Description 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.

Cover crop not included as part of the permanent mix composition will be paid for under Item 765.21, Annual Cover Crop.

Application and care of native seed mix will be paid for separately under Item 735.635 Native Seeding and Establishment.

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 **P**ure **L**ive **S**eed (PLS[1]):

_____ **Total Pounds PLS**

Engineer: Verification at Time of Application

Number pounds delivered to site[2]: _____ 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).*
[2]*Quantity delivered should match pounds* ***Total Pounds PLS*** *and* ***Verification of Seed Delivery****. Pounds should be shown on each Seed Tag.*

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 765.553 WETLAND SEEDING RIPARIAN MIX POUND

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.

   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% x [78 + 10 + 2]% = 81% PLS.

Therefore, each pound of PLS would need 1 pound / 0.81 = 1.2 pounds of seed with a 90% purity and 90% total germination

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.

Wetland Seed - Riparian Mix

765.553 Wetland - Riparian Mix			
	Botanical Name	Common Name	% PLS by Weight
Grass			
	Sorghastrum nutans NY Eco	Indiangrass NY Ecotype	14.00%
	Schizachyrium scoparium	Little Blue Stem	14.00%
	Elymus riparius	Riverbank Wild Rye	10.00%
	Elymus virginicus	Virginia Wild Rye	10.00%
	Panicum clandestinum 'Tioga'	Deer Tongue 'Tioga'	9.00%
	Andropogon gerardii NY Eco	Big Bluestem NY Eco	8.00%
	Carex vulpinoidea	Fox Sedge	7.00%
	Panicum virgatum	Switchgrass	3.00%
	Juncus effusus	Soft Rush	2.00%
	Agrostis perennans	Upland Bentgrass	2.00%
	Scirpus atrovirens	Green Bulrush	1.00%
			80.00%
Herb/Forb			
	Chamaecrista fasciculata	Partridge Pea	3.00%
	Verbena hastata	Blue Vervain	3.00%
	Asclepias incarnata	Swamp Milkweed	3.00%
	Heliopsis helianthoides	Ox-Eye Sunflower	2.00%
	Eupatorium perfoliatum	Boneset	2.00%
	Aster umbellatus	Flat Topped White Aster	1.00%
	Aster prenanthoides	Zig Zag Aster	1.00%
	Aster puniceus	Aster – Swamp	1.00%
	Aster novae-angliae	New England Aster	1.00%
	Eupatorium maculatum	Joe-pye Weed	1.00%
	Monarda fistulosa	Wild Bergamot	1.00%
	Vernonia noveboracensis	New York Ironweed	1.00%
			20.00%
			100.00%
	Seeding Rate: 20.0 lbs PLS/Acre		

Application Rate

Mix X: 20 lbs/acre PLS. In addition, apply 30 pounds of cover crop (grain oats or grain rye) as appropriate to the season.

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.

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 AND BASIS OF PAYMENT

Wetland Seeding Riparian Mix will be measured for payment by the pound of Pure Live Seed delivered and complete in place.

Wetland Seeding Riparian Mix 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.

Cover crop not included as part of the permanent mix composition will be paid for under Item 765.21, Annual Cover Crop.

Application and care of native seed mix will be paid for separately under Item 765.635 Native Seeding and Establishment.

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 **P**ure **L**ive **S**eed (PLS[1]):

_____ **Total Pounds PLS**

Engineer: Verification at Time of Application

Number pounds delivered to site[2]: _____ 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).*
[2]*Quantity delivered should match pounds* ***Total Pounds PLS*** *and* ***Verification of Seed Delivery****. Pounds should be shown on each Seed Tag.*

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 765.635 NATIVE SEEDING AND ESTABLISHMENT SQUARE YARD

Work shall conform to the relevant provisions of Subsections 765 and 767 of the Standard Specifications and the following:

The work under this item shall consist of seeding, mowing, and other care to establish 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.

QUALIFICATIONS

Seeding shall be done by a company having a minimum of five years of experience with native seed establishment. Prior to beginning work, the seeding Contractor shall furnish proof of qualifications to the Engineer for approval. Proof of qualifications shall include providing documentation (photos and contacts) to demonstrate knowledge and expertise with native seeding and establishment and proof of having completed successful native seeding projects.

SEEDING SEASON

Seeding seasons for native mixes is April 1 - May 15 and October 1 - December 1 for dormant seeding. Written approval must be obtained for seeding outside the seeding season and, if approved, the permanent seed rate shall be increased by 50%.

Seeding season for cover crops shall be grain oats January 1 – July 31 and grain rye August 1 – December 1.

MATERIAL AND SUBMITTALS

Seed Mixes and Submittals shall be per the item(s) for permanent and annual (cover crop) seed mixes.

Compost Blanket, if used, shall meet the material and submittal requirements for that item.

Hydromulch shall be wood fiber or straw applied per the Standard Specifications and at the rates specified below and per the manufacturer.

A certified statement shall be furnished, prior to start of work, to the Engineer by the Contractor as to the number of pounds of hydromulch, tackifier, and seed, per 100 gallons of water and as applicable to products used. This statement should also specify the number of square yards of seeding that can be covered with the solution specified above.

Fertilizer

No fertilizers shall be applied.

Water

Water, including hose and all other watering equipment required for the work, shall be furnished by the Contractor to the site at no additional cost. Water shall be suitable for irrigation and free from ingredients

harmful to plant life. All plants injured or work damaged due to the lack of water or the use of too much water shall be the Contractor's responsibility to correct.

SEEDING

Hand broadcast method shall be used for all areas smaller than half an acre and when specified on the plans for areas over half an acre.

Seeding shall occur within 72 hours of placement of loam and final grading or the Contractor shall propose a reasonable, alternative schedule that shall be approved by the Engineer.

Surface Preparation

No seeding or soil preparation shall be done if soils are muddy or dry and compacted. Bare soils shall be raked to remove large stiff clods, lumps, brush, roots, stumps, litter and other foreign matter. Ruts and depressions shall be filled with additional loam or compost and the soil shall be re-graded to a relatively smooth finish corresponding to the required grades.

When seeding over existing or compacted soil or soil that has sat bare for more than 30 days, surface will be prepared by tilling or raking to a minimum depth of 2 inches prior to seeding and prior to Compost Blanket application (when applied).

Surface preparation shall be compensated for under for loam placement or topsoil rehandled and spread as appropriate to the project.

Jute or coir mesh, when specified in the contract, shall be placed after seeding and per the Standard Specifications and the manufacturer’s instruction.

Surface preparation shall be approved by the Engineer prior to seeding.

Seeding over Various Substrates

Loam: Seeding shall occur within 72 hours of loam placement to prevent loss of topsoil. Seed shall be manually broadcast for areas less than half an acre (each area, not cumulative area) and when specified on the plans. Broadcasting shall be immediately followed by hydromulching as specified below. When not specified on the plans, larger areas may be hydroseeded as specified below.

Compost Blanket: Compost Blanket shall be applied as specified under that item. Seed should be hand broadcast at the same time as compost application to ensure a thin cover of compost over seed.

When seeding is done after application of Compost Blanket the rate shall be increased by 50%. If the Compost Blanket is applied after December 1, seed shall be broadcast or hydroseeding over the compost in the Spring and the rate increased by 50% specified under Seed Application.

Compost Mulch over Modified Rock: Compost Mulch and seed shall be applied as specified under that item. No hydromulch is required.

Cover Crop

Cover crop shall be used when seeding out of season, when specified with the permanent native seed mix under that item, and as required to prevent erosion until the permanent seed establishes.
A cover crop should not be used with a steep slope mix or other permanent mix which already contains either cereal rye or oats in the composition of the mix. A cover crop is not necessary for wetland seeding and is not typically necessary for soil stabilization when seeding in conjunction with a compost blanket application.

Seed Application

All seed shall be mulched as specified herein.

Seed application shall be by broadcast seeding or by hydroseeding as described below.

Broadcast Seeding

Seed shall be broadcast spread using a cyclone or whirlwind seeder or hand broadcast. Small or light-seeded species such as bluestem may be mixed with approved filler to achieve an even distribution. Seed shall not be broadcast when wind velocities are greater than 15 mph.

Broadcast seeding shall be undertaken in two separate passes at ninety degrees to each other. One-half the seeding rate shall be applied in each direction (horizontally and vertically). To ensure seed to soil contact with broadcasting of seed, seeding shall be followed by rolling or tracking with equipment approved by the Engineer.

Broadcast seed shall be mulched with weed-free straw mulch unless seeding is done as part of Compost Blanket in which case it shall be as specified above under seeding with Compost Blanket application. Hydromulching shall be as specified under Hydromulching.

Hydroseeding and Hydromulching

Hydroseed and mulching shall be per the manufacturer's directions and as follows.

Hydroseeding shall only be used for sites over half an acre in size or with permission of the Engineer.

Tank and hoses shall be cleaned from all previous hydroseeding and hydromulching projects. Seed shall be mixed into the slurry immediately before application and slurry applied within 30 minutes after seeds have been placed in the tank. Once seed has been placed in the tank, tank shall be agitated only enough to mix the seeds and keep slurry from separating.

A 2-step process shall be used for seeding in conjunction with hydromulch. Seed shall be applied with 500 lbs/acre of hydromulch in the first pass. A second pass with 1,000 lbs/ acre of hydromulch shall be applied in a second pass. Each pass shall be applied in a different direction.

Once the seed has been added to the tank mixture a one-hour time limit is set for spreading the mixture on the soil. Once the one hour has passed the excess mixture must be discarded.

For broadcast seeding, hydromulch shall be applied immediately following seeding at a rate of 1,000 lbs/acre. Tank shall be cleaned from any previous hydroseeding.

CARE DURING GERMINATION AND ESTABLISHMENT

Contractor shall care for seeded areas as necessary for successful germination. Care will include watering and weed control as necessary to achieve establishment of the specified seeded species after one growing season as specified below.

The contractor shall maintain the stand of grasses to ensure healthy growth of the seeded species. Work shall include mowing or weed-whacking for weed control, watering if necessary, and removal of invasive plants.

Watering shall be sufficient to achieve soil moisture to a depth of 2 inches or more and such moisture is uniform. Method of watering shall not erode or damage soil or grassed surfaces.

General Weed Control: Unless otherwise directed, mowing shall be as specified under Mowing for Weed Control for seed establishment. Weeds shall be mowed prior to weeds setting seed (by the end of July unless otherwise approved).

Control of Invasive and Aggressive Weeds: Invasive and aggressive weeds, including but not limited to mugwort, ragweed, knapweed, foxtail, crabgrass, and chicory must be cut or treated prior to going to seed. Herbicide treatment must be coordinated with MassDOT. Undesired species (such as chicory) introduced due to use of incorrect seed mix shall be removed at the Contractor's expense.

MOWING FOR WEED CONTROL

Mowing for weed control shall be completed after weeds have sprouted and show leaf and bud growth, but prior to setting seed, generally between July 7th and August 1st, unless directed otherwise by the MassDOT Landscape Architect and the Engineer.

Mowing height shall be as needed for weed control, generally to a height of 8 inches and not below 4 inches, unless directed otherwise. Mowing shall be with a brush hog mower or string trimmer other approved equipment. Conventional lawn mowers which cannot achieve the appropriate cut shall not be used.

Contractor shall give 48-hour notice prior to mowing work. Mowing shall only occur in dry sunny weather. Litter pickup should occur prior to mowing in all areas. If required, cut grass shall be raked and removed. Litter pickup and raking and removal of grass shall be incidental to the work.

Mowing equipment shall be approved by the Engineer prior to work.

OVER-SEEDING

Areas of bare ground greater than 2-3 feet in diameter shall be over-seeded with the specified mix during the appropriate season for seeding. Where required for overseeding mowing shall be as close to the soil as possible. Soil that is compacted shall be raked or otherwise roughened prior to over-seeding.

Over-seeding rates and methods shall those specified above under Materials and Methods. Following over-seeding, soil shall be lightly tamped to ensure seed to soil contact and areas shall be mulched with straw mulch and watered with a fine mist to moisten soil to a depth of at least 2 inches.

Over-seeding, mulch, watering, and all work for over-seeding shall be incidental.

DETERMINING SATISFACTORY GRASS ESTABLISHMENT

A well-established stand of the specified seeded species as determined by the Engineer and the MassDOT Landscape Architect will be required for Final Acceptance. The expectation is that an acceptable number and variety of the desired permanent seeded species (not the cover crop) will be visible. Generally:

- A minimum of 75% coverage by the specified permanent seeded species after one growing season. Of that percentage, generally, depending on the mix species:
  - At least 3 types of the permanent seeded grass species shall be visible.
  - At least 3 species of wildflowers shall be visible.
- There will be no significant gaps or bare soil (generally 2-3 feet in diameter or greater).
- There will be no more than 25% coverage by weed species.
- All soil shall be stabilized and there shall be no channeling or erosion.
- There will be no invasive or aggressive species within the stand at the time of acceptance.
- There shall be no evidence of seed from non-native mixes (i.e., clover) due to failure to clean the hydroseeding tank or using incorrect mix.

Invasive and aggressive weeds (such as mugwort, ragweed, knapweed, and chicory) must be cut or treated prior to going to seed for Interim Acceptance. Herbicide treatment must be coordinated with MassDOT.

A warm-season grass mix with perennials will not have uniform growth. A uniform stand of grass may indicate use of an incorrect mix.

ACCEPTANCE OF SEEDING AND ESTABLISHMENT WORK

Conditional Acceptance shall be based on proper application of seed as specified herein.

Interim Acceptance of Care. Seeding will be inspected by mid-July to assess germination and Establishment conditions as described above. When necessary for Interim Acceptance, areas shall be mowed prior to weed species producing seed and as specified above under Weed Control. ***Areas requiring weed control that are not mowed prior to weed seed dispersal will not be approved for Interim Acceptance.*** Seeding that shows good germination and is determined by the Engineer and Landscape Architect to not require weed control at time of inspection shall be accepted for Interim Acceptance payment.

Final Acceptance of Establishment shall be given upon satisfactory Establishment as described above.

If the seeded area fails to meet the requirements of Establishment by the end of the growing season, contractor shall propose and implement remediations and site shall be inspected during the following growing season after July 1st. All remediation shall be at the contractor's expense.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Native Seeding and Establishment will be measured for payment by the square yard, complete in place.

Native Seeding and Establishment will be paid at the Contract unit price by the square yard upon Conditional, Interim, and Final Acceptances as described above. This price shall include all submittals, seeding, rolling to ensure seed-to-soil contact, weed control other than mowing, water, over-seeding, labor, materials, equipment, and all incidental costs required to complete the work of establishing a satisfactory stand of grass.

Native seed and cover crop mixes shall be compensated under the respective items.

Site preparation, including raking, tilling, removal of debris and stones, and other work to the prepare site for seeding shall be compensated under loam placement or topsoil rehandled and spread as relevant to the project. If used, Compost Blanket shall be compensated under the respective item.

Option 1: Mowing for weed control shall be considered incidental to this item.

Schedule of payment shall be as follows:

30% upon Conditional Acceptance

20% upon Interim Acceptance of Care, except this amount will be reduced to zero and final payment will be reduced accordingly when areas requiring weed control are not mowed as specified in the Interim Acceptance criteria.

50% upon Final Acceptance of Establishment

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.

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.

Sedimentation Fence

Materials and Installation shall be per Section 670.40 and 670.60 of the Standard Specifications and the following:

Sedimentation fence shall only be used if shown on the plans or when specified by Orders of Condition or other permit requirements.

When used with compost filter tubes, the tube shall be placed on a minimum of 8 inches of folded fabric on the upslope side of the fence. Fabric does not need to be trenched.

When used with straw bales, an 8-inch deep and 4-inch wide trench or V-trench shall be dug on the upslope side of the fence line. One foot of fabric shall be placed in the bottom of the trench followed by backfilling with compacted earth or gravel. Stakes shall be on the down slope side of the trench and shall be spaced such that the fence remains vertical and effective.

Width of fabric shall be sufficient to provide a 36-inch high barrier after fabric is folded or trenched. Sagging fabric will require additional staking or other anchoring.

MAINTENANCE

Maintenance of the sediment control barrier shall be per Section 670.60 of the Standard Specifications 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.

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 damage by construction activities shall be repaired or replaced as directed by the Engineer at the Contractors expense.

ITEM 983.12 RIPRAP WITH GRAVEL PACKED VOIDS CY

DESCRIPTION

Description, Materials, and Construction Methods shall all be in accordance with the relevant provisions of Section 983 of the Standard Specifications and the following:

Riprap shall conform to the requirements of M2.02.0 Materials Specification. Riprap shall be placed on the areas, depths, contours, and grades designated on the Plans in a manner that will produce a well-graded mass of stone with the minimum practicable percentage of voids. Riprap protection shall be placed to its full thickness in one operation in such a manner to avoid displacing the underlying material. Placing of riprap in layers by dumping into chutes or by placing by similar methods that are likely to cause segregation will not be permitted.

The riprap will be placed in accordance with the relevant provisions of Section 983. After the riprap has been placed, gravel will be used to pack any voids that are present.

CONSTRUCTION METHODS

Riprap shall be placed upon an approved bed of crushed stone over geotextile fabric to the lines and grades shown on the Plans and as directed by the Engineer.

DESCRIPTION – GEOTEXTILE FABRIC

Geotextile fabric shall conform to the requirements and installation procedure of Item 698.4 Geotextile Fabric for Permanent Erosion Control.

When stone or riprap is placed over the geotextile fabric, the stone placement shall begin at the toe and proceed up the slope. Care shall be taken during stone or riprap placement to avoid stretching and tearing of the geotextile fabric. Stone shall not be dropped from a height exceeding 12-inches.

Field monitoring shall be performed to verify that the crushed stone or riprap placement does not damage the geotextile. Any geotextile damaged during backfill placement shall be replaced as directed by the Engineer, at the Contractor's expense, as specified in the provisions of Item 698.4. All costs associated with the material and placement of the material shall be considered incidental to this item.

DESCRIPTION – GRAVEL

The finished surface shall be free of voids and shall be approved by the Engineer. Gravel shall conform to MassDOT Standard Specification Item 151. Gravel Borrow (M1.03.0 Type d). All costs associated with the material and placement of the material shall be considered incidental to this item.

METHOD AND MEASUREMENT OF PAYMENT

Item 983.12 Riprap with Gravel Packed Voids will be measured by Cubic Yard of Riprap M2.02.0 completed in place, and paid at the Contract Bid Price per CY. The Contract Bid Price shall be the full payment of all labor, materials, equipment, transportation, and incidental materials/costs necessary to complete the work to the satisfaction of the Engineer.

Gravel borrow to pack voids, rock for riprap, any additional excavation beyond that required to construct the proposed substructures, any necessary removal of existing riprap, as determined by the Engineer, and all work related to the installation of riprap shall be included in the bid price for Riprap with Gravel Packed Voids. No additional payment will be provided. Said price shall be considered full compensation for all labor, tools, equipment, and material necessary for the completion of the work.

The cost for geotextile fabric will be paid for under Item 698.4 Geotextile Fabric for Permanent Erosion Control.

The cost for crushed stone for the riprap bedding will be paid for under Item 156.5 Crushed Stone for Filter Blanket.

ITEM 991.1 CONTROL OF WATER - STRUCTURE NO. A-04-038 LUMP SUM

Work under this Item shall conform to the relevant provisions of Section 140 of the Standard Specifications and the following:

This Item includes all dewatering necessary to accomplish the demolition and removal of the existing bridge, construction of the proposed bridge, and installation of the proposed slope protection (i.e. riprap). While the intent is to excavate for demolition of the existing bridge substructure and construction of the proposed bridge integral abutments behind existing riprap slope protection, channel diversions may be required to prevent groundwater infiltration through the slope to remain.

Any pumping and dewatering measures to construct the proposed bridge and temporary utility bridge; demolish the existing bridge and temporary utility bridge; and install riprap, crushed stone, geotextile fabric etc. shall be considered incidental to this item.
Channel diversions and dewatering of excavation shall be conducted to ensure that removal and construction of bridge substructures and installation of the proposed slope protection are done "*in the dry.*"

Additionally, the contractor is responsible for locating and providing the necessary protection for any utilities that will remain in service during the demolition/construction phases. The existing and proposed approximate location of several overhead and underground utilities are depicted on the construction plans. Under no circumstances shall sheet piling, soldier piles, and/or other systems that protrude into the soils be installed using impact driving in close proximity to underground utilities. Locating and protecting utilities is considered incidental to Item 991.1 and will not be considered for additional compensation.

As part of the work under this Item, it is the responsibility of the Contractor to determine the need and extent of channel diversions, sedimentation basin and dewatering techniques, and sedimentation controls needed to control water and sediment at the site. Prior to starting the excavation and demolition operations, the Contractor shall submit working drawings and design calculations, as required, specifying the methods and materials they propose to use for the Engineer's review and approval. These plans and calculations shall be in conformance with the Plans and these Specifications.

The Contractor shall install all erosion control measures and turbidity barriers prior to proceeding with the approved water control plans. The materials and methods not specifically mentioned under this Item shall comply with the Standard Specifications where applicable.

Approval of the working drawings does not relieve the Contractor of the responsibility of providing for the safety and successful completion of the work.

CONSTRUCTION METHODS

Plans and calculations for dewatering measures shall be developed by the Contractor for this Item, and shall be prepared and stamped by a Professional Engineer registered in the Commonwealth of

Massachusetts. The proposed dewatering procedure and calculations shall be submitted to the Engineer for review and approval prior to the start of construction.

Stream restrictions shall be conducted in such a manner as to minimize siltation and prevent contamination of the waterway.

Maximum screen sizes on the inlet side of all pumps shall not exceed ½ in (12.7 mm).

Recommended devices to control water at the site include, but are not limited to:

- Sheet Piles.
- Sandbag dams or bulk storage bag cofferdams.
- Installation of precast concrete median barriers or blocks covered with sedimentation fabric and sandbags to reduce water infiltration.
- Portable cofferdam system comprised of steel frames covered by an impervious fabric membrane.

The Contractor is advised that the effectiveness of the water control method used will vary based on the field conditions and the time at which the actual excavation work is being performed. The Engineer has the right to order the Contractor to stop all excavation operations when in his/her judgment the Contractor's water control operations are failing to produce adequate results or are posing a threat to the environment.

The Contractor shall provide the means of removing all sediment from water pumped from the excavation areas; this shall include the use of filter bags, sedimentation basins, check dams, sedimentation fences or tanks.

BASIS FOR PAYMENT

Payment under this heading will be made at the Lump Sum Contract Unit Price Bid for this Item, which shall include all labor, materials, equipment and incidental costs required to complete the work.

Partial payments shall be made at the following percentages:

Approval of the Control of Water submittal	10%
Accepted installation of Control of Water	60%
Satisfactory removal/cutting of the Control of Water	30%

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

February 14, 2025

MassDOT Environmental
10 Park Plaza
Boston, MA 02116
ATTN: Courtney Walker

RE: 401 WATER QUALITY CERTIFICATION
Administrative Completeness and Technical Deficiency Review
401 WQC Application No: 24-WW11-0003-APP
MassDOT Project #: 610777

AT: Quality Street over the Hoosic River
Adams, MA

Dear Ms. Walker:

MassDEP has completed its Administrative Review of the application for the above-referenced Water Quality Certification (WQC) application and notes that the application still requires a proof of public notice to be administratively complete.

MassDEP has completed its Technical Review of the application and is requesting submittal of the following additional information:

1. The project permit plans cut off the outer area of the project limits in the northeast and southwest quadrants. Please provide a plan set that includes the entire project area.

2. In accordance with 314 CMR 9.06(6)(a)(7), "A redevelopment project shall also comply with all other requirements of the Stormwater Management Standards and improve existing conditions." The current design does not propose any changes that improve upon existing conditions. Stormwater Control Measures or Low Impact Development

This information is available in alternate format. Please contact Melixza Esenyie at 617-626-1282.
TTY# MassRelay Service 1-800-439-2370
MassDEP Website: www.mass.gov/dep

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(LID) Techniques should be further evaluated and incorporated into the proposed project.

3. Section 5, "Stormwater Management", of the Project Narrative states that the two catch basins at the western project limits will be replaced with deep sump catch basins. On page two of the Stormwater Management Memo, it is also stated that Option 4 proposes to replace the two existing catch basins with deep sump catch basins. Within the same paragraph it is stated that there are no proposed stormwater control measures. The summary under Standard 4 of the Stormwater Standards analysis states that no TSS removal will be provided, implying that the deep sump catch basins will not be installed. Please clarify the project proposal.

4. The applications states that these catch basins are outside of the project limits. If these catch basins will be replaced, please confirm that the project limits will incorporate their installation.

5. The "Option 1" note on the Alternatives Analysis plan sheet states that the flat elevations and overhead utilities would make it challenging to install a bioretention area. As the applications describes the subsurface 6-inch PVC pipe as abandoned, it appears that there is space to provide an SCM. Please reevaluate this area for the installation of a SCM.

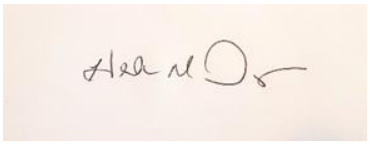
6. Photo 4 of the application shows a section of the abandoned 6-inch PVC pipe suspended over the bank of the river. Despite being outside the project limits and on town-owned property, MassDEP suggests coordination with the town to address removal of the suspended end of this pipe as it could potentially entrap debris during flood events.

7. On page two of the Stormwater Management Memo, it is stated that 1,796 square feet (sf) of impervious area will be added within the project limits. Table 1 also provides the same value for increased impervious area. The description under Standard 2 states that the increase in impervious area will be 1,848 sf. Please clarify which value is correct.

Upon receipt of all requested supplemental information, MassDEP has 30 calendar days in which to issue or deny a certification.

Should you have any questions relative to this letter, please contact me at heidi.davis@mass.gov or Tyler Lewis at tyler.lewis@mass.gov.

Sincerely,



Heidi M. Davis
Highway Unit Supervisor

Ecc: DEP – WERO – Michael McHugh
MassDOT – Melissa Lenker
MassDOT – Michael Joa
BSC Group – Diana Walden – dwalden@bscgroup.com
Adams Conservation Commission – Kyomi Belanger – kbelanger@town.adams.ma.us

March 13, 2025

Heidi Davis, Senior Environmental Analyst & Highway Unit Supervisor
Massachusetts Department of Environmental Protection
Wetlands and Waterways Program
100 Cambridge Street, Suite 900
Boston, MA 02114

SUBJECT: MassDOT Project 610777
Quality Street over the Hoosic River (A-04-038)
Bridge Superstructure Replacement Project
Adams, Massachusetts
Response to MassDEP Comments

Dear Ms. Davis,

In response to the MassDEP's comments, the Massachusetts Department of Transportation – Highway Division (MassDOT) (the Applicant) is responding to the comments that were provided on February 14, 2025, in response to a Massachusetts Section 401 Water Quality Certification (401 WQC) (BRP WW 11 – Minor Project Certification) application replacement of the structurally deficient bridge structure (A-04-038) that carries Quality Street over the Hoosic River in Adams, MA (42.608989 N, 73.131334 W). The bridge replacement design is substantially the functional equivalent of, and in similar alignment to, the existing bridge. Efforts have been made to avoid, minimize, and mitigate impacts where possible.

General

Comment 1. *The project permit plans cut off the outer area of the project limits in the northeast and southwest quadrants. Please provide a plan set that includes the entire project area.*

Response 1: Updated plans are attached.

Comment 2. *In accordance with 314 CMR 9.06(6)(a)(7), "A redevelopment project shall also comply with all other requirements of the Stormwater Management Standards and improve existing conditions." The current design does not propose any changes that improve upon existing conditions. Stormwater Control Measures or Low Impact Development (LID) Techniques should be further evaluated and incorporated into the proposed project.*

Response 2: In an effort to proposed improvements to existing conditions, the project now includes a sediment forebay and bioretention which will capture, and mitigate for, a portion of the proposed increase in impervious surface area and provide treatment prior to discharging into the Hoosic River. Separately, the implementation of two (2) 4-ft deep sump catch basins are proposed to replace existing catch basins. They will provide treatment for runoff from impervious surfaces that is captured by these existing inlets. Please see the attached, updated plan set.

Comment 3. *Section 5, "Stormwater Management", of the Project Narrative states that the two catch basins at the western project limits will be replaced with deep sump catch basins. On page two of the Stormwater Management Memo, it is also stated that Option 4 proposes to replace the two existing catch basins with deep sump catch basins. Within the same paragraph it is stated that there are no proposed stormwater control measures. The summary under Standard 4 of the Stormwater Standards analysis states that no TSS removal will be provided, implying that the deep sump catch basins will not be installed. Please clarify the project proposal.*

Response 3: The Stormwater Management Memo has been revised to reflect the removal and replacement of the two (2) existing catch basins. The summary under Standard 4 now includes language regarding the TSS removal provided by the proposed Stormwater Control Measures (SCMs). The updated stormwater Management Memo is attached to this reply.

Comment 4. *The applications states that these catch basins are outside of the project limits. If these catch basins will be replaced, please confirm that the project limits will incorporate their installation.*

Response 4: The limit of work has been modified to include the removal and replacement of the two (2) existing catch basins.

Comment 5. *The "Option 1" note on the Alternatives Analysis plan sheet states that the flat elevations and overhead utilities would make it challenging to install a bioretention area. As the applications describes the subsurface 6-inch PVC pipe as abandoned, it appears that there is space to provide an SCM. Please reevaluate this area for the installation of a SCM.*

Response 5: Since the original submission, MassDOT has coordinated with both the overhead utility company and the MassDOT District office and determined that the proposed bioretention area can be constructed and installed near the existing utility pole. However, the subsequent installation of a 15-ft-wide gravel access road to access the pole is also required. As such, the plans (attached) have been updated to reflect this proposed installation of the approximately 391 sf grassy channel, approximately 139 sf sediment forebay, check dam, approximately 776 sf bioretention area, and spillway.

Comment 6. *Photo 4 of the application shows a section of the abandoned 6-inch PVC pipe suspended over the bank of the river. Despite being outside the project limits and on town-owned property, MassDEP suggests coordination with the town to address removal of the suspended end of this pipe as it could potentially entrap debris during flood events.*

Response 6: MassDOT will reach out to the Town of Adams; however, as the owner, the Town will have the final say in the decision on whether to remove.

Comment 7. *On page two of the Stormwater Management Memo, it is stated that 1,796 square feet (sf) of impervious area will be added within the project limits. Table 1 also provides the same value for increased impervious area. The description under Standard 2 states that the increase in impervious area will be 1,848 sf. Please clarify which value is correct.*

Response 7: The project increases impervious area within the project area by 1,796 square feet (sf). The Stormwater Management Memo has been revised to reflect this.

If you have questions regarding the subject project, please contact me by email at courtney.l.walker@dot.state.ma.us, or at (857) 262-0757.

Sincerely

Courtney Walker

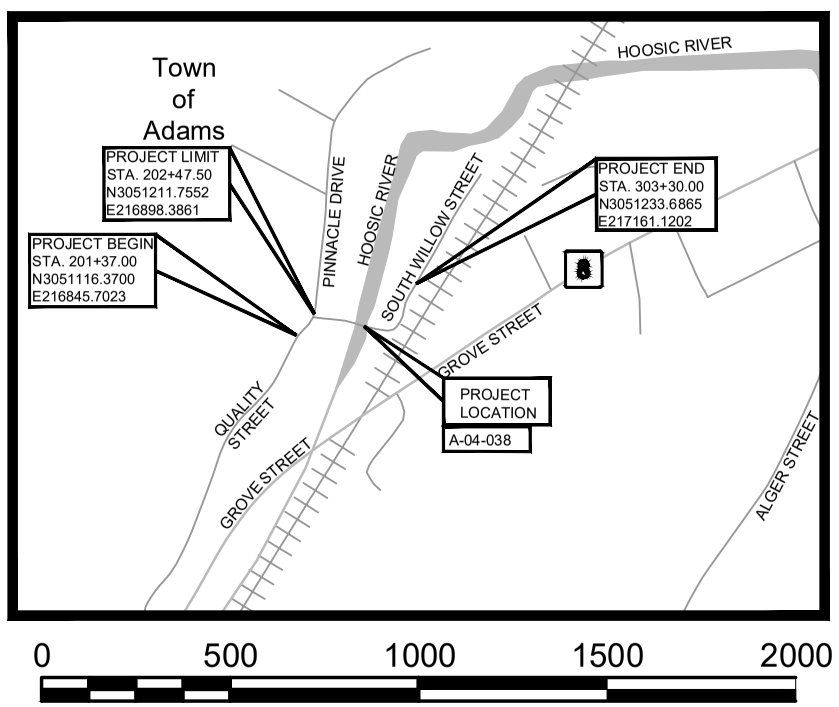
Courtney Walker, Wetlands and Water Resources Coordinator (Bridges)
MassDOT - Highway Division, Environmental Services

CC: Ryan Hale (MassDEP)
Tyler Lewis (MassDEP)
Kevin Newton (USACE)
Sheffield Conservation Commission
Diana Walden, BSC Group
Kristine Chestna, MassDOT (Project Manager)
Dan Vasconcelos, (USACE)
Michael Joa (MassDOT Wetlands)
Micah Morrison, PE, BSC Group
Sara Kreisel, PWS, BSC Group

PERMIT PLANS

INDEX

SHEET NO.	DESCRIPTION
1	INDEX
2	EXISTING CONDITIONS
3	PROPOSED CONDITIONS
4	EXISTING SOUTH ELEVATION
5	PROPOSED SOUTH ELEVATION
6	PROPOSED ROADWAY PROFILE
7	IMPACTS
8 - 12	CONTROL OF WATER
13	DRAINAGE & SEDIMENT CONTROL DETAILS



SCALE: 1" = 500'

LENGTH OF PROJECT = 417.68 FEET = 0.079 MILES

IMPACTS TO WATERS OF THE UNITED STATES

WATERS OF THE US	PERMANENT IMPACT	0	SF
	TEMPORARY IMPACT	431	SF
	PERMANENT IMPACT - DREDGE / FILL	0 / 0	CY
	TEMPORARY IMPACT - DREDGE / FILL	0 / 0	CY
BANK/ ORDINARY HIGH WATER (OHW)	PERMANENT IMPACT	0	LF
	TEMPORARY IMPACT	109	LF

NOTES:
1. HORIZONTAL DATUM IS BASED OFF OF THE NORTH AMERICAN DATUM (NAD) 1983
2. ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88)

PREPARED FOR:
massDOT Massachusetts Department of Transportation Highway Division
MASSDOT HIGHWAY DIVISION
10 PARK PLAZA, BOSTON, MA 02116

Source:

INDEX

BRIDGE REPLACEMENT PROJECT
QUALITY STREET OVER HOOSIC RIVER,
ADAMS, MA
BERKSHIRE COUNTY

Job No.: 610777 Date: 3/3/2025
Scale: N/A Revised:
Description: INDEX Figure: 1 OF 13

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Proposal No. 610777-131930
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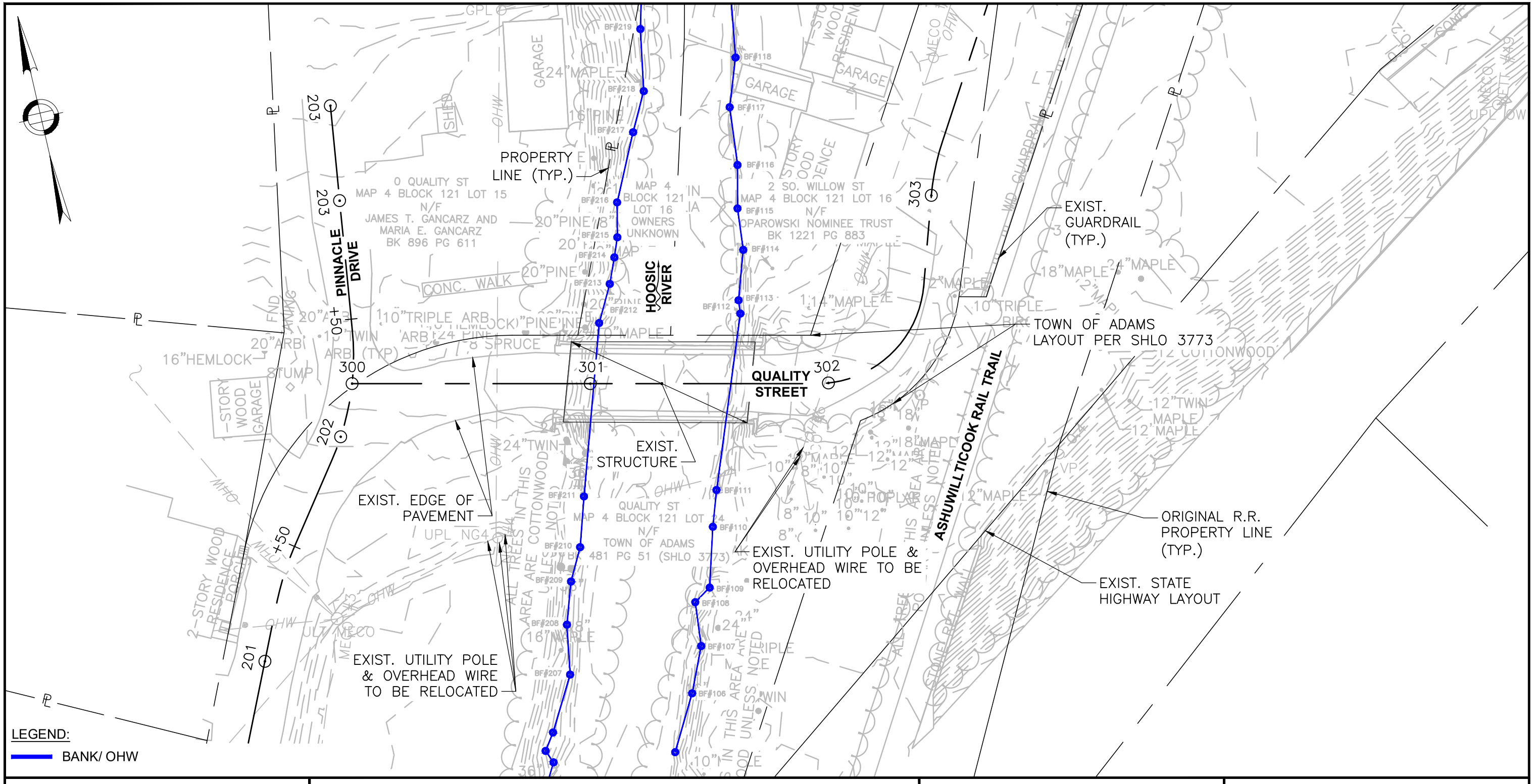
Proposal No. 610777-131930

A00840 - 194



LEGEND:

BANK/ OHW

PREPARED FOR:

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MASSDOT HIGHWAY DIVISION
10 PARK PLAZA, BOSTON, MA 02116

Source:

EXISTING CONDITIONS

BRIDGE REPLACEMENT PROJECT
QUALITY STREET OVER HOOSIC RIVER,
ADAMS, MA
BERKSHIRE COUNTY

Job No.: 610777 Date: 3/3/2025

Scale: 1" = 40' Revised:

Description: EX. COND. Figure: 2 OF 13

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Proposal No. 610777-131930

A00840 - 195

PROP. UTILITY POLE & OVERHEAD WIRE (TYP.)

PINNACLE DRIVE

0 QUALITY ST
MAP 4 BLOCK 121 LOT 15
N/F
JAMES T. GANCARZ AND
MARIA E. GANCARZ
BK 896 PG 611

MAP 4
BLOCK 121
LOT 16
OWNERS
UNKNOWN

2 SO. WILLOW ST
MAP 4 BLOCK 121 LOT 1
N/F
OPAROWSKI NOMINEE TRUST
BK 1221 PG 883

PORTION OF EXIST. ABUT. (TYP.)

PROP. EDGE OF PAVEMENT (TYP.)

HOOSIC RIVER

QUALITY STREET

PROP. BIORETENTION AREA

PROP. BRIDGE

PROP. WATER LINE

PROP. GUARDRAIL (TYP.)

ASHUWILLTICOOK RAIL TRAIL

STONE RET. WALL

12"WATER (TYPE UNKNOWN)
16"WATER (TYPE UNKNOWN)
(1922)

9.50'

15.00'

SEDIMENT CONTROL BARRIER (TYP.)

LIMIT OF WORK (TYP.)

QUALITY ST
MAP 4 BLOCK 121 LOT 24
N/F
TOWN OF ADAMS
481 PG 51 (SHLO 3773)

BF#219 BF#218 BF#217 BF#216 BF#215 BF#214 BF#213 BF#212 BF#211 BF#210 BF#209 BF#208 BF#207

BF#118 BF#117 BF#116 BF#115 BF#114 BF#113 BF#112 BF#111 BF#110 BF#109 BF#108 BF#107 BF#106

LEGEND:
- PROPOSED BRIDGE ABUTMENT/ WINGWALL
- EXIST BRIDGE FOUNDATION (TO BE RETAINED)
- BANK/ OHW
- SEDIMENT CONTROL BARRIER
- PROP LIMIT OF WORK
- RIPRAP WITH GRAVEL PACKED VOIDS

PROP. GRASSED CHANNEL
PROP. SEDIMENT FOREBAY
PROP. CHECK DAM
PROP. BIORETENTION AREA
PROP. DEEP SUMP CATCH BASIN
PROP. SPILLWAY
PROP. UTILITY POLE GRAVEL ACCESS
PROP. UTILITY POLE (TYP.)
CHAINLINK FENCE

INSET
1" = 40'

PREPARED FOR:
massDOT
Massachusetts Department of Transportation
Highway Division

MASSDOT HIGHWAY DIVISION
10 PARK PLAZA, BOSTON, MA 02116

Source:

PROPOSED CONDITIONS

BRIDGE REPLACEMENT PROJECT
QUALITY STREET OVER HOOSIC RIVER,
ADAMS, MA
BERKSHIRE COUNTY

Job No.: 610777 Date: 3/3/2025

Scale: 1" = 40' Revised:

Description: PR. COND. Figure: 3 OF 13

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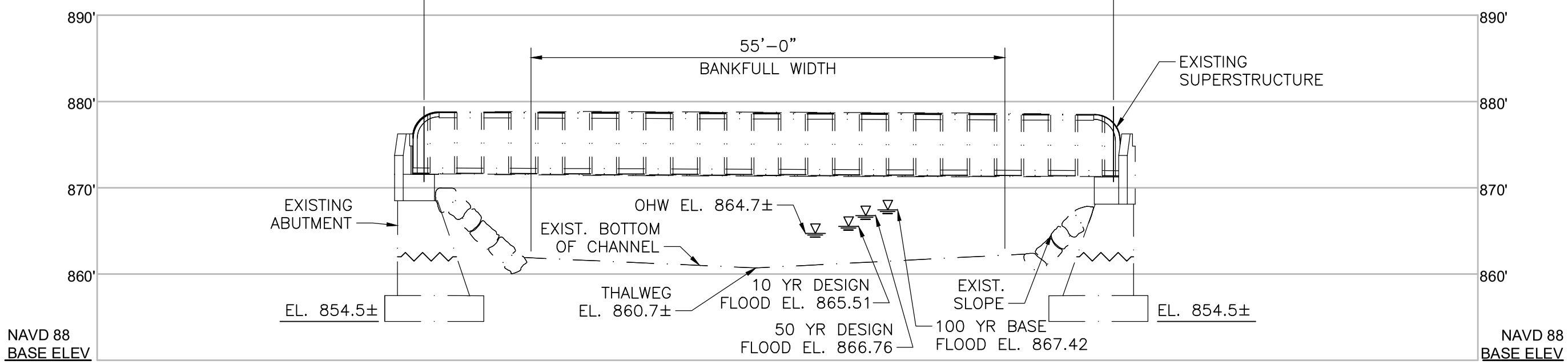
Proposal No. 610777-131930

A00840 - 196



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Source:

EXISTING SOUTH ELEVATION

BRIDGE REPLACEMENT PROJECT
QUALITY STREET OVER HOOSIC RIVER,
ADAMS, MA
BERKSHIRE COUNTY

Job No.: 610777 Date: 3/3/2025

Scale: 1" = 150' Revised:

Description: EX. ELEV. Figure: 4 OF 13

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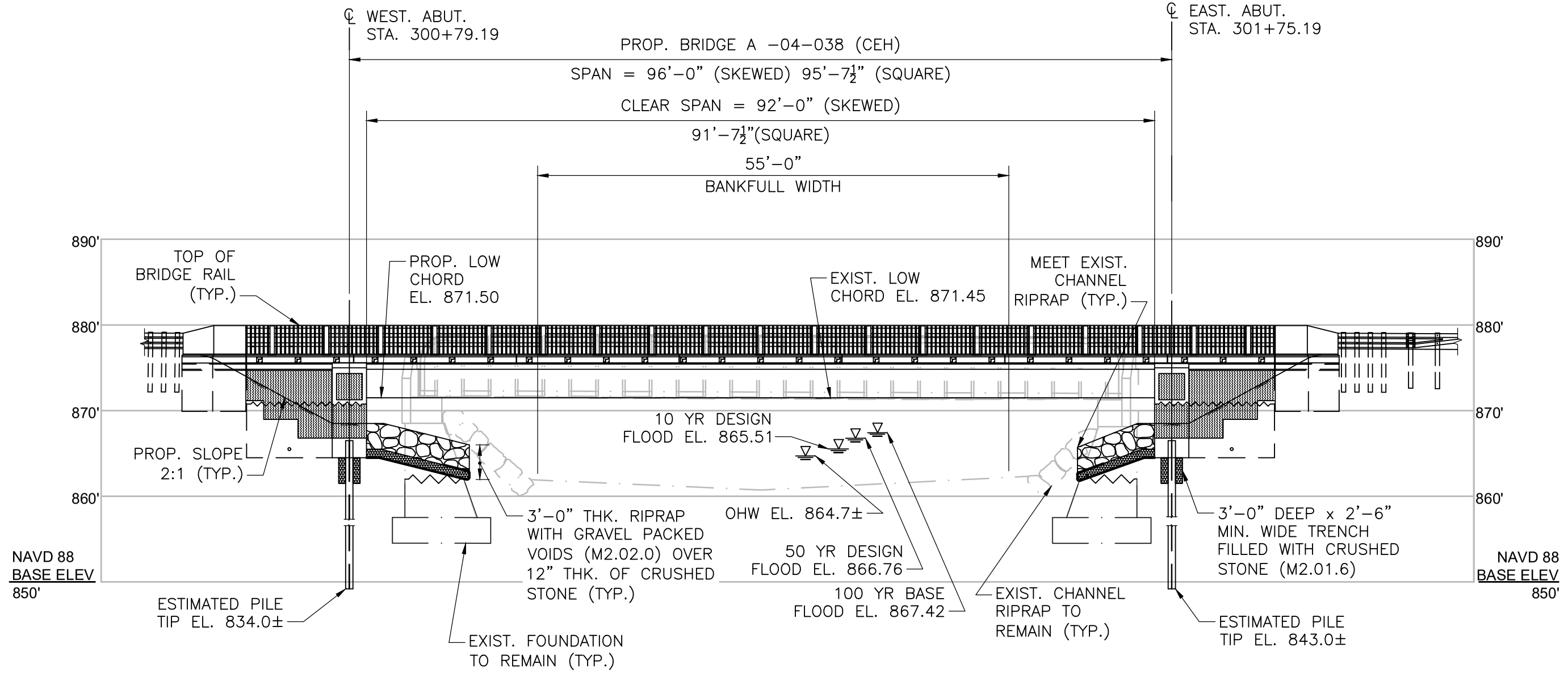
Proposal No. 610777-131930



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10 PARK PLAZA, BOSTON, MA 02116

Source:

PROPOSED SOUTH ELEVATION

BRIDGE REPLACEMENT PROJECT
QUALITY STREET OVER HOOSIC RIVER,
ADAMS, MA
BERKSHIRE COUNTY

Job No.: 610777 Date: 3/3/2025
Scale: 1" = 150' Revised:
Description: PR. ELEV. Figure: 5 OF 13

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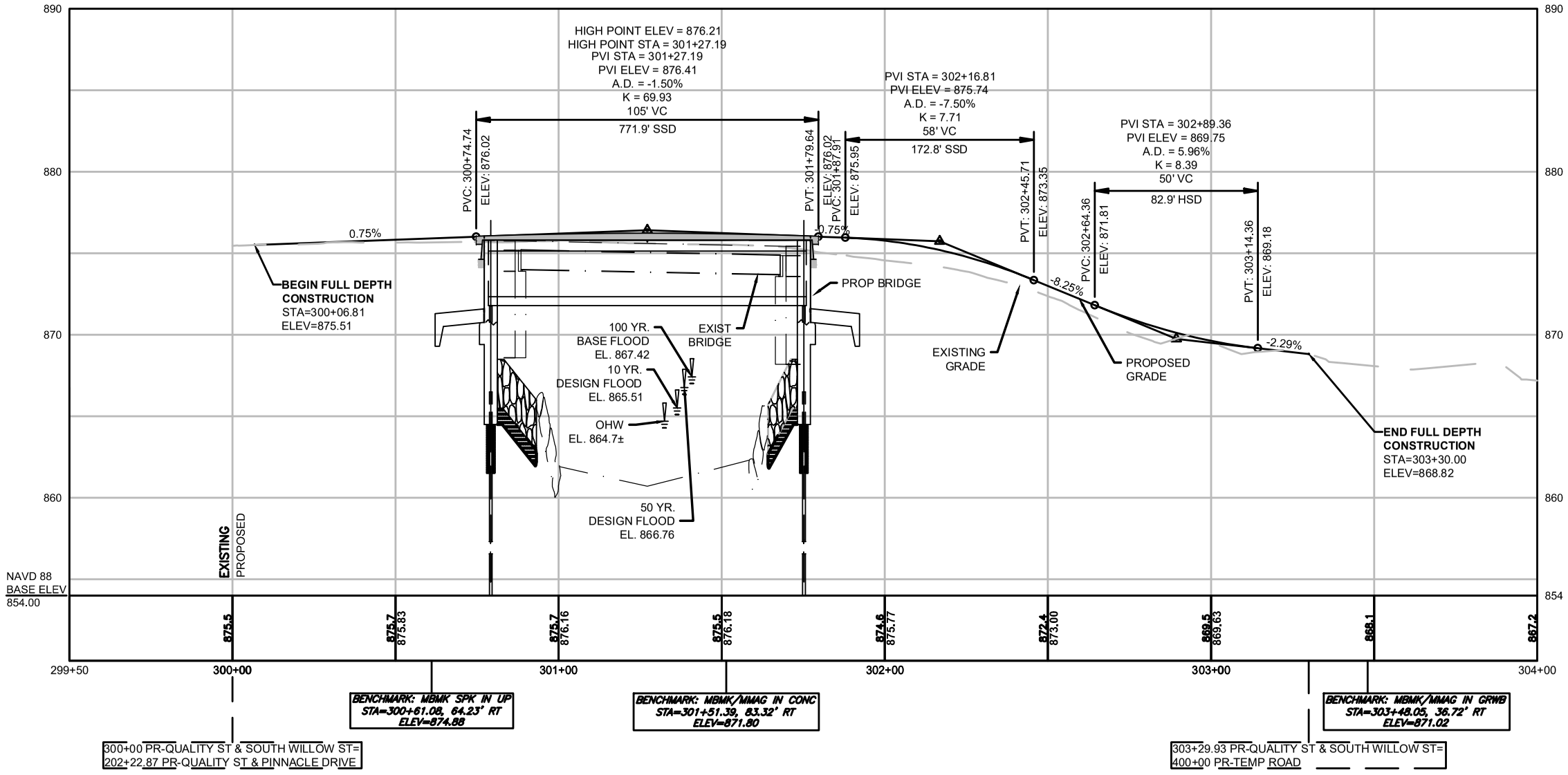
A00840 - 197

PR-QUALITY ST & SOUTH WILLOW ST



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Source:

PROPOSED ROADWAY PROFILE

BRIDGE REPLACEMENT PROJECT
QUALITY STREET OVER HOOSIC RIVER,
ADAMS, MA
BERKSHIRE COUNTY

Job No.: 610777 Date: 3/3/2025

Scale: NOT TO SCALE Revised:

Description: PROFILE Figure: 6 OF 13

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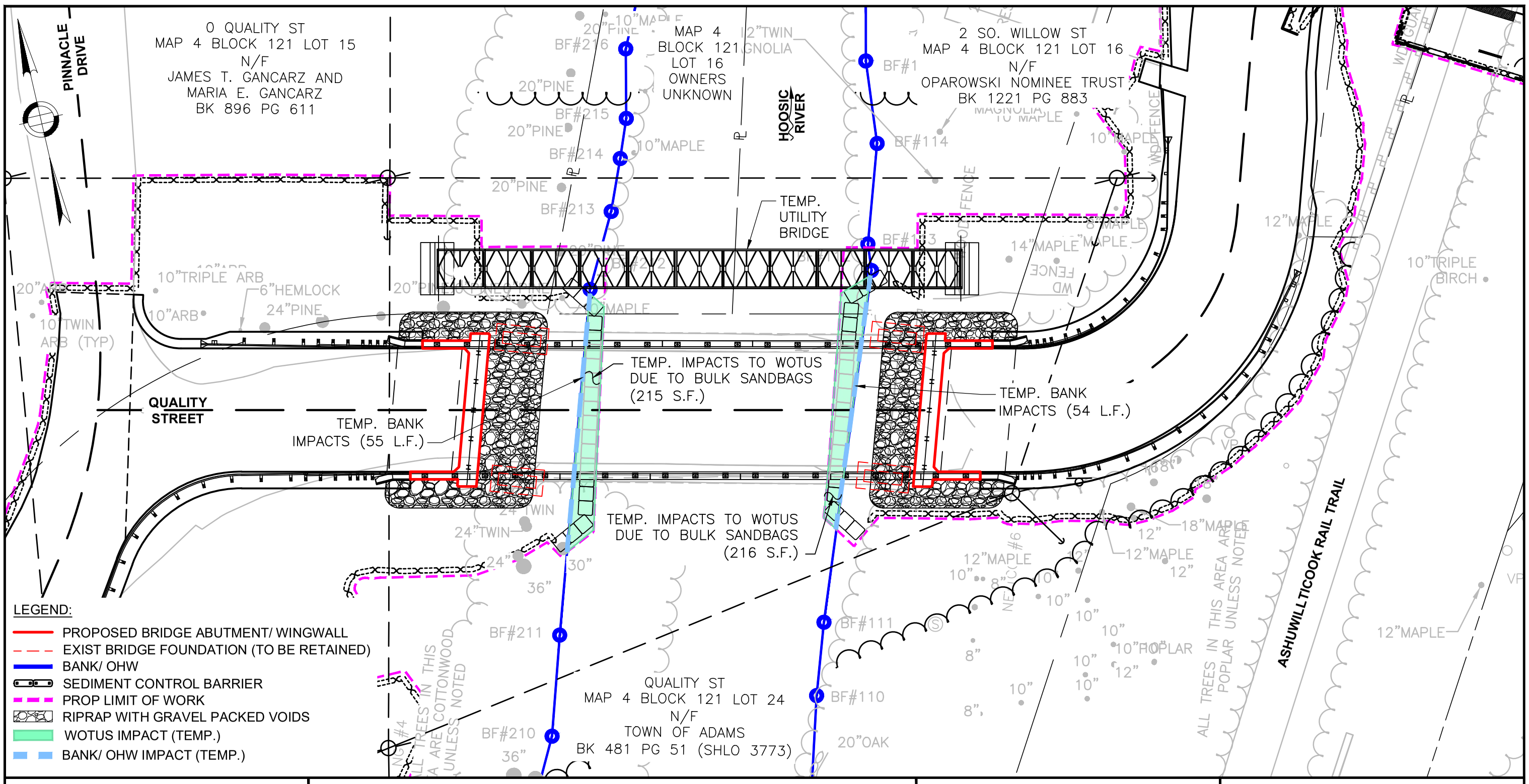

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10 PARK PLAZA, BOSTON, MA 02116

Source:

IMPACTS

BRIDGE REPLACEMENT PROJECT
QUALITY STREET OVER HOOSIC RIVER,
ADAMS, MA
BERKSHIRE COUNTY

Job No.: 610777 Date: 3/3/2025

Scale: 1" = 20' Revised:

Description: IMPACTS Figure: 7 OF 13

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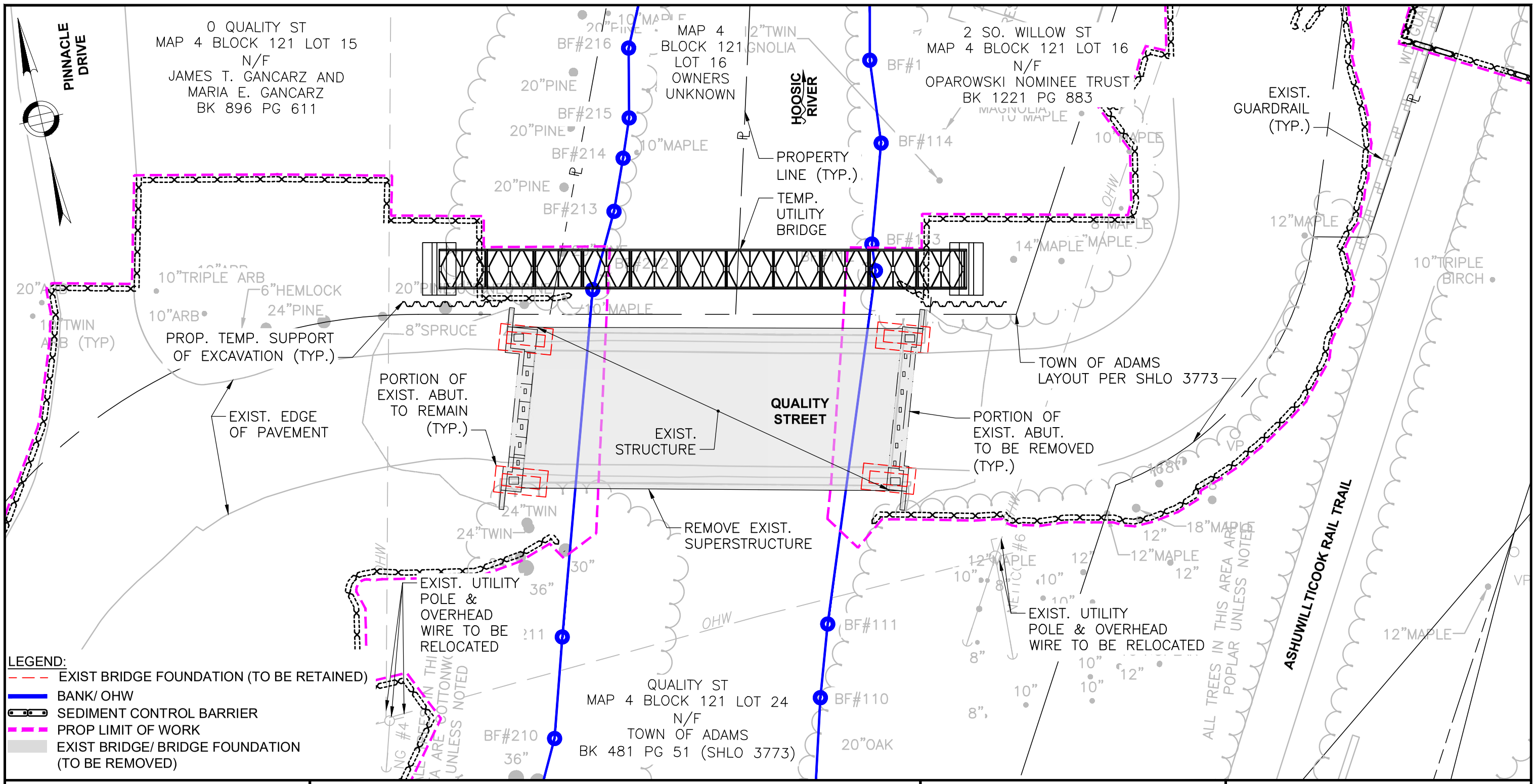

PREPARED FOR:

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Massachusetts Department of Transportation
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MASSDOT HIGHWAY DIVISION
10 PARK PLAZA, BOSTON, MA 02116

Source:

STAGE 1 CONTROL OF WATER PLAN

BRIDGE REPLACEMENT PROJECT
QUALITY STREET OVER HOOSIC RIVER,
ADAMS, MA
BERKSHIRE COUNTY

Job No.: 610777 Date: 3/3/2025

Scale: 1" = 20' Revised:

Description: COW Figure: 8 OF 13

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File: P:\2830428\Environmental\Drawings\8-12 - 2830428_(COW).dwg

Proposal No. 610777-131930
A00840 - 200

Proposal No. 610777-131930

A00840 - 201

PINNACLE DRIVE

0 QUALITY ST
MAP 4 BLOCK 121 LOT 15
N/F
JAMES T. GANCARZ AND
MARIA E. GANCARZ
BK 896 PG 611

MAP 4
BLOCK 121
LOT 16
OWNERS
UNKNOWN

HOOSIC RIVER

2 SO. WILLOW ST
MAP 4 BLOCK 121 LOT 16
N/F
OPAROWSKI NOMINEE TRUST
BK 1221 PG 883

PROPERTY LINE (TYP.)

TEMP. UTILITY BRIDGE

EXIST. GUARDRAIL (TYP.)

TOWN OF ADAMS
LAYOUT PER SHLO 3773

FILTER BAG CAPACITY
600 GALLONS/MINUTE
OR GREATER FINAL DESIGN
TO BE DETERMINED BY
CONTRACTOR'S ENGINEER

CONC. BARRIER
SILTATION BASIN
WITH FILTER BAG
(TYP.)

PORTION OF
EXIST. ABUT.
TO REMAIN
(TYP.)

EXIST. EDGE
OF PAVEMENT

QUALITY
STREET

INSTALL PROP.
ABUT. (TYP.)

22'–0"
MIN. (TYP.)

22'–0"
MIN. (TYP.)

BULK SANDBAG (TYP.)

SUMP PUMP
DISCHARGE
HOSE (TYP.)

SUMP PUMP (TYP.)

6" MIN. LAYER
OF CRUSHED STONE
(TYP.)

LOCATION
TO BE APPROVED
BY MASSDOT BEFORE
INSTALLATION

EXIST. UTILITY
POLE & OVERHEAD
WIRE TO BE
RELOCATED

QUALITY ST
MAP 4 BLOCK 121 LOT 24
N/F
TOWN OF ADAMS
BK 481 PG 51 (SHLO 3773)

EXIST. UTILITY
POLE & OVERHEAD
WIRE TO BE RELOCATED

ALL TREES IN THIS AREA ARE POPLAR UNLESS NOTED

ASHUWILLTICOOK RAIL TRAIL

LEGEND:
- PROPOSED BRIDGE ABUTMENT/ WINGWALL
- EXIST BRIDGE FOUNDATION (TO BE RETAINED)
- BANK/ OHW
- SEDIMENT CONTROL BARRIER
- PROP LIMIT OF WORK

PREPARED FOR:
massDOT
Massachusetts Department of Transportation
Highway Division
MASSDOT HIGHWAY DIVISION
10 PARK PLAZA, BOSTON, MA 02116

Source:

STAGE 2 CONTROL OF WATER PLAN

BRIDGE REPLACEMENT PROJECT
QUALITY STREET OVER HOOSIC RIVER,
ADAMS, MA
BERKSHIRE COUNTY

Job No.: 610777 Date: 3/3/2025
Scale: 1" = 20' Revised:
Description: COW Figure: 9 OF 13

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Proposal No. 610777-131930

A00840 - 202

PINNACLE DRIVE

0 QUALITY ST
MAP 4 BLOCK 121 LOT 15
N/F
JAMES T. GANCARZ AND
MARIA E. GANCARZ
BK 896 PG 611

MAP 4
BLOCK 121
LOT 16
OWNERS
UNKNOWN

HOOSIC RIVER

2 SO. WILLOW ST
MAP 4 BLOCK 121 LOT 16
N/F
OPAROWSKI NOMINEE TRUST
BK 1221 PG 883

PROPERTY LINE (TYP.)

TEMP. UTILITY BRIDGE

TOWN OF ADAMS
LAYOUT PER SHLO 3773

PORTION OF EXIST. ABUT. TO REMAIN (TYP.)

MEET EXIST. CHANNEL RIPRAP (TYP.)

QUALITY STREET

SUMP PUMP (TYP.)

FILTER BAG CAPACITY
600 GALLONS/MINUTE
OR GREATER FINAL DESIGN
TO BE DETERMINED BY
CONTRACTOR'S ENGINEER

CONC. BARRIER
SILTATION BASIN
WITH FILTER BAG
(TYP.)

INSTALL PROP. BEAMS (TYP.)

6" MIN. LAYER
OF CRUSHED STONE
(TYP.)

22'-0"
MIN. (TYP.)

22'-0"
MIN. (TYP.)

REMOVE BULK SANDBAGS
BEFORE INSTALLING
BEAMS (TYP.)

INSTALL
PROP. RIPRAP
WITH GRAVEL
PACKED VOIDS
(TYP.)

SUMP PUMP
DISCHARGE
HOSE (TYP.)

LOCATION
TO BE APPROVED
BY MASSDOT BEFORE
INSTALLATION

QUALITY ST
MAP 4 BLOCK 121 LOT 24
N/F
TOWN OF ADAMS
BK 481 PG 51 (SHLO 3773)

ALL TREES IN THIS AREA
POPLAR UNLESS NC

ASHUWILLTICOOK RAIL TRAIL

LEGEND:
- PROPOSED BRIDGE ABUTMENT/ WINGWALL
- EXIST BRIDGE FOUNDATION (TO BE RETAINED)
- BANK/ OHW
- SEDIMENT CONTROL BARRIER
- PROP LIMIT OF WORK
- RIPRAP WITH GRAVEL PACKED VOIDS

PREPARED FOR:
massDOT
Massachusetts Department of Transportation
Highway Division
MASSDOT HIGHWAY DIVISION
10 PARK PLAZA, BOSTON, MA 02116

Source:

STAGE 3 CONTROL OF WATER PLAN

BRIDGE REPLACEMENT PROJECT
QUALITY STREET OVER HOOSIC RIVER,
ADAMS, MA
BERKSHIRE COUNTY

Job No.: 610777 Date: 3/3/2025
Scale: 1" = 20' Revised:
Description: COW Figure: 10 OF 13

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Proposal No. 610777-131930

A00840 - 203

PINNACLE DRIVE

0 QUALITY ST
MAP 4 BLOCK 121 LOT 15
N/F
JAMES T. GANCARZ AND
MARIA E. GANCARZ
BK 896 PG 611

MAP 4
BLOCK 121
LOT 16
OWNERS
UNKNOWN

PROPERTY
LINE (TYP.)

2 SO. WILLOW ST
MAP 4 BLOCK 121 LOT 16
N/F
OPAROWSKI NOMINEE TRUST
BK 1221 PG 883

PROP. UTILITY
POLE

PROP. UTILITY
POLE &
OVERHEAD WIRE

HOOSIC
RIVER

PROP. GUARDRAIL
(TYP.)

QUALITY
STREET

PROP. EDGE
OF PAVEMENT

PORTION OF EXIST.
ABUT. TO REMAIN (TYP.)

PROP. BRIDGE

SEDIMENT
CONTROL
BARRIER
(TYP.)

LIMIT OF
WORK
(TYP.)

ASHUWILLTICOOK RAIL TRAIL

QUALITY ST
MAP 4 BLOCK 121 LOT 24
N/F
TOWN OF ADAMS
BK 481 PG 51 (SHLO 3773)

LEGEND:
- PROPOSED BRIDGE ABUTMENT/ WINGWALL
- EXIST BRIDGE FOUNDATION (TO BE RETAINED)
- BANK/ OHW
- SEDIMENT CONTROL BARRIER
- PROP LIMIT OF WORK
- RIPRAP WITH GRAVEL PACKED VOIDS

PREPARED FOR:
massDOT
Massachusetts Department of Transportation
Highway Division
MASSDOT HIGHWAY DIVISION
10 PARK PLAZA, BOSTON, MA 02116

Source:

STAGE 4 CONTROL OF WATER PLAN

BRIDGE REPLACEMENT PROJECT
QUALITY STREET OVER HOOSIC RIVER,
ADAMS, MA
BERKSHIRE COUNTY

Job No.: 610777 Date: 3/3/2025
Scale: 1" = 20' Revised:
Description: COW Figure: 11 OF 13

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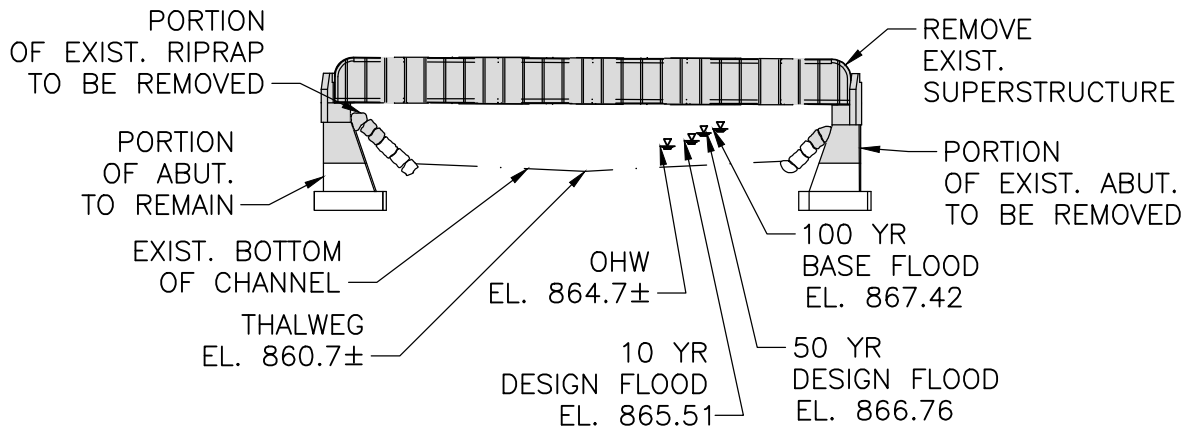
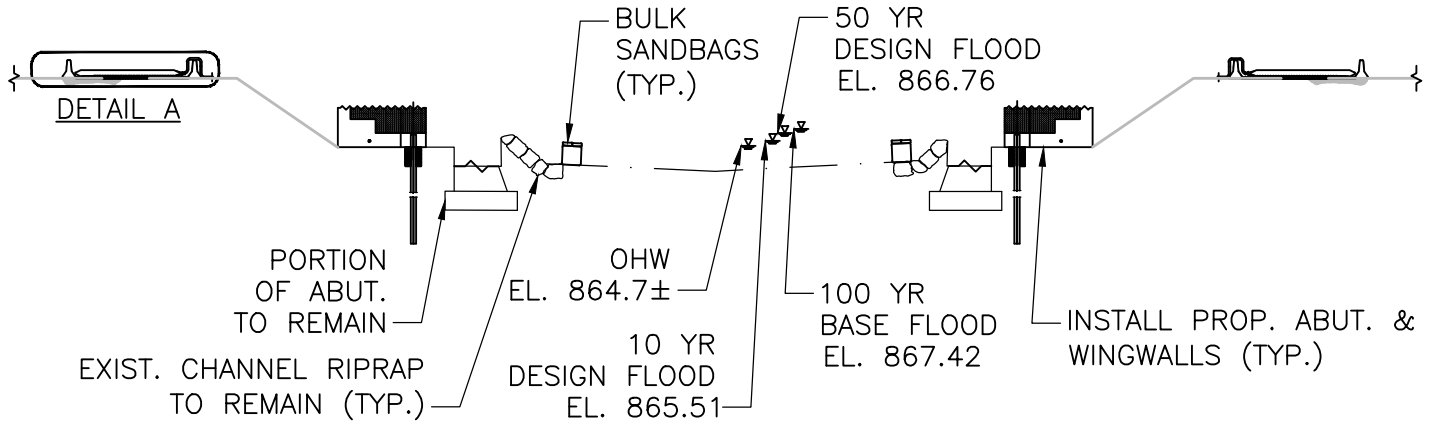


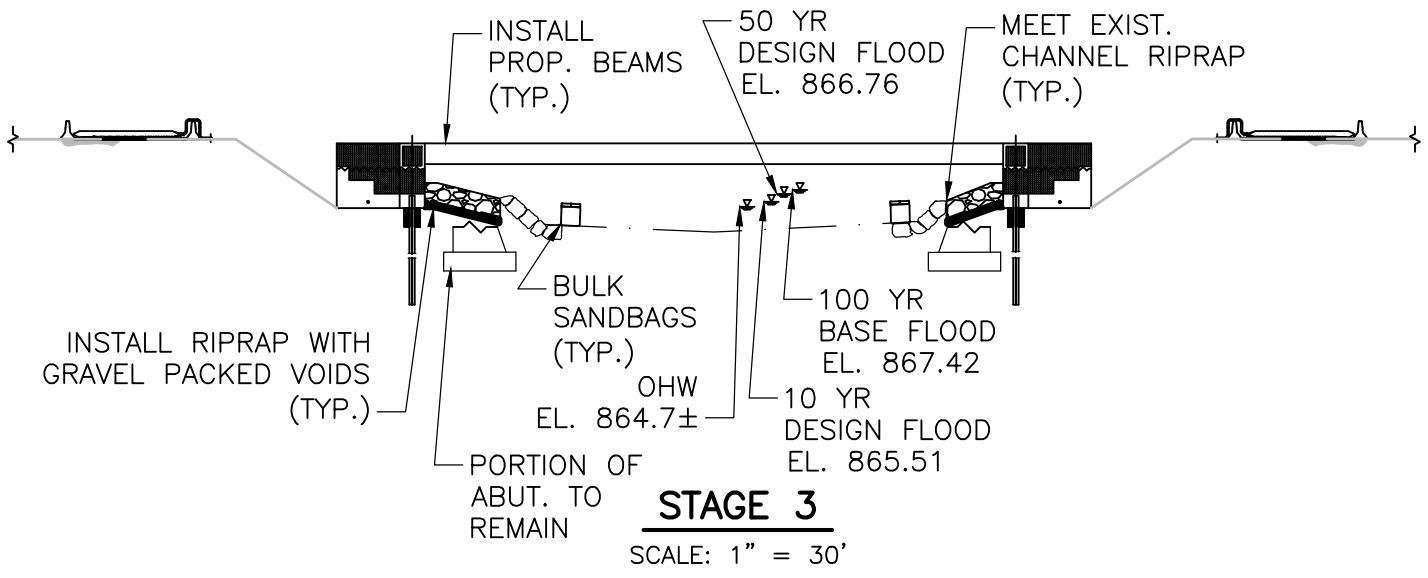
STAGE 1

SCALE: 1" = 30'



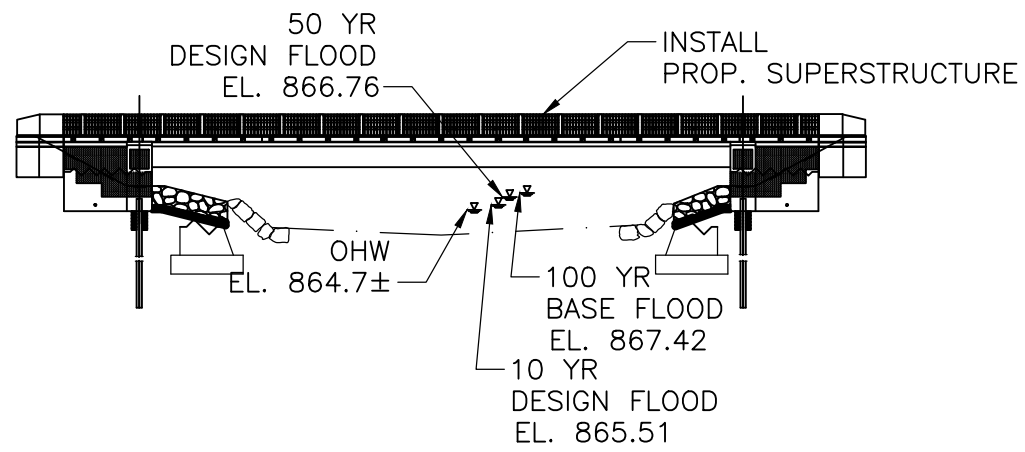
STAGE 2

SCALE: 1" = 30'



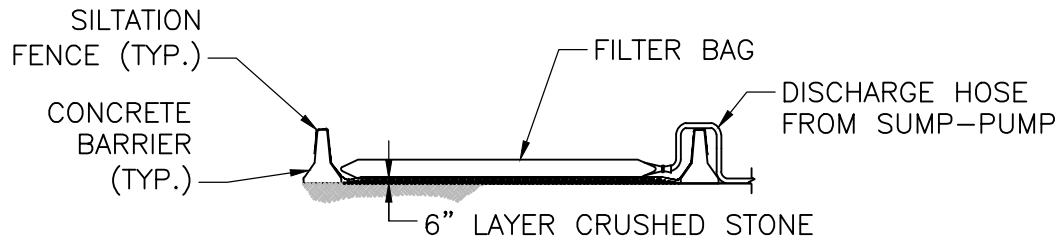
STAGE 3

SCALE: 1" = 30'



STAGE 4

SCALE: 1" = 30'



DETAIL A

SCALE: 1" = 10'

PREPARED FOR:

massDOT Massachusetts Department of Transportation Highway Division

MASSDOT HIGHWAY DIVISION
10 PARK PLAZA, BOSTON, MA 02116

STAGE 1-4 CONTROL OF WATER ELEVATIONS

Source:

BRIDGE REPLACEMENT PROJECT
QUALITY STREET OVER HOOSIC RIVER,
ADAMS, MA
BERKSHIRE COUNTY

Job No.: 610777 Date: 3/3/2025

Scale: 1" = 30' Revised:

Description: COW Figure: 12 OF 13

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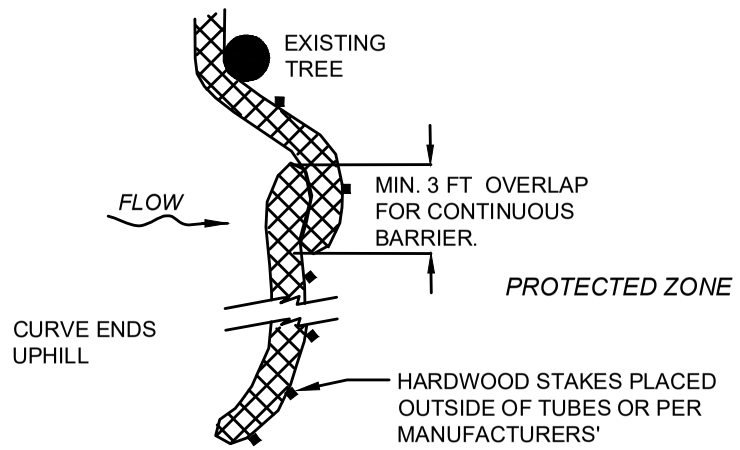
Proposal No. 610777-131930
A00840 - 204

Proposal No. 610777-131930

A00840 - 205



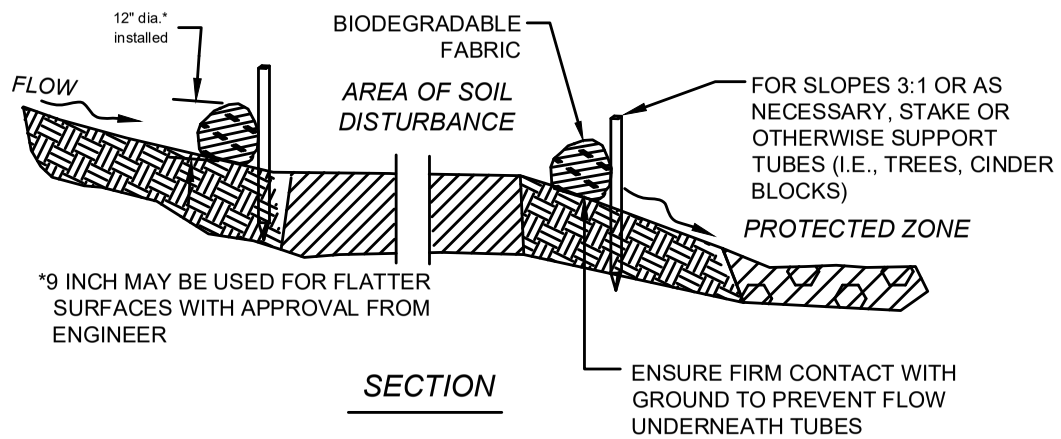
PLACE TUBE AS CLOSE TO LIMIT OF SOIL DISTURBANCE AS POSSIBLE, ALONG CONTOURS, AND PERPENDICULAR TO FLOW.

ADJUST LOCATION AS REQUIRED FOR OPTIMUM EFFECTIVENESS. DO NOT INSTALL IN WATERWAYS.

PLAN VIEW

REDUCE HIGH WATER FLOW ONTO WORK ZONE

CAPTURE SEDIMENT AND PREVENT FLOW OFF SITE



SEDIMENT BARRIER - COMPOST FILTER TUBE

NOT TO SCALE

PREPARED FOR:

massDOT Massachusetts Department of Transportation Highway Division

MASSDOT HIGHWAY DIVISION
10 PARK PLAZA, BOSTON, MA 02116

Source:

DRAINAGE & SEDIMENT CONTROL DETAILS

BRIDGE REPLACEMENT PROJECT
QUALITY STREET OVER HOOSIC RIVER,
ADAMS, MA
BERKSHIRE COUNTY

Job No.: 610777 Date: 3/3/2025

Scale: NOT TO SCALE Revised:

Description: DETAILS Figure: 13 OF 13

BSC GROUP
BUILD | SUPPORT | CONNECT
803 SUMMER STREET
BOSTON, MASSACHUSETTS 02127
617-896-4300 | www.bscgroup.com

File: P:\2830428\Environmental\Drawings\13 - 2830428_(DETAILS).dwg

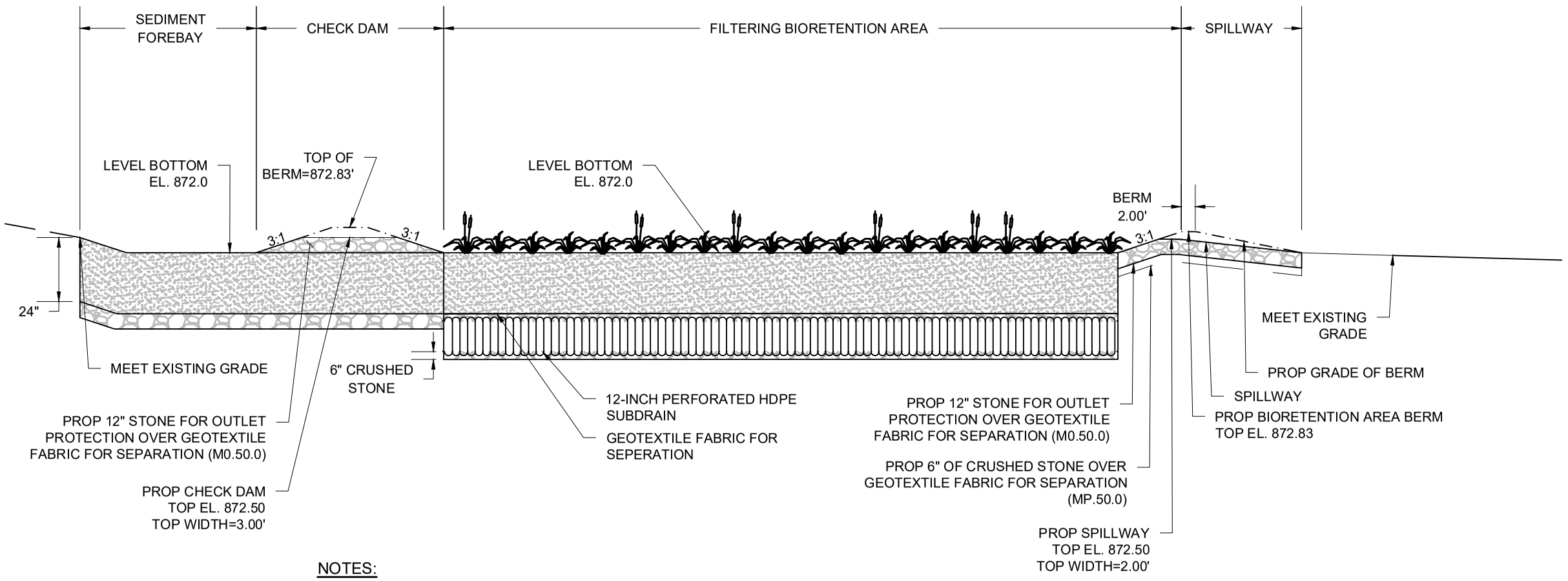
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-		
PROJECT FILE NO.	610777		

CONSTRUCTION DETAILS

610777_HD9(DETAILS).DWG Plotted on 12-Mar-2025 1:38 PM

Proposal No. 610777-131930

A00840 - 206



NOTES:

1. SEE LANDSCAPE DETAILS FOR BIORETENTION AREA DESIGN AND PLANTINGS
2. THE SUBDRAIN SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321, LATEST EDITION, AND THE MANUFACTURER'S INSTALLATION GUIDELINES.
3. FOUNDATION: WHERE THE UNDISTURBED EARTH BELOW THE PROPOSED CRUSHED STONE IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH SUITABLE MATERIAL AS SPECIFIED BY THE ENGINEER. AS AN ALTERNATIVE AND AT THE DISCRETION OF THE ENGINEER, THE BOTTOM MAY BE STABILIZED USING GEOTEXTILE MATERIAL.
4. GEOTEXTILE FABRIC FOR SEPARATION SHALL BE INSTALLED ON THE TOP AND SIDES OF THE CRUSHED STONE.
5. CRUSHED STONE AND GEOTEXTILE FABRIC ARE INCLUDED IN THE COST OF THE PERFORATED PIPE.
6. BIORETENTION AREA PLANTINGS NOT SHOWN FOR CLARITY.

FILTERING BIORETENTION AREA: SCM-1

NOT TO SCALE

Template Version: November 2023

To: MassDOT

Date: March 11, 2025

Project #: 610777

From: BSC Group

Re: Bridge A-04-038 Replacement

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 610777 to construct a bridge replacement (the Project) located in Adams, MA. As proposed, the Project consists of replacing bridge # A-04-038, carrying South Willow Street over the Hoosic River. The Project will include related highway work required to install the proposed bridge such as mill and overlay transitions, full depth pavement reconstruction and utility upgrades.

Existing and Proposed Drainage Conditions

The existing roadway is a 2-lane, 2-way road which is classified as an Urban Local Road situated in a north-south orientation. The area for the proposed replacement of Bridge A-04-038 consists of approximately 332 feet of roadway along South Willow Street centered on the bridge over Hoosic River, as well as approximately 85 feet of roadway along Quality Street. The bridge is located approximately 1.6 miles west of the intersection where a portion of Grove Street splits off onto a side street. The roadway is approximately 24' wide with no pavement markings to indicate lane or shoulder width and averages 129 vehicles per day.

The proposed conditions of the site will increase roadway width to 26' wide but it will decrease the overall bridge width by approximately 2-feet. The proposed clear span width will increase from 82-feet to 92-feet. The project also involves milling and overlaying a portion of Quality Street, as well as removing existing pavement to allow for an increased radius of the right-turn approaching the bridge from Quality Street and installing associated guardrail.

The project drainage area is 26,188 SF. In existing conditions, 12,399 SF is impervious area. The Project proposes to increase the impervious area by 1,796 SF to 14,195 SF. The approximately 12.7% increase in impervious area is largely due to the roadway reconstruction for improved roadway approaches.

The existing roadway largely relies on country drainage to facilitate flow to the Hoosic River. There are two existing catch basins capturing stormwater runoff from a portion of Quality Street that then discharge into the Hoosic River via a 12" reinforced concrete pipe (RCP) though a headwall with stone protection. There is an abandoned 6" PVC outfall within the project limits.

South Willow Street slopes from higher elevations in the east to lower elevations northwest. Runoff that does not continue down the roadway will ultimately discharge down the side slopes into the Hoosic River. The river is tributary of the Hudson watershed.

Existing watershed patterns remain effectively unchanged in the proposed condition. In the existing and proposed conditions, the roadway is slightly crowned, and the majority of stormwater runs off the roadway via country drainage. The length of curbing required for bridge rail to guardrail transitions will increase at each corner of the bridge by less than 23'. The increased length of guardrail is necessary in order to protect against hazards that would otherwise be within the clear zone required due to the raised profile. In the existing condition, roadway runoff sheet flows past the end of the curb, and either passes down the 1:1 slope towards the river or continues to sheet flow down South Willow Street until it ultimately discharges into the Hoosic River as well. There is no existing erosion control protecting the slope down to the river. In

the proposed conditions, channel scour protection shall be constructed at the side slopes from the bridge to the streambed. In addition, in areas where the existing slope exceeds a 1:2 vertical slope, regrading is proposed to prevent erosion and scour. There is only one discharge point within the project area, the Hoosic River. Overall, the drainage patterns are either maintained or improved due to the proposed rip-rap for erosion control.

There are no existing stormwater control measures (SCM). In proposed conditions, the two existing catch basins shall be removed and replaced by 4' deep sump catch basins. The new catch basins are conveyed into a proposed manhole prior to discharging into the Hoosic River via the existing 12" RCP outfall. By replacing these catch basins and proposing 4' sumps, 25% of Total Suspended Solids (TSS) will be removed; therefore, improving the overall water quality in proposed conditions. In addition, a filtering bioretention area is proposed in the grass area southwest of the bridge. A grass channel is proposed at the intersection of South Willow Street and Quality Street to convey stormwater runoff into a sediment forebay. The sediment forebay will provide pretreatment to stormwater before it enters the filtering bioretention area. Any stormwater that is not infiltrated will overflow over the proposed spillway where it will then sheet flow into the Hoosic River. The forebay and filtering bioretention area will remove 90% of Total Suspended Soils (TSS), further improving overall water quality in proposed conditions.

A 15' wide gravel access is proposed south of the bioretention area to maintain access to the proposed utility pole.

The project limits were designed to minimize impacts to the environmental resources in the area. No work is proposed within vegetated wetlands at the Project site. The project is located within a Critical Area, the Hoosic River is identified as a Cold-Water Fishery.

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 is structurally deficient and functionally obsolete. The proposed bridge replacement is considered maintenance which is required to maintain the function, safety, and longevity of the roadway. Increased impervious area is required to facilitate the maintenance of the bridge, improve overall water quality, and provide a safe corridor for vehicular traffic. The proposed features that increase impervious cover are larger radii at roadway approaches. The overall width of the bridge will decrease by approximately 2-feet. 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.

No new stormwater outfalls are proposed for the Project. In the existing conditions, all runoff within the project area flows toward the Hoosic River via country drainage. All runoff will continue to discharge into the river in proposed conditions. There are two existing catch basins capturing stormwater runoff from Quality Street that then discharge into the Hoosic River via a 12" reinforced concrete pipe (RCP) though a headwall with stone protection. These catch basins are to be replaced by 4' deep sump catch basins, providing TSS removal prior to discharging into the river. The outfall is outside the limit of work; therefore, no changes are proposed. There is no existing erosion control treating stormwater as it flows down toward the river. In proposed conditions, channel scour protection will be installed to treat the stormwater runoff flowing from the bridge prior to discharging into the river.

No new outfalls are proposed.

See Standard 4 for the water quality treatment provided by the Project.

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.

Watershed modeling was performed using HydroCAD Stormwater Modeling Software version 10.00, a computer aided design program that combines SCS runoff methodology with standard hydraulic calculations. A model of the site's hydrology was developed for both pre- and post-development conditions to assess the effects of the proposed redevelopment of the project site and surrounding areas. One (1) design point was selected - the Hoosic River.

Since the project proposes an 1,796 SF increase in impervious area, and therefore a minor increase in peak flows, there are no increased flooding concerns. This increase is required to provide adequate roadway transitions on both ends of the improved bridge structure. Considering the minor increase of this area, the

project will have a negligible effect on the existing peak rate, the receiving water body, and down stream flooding.

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 (%)
12,399	14,195	1,796	12.7

Table 2: Peak Flow Discharge Rates

Storm Event	Pre-Development Peak Discharge Rate (cfs)	Post-Development Peak Discharge Rate (cfs)	Change In Peak Discharge Rate (cfs)
2-Year	0.45	0.65	0.20
10-Year	0.94	1.15	0.21
100-Year	1.98	2.11	0.13

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.

Existing groundwater recharge conditions are maintained.

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.

There is no existing treatment of total suspended solids within the project limits. In proposed conditions, the deep sump catch basins will capture 25% of total suspended solids from a contributing impervious area of approximately 2,050 SF, improving existing conditions. The sediment forebay and bioretention area will

remove 90% of total suspended solids from a contributing impervious area of 1,797 SF, further improving upon existing conditions. Additionally, the proposed channel scour protection will limit sediment uptake into the river, therefore improving the overall water quality in the proposed condition.

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 is located within a Critical Area, the Hoosic River is identified as a Cold-Water Fishery. The sediment forebay was sized to hold a volume greater than 0.5-inches of runoff, rather than 0.1-inches to accommodate the project being within a critical area. The proposed channel scour protection will provide increased treatment to surface runoff over existing conditions.

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.

As a bridge improvement, the Project is considered a redevelopment and has been designed to comply with the Stormwater Management Standards to the maximum extent practicable. Standards 2, 3, and 4 have been met to the maximum extent practicable, while Standards 1, 5, 6, 7, 8, 9, and 10 have been met fully.

Standard 8: Construction Period Pollution Prevention and Erosion and Sedimentation Controls

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 and include sediment control barriers and channel scour protection. The proposed E&S measures will be provided on both Quality Street and South Willow Street and will minimize the impact of sediment and debris on the stream from construction activities.

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.

The bridge included in this project is not owned by MassDOT. The O&M Plan will be implemented by the municipality. Appendix B included the O&M Plan for this project.

Long-term pollution prevention for this 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:

Figure 1 – Existing Watershed Map
Figure 2 – Existing HydroCAD Calculations
Figure 3 – Proposed Watershed Map
Figure 4 – Proposed HydroCAD Calculations
Figure 5 – NRCS Web Soil Survey

Appendix A – Stormwater Checklist
Appendix B – O&M Plan

Figure 1 – Existing Watershed Map

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BRIDGE NO. A-04-038 REPLACEMENT

QUALITY STREET &
SOUTH WILLOW STREET
IN
ADAMS
MASSACHUSETTS
(BERSHIRE COUNTY)

EXISTING CONDITIONS WATERSHED MAP

FEBRUARY 28, 2025

REVISIONS:

NO.	DATE	DESC.

PREPARED FOR:
MASSDOT
270 MAIN STREET
LENOX, MA 01240

BSC GROUP
BUILD | SUPPORT | CONNECT
803 Summer Street
Boston, Massachusetts
02127
617 896 4300

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SCALE: 1" = 20'
0 10 20 40 FEET

FILE:
DWG.:
JOB. NO: 28304.28
SHEET 1 OF 2

ISSUED FOR PERMITTING
NOT FOR CONSTRUCTION

EX1
DP1

PINNACLE DRIVE
PRIVATE ACCESS DRIVE

QUALITY STREET
(WIDTH VARIES, PUBLIC)
1950 SHLO NO. 3773

SOUTH WILLOW STREET
1950 SHLO NO. 3773

ASHUWILLTICOOK RAIL TRAIL (DCR)

HOOSIC RIVER

AUXILIARY BASELINE

BASELINE 1950 SHLO NO. 3773

ORIGINAL R.R. PROPERTY LINE

HYDRAULIC SOIL GROUP A
COPAKE FINE SANDY LOAM

10' WIDE WATERLINE EASEMENT
SEE "ADAMS FIRE DISTRICT PLAN OF LOCATION OF PROPOSED TAKING FOR WATER MAINS ACROSS PITTSFIELD & NORTH ADAMS R.R. LOCATION OCT. 5, 1950"

101 GROVE ST
MAP 4 BLOCK 124 LOT 23
N/F
JOHN D. DUQUETTE, JR.
BK 1438 PG 482

0 QUALITY ST
MAP 4 BLOCK 121 LOT 15
N/F
JAMES T. GANCARZ AND
MARIA E. GANCARZ
BK 896 PG 611

QUALITY ST
MAP 4 BLOCK 121 LOT 14
N/F
JAMES T. GANCARZ
BK 896 PG 611

8 SOUTH WILLOW STREET
MAP 4 BLOCK 121 LOT 18
N/F
ALBERT J. SAWYER
BK 672 PG 666

8 SOUTH WILLOW STREET
MAP 4 BLOCK 121 LOT 21.2
N/F
ALBERT J. SAWYER
BK 727 PG 444

2 SOUTH WILLOW STREET
MAP 4 BLOCK 121 LOT 17
N/F
OPAROWSKI NOMINEE TRUST
BK 1221 PG 883

2 SO. WILLOW ST
MAP 4 BLOCK 121 LOT 16
N/F
OPAROWSKI NOMINEE TRUST
BK 1221 PG 883

1-3 QUALITY ST
MAP 4 BLOCK 121 LOT 13
N/F
JEFFREY R. MULLEN
BK 1540 PG 310

7-9 QUALITY ST
MAP 4 BLOCK 121 LOT 12
N/F
MARK G. HARRINGTON
BK 1034 PG 847

0 QUALITY ST
MAP 4 BLOCK 121 LOT 24
N/F
TOWN OF ADAMS
BK 481 PG 51 (SHLO 3773)

N/F
DEPARTMENT OF TRANSPORTATION
BK 860 PG 1194
DRAWER 8 PLAN 587

46 GROVE ST
MAP 4 BLOCK 121 LOT 40
N/F
MICHAEL W. MECZYWOR AND
KRISTY B. MECZYWOR
BK 1586 PG 1051

MAP 4 BLOCK 121 LOT 16 OWNERS UNKNOWN

BENCHMARK: MAG NAIL IN 20" SPRUCE EL=873.40'

BENCHMARK: MAG NAIL IN WOOD GUARDRAIL EL=871.02'

BENCHMARK: SPK IN UP EL=874.88'

BENCHMARK: MAG NAIL IN CONC. EL=871.80'

51
N: 3051167.069'
E: 216858.757'
EL: 873.212'
MMAG

56
N: 3051282.515'
E: 216883.415'
EL: 879.264'
SWC

54
N: 3051368.172'
E: 217116.319'
EL: 864.906'
SWC

4
N: 3051310.483'
E: 217224.538'
EL: 867.830'
IRWC

57
N: 3051137.955'
E: 216990.761'
EL: 862.728'
SWC

52
N: 3050993.941'
E: 216991.805'
EL: 868.088'
SWC

50
N: 3051096.420'
E: 217052.753'
EL: 869.591'
SWC

1
N: 3050994.310'
E: 216857.067'
EL: 875.370'
IRWC

2
N: 3051166.166'
E: 217117.38"E
125.58'
MMAG

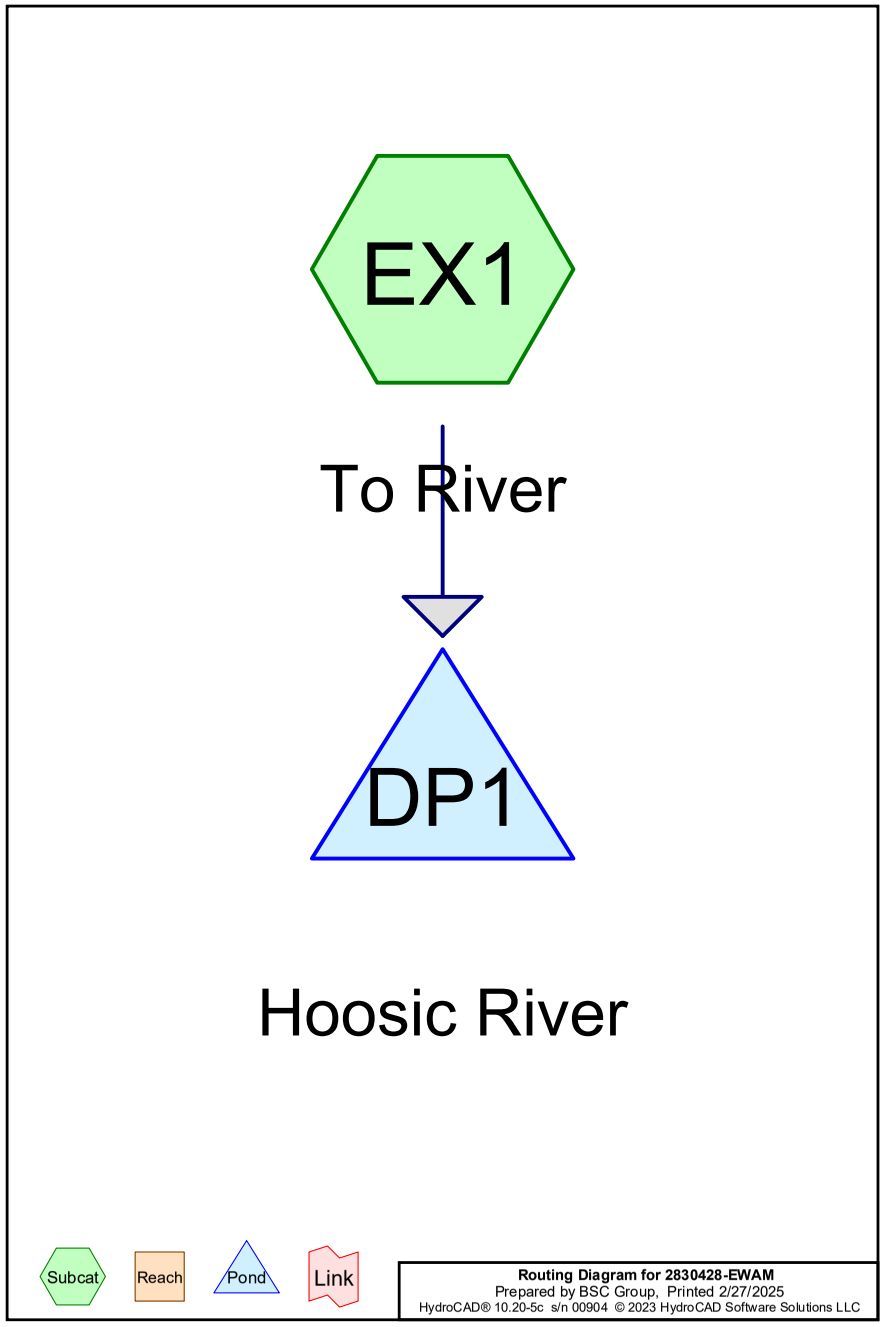
N 3051250
E 216750

N 3051000
E 216750

N 3051250
E 217250

N 3051000
E 217250

Figure 2 – Existing HydroCAD Calculations



Rainfall Events Listing

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	2-year	Type III 24-hr		Default	24.00	1	3.02	2
2	10-year	Type III 24-hr		Default	24.00	1	4.10	2
3	100-year	Type III 24-hr		Default	24.00	1	6.03	2

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Area Listing (all nodes)

Area (sq-ft)	CN	Description (subcatchment-numbers)
12,350	39	>75% Grass cover, Good, HSG A (EX1)
443	72	Dirt roads, HSG A (EX1)
12,399	98	Paved parking, HSG A (EX1)
996	98	Water Surface, HSG A (EX1)
26,188	**70**	**TOTAL AREA**

Soil Listing (all nodes)

Area (sq-ft)	Soil Group	Subcatchment Numbers
26,188	HSG A	EX1
0	HSG B	
0	HSG C	
0	HSG D	
0	Other	
26,188		**TOTAL AREA**

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Ground Covers (all nodes)

HSG-A (sq-ft)	HSG-B (sq-ft)	HSG-C (sq-ft)	HSG-D (sq-ft)	Other (sq-ft)	Total (sq-ft)	Ground Cover
12,350	0	0	0	0	12,350	>75% Grass cover, Good
443	0	0	0	0	443	Dirt roads
12,399	0	0	0	0	12,399	Paved parking
996	0	0	0	0	996	Water Surface
26,188	**0**	**0**	**0**	**0**	**26,188**	**TOTAL AREA**

Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

SubcatchmentEX1: To River Runoff Area=26,188 sf 51.15% Impervious Runoff Depth>0.72"
Tc=6.0 min CN=70 Runoff=0.45 cfs 1,580 cf

Pond DP1: Hoosic River Inflow=0.45 cfs 1,580 cf
Primary=0.45 cfs 1,580 cf

Total Runoff Area = 26,188 sf Runoff Volume = 1,580 cf Average Runoff Depth = 0.72"
48.85% Pervious = 12,793 sf 51.15% Impervious = 13,395 sf

Proposal No. 610777-131930

Summary for Subcatchment EX1: To River

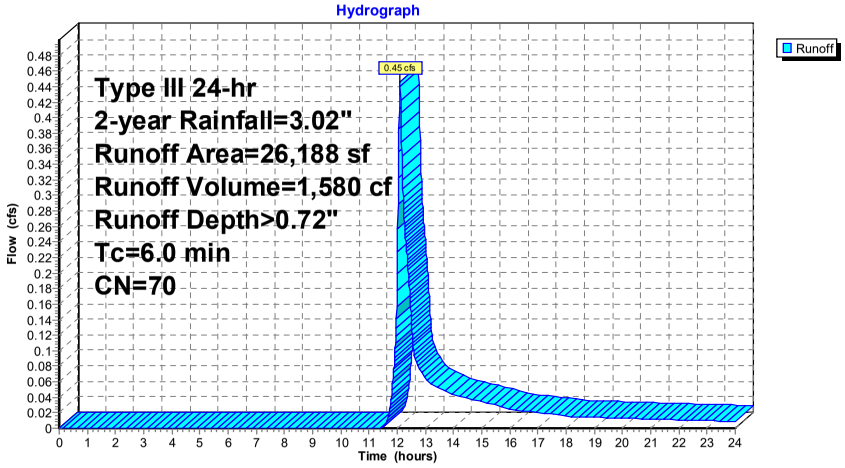
Runoff = 0.45 cfs @ 12.10 hrs, Volume= 1,580 cf, Depth> 0.72"
Routed to Pond DP1 : Hoosic River

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=3.02"

Area (sf)	CN	Description
12,399	98	Paved parking, HSG A
12,350	39	>75% Grass cover, Good, HSG A
996	98	Water Surface, HSG A
443	72	Dirt roads, HSG A
26,188	70	Weighted Average
12,793		48.85% Pervious Area
13,395		51.15% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment EX1: To River

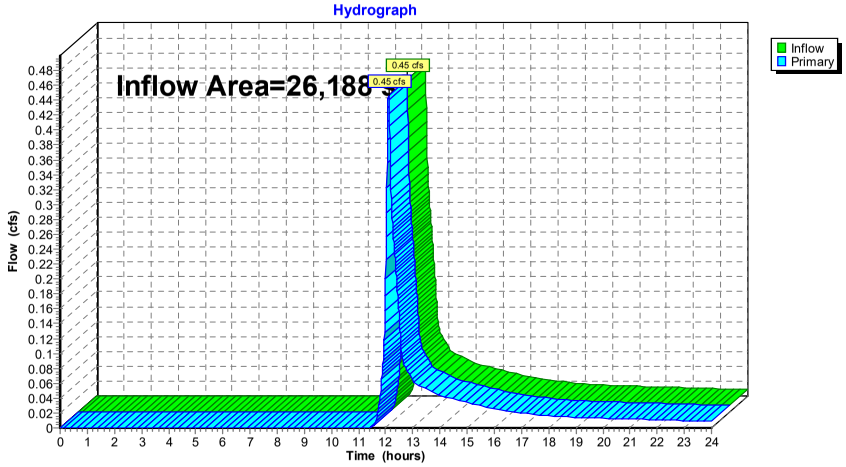


Summary for Pond DP1: Hoosic River

Inflow Area = 26,188 sf, 51.15% Impervious, Inflow Depth > 0.72" for 2-year event
Inflow = 0.45 cfs @ 12.10 hrs, Volume= 1,580 cf
Primary = 0.45 cfs @ 12.10 hrs, Volume= 1,580 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Pond DP1: Hoosic River



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Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

SubcatchmentEX1: To River Runoff Area=26,188 sf 51.15% Impervious Runoff Depth>1.39"
Tc=6.0 min CN=70 Runoff=0.94 cfs 3,044 cf

Pond DP1: Hoosic River Inflow=0.94 cfs 3,044 cf
Primary=0.94 cfs 3,044 cf

Total Runoff Area = 26,188 sf Runoff Volume = 3,044 cf Average Runoff Depth = 1.39"
48.85% Pervious = 12,793 sf 51.15% Impervious = 13,395 sf

Summary for Subcatchment EX1: To River

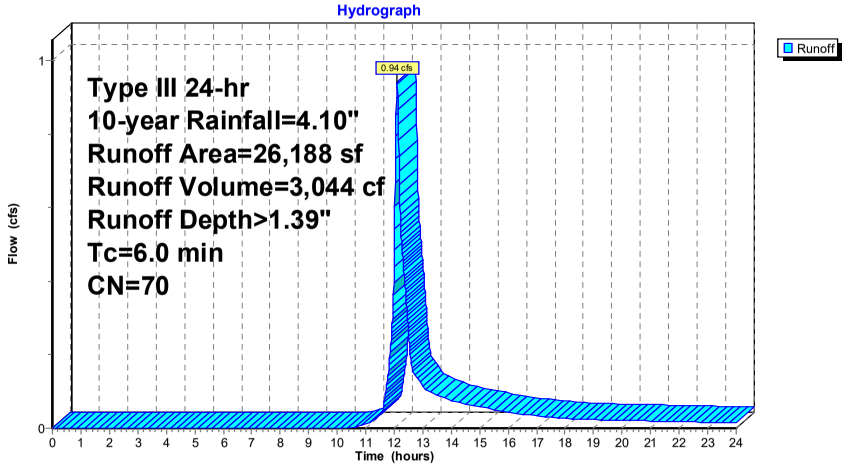
Runoff = 0.94 cfs @ 12.09 hrs, Volume= 3,044 cf, Depth> 1.39"
Routed to Pond DP1 : Hoosic River

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.10"

Area (sf)	CN	Description
12,399	98	Paved parking, HSG A
12,350	39	>75% Grass cover, Good, HSG A
996	98	Water Surface, HSG A
443	72	Dirt roads, HSG A
26,188	70	Weighted Average
12,793		48.85% Pervious Area
13,395		51.15% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment EX1: To River



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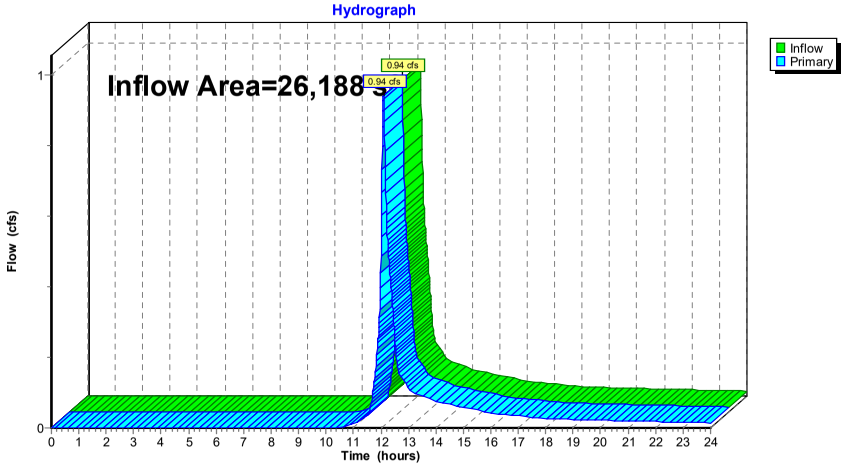
Summary for Pond DP1: Hoosic River

Inflow Area = 26,188 sf, 51.15% Impervious, Inflow Depth > 1.39" for 10-year event
Inflow = 0.94 cfs @ 12.09 hrs, Volume= 3,044 cf
Primary = 0.94 cfs @ 12.09 hrs, Volume= 3,044 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Pond DP1: Hoosic River



Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

SubcatchmentEX1: To River Runoff Area=26,188 sf 51.15% Impervious Runoff Depth>2.83"
Tc=6.0 min CN=70 Runoff=1.98 cfs 6,166 cf

Pond DP1: Hoosic River Inflow=1.98 cfs 6,166 cf
Primary=1.98 cfs 6,166 cf

Total Runoff Area = 26,188 sf Runoff Volume = 6,166 cf Average Runoff Depth = 2.83"
48.85% Pervious = 12,793 sf 51.15% Impervious = 13,395 sf

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Summary for Subcatchment EX1: To River

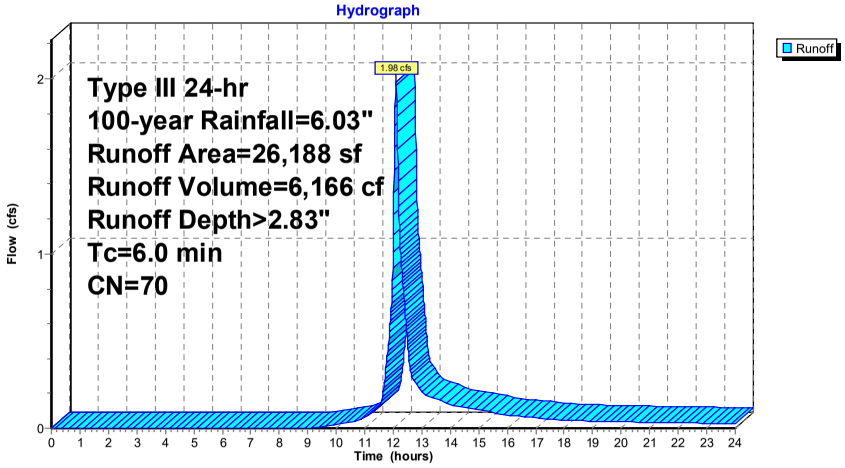
Runoff = 1.98 cfs @ 12.09 hrs, Volume= 6,166 cf, Depth> 2.83"
Routed to Pond DP1 : Hoosic River

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-year Rainfall=6.03"

Area (sf)	CN	Description
12,399	98	Paved parking, HSG A
12,350	39	>75% Grass cover, Good, HSG A
996	98	Water Surface, HSG A
443	72	Dirt roads, HSG A
26,188	70	Weighted Average
12,793		48.85% Pervious Area
13,395		51.15% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment EX1: To River



Summary for Pond DP1: Hoosic River

Inflow Area = 26,188 sf, 51.15% Impervious, Inflow Depth > 2.83" for 100-year event
Inflow = 1.98 cfs @ 12.09 hrs, Volume= 6,166 cf
Primary = 1.98 cfs @ 12.09 hrs, Volume= 6,166 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Pond DP1: Hoosic River

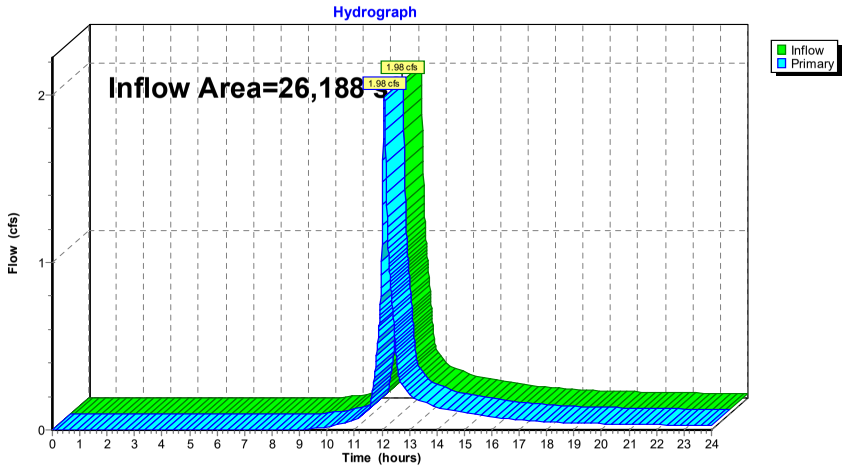


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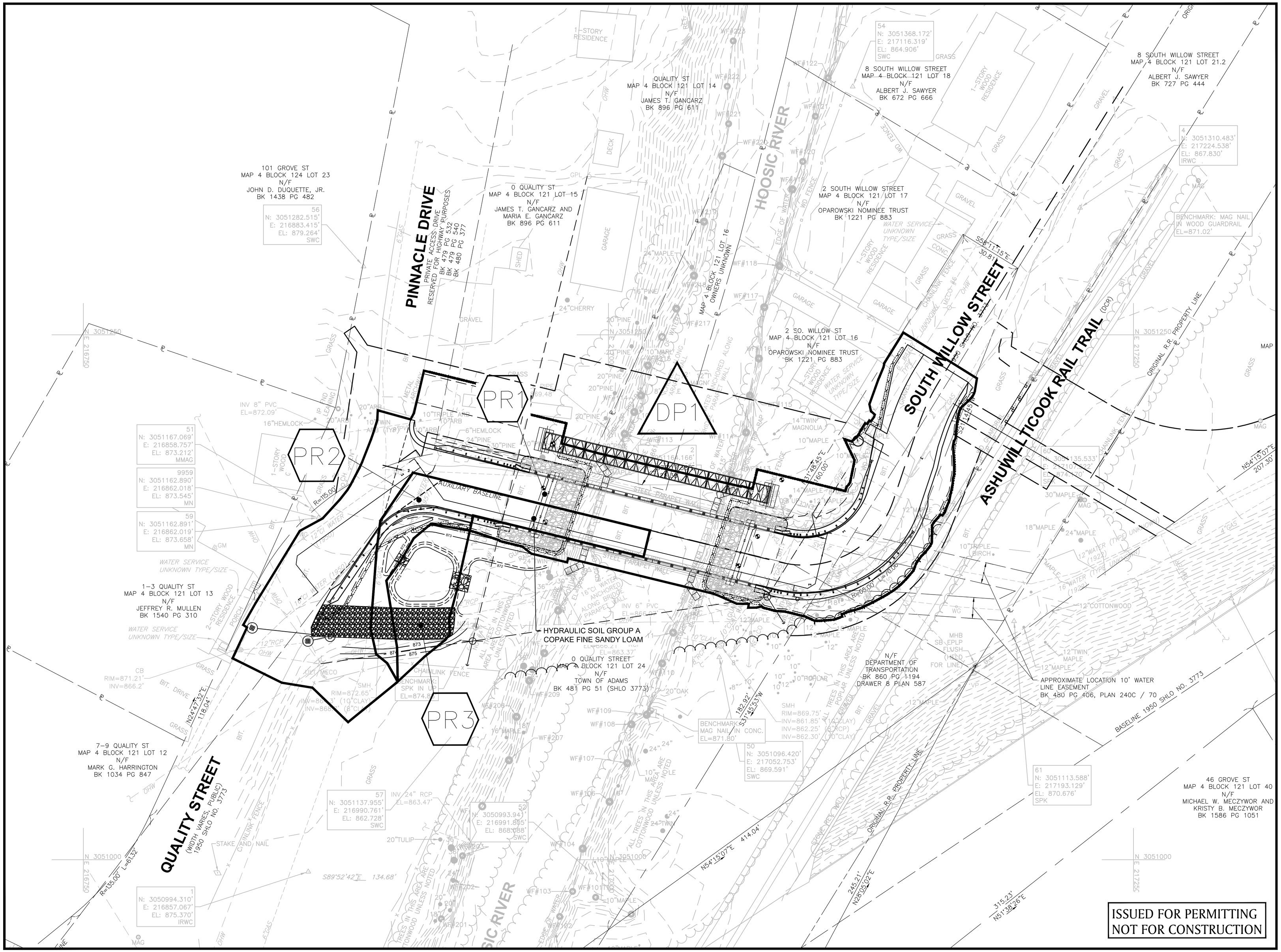
Figure 3 – Proposed Watershed Map



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BRIDGE NO. A-04-038 REPLACEMENT

QUALITY STREET &
SOUTH WILLOW STREET
IN
ADAMS
MASSACHUSETTS
(BERSHIRE COUNTY)

PROPOSED CONDITIONS WATERSHED MAP

FEBRUARY 28, 2025

REVISIONS:

NO.	DATE	DESC.

PREPARED FOR:
MASSDOT
270 MAIN STREET
LENOX, MA 01240

BSC GROUP
BUILD | SUPPORT | CONNECT
803 Summer Street
Boston, Massachusetts
02127
617 896 4300

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SCALE: 1" = 20'
0 10 20 40 FEET

FILE:
DWG.:
JOB. NO: 28304.28
SHEET 2 OF 2

Figure 4 – Proposed HydroCAD Calculations

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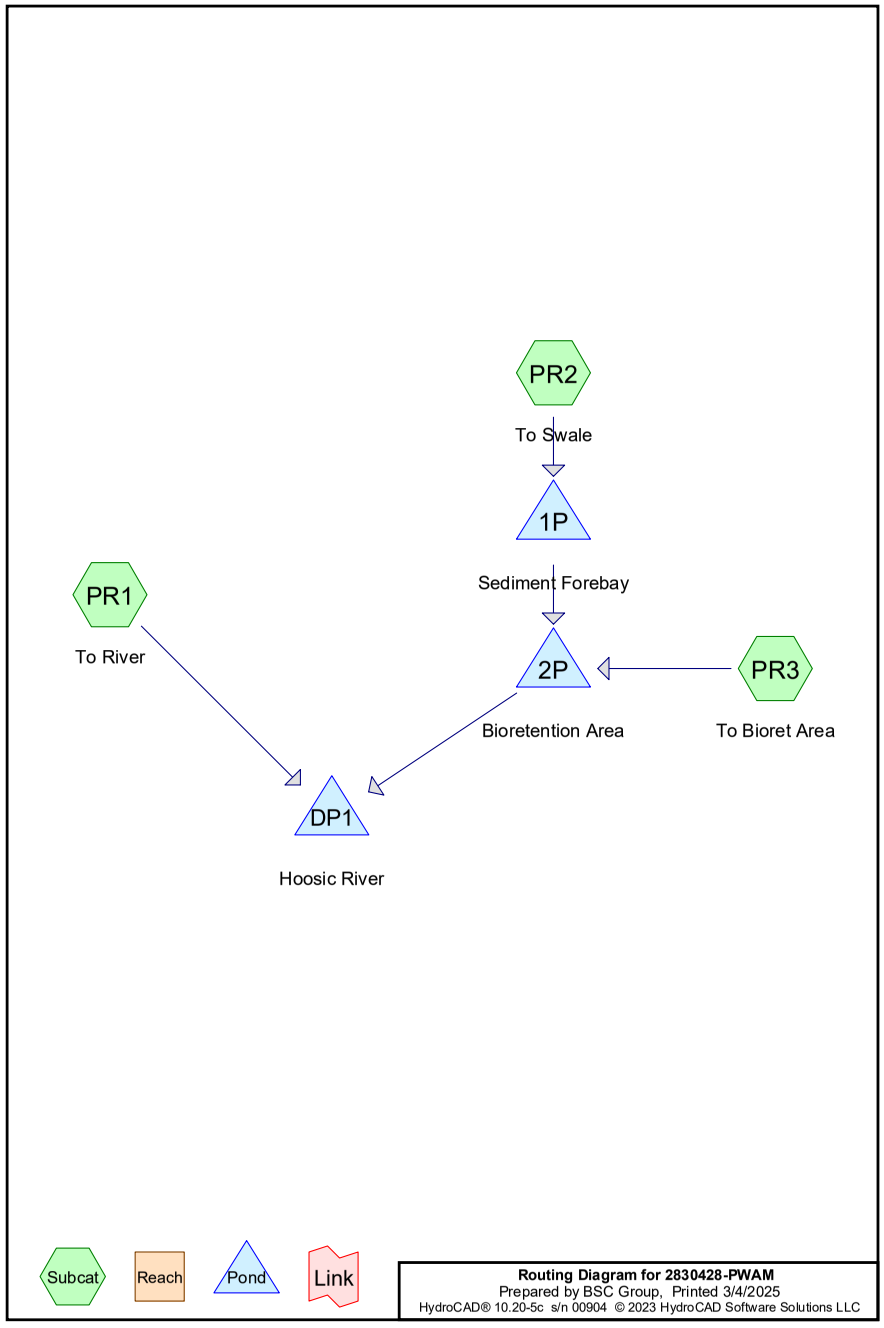

Rainfall Events Listing

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	2-year	Type III 24-hr		Default	24.00	1	3.02	2
2	10-year	Type III 24-hr		Default	24.00	1	4.10	2
3	100-year	Type III 24-hr		Default	24.00	1	6.03	2

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Area Listing (all nodes)

Area (sq-ft)	CN	Description (subcatchment-numbers)
9,178	39	>75% Grass cover, Good, HSG A (PR1, PR2, PR3)
1,623	96	Gravel surface, HSG A (PR1, PR2, PR3)
14,172	98	Paved parking, HSG A (PR1, PR2)
1,215	98	Water Surface, HSG A (PR1)
26,188	**77**	**TOTAL AREA**

Soil Listing (all nodes)

Area (sq-ft)	Soil Group	Subcatchment Numbers
26,188	HSG A	PR1, PR2, PR3
0	HSG B	
0	HSG C	
0	HSG D	
0	Other	
26,188		**TOTAL AREA**

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Ground Covers (all nodes)

HSG-A (sq-ft)	HSG-B (sq-ft)	HSG-C (sq-ft)	HSG-D (sq-ft)	Other (sq-ft)	Total (sq-ft)	Ground Cover
9,178	0	0	0	0	9,178	>75% Grass cover, Good
1,623	0	0	0	0	1,623	Gravel surface
14,172	0	0	0	0	14,172	Paved parking
1,215	0	0	0	0	1,215	Water Surface
26,188	**0**	**0**	**0**	**0**	**26,188**	**TOTAL AREA**

Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

SubcatchmentPR1: To River Runoff Area=21,727 sf 62.55% Impervious Runoff Depth>1.20"
Tc=6.0 min CN=79 Runoff=0.69 cfs 2,175 cf

SubcatchmentPR2: To Swale Runoff Area=2,694 sf 66.70% Impervious Runoff Depth>1.39"
Tc=5.0 min CN=82 Runoff=0.10 cfs 313 cf

SubcatchmentPR3: To Bioret Area Runoff Area=1,767 sf 0.00% Impervious Runoff Depth>0.13"
Tc=5.0 min CN=52 Runoff=0.00 cfs 19 cf

Pond 1P: Sediment Forebay Peak Elev=872.51' Storage=51 cf Inflow=0.10 cfs 313 cf
Discarded=0.01 cfs 227 cf Primary=0.14 cfs 86 cf Outflow=0.15 cfs 313 cf

Pond 2P: Bioretention Area Peak Elev=872.05' Storage=27 cf Inflow=0.14 cfs 105 cf
Discarded=0.03 cfs 105 cf Primary=0.00 cfs 0 cf Outflow=0.03 cfs 105 cf

Pond DP1: Hoosic River Inflow=0.69 cfs 2,175 cf
Primary=0.69 cfs 2,175 cf

Total Runoff Area = 26,188 sf Runoff Volume = 2,508 cf Average Runoff Depth = 1.15"
41.24% Pervious = 10,801 sf 58.76% Impervious = 15,387 sf

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Summary for Subcatchment PR1: To River

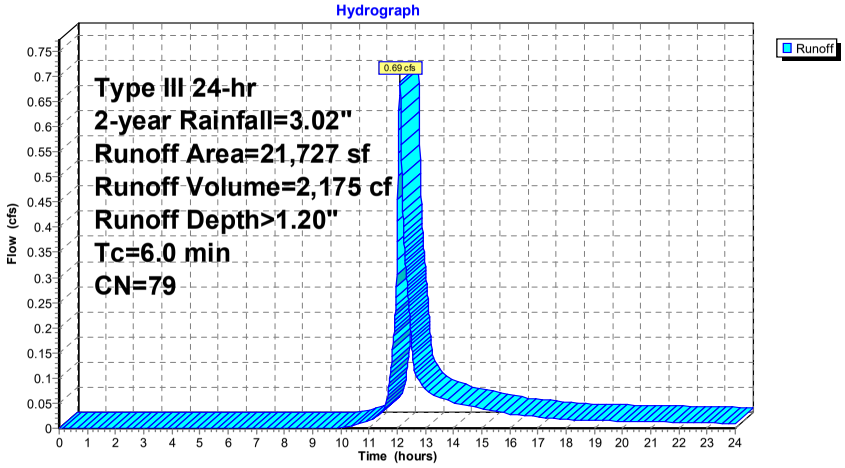
Runoff = 0.69 cfs @ 12.09 hrs, Volume= 2,175 cf, Depth> 1.20"
Routed to Pond DP1 : Hoosic River

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=3.02"

Area (sf)	CN	Description
12,375	98	Paved parking, HSG A
7,072	39	>75% Grass cover, Good, HSG A
1,215	98	Water Surface, HSG A
1,065	96	Gravel surface, HSG A
21,727	79	Weighted Average
8,137		37.45% Pervious Area
13,590		62.55% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment PR1: To River



Summary for Subcatchment PR2: To Swale

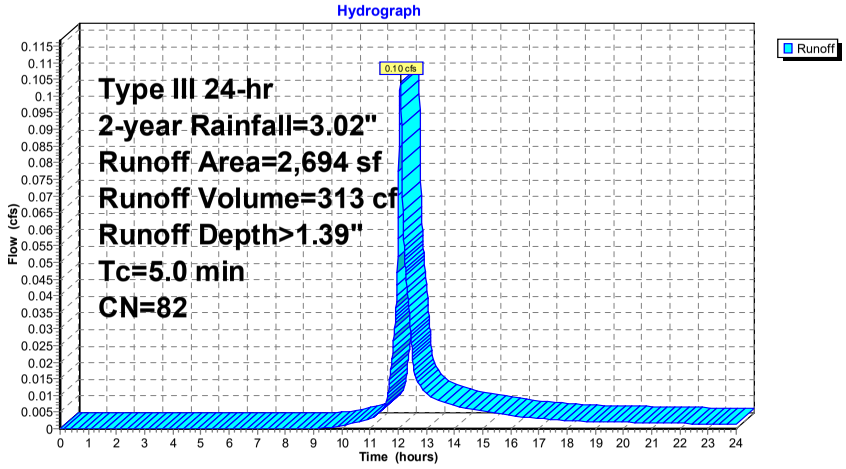
Runoff = 0.10 cfs @ 12.08 hrs, Volume= 313 cf, Depth> 1.39"
Routed to Pond 1P : Sediment Forebay

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=3.02"

Area (sf)	CN	Description
1,797	98	Paved parking, HSG A
741	39	>75% Grass cover, Good, HSG A
156	96	Gravel surface, HSG A
2,694	82	Weighted Average
897		33.30% Pervious Area
1,797		66.70% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment PR2: To Swale



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Summary for Subcatchment PR3: To Bioret Area

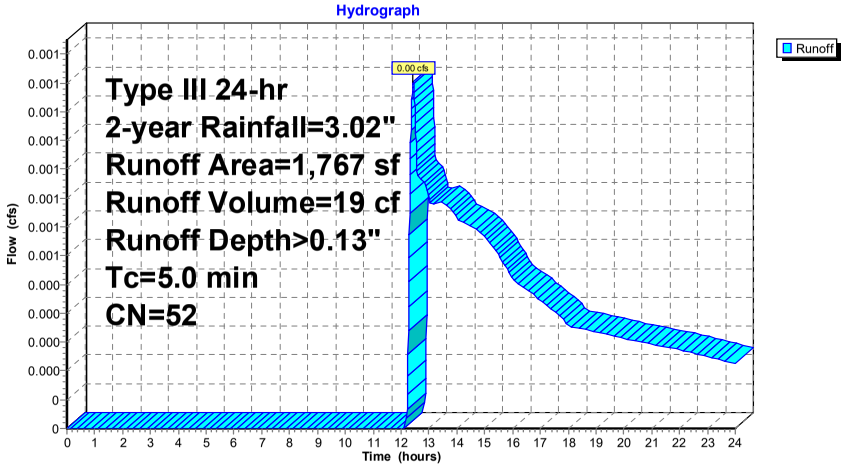
Runoff = 0.00 cfs @ 12.44 hrs, Volume= 19 cf, Depth> 0.13"
Routed to Pond 2P : Bioretention Area

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=3.02"

Area (sf)	CN	Description
1,365	39	>75% Grass cover, Good, HSG A
402	96	Gravel surface, HSG A
1,767	52	Weighted Average
1,767		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment PR3: To Bioret Area



Summary for Pond 1P: Sediment Forebay

Inflow Area = 2,694 sf, 66.70% Impervious, Inflow Depth > 1.39" for 2-year event
Inflow = 0.10 cfs @ 12.08 hrs, Volume= 313 cf
Outflow = 0.15 cfs @ 12.08 hrs, Volume= 313 cf, Atten= 0%, Lag= 0.2 min
Discarded = 0.01 cfs @ 12.08 hrs, Volume= 227 cf
Primary = 0.14 cfs @ 12.08 hrs, Volume= 86 cf
Routed to Pond 2P : Bioretention Area

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peak Elev= 872.51' @ 12.08 hrs Surf.Area= 139 sf Storage= 51 cf

Plug-Flow detention time= 49.3 min calculated for 313 cf (100% of inflow)
Center-of-Mass det. time= 49.1 min (886.7 - 837.5)

Volume	Invert	Avail.Storage	Storage Description
#1	872.00'	51 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
872.00	70	41.6	0	0	70
872.50	139	51.0	51	51	143

Device	Routing	Invert	Outlet Devices
#1	Discarded	872.00'	**2.410 in/hr Exfiltration over Surface area**
#2	Primary	872.49'	**20.0' long x 1.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 Coef. (English) 2.69 2.72 2.75 2.85 2.98 3.08 3.20 3.28 3.31 3.30 3.31 3.32

Discarded OutFlow Max=0.01 cfs @ 12.08 hrs HW=872.51' (Free Discharge)
↑—**1=Exfiltration** (Exfiltration Controls 0.01 cfs)

Primary OutFlow Max=0.14 cfs @ 12.08 hrs HW=872.51' (Free Discharge)
↑—**2=Broad-Crested Rectangular Weir** (Weir Controls 0.14 cfs @ 0.37 fps)

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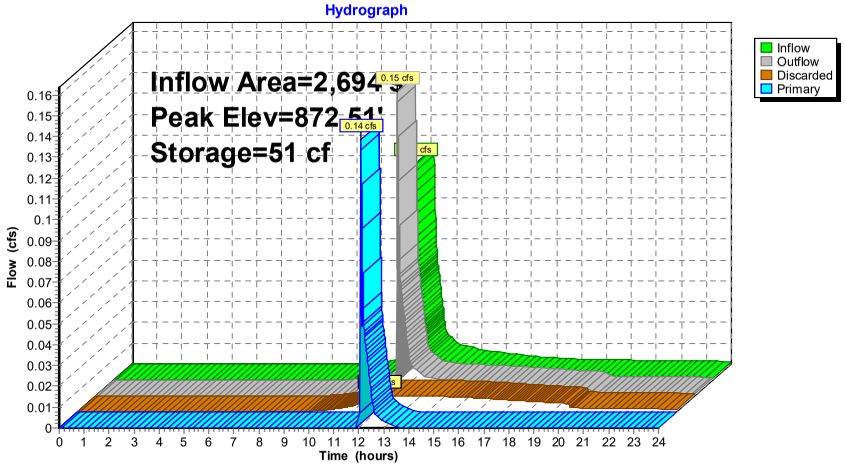
Pond 1P: Sediment Forebay



Stage-Area-Storage for Pond 1P: Sediment Forebay

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
872.00	70	0
872.01	71	1
872.02	72	1
872.03	73	2
872.04	75	3
872.05	76	4
872.06	77	4
872.07	78	5
872.08	79	6
872.09	81	7
872.10	82	8
872.11	83	8
872.12	84	9
872.13	86	10
872.14	87	11
872.15	88	12
872.16	90	13
872.17	91	14
872.18	92	15
872.19	93	15
872.20	95	16
872.21	96	17
872.22	97	18
872.23	99	19
872.24	100	20
872.25	102	21
872.26	103	22
872.27	104	23
872.28	106	24
872.29	107	25
872.30	109	27
872.31	110	28
872.32	111	29
872.33	113	30
872.34	114	31
872.35	116	32
872.36	117	33
872.37	119	35
872.38	120	36
872.39	122	37
872.40	123	38
872.41	125	39
872.42	126	41
872.43	128	42
872.44	129	43
872.45	131	45
872.46	133	46
872.47	134	47
872.48	136	49
872.49	137	50
872.50	**139**	**51**
872.51	139	51

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Summary for Pond 2P: Bioretention Area

Inflow Area = 4,461 sf, 40.28% Impervious, Inflow Depth > 0.28" for 2-year event
Inflow = 0.14 cfs @ 12.08 hrs, Volume= 105 cf
Outflow = 0.03 cfs @ 12.37 hrs, Volume= 105 cf, Atten= 78%, Lag= 17.5 min
Discarded = 0.03 cfs @ 12.37 hrs, Volume= 105 cf
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf
Routed to Pond DP1 : Hoosic River

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 872.05' @ 12.37 hrs Surf.Area= 555 sf Storage= 27 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 7.9 min (795.7 - 787.8)

Volume	Invert	Avail.Storage	Storage Description
#1	872.00'	304 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

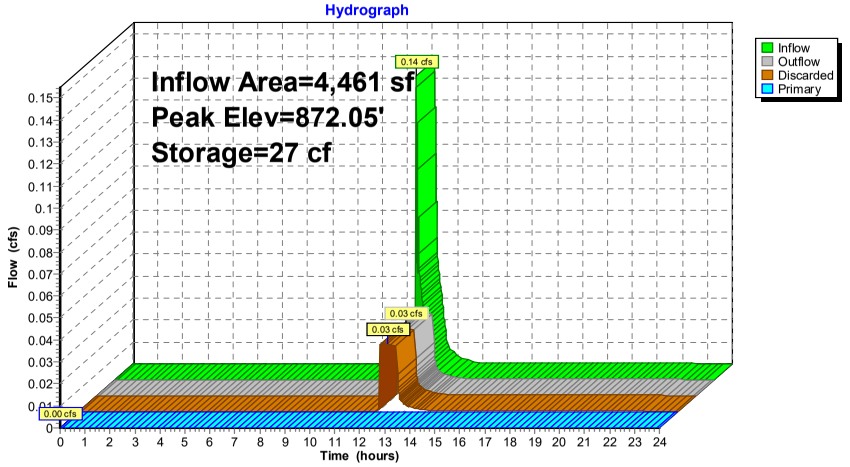
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
872.00	542	85.6	0	0	542
872.50	678	95.0	304	304	684

Device	Routing	Invert	Outlet Devices
#1	Discarded	872.00'	**2.410 in/hr Exfiltration over Surface area**
#2	Primary	872.49'	**8.0' long x 1.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 Coef. (English) 2.69 2.72 2.75 2.85 2.98 3.08 3.20 3.28 3.31 3.30 3.31 3.32

Discarded OutFlow Max=0.03 cfs @ 12.37 hrs HW=872.05' (Free Discharge)
└**1=Exfiltration** (Exfiltration Controls 0.03 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=872.00' (Free Discharge)
└**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 2P: Bioretention Area



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Stage-Area-Storage for Pond 2P: Bioretention Area

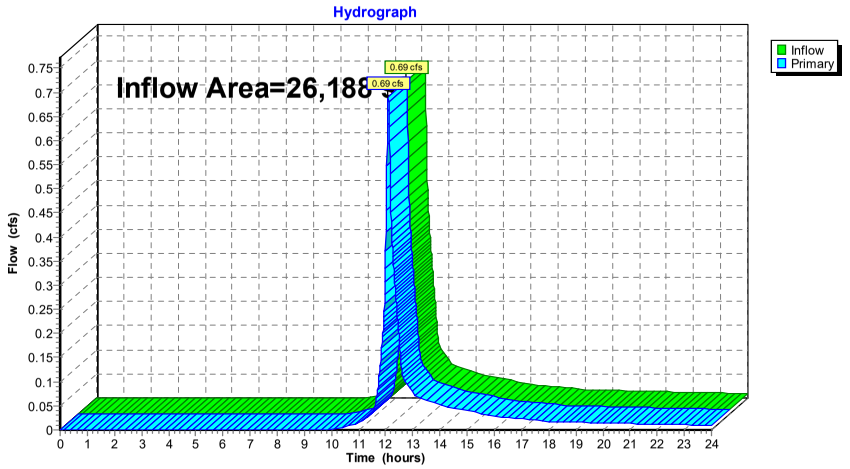
Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
872.00	542	0
872.01	545	5
872.02	547	11
872.03	550	16
872.04	552	22
872.05	555	27
872.06	558	33
872.07	560	39
872.08	563	44
872.09	565	50
872.10	568	55
872.11	571	61
872.12	573	67
872.13	576	73
872.14	579	78
872.15	581	84
872.16	584	90
872.17	587	96
872.18	589	102
872.19	592	108
872.20	595	114
872.21	597	120
872.22	600	126
872.23	603	132
872.24	605	138
872.25	608	144
872.26	611	150
872.27	614	156
872.28	616	162
872.29	619	168
872.30	622	174
872.31	625	181
872.32	627	187
872.33	630	193
872.34	633	200
872.35	636	206
872.36	638	212
872.37	641	219
872.38	644	225
872.39	647	232
872.40	650	238
872.41	652	245
872.42	655	251
872.43	658	258
872.44	661	264
872.45	664	271
872.46	667	277
872.47	669	284
872.48	672	291
872.49	675	298
872.50	**678**	**304**

Summary for Pond DP1: Hoosic River

Inflow Area = 26,188 sf, 58.76% Impervious, Inflow Depth > 1.00" for 2-year event
Inflow = 0.69 cfs @ 12.09 hrs, Volume= 2,175 cf
Primary = 0.69 cfs @ 12.09 hrs, Volume= 2,175 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Pond DP1: Hoosic River



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Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

SubcatchmentPR1: To River Runoff Area=21,727 sf 62.55% Impervious Runoff Depth>2.04"
Tc=6.0 min CN=79 Runoff=1.19 cfs 3,698 cf

SubcatchmentPR2: To Swale Runoff Area=2,694 sf 66.70% Impervious Runoff Depth>2.29"
Tc=5.0 min CN=82 Runoff=0.17 cfs 513 cf

SubcatchmentPR3: To Bioret Area Runoff Area=1,767 sf 0.00% Impervious Runoff Depth>0.44"
Tc=5.0 min CN=52 Runoff=0.01 cfs 65 cf

Pond 1P: Sediment Forebay Peak Elev=872.51' Storage=51 cf Inflow=0.17 cfs 513 cf
Discarded=0.01 cfs 289 cf Primary=0.17 cfs 224 cf Outflow=0.17 cfs 513 cf

Pond 2P: Bioretention Area Peak Elev=872.21' Storage=120 cf Inflow=0.17 cfs 289 cf
Discarded=0.03 cfs 289 cf Primary=0.00 cfs 0 cf Outflow=0.03 cfs 289 cf

Pond DP1: Hoosic River Inflow=1.19 cfs 3,698 cf
Primary=1.19 cfs 3,698 cf

Total Runoff Area = 26,188 sf Runoff Volume = 4,276 cf Average Runoff Depth = 1.96"
41.24% Pervious = 10,801 sf 58.76% Impervious = 15,387 sf

Summary for Subcatchment PR1: To River

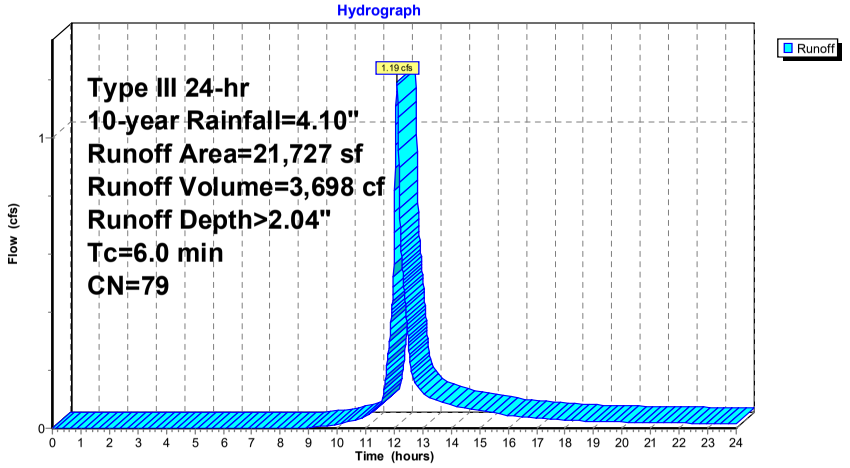
Runoff = 1.19 cfs @ 12.09 hrs, Volume= 3,698 cf, Depth> 2.04"
Routed to Pond DP1 : Hoosic River

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.10"

Area (sf)	CN	Description
12,375	98	Paved parking, HSG A
7,072	39	>75% Grass cover, Good, HSG A
1,215	98	Water Surface, HSG A
1,065	96	Gravel surface, HSG A
21,727	79	Weighted Average
8,137		37.45% Pervious Area
13,590		62.55% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment PR1: To River



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Summary for Subcatchment PR2: To Swale

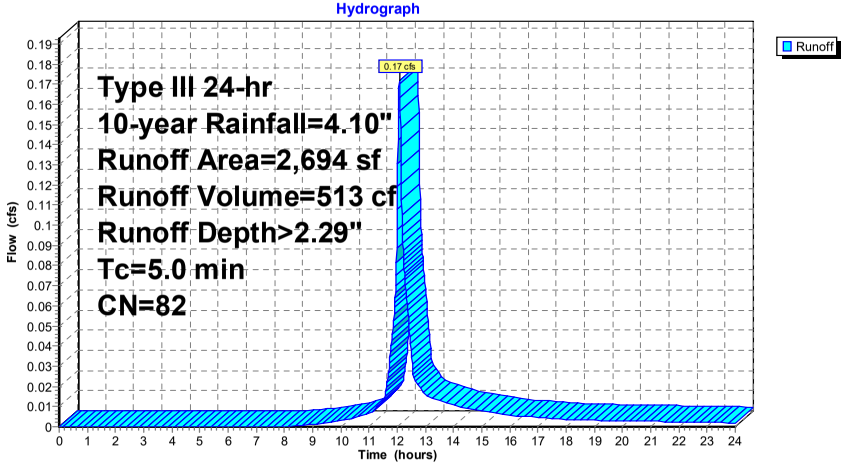
Runoff = 0.17 cfs @ 12.07 hrs, Volume= 513 cf, Depth> 2.29"
Routed to Pond 1P : Sediment Forebay

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.10"

Area (sf)	CN	Description
1,797	98	Paved parking, HSG A
741	39	>75% Grass cover, Good, HSG A
156	96	Gravel surface, HSG A
2,694	82	Weighted Average
897		33.30% Pervious Area
1,797		66.70% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment PR2: To Swale



Summary for Subcatchment PR3: To Bioret Area

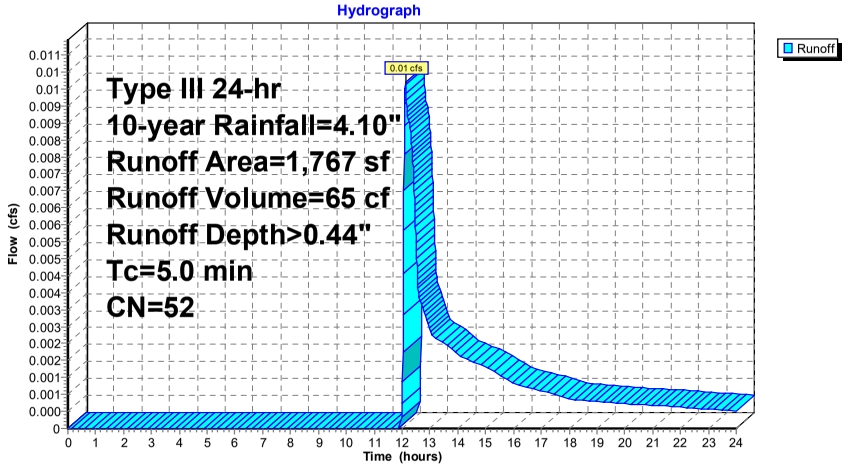
Runoff = 0.01 cfs @ 12.13 hrs, Volume= 65 cf, Depth> 0.44"
Routed to Pond 2P : Bioretention Area

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.10"

Area (sf)	CN	Description
1,365	39	>75% Grass cover, Good, HSG A
402	96	Gravel surface, HSG A
1,767	52	Weighted Average
1,767		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment PR3: To Bioret Area



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Summary for Pond 1P: Sediment Forebay

Inflow Area = 2,694 sf, 66.70% Impervious, Inflow Depth > 2.29" for 10-year event
Inflow = 0.17 cfs @ 12.07 hrs, Volume= 513 cf
Outflow = 0.17 cfs @ 12.08 hrs, Volume= 513 cf, Atten= 0%, Lag= 0.2 min
Discarded = 0.01 cfs @ 11.94 hrs, Volume= 289 cf
Primary = 0.17 cfs @ 12.08 hrs, Volume= 224 cf
Routed to Pond 2P : Bioretention Area

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peak Elev= 872.51' @ 12.08 hrs Surf.Area= 139 sf Storage= 51 cf

Plug-Flow detention time= 41.1 min calculated for 513 cf (100% of inflow)
Center-of-Mass det. time= 40.9 min (864.2 - 823.3)

Volume	Invert	Avail.Storage	Storage Description
#1	872.00'	51 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

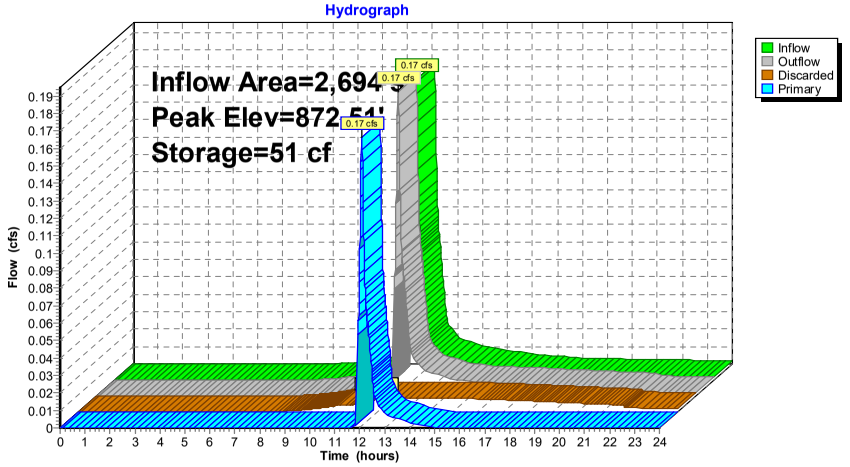
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
872.00	70	41.6	0	0	70
872.50	139	51.0	51	51	143

Device	Routing	Invert	Outlet Devices
#1	Discarded	872.00'	**2.410 in/hr Exfiltration over Surface area**
#2	Primary	872.49'	**20.0' long x 1.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 Coef. (English) 2.69 2.72 2.75 2.85 2.98 3.08 3.20 3.28 3.31 3.30 3.31 3.32

Discarded OutFlow Max=0.01 cfs @ 11.94 hrs HW=872.50' (Free Discharge)
└**1=Exfiltration** (Exfiltration Controls 0.01 cfs)

Primary OutFlow Max=0.17 cfs @ 12.08 hrs HW=872.51' (Free Discharge)
└**2=Broad-Crested Rectangular Weir** (Weir Controls 0.17 cfs @ 0.39 fps)

Pond 1P: Sediment Forebay



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Stage-Area-Storage for Pond 1P: Sediment Forebay

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
872.00	70	0
872.01	71	1
872.02	72	1
872.03	73	2
872.04	75	3
872.05	76	4
872.06	77	4
872.07	78	5
872.08	79	6
872.09	81	7
872.10	82	8
872.11	83	8
872.12	84	9
872.13	86	10
872.14	87	11
872.15	88	12
872.16	90	13
872.17	91	14
872.18	92	15
872.19	93	15
872.20	95	16
872.21	96	17
872.22	97	18
872.23	99	19
872.24	100	20
872.25	102	21
872.26	103	22
872.27	104	23
872.28	106	24
872.29	107	25
872.30	109	27
872.31	110	28
872.32	111	29
872.33	113	30
872.34	114	31
872.35	116	32
872.36	117	33
872.37	119	35
872.38	120	36
872.39	122	37
872.40	123	38
872.41	125	39
872.42	126	41
872.43	128	42
872.44	129	43
872.45	131	45
872.46	133	46
872.47	134	47
872.48	136	49
872.49	137	50
872.50	**139**	**51**
872.51	139	51

Summary for Pond 2P: Bioretention Area

Inflow Area = 4,461 sf, 40.28% Impervious, Inflow Depth > 0.78" for 10-year event
Inflow = 0.17 cfs @ 12.08 hrs, Volume= 289 cf
Outflow = 0.03 cfs @ 12.51 hrs, Volume= 289 cf, Atten= 81%, Lag= 26.0 min
Discarded = 0.03 cfs @ 12.51 hrs, Volume= 289 cf
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf
Routed to Pond DP1 : Hoosic River

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 872.21' @ 12.51 hrs Surf.Area= 598 sf Storage= 120 cf

Plug-Flow detention time= 31.5 min calculated for 289 cf (100% of inflow)
Center-of-Mass det. time= 31.4 min (816.7 - 785.4)

Volume	Invert	Avail.Storage	Storage Description
#1	872.00'	304 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
872.00	542	85.6	0	0	542
872.50	678	95.0	304	304	684

Device	Routing	Invert	Outlet Devices
#1	Discarded	872.00'	**2.410 in/hr Exfiltration over Surface area**
#2	Primary	872.49'	**8.0' long x 1.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 Coef. (English) 2.69 2.72 2.75 2.85 2.98 3.08 3.20 3.28 3.31 3.30 3.31 3.32

Discarded OutFlow Max=0.03 cfs @ 12.51 hrs HW=872.21' (Free Discharge)
↑—**1=Exfiltration** (Exfiltration Controls 0.03 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=872.00' (Free Discharge)
↑—**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

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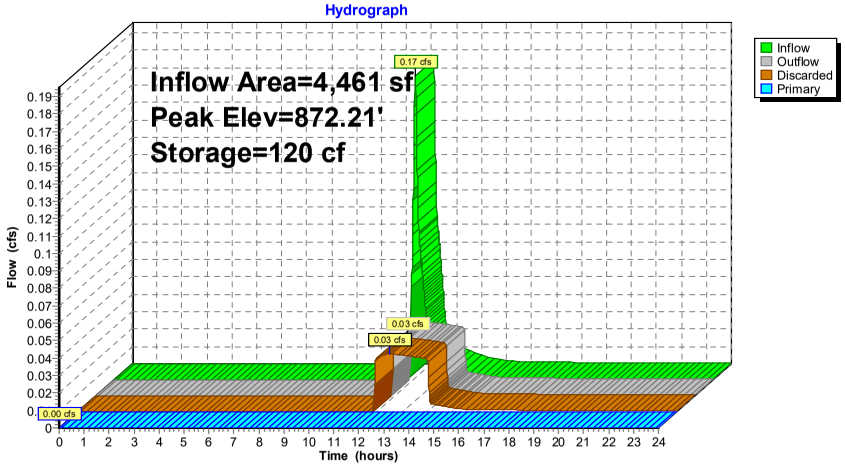
Pond 2P: Bioretention Area



Stage-Area-Storage for Pond 2P: Bioretention Area

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
872.00	542	0
872.01	545	5
872.02	547	11
872.03	550	16
872.04	552	22
872.05	555	27
872.06	558	33
872.07	560	39
872.08	563	44
872.09	565	50
872.10	568	55
872.11	571	61
872.12	573	67
872.13	576	73
872.14	579	78
872.15	581	84
872.16	584	90
872.17	587	96
872.18	589	102
872.19	592	108
872.20	595	114
872.21	597	120
872.22	600	126
872.23	603	132
872.24	605	138
872.25	608	144
872.26	611	150
872.27	614	156
872.28	616	162
872.29	619	168
872.30	622	174
872.31	625	181
872.32	627	187
872.33	630	193
872.34	633	200
872.35	636	206
872.36	638	212
872.37	641	219
872.38	644	225
872.39	647	232
872.40	650	238
872.41	652	245
872.42	655	251
872.43	658	258
872.44	661	264
872.45	664	271
872.46	667	277
872.47	669	284
872.48	672	291
872.49	675	298
872.50	**678**	**304**

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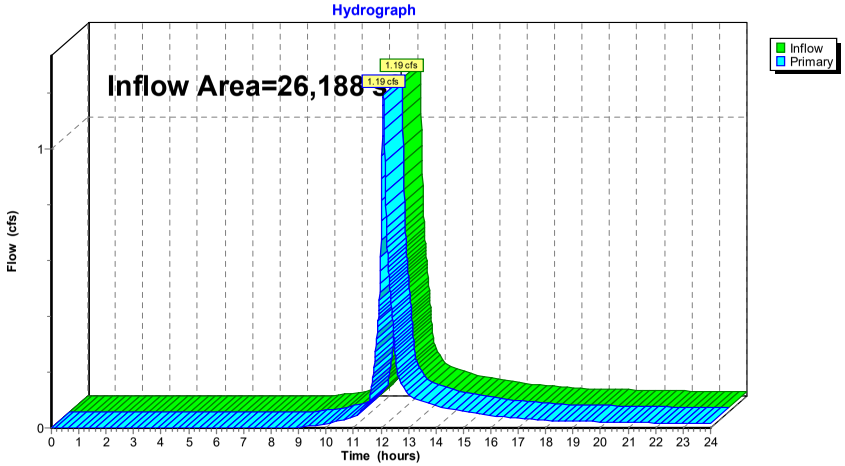
Summary for Pond DP1: Hoosic River

Inflow Area = 26,188 sf, 58.76% Impervious, Inflow Depth > 1.69" for 10-year event
Inflow = 1.19 cfs @ 12.09 hrs, Volume= 3,698 cf
Primary = 1.19 cfs @ 12.09 hrs, Volume= 3,698 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Pond DP1: Hoosic River



Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

SubcatchmentPR1: To River Runoff Area=21,727 sf 62.55% Impervious Runoff Depth>3.70"
Tc=6.0 min CN=79 Runoff=2.16 cfs 6,703 cf

SubcatchmentPR2: To Swale Runoff Area=2,694 sf 66.70% Impervious Runoff Depth>4.01"
Tc=5.0 min CN=82 Runoff=0.30 cfs 901 cf

SubcatchmentPR3: To Bioret Area Runoff Area=1,767 sf 0.00% Impervious Runoff Depth>1.30"
Tc=5.0 min CN=52 Runoff=0.05 cfs 192 cf

Pond 1P: Sediment Forebay Peak Elev=872.52' Storage=51 cf Inflow=0.30 cfs 901 cf
Discarded=0.01 cfs 369 cf Primary=0.29 cfs 525 cf Outflow=0.30 cfs 894 cf

Pond 2P: Bioretention Area Peak Elev=872.52' Storage=304 cf Inflow=0.34 cfs 717 cf
Discarded=0.04 cfs 667 cf Primary=0.15 cfs 71 cf Outflow=0.19 cfs 738 cf

Pond DP1: Hoosic River Inflow=2.16 cfs 6,774 cf
Primary=2.16 cfs 6,774 cf

Total Runoff Area = 26,188 sf Runoff Volume = 7,796 cf Average Runoff Depth = 3.57"
41.24% Pervious = 10,801 sf 58.76% Impervious = 15,387 sf

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Summary for Subcatchment PR1: To River

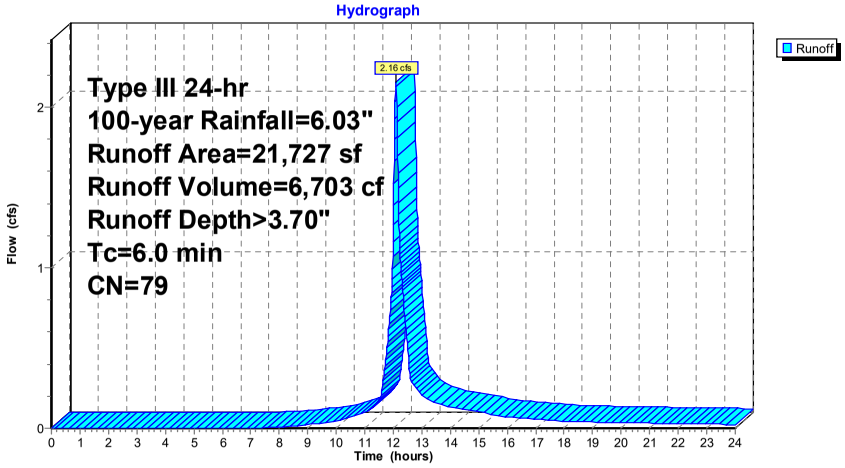
Runoff = 2.16 cfs @ 12.09 hrs, Volume= 6,703 cf, Depth> 3.70"
Routed to Pond DP1 : Hoosic River

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-year Rainfall=6.03"

Area (sf)	CN	Description
12,375	98	Paved parking, HSG A
7,072	39	>75% Grass cover, Good, HSG A
1,215	98	Water Surface, HSG A
1,065	96	Gravel surface, HSG A
21,727	79	Weighted Average
8,137		37.45% Pervious Area
13,590		62.55% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment PR1: To River



Summary for Subcatchment PR2: To Swale

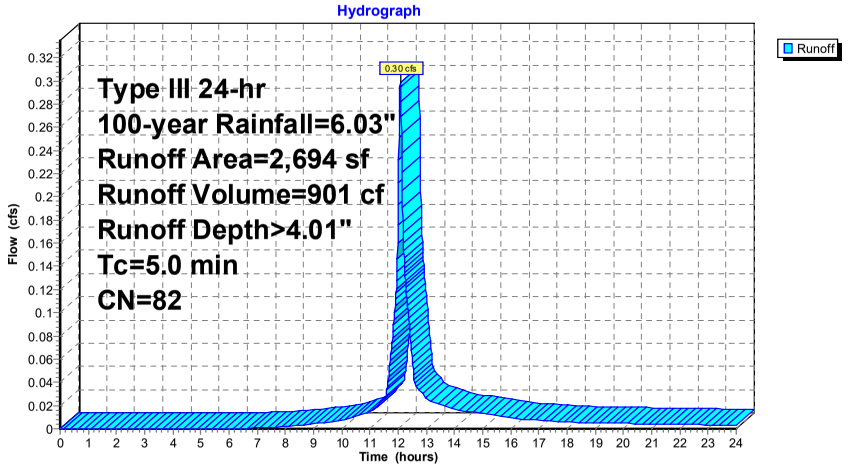
Runoff = 0.30 cfs @ 12.07 hrs, Volume= 901 cf, Depth> 4.01"
Routed to Pond 1P : Sediment Forebay

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-year Rainfall=6.03"

Area (sf)	CN	Description
1,797	98	Paved parking, HSG A
741	39	>75% Grass cover, Good, HSG A
156	96	Gravel surface, HSG A
2,694	82	Weighted Average
897		33.30% Pervious Area
1,797		66.70% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment PR2: To Swale



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Summary for Subcatchment PR3: To Bioret Area

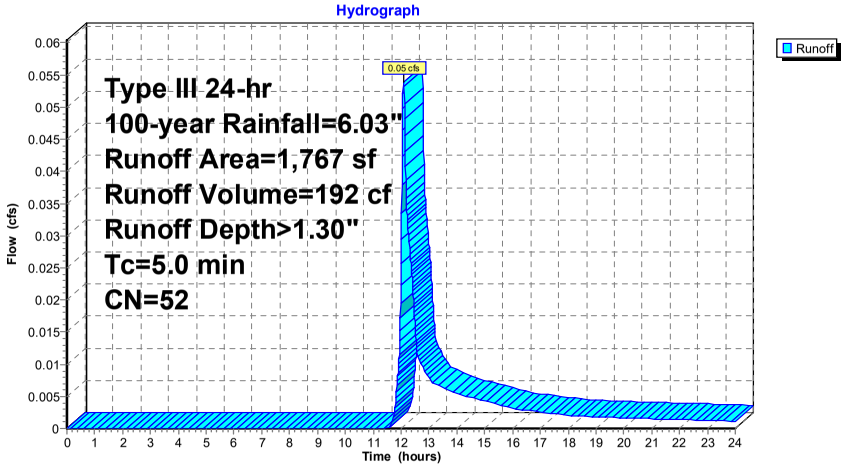
Runoff = 0.05 cfs @ 12.09 hrs, Volume= 192 cf, Depth> 1.30"
Routed to Pond 2P : Bioretention Area

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-year Rainfall=6.03"

Area (sf)	CN	Description
1,365	39	>75% Grass cover, Good, HSG A
402	96	Gravel surface, HSG A
1,767	52	Weighted Average
1,767		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment PR3: To Bioret Area



Summary for Pond 1P: Sediment Forebay

Inflow Area = 2,694 sf, 66.70% Impervious, Inflow Depth > 4.01" for 100-year event
Inflow = 0.30 cfs @ 12.07 hrs, Volume= 901 cf
Outflow = 0.30 cfs @ 12.08 hrs, Volume= 894 cf, Atten= 0%, Lag= 0.2 min
Discarded = 0.01 cfs @ 11.74 hrs, Volume= 369 cf
Primary = 0.29 cfs @ 12.08 hrs, Volume= 525 cf
Routed to Pond 2P : Bioretention Area

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peak Elev= 872.52' @ 12.08 hrs Surf.Area= 139 sf Storage= 51 cf

Plug-Flow detention time= 34.4 min calculated for 894 cf (99% of inflow)
Center-of-Mass det. time= 29.6 min (836.9 - 807.3)

Volume	Invert	Avail.Storage	Storage Description
#1	872.00'	51 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
872.00	70	41.6	0	0	70
872.50	139	51.0	51	51	143

Device	Routing	Invert	Outlet Devices
#1	Discarded	872.00'	**2.410 in/hr Exfiltration over Surface area**
#2	Primary	872.49'	**20.0' long x 1.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 Coef. (English) 2.69 2.72 2.75 2.85 2.98 3.08 3.20 3.28 3.31 3.30 3.31 3.32

Discarded OutFlow Max=0.01 cfs @ 11.74 hrs HW=872.50' (Free Discharge)
↑—**1=Exfiltration** (Exfiltration Controls 0.01 cfs)

Primary OutFlow Max=0.29 cfs @ 12.08 hrs HW=872.52' (Free Discharge)
↑—**2=Broad-Crested Rectangular Weir** (Weir Controls 0.29 cfs @ 0.47 fps)

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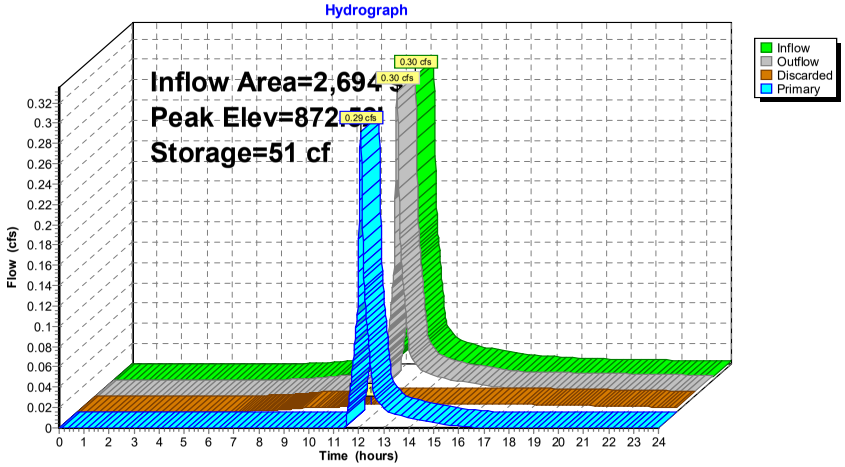
Pond 1P: Sediment Forebay



Stage-Area-Storage for Pond 1P: Sediment Forebay

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
872.00	70	0
872.01	71	1
872.02	72	1
872.03	73	2
872.04	75	3
872.05	76	4
872.06	77	4
872.07	78	5
872.08	79	6
872.09	81	7
872.10	82	8
872.11	83	8
872.12	84	9
872.13	86	10
872.14	87	11
872.15	88	12
872.16	90	13
872.17	91	14
872.18	92	15
872.19	93	15
872.20	95	16
872.21	96	17
872.22	97	18
872.23	99	19
872.24	100	20
872.25	102	21
872.26	103	22
872.27	104	23
872.28	106	24
872.29	107	25
872.30	109	27
872.31	110	28
872.32	111	29
872.33	113	30
872.34	114	31
872.35	116	32
872.36	117	33
872.37	119	35
872.38	120	36
872.39	122	37
872.40	123	38
872.41	125	39
872.42	126	41
872.43	128	42
872.44	129	43
872.45	131	45
872.46	133	46
872.47	134	47
872.48	136	49
872.49	137	50
872.50	**139**	**51**
872.51	139	51
872.52	139	51

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Summary for Pond 2P: Bioretention Area

Inflow Area = 4,461 sf, 40.28% Impervious, Inflow Depth > 1.93" for 100-year event
Inflow = 0.34 cfs @ 12.08 hrs, Volume= 717 cf
Outflow = 0.19 cfs @ 12.34 hrs, Volume= 738 cf, Atten= 46%, Lag= 16.1 min
Discarded = 0.04 cfs @ 12.34 hrs, Volume= 667 cf
Primary = 0.15 cfs @ 12.34 hrs, Volume= 71 cf
Routed to Pond DP1 : Hoosic River

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 872.52' @ 12.34 hrs Surf.Area= 678 sf Storage= 304 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 68.4 min (853.5 - 785.1)

Volume	Invert	Avail.Storage	Storage Description
#1	872.00'	304 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

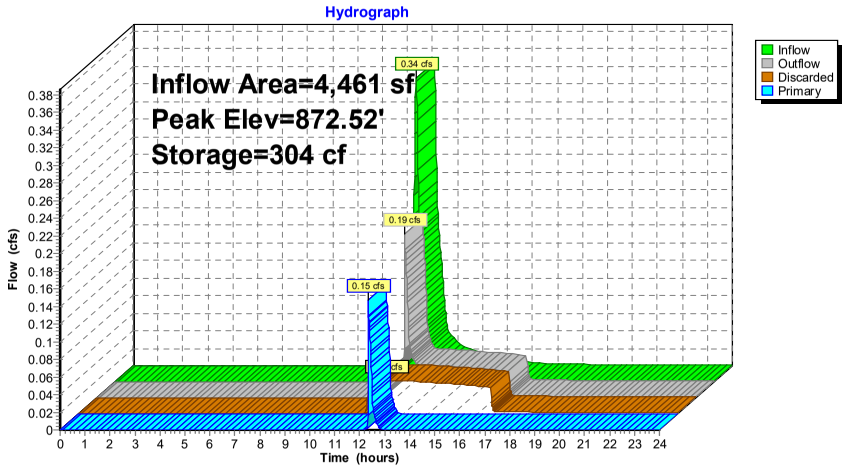
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
872.00	542	85.6	0	0	542
872.50	678	95.0	304	304	684

Device	Routing	Invert	Outlet Devices
#1	Discarded	872.00'	**2.410 in/hr Exfiltration over Surface area**
#2	Primary	872.49'	**8.0' long x 1.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 Coef. (English) 2.69 2.72 2.75 2.85 2.98 3.08 3.20 3.28 3.31 3.30 3.31 3.32

Discarded OutFlow Max=0.04 cfs @ 12.34 hrs HW=872.52' (Free Discharge)
└**1=Exfiltration** (Exfiltration Controls 0.04 cfs)

Primary OutFlow Max=0.13 cfs @ 12.34 hrs HW=872.52' (Free Discharge)
└**2=Broad-Crested Rectangular Weir** (Weir Controls 0.13 cfs @ 0.49 fps)

Pond 2P: Bioretention Area



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Stage-Area-Storage for Pond 2P: Bioretention Area

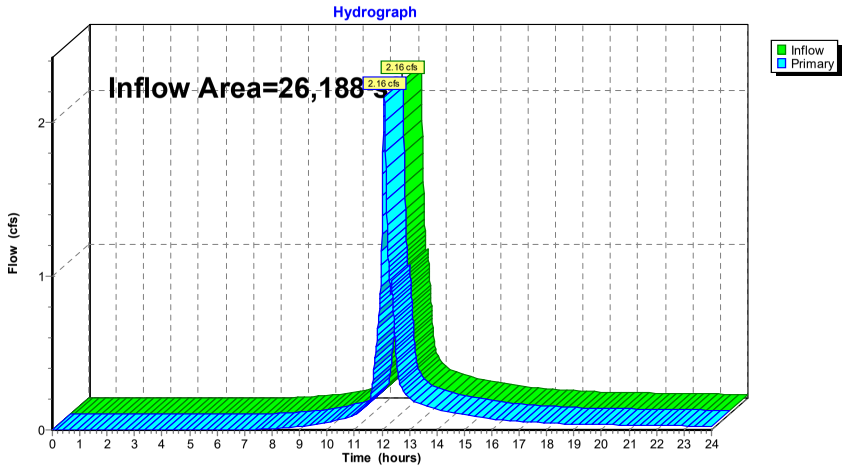
Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
872.00	542	0
872.01	545	5
872.02	547	11
872.03	550	16
872.04	552	22
872.05	555	27
872.06	558	33
872.07	560	39
872.08	563	44
872.09	565	50
872.10	568	55
872.11	571	61
872.12	573	67
872.13	576	73
872.14	579	78
872.15	581	84
872.16	584	90
872.17	587	96
872.18	589	102
872.19	592	108
872.20	595	114
872.21	597	120
872.22	600	126
872.23	603	132
872.24	605	138
872.25	608	144
872.26	611	150
872.27	614	156
872.28	616	162
872.29	619	168
872.30	622	174
872.31	625	181
872.32	627	187
872.33	630	193
872.34	633	200
872.35	636	206
872.36	638	212
872.37	641	219
872.38	644	225
872.39	647	232
872.40	650	238
872.41	652	245
872.42	655	251
872.43	658	258
872.44	661	264
872.45	664	271
872.46	667	277
872.47	669	284
872.48	672	291
872.49	675	298
872.50	**678**	**304**
872.51	678	304
872.52	678	304

Summary for Pond DP1: Hoosic River

Inflow Area = 26,188 sf, 58.76% Impervious, Inflow Depth > 3.10" for 100-year event
Inflow = 2.16 cfs @ 12.09 hrs, Volume= 6,774 cf
Primary = 2.16 cfs @ 12.09 hrs, Volume= 6,774 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Pond DP1: Hoosic River



Proposal No. 610777-131930
A00840 - 245

Figure 5 – NRCS Web Soil Survey

Proposal No. 610777-131930

A00840 - 247

Hydrologic Soil Group—Berkshire County, Massachusetts

Map Scale: 1:1,230 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 15 30 60 90

Feet: 0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils

Soil Rating Polygons
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Lines
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Points
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:25,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Berkshire County, Massachusetts
Survey Area Data: Version 18, Sep 12, 2023

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Aug 15, 2021—Nov 8, 2021

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Proposal No. 610777-131930

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Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
267B	Copake fine sandy loam, 3 to 8 percent slopes	A	5.9	77.3%
267C	Copake fine sandy loam, 8 to 15 percent slopes	A	0.6	8.4%
298E	Groton and Hinckley soils, 25 to 35 percent slopes	A	1.1	14.4%
Totals for Area of Interest			**7.6**	**100.0%**

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

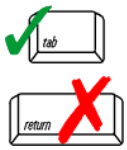
Appendix A – Stormwater Checklist

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 8[2]
- 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
Bureau of Resource Protection - Wetlands Program

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.

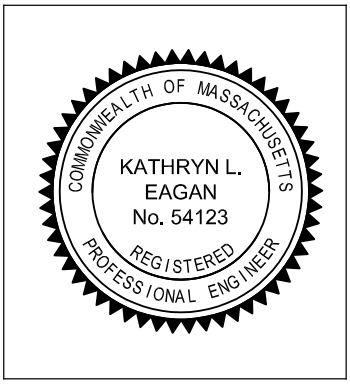
Note: Because stormwater requirements vary from project to project, it is possible that a complete Stormwater Report may not include information on some of the subjects specified in the Checklist. If it is determined that a specific item does not apply to the project under review, please note that the 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



3/11/25
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
Bureau of Resource Protection - Wetlands Program

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 Field[1]

☐ 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
Bureau of Resource Protection - Wetlands Program

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.

Appendix B – O&M Plan

Bridge A-04-038 Replacement

Stormwater Management System Operation and Maintenance Plan and Long-Term Pollution Prevention Plan

Adams, MA

PREPARED FOR

10 Park Plaza
Boston, MA 02116

PREPARED BY

803 Summer Street
Boston, MA, 02127
03/11/2025

Table of Contents

1 Stormwater Management System Operation and Maintenance (O&M) Plan 1

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1.2 Inspection and Maintenance Measures and Record-Keeping 1
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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 to minimize contaminant loading for the Bridge A-04-038 Replacement, on South Willow Street in Adams, MA. 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

The Town of Adams will be responsible for the operation and maintenance of all stormwater management systems within the project area. Questions or concerns regarding activities associated with this O&M Plan should be address to Town of Adams Department of Public Works, Highway Division located at 8 Park Street Adams, MA 01220, phone (413) 743-8300 ext. 172.

1.2 Inspection and Maintenance Measures and Record-Keeping

See the Permit Plans for the existing stormwater system within the project limits, there are no systems proposed. The stormwater management system covered by this O&M Plan consists of the following measures:

- Two (2) 4' deep sump catch basins
- One (1) filtering bioretention area
- One (1) Sediment forebay
- One (1) grassed channel
- One hundred and fifty eight (158) feet of reinforced concrete pipe
- One (1) headwall with stone protection

Overall, the Town will 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.

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	› Catch basins	› Sediment accumulation › Trash/Debris accumulation › Signs of contamination › Frame and grate condition › Overall structure condition
SCMs	› Sediment Forebay › Filtering Bioretention Area › Consistent with the MassDOT Stormwater Design Guide (SDG)	› SCM accessibility › Presence of standing water › Level of erosion › Sediment accumulation › Trash/Debris accumulation › Vegetation condition › Overall SCM condition
Storm Discharge Points	› Pipe Outlets	› Presence of flow › Signs of contaminated flow › Sediment accumulation › Level of erosion › Pipe condition › Scour protection condition › Overall structure condition

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:

- Clear inlet and remove and properly dispose of sediment, trash, leaf litter, debris, and vegetation.
- Regrade areas that show signs of ponding and channelization.
- Repair or replace structural componenents.
- Repair damaged or eroded areas.
- Provide or rehabilitate erosion control at the outlet.
- Regrade and replace the channel materials.
- Remove woody growth.
- Stabilize or reconstruct eroded areas.

Based on the results of the inspection, the Town will make repairs in accordance with 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

The Town performs maintenance for stormwater management systems as part of their routine operation and maintenance budget for roadways and bridges. Budgets are managed by the Town 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 the Bridge A-04-038 Replacement, Adams, MA. 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),

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.

- good housekeeping;
- storing materials and waste products inside or under cover;
- vehicle washing;
- routine inspections and maintenance of SCMs;
- spill prevention and response;
- maintenance of lawns, gardens, and other landscaped areas;
- storage and use of fertilizers, herbicides, and pesticides;
- pet waste management;
- operation and management of septic systems; and
- proper management of deicing chemicals and snow.

2.1.1 Litter Pick-up

The Town 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

The Town will conduct inspection and maintenance of drainage infrastructure 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 the Town of Adams Vegetation Management Plan (VMP).

The Town does minimize the reliance on herbicides. Only herbicides listed on the Town's current ROW Sensitive Areas Materials List will be used.

2.1.4 Snow and Ice Management

Snow and Ice Management will be conducted consistent with the practices outlined in the Town of Adams Streets and Sidewalks Bylaw, Section 105-2.

2.1.5 Street Sweeping

Routine roadway cleaning, will be conducted in accordance with the Towns standard practices.

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 Project. Should an interconnection to the stormwater management system be identified, the highway division will confirm if the connections are authorized. For unauthorized connections, the highway division will investigate the connections and if they are determined to be illicit, the connections will be managed through the Town's Illicit Discharge Detection and Elimination (IDDE) program and/or through other agencies.

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
Governor

Kimberley Driscoll
Lieutenant Governor

Rebecca L. Tepper
Secretary

Bonnie Heiple
Commissioner

April 11, 2025

Massachusetts Department of Transportation Highway Division
10 Park Plaza, Room 7360
Boston, MA 02116
ATTN: Courtney Walker

RE: 401 WATER QUALITY CERTIFICATION
BRP WW 11, Minor Fill Project
Bridge Replacement (A-04-038), Quality Street over the Hoosic River
Adams, Massachusetts

401 WQC Filing Number: 24-WW11-0003-APP
USACE Application No. NAE-2025-00087
MassDOT File Number: 610777

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 March 13, 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 consists of the replacement of the existing bridge (Bridge No. A-04-038) that carries Quality Street over the Hoosic River in Adams, MA (the Project). The Project also includes installation of scour protection, full-depth reconstruction of the approaches, and Stormwater Control Measure (SCM) installation. The bridge and substructure are stated as needing replacement due to various structural deficiencies.

The existing bridge is oriented in an east-west direction with the Hoosic River flowing south to north under the bridge. The bridge has an approximately 82-foot-long span and carries two lanes with a roadway width of approximately 24 feet. Overhead utilities run adjacent to Quality Street and water and gas lines are carried underneath the bridge. No sidewalks or paved shoulders are within the project limits and stormwater drainage is primarily country drainage with two stormwater catch basins on the south end of the project limits. The Ashuwillticook Rail Trail also runs parallel to the Hoosic River in the Project area.

This information is available in alternate format. Please contact MassDEP at 617-292-5500.
TTY# MassRelay Service 1-800-439-2370
MassDEP Website: www.mass.gov/dep

Printed on Recycled Paper

The Hoosic River is a tributary of the Hudson River and is mapped as a Coldwater Fishery Critical Area. The bridge is within a mapped 1% annual chance of flood zone (Zone A). The Project is also located within Massachusetts Natural Heritage and Endangered Species Program (NHESP) Estimated and Priority Habitats of Rare Species for the longnose sucker (*Catostomus catostomus*). The Project will occur adjacent to the Quality Street Field, an Article 97 property owned by the Town of Adams but will not impact the recreational field or result in any take of the Article 97 parcel.

The Project will replace a structurally deficient bridge with a new bridge along a similar horizontal and vertical alignment. Portions of the existing abutments will be cut and remain in place while the new abutments will be installed behind them. The replacement bridge will have a 96-foot-long by 29.25-foot-wide span. Full depth pavement reconstruction of the approaches will occur following installation of each new abutment. To facilitate bridge replacement, the existing overhead utility lines will be temporarily relocated, and the water and gas lines will be rerouted to a temporary utility bridge constructed over the river. A two-year temporary easement will be required to build a roadway detour over the Ashuwillticook Rail Trail between South Willow Street and Route 8.

In total, 431 square feet (sf) of temporary impact to LUW is required to complete the project. Bulk sandbag cofferdams will be installed within Hoosic River and dewatered to create dry working conditions while maintaining flow. These dewatered areas will be utilized to install scour protection on each slope leading up to the newly installed abutments. The scour protection installation will occur above ordinary high water.

An alternatives analysis was completed in accordance with 314 CMR 9.00. The existing bridge is structurally deficient and presents a risk to driver safety due to a potential bridge failure; therefore, a no-build alternative is not practicable to meet project goals. Three alternatives were considered which all met stream crossing standards and all create impacts to LUW. The only difference between alternatives was the bridge structure type. The new span will completely meet the Stream Crossing Standards.

The Project meets the Stormwater Management Standards to the maximum extent practicable (MEP) per 314 CMR 9.06(6). The widening of the bridge and surrounding approaches will increase impervious surface within the Project limits by 12.7 percent (1,796 sf). During the course of project review, MassDOT revised the project to include a grass channel, sediment forebay and bioretention area to be located at the intersection of South Willow Street and Quality Street. In addition, two deep sump catch basins will be installed to meet the Stormwater Management Standards to the MEP as a redevelopment project.

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 and 9.07. Public notice was provided in the Berkshire Eagle on February 6, 2025. No comment letters were received during the public comment period.

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. The Department 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 BSC Group on behalf of MassDOT, dated January 31, 2025, with cover letter and attachments. 401 WQC Filing Number: 24-WW11-0003-APP.
    - MassDOT Response to MassDEP Administrative Completeness and Technical Deficiency Review. Prepared BSC Group on behalf of MassDOT. 401 Water Quality Certification, Major Fill and Minor Dredge Project Certification. Quality Street over Hoosic River Bridge Replacement with Plans and Attachments. Dated March 13, 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 or vegetation clearing, 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, provided 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. Verification of 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 LUW, proposed dewatering 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.

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 include a description of proposed methods to isolate and dewater work areas within streams while maintaining stream flow, including but not limited to the method of isolation (e.g., steel sheeting or sandbag cofferdam), dewatering methods and locations and specifications for stream bypass systems as applicable. The Control of Water Plan shall include a plan depicting LUW boundaries, and the location of all relevant methods and materials which shall be located within the LUW impact areas approved herein. The plan shall meet requirements of the CP/PP and be specific to the Project. Dewatering and stream bypasses 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. **(Submittal)**

9. 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.

10. Prior to the Pre-Construction Meeting, the boundaries of LUW shall be re-flagged where they are within 50 feet of the limits of work. 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.

11. 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 LUW.

    c. Anchored stationary equipment may remain below the BFE if demonstrated to be required and upon written approval from MassDEP. In the event stockpiles or 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, 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.

12. 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 by MassDOT. **(Submittal)**

13. 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 for any proposed application of herbicides in water bodies.

Construction Period

14. No more than **431 sf** of temporary impacts to LUW shall occur. All work shall avoid unapproved impacts to LUW.

15. 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.

16. Copies of CP/PP Inspection and Maintenance Log Forms shall be submitted to MassDEP within 14 days upon request.

17. 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 Adams Conservation Commission if any unauthorized discharges to LUW occur.

18. 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.

19. Work within LUW shall be conducted in low or no-flow conditions to the extent practicable. Notice shall be provided to MassDEP and the Adams Conservation Commission within 24 hours prior to the commencement of dewatering. 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 LUW. Any discharges shall be visibly free of sediment.

20. 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.

21. 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 11.

22. 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. Stockpiles shall be located no less than 50 feet from storm drains that discharge to wetland Resource Areas.

23. 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 LUW and catch basins or other drainage conveyances that discharge directly or indirectly to LUW.

24. Refueling, washing, and cleaning of vehicles and other construction equipment shall not take place within 50 feet of LUW and any wash water shall be contained such that it does not drain toward LUW. MassDEP shall explicitly approve in writing any deviation to this condition for oversized stationary vehicles.

25. 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.

26. Construction vehicles or other vehicles or heavy equipment are prohibited from traversing over the proposed infiltration SCMs to avoid compaction of soils during construction. These areas shall be demarcated by silt fence with signage, or high visibility fencing. If access through the location of an infiltration SCM is unavoidable, MassDOT shall request written approval from MassDEP to use low ground pressure equipment to complete the work. Following completion of the work, subsoils shall be tilled to a minimum depth of 18 inches prior to placement of final surface dressing materials required by the approved plans. Tilling shall only be conducted when the subsoils are in a friable condition and dry enough so that a clump cannot be formed into a ball shape by hand. 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.

27. A temporary shielding or containment system shall be in place beneath the bridge structure prior to removal and concrete excavation to prevent debris from falling into the water below. In the event that any debris accidentally enters the Hoosic River, it shall be immediately retrieved. Notice shall be provided to MassDEP if debris enters the river and that it has been removed with

Stream Mitigation

28. All temporarily impacted streambed shall be restored to pre-construction conditions under the oversight of the RE.

29. Water shall be slowly introduced back into the restored and dewatered LUW work areas as to not cause erosion and sedimentation. This work shall be overseen by the RE.

30. 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

31. All non-biodegradable temporary erosion controls shall be removed at the conclusion of work once the surrounding area has achieved final stabilization.

General Conditions

32. 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 tyler.lewis@mass.gov. **(Submittal)**

33. This WQC remains in effect for the same duration as the Section 404 permit that requires it.

34. No Special Condition set forth herein shall be construed or operate to prohibit MassDEP from taking enforcement against the MassDOT or its contractors for any failure to comply with the terms and requirements of this WQC.

35. 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; (c) 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):

1. the 401 Certification Transmittal Number;
2. the complete name of the applicant and address of the project;
3. 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;
4. 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;
5. a clear and concise statement that an adjudicatory hearing is being requested;
6. 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
7. 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

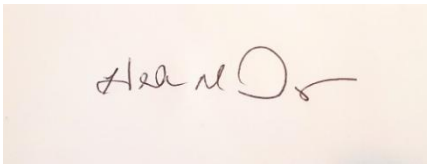
The hearing request along with a DEP Fee Transmittal Form and a valid check or money order payable to the Commonwealth of Massachusetts in the amount of one hundred dollars ($100) must be mailed to:

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 me at heidi.davis@mass.gov or Tyler Lewis at tyler.lewis@mass.gov.

Very truly yours,



Heidi M. Davis
Highway Unit Supervisor

Ecc: DEP – WERO – Michael McHugh
USACE – Dan Vasconcelos
USACE – Kevin Newton
MassDOT – Melissa Lenker
MassDOT – Michael Joa
BSC Group – Diana Walden – dwalden@bscgroup.com
Adams Conservation Commission – Kyomi Belanger – kbelanger@town.adams.ma.us
Town of Adams – Donna Cesan - dcesan@town.adams.ma.us

ATTACHMENT A
PRE-CONSTRUCTION SUBMITTAL CHECKLIST

Bridge Replacement (A-04-038), Quality Street over Hoosic River
Adams, 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.

Pre-Construction Meeting Date: _____

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 start of work		
8	Control of Water Plan	14 days prior to work start		
11	Flood Contingency Plan	Prior to any work within 1% annual chance of flooding zone		
12	Invasive Plant Management Strategy	Prior to Pre-Construction Meeting		

重要 महत्वपूर्ण σημαντικός Important կարեւոր quan trọng مهم

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 Anviwònmantal 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
ហើយគប្បីត្រូវត្រូវបានបកប្រែភ្លាមៗ។.
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 telifoni 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
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(Version revised 8.2.2023) 310 CMR 1.03(5)(a)

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DOCUMENT A00855

U.S. FISH AND WILDLIFE SERVICE NLAA CONCURRENCE VERIFICATION 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: 04/19/2024 19:51:16 UTC
Project code: 2024-0079744
Project Name: 610777 ADAMS- BRIDGE REPLACEMENT, A-04-038, QUALITY STREET OVER HOOSIC RIVER

Subject: Concurrence verification letter for the '610777 ADAMS- BRIDGE REPLACEMENT, A-04-038, QUALITY STREET OVER HOOSIC 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 April 19, 2024 to verify that the **610777 ADAMS- BRIDGE REPLACEMENT, A-04-038, QUALITY STREET OVER HOOSIC RIVER** (Proposed Action) may rely on the concurrence provided in 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 is within the scope and adheres to the criteria of the PBO, including the adoption of applicable avoidance and minimization measures. **At least one of the qualification interview questions indicated an activity or portion of your project is consistent with a not likely to adversely affect determination therefore, the overall determination for your project is, may affect, and is not likely to adversely affect (NLAA) the endangered Indiana bat (*Myotis sodalis*) and/or the endangered northern long-eared bat (*Myotis septentrionalis*)**. Consultation with the Service pursuant to section 7(a)(2) of ESA (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq*.) is required.

The Service has 14 calendar days to notify the lead Federal action agency or designated non-federal representative if we determine that the Proposed Action does not meet the criteria for a NLAA determination under the PBO. If we do not notify the lead Federal action agency or designated non-federal representative within that timeframe, you may proceed with the Proposed

Action under the terms of the NLAA concurrence provided in the PBO. This verification period allows Service Field Offices to apply local knowledge to implementation of the PBO, as we may identify a small subset of actions having impacts that were unanticipated. In such instances, Service Field Offices may request additional information that is necessary to verify inclusion of the proposed action under the PBO.

For Proposed Actions that include bridge/culvert or structure removal, replacement, and/or maintenance activities: If your initial bridge/culvert or structure assessment documented signs of bat use or occupancy, or an assessment failed to detect Indiana bats and/or NLEBs, yet are 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 any potential take. In these instances, potential incidental take of Indiana bats and/or NLEBs is covered under the Incidental Take Statement in the 2018 FHWA, FRA, FTA PBO (provided that the take is reported to the Service).

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 assessments failed to detect Indiana bats and/or NLEB use or occupancy, yet bats are 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 any 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 contact this Service Office.

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

610777 ADAMS- BRIDGE REPLACEMENT, A-04-038, QUALITY STREET OVER HOOSIC RIVER

DESCRIPTION

610777 ADAMS- BRIDGE REPLACEMENT, A-04-038, QUALITY STREET OVER HOOSIC RIVER

The proposed design begins at the roadway's intersection with Pinnacle Drive. The intersection pavement will be rebuilt to match the existing conditions. The roadway pavement courses and base will be reconstructed and graded to match the proposed profile. The project also involves rebuilding an old temporary road alignment to allow residents access to the north side of South Willow Street by car or by foot during construction. The temporary road pavement will be excavated and replaced with loam and seed after completion of the project.

Monarch Butterfly: Candidate Species only, no conservation measures at this time.

Tricolored Bat: Proposed Endangered Species only. At this time, no formal USFWS consultation is required.

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@42.6090676,-73.13165719909115,14z

DETERMINATION KEY RESULT

Based on your answers provided, this project(s) may affect, but is not likely to adversely affect the endangered Indiana bat and/or the endangered northern long-eared bat, therefore, 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. However, also based on your answers provided, this project may rely on the concurrence provided in 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.

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. Which Federal Agency is the lead for the action?

   A) Federal Highway Administration (FHWA)

4. Are *all* project activities limited to non-construction[1] activities only? (examples of non-construction activities include: bridge/abandoned structure assessments, surveys, planning and technical studies, property inspections, and property sales)

   [1] Construction refers to activities involving ground disturbance, percussive noise, and/or lighting.

   No

5. Does the project include *any* activities that are **greater than** 300 feet from existing road/rail surfaces[1]?

   [1] Road surface is defined as the actively used [e.g. motorized vehicles] driving surface and shoulders [may be pavement, gravel, etc.] and rail surface is defined as the edge of the actively used rail ballast.

   No

6. Does the project include *any* activities **within** 0.5 miles of a known Indiana bat and/or NLEB hibernaculum[1]?

   [1] For the purpose of this consultation, a hibernaculum is a site, most often a cave or mine, where bats hibernate during the winter (see suitable habitat), but could also include bridges and structures if bats are found to be hibernating there during the winter.

   No

7. Is the project located **within** a karst area?

   No

8. Is there *any* suitable[1] summer habitat for Indiana Bat or NLEB **within** the project action area[2]? (includes any trees suitable for maternity, roosting, foraging, or travelling habitat)

   [1] See the Service's summer survey guidance for our current definitions of suitable habitat.

   [2] The action area is defined as all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action (50 CFR Section 402.02). Further clarification is provided by the User's Guide for the Range-wide Programmatic Consultation for Indiana Bat and Northern Long-eared Bat.

   Yes

9. Will the project remove *any* suitable summer habitat[1] and/or remove/trim any existing trees **within** suitable summer habitat?

   [1] See the Service's summer survey guidance for our current definitions of suitable habitat.

   Yes

10. Will the project clear more than 20 acres of suitable habitat per 5-mile section of road/rail?

    No

11. Have presence/probable absence (P/A) summer surveys[1][2] been conducted[3][4] **within** the suitable habitat located within your project action area?

    [1] See the Service's summer survey guidance for our current definitions of suitable habitat.

    [2] Presence/probable absence summer surveys conducted within the fall swarming/spring emergence home range of a documented Indiana bat hibernaculum (contact local Service Field Office for appropriate distance from hibernacula) that result in a negative finding requires additional consultation with the local Service Field Office to determine if clearing of forested habitat is appropriate and/or if seasonal clearing restrictions are needed to avoid and minimize potential adverse effects on fall swarming and spring emerging Indiana bats.

    [3] For projects within the range of either the Indiana bat or NLEB in which suitable habitat is present, and no bat surveys have been conducted, the transportation agency will assume presence of the appropriate species. This assumption of presence should be based upon the presence of suitable habitat and the capability of bats to occupy it because of their mobility.

    [4] Negative presence/probable absence survey results obtained using the summer survey guidance are valid for a minimum of two years from the completion of the survey unless new information (e.g., other nearby surveys) suggest otherwise.

    Yes

    SUBMITTED DOCUMENTS

    - *610777_Adams_MassDOT_NLEB_Report.pdf https://ipac.ecosphere.fws.gov/project/K7FJ26T7PVETDELXPQKXN4RXUI/projectDocuments/142058359*

12. Did the presence/probable absence (P/A) summer surveys detect Indiana bats and/or NLEB[1]?

    [1] P/A summer surveys conducted within the fall swarming/spring emergence home range of a documented Indiana bat hibernaculum (contact local Service Field Office for appropriate home range) that result in a negative finding requires additional consultation with the local Service Field Office to determine if clearing of forested habitat is appropriate and/or if seasonal clearing restrictions are needed to avoid and minimize potential adverse effects on fall swarming and spring emerging Indiana bats.

    No

13. Were the P/A summer surveys conducted **within** the fall swarming/spring emergence range of a documented Indiana bat hibernaculum[1]?

    [1] Contact the local Service Field Office for appropriate distance from hibernacula.

    No

14. Does the project include activities **within documented NLEB habitat**[1][2]?

    [1] Documented roosting or foraging habitat – for the purposes of this consultation, we are considering documented habitat as that where Indiana bats and/or NLEB have actually been captured and tracked using (1) radio telemetry to roosts; (2) radio telemetry biangulation/triangulation to estimate foraging areas; or (3) foraging areas with repeated use documented using acoustics. Documented roosting habitat is also considered as suitable summer habitat within 0.25 miles of documented roosts.)

    [2] For the purposes of this key, we are considering documented corridors as that where Indiana bats and/or NLEB have actually been captured and tracked to using (1) radio telemetry; or (2) treed corridors located directly between documented roosting and foraging habitat.

    No

15. Will the removal or trimming of habitat or trees occur **within** suitable but **undocumented NLEB** roosting/foraging habitat or travel corridors?

    Yes

16. What time of year will the removal or trimming of habitat or trees **within** suitable but **undocumented NLEB** roosting/foraging habitat or travel corridors occur?

    B) During the inactive season

17. Will *any* tree trimming or removal occur **within** 100 feet of existing road/rail surfaces?

    Yes

18. Will *any* tree trimming or removal occur **between** 100-300 feet of existing road/rail surfaces?

    No

19. Are *all* trees that are being removed clearly demarcated?

    Yes

20. Will the removal of habitat or the removal/trimming of trees include installing new or replacing existing **permanent** lighting?

    No

21. Does the project include wetland or stream protection activities associated with compensatory wetland mitigation?

    No

22. Does the project include slash pile burning?

    No

23. Does the project include *any* bridge removal, replacement, and/or maintenance activities (e.g., any bridge repair, retrofit, maintenance, and/or rehabilitation work)?

    Yes

24. Is there *any* suitable habitat[1] for Indiana bat or NLEB **within** 1,000 feet of the bridge? (includes any trees suitable for maternity, roosting, foraging, or travelling habitat)

    [1] See the Service's current summer survey guidance for our current definitions of suitable habitat.

    Yes

25. Has a bridge assessment[1] been conducted **within** the last 24 months[2] to determine if the bridge is being used by bats?

    [1] See User Guide Appendix D for bridge/structure assessment guidance

    [2] Assessments must be completed no more than 2 years prior to conducting any work below the deck surface on all bridges that meet the physical characteristics described in the Programmatic Consultation, regardless of whether assessments have been conducted in the past. Due to the transitory nature of bat use, a negative result in one year does not guarantee that bats will not use that bridge/structure in subsequent years.

    Yes

    SUBMITTED DOCUMENTS

    - *610777_Adams_MassDOT_NLEB_Report.pdf https://ipac.ecosphere.fws.gov/project/K7FJ26T7PVETDELXPQKXN4RXUI/projectDocuments/142058359*

26. Did the bridge assessment detect *any* signs of Indiana bats and/or NLEBs roosting in/under the bridge (bats, guano, etc.)[1]?

    [1] If bridge assessment detects signs of *any* species of bats, coordination with the local FWS office is needed to identify potential threatened or endangered bat species. Additional studies may be undertaken to try to identify which bat species may be utilizing the bridge prior to allowing *any* work to proceed.

    Note: There is a small chance bridge assessments for bat occupancy do not detect bats. Should a small number of bats be observed roosting on a bridge just prior to or during construction, such that take is likely to occur or does occur in the form of harassment, injury or death, the PBO requires the action agency to report the take. Report all unanticipated take within 2 working days of the incident to the USFWS. Construction activities may continue without delay provided the take is reported to the USFWS and is limited to 5 bats per project.

    No

27. Will the bridge removal, replacement, and/or maintenance activities include installing new or replacing existing **permanent** lighting?

    No

28. Does the project include the removal, replacement, and/or maintenance of *any* structure other than a bridge? (e.g., rest areas, offices, sheds, outbuildings, barns, parking garages, etc.)

    No

29. Will the project involve the use of **temporary** lighting *during* the active season?

    Yes

30. Is there *any* suitable habitat **within** 1,000 feet of the location(s) where **temporary** lighting will be used?

    Yes

31. Will the project install new or replace existing **permanent** lighting?

    No

32. Does the project include percussives or other activities (**not including tree removal/ trimming or bridge/structure work**) that will increase noise levels above existing traffic/ background levels?

    Yes

33. Will the activities that use percussives (**not including tree removal/trimming or bridge/ structure work**) and/or increase noise levels above existing traffic/background levels be conducted *during* the active season[1]?

    [1] Coordinate with the local Service Field Office for appropriate dates.

    Yes

34. Will *any* activities that use percussives (**not including tree removal/trimming or bridge/ structure work**) and/or increase noise levels above existing traffic/background levels be conducted *during* the inactive season[1]?

    [1] Coordinate with the local Service Field Office for appropriate dates.

    Yes

35. Are *all* project activities that are **not associated with** habitat removal, tree removal/ trimming, bridge and/or structure activities, temporary or permanent lighting, or use of percussives, limited to actions that DO NOT cause any additional stressors to the bat species?

    Examples: lining roadways, unlighted signage , rail road crossing signals, signal lighting, and minor road repair such as asphalt fill of potholes, etc.

    Yes

36. Will the project raise the road profile **above the tree canopy**?

    No

37. Are the project activities that use percussives (not including tree removal/trimming or bridge/structure work) consistent with a Not Likely to Adversely Affect determination in this key?

    Automatically answered
    Yes, because the activities are within 300 feet of the existing road/rail surface, greater than 0.5 miles from a hibernacula, and conducted during the active season within undocumented habitat.

38. Are the project activities that use percussives (not including tree removal/trimming or bridge/structure work) and/or increase noise levels above existing traffic/background levels consistent with a No Effect determination in this key?

    Automatically answered
    Yes, because the activities are within 300 feet of the existing road/rail surface, greater than 0.5 miles from a hibernacula, and conducted during the inactive season

39. Is the location of this project consistent with a Not Likely to Adversely Affect determination in this key?

    Automatically answered
    Yes, because no bats were detected during presence/probable absence surveys conducted during the summer survey season and outside of the fall swarming/spring emergence periods. Additionally, all activities were at least 0.5 miles from any hibernaculum.

40. Is the bridge removal, replacement, or maintenance activities portion of this project consistent with a No Effect determination in this key?

    Automatically answered
    Yes, because the bridge has been assessed using the criteria documented in the BA and no signs of bats were detected

41. **General AMM 1**
    Will the project ensure *all* operators, employees, and contractors working in areas of known or presumed bat habitat are aware of *all* FHWA/FRA/FTA (Transportation Agencies) environmental commitments, including all applicable Avoidance and Minimization Measures?

    Yes

PROJECT QUESTIONNAIRE

1. Have you made a No Effect determination for *all* other species indicated on the FWS IPaC generated species list?

   N/A

2. Have you made a May Affect determination for *any* other species on the FWS IPaC generated species list?

   N/A

3. How many acres[1] of trees are proposed for removal between 0-100 feet of the existing road/rail surface?

   [1] If described as number of trees, multiply by 0.09 to convert to acreage and enter that number.

1.75

4. Please describe the proposed bridge work:

   The bridge has been identified as having deteriorated superstructure elements requiring replacement. The bridge deck will be 29 feet, 3 inches wide and will accommodate two 11-foot side travel lanes, 2-foot shoulders and safety curbs with railings. The structural single span length will be increased from 82'-0" to 96'-0" in order to relocate the substructure behind the existing abutment footings. The hydraulic opening is slightly increased, while the abutment skew is maintained.

5. Please state the timing of all proposed bridge work:

   Spring 2025 - Spring 2027

6. Please enter the date of the bridge assessment:

   10/25/2023

AVOIDANCE AND MINIMIZATION MEASURES (AMMS)

This determination key result includes the committment to implement the following Avoidance and Minimization Measures (AMMs):

GENERAL AMM 1

Ensure all operators, employees, and contractors working in areas of known or presumed bat habitat are aware of all FHWA/FRA/FTA (Transportation Agencies) environmental commitments, including all applicable AMMs.

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

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DOCUMENT A00875

POLICY DIRECTIVE P-22-001
AND
POLICY DIRECTIVE P-22-002

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massDOT Massachusetts Department of Transportation Highway Division

Number: P-22-001
Date: 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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massDOT Massachusetts Department of Transportation Highway Division

Number: P-22-002
Date: 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 B00420

PROPOSAL

ADAMS

For: **Bridge Replacement, A-04-038, Quality Street over Hoosic River**

COMMONWEALTH OF MASSACHUSETTS

LOCATION

The work referred to herein is in the Town of ADAMS in Berkshire 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:

Quality Street

Bridge No. A-04-038

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 **1345 CALENDAR DAYS** upon receipt of a Notice to Proceed, except that if the completion date falls between December 1 and March 15 then the same number of days beyond December 1st will be extended after March 15th.

The Work of this project is described by the following Items and quantities.

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Project # 610777	Contract # 131930			
Location : ADAMS				
Description : Bridge Replacement, A-04-038, Quality Street over Hoosic River				
ITEM #	**QUANTITY**	**ITEM WITH UNIT BID PRICE WRITTEN IN WORDS**	**UNIT PRICE**	**AMOUNT**
100.9	1	BUILDING CONDITION SURVEY AT _____ LUMP SUM		
101.	0.3	CLEARING AND GRUBBING AT _____ PER ACRE		
102.1	170	TREE TRIMMING AT _____ PER FOOT		
102.3	24	HERBICIDE TREATMENT OF INVASIVE PLANTS AT _____ PER HOUR		
102.33	8	INVASIVE PLANT MANAGEMENT STRATEGY AT _____ PER HOUR		
102.511	6	TREE PROTECTION - ARMORING AND PRUNING AT _____ EACH		
102.513	70	AIR EXCAVATION AND ROOT PRUNING AT _____ PER FOOT		
102.521	300	TREE AND PLANT PROTECTION FENCE AT _____ PER FOOT		
102.531	1	TREE CARE- PRUNING AT _____ EACH		

Project # 610777	Contract # 131930			
Location : ADAMS				
Description : Bridge Replacement, A-04-038, Quality Street over Hoosic River				
ITEM #	**QUANTITY**	**ITEM WITH UNIT BID PRICE WRITTEN IN WORDS**	**UNIT PRICE**	**AMOUNT**
102.533	600	TREE CARE- WATERING AT _____ PER GALLON		
102.55	34	ARBORIST AT _____ PER HOUR		
103.	15	TREE REMOVED - DIAMETER UNDER 24 INCHES AT _____ EACH		
104.	3	TREE REMOVED - DIAMETER 24 INCHES AND OVER AT _____ EACH		
114.1	1	DEMOLITION OF SUPERSTRUCTURE OF BRIDGE NO. A-04-038 (ACD) AT _____ LUMP SUM		
120.	570	EARTH EXCAVATION AT _____ PER CUBIC YARD		
121.	8	CLASS A ROCK EXCAVATION AT _____ PER CUBIC YARD		
127.1	70	REINFORCED CONCRETE EXCAVATION AT _____ PER CUBIC YARD		
140.	590	BRIDGE EXCAVATION AT _____ PER CUBIC YARD		

Project # 610777 Contract # 131930				
Location : ADAMS				
Description : Bridge Replacement, A-04-038, Quality Street over Hoosic River				
ITEM #	**QUANTITY**	**ITEM WITH UNIT BID PRICE WRITTEN IN WORDS**	**UNIT PRICE**	**AMOUNT**
141.1	60	TEST PIT FOR EXPLORATION AT _____ PER CUBIC YARD		
142.	600	CLASS B TRENCH EXCAVATION AT _____ PER CUBIC YARD		
143.	100	CHANNEL EXCAVATION AT _____ PER CUBIC YARD		
144.	60	CLASS B ROCK EXCAVATION AT _____ PER CUBIC YARD		
146.	2	DRAINAGE STRUCTURE REMOVED AT _____ EACH		
151.	400	GRAVEL BORROW AT _____ PER CUBIC YARD		
151.1	200	GRAVEL BORROW FOR BRIDGE FOUNDATION AT _____ PER CUBIC YARD		
151.2	18	GRAVEL BORROW FOR BACKFILLING STRUCTURES AND PIPES AT _____ PER CUBIC YARD		
156.	115	CRUSHED STONE AT _____ PER TON		

Project # 610777	Contract # 131930			
Location : ADAMS				
Description : Bridge Replacement, A-04-038, Quality Street over Hoosic River				
ITEM #	**QUANTITY**	**ITEM WITH UNIT BID PRICE WRITTEN IN WORDS**	**UNIT PRICE**	**AMOUNT**
156.1	45	CRUSHED STONE FOR BRIDGE FOUNDATIONS AT _____ PER TON		
156.13	30	CRUSHED STONE FOR INTEGRAL ABUTMENT PILES AT _____ PER TON		
156.5	52	CRUSHED STONE FOR FILTER BLANKET AT _____ PER CUBIC YARD		
160.3	6	CONTROLLED LOW-STRENGTH MATERIAL (> 300 PSI) AT _____ PER CUBIC YARD		
170.	800	FINE GRADING AND COMPACTING - SUBGRADE AREA AT _____ PER SQUARE YARD		
173.1	700	SOIL REPLACEMENT OF FORMER PAVED AREAS FOR SEEDING AT _____ PER SQUARE YARD		
173.2	20	SOIL DECOMPACTION AT _____ PER SQUARE YARD		
180.01	1	ENVIRONMENTAL HEALTH AND SAFETY PROGRAM AT _____ LUMP SUM		
180.02	16	PERSONAL PROTECTION LEVEL C UPGRADE AT _____ PER HOUR		

Project # 610777	Contract # 131930			
Location : ADAMS				
Description : Bridge Replacement, A-04-038, Quality Street over Hoosic River				
ITEM #	**QUANTITY**	**ITEM WITH UNIT BID PRICE WRITTEN IN WORDS**	**UNIT PRICE**	**AMOUNT**
180.03	80	LICENSED SITE PROFESSIONAL SERVICES AT _____ PER HOUR		
181.11	1,355	DISPOSAL OF UNREGULATED SOIL AT _____ PER TON		
181.12	80	DISPOSAL OF REGULATED SOIL - IN-STATE FACILITY AT _____ PER TON		
181.13	80	DISPOSAL OF REGULATED SOIL - OUT-OF-STATE FACILITY AT _____ PER TON		
181.14	40	DISPOSAL OF HAZARDOUS WASTE AT _____ PER TON		
201.	2	CATCH BASIN AT _____ EACH		
202.	1	MANHOLE AT _____ EACH		
243.12	45	12 INCH REINFORCED CONCRETE PIPE CLASS IV AT _____ PER FOOT		
271.12	45	12 INCH AND UNDER PIPE REMOVED AND STACKED AT _____ PER FOOT		

Project # 610777	Contract # 131930			
Location : ADAMS				
Description : Bridge Replacement, A-04-038, Quality Street over Hoosic River				
ITEM #	**QUANTITY**	**ITEM WITH UNIT BID PRICE WRITTEN IN WORDS**	**UNIT PRICE**	**AMOUNT**
303.06	10	6 INCH DUCTILE IRON WATER PIPE (MECHANICAL JOINT) AT _____ PER FOOT		
303.08	15	8 INCH DUCTILE IRON WATER PIPE (MECHANICAL JOINT) AT _____ PER FOOT		
303.12	80	12 INCH DUCTILE IRON WATER PIPE (MECHANICAL JOINT) AT _____ PER FOOT		
303.14	35	14 INCH DUCTILE IRON WATER PIPE (MECHANICAL JOINT) AT _____ PER FOOT		
303.16	240	16 INCH DUCTILE IRON WATER PIPE (MECHANICAL JOINT) AT _____ PER FOOT		
303.20	510	20 INCH DUCTILE IRON WATER PIPE (MECHANICAL JOINT) AT _____ PER FOOT		
309.	12,110	DUCTILE IRON FITTINGS FOR WATER PIPE AT _____ PER POUND		
315.06	15	6 INCH WATER MAIN REMOVED AND STACKED AT _____ PER FOOT		
315.12	220	12 INCH WATER MAIN REMOVED AND STACKED AT _____ PER FOOT		

Project # 610777	Contract # 131930			
Location : ADAMS				
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ITEM #	**QUANTITY**	**ITEM WITH UNIT BID PRICE WRITTEN IN WORDS**	**UNIT PRICE**	**AMOUNT**
315.16	400	16 INCH WATER MAIN REMOVED AND STACKED AT _____ PER FOOT		
315.20	240	20 INCH WATER MAIN REMOVED AND STACKED AT _____ PER FOOT		
350.06	1	6 INCH GATE AND GATE BOX AT _____ EACH		
350.08	2	8 INCH GATE AND GATE BOX AT _____ EACH		
350.12	3	12 INCH GATE AND GATE BOX AT _____ EACH		
350.16	2	16 INCH GATE AND GATE BOX AT _____ EACH		
358.	3	GATE BOX ADJUSTED AT _____ EACH		
367.12	3	12 INCH CAST IRON PLUG AT _____ EACH		
367.16	4	16 INCH CAST IRON PLUG AT _____ EACH		

Project # 610777	Contract # 131930			
Location : ADAMS				
Description : Bridge Replacement, A-04-038, Quality Street over Hoosic River				
ITEM #	**QUANTITY**	**ITEM WITH UNIT BID PRICE WRITTEN IN WORDS**	**UNIT PRICE**	**AMOUNT**
369.12	2	12 X 12 INCH TAPPING SLEEVE, VALVE AND BOX AT _____ EACH		
369.16	2	16 X 16 INCH TAPPING SLEEVE, VALVE AND BOX AT _____ EACH		
373.20	315	20 INCH WATER PIPE INSULATION AT _____ PER FOOT		
375.12	2	12 INCH INSERTION VALVE AND BOX AT _____ EACH		
375.16	2	16 INCH INSERTION VALVE AND BOX AT _____ EACH		
402.13	300	PAVEMENT MILLING MULCH FOR SHOULDERS AT _____ PER FOOT		
415.1	600	PAVEMENT STANDARD MILLING AT _____ PER SQUARE YARD		
431.	6	HIGH EARLY STRENGTH CEMENT CONCRETE BASE COURSE AT _____ PER SQUARE YARD		
443.	4	WATER FOR ROADWAY DUST CONTROL AT _____ PER 1000 GALLONS		

Project # 610777	Contract # 131930			
Location : ADAMS				
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ITEM #	**QUANTITY**	**ITEM WITH UNIT BID PRICE WRITTEN IN WORDS**	**UNIT PRICE**	**AMOUNT**
450.22	110	SUPERPAVE SURFACE COURSE – 9.5 (SSC – 9.5) AT _____ PER TON		
450.31	120	SUPERPAVE INTERMEDIATE COURSE - 12.5 (SIC -12.5) AT _____ PER TON		
450.601	25	SUPERPAVE BRIDGE SURFACE COURSE - 9.5 POLYMER (SSC-B - 9.5 - P) AT _____ PER TON		
450.701	40	SUPERPAVE BRIDGE PROTECTIVE COURSE - 9.5 POLYMER (SPC-B - 9.5 - P) AT _____ PER TON		
451.	10	HMA FOR PATCHING AT _____ PER TON		
452.	260	ASPHALT EMULSION FOR TACK COAT AT _____ PER GALLON		
453.	800	HMA JOINT ADHESIVE AT _____ PER FOOT		
472.	2	TEMPORARY ASPHALT PATCHING AT _____ PER TON		
503.	60	GRANITE CURB TYPE VA3 - STRAIGHT AT _____ PER FOOT		

Project # 610777 Contract # 131930				
Location : ADAMS				
Description : Bridge Replacement, A-04-038, Quality Street over Hoosic River				
ITEM #	**QUANTITY**	**ITEM WITH UNIT BID PRICE WRITTEN IN WORDS**	**UNIT PRICE**	**AMOUNT**
503.1	45	GRANITE CURB TYPE VA3 - CURVED AT _____ PER FOOT		
570.3	225	HOT MIX ASPHALT CURB TYPE 3 AT _____ PER FOOT		
620.12	150	GUARDRAIL, TL-2 (SINGLE FACED) AT _____ PER FOOT		
620.32	150	GUARDRAIL - CURVED, TL-2 (SINGLE FACED) AT _____ PER FOOT		
627.82	4	GUARDRAIL TANGENT END TREATMENT, TL-2 AT _____ EACH		
628.21	4	TRANSITION TO NCHRP 350 GUARDRAIL AT _____ EACH		
628.24	2	TRANSITION TO BRIDGE RAIL AT _____ EACH		
628.241	2	TRANSITION TO BRIDGE RAIL - CURVED AT _____ EACH		
630.2	270	HIGHWAY GUARD REMOVED AND DISCARDED AT _____ PER FOOT		

Project # 610777	Contract # 131930			
Location : ADAMS				
Description : Bridge Replacement, A-04-038, Quality Street over Hoosic River				
ITEM #	**QUANTITY**	**ITEM WITH UNIT BID PRICE WRITTEN IN WORDS**	**UNIT PRICE**	**AMOUNT**
630.41	50	STEEL BACKED WOOD GUARDRAIL - DOUBLE SIDED REMOVED AND RESET AT _____ PER FOOT		
643.	40	WOODEN FENCE REMOVED AND RESET AT _____ PER FOOT		
645.048	40	48 INCH CHAIN LINK FENCE (PIPE TOP RAIL) (LINE POST OPTION) AT _____ PER FOOT		
657.	300	TEMPORARY FENCE AT _____ PER FOOT		
657.5	160	TEMPORARY FENCE REMOVED AND RESET AT _____ PER FOOT		
669.	50	FENCE REMOVED AND STACKED AT _____ PER FOOT		
697.	210	SEDIMENTATION FENCE AT _____ PER FOOT		
697.1	2	SILT SACK AT _____ EACH		
698.4	270	GEOTEXTILE FABRIC FOR PERMANENT EROSION CONTROL AT _____ PER SQUARE YARD		

Project # 610777	Contract # 131930			
Location : ADAMS				
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ITEM #	**QUANTITY**	**ITEM WITH UNIT BID PRICE WRITTEN IN WORDS**	**UNIT PRICE**	**AMOUNT**
701.2	15	CEMENT CONCRETE PEDESTRIAN CURB RAMP AT _____ PER SQUARE YARD		
702.	25	HOT MIX ASPHALT SIDEWALK OR DRIVEWAY AT _____ PER TON		
710.4	1	BOUND - PLAIN GRANITE AT _____ EACH		
722.3	1	SCHEDULE OF OPERATIONS (TYPE C) - FIXED PRICE $43500 AT Forty Three Thousand Five Hundred Dollars LUMP SUM	$43,500.00	$43,500.00
740.	45	ENGINEER'S FIELD OFFICE AND EQUIPMENT (TYPE A) AT _____ PER MONTH		
748.	1	MOBILIZATION AT _____ LUMP SUM		
751.	130	LOAM FOR ROADSIDES AT _____ PER CUBIC YARD		
751.7	90	COMPOST BLANKET AT _____ PER CUBIC YARD		
765.21	6	ANUAL COVER CROP FOR NATIVE SEEDING AT _____ PER POUND		

Project # 610777	Contract # 131930			
Location : ADAMS				
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ITEM #	**QUANTITY**	**ITEM WITH UNIT BID PRICE WRITTEN IN WORDS**	**UNIT PRICE**	**AMOUNT**
765.451	4	PART SHADE ROADSIDE MIX AT _____ PER POUND		
765.553	2	WETLAND SEEDING RIPARIAN MIX AT _____ PER POUND		
765.554	1	WETLAND SEED-SEASONALLY FLOODED MIX AT _____ PER POUND		
765.635	900	NATIVE SEEDING AND ESTABLISHMENT AT _____ PER SQUARE YARD		
767.121	1,200	SEDIMENT CONTROL BARRIER AT _____ PER FOOT		
769.	300	PAVEMENT MILLING MULCH UNDER GUARD RAIL AT _____ PER FOOT		
772.038	3	ARBORVITAE 7-8 FEET AT _____ EACH		
775.140	2	LINDEN - AMERICAN 2-2.5 INCH CALIPER AT _____ EACH		
777.261	3	OAK - SWAMP WHITE 1.5-2 INCH CALIPER AT _____ EACH		

Project # 610777	Contract # 131930			
Location : ADAMS				
Description : Bridge Replacement, A-04-038, Quality Street over Hoosic River				
ITEM #	**QUANTITY**	**ITEM WITH UNIT BID PRICE WRITTEN IN WORDS**	**UNIT PRICE**	**AMOUNT**
777.442	3	PLANETREE - AMERICAN 2-2.5 INCH CALIPER AT _____ EACH		
781.284	2	HAWTHORN - COCKSPUR 1.5-2 INCH CALIPER AT _____ EACH		
783.036	3	SERVICEBERRY - ALLEGHENY CLUMP 4-5 FEET AT _____ EACH		
789.633	3	BLUEBERRY - HIGHBUSH 2-3 FEET / #3 AT _____ EACH		
794.731	6	SUMMERSWEET SHRUB 18-24 INCH / #2 AT _____ EACH		
795.189	6	WITCH HAZEL - SPRING BLOOMING 2-3 FEET / #3 AT _____ EACH		
795.433	2	WILLOW - PUSSY 2-3 FEET / #2 AT _____ EACH		
796.	10	PERENNIAL #1 AT _____ EACH		
833.7	4	DELINEATION FOR GUARD RAIL TERMINI AT _____ EACH		

Project # 610777 Contract # 131930				
Location : ADAMS				
Description : Bridge Replacement, A-04-038, Quality Street over Hoosic River				
ITEM #	**QUANTITY**	**ITEM WITH UNIT BID PRICE WRITTEN IN WORDS**	**UNIT PRICE**	**AMOUNT**
852.	250	SAFETY SIGNING FOR TRAFFIC MANAGEMENT AT _____ PER SQUARE FOOT		
853.1	4	PORTABLE BREAKAWAY BARRICADE TYPE III AT _____ EACH		
853.2	60	TEMPORARY BARRIER (TL-2) AT _____ PER FOOT		
854.1	220	PAVEMENT MARKING REMOVAL AT _____ PER SQUARE FOOT		
856.12	80	PORTABLE CHANGEABLE MESSAGE SIGN AT _____ PER DAY		
859.	5,500	REFLECTORIZED DRUM AT _____ PER DAY		
866.112	110	12 INCH REFLECTORIZED WHITE LINE (THERMOPLASTIC) AT _____ PER FOOT		
903.	60	3000 PSI, 1.5 INCH, 470 CEMENT CONCRETE AT _____ PER CUBIC YARD		
942.102	300	STEEL PILE HP 10 X 57 AT _____ PER FOOT		

Project # 610777	Contract # 131930			
Location : ADAMS				
Description : Bridge Replacement, A-04-038, Quality Street over Hoosic River				
ITEM #	**QUANTITY**	**ITEM WITH UNIT BID PRICE WRITTEN IN WORDS**	**UNIT PRICE**	**AMOUNT**
944.2	230	PREDRILLING FOR PILES AT _____ PER FOOT		
944.3	70	DRILLING FOR PILE OBSTRUCTIONS AT _____ PER FOOT		
948.41	2	DYNAMIC LOAD TEST BY CONTRACTOR AT _____ EACH		
948.5	10	PILE SHOES AT _____ EACH		
950.32	1	TEMPORARY EARTH SUPPORT SYSTEM AT _____ LUMP SUM		
983.12	250	RIPRAP WITH GRAVEL PACKED VOIDS AT _____ PER TON		
991.1	1	CONTROL OF WATER - STRUCTURE NO. A-04-038 AT _____ LUMP SUM		
993.12	1	TEMPORARY UTILITY BRIDGE AT _____ LUMP SUM		
994.01	1	TEMPORARY PROTECTIVE SHIELDING BRIDGE NO. A-04-038 AT _____ LUMP SUM		

Project # 610777	Contract # 131930			
Location : ADAMS				
Description : Bridge Replacement, A-04-038, Quality Street over Hoosic River				
ITEM #	**QUANTITY**	**ITEM WITH UNIT BID PRICE WRITTEN IN WORDS**	**UNIT PRICE**	**AMOUNT**
995.01	1	BRIDGE STRUCTURE, BRIDGE NO. A-04-038 AT _____ LUMP SUM		
Total Qty:	35,870.3			

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DOCUMENT B00853

SCHEDULE OF PARTICIPATION
BY DISADVANTAGED BUSINESS ENTERPRISES (DBEs)

PRIME BIDDER: _____

DATE OF BID OPENING: _____ MassDOT PROJECT NO.: 610777

FEDERAL AID PROJECT NUMBER: BFL(BR-OFF)-0031(020)

PROJECT LOCATION: ADAMS

Name Address and Phone Number of DBE	Name of Activity	NAICS Code(s)	(a) DBE Contractor Activity Amount *Construction Work*	(b) DBE Other Business Amount *Services, Supplies, Material*	(c) Total amount eligible for credit
Total Bid Amount	TOTALS:		$		$
	DBE Percentage of Total bid:		%		%

A copy of the DBE's most recent certification and an original affidavit must be attached to this document.

Is a Joint Check Approval being submitted for any of the above? ☐ Yes X No
Will any of the contractors listed above be using a third party to deliver materials or perform any portion of work?
☐ Yes X No
(i.e. manufacturing)

SIGNATURE:_____ DATE_____

NAME AND TITLE (*PRINT*):_____

EMAIL ADDRESS: _____TEL NO.:_____

Rev'd 5/8/13

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DOCUMENT B00854

DBE Letter of Intent

(To be completed by the DBE – Page 1 of 2)

The DBE firm will also include the latest MassUCP letter with this Letter of Intent.

To: _____ (Prime Bidder)

From: _____ (DBE Firm)

Federal Aid Project No.: BFL(BR-OFF)-0031(020) Bid Opening or Due Date: _____

Project Name: _____ Project Location: ADAMS

I, _____, authorized signatory of the above-reference DBE firm hereby declare:

(Print Name)

(a) My company is currently certified as a Disadvantaged Business Enterprise (DBE) by the Massachusetts Supplier Diversity Office (SDO), as a (check all that apply):

☐ CONTRACTOR ☐ REGULAR DEALER ☐ OTHER
☐ MANUFACTURER ☐ TRUCKING OPERATIONS ☐ PROFESSIONAL SERVICES

[Additional guidance is available at Title 49, Code of Federal Regulations, Part 26.55 (49 CFR Part 26.55)]

(b) My firm has the ability to manage, supervise and perform the activity described on page 3 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.

(c) There have been no changes affecting the ownership, control or independence of my company since my last certification review on _____. 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 Office of Diversity and Civil Rights (ODCR)(MBTA/MassDOT) and SDO.

(d) I have read the MassDOT proposal for the Project, and acknowledge that my company will comply with that document and the requirements of 49 CFR Part 26.

(e) For the purpose of obtaining subcontractor approval from the MassDOT, my firm will provide to you:

a. ***The following construction work:***
   i. a complete list of contact information for proposed Superintendent, i.e., address, phone number and e-mail address, and;
   ii. a list of projects completed in the last 10 years. I shall also include, for each project: the name and telephone number of a contact person for the contracting authority, person, or organization; project title / location (City/State), dollar value of the work; a description of the work; and the date project completed .

b. The following professional services work:
   i. resume, stating the qualifications and experience of person responsible for project oversight and contact information, i.e., address, phone number and e-mail address.
   ii. proposed team and organization,
   iii. resumes of key personnel;
   iv. example projects

c. 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 to be sent to the Office of Diversity and Civil Rights Government Compliance Unit designee;
   ii. information concerning brokers fees and commissions for providing services or materials.

DBE Firm Authorized Signature _____ Date _____

DBE Letter of Intent (Continued)

(To be completed by the DBE – Page 2 of 2)

Prime Bidder: _____

DBE Firm: _____

Federal Aid Project No.: BFL(BR-OFF)-0031(020) Bid Opening or Due Date: _____

Project Name: _____ Project Location: ADAMS

Item number if applicable	NAICS Code	Description of Activity with notations such as Services, or Brokerage, Labor Only, Material Only, or Complete	Quantity	Unit Price	Amount
			TOTAL AMOUNT:		

Please give full explanations, attach additional sheets if necessary.

I HEREBY VERIFY THAT _____

(DBE Firm)

WILL SOLELY PERFORM THE WORK, OR PROVIDE THE SERVICES OR MATERIALS, AS DESCRIBED ABOVE.

DBE Authorized Signature: _____

_____

Name (Print): _____

Title: _____

Email Address: _____

Phone Number: _____ Fax Number: _____

END OF DOCUMENT

DOCUMENT B00855

DBE JOINT CHECK ARRANGEMENT APPROVAL FORM

(to be submitted by Prime Contractor)

Contract No: 131930 **Project No.** 610777 **Federal Aid No.:** BFL(BR-OFF)-0031(020)

Location: ADAMS **Bid Opening Date:** _____

Project Description: Bridge Replacement, A-04-038, Quality Street over Hoosic 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 ***