

**KINGS HIGHWAY BRIDGE OVER PELHAM BROOK
BRIDGE REPLACEMENT
Bridge No. R-10-003
Rowe, Massachusetts**

ROWE R-10-003



INVITATION FOR BIDS 20191205

CONTACT INFORMATION:

ANDREA WOODS, MCPPO

CHIEF PROCUREMENT OFFICER

FRANKLIN REGIONAL COUNCIL OF GOVERNMENTS

12 Olive Street, Suite 2

Greenfield, MA 01301

email: bids@frcog.org

bid docs available at <https://frcog.org/bids>

413-774-3167 X104

FAX: 413-774-3169

Engineering Plans and Specifications by:

Gill Engineering Associates, Inc.

Needham, Massachusetts

INVITATION FOR BIDS
TOWN OF ROWE – KINGS HIGHWAY OVER PELHAM BROOK
BRIDGE REPLACEMENT – BRIDGE NO. R-10-003
FRCOG IFB 20191205

The Franklin Regional Council of Governments (FRCOG) will accept sealed bids on behalf of the Town of Rowe for replacement of a bridge on Kings Highway over Pelham Brook.

The sealed bids, plainly marked "**IFB 20191205 Rowe Kings Highway Bridge**" in the lower left hand corner of the envelope will be received by the Franklin Regional Council of Governments, 12 Olive St. Suite 2, Greenfield, MA 01301, until **DECEMBER 5, 2019 at 2 p.m.**, at which time they will be publicly opened and read.

THIS BID DOCUMENT IS TO BE CONSIDERED INFORMATIONAL ONLY
UNLESS THE BIDDER MEETS MASSDOT PREQUALIFICATION REQUIREMENTS.
Contractors should contact the MassDOT Prequalification Hotline at 857-368-8660 or email
prequal.r109@state.ma.us with questions.

Wage rates for this bid are subject to prevailing wage rates as per MGL Chapter 149, Section 26 - 27f inclusive. This bid is being undertaken per MGL Ch 30 §39M requiring a 5% bid bond/deposit and 50% Labor and Materials Payment Bond.

Specifications and plans for the bid and bid instructions are available for download from <https://frcog.org/bids>. Downloading from this site will allow for automatic notifications of any addenda or clarifications.

Potential contractors are invited to visit the project site and send written questions via email to the FRCOG Chief Procurement Officer at bids@frcog.org no later than 4pm two weeks before the bid opening. There will be no pre-bid meeting.

The Town of Rowe is the awarding authority and reserves the right to accept or reject any or all bids in total or in part as they may deem in the best public interest.

FRANKLIN REGIONAL COUNCIL OF GOVERNMENTS

By: *Andrea Woods, Chief Procurement Officer*
October 30, 2019

The Franklin Regional Council of Governments (FRCOG) and the Town do not discriminate on the basis of race, color, national origin, sex, age, disability, or gender with respect to admission to, access to, or operation of its programs, services or activities. If you would like accessibility or language accommodation, please contact the Title VI Coordinator at 413-774-3167 (voice) (MA Relay System: 800-439-2370), 413-774-3169 (fax), or civilrights@frcog.org (e-mail).

12 Olive Street, Ste 2, Greenfield, MA 01301 phone 413-774-3167 fax 413-774-3169 <https://frcog.org>

Advertisement for Public Works Construction Services (MGL Ch 30, §39M)

<input type="checkbox"/> GREENFIELD RECORDER	October 30, 2019
<input type="checkbox"/> FRCOG Webpage	October 30, 2019
<input type="checkbox"/> Posted at Rowe Town Hall	October 30, 2019
<input type="checkbox"/> Central Register	October 30, 2019
<input type="checkbox"/> CommBUYS	October 30, 2019

CRITICAL DATES

Written Questions Accepted No Later Than	November 21, 2019 at 4pm
Addenda Issued by	November 26, 2019
Deadline for Bid Submissions/Public Bid Opening	December 5, 2019 at 2pm

APPROXIMATE DATES

Contract Executed	December 23, 2019
Work Completed by	June 30, 2020



BID PACKAGE TABLE OF CONTENTS

	IFB Page(s)
Invitation for Bids – Public Notice	1-2
Schedule of Critical and Approximate Dates	3
Project Description	4
Special Provisions/Technical Specifications	5- 57
Attachment A Locus Map	58-59
Attachment B Order of Conditions	60-74
Attachment C US Army Corps of Engineers General Permit	75-87
Attachment D Temporary Bridge Agreement	88-90
General Instructions to Bidders	91-94
Bid Form	95-97
Required Certifications to be Submitted with Bid	98-101
Attachment E Sample Contract Document and Payment Bond Form	102-110
Attachment F Massachusetts Certified Payroll Reporting Forms and Prevailing Wage Schedule	111-149

UNDER SEPARATE COVER

EXHIBIT 1 GILL ENGINEERING DESIGN PLANS

PROJECT DESCRIPTION SUMMARY

TOWN OF ROWE – KINGS HIGHWAY OVER PELHAM BROOK BRIDGE REPLACEMENT – BRIDGE NO. R-10-003 FRCOG IFB 20191205

The Kings Highway Bridge Replacement Project is located on a dead-end road just off the intersection with Zoar Road located approximately 4 miles north of the intersection on Rte. 2 and Zoar Road in the Town of Rowe. Kings Highway services residents and The Rowe Center which holds workshops and camps throughout the year thus requiring vehicle access during construction activities. It is proposed to replace the structural deficient bridge that current spans over Pelham Brook. The current bridge abutments are located within the stream channel and are founded on bedrock. The stream channel is steep and has exposed bedrock within it. Concrete retaining walls join the abutment at three of its corners. Just upstream of the bridge is a weir structure that impounds an unnamed reservoir. There are no time restrictions for working within the stream channel. The construction contract completion date is June 30, 2020.

TECHNICAL SPECIFICATIONS

TOWN OF ROWE BRIDGE NO. R-10-003, KINGS HIGHWAY ROAD OVER PELHAM BROOK

SPECIAL PROVISIONS TO THE MASSACHUSETTS DEPARTMENT OF TRANSPORTATION – HIGHWAY DIVISION STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES

DIVISION II

The work on this project shall conform to the 1988 Massachusetts Department of Transportation Highway Division Standard Specifications for Highways and Bridges, the April 1, 2019 Supplemental Specifications, the June 30, 2019 Interim Supplemental Specifications, The October 2017 Massachusetts Department of Transportation Highway Division Construction Standard Details; the 1990 Standard Drawings for Signs and Supports; the 1996 Construction and Traffic Standard Details (as relates to the Pavement Markings details only); the 2009 Manual on Uniform Traffic Control Devices (MUTCD) with Massachusetts Amendments and the Standard Municipal Traffic Code; the 1968 Standard Drawings for Traffic Signals and Highway Lighting; the latest edition of American Standard for Nursery Stock; the Plans and these Special Provisions. The 1988 Standard Specifications; the 2019 Supplemental Specifications and the 2019 Interim Supplemental Specifications shall be referred to collectively as the Standard Specifications.

General: The work includes the complete replacement of the existing deteriorating concrete slab bridge with a proposed precast concrete or cast-in-place 3-sided frame bridge on concrete spread footings and concrete wingwalls. The work shall include installation of temporary bridge with bypass approach, demolition of the existing bridge and wingwalls to the limits shown on the plans, installation of the proposed bridge and wingwalls, bridge excavation, rock excavation, necessary de-watering /diversion, installation of steel thrie beam bridge railing and approach guard rail, and full depth pavement and final paving over the bridge and the approaches. The Plans consist of 16 construction drawing sheets that were reviewed and approved by MassDOT on 10/01/19. Traffic management required to perform the proposed work shall be as shown on the Plans. Payment for materials or work shown on the Plans or as being part of the bridge replacement which may be incidental to its construction and are not specifically included for payment under the Contract shall be considered incidental to the work performed. Where used within the contract documents, the terms “Department”, “Municipality”, and “Town” shall be taken to mean the Town of Rowe. The term “Engineer” shall be taken to mean the authorized representative or Project Manager for the Town of Rowe.

For the work specified under this Contract, the Contractor or Subcontractor(s) shall be

(10/01/2019) -1

prequalified by the Massachusetts Department of Transportation Highway Division (MassDOT) for the following classes of work:

Bridge Construction
Demolition

PLANS AND DETAIL DRAWINGS

(Supplementing Subsection 5.02)

Plans of the existing bridge R-10-003 are not available. Existing conditions shown in plans were depicted from survey and visual observations. The latest MassDOT Inspection report is available upon request from Gill Engineering. The Contractor shall perform his/her own investigation of the existing bridge to determine its condition and details necessary for construction and base his/her bid thereon.

PROTECTION OF UTILITIES AND PROPERTY

(Supplementing Subsection 7.13)

The bridge plans may indicate the location of existing known utilities in the vicinity of the work. Bidders are cautioned to verify this information, as its accuracy and completeness are not guaranteed in any manner.

The Contractor is responsible for the protection of vehicular and pedestrian areas on and around the bridge being worked on. The Contractor at no additional compensation (unless otherwise provided in this Contract) shall take all necessary precautions, including the use of shielding, to protect vehicles and pedestrians from debris.

NOTICE TO OWNERS OF UTILITIES

Written notice shall be given by the Contractor to all public service corporations or officials owning or having charge of publicly or privately owned utilities attached to, or in the vicinity of the bridge, of his intention to commence operations and the Contractor shall at that time file a copy of such notice with the Engineer.

Before the Contractor begins any work or operations that may cause damage to any subsurface structures, he shall carefully locate all such structures and conduct his operations so as to avoid any damage to them.

A list of public and private utilities can be found on the MassDOT website at:

<http://www.massdot.state.ma.us/>

Select Quick Links

Select Doing Business with the Highway Division

(10/01/2019) -2

Select Design/Engineering

Select Utility Contacts

Select District 1 on top of the webpage, select the City/Town, and then locate the utility.

The utility contact list is for guidance only and is not guaranteed to be complete or up to date. The list given is typically used for MassDOT projects only. Contractor shall contact each utility on behalf of the Town to schedule any relocation of overhead lines that may be in conflict with the proposed work.

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

Town Highway Superintendent, Town of Rowe

Police Department, Town of Rowe

Fire Department, Town of Rowe

Utilities on Overhead Line:

Verizon Karen Mealey 774-409-3160

National Grid 800-375-7405

PROTECTION OF UNDERGROUND FACILITIES

The Contractor's attention is directed to the necessity of making his own investigation in order to assure that no damage to existing structures, drainage lines, traffic signal conduits, et cetera, will occur.

The Contractor shall notify Massachusetts DIG SAFE and procure a Dig Safe Number for each location prior to disturbing existing ground in any way. The telephone number of the Dig Safe Call Center is 811 or 1-888-344-7233

PIGEON WASTE

The Contractor shall remove and dispose of any pigeon waste and any other debris accumulated on the bridge members in areas where work is being performed. Pigeon waste and debris material contaminates will require special handling and disposal in accordance with all Federal, state, and local requirements.

ENVIRONMENTAL PERMITTING

The Contractor is advised that a MassDEP WPA Form 5 - Order of Conditions was issued for this project by the Rowe Conservation Commission on April 11, 2019 under MassDEP File No.

(10/01/2019) -3

274-0037. See Attachment B. General Permit Number NAE-2019-01540 was issued on August 6, 2019 by the United States Army Corps of Engineers. See Attachment C. If field conditions and/or Contractor-proposed erection, demolition, storage, or other procedures not originally allowed by existing environmental permits require work to occur in or otherwise impact water or wetland resource areas, the Contractor is advised that no associated work can occur until all required environmental permits have been either amended or obtained allowing such work. The Contractor must notify the Town of Rowe and Resident Engineer in writing at least 60 days prior to desired commencement of the proposed activity. All environmental submittals, including any contact with Local, State, or Federal environmental agencies, must be coordinated with the Town of Rowe and the Resident Engineer. The Contractor is expected to fully cooperate with requests for information and provide the same in a timely manner. The Contractor is further advised that the Town of Rowe will not entertain a delay claim due to the time required to modify or obtain the environmental permits.

ARCHITECTURAL ACCESS BOARD TOLERANCES

The Contractor shall be responsible for constructing all project elements in strict compliance with the current AAB/ADA rules, regulations and standards.

All construction elements in this project associated with sidewalks, walkways, wheelchair ramps and curb cuts are controlled by 521CMR - Rules and Regulations of the Architectural Access Board (AAB).

The AAB Rules and Regulations specify maximum slopes and minimum dimensions required for construction acceptance. There is no tolerance allowed for slopes greater than the maximum slope nor for dimensions less than the minimum dimensions.

Contractors shall establish grade elevations at all wheel chair ramp locations, and shall set transition lengths according to the appropriate table in the Construction Standards (or to the details shown on the plans).

All wheelchair ramp joints and transition sections which define grade changes shall be formed, staked and checked prior to placing cement concrete. All grade changes are to be made at joints.

PROVISIONS FOR TRAVEL AND PROSECUTION OF WORK

The Contractor shall notify the Town of Rowe in writing at least two (2) weeks in advance of any proposed commencement of the work. Before starting any work under this Contract, the Contractor shall submit a Schedule of Operations. Work on roadways shall proceed only on such sections and widths thereof as will be approved by the Town of Rowe.

DESIGNER/ TOWN DPW DIRECTOR/COMMISSIONS

DESIGNER

Keith Nelson, P.E.
Gill Engineering Associates, Inc.
63 Kendrick Street
Needham, MA 02494
781-355-7100

TOWN DEPARTMENT OF PUBLIC WORKS

Lance Larned, Highway Superintendent
Town of Rowe
8 Sibley Road
Rowe, MA 01367
413-339-5588

ROWE CONSERVATION COMMISSION

Ramon Sanchez
321 Zoar Road
PO Box 462
Rowe, MA 01367
413-339-4836

ITEM 115.1**DEMOLITION OF BRIDGE NO. R13003****LUMP SUM**

The work to be done under this Item shall conform to the relevant provisions of Section 112, 120, and 140 of the Standard Specifications, amended and or supplemented as follows:

The work to be done under this Item shall consist of the demolition and satisfactory removal of the existing bridge to the limits shown on the plans.

Existing materials to be removed and disposed of under this Item include, but are not limited to, the following:

- The existing concrete abutments and wingwalls to the limits shown
- The existing concrete bridge deck
- The existing steel railing

Within 10 working days of the notice to proceed, the Contractor shall submit a plan indicating his proposed demolition procedures and methods to be used including equipment, tools, devices, crane or excavator capacity and location, schedule of operations, methods of utility protection, 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 Erection of the Specifications.

The demolition procedures and any necessary calculations and drawings shall be stamped by a Professional Engineer registered in Massachusetts certifying that all existing structural members are suitably supported throughout the demolition process. In determining the stresses to which the structure will be subjected, all loading combinations including traffic and the Contractor's equipment shall be considered. The method of determining stresses shall conform to the latest AASHTO Standard Specifications for Highway Bridges. Work under this Item may not commence until the Engineer has given written approval.

No debris, tools or incidental equipment of any kind will be permitted to fall into areas within the vicinity of the waterway under. Any material that accidentally falls into such areas shall be removed immediately.

Incidental to this item shall be the design and installation of a shielding system, which may be netting with sufficient covering to become impermeable or timber shielding, to protect the waterway from falling debris. The design for the shielding system shall be submitted as part of the Demolition Procedure. The shielding system shall extend outward beyond the edges of the bridge deck an enough distance to ensure no debris falls past the edge of the shielding. In addition, the shielding shall include areas along the existing rock ledge that lie adjacent to the approach retaining wall to keep debris falling into the stream.

Demolition of the bridge shall not commence until such time that the shielding system is in

(10/01/2019) -6

place.

Prior to the start of work, the Contractor shall locate all utilities and shall submit to the Engineer and the utility companies his proposed method of protecting them during the demolition operations as part of the Demolition Procedure. Procedure approval shall not serve to relieve the Contractor of his responsibility to protect all utilities from damage at all times. Any damage resulting from Contractor Operations shall be repaired at his expense.

All materials removed under Item 115.11 shall become the property of the Contractor and shall be removed from the job site and disposed of properly.

PAYMENT

Unless otherwise covered under other contract items, full payment for this work shall be included under the lump sum price for Item 115.1, Demolition of Bridge No. R-10-003, and shall include all labor, equipment and materials necessary to complete the work.

ITEM 140.

BRIDGE EXCAVATION

CUBIC YARD

Work under this item shall conform to the relevant provisions of Sections 120, 140 and 150 of the Specifications and the following:

Excavation shall be as required to install the proposed bridge and wingwalls to the line and grade shown on the Plans. Any materials encountered as defined in the referenced sections of the Specifications under the classification of Earth Excavation or Bridge Excavation shall be removed.

Backfill shall be placed and compacted in accordance with the relevant provisions of Section 150 of the Specifications. Compaction shall be achieved using mechanical tampers or other approved compacting equipment.

MEASUREMENT AND PAYMENT

Measurement shall be made to the nearest 0.1 cubic yards of Bridge Excavation complete and accepted by the Engineer to the limits shown on the plans. Excavation made outside the lines prescribed for payment will be considered as made for the Contractor's convenience and will not be included for payment under any item of excavation, or will the refilling of any such area be included under any item for filling material. Payment will be made at the contract unit price per cubic yard and shall be considered full compensation for all labor, equipment, stockpiling, hauling, disposal, and incidentals necessary to complete the work.

(10/01/2019) -7

ITEM 151.**GRAVEL BORROW****CUBIC YARD**

The work under this item shall conform to the relevant provisions of Section 150 of the Specifications and in close conformity with the lines and grades shown on the plans.

Gravel borrow conforming to material specification M1.03.0 Type b shall be used for the roadway subbase.

MEASUREMENT AND PAYMENT

Measurement shall be made to the nearest 0.1 cubic yards of Gravel Borrow complete and accepted by the Engineer to the limits shown on the plans. Payment will be made at the contract unit price per cubic yard and shall be considered full compensation for all labor, equipment, stockpiling, hauling, disposal, and incidentals necessary to complete the work.

ITEM 151.2**GRAVEL BORROW FOR BACKFILLING
STRUCTURES AND PIPES****CUBIC YARD**

Backfilling the precast concrete bridge and wingwalls shall be in accordance with Section 150 of the Specifications, the requirements of the manufacturer of the precast concrete bridge and wingwalls, and the following. Where differences exist between requirements of the manufacturer of the precast concrete bridge and wingwalls and the Specifications, the more stringent requirements shall apply.

1. The gravel borrow shall meet the requirements of M1.03.0 Type C. Excavated material may be used for backfilling if the material meets the requirements of M1.03.0 Type C. Any material that is stockpiled shall be piled within the project limits and right-of-way. Material shall not be stockpiled in the wetland area. Stockpiled material shall have at least one layer of tarp material below the pile and shall be covered with tarps. The pile shall be surrounded by compost filter tubes.
2. The fill shall be placed and compacted in layers not exceeding 8 inches in depth in accordance with the provisions of Subsection 150.62 of the Specifications and shall be compacted to at least 95% of the maximum dry density in accordance with ASTM D1557. The moisture content shall be within 2% of the optimum moisture content for compaction;
3. Backfill shall be placed as symmetrically as possible around the structure with differential depths of backfill on each side of the structure not exceeding 2 feet with respect to each other;
4. Compaction shall be achieved using mechanical tampers or approved compacting equipment for all fill within 4 feet of the structure;
5. Construction equipment will not be permitted atop the uncompleted structure;
6. Construction equipment whose weight exceeds the design capacity shall not be permitted atop the completed structure under any circumstances;
7. The use of vibratory rollers for compaction purposes will not be permitted.

Backfilling operations shall not begin until the following checks have been made:

1. The bridge to wingwall joints are sealed and the bridge frame to frame connections are complete as shown on the shop Drawings;
2. The bituminous damp-proofing shall be applied to the bridge frames and wingwalls and approved by the Engineer;
3. All frame joint connections and seals are properly placed in accordance with manufacturer's specifications shown on the shop drawings.

A Project Manager from the bridge manufacturer shall be on site during backfilling operations to ensure that manufacturer's requirements are met.

ITEM 156.

CRUSHED STONE

CUBIC YARD

The work under this item shall conform to the relevant provisions of Section 150 of the Specifications in close conformity with the lines and grades shown on the plans and the following:

Crushed stone conforming to M2.01.3 shall be placed within backfill of the wing walls adjacent to weep holes as shown in the plans.

MEASUREMENT AND PAYMENT

Crushed stone will be measured for payment per cubic yard complete in place and accepted by the Engineer.

Crushed stone will be paid for at the Contract unit price per cubic yard, which price shall include all labor, tools, material, equipment and incidental costs required to complete the work.

ITEM 460.

HOT MIX ASPHALT LOW VOLUME NON-HIGHWAY

TON

DESCRIPTION

460.20 General.

The work performed under this section shall consist of designing, producing, placing, compacting and testing a "Warm Mix Asphalt" SUPERPAVE mixture. This mixture is intended for use on local roadways or municipal streets having traffic volumes between 2,000 and 25,000 vehicles per day with light to moderate truck traffic. This mixture must meet the requirements of the SUPERPAVE volumetric design system and be approved by MassDOT prior to placement. The pavement shall be constructed in courses as directed in the bid documents or as otherwise

directed by the Engineer.

The mixture will be modified using a Warm Mix Asphalt (WMA) additive to reduce compaction effort and lower plant production temperatures when feasible. WMA can be produced at temperatures approximately 50°F lower than Hot Mix Asphalt resulting in benefits including reduced fuel consumption and lower production of greenhouse gases.

459.21 Definitions.

Equivalent Single Axle Load (ESAL) - a weight-factor used to estimate pavement damage from traffic loading. The reference axle load is an 18,000-lb. single axle with dual tires.

Engineer – The Town or City Engineer, Superintendent of Public Works, or municipal designee.

Job Mix Formula (JMF) – a MassDOT approved LTMF mixture design. Only JMF’s may be placed on municipal projects.

Laboratory Trial Mix Formula (LTMF) – an HMA/WMA mixture design that has been submitted for approval by MassDOT.

Lot – the total quantity of an HMA/WMA mixture type with the same JMF, produced by a single plant, using the same source of materials and placed at a uniform specified thickness within the same construction season. Changes in the material sources or JMF will constitute a change in Lot, requiring the establishment of a new Lot.

Sublot – a Sublot is a portion of a lot usually equal to six hundred (600) tons of HMA/WMA. If the HMA/WMA quantity at the end of a Lot is less than 300 tons, then such quantity shall be combined with the previous full Sublot. If the final Sublot is greater than 300 tons, then it shall be its own Sublot.

Warm Mix Asphalt (WMA) – A Hot Mix Asphalt (HMA) that has been modified with an admixture or other technology that lowers production temperatures to a maximum of 275°F.

MATERIALS

460.40 General.

This SUPERPAVE mixture may be composed of the following: Mineral aggregate, mineral filler, Performance Graded Asphalt Binder (PGAB), and Reclaimed Asphalt Pavement (RAP). Materials shall meet the requirements in the following Subsections of MassDOT’s Standard Specifications for Highways and Bridges, Division III, Materials and as otherwise specified herein:

Asphalt Emulsion	M3.03.0
Hot Poured Joint Sealer	M3.05.0
Asphalt Anti-Stripping Additive	M3.10.0
Mineral Aggregate	M3.11.04
Mineral Filler	M3.11.05
Plant Requirements	M3.11.07
WMA Technology	NEAUPG Qualified Warm Mix Asphalt (WMA) Technologies List

(10/01/2019) -10

460.42 SUPERPAVE Warm Mix Asphalt Mixture Design.

The Contractor shall be responsible for development of the volumetric SUPERPAVE WMA mixture design in accordance with the following AASHTO standards, as modified herein:

AASHTO M 323
AASHTO R 35
AASHTO T 312

A. Development of Laboratory Trial Mix Formula (LTMF).

The Contractor shall develop and submit for approval, a minimum of sixty (60) days prior to the start of paving operations, a Laboratory Trial Mix Formula (LTMF) as the proposed Job Mix Formula (JMF). The following is a general outline of the steps for developing an LTMF and an approved JMF:

1. Estimate Percentage of RAP to be utilized and select PG Asphalt Binder as required by the specifications;
2. Evaluate aggregates (and reclaimed materials) for conformance with Consensus Properties and Source Properties;
3. Develop trial aggregate blends and estimate PG Asphalt Binder content in accordance with AASHTO R 35. Compact each of the blends. Based on volumetric analysis, select the best trial blend that meets the requirements of M 323.
4. Any WMA additive, technology, or combination of additives and technologies must be used in the development of this LTMF. Plant Produced WMA shall be required for MassDOT verification.
5. Determine volumetric properties of LTMF and select PG Asphalt Binder content;
6. Evaluate Moisture Sensitivity of the mixture;
7. LTMF to be verified in the laboratory by MassDOT;
8. Submit to MassDOT WMA samples for testing by Hamburg Wheel Test;
9. MassDOT LTMF verification and Hamburg Wheel Test results for approved JMF.

B. Estimated Design Traffic.

The estimated traffic level to be used for SUPERPAVE WMA mixture designs, expressed in Equivalent Single Axle Loads (ESALs) for the design travel lane over a 20-year period, is between 0.3 and 3.0 Million 18-kip (80-kn) ESALs.

C. Performance Graded Asphalt Binder.

The PGAB Grade selected for this Contract is PGAB 64-28.

D. Aggregate Consensus Properties.

Aggregates utilized in SUPERPAVE mixtures, including RAP if used in the mixture, shall be tested for conformance with the following Consensus Property requirements:

- Determining the Percentage of Fractured Particles in Coarse Aggregate (ASTM D 5821)
- Uncompacted Void Content of Fine Aggregate (AASHTO T 304 - Method A)
- Flat or Elongated Particles (ASTM D 4791)
- Clay Content/Sand Equivalent Test – Excluding RAP (AASHTO T 176)

The Consensus Property test results shall be submitted with the LTMF for each mixture. The Contractor shall provide aggregate samples a minimum of sixty (60) days prior to production for each LTMF to the MassDOT for LTMF verification prior to production. The required criteria for each of the Consensus Property tests for the total aggregate blend are specified below in Table 460.2 below.

Table 460.2 - Aggregate Consensus Property Requirements

Design ESALs 18-kip (80-kn)	Coarse Aggregate Angularity (1) (2) ASTM D5821 (Percent Minimum)	Fine Aggregate Angularity (1) AASHTO T 304 - Method A (Percent Minimum)	Flat or Elongated Particles (2) ASTM D4791 (Percent Maximum)	Sand Equivalent AASHTO T 176 (Percent Minimum)
(million)	Percent Minimum	Percent Minimum	> # 4 (4.75 mm)	----
< 0.3	55/--	--	--	40
0.3 to < 10	85/80	45	10	45
Design ESALS are the anticipated project traffic level expected on the design lane, projected over a 20-year period, regardless of the actual expected design life of the roadway.		Criteria presented as minimum percent air voids in loosely compacted fine aggregate passing the #8 (2.36 mm) sieve.	Criteria presented as maximum percent by mass of flat or elongated particles of materials retained on the #4 (4.75 mm) sieve, determined at 5:1 ratio.	Criteria presented as minimum values for fine aggregate passing the #4 (4.75 mm) sieve.

E. Aggregate Source Properties.

The coarse mineral aggregate utilized in SUPERPAVE WMA mixtures shall be clean, crushed rock consisting of the angular fragments obtained by breaking and crushing shattered natural rock. It shall be free from dirt or other objectionable materials. The coarse aggregate shall be

tested for conformance with the following Source Property requirements:

- Toughness as Determined by: Los Angeles Abrasion (AASHTO T 96)
- Soundness as Determined by: Soundness (AASHTO T 104)
- Deleterious Materials as Determined by: Clay Lumps & Friable Particles (AASHTO T 112)
- Specific Gravity (AASHTO T 84, T 85, and/or T 100)

Testing for each of the Source Properties shall be performed for each SUPERPAVE WMA mixture. The Source Property test results shall be submitted with the LTMF for each SUPERPAVE WMA mixture. The Contractor shall provide samples of each aggregate material from each stock pile, a minimum of sixty (60) days prior to production for each LTMF to the Department for LTMF verification prior to SUPERPAVE WMA production. The requirements for each of the Source Properties are as indicated in Table 460.3 below.

Table 460.3 - Aggregate Source Property Requirements

Source Property Test	Limit
Toughness (AASHTO T 96)	Maximum Loss < 30 %
Soundness (AASHTO T 104)	Maximum Loss < 10 %
Deleterious Materials (AASHTO T 112)	Maximum Permissible < 0.5 %

F. SUPERPAVE Aggregate Gradation and Specific Gravity Requirements.

The combined aggregate blend for each SUPERPAVE WMA mixture shall conform to the Gradation Control Point requirements specified in Table 460.4 below. The results of the selected optimum Design Aggregate Structure shall be plotted on a 0.45 Power Chart and included with the LTMF.

The specific gravity of each coarse and fine aggregate component shall be determined in accordance with AASHTO T 85 and T 84 respectively, and the specific gravity of the mineral filler shall be determined in accordance with AASHTO T 100. The individual aggregate specific gravities shall be included with the LTMF. The Contractor shall provide samples of each aggregate material a minimum of sixty (60) days prior to production for each LTMF to the Department for verification of the selected optimum Design Aggregate Structure and specific gravity of each stock pile.

Table 460.4 Gradation Classification

PCS Control Point for Mixture Nominal Maximum Aggregate Size % Passing			
Nominal Maximum Aggregate Size	3/8" (9.5 mm)	1/2" (12.5 mm)	3/4" (19.0 mm)
Primary Control Sieve	#8 (2.36 mm)	#8 (2.36 mm)	#4 (4.75 mm)
PCS Control Point (% Passing)	47	39	47

G. Gyrotory Compaction Criteria.

SUPERPAVE WMA mixtures shall be designed and controlled during production using a Gyrotory Compactor which meets the requirements of AASHTO T 312. Compaction shall be in accordance with the requirements of AASHTO T 312. The density of each SUPERPAVE mixture shall be evaluated at the design number of gyrations (N_{design}). The gyrotory-compacted specimens for each LTMF shall meet the density requirements specified in Table 460.5 below.

H. Volumetric Design Requirements.

SUPERPAVE mixtures shall be designed in accordance with the volumetric mixture design specifications contained in AASHTO M 323 and procedures contained in AASHTO R 35, as modified herein. Each mixture LTMF shall be tested for conformance with the following volumetric properties:

- Air Voids at N_{design} (V_a)
- Voids in the Mineral Aggregate at N_{design} (VMA)
- Voids Filled with Asphalt at N_{design} (VFA)
- Fines to Effective Asphalt Ratio ($P_{0.075} / P_{be}$)

The volumetric property test results shall be submitted with the LTMF for each SUPERPAVE WMA mixture. The required minimum or maximum criteria for each of the volumetric property tests are specified in Table 460.5 below.

Table 460.5 - Standard SUPERPAVE WMA Design Requirements

Traffic Level Design ESALs (millions) (ADT)*	Number of Gyration by Superpave Gyrotory Compactor	Percent Density of Gmm from WMA Specimen	Voids Filled with Asphalt (VFA)* Based on Nominal Maximum Aggregate Size		
			3/8" (9.5mm)	1/2" (12.5mm)	3/4" (19.0mm)
< 0.3 (< 5,000)	50	96.0	70 – 80	70 – 80	70 – 80
0.3 to > 10 (≥ 5,000 - < 25,000)	75	96.0	65 – 78	65 – 78	65 – 78

The VFA value contained in Table 460.5 have been modified from AASHTO M 323 to ensure adequate PG Asphalt Binder content in each SUPERPAVE WMA mixture.

*For routes that have an ADT greater than 25,000 or contain greater than 5% truck traffic consult MassDOT Pavement Section.

Table 460.6 - Gradation and Volumetric Design and Production Requirements

Sieve	3/8" (9.5 mm)		1/2" (12.5 mm)		3/4" (19.0 mm)		Production Tolerances		LTMF Verification Limits
	CONTROL POINTS		CONTROL POINTS		CONTROL POINTS				
Inches	Min (%)	Max (%)	Min (%)	Max (%)	Min (%)	Max (%)	Min (%)	Max (%)	Target ±
2	-	-	-	-	-	-	-	-	6.0
1.5	-	-	-	-	-	-	-	-	6.0
1	-	-	-	-	100	-	-	-	6.0
3/4	-	-	100	-	90	100	-	-	6.0
1/2	100	-	90	100	-	90	-	-	6.0
3/8	90	100	-	90	-	-	±7	-	6.0
#4	-	90	-	-	-	-	±7	-	6.0
#8	35	67	31	58	26	49	±5	-	5.0
#16	-	-	-	-	-	-	±4	-	3.0
#30	-	-	-	-	-	-	±4	-	3.0
#50	-	-	-	-	-	-	±4	-	3.0
#100	-	-	-	-	-	-	±3	-	2.0
#200	2	10	2	10	2	8	±1.5	-	1.0
% PGAB	-	-	-	-	-	-	±0.4	-	0.3
VMA⁽¹⁾	16.0		15.0		14.0		-		1.0
Va (%)	4.0		4.0		4.0		±2		1.0
VFA	Per Table 460.5 + 5 of LTMF		Per Table 460.5 + 5 off LTMF		Per Table 460.5 + 5 off LTMF		-		
Gse	LTMF value		LTMF value		LTMF value		-		0.02
Gmm	LTMF value		LTMF value		LTMF value		-		0.02
P200/Pbe	0.6 - 1.2		0.6 - 1.2		0.6 - 1.2		-		
Design Mixing and Compaction Temp	Per WMA Manufacturer Specifications, though not to exceed 275°F		Per WMA Manufacturer Specifications, though not to exceed 275°F		Per WMA Manufacturer Specifications, though not to exceed 275°F		-		
PCS⁽²⁾	Sieve #8	47	Sieve #8	39	Sieve #4	47	-	-	

(1) Voids in Mineral Aggregates shall be computed as specified by AASHTO R 35.

(2) If the aggregate gradation passes beneath the PCS Control Point specified in Table 460.6, the dust-to-binder ratio range may be increased from 0.6-1.2 to 0.8-1.6 at the Engineer's discretion

I. Evaluation of LTMF for Rutting and Moisture Susceptibility

(10/01/2019) -15

Each HMA mixture shall be tested by the MassDOT Research & Materials section for rutting and moisture sensitivity in accordance with the requirements of AASHTO T 324 using the Hamburg Wheel-Tracking Device (HWTD).

The Engineer may also require that mixtures meet the requirements of AASHTO T 283 with a minimum tensile strength ratio of 80%.

Table 460.7 – HWTD Requirements

Traffic Level	Maximum Rut Depth Inches (mm)	Minimum number of passes before Stripping Inflection Point is observed
1	½ (12.5)	10,000
2		15,000
3		15,000

460.43 Verification of Laboratory Trial Mix Formula (LTMF)

The Contractor shall submit a LTMF with supporting documentation, a minimum of sixty (60) days prior to production, to the Engineer with samples of blended aggregate material and PG Asphalt Binder. An adequate amount of the blended aggregate material and PG Asphalt Binder shall be supplied in order to verify the LTMF selected for production (proposed JMF).

If MassDOT is unable to verify the Contractor’s LTMF in accordance with the LTMF Verification Limits in Table 460.8, it is the Contractor’s responsibility to resolve the verification issue(s). The Contractor shall not proceed with production and placement of any mixture until the JMF is approved by MassDOT.

Once MassDOT has verified the Contractor’s LTMF, the LTMF will be an approved JMF for the duration indicated on the “JMF Approval Letter”, or until such time as the Contractor makes a change in its mixture design or aggregate sources. Material changes in the mixture design or aggregate source properties will require a new LTMF submittal to MassDOT.

Table 460.8 - SUPERPAVE LTMF Verification Limits

Properties	LTMF Verification Limit
Asphalt Binder Content (P_b)	Target \pm 0.3 percent
Gradation Passing #4 (4.75 mm) and Larger Sieves	Target \pm 6.0 percent
Gradation Passing #8 (2.36 mm) Sieve	Target \pm 5.0 percent
Gradation Passing #16 (1.18 mm) to #50 (0.30 mm) Sieve	Target \pm 3.0 percent
Gradation Passing #100 (0.15 mm) Sieve	Target \pm 2.0 percent
Gradation Passing #200 (75 μ m) Sieve	Target \pm 1.0 percent
Max. Theo. Specific Gravity (G_{mm})	Target \pm 0.02
Air Voids (V_a)	Target \pm 1.0 percent
Voids in Mineral Aggregate (VMA)	Target \pm 1.0 percent
Voids Filled With Asphalt (VFA)	Target \pm 5.0 percent
Bulk Specific Gravity (G_{mb})	Target \pm 0.022

460.44 Performance Graded Asphalt Binder.**A. Standard Asphalt Binder Grade.**

The asphalt binder shall be a Performance Graded Asphalt Binder (PGAB) which meets the specification requirements of AASHTO M 320. PGAB shall be provided by an approved supplier in accordance with the AASHTO R 26.

The standard PGAB grade for Massachusetts has been determined based upon the expected minimum and maximum pavement in-service temperature using the LTPPBind software with a High Reliability (96-98%). The standard PGAB Grade of **PG 64-28** shall be used.

CONSTRUCTION PROCEDURES**460.45 General.**

The Contractor shall provide a Quality Control Plan prior to the commencement of work for all lots in excess of 2100 tons. The Contractor shall discuss with the Engineer in sufficient detail the Quality Control measures being implemented during the work. The Contractor's shall demonstrate that its personnel are fully knowledgeable of the roles and activities for which they are responsible.

460.46 Control of Grade and Cross-Section.

For resurfacing projects with posted speeds in excess of 40MPH, grade control may be required by the Engineer.

460.47 Weather Limitations.

HMA shall only be placed on dry, unfrozen surfaces and only when the temperature requirements contained in Table 460.9 below are met. If the temperature requirements contained in Table 460.9 are not met at any point throughout the paving shift, HMA placement shall cease. The Contractor may continue HMA placement when overtaken by sudden rain, but only with material which is in transit from the HMA production facility at the time, and then only when the temperature of the HMA mixture is within the temperature limits specified and when the existing surface on the roadway is free of standing moisture. The Engineer is not obligated to accept any material that was not already in transit prior the onset of rain and may suspend operations for the day when the Contractor is unable to meet these specifications.

The construction of HMA pavement shall terminate November 15 and shall not be resumed prior to April 1 except as determined and directed in writing by the Engineer depending upon the necessity and emergency of attendant conditions, weather conditions, and location of the project. Only in extreme cases will the placement of surface courses be permitted between November 15 and April 1. Regardless of any temperature requirements, OGFC mixtures shall not be placed after October 31 or before May 1 without the written permission of the Engineer.

Table 460.9 - Temperature Limitations for HMA Placement

HMA Pavement Course	Lift Thickness (Inches)	Minimum Temperature (°F)	Air	Minimum Temperature (°F)	Surface
Surface Course	< 1¾	45		50	
Surface Course	≥ 1¾	35 ⁽¹⁾		40	
Intermediate Course	All	35 ⁽¹⁾		40	
Base Course	All	35 ⁽¹⁾		40	
Leveling Course	As Specified	45		50	
(1) When the air temperature falls below 50°F, extra precautions shall be taken in drying the aggregates, controlling the temperatures of the materials, and in placing and compacting the mixtures.					

460.48 Preparation of Underlying Surface.

WMA mixtures shall be placed only upon properly prepared surfaces that are clean from foreign materials. The underlying surface shall be prepared in accordance with the requirements below, prior to the placement of WMA pavement courses.

A. Milling Existing Pavement.

When specified on the plans, existing pavement courses shall be milled and removed from the project by the Contractor. Milling shall be performed in conformity with the limits, line, grade, and typical cross-section shown on the plans and in accordance with the most current MassDOT Pavement Milling Specifications. Quality Control of the milling operations and the milled surfaces shall be included in the Quality Control Plan.

B. Preparation of Curbs, Edging, and Utilities.

All curbs or edging shall be installed or reset to the line and grade established on the plans. The surface elevation of all catch basin frames and grates, manholes, utility valve boxes, or other utility structures located in the pavement shall uniformly match the grade and cross-slope of the final pavement riding surface. Adjustment of all curbs, edging, and utilities shall be completed prior to the placement of the WMA surface course. Hand placement of WMA along curbs and edging or around utilities after placement and compaction of the surface course shall not be permitted.

C. Sweeping Underlying Surface.

The Contractor shall provide a mechanical sweeper equipped with a water tank, spray assembly to control dust, a pick-up broom, a dual gutter broom, and a dirt hopper. The sweeper shall be capable of removing millings and loose debris from the underlying surface.

All milled pavement surfaces shall be thoroughly swept in accordance with Section 130, prior to opening a milled area to traffic, to remove all remaining millings and dust. All other existing pavement surfaces shall be swept if necessary immediately prior to application of the tack coat. Any new WMA pavement course that has been open to traffic, or that was placed 30 days prior to placement of the subsequent pavement course, shall also be swept immediately prior to application of the tack coat.

D. Tack Coat.

A tack coat of asphalt emulsion, grade RS-1h shall be uniformly applied to existing or new pavement surfaces prior to placing pavement courses as specified below. The existing surface shall be swept clean of all foreign matter and loose material using a mechanical sweeper and shall be dry before the tack coat is applied.

(1) Tack Distributor System

A pressure distributor shall be used to apply the tack coat. The tack distributor system shall be equipped with the following to control and monitor the application:

- System for heating the asphalt emulsion uniformly to specified temperature
- Thermometer for measuring the asphalt emulsion temperature
- Adjustable full circulation spray bar
- Positive controls including tachometer, pressure gauge, and volume measuring device

At least once every 12 months the application rate of the tack distributor system shall be calibrated by the Contractor using the appropriate spray bar nozzle size(s). The calibration shall be in the transverse and longitudinal directions following ASTM D2995. The calibration shall address the spray bar height, nozzle angle, spray bar pressure, thermometers, and strapping stick. Documentation of the annual calibration shall be kept with the tack distributor system and shall be provided to Engineer when requested.

The use of tack wagons/trailers shall only be allowed for patching under Item 451 or when the Engineer agrees that the area is inaccessible to the distributor. Regardless of

application method the tack application rates shall meet the requirements below. The use of gravity distributors is not allowed.

(2) Tack Application Requirements.

The tack coat material shall be applied by a pressure distributor. All nozzles on the distributor shall be open and functioning. All nozzles shall be turned at the same angle to the spray bar. The nozzles shall be offset at an angle from the spray bar to prevent the fan from one nozzle from interfering with the fan from another. Proper nozzle angle shall be as determined by the manufacturer of the distributor spray bar. The spray bar shall be adjusted so that it is at the proper height above the pavement surface to provide a triple overlap spray for a uniform coverage of the pavement surface. A triple lap application requires that the nozzle spray patterns overlap one another such that every portion of the pavement receives spray from exactly three nozzles. Tack coat application rates shall be in accordance with the following surface types:

- On a new HMA surface, not opened to traffic, the residual rate shall equal 0.05 gal/yd²
- On an existing tight smooth pavement the residual rate shall equal 0.05 gal/yd²
- On a milled surface the residual rate shall equal 0.07 gal/yd²
- On cement concrete base course the residual rate shall be equal to spray application for adjacent surface
- On new HMA patches the residual rate shall equal 0.05 gal/yd²

The residual amount of tack is defined as the remaining asphalt after the tack coat has set and all water has evaporated. The application rate of the tack coat emulsion shall set at a rate that achieves the specified residual amount.

Tack coat shall be applied to cover a minimum of 90% of the pavement surface. In addition to the requirements above, all vertical surfaces of curbs, edging, utilities, and drainage structures that will be abutted by new pavement shall receive a thorough tack coat application immediately prior to placing each HMA pavement course.

460.49 Warm Mix Asphalt Transportation and Delivery.

A. Haul Unit Equipment.

The trucks used to transport WMA to the field placement site shall have tight, clean, smooth metal beds. When necessary to maintain the required WMA temperature, trucks shall be equipped with insulated beds. The truck beds shall be evenly and lightly coated with an approved release agent to prevent mixture adherence. Release agents may consist of soapy water or commercial oil emulsions (also known as soluble oils) in the proportions recommended by the manufacturer. Truck beds shall be kept free of kerosene, gasoline, fuel oil, solvents, or other materials that could adversely affect the WMA mixture. Excess lubricant shall not be allowed to accumulate in low spots in the body. The Contractor shall employ sufficient procedures and QC inspection to ensure that all truck beds are free of contaminants, residual WMA, or excess release agent.

B. Protection During Transport.

The WMA shall be transported from the plant to the field placement site in trucks previously cleaned of all foreign materials. During transportation of the WMA from the plant to the placement equipment at the site, each load shall be fully covered at all times, without exception, with canvas or other suitable material of sufficient size and thickness, which is tightly secured to furnish complete protection. The WMA shall not be transported such a distance that segregation of the mixture takes place or that a crust is formed on the surface, bottom or sides of the WMA.

C. Coordination and Inspection of WMA Delivery.

The dispatching of trucks from the plant shall be continuously coordinated to ensure that all WMA mixture planned to be delivered to the field placement site may be placed and compacted before the end of the scheduled work day. During paving operations, the Contractor shall provide for ongoing two-way radio or cellular phone communication between the field placement site and the WMA plant.

The target temperature and allowable range of the WMA when delivered at the field placement site will be established in the Contractor's Quality Control Plan. The Contractor shall measure the temperature of the WMA, either from the trucks prior to discharge or from the paver hopper, using a metal stemmed dial type thermometer at the minimum frequency indicated in the approved QC Plan. The Contractor shall also visually inspect the delivered WMA for crusting or material (physical) segregation. The Contractor shall reject any loads of WMA with material which is crusted, segregated, or which is not within the delivery temperature range established in the Contractor's Quality Control Plan.

460.50 Warm Mix Asphalt Placement.

A. Pavers.

Each pavement course shall be placed with one or more pavers at the specified grade, cross-slope, and lift thicknesses.

(1) Paver Equipment Requirements.

Each paver shall be a self-contained, power propelled unit and shall produce a finished surface of smooth and uniform texture without segregating, tearing, shoving or gouging the WMA. The pavers shall be equipped with the following:

- (a) A receiving hopper having sufficient capacity to ensure a uniform and continuous placement operation.
- (b) Automatic feed controls, which are properly adjusted to maintain a uniform depth of material ahead of the screed.
- (c) Automatic screed controls with sensors capable of sensing the transverse slope of the screed, and providing the automatic signals that operate the screed to maintain grade and transverse slope.
- (d) An adjustable vibratory screed with full-width screw augers and heated for the full width of the screed.
- (e) Capable of spreading and finishing WMA pavement courses in widths at least 12 inches (300mm) more than the width of one travel lane.

(10/01/2019) -21

(f) Capable of being operated at forward speeds to satisfactorily place the WMA.

(2) Paver Operations.

The Contractor shall ensure that the paver is loaded continuously to keep the placement operation moving. The volume of mixture in the paver receiving hopper shall remain above the paver tunnel during all paving operations. Proper practices shall be utilized to ensure that WMA is not dumped or spilled onto the prepared underlying surface in front of the paver by trucks unloading into the receiving hopper.

B. WMA Placement Inspection.

The WMA shall be free of identifiable material (physical) segregation or temperature related segregation. The WMA placed shall be a homogeneous mixture that is of uniform temperature. The Contractor shall inspect the WMA in the paver receiving hopper for material (physical) segregation. The Contractor will also inspect the un-compacted WMA mat behind the paver for longitudinal streaks, end-of-load segregation or other irregularities.

The Contractor shall make every effort to prevent or correct any irregularities in the WMA, such as changing pavers or using different and additional equipment. The Contractor's Quality Control Plan shall fully outline procedures for inspecting the WMA mat during placement, identifying and troubleshooting material segregation or temperature related segregation, and implementing corrective action.

460.51 Warm Mix Asphalt Compaction.

A. Compaction Equipment Requirements.

The Contractor shall employ compaction equipment as outlined in the Quality Control Plan. Equipment used for compaction of may include steel wheeled rollers, vibratory rollers, oscillation rollers, or pneumatic-tired (rubber tired) rollers as determined appropriate by the Contractor for the particular mixture type being placed. The number and type of rollers used for breakdown, intermediate, and finish rolling shall be sufficient to achieve the target in-place density and specified course thickness.

B. Compaction Operations.

The rollers shall not crush the aggregate in the WMA mixture and shall be capable of reversing without shoving or tearing the mixture. The Contractor shall outline in the Quality Control Plan the proposed rolling sequence for each WMA pavement course to be placed. As Lot placement progresses during the construction season, the rolling pattern shall be adjusted as necessary to achieve the specified WMA in-place density.

C. Inspection of Compacted WMA.

The compacted WMA pavement course shall be free of material (physical) segregation and shall meet the requirements for in-place density specified in Subsection 460.51D. The Contractor shall inspect the WMA throughout the compaction operation and shall further inspect in-place WMA after completion and identify any areas of visible material (physical) segregation. The Contractor shall replace any sections of WMA which is determined to be segregated through procedures established in the Quality Control Plan.

D. Testing and Compaction Quality Control.

It is well established that Pavement Density is critical to the long-term performance of all asphalt pavements and the Contractor shall make every reasonable effort to achieve the Target In-Place Density. The target In-Place Density requirement for this project is 95% with a construction tolerance of +3%. No coring shall be required on contracts less than 2100 tons. On contracts greater than 2100 tons, one (1) pavement core for each day's paving shall be obtained and analyzed for in-place density. In-place density results will be provided in writing to the Engineer within fourteen (14) days of mixture placement and accurately reflect test locations.

The Contractor or an Independent Laboratory will core and test each day for in-place density and thickness for Contractor Quality Control purposes. All pavement density testing will be performed by NETTCP Certified Technicians using 6-inch (150 mm) diameter cores in accordance with AASHTO T230, T166, and T269. In-Place Density shall be determined from each core by comparing the Bulk Specific Gravity of the core to the average Maximum Theoretical Specific Gravity for the WMA produced for the pavement course. The Maximum Theoretical Specific Gravity shall be determined on the day of production for the first core and for every ten sublots (6000 tons). Each core location shall be established randomly in accordance with ASTM D3665. If the randomly determined sampling location coincides with one of the following conditions, the sampling location shall be relocated immediately beyond the boundary distance as indicated below for the specific condition:

1. Within 1 foot (300mm) from an edge of pavement course to be left unconfined upon project completion
2. Within 1 foot (300mm) of any longitudinal joint or transverse joint.
3. Within 3 feet (1 meter) of any drainage or utility structure.

Core samples shall be obtained in accordance with AASHTO T230. All cores shall be obtained within 7 days of WMA placement and protected against damage. The Contractor shall fill all core holes with suitable patching material. The filled core holes shall be thoroughly compacted as outlined in the Contractor's approved QC Plan.

460.52 Warm Mix Asphalt Joints.

The Contractor shall plan the sequence of WMA placement to minimize transverse and longitudinal joints in each pavement course. Paving operations should employ long pulls or tandem pavers, whenever practicable, to reduce the number and length of joints.

A. Transverse Joints.

Where the start or end of a new pavement course meets existing pavement, the existing pavement shall be sawcut to form a transverse butt joint for the full depth of all new pavement courses. The sawcut shall follow a straight line and provide a clean and sound vertical face. Material at any intermediate transverse joint resulting from suspension of placement of a new WMA pavement course shall also be sawcut and removed to provide a clean vertical face before continuing placement of the pavement course.

(10/01/2019) -23

When traffic is to be carried over any transverse joint before completion of a WMA pavement course, the Contractor shall provide a temporary tapered joint with a maximum 6:1 slope. The WMA mixture forming the taper shall be placed on heavy wrapping paper or other suitable material to serve as a bond breaker. The temporary tapered joint shall be sawcut to reveal the full depth of the pavement course and form a transverse butt joint with a clean vertical face. The temporary tapered joint material shall be completely removed before resuming placement of the WMA pavement course.

Prior to the start of WMA placement at each transverse joint, the vertical joint face shall be thoroughly coated with a hot poured rubberized asphalt sealant meeting the requirements of ASTM D3405, with a minimum of 15% ground reclaimed tire rubber. The asphalt sealant temperature and application rate for each pavement course shall be established in the Contractor's Quality Control Plan. No reheating of the joint face shall be permitted. Equipment used to apply the hot poured rubberized asphalt sealant shall be capable of maintaining the sealant at the established temperature and application rate sufficient to uniformly coat the vertical joint face without runoff or accumulation of the asphalt sealant.

B. Longitudinal Joints.

All longitudinal joints in WMA surface courses shall be located on the roadway centerline, on a lane line, on an edge line of the traveled way or as approved by the Engineer. The longitudinal joints in each pavement course below the surface course shall be successively offset from the joint in the surface course by no more than 12 inches (300 mm) and no less than six inches (150 mm).

(1) Vertical Joints.

When a WMA pavement course is placed using single paver pulls, the Contractor shall employ suitable equipment to confine the longitudinal edge of the WMA mixture to establish an edge that is near vertical. For all WMA surface course mixtures placed, when the Contractor's placement operations do not provide a confined and near vertical edge, the longitudinal edge of the surface course shall be sawcut full depth and removed to provide a clean vertical face before placement of the adjacent course of WMA.

Hot poured rubber joint sealant will be used where required by the contract and compensated under Pay Item 453.

All longitudinal joint edges of WMA surface courses, regardless of whether the joint edge is required to be saw cut, shall be treated prior to placing the adjacent pull of WMA. The vertical joint shall be coated with a hot poured rubberized asphalt sealant meeting the requirements of ASTM D3405, with a minimum of 15% ground reclaimed tire rubber. The asphalt sealant shall be applied at a sufficient temperature and application rate sufficient to uniformly coat the vertical joint face without runoff or accumulation of the sealant. The asphalt sealant temperature and application rate shall be established in the Contractor's Quality Control Plan. No reheating of the joint shall be permitted.

When placing an WMA surface course with pavers in tandem, the use of the hot poured rubberized asphalt sealant will be omitted, provided the temperature of the mixture at the longitudinal joint does not fall below 200°F (95°C) prior to the placement of the adjacent mat.

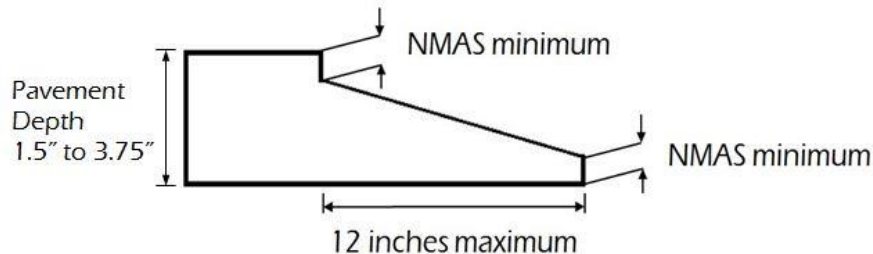
When the longitudinal edge of any WMA pavement course is placed against an adjoining edge

such as existing pavement, curb, gutter, drainage or utility structure, or any metal surface, a tack coat shall be uniformly applied to the entire vertical joint surface in accordance with Subsection 460.48 prior to placement of the WMA.

(2) Wedge Joints.

The Contractor may use a longitudinal wedge joint when placing HMA pavement courses at a thickness of 1.5 inches to 3.75 inches.

When a wedge joint is proposed for use, the joint detail shall be included in the Contractor's QC Plan. The wedge joint shall include a notched vertical edge with a minimum depth equal to the nominal maximum aggregate size of the mixture both at the top and bottom of the wedge. The sloped surface of the wedge joint shall not exceed a 6:1 slope. The width of the wedge shall not exceed 12 inches. The Contractor shall use a commercially manufactured wedge joint attachment to the paver, or other attachment approved by the Engineer, to form the wedge joint. Hot poured rubberized asphalt sealant shall not be applied to wedge joints. A tack coat shall be applied to the entire surface of the wedge joint in accordance with Subsection 460.48 prior to placement of the adjacent pull of HMA.



C. Inspection & Testing of Joints.

The placement and compaction of WMA at each transverse joint or longitudinal joint shall provide a tight bond between the existing pavement and the new pavement course. The Contractor shall visually inspect each transverse joint and longitudinal joint throughout the placement and compaction operations and shall further inspect the joints after completion and identify any bumps, depressions, openings, or other visible defects. The Contractor shall reject any in-place WMA which is determined to have defective joints through procedures established in the Quality Control Plan.

ACCEPTANCE

The Contractor shall submit for the Engineer's Acceptance all Quality Control Data that is required in the Contractor's Quality Control Plan, the plant's QC test results, all In-Place Pavement density test results from the pavement cores and a copy of production plant reports for the times of WMA production. The Engineer shall review this data for Acceptance and payment purposes.

COMPENSATION

The WMA pavement course will be paid for at the contract unit price per ton of in-place mixture

(10/01/2019) -25

under item 460.0. Payment shall include design and verification of the mixture, cost of the warm mix additive, Quality Control testing, sweeping the underlying surface, transportation, delivery, placement, compaction, coring and in-place pavement density measurements for each WMA pavement course.

All saw cutting required for transverse joints or longitudinal joints shall also be included in the contract unit price for this pavement course. All Contractor efforts related to the SUPERPAVE LTMF design and verification and quality control testing shall be considered incidental to the work and entitled to no additional compensation.

ITEM 504. GRANITE CURB TYPE VA-4 - STRAIGHT FOOT

The work under these items shall conform to the relevant provisions of Section 500 of the Standards and the following.

Salvaged granite curbing in a condition acceptable to the engineer may be used. Precast concrete curb may be used as an alternative to granite curb.

<u>ITEM 627.3</u>	<u>STEEL THRIE BEAM TERMINAL SECTION (SINGLE FACED)</u>	<u>EA</u>
<u>ITEM 632.1</u>	<u>GUARDRAIL POST - WOOD</u>	<u>EA</u>
<u>ITEM 633.1</u>	<u>GUARDRAIL OFFSET BLOCK - THRIE BEAM</u>	<u>EA</u>
<u>ITEM 634.1</u>	<u>THRIE BEAM GUARD PANEL</u>	<u>EA</u>

The work under these items shall conform to the relevant provisions of Section 600 of the Specifications and the following. The construction of all Highway Guardrail at each of the three quadrants leading into or out of the bridge on the approaches shall include the assembly and erection of all component parts and materials complete at the locations indicated on the drawings as detailed and directed. Rail panels shall be shop curved when the radius of curvature is 150 feet or less. All Thrie Beam Panels located on the approaches to the bridge shall be 12 Gauge. The Thrie Beam Panels shall be two sections of 12 Gauge thrie beam panels nested within one another.

Each component part of the Highway Guardrail will be measured as individual units of the lengths and/or number of each unit detailed on the plans. Each payment unit of Thrie Beam Guard Panel shall be based on a panel length of 12'-6" between the centers of the first and last support posts. All bolts, nuts, washers, reflectors, and related hardware shall be supplied and installed as required and shall be considered incidental to the components that they are attached to. Separate measurement shall be made for each panel of nested Thrie Beam Panels. Curvature of the rail panels shall be considered incidental to the work. The removal and discarding of portions of the existing guardrail shall be considered incidental to the work without separate measurement and payment.

Each component part of the Highway Guardrail will be paid for at the contract bid price, per each unit, for each location which payment shall be considered full compensation for all labor, tools, equipment, materials and all incidental items of work necessary to satisfactorily complete the work. Separate measurement and payment shall be made for Metal Bridge Railing, 10 Gauge or double nested 12 Gauge Thrie Beam, under Item 995.01 Bridge Structure, Bridge No. R-10-003.

ITEM 657.

TEMPORARY FENCE

FOOT

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

MATERIALS

Temporary six (6) foot high chain link fence shall be installed around the work area to provide an enclosed, protected work area as directed by the Engineer.

The fence shall be chain link and shall meet the requirements of the Standard Specifications and the Construction Standards, except the material need not be in new condition. Gates shall be used at all locations that are to be opened on a regular basis.

CONSTRUCTION METHODS

Temporary fence shall be reset as often as required by Contractor activities to meet the project schedule and to stage the construction, subject to approval by the Engineer. The Contractor shall submit a plan to the Engineer indicating the locations and the amount of Temporary Fence that he anticipates he will install for the project. The methods of installation(s) and fence detail(s) shall also be submitted for approval by the Engineer.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Temporary fence will be measured for payment by the FOOT for the entire length of installed temporary fence including gates, complete in place. Temporary fence will be paid at Contract unit price per FOOT, which price shall include all labor, materials, equipment, and incidental costs required to complete the work. No separate payment will be made for gates and locks, or to maintain (and remove when ordered) the temporary fence, 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 shall consist of furnishing and installing approved geotextile filter fabric at the locations and in the manner shown on the plans or as directed by the Engineer.

The work under this item includes the furnishing and installation of geotextile fabric under modified rock fill.

MATERIALS

The geotextile fabric shall be selected from the MassDOT QCML.

CONSTRUCTION METHODS

The geotextiles shall be protected from exposure to sunlight during transport and storage. After placement, the geotextile shall not be left uncovered for more than two (2) weeks.

Traffic or construction equipment will not be permitted directly on the geotextile. Geotextiles may be joined either by sewing or overlapping. Sewn seams shall be lapped a minimum of four inches and double sewn. The thread used to sew the seam shall be nylon or polypropylene. Overlapped seams shall have a minimum overlap of 18 inches. All seams shall be subject to the approval of the Engineer. Geotextile that becomes torn or damaged shall be replaced or patched. The patch shall extend 3 feet beyond the perimeter of the tear or damage.

Bedding and Slope Protection: The geotextile shall be placed and anchored on a prepared surface approved by the Engineer. The geotextile shall be laid loosely so that placement of the overlaying materials will not stretch or tear the geotextile. The backfill placement shall begin at the toe and proceed up the slope. Successive geotextile sheets shall be overlapped in such a manner that the upstream sheet is placed over the downstream sheet.

Modified rock fill shall not be dropped onto the geotextile from a height greater than 12 inches.

The surface upon which the geotextile is to be placed shall be within reasonable conformity to the proposed grade. The overlaying course shall be placed in one (1) lift and compacted as approved by the Engineer.

METHOD OF MEASUREMENT

The quantity of geotextile filter fabric will be the number of square yards computed from the

payment lines shown on the plans or from payment lines established in writing by the Engineer. Measurement will not be made for geotextile used for repairs, seams or overlaps.

BASIS OF PAYMENT

The contract unit price per square yard for this item shall include the cost of furnishing all labor, equipment, and materials necessary to complete the work, including the cost of preparing the surface upon which the geotextile is placed.

ITEM 767.12

COMPOST FILTER TUBES

FOOT

The purpose of this item is to provide a linear, compost-filled tube for filtering suspended sediments from storm water flow. This item shall conform to the requirements of Section 751 and 767 of the Standard Specifications and the following.

MATERIALS

Material for the filter tubes shall be compost meeting M1.06.0, except that no manure or bio-solids shall be used. In addition, no kiln-dried wood or construction debris shall be allowed. Particle size analysis: 98% shall pass through a 3-inch (75mm) sieve; 30-50% shall pass 3/8 inches (10mm) sieve.

Tubes for compost filters shall be a minimum of 12 inches (300 mm), a maximum of 18" (450mm) in diameter. Tube material shall be a knitted mesh with 1/8" - 3/8" (3-10 mm) openings, and made of biodegradable (cotton, jute, or oxo-biodegradable) materials. Additional tubes shall be used at the direction of the Engineer.

As shown in the detail, the 1 foot (0.2 meters) wide by 2 inch (50 mm) deep wedge of compost spread along the top of the filter tube shall be incidental to this item.

Stakes for anchors, if required, shall be nominal 2 x 2 stakes.

CONSTRUCTION METHODS

Tubes of compost may be filled on site or shipped. Tubes shall be placed, filled and staked in place as required to ensure stability against water flows. All tubes shall be tamped to ensure good contact with soil.

The Contractor shall ensure that the filter tubes function as intended at all times. Tubes shall be inspected after each rainfall and at least daily during prolonged rainfall. The Contractor shall

(10/01/2019) -29

immediately correct all deficiencies, including, but not limited, to washout, overtopping, clogging due to sediment, and erosion. The contractor shall review location of tubes in areas where construction activity causes drainage runoff to ensure that the tubes are properly located for effectiveness. Where deficiencies exist, such as overtopping or wash-out, additional staking or compost material shall be installed as directed by the Engineer. Contractor shall remove sediment deposits as necessary to maintain the filters in working condition. The functional integrity of filter tubes shall be maintained in sound condition at all times. Filter tubes that are decomposing, cut, or otherwise compromised shall be repaired or replaced as directed by the Engineer and be incidental to this item. Filter tube fabric and stakes shall be removed by the Contractor when site conditions are sufficiently stable to prevent surface erosion, and after receiving permission to do so from the Engineer. All biodegradable tube fabric shall be cut and laid flat in place to decompose on-site at the direction of the Engineer. Tube fabric that is not decomposing satisfactorily shall be removed and disposed off-site by the Contractor. At the direction of the Engineer, the Contractor may rake out and seed compost so that it is no greater than 2 inches (50 mm) in depth on soil substrate.

MEASUREMENT AND PAYMENT

Measurement for this item shall be by the FOOT of Compost Filter Tube installed, approved, and maintained in place. Payment shall be per FOOT and shall be compensation for all labor equipment and materials necessary to complete the work specified above, including, but not limited to, stakes and tube fabric, compost mulch wedge along top of tubes, removal and disposal of fabric and stakes, raking and seeding of compost.

<u>ITEM 853.2</u>	<u>TEMPORARY BARRIER (TL-2)</u>	<u>FT</u>
<u>ITEM 853.21</u>	<u>TEMPORARY BARRIER REMOVED AND RESET</u>	<u>FT</u>
<u>ITEM 853.3</u>	<u>TEMPORARY RESTRAINED BARRIER</u>	<u>FT</u>

The work under these Items shall conform to the relevant provisions of Section 850 of the Standard Specifications and the following:

Temporary barrier shall be removed and reset as shown on the traffic control and staging plans for the various stages.

Temporary restrained barrier shall be place on bridge and adjacent to temporary shoring for stage 1-3 traffic as shown on the traffic control plan and staging plans.

<u>ITEM 853.62</u>	<u>TEMPORARY IMPACT ATTENUATOR UNIDIRECTIONAL, REDIRECTIVE (TL-2)</u>	<u>FT</u>
--------------------	---	-----------

DESCRIPTION

Work under Item 853.501 shall conform to the relevant provisions of Section 850 and shall consist of maintaining, removing and reinstalling temporary impact attenuators where indicated on the plans or as directed by the Engineer.

Work under Items 853.62 shall conform to the relevant provisions of Section 850 and shall consist of furnishing, installing, maintaining, and final removal of temporary impact attenuator systems for protection of the ends of temporary barrier and other roadside hazards in work zones. All work shall be in conformance with the specifications of the manufacturer and in close conformance with the locations, lines, and grades shown on the plans.

MATERIALS

The Contractor shall supply a temporary attenuator that meets the same or higher crash Test Level (TL) as the adjacent temporary barrier, unless otherwise shown on the plans. The temporary attenuator shall be listed on the Department’s Qualified Traffic Control Equipment List.

The temporary impact attenuator shall be designed to fit within reasonably close tolerance of the dimensions given on the plans provided with the scope of work.

The Contractor shall supply shop drawings for the temporary attenuator and for any anchorage system and for any transitions or connections between the temporary attenuator and the adjacent barrier or other roadside hazard.

The side of the temporary attenuator that faces traffic shall include a Type 3 Object Marker that conforms to the language found in Sections 2C.64 and 2C.65 of the *Manual on Uniform Traffic Control Devices*.

Unless a separate barrier system protects it from opposing traffic, only temporary impact attenuators that are certified for bi-directional use shall be used in medians.

The work shall also include necessary patches and repairs caused by the temporary impact attenuator system to damaged pavement surfaces or any adjacent longitudinal barrier once the system has been removed.

CONSTRUCTION METHODS

Installation, means, and methods shall be per the manufacturer's specifications and/or drawings.

Excavation for temporary attenuator foundations and anchorage shall be made to the required depth and to a width that will permit the installation and bracing of forms, where necessary. All soft and unsuitable material shall be replaced with compacted gravel borrow.

The Contractor shall supply the Engineer instructions for installation and the manufacturer's recommended routine inspection and maintenance program. The cost of inspection and maintenance of temporary attenuators shall be considered incidental in nature.

Damaged temporary impact attenuators shall be replaced by the Contractor within 24 hours or as directed by the Engineer, at the Contractor's expense. A truck mounted attenuator that meets the same or higher TL, or other means of protecting the damaged temporary impact attenuator, shall be deployed until the repairs or replacement has been completed, at the Contractor's expense.

METHOD OF MEASUREMENT

Items 853.62 shall be measured for payment as a single unit Each furnished and installed in place.

BASIS OF PAYMENT

Payment for work under these items shall be made at the respective contract unit prices per Each. This price shall include the cost of all labor and materials for furnishing, foundations and anchorages, installation, maintenance and final removal, and all incidental work necessary to complete the work as specified.

SYSTEM DESCRIPTION

The construction of the excavation support systems may include, trench boxes, concrete gravity block systems, mechanical stabilize earth (MSE) wall systems and timber gravity systems or similar means. It is not anticipated a soldier pile wall or sheet pile wall system will be feasible due to the anticipated high rock ledge.

Qualifications and Submittals

The Contractor shall engage the services of a licensed Professional Engineer, registered in the State of Massachusetts, to prepare the excavation support required for this project including drawings and supporting calculations. Submit stamped drawings and calculation to the Engineer for review and approval.

The excavation support plan shall contain specific information and methods proposed to provide safe work conditions within the limits of work and complete the excavations required within all required areas of the project. The plan shall describe, at a minimum, the following:

1. Arrangements, locations, and depths of the proposed systems and components.
2. A description of equipment and materials to be used and the procedure to be followed in installation, operation, and maintenance in relation to the proposed sequence of excavation.
3. Calculations demonstrating adequacy of the proposed system and equipment.
4. Points of access to the work areas.
5. Methods and sequence of installing, maintaining, and removal of all excavation support.

Submit stamped drawings to Engineer for review and approval.

MATERIALS

All materials used for the temporary excavation support system need not be new but shall be sound and free from strength-impairing defects and subject to the Engineer's approval. Dewatering methods if needed are to be included in the selection and design of the temporary support excavation system.. Any materials removed after the proposed construction is in place shall be salvaged to the Contractor.

EXECUTION

The Contractor shall be responsible for the means and methods of excavation and for the design and construction of the excavation support systems.

The support system shall be designed to support the maximum loads that will occur during construction.

Excavation support systems shall be constructed so as to be able to support all vertical and lateral loads and other surcharge loads imposed on the system during construction including earth pressures, utility loads and other surcharges and construction loads in order to provide safe construction of the permanent structures and prevent movement and/or damage to adjacent soil, buildings, structures and utilities.

The Contractor shall consider the support of the temporary bridge as part of the temporary shoring design to allow staging of the proposed bridge substructure work.

Do not brace to concrete unless authorized by the Engineer, and then only if concrete has reached its design strength as determined by compressive test of representative concrete cylinders which have been cured on site for a period of at least 14 days.

Do not embed any part or portion of excavation support system in the Work. Do not construct sleeves or openings in the structures to permit bracing through the structures unless authorized by the Engineer.

The Contractor shall not perform excavations in unstable earth. Stabilize all earth materials behind support walls before excavation is allowed to proceed.

The Contractor shall monitor all excavations and provide a means of determining movement of adjacent soil, buildings, structures and utilities.

Where movement or damage is observed, the Contractor shall immediately cease excavation operations and correct such deficiency in the excavation support system that allowed for movement or damage and repair all damage at no additional cost to the Owner and at no additional time for performance.

The Contractor shall be responsible for and shall repair all damage resulting from his excavations and at no additional cost to the OWNER and at no additional time for performance.

MEASUREMENT AND PAYMENT

Temporary shoring will be paid for at the contract unit price per lump sum, which price shall include temporary control of water, all labor, materials, equipment and incidental costs required to complete the work.

No separate payment will be made for the removal of the temporary shoring.

ITEM 986.2

MODIFIED ROCKFILL

CUBIC YARD

The work under this item shall conform to the relevant provisions of Section 258 of the Specifications in close conformity with the lines and grades shown on the plans and the following:

Crushed stone conforming to M2.02.4 shall be placed within the drainage swale as shown on the plans.

MEASUREMENT AND PAYMENT

Modified Rockfill will be measured for payment per cubic yard complete in place and accepted by the Engineer.

Modified Rock Fill will be paid for at the Contract unit price per cubic yard, which price shall include all labor, tools, material, equipment and incidental costs required to complete the work.

ITEM 991.1

CONTROL OF WATER - STRUCTURE NO. R10003

**LUMP
SUM**

The work to be done under this item shall conform to the relevant provisions of Sections 140 and 950 of the Standard Specifications and the following:

The work shall include the furnishing, installation, operation, maintenance, and removal of a dewatering system and sedimentation treatment basins required for the construction of the proposed bridge and wingwalls. The dewatering system shall be capable of both preventing flow through the constructed works and the lowering of the water table to an elevation below the bottom of the proposed footings, as shown on the plans.

In addition to the support of excavation/cofferdam, sandbags shall be placed to prevent water flow into the construction area for flows up to the 2-year storm event water surface elevation shown on the Plans. The Contractor shall adjust the height of the water control dam structure if needed and use supplemental pumping in the event of an extreme rain event or unusually high

flows. The Contractor shall comply with all conditions included with the Town of Rowe Conservation Commission Order of Conditions, attached hereto (see Appendices). In case of conflict the aforementioned Conditions take precedence over these Specifications.

The use of earthen berms in the stream is prohibited.

All dewatering and related earthwork shall be conducted in such a manner as to prevent siltation or contamination of the waterway. The pumping discharge shall not be allowed to enter directly into the waterway. The water from the work areas shall be pumped to a settling basin or other type of measure such as a silt sack. This basin shall be constructed so as to allow the pumped water to pass through the basin with sediments settling out before out-letting. At a minimum, the basin shall be constructed of an earthen or stone berm lined with geotextile fabric and surrounded by staked straw bales or compost filter tubes. The basin shall meet or exceed the following criteria:

- A. The size and location of the basins shall be determined based on the size of the contractor's pump and the anticipated flows for the construction of the bridge and wingwalls in the dry.
- B. The outlet/weir of the dewatering basins shall not cause erosion of the surrounding area. An approved method of controlling erosion, such as an erosion control blanket, stone, etc., shall be used at the outlet of the basin.
- C. The Contractor shall maintain the dewatering operations in working condition, including periodic removal of accumulated sediment within the basins to permit its proper function. The water pump and hoses for dewatering shall be in good working condition and of adequate power and size for the operation.
- D. The contractor shall inspect straw bales/compost filter tubes that surround the outlets daily and shall immediately replace any that are damaged.
- E. The proposed location and design of the settling basins shall be subject to the approval of the Engineer and the Rowe Conservation Commission and MassDEP prior to construction.

Plans and calculations (if applicable) for all sandbagging, settling basins, pumps and other water control measures shall be developed by the Contractor for this item. These plans and calculations shall be prepared and stamped by a Professional Engineer registered in Massachusetts and shall be submitted for the approval of the Engineer prior to the start of construction. Furthermore, this submission shall be submitted to the Rowe Conservation Commission as required for review and approval prior to construction.

The Contractor shall be responsible for the removal and proper disposal of all sediments and temporary structures or devices to an off-site location. At the completion of the work the contractor shall remove the sandbags from the abutments and all disturbed areas shall be restored.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Payment for the work to be done under this item shall be at the contract lump sum bid price for Item 991.1 Control of Water, which price shall include all labor, materials, equipment, sandbags sedimentation basins, filter bags, pumping, removal of temporary water control devices, restoration of all disturbed areas and all incidental costs required to complete the work.

ITEM 993.1

TEMPORARY BRIDGE NO. R10003T

LUMP SUM

This item shall conform to the general provisions of Section 995 and the following requirements. Where no specific requirement is directed for a component part of the item, the Standard Specifications shall apply, except for payment.

The work under this item shall consist of constructing the temporary bridge structure for Bridge No. R-10-003 in accordance with the plans and specifications, and in accordance with guidelines of the manufacturer's technical handbook. The work includes furnishing and installing a temporary bridge superstructure, bridge deck, bridge railing, bridge abutments, retaining walls, approach barrier, and approach roadways.

The Contractor has the option to use a temporary bridge owned by the Town of Shelburne as depicted in the plans or provide their own design. See Attachment D for an agreement between the Town of Rowe and the Town of Shelburne for its use.

The temporary bridge shall meet the following design criteria:

1. Design shall be in accordance with AASHTO Guide Design Specifications for Bridge Temporary Works, 2nd Edition.
2. The bridge shall be designed for HS20 loading at a minimum.
3. The railing system on the bridge and the barrier along the approach roadways shall be designed for AASHTO TL-1 loading as a minimum.
4. The roadway width on the approach roadway and on the bridge shall be a minimum of 12 feet.
5. The maximum allowable bearing pressure is 3 tons/sq. ft (6 ksf). If the Contractor chooses to exceed the maximum allowable, additional subsurface exploration and geotechnical evaluation shall be performed. The additional bearing capacity evaluation shall be submitted to the Engineer of Record for approval.
6. The temporary bridge and roadway shown on the plans are within the approximate Right of Way limits. If the Contractor chooses to exceed the ROW limits, the Contractor shall be responsible for obtaining written agreements from the Town and applicable property owners.
7. The temporary bridge shown on the plans has a span of 37 feet with an overall length of 40 feet and is located as shown. The Contractor may modify the geometry and layout of the bridge but shall not violate the temporary bridge criteria described in this

(10/01/2019) -37

specification. The Contractor is responsible for any permits required resulting from a change in the geometry or layout of the temporary bridge.

CONSTRUCTION METHODS

General.

The field personnel shall have knowledge of and follow the approved Field Erection Plan and Assembly Plan. Field Erection shall comply with 960.61, *Erection* and the Assembly Plan shall be as described below.

Submittal Requirements.

The Contractor shall submit a temporary bridge design package to the Engineer for approval prior to the installation of the temporary bridge which shall include calculations and plans for the design of the temporary bridge (if different than plans) and retaining walls. Plans and calculations shall be stamped by a Professional Engineer registered in the Commonwealth of Massachusetts.

Prior to erection of the temporary bridge, the Contractor shall submit for approval by the Engineer, detailed assembly plans, procedures, computations and drawings for transport, hoisting, erection and handling of the bridge stamped by a Professional Engineer registered in the Commonwealth of Massachusetts. The assembly plans shall include structural steel details, steel reinforcing details, deck details, the location and details of lifting devices, minimum concrete compressive strength to be obtained prior to handling the units, as well as concrete stresses and steel member stresses during handling transport and erection, crane capacities, pick radii, sling geometry, and lifting hardware.

The erection procedure shall be in conformance with Subsection 960.61 and include the following as a minimum:

- Verification that the equipment can handle all pick loads and weights with appropriate factor of safety
- Evaluation of construction sequence/evaluation of any geometric conflicts in the placement procedures
- Design of crane supports including verification of subgrade for support.
- Documentation of all preparatory work necessary for moving personnel, equipment, supplies, additional equipment used to move the superstructure and incidentals to the project site before beginning work.
- Provision of a pre-operations checklist.
- Documentation that the system shall be sufficiently redundant to avoid damage to the structure during fabrication, transport and placement.

The following submittals, as described above, shall be submitted to the Designer of Record:

- Calculations and Plans for temporary retaining walls.

(10/01/2019) -38

- Calculations and Plans for temporary bridge if different than plans.
- Erection Procedure and Assembly Plan for temporary bridge
- Calculations and Plans for the transport, hoisting, erection and handling of the bridge

Temporary Shoring

See Item 950.1 for the design and construction for temporary shoring which may require the support of the temporary bridge footing.

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. The Town reserves the right to perform additional independent survey. This survey does not relieve the Contractor of performing survey for the construction. If discrepancies are found, the Contractor may be required to verify previous survey data.

Erection.

The elements shall be placed in the sequence and according to the methods outlined in the Erection and Assembly Plan.

Approach Roadway.

Approach roadways shall be constructed in accordance with the Standard Specifications. The temporary pavement materials and thicknesses shall be as shown on the plans. Slopes shall be stabilized with straw mulch.

Approach Barrier.

Approach barrier shall be according to the MassDOT special provisions for restrained barrier when supported on a retaining wall or support of earth type of structure.

Restoration of Site.

After traffic is transferred to the proposed permanent bridge, the temporary bridge shall be disassembled and removed from the project site. The project site shall be restored to its original conditions. Limits of Loam Borrow and Seeding shall be according to the plans.

COMPENSATION

The 993.1 Lump Sum item shall include all design, labor, and materials for the temporary bridge, approach roadway, and retaining walls. The cost of labor and materials required to complete the work under this item shall be considered incidental to Item 993.1 and no further compensation will be allowed.

Item 993.1 shall be paid according to the following payment schedule:

<u>Partial Payment</u>	<u>Description</u>
15%	Acceptance of Preliminary Design Engineering

60%	Installation of Temporary Bridge
25%	Removal of Temporary Bridge, Retaining Walls, Approach Roadway and Restoration of Site

ITEM 995.01 BRIDGE STRUCTURE, BRIDGE NO. R10003 LUMP SUM

The work to be done under this Item shall conform to the applicable provisions of Section 901 and Section 995 of the Standard Specifications and the specific requirements stipulated below for the component parts of this Item.

Work under this Item shall include all materials, equipment and labor needed to construct the following components of the bridge: the precast 3-sided frame sections and footings, cast-in-place concrete wingwalls, steel thrie beam bridge railings, and the application of membrane waterproofing to the top surfaces of the bridge.

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.

PRECAST CONCRETE 3-SIDED FRAME BRIDGE

DESCRIPTION

Type - This work shall consist of designing, fabricating, furnishing, and constructing a precast concrete 3-sided frame bridge on cast-in-place footings and wingwalls (if precast) in accordance with these specifications and in reasonably close conformity with the lines, grades, design and dimensions shown on the plans. In situations where two or more specifications apply to this work, the more stringent requirements shall govern. Any deviation from the bridge geometry shown on the plans will be subject to the review and approval of the Engineer. The bridge shall provide the same span and hydraulic opening and fit within the profile grade lines shown on the plans. The bottom chord of the proposed bridge shall not be set below the existing bottom chord elevation. The proposed top of roadway shall be per plans. The proposed overall structure depth shall fit within the theoretical envelope from the top of proposed grade to the existing bridge bottom chord.

Designation - Precast concrete bridge frame units shall be designated by span and height. Precast bridge footings slabs manufactured in accordance with this specification shall be designated by length and width. Precast reinforced concrete wingwalls manufactured in accordance with this specification shall be designated by length and height.

DESIGN

Specifications - The precast elements shall be designed in accordance with the current version and latest interim specifications of LRFD Bridge Design Specifications of the American Association of State Highway and Transportation Officials (AASHTO) for HL-93 loading.

Design Submissions

Computations - The Contractor shall submit a PDF copy of the design computations prepared and stamped by a Professional Engineer registered in Massachusetts for the precast the precast elements to the Engineer for review and acceptance. The design computations shall consider all loadings as are appropriate for each stage of fabrication, shipment, construction, and final condition.

Shop Drawings - Shop drawings shall be prepared and stamped by a Professional Engineer licensed in Massachusetts. Prior to fabrication, a PDF copy of complete shop drawings showing, at a minimum, the following information shall be submitted to the Engineer for approval:

1. Plan layout of the structure indicating the piece mark of each precast unit;
2. Catalogue cut-sheets for all hardware to be used in the precast elements;
3. Description of the fabricating plant, including any backup concrete mixing facilities, current MassDOT approved concrete mix design and proposed method of placement. Modifications or deviations from the current MassDOT approved mix design at any time after the original approval shall be submitted to the Engineer for approval;
4. Proposed admixtures to be added to the concrete mix, including brand and dosage rates, shall be consistent with the MassDOT approved mix design;
5. Outline of the proposed concrete curing procedures for both the precast units and test cylinders;
6. The name of the Manufacturer of all reinforcing steel;
7. Complete details of all precast units, including all dimensions and tolerances, locations and types of reinforcement, finish treatments, and concrete strengths at lifting and at 28 days;
8. Details of bridge frame and wingwall units (if precast) and all connections;
9. Joint dimensions and details including type and brand of joint sealing materials;
10. Grouted shear keyway and bolt details to rigidly connect frames together or similar details to prevent reflective cracking through the pavement;
11. Locations and methods of forming lifting holes, type and location of lifting devices, and the method of handling and transporting all precast units to the job site;
12. Provisions for repair of minor non-structural defects;

Final MassDOT Chapter 85 Approval Process for Prefabricated Structures:

1. After the construction contract is executed, the Contractor shall submit PE-stamped shop drawings and design calculations prepared by the Fabricator Engineer to the Designer for review and approval.

(10/01/2019) -41

2. Upon receipt, the Designer shall forward shop drawings and calculations (PDF) to MassDOT for their concurrent review with the Designer's review. At any time MassDOT may forward comments to the Designer who will address the comments or forward them to the Contractor for their responses.
3. The Designer shall review shop drawings and calculations and resolve any comments with the Contractor (and Fabricator Engineer as appropriate) through the normal shop drawing review process. The Designer shall forward any review comments to the Contractor, with a copy to MassDOT. The Designer shall forward any Contractor resubmittals to MassDOT, again PDF.
4. Upon resolution of all Designer comments, the Designer shall submit a PDF of the Designer-approved shop drawings and calculations to MassDOT for approval. All sheets of the final set of shop drawings shall include the Standard Chapter 85 Approval Stamp shown below, along with the Designer's shop drawing approval stamp.
5. Once all MassDOT comments are resolved, the Designer shall submit a PDF of the shop drawings and calculations to MassDOT. Each sheet of the shop drawings shall have the Standard Chapter 85 Approval Stamp, the Fabricator's Registered Professional Engineer's stamp, and the Designer's Shop Drawing Approval Stamp. MassDOT will forward their approval to the Designer, who will forward notification to the Contractor so that fabrication may begin. This approval shall constitute the final approval as stipulated by Chapter 85 Section 35 of the Massachusetts General Laws.

It is recommended to allow sufficient time for shop drawing approval by the Designer and MassDOT per the process described above. Any fabrication prior to final Chapter 85 approval by MassDOT will be at the Contractor's own risk.

MATERIALS

Concrete

All precast concrete 3 sided frame bridge components and safety curbs supporting the bridge rail and railing on the wingwalls shall be produced using a minimum 5000 psi HP cement concrete mix design. All other precast concrete elements: frame bridge footings, wingwall footings and stems, shall be minimum 4000 psi cement concrete. All concrete mix designs for precast shall be approved MassDOT High Performance cement concrete mixes.

Steel Reinforcement

(10/01/2019) -42

The minimum steel yield strength shall be 60,000 psi, unless otherwise required by the design and noted on the shop drawings.

All reinforcing steel for the precast elements shall be fabricated and placed in accordance with the approved shop drawings submitted by the manufacturer.

Reinforcement shall consist of welded wire fabric conforming to ASTM Specification A 1064 or deformed billet steel bars conforming to ASTM Specification A 615, Grade 60. Longitudinal distribution reinforcement may consist of welded wire fabric or deformed billet-steel bars.

All reinforcing steel bars shall be epoxy coated in accordance with ASTM A775. All welded wire fabric shall be epoxy coated in accordance with ASTM A884.

Steel Hardware

As a minimum:

- Bolts and threaded rods shall conform to ASTM A 307. Nuts shall conform to AASHTO M292 (ASTM A194) Grade 2H. All bolts, threaded rods and nuts used shall be mechanically zinc coated in accordance with ASTM B695 Class 50.
- Structural Steel for connection plates and plate washers shall conform to AASHTO M 270 (ASTM A 709) Grade 36 and shall be hot dip galvanized as per AASHTO M111 (ASTM A123).
- Reinforcing bar splices shall be made using the Dowel Bar Splicer System as manufactured by Dayton Superior, and shall consist of the Dowel Bar Splicer (DB-SAE) and Dowel-In (DI).

MANUFACTURE OF PRECAST ELEMENTS

Subject to the provisions of the PERMISSIBLE VARIATIONS section, below, the precast element dimension and reinforcement details shall be as prescribed in the plan and shop drawings provided by the manufacturer.

The forms used in manufacture shall be sufficiently rigid and accurate to maintain the required precast element dimensions within the permissible variations given in Section 5 of these specifications. All casting surfaces shall be of a smooth material.

Placement of Reinforcement

Placement of Reinforcement in Precast Units - The cover of concrete over the reinforcement of the precast units shall be 2 inches minimum.

Curing

The precast concrete elements shall be cured for a sufficient length of time so that the concrete will develop the specified compressive strength in 28 days or less. Any one of the following methods of curing or combinations thereof shall be used:

Steam Curing - The precast elements may be low-pressure steam cured by a system that will maintain a moist atmosphere.

Water Curing - The precast elements may be water cured by any method that will keep the sections moist.

Membrane Curing - A sealing membrane conforming to the requirements of ASTM Specification C309 may be applied and shall be left intact until the required concrete compressive strength is attained. The concrete temperature at the time of application shall be within +/- 10 degrees F of the atmospheric temperature. All surfaces shall be kept moist prior to the application of the compounds and shall be damp when the compound is applied.

Storage, Handling & Delivery

Storage

- Precast concrete bridge elements shall be lifted and stored in “as-cast” position.
- Precast concrete wingwall units are cast, stored and shipped in a flat position.
- The precast elements shall be stored in such a manner to prevent cracking or damage. Store elements using timber supports as appropriate. The units shall not be moved until the concrete compressive strength has reached a minimum of 2500 psi, and they shall not be stored in an upright position.

Handling

- Handling devices shall be permitted in each precast element for the purpose of handling and setting.
- Spreader beams may be required for the lifting of precast concrete bridge elements to preclude damage from bending or torsion forces.

Delivery

- Precast concrete elements shall not be shipped until the concrete has attained the specified design compressive strength, or as directed by the Engineer.
- Precast concrete elements may be unloaded and placed on the ground at the site until installed. Store elements using timber supports as appropriate.
- The bridge shall not be opened to traffic until the precast concrete has attained the required 28 day design strength shown on the approved shop drawings as verified by concrete cylinder break.

(10/01/2019) -44

Quality Assurance

The Precaster shall demonstrate adherence to the Specifications set forth in the NPCA Quality Control Manual.

Certification: The Precaster shall be approved by MassDOT and certified by the Precast/Prestressed Concrete Institute Plant Certification Program or the National Precast Concrete Association's Plant Certification Program prior to and during production of the products covered by this specification.

Testing and Inspection: At a minimum, the Precaster shall perform the following tests in accordance with the ASTM standards indicated. Tests shall be performed as indicated in the TESTING/INSPECTION section of these specifications.

- Air Content: C231 or C173
- Compressive Strength: C31, C39, C497
- The Owner may place an inspector in the plant when the products covered by this specification are being manufactured.

PERMISSIBLE VARIATIONS

Bridge 3-Sided Frame Units

Internal Dimensions - The internal dimension shall vary not more than 1% from the design dimensions nor more than 1-1/2 inches whichever is less.

Top Slab and Wall Thickness - The slab and wall thickness shall not be less than that shown in the design by more than 1/4 inch. A thickness more than that required in the design shall not be cause for rejection.

Length of Opposite Surfaces - Variations in laying lengths of two opposite surfaces of the bridge unit shall not be more than 1/2 inch in any section, except where beveled ends for laying of curves are specified by the purchaser.

Length of Section - The underrun in length of a section shall not be more than 1/2 inch in any bridge unit.

Position of Reinforcement - The maximum variation in position of the reinforcement shall be \pm 1/2 inch.

Area of Reinforcement - The areas of steel reinforcement shall be the design steel areas as shown in the approved shop drawings. Steel areas that are greater than those required shall not be cause for rejection. The permissible variation in diameter of any reinforcement shall conform to the tolerances prescribed in the ASTM Specification for that type of reinforcement.

Wingwalls (if precast)

(10/01/2019) -45

Wall Thickness - The wall thickness shall not vary from that shown in the design by more than 1/2 inch.

Length/ Height of Wall sections - The length and height of the wall shall not vary from that shown in the design by more than 1/2 inch.

Position of Reinforcement - The maximum variation in the position of the reinforcement shall be $\pm 1/2$ inch.

Size of Reinforcement - The permissible variation in diameter of any reinforcing shall conform to the tolerances prescribed in the ASTM Specification for that type of reinforcing. Steel areas that are greater than that required shall not be cause for rejection.

TESTING/ INSPECTION

Testing

Type of Test Specimen - Concrete compressive strength shall be determined from compression tests made on cylinders. A minimum of 3 cylinders shall be taken for each lot of bridge elements. (A lot is defined as the precast elements made using the same concrete mix during a single day's production.) Each lot shall be considered separately for the purpose of testing and acceptance.

Compression Testing - Cylinders shall be made and tested as prescribed by the ASTM C 39 Specification.

Acceptability of Cylinder Tests - When the average compressive strength of all cylinders tested is equal to or greater than the design compressive strength, and not more than 10% of the cylinders tested have a compressive strength less than the design concrete strength, and no cylinder tested has a compressive strength less than 80% of the design compressive strength, then the lot shall be accepted. When the compressive strength of the cylinders tested does not conform to these acceptance criteria, the acceptability of the lot may be determined as described in the following section.

Inspection - The quality of materials, the process of manufacture, and the finished precast elements shall be subject to inspection by the purchaser.

Certificates of Compliance – The precast concrete producer shall furnish Certificates of Compliance to the Engineer stating that all fabrication was performed in accordance with the approved construction documents.

JOINTS

The 3-sided bridge frame units shall be produced with grouted shear keyways and bolted connections in the deck slabs or similar details to provide a rigid connection that will preclude reflective cracking through the pavement.

WORKMANSHIP/FINISH

(10/01/2019) -46

The bridge and wingwall units shall be substantially free of fractures. The ends of the units shall be normal to the walls and centerline of the bridge section, within the limits of the variations specified, above, except where oblique or beveled ends are specified. The faces of the wingwalls shall be parallel to each other, within the limits of variations given above. The surface of the precast elements shall be a smooth steel form or troweled surface. Trapped air pockets causing surface defects shall be considered as part of a smooth, steel form finish.

REPAIRS

Precast elements may be repaired, if necessary, because of imperfections in manufacture or handling damage and will be acceptable if, in the opinion of the Engineer, the repairs are sound, properly finished and cured, and the repaired section conforms to the requirements of this specification.

REJECTION

The precast elements shall be subject to rejection on account of any of the specification requirements. Individual precast elements may be rejected because of any of the following:

- Fractures or cracks passing through the wall, except for a single end crack that does not exceed one half the thickness of the wall.
- Defects which indicate proportioning, mixing, and molding not in compliance with MANUFACTURER OF PRECAST ELEMENTS section of these specifications.
- Honeycombed or open texture.
- Damaged ends, where such damage would prevent making a satisfactory joint.

MARKING

Each unit shall be clearly marked by waterproof paint. The following shall be shown on the inside of the vertical leg of the bridge frame sections:

- Bridge Frame Span XX ft Bridge Rise X ft
- Date of Manufacture
- Name or trademark of the manufacturer

INSTALLATION PREPARATION

(10/01/2019) -47

To ensure correct installation of the precast concrete bridge system, care and caution must be exercised in placing the support areas for the footings, 3 sided frame units and wingwall elements. Exercising special care will facilitate the rapid installation of the precast components.

Footings

The precast bridge frame and wingwall units (if precast) shall be set on cast-in-place concrete footings as the footings will be keyed into rock. The top of footing elevations are shown in the plans and are based on approximate rock elevations. The top of footing elevations may be adjusted to meet the actual site conditions with the approval of the Engineer, but the final top of grade shall match the plans.

The elevations shall be as shown on the plans and shop drawings. The precast units shall be set to the lines and grades shown on the plans or as modified from field conditions. When tested with a 10-foot straight edge, the top surface of the precast units shall not vary more than 1/4 inch in 10 feet.

Grout for bridge frame keyways and wingwall joints shall be a rapid set grout suitable for the application and as specified on the approved shop drawings.

INSTALLATION

General

The installation of the precast concrete elements shall be per manufacturer's recommendations, and the following:

- Lifting - It is the responsibility of the contractor to ensure that a crane of the correct lifting capacity is available to handle the precast concrete units. This can be accomplished by using the weights given for the precast concrete components and by determining the lifting reach for each crane unit. Site conditions must be checked well in advance of shipping to ensure proper crane location and to avoid any lifting restrictions. The lift anchors or holes provided in each unit shall be the only means to be used to lift the elements. The precast concrete elements must not be supported or raised by other means than those given in the manuals and drawings without written approval from the manufacturer.
- Erection Procedure – The Contractor shall submit along with the design computations and shop drawings specified above an erection procedure to the Engineer for approval. This procedure will indicate his proposed erection procedures and methods to be used including equipment, tools, devices, crane capacity and location, schedule of operations, methods of utility protection, etc. The requirements for equipment and all procedures utilized shall be in conformance with the intent of Subsection 960.61 Erection of the Specifications.

The erection procedure and any necessary calculations and drawings shall be stamped by a Professional Engineer registered in Massachusetts certifying that all elements are

suitably braced and within acceptable stress limits during all stages of the erection process. In determining the stresses to which the structure will be subjected, all loading combinations including wind loading shall be considered. The method of determining stresses may conform to either the AASHTO LRFD or 2002 AASHTO Standard Specifications for Highway Bridges. Erection of any bridge components may not commence until the Engineer has given written approval.

Construction equipment weight restrictions

In no case shall equipment operating in excess of the design load (HL93) be permitted over the bridge frame units unless approved by the manufacturer and Engineer.

Placement of Bridge Units

The 3-sided bridge frame and wingwall units (if precast) shall be placed as shown on the plans and shop drawings. Special care shall be taken in setting the elements to the line and grade show on the plans.

Waterproofing/ Joint protection and Subsurface Drainage

Bituminous Damp-proofing – All units shall be coated with bituminous damp-proofing conforming to the relevant provisions of Section 970 of the Specifications on all surfaces which will be in contact with backfill soils. This coating shall be applied at the precasting plant and allowed to cure prior to shipping to the job site.

The joints between adjacent bridge frame sections shall be connected as required on the approved shop drawings. Lifting holes shall also be filled with non-shrink grout after erection is complete.

Membrane Waterproofing for Bridge Decks – Membrane Waterproofing for Bridge Decks shall conform to the requirements of Section 965 of the Specifications and may be sheet membrane.

Backfill

Do not perform backfilling during wet or freezing weather. No backfill shall be placed against any structural elements until they have been approved by the Engineer.

ON SITE INSPECTION BY MANUFACTURER

A representative from the manufacturer shall be onsite for the following operations or to inspect completed portions of the structure for conformance with the design specifications:

1. Once the foundation preparation is complete it shall be inspected for acceptability prior to placement of the bridge and wingwall units;
2. During the entire erection operation of the bridge and wingwall units (if precast);

3. Once erection and assembly of the structure is complete and the joint connections are made, it shall be inspected for conformance with the design specifications prior to backfilling;
4. During the entire backfilling operation until the fill is uniformly brought up to the level of the approach slabs.

4000 PSI, 1.5 IN., 565 CEMENT CONCRETE

The work to be done under this heading shall conform to the relevant provisions of Subsection 901 of the Supplemental Specifications and the following:

4000 PSI, 1.5 IN., 565 HP Cement Concrete shall be used to construct areas as designated on the Plans and/or designated by the Engineer. This concrete shall conform to all material requirements contained in Subsection M4.02 of the Supplemental Specifications, with the exception of the cementitious content, which shall be limited to a maximum of 565 pounds per cubic yard.

5000 PSI, ¾ IN., 685 HP CEMENT CONCRETE

The work to be done under this heading shall conform to the relevant provisions of Subsection 904 of the Supplemental Specifications and the following:

5000 PSI, ¾ IN., 685 HP Cement Concrete shall be used to construct areas as designated on the Plans and/or designated by the Engineer. This concrete shall conform to all material requirements contained in Subsection M4.06.1 of the Supplemental Specifications, with the exception of the cementitious content, which shall be limited to a maximum of 685 pounds per cubic yard.

STEEL REINFORCEMENT FOR STRUCTURES-EPOXY COATED

The work to be done under this heading shall conform to the relevant provisions of Subsection 901.62 of the Supplemental Specifications.

METAL BRIDGE RAILING 10 GAUGE THRIE BEAM

The work to be performed under this heading shall consist of the fabrication and installation of a Thrie Beam Bridge Rail system. Work shall conform to the relevant provisions of Section 975, Metal Bridge Railings and Protective Screen, of the Supplemental Specifications to the Standard Specifications for Highways and Bridges and the following.

Anchor bolts shall conform to ASTM A449. Guardrail post anchorage assemblies shall be provided to the Precaster so they may be installed into the precast headwall units during casting.

(10/01/2019) -50

Thrie beam panels shall be 10 gauge or double nested 12 gauge and shall conform to AASHTO M 180 Class B. The posts, base plates, and thrie beam rail panels shall be galvanized after fabrication in accordance with AASHTO M111.

SCHEDULE OF BASIS FOR PARTIAL PAYMENT

The Contractor shall submit a schedule of unit prices for the major component Sub-Items that make up Item 995.01 as well as his/her total Bridge Structure Lump Sum cost. The Bridge Structure Lump Sum breakdown quantities provided in the proposal form are estimated and not guaranteed. The total of all partial payments to the Contractor shall equal the Lump Sum contract price regardless of the accuracy of the quantities furnished by the Engineer for the individual bridge components. The cost of labor and materials for any Item not listed but required to complete the work shall be considered incidental to Item 995.01 and no further compensation will be allowed.

The schedule on the proposal form applies only to Bridge Structure No. R10003 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.

995.01 Bridge No. R10003

<u>Sub-Item</u>	<u>Description</u>	<u>QTY.</u>	<u>UNIT</u>
901.	4000 PSI, 1.5 in., 565 Cement Concrete	65	CY
904.3	5000 PSI, ¾ in., 685 HP Cement Concrete	10	CY
904.3	Precast 3-Sided Frame Minimum 5000 psi HP Cement Concrete	980	CF
910.2	Steel Reinforcement for Structures- Epoxy Coated	6100	LB
965.	Membrane Waterproofing for Bridge Decks	56	SY
975.7	Metal Bridge Railing 10 Gauge Thrie Beam	60	FT

CONTRACT ALLOWANCE PAYMENT ITEMS

The quantity to be paid for under these items shall be the actual amount paid by the Contractor to provide satisfactory police services and testing operations as stipulated and required. Any associated Contractor overhead costs and profit shall be considered incidental to the cost of the contract.

ALLOWANCE ITEM 999.001

TRAFFIC POLICE

The Contractor shall furnish police services where and when required to direct traffic on existing

roadways where traffic is maintained.

The Contractor shall provide such police officers as may be deemed necessary by either the Engineer or the Town for the direction and control of all traffic traveling within and through the project area. The police officers shall be obtained from the Town Police Department as applicable. The police officers shall be paid by the Contractor at the prevailing rate of wages established by the Town.

Allowance for Police Services

An allowance for the furnishing of police services has been included in all bids. This allowance is determined by multiplying the number of hours estimated as necessary by the prevailing hourly rate of wages established for such services. The Contractor shall submit certified copies of itemized bills of services rendered for review and approval by the Engineer. The allowance will be adjusted to the actual amount paid for authorized and approved police services as stipulated and shall include other payments due to any legal requirements of the State and Federal governments.

ALLOWANCE ITEM 999.300

MATERIALS INSPECTION, SAMPLING AND TESTING SERVICES

Allowance for Verification and Testing

Materials inspection, sampling and testing services shall be provided by independent testing consultants or firms that shall be retained by the Contractor to ensure compliance with the Standard Specifications and these Special Provisions. These services will include, but are not limited to the following:

- Precast Concrete Shop Fabrication
- Field Placed Cement Concrete and Grout Inspection and Testing
- Compact Testing for placing Backfill

The firm(s) selected to provide these services must be pre-qualified by MassDOT in the discipline of Materials Inspection and Testing. The Contractor shall coordinate with the firm(s) and the Engineer as necessary while the work is ongoing to ensure that the appropriate materials inspection, sampling and testing is occurring. Test reports shall be provided to the Engineer with copies to the Contractor. Work on materials that fail to meet the requirements of these Special Provisions shall be promptly corrected by the Contractor in accordance with the standard specifications. The cost of tests that fail to show compliance will not be reimbursed to the Contractor. The Contractor shall be reimbursed under this allowance item for testing based on paid invoices from the independent testing consultant(s).

ALLOWANCE ITEM 999.400

TEMPORARY BRIDGE RENTAL

Allowance for Temporary Bridge Rental

The contractor may elect to use the temporary bridge located in the Town of Shelburne. An allowance for the use of the bridge through construction has been included in all bids. This allowance is determined by multiplying the number of days in use by the rate given in the Agreement between the Town of Rowe and Town of Shelburne as given in Attachment D. The Contractor shall submit certified copies of itemized bills of services rendered for review and approval by the Engineer. The allowance will be adjusted to the actual amount paid for the services as stipulated and shall include other payments due to any legal requirements of the State and Federal governments as agreed upon by the Town.

*****END OF SPECIAL PROVISIONS*****

ATTACHMENT A
PROJECT LOCUS MAP

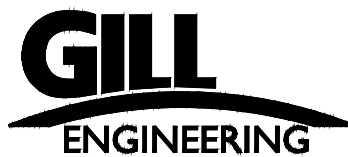
(10/01/2019) -54



ROWE R-10-003



LOCUS



SCALE: 1" = 500 FT

ATTACHMENT B
ORDER OF CONDITIONS

(10/01/2019) -55



Massachusetts Department of Environmental Protection

eDEP Transaction Copy

Here is the file you requested for your records.

To retain a copy of this file you must save and/or print.

Username: **ROWECC**

Transaction ID: **1076074**

Document: **WPA Form 5 - OOC**

Size of File: **143.41K**

Status of Transaction: **In Process**

Date and Time Created: **4/10/2019:8:55:15 PM**

Note: This file only includes forms that were part of your transaction as of the date and time indicated above. If you need a more current copy of your transaction, return to eDEP and select to "Download a Copy" from the Current Submittals page.

Massachusetts Department of Environmental Protection

Bureau of Resource Protection - Wetlands

WPA Form 5 - Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

MassDEP File #:274-0037

eDEP Transaction #:1076074

City/Town:ROWE

A. General Information

1. Conservation Commission ROWE
2. Issuance a. OOC b. Amended OOC
3. Applicant Details
- | | | | |
|--------------------|---------------|--------------|-------|
| a. First Name | JENNIFER | b. Last Name | MORSE |
| c. Organization | TOWN OF ROWE | | |
| d. Mailing Address | 321 ZOAR ROAD | | |
| e. City/Town | ROWE | f. State | MA |
| | | g. Zip Code | 01367 |
4. Property Owner
- | | | | |
|--------------------|---------------|--------------|-------|
| a. First Name | JENNIFER | b. Last Name | MORSE |
| c. Organization | TOWN OF ROWE | | |
| d. Mailing Address | 321 ZOAR ROAD | | |
| e. City/Town | ROWE | f. State | MA |
| | | g. Zip Code | 01367 |
5. Project Location
- | | | | |
|-------------------|--------------------|----------------|-----------|
| a. Street Address | KINGS HIGHWAY ROAD | | |
| b. City/Town | ROWE | c. Zip Code | 01367 |
| d. Assessors | 0 | e. Parcel/Lot# | 0 |
| Map/Plat# | | | |
| f. Latitude | 42.69278N | g. Longitude | 72.89944W |
6. Property recorded at the Registry of Deed for:
- | a. County | b. Certificate | c. Book | d. Page |
|-----------|----------------|---------|---------|
|-----------|----------------|---------|---------|
7. Dates
- a. Date NOI Filed : 12/18/2018 b. Date Public Hearing Closed: 4/10/2019 c. Date Of Issuance: 4/10/2019
8. Final Approved Plans and Other Documents
- | a. Plan Title: | b. Plan Prepared by: | c. Plan Signed/Stamped by: | d. Revised Final Date: | e. Scale: |
|--|----------------------|----------------------------|------------------------|-----------|
| BRIDGE REPLACEMENT FOR ROWE R-10-003 KINGS HIGHWAY OVER PELHAM BROOK (75% PLANS) | KEITH T. NELSON | KEITH T. NELSON | 03/15/2019 | VARIES |

B. Findings

1. Findings pursuant to the Massachusetts Wetlands Protection Act
Following the review of the the above-referenced Notice of Intent and based on the information provided in this application and presented at the public hearing, this Commission finds that the areas in which work is proposed is significant to the following interests of the Wetlands Protection Act.

Check all that apply:

- | | | |
|--|------------------------------|--|
| a. <input checked="" type="checkbox"/> Public Water Supply | b. Land Containing Shellfish | c. <input checked="" type="checkbox"/> Prevention of Pollution |
|--|------------------------------|--|

Massachusetts Department of Environmental Protection

Bureau of Resource Protection - Wetlands

WPA Form 5 - Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

MassDEP File #:274-0037

eDEP Transaction #:1076074

City/Town:ROWE

d. <input checked="" type="checkbox"/> Private Water Supply	e. <input checked="" type="checkbox"/> Fisheries	f. <input checked="" type="checkbox"/> Protection of Wildlife Habitat
g. <input checked="" type="checkbox"/> Ground Water Supply	h. <input checked="" type="checkbox"/> Storm Damage Prevention	i. <input checked="" type="checkbox"/> Flood Control

2. Commission hereby finds the project, as proposed, is:

Approved subject to:

- a. The following conditions which are necessary in accordance with the performance standards set forth in the wetlands regulations. This Commission orders that all work shall be performed in accordance with the Notice of Intent referenced above, the following General Conditions, and any other special conditions attached to this Order. To the extent that the following conditions modify or differ from the plans, specifications, or other proposals submitted with the Notice of Intent, these conditions shall control.

Denied because:

- b. The proposed work cannot be conditioned to meet the performance standards set forth in the wetland regulations. Therefore, work on this project may not go forward unless and until a new Notice of Intent is submitted which provides measures which are adequate to protect interests of the Act, and a final Order of Conditions is issued. **A description of the performance standards which the proposed work cannot meet is attached to this Order.**
- c. The information submitted by the applicant is not sufficient to describe the site, the work or the effect of the work on the interests identified in the Wetlands Protection Act. Therefore, work on this project may not go forward unless and until a revised Notice of Intent is submitted which provides sufficient information and includes measures which are adequate to protect the interests of the Act, and a final Order of Conditions is issued. **A description of the specific information which is lacking and why it is necessary is attached to this Order as per 310 CMR 10.05(6)(c).**

- 3. Buffer Zone Impacts: Shortest distance between limit of project disturbance and the wetland resource area specified in 310CMR10.02(1)(a).
a. linear feet

Inland Resource Area Impacts:(For Approvals Only):

Resource Area	Proposed Alteration	Permitted Alteration	Proposed Replacement	Permitted Replacement
4. <input checked="" type="checkbox"/> Bank	<u>80</u> a. linear feet	<u>80</u> b. linear feet	<u>80</u> c. linear feet	<u>80</u> d. linear feet
5. Bordering Vegetated Wetland	<u> </u> a. square feet	<u> </u> b. square feet	<u> </u> c. square feet	<u> </u> d. square feet
6. <input checked="" type="checkbox"/> Land under Waterbodies and Waterways	<u>300</u> a. square feet	<u>300</u> b. square feet	<u>300</u> c. square feet	<u>300</u> d. square feet
	<u>0</u> e. c/y dredged	<u>0</u> f. c/y dredged		
7. Bordering Land Subject to Flooding	<u> </u> a. square feet	<u> </u> b. square feet	<u> </u> c. square feet	<u> </u> d. square feet
Cubic Feet Flood Storage	<u> </u> e. cubic feet	<u> </u> f. cubic feet	<u> </u> g. cubic feet	<u> </u> h. cubic feet
8. Isolated Land Subject to Flooding	<u> </u>	<u> </u>		

Massachusetts Department of Environmental Protection

Bureau of Resource Protection - Wetlands

WPA Form 5 - Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:
 MassDEP File #:274-0037
 eDEP Transaction #:1076074
 City/Town:ROWE

Cubic Feet Flood Storage	a. square feet	b. square feet		
	<u> </u>	<u> </u>	<u> </u>	<u> </u>
9. Riverfront Area	c. cubic feet	d. cubic feet	e. cubic feet	f. cubic feet
	<u> </u>	<u> </u>	<u> </u>	<u> </u>
Sq ft within 100 ft	a. total sq. feet	b. total sq. feet		
	<u> </u>	<u> </u>		
Sq ft between 100-200 ft	c. square feet	d. square feet	e. square feet	f. square feet
	<u> </u>	<u> </u>	<u> </u>	<u> </u>
	g. square feet	h. square feet	i. square feet	j. square feet
	<u> </u>	<u> </u>	<u> </u>	<u> </u>

Coastal Resource Area Impacts:

Resource Area	Proposed Alteration	Permitted Alteration	Proposed Replacement	Permitted Replacement
10. Designated Port Areas	Indicate size under Land Under the Ocean, below			
11. Land Under the Ocean	<u> </u>	<u> </u>		
	a. square feet	b. square feet		
	<u> </u>	<u> </u>		
	c. c/y dredged	d. c/y dredged		
12. Barrier Beaches	Indicate size under Coastal Beaches and/or Coastal Dunes below			
13. Coastal Beaches	<u> </u>	<u> </u>	<u> </u>	<u> </u>
	a. square feet	b. square feet	c. c/y nourishment	d. c/y nourishment
14. Coastal Dunes	<u> </u>	<u> </u>	<u> </u>	<u> </u>
	a. square feet	b. square feet	c. c/y nourishment	d. c/y nourishment
15. Coastal Banks	<u> </u>	<u> </u>		
	a. linear feet	b. linear feet		
16. Rocky Intertidal Shores	<u> </u>	<u> </u>		
	a. square feet	b. square feet		
17. Salt Marshes	<u> </u>	<u> </u>	<u> </u>	<u> </u>
	a. square feet	b. square feet	c. square feet	d. square feet
18. Land Under Salt Ponds	<u> </u>	<u> </u>		
	a. square feet	b. square feet		
	<u> </u>	<u> </u>		
	c. c/y dredged	d. c/y dredged		
19. Land Containing Shellfish	<u> </u>	<u> </u>	<u> </u>	<u> </u>
	a. square feet	b. square feet	c. square feet	d. square feet
20. Fish Runs	Indicate size under Coastal Banks, inland Bank, Land Under the Ocean, and/or inland Land Under Waterbodies and Waterways, above			
	<u> </u>	<u> </u>		
	c. c/y dredged	d. c/y dredged		

Massachusetts Department of Environmental Protection

Bureau of Resource Protection - Wetlands

WPA Form 5 - Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

MassDEP File #:274-0037

eDEP Transaction #:1076074

City/Town:ROWE

21. Land Subject to Coastal Storm Flowage

_____ a. square feet b. square feet

22.

Restoration/Enhancement (For Approvals Only)

If the project is for the purpose of restoring or enhancing a wetland resource area in addition to the square footage that has been entered in Section B.5.c & d or B.17.c & d above, please entered the additional amount here.

_____ a. square feet of BVW

_____ b. square feet of Salt Marsh

23.

✓ Streams Crossing(s)

If the project involves Stream Crossings, please enter the number of new stream crossings/number of replacement stream crossings.

_____ a. number of new stream crossings

_____ 1 _____
b. number of replacement stream crossings

C. General Conditions Under Massachusetts Wetlands Protection Act

The following conditions are only applicable to Approved projects

1. Failure to comply with all conditions stated herein, and with all related statutes and other regulatory measures, shall be deemed cause to revoke or modify this Order.
2. The Order does not grant any property rights or any exclusive privileges; it does not authorize any injury to private property or invasion of private rights.
3. This Order does not relieve the permittee or any other person of the necessity of complying with all other applicable federal, state, or local statutes, ordinances, bylaws, or regulations.
4. The work authorized hereunder shall be completed within three years from the date of this Order unless either of the following apply:
 - a. the work is a maintenance dredging project as provided for in the Act; or
 - b. the time for completion has been extended to a specified date more than three years, but less than five years, from the date of issuance. If this Order is intended to be valid for more than three years, the extension date and the special circumstances warranting the extended time period are set forth as a special condition in this Order.
5. This Order may be extended by the issuing authority for one or more periods of up to three years each upon application to the issuing authority at least 30 days prior to the expiration date of the Order.
6. If this Order constitutes an Amended Order of Conditions, this Amended Order of Conditions does not exceed the issuance date of the original Final Order of Conditions.
7. Any fill used in connection with this project shall be clean fill. Any fill shall contain no trash, refuse, rubbish, or debris, including but not limited to lumber, bricks, plaster, wire, lath, paper, cardboard, pipe, tires, ashes, refrigerators, motor vehicles, or parts of any of the foregoing.
8. This Order is not final until all administrative appeal periods from this Order have elapsed, or if such an appeal has been taken, until all proceedings before the Department have been completed.
9. No work shall be undertaken until the Order has become final and then has been recorded in the Registry of Deeds or the Land Court for the district in which the land is located, within the chain of title of the affected property. In the case of recorded land, the Final Order shall also be noted in the Registry's Grantor Index under the name of the owner of the land upon which the proposed work is to be done. In the case of the registered

Massachusetts Department of Environmental Protection

Bureau of Resource Protection - Wetlands

WPA Form 5 - Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

MassDEP File #:274-0037

eDEP Transaction #:1076074

City/Town:ROWE

land, the Final Order shall also be noted on the Land Court Certificate of Title of the owner of the land upon which the proposed work is done. The recording information shall be submitted to the Conservation Commission on the form at the end of this Order, which form must be stamped by the Registry of Deeds, prior to the commencement of work..

10. A sign shall be displayed at the site not less than two square feet or more than three square feet in size bearing the words,

" Massachusetts Department of Environmental Protection"
[or 'MassDEP']
File Number : "274-0037"

11. Where the Department of Environmental Protection is requested to issue a Superseding Order, the Conservation Commission shall be a party to all agency proceedings and hearings before Mass DEP.
12. Upon completion of the work described herein, the applicant shall submit a Request for Certificate of Compliance (WPA Form 8A) to the Conservation Commission.
13. The work shall conform to the plans and special conditions referenced in this order.
14. Any change to the plans identified in Condition #13 above shall require the applicant to inquire of the Conservation Commission in writing whether the change is significant enough to require the filing of a new Notice of Intent.
15. The Agent or members of the Conservation Commission and the Department of Environmental Protection shall have the right to enter and inspect the area subject to this Order at reasonable hours to evaluate compliance with the conditions stated in this Order, and may require the submittal of any data deemed necessary by the Conservation Commission or Department for that evaluation.
16. This Order of Conditions shall apply to any successor in interest or successor in control of the property subject to this Order and to any contractor or other person performing work conditioned by this Order.
17. Prior to the start of work, and if the project involves work adjacent to a Bordering Vegetated Wetland, the boundary of the wetland in the vicinity of the proposed work area shall be marked by wooden stakes or flagging. Once in place, the wetland boundary markers shall be maintained until a Certificate of Compliance has been issued by the Conservation Commission.
18. All sedimentation barriers shall be maintained in good repair until all disturbed areas have been fully stabilized with vegetation or other means. At no time shall sediments be deposited in a wetland or water body. During construction, the applicant or his/her designee shall inspect the erosion controls on a daily basis and shall remove accumulated sediments as needed. The applicant shall immediately control any erosion problems that occur at the site and shall also immediately notify the Conservation Commission, which reserves the right to require additional erosion and/or damage prevention controls it may deem necessary. Sedimentation barriers shall serve as the limit of work unless another limit of work line has been approved by this Order.

NOTICE OF STORMWATER CONTROL AND MAINTENANCE REQUIREMENTS

19. The work associated with this Order(the "Project") is (1) is not (2) subject to the Massachusetts Stormwater Standards. If the work is subject to Stormwater Standards, then the project is subject to the following conditions;
- a) All work, including site preparation, land disturbance, construction and redevelopment, shall be implemented in accordance with the construction period pollution prevention and erosion and sedimentation control plan and, if applicable, the Stormwater Pollution Prevention Plan required by the National Pollutant Discharge Elimination System Construction General Permit as required by Stormwater Standard 8. Construction period erosion, sedimentation and pollution control measures and best management practices (BMPs) shall remain in place until the site is fully stabilized.
- b) No stormwater runoff may be discharged to the post-construction stormwater BMPs unless and until a Registered Professional Engineer provides a Certification that: *i.* all construction period BMPs have been

Massachusetts Department of Environmental Protection

Bureau of Resource Protection - Wetlands

WPA Form 5 - Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

MassDEP File #:274-0037

eDEP Transaction #:1076074

City/Town:ROWE

removed or will be removed by a date certain specified in the Certification. For any construction period BMPs intended to be converted to post construction operation for stormwater attenuation, recharge, and/or treatment, the conversion is allowed by the MassDEP Stormwater Handbook BMP specifications and that the BMP has been properly cleaned or prepared for post construction operation, including removal of all construction period sediment trapped in inlet and outlet control structures; *ii.* as-built final construction BMP plans are included, signed and stamped by a Registered Professional Engineer, certifying the site is fully stabilized; *iii.* any illicit discharges to the stormwater management system have been removed, as per the requirements of Stormwater Standard 10; *iv.* all post-construction stormwater BMPs are installed in accordance with the plans (including all planting plans) approved by the issuing authority, and have been inspected to ensure that they are not damaged and that they are in proper working condition; *v.* any vegetation associated with post-construction BMPs is suitably established to withstand erosion.

- c) The landowner is responsible for BMP maintenance until the issuing authority is notified that another party has legally assumed responsibility for BMP maintenance. Prior to requesting a Certificate of Compliance, or Partial Certificate of Compliance, the responsible party (defined in General Condition 19(e)) shall execute and submit to the issuing authority an Operation and Maintenance Compliance Statement ("O&M Statement") for the Stormwater BMPs identifying the party responsible for implementing the stormwater BMP Operation and Maintenance Plan ("O&M Plan") and certifying the following: *i.*) the O&M Plan is complete and will be implemented upon receipt of the Certificate of Compliance, and *ii.*) the future responsible parties shall be notified in writing of their ongoing legal responsibility to operate and maintain the stormwater management BMPs and implement the Stormwater Pollution Prevention Plan.
- d) Post-construction pollution prevention and source control shall be implemented in accordance with the long-term pollution prevention plan section of the approved Stormwater Report and, if applicable, the Stormwater Pollution Prevention Plan required by the National Pollutant Discharge Elimination System Multi-Sector General Permit.
- e) Unless and until another party accepts responsibility, the landowner, or owner of any drainage easement, assumes responsibility for maintaining each BMP. To overcome this presumption, the landowner of the property must submit to the issuing authority a legally binding agreement of record, acceptable to the issuing authority, evidencing that another entity has accepted responsibility for maintaining the BMP, and that the proposed responsible party shall be treated as a permittee for purposes of implementing the requirements of Conditions 19(f) through 19(k) with respect to that BMP. Any failure of the proposed responsible party to implement the requirements of Conditions 19(f) through 19(k) with respect to that BMP shall be a violation of the Order of Conditions or Certificate of Compliance. In the case of stormwater BMPs that are serving more than one lot, the legally binding agreement shall also identify the lots that will be serviced by the stormwater BMPs. A plan and easement deed that grants the responsible party access to perform the required operation and maintenance must be submitted along with the legally binding agreement.
- f) The responsible party shall operate and maintain all stormwater BMPs in accordance with the design plans, the O&M Plan, and the requirements of the Massachusetts Stormwater Handbook.
- g) The responsible party shall:
 - 1. Maintain an operation and maintenance log for the last three (3) consecutive calendar years of inspections, repairs, maintenance and/or replacement of the stormwater management system or any part thereof, and disposal (for disposal the log shall indicate the type of material and the disposal location);
 - 2. Make the maintenance log available to MassDEP and the Conservation Commission ("Commission") upon request; and
 - 3. Allow members and agents of the MassDEP and the Commission to enter and inspect the site to evaluate and ensure that the responsible party is in compliance with the requirements for each BMP established in the O&M Plan approved by the issuing authority.

**Massachusetts Department of Environmental
Protection**

Bureau of Resource Protection - Wetlands

WPA Form 5 - Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

MassDEP File #:274-0037

eDEP Transaction #:1076074

City/Town:ROWE

- h) All sediment or other contaminants removed from stormwater BMPs shall be disposed of in accordance with all applicable federal, state, and local laws and regulations.
- i) Illicit discharges to the stormwater management system as defined in 310 CMR 10.04 are prohibited.
- j) The stormwater management system approved in the Order of Conditions shall not be changed without the prior written approval of the issuing authority.
- k) Areas designated as qualifying pervious areas for the purpose of the Low Impact Site Design Credit (as defined in the MassDEP Stormwater Handbook, Volume 3, Chapter 1, Low Impact Development Site Design Credits) shall not be altered without the prior written approval of the issuing authority.
- l) Access for maintenance, repair, and/or replacement of BMPs shall not be withheld. Any fencing constructed around stormwater BMPs shall include access gates and shall be at least six inches above grade to allow for wildlife passage.

Special Conditions:

SC#1. ANY CHANGES TO THE 75% PLANS ARE TO BE REVIEWED AND APPROVED BY THE CONSERVATION COMMISSION PRIOR TO THE START OF ANY ACTIVITY ON THE SITE.

SC#2. PRE-CONSTRUCTION PHOTOGRAPHS OF ALL WORK SITES INDICATED ON THE PLAN SHALL BE SUBMITTED TO THE CONSERVATION COMMISSION PRIOR TO CONSTRUCTION. PHOTOGRAPHS SHALL ALSO BE TAKEN AFTER CONSTRUCTION AND SHALL BE SUBMITTED TO THE COMMISSION. THESE PHOTOGRAPHS MAY BE SUBMITTED IN DIGITAL FORMAT.

SC#3. PRIOR TO THE START OF ANY ACTIVITY ON THE SITE, THE APPLICANT SHALL REQUEST A PRE-CONSTRUCTION MEETING WITH THE CONSERVATION COMMISSION AND/OR ITS REPRESENTATIVE, THE PROJECT SUPERVISOR, THE CONTRACTOR RESPONSIBLE FOR THE WORK AND THE ENVIRONMENTAL MONITOR TO REVIEW THE CONDITIONS OF THIS ORDER AND ENSURE THAT THEY ARE UNDERSTOOD. ARRANGEMENTS FOR THIS MEETING WILL BE MADE AT LEAST TWO (2) WEEK PRIOR TO ANY ACTIVITY.

SC#4. THE APPLICANT SHALL DESIGNATE AN EROSION CONTROL MONITOR TO OVERSEE ALL WORK WITHIN THE 100-FOOT BUFFER ZONE ON THE PROJECT SITE, INCLUDING BUT NOT LIMITED TO SUPERVISION OF THE MAINTENANCE AND REPLACEMENT OF ALL EROSION CONTROLS AND TEMPORARY STORM WATER STRUCTURES. THE ENVIRONMENTAL MONITOR SHALL BE RESPONSIBLE FOR ENSURING COMPLIANCE WITH THIS ORDER DURING CONSTRUCTION. THE APPLICANT SHALL PROVIDE THE COMMISSION WITH THE NAMES(S), ADDRESS(ES) AND TELEPHONE NUMBER(S) OF THE EM AND HIS OR HER ALTERNATE PRIOR TO THE START OF WORK TO ENSURE THAT THE EM CAN BE CONTACTED DURING AN EMERGENCY. PRIOR TO ANY CHANGE IN EM ASSIGNMENT, UPDATED INFORMATION SHALL BE PROVIDED TO THE COMMISSION.

SC#5. THE ENVIRONMENTAL MONITOR SHALL INSPECT EROSION CONTROLS ON A WEEKLY BASIS AND AFTER ANY STORM EVENTS AND SHALL HAVE THE AUTHORITY TO MODIFY EXISTING CONTROLS OR REQUIRE ADDITIONAL CONTROLS IF S/HE DEEMS IT NECESSARY. THE EM SHALL HAVE THE AUTHORITY TO REQUIRE THAT ANY EROSION PROBLEMS ARE ADDRESSED IMMEDIATELY AND SHALL IMMEDIATELY NOTIFY THE COMMISSION IF ANY DISCHARGES TO A WETLAND RESOURCE AREA OCCUR.

**Massachusetts Department of Environmental
Protection**

Bureau of Resource Protection - Wetlands

WPA Form 5 - Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

MassDEP File #:274-0037

eDEP Transaction #:1076074

City/Town:ROWE

SC#6. NO CLEARING OF TREES, OR DISTURBANCE OF SOILS SHALL OCCUR PRIOR TO THE PRE-CONSTRUCTION MEETING, EXCEPT THAT MINIMAL DISTURBANCE OF SHRUBS AND HERBACEOUS PLANTS ABSOLUTELY NECESSARY IN ORDER TO PLACE EROSION OR SEDIMENTATION CONTROL DEVICES WHERE REQUIRED.

SC#7. MEMBERS AND AGENTS OF THE CONSERVATION COMMISSION SHALL HAVE THE RIGHT TO ENTER AND INSPECT THE PREMISES TO EVALUATE AND ENSURE COMPLIANCE WITH THE CONDITIONS AND PERFORMANCE STANDARDS STATED IN THIS ORDER, THE ACT AND 310 CMR 10.00 AS WELL AS MASSDEP'S POLICIES. THE COMMISSION MAY ACQUIRE ANY INFORMATION, MEASUREMENTS, PHOTOGRAPHS, OBSERVATIONS AND/OR MATERIALS OR MAY REQUIRE THE SUBMITTAL OF ANY DATA OR INFORMATION DEEMED NECESSARY FOR THAT EVALUATION.

SC#8. ANY DAMAGE CAUSED AS A DIRECT RESULT OF THIS PROJECT TO ANY WETLAND RESOURCE AREAS SHALL BE THE RESPONSIBILITY OF THE APPLICANT TO REPAIR OR RESTORE. SEDIMENTATION OF ANY RESOURCE AREA SHALL BE CONSIDERED FILL OF THAT WETLAND AREA.

SC#9. EXCAVATED MATERIALS NOT USED FOR BACKFILL SHALL BE REMOVED FROM THE AREA AND DISPOSED OF LEGALLY. RECORDS SHALL BE KEPT DOCUMENTING THAT EXCESS MATERIAL HAS BEEN PROPERLY DISPOSED OF AT A LEGAL SITE.

SC#10. THE APPLICANT SHALL HAVE ABSORBENT MATERIALS FOR USE IN CONTAINING ACCIDENTAL SPILLS AVAILABLE ON SITE AT ALL TIMES. IF ANY RELEASE OF FUEL, MOTOR OIL, LUBRICATING OILS, ETC. OCCURS, THE APPLICANT OR DESIGNEE SHALL IMMEDIATELY NOTIFY THE COMMISSION'S OFFICE AT (TELEPHONE NUMBER). A RESPONSE ACTION OR CLEANUP SHALL BE CONDUCTED PURSUANT TO GL C. 21E (MASSACHUSETTS OIL AND HAZARDOUS MATERIAL RELEASE PREVENTION AND RESPONSE ACT) AND THE MASSACHUSETTS CONTINGENCY PLAN (MCP).

SC#11. PRIOR TO COMMENCEMENT OF ANY WORK ON THE PROJECT SITE, EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE INSTALLED AS SHOWN ON THE REFERENCED PLANS. THE EROSION CONTROL SPECIFICATIONS PROVIDED IN THE NOTICE OF INTENT AND IN THE ORDER OF CONDITIONS SHALL BE THE MINIMUM STANDARDS FOR THIS PROJECT. THE CONSERVATION COMMISSION MAY REQUIRE ADDITIONAL OR MODIFIED EROSION CONTROL MEASURES AT ANY TIME BEFORE, DURING AND AFTER CONSTRUCTION.

SC#12. ALL EROSION AND SEDIMENTATION CONTROLS SHALL BE MAINTAINED IN GOOD REPAIR UNTIL ALL DISTURBED AREAS HAVE BEEN FULLY STABILIZED WITH VEGETATION OR OTHER MEANS. AT NO TIME SHALL SEDIMENTS BE DEPOSITED IN A WETLAND AREA. THE CONSERVATION COMMISSION RESERVES THE RIGHT TO DETERMINE WHETHER EROSION AND SEDIMENT CONTROL MEASURES ARE NO LONGER NEEDED, AT WHICH TIME THEY SHALL BE REMOVED.

SC#13. STOCKPILES OF SOILS, AGGREGATE, OR ANY OTHER UNCONSOLIDATED CONSTRUCTION MATERIALS PERMITTED BY THIS ORDER WITHIN 100-FOOT BUFFER ZONES SHALL BE COVERED WITH TARPAULINS WHEN NOT BEING WORKED WITH. STOCKPILES IN PLACE FOR GREATER THAN TWENTY-FOUR (24) HOURS SHALL BE RINGED WITH AN ENTRENCHED HAY BALE BARRIER AND COVERED BY PROPERLY SECURED TARPAULINS AT THE CLOSE OF EACH WORKDAY. THE AREAS OF CONSTRUCTION SHALL REMAIN IN A STABLE CONDITION AT THE CLOSE OF EACH CONSTRUCTION

**Massachusetts Department of Environmental
Protection**

Bureau of Resource Protection - Wetlands

WPA Form 5 - Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

MassDEP File #:274-0037

eDEP Transaction #:1076074

City/Town:ROWE

DAY. EROSION CONTROLS SHALL BE INSPECTED DAILY, AND MAINTAINED OR REINFORCED IF NECESSARY. AFTER ANY STORM EVENT, ANY ACCUMULATED SILT ADJACENT TO THE BARRIERS SHALL BE REMOVED.

SC#14. AN ADEQUATE RESERVE OF EROSION CONTROL MATERIALS SHALL BE ON SITE AT ALL TIMES FOR EMERGENCY OR ROUTINE REPLACEMENT.

SC#15. PLACEMENT OF EROSION CONTROLS SHALL BE DIRECTED AT THE SITE BY THE PROJECT ENGINEER/COMPLIANCE OR EROSION CONTROL MONITOR IN ORDER TO ENSURE THAT THE EROSION AND SEDIMENTATION CONTROLS PERFORM AS SPECIFIED AS PART OF THE NOTICE OF INTENT AND THIS ORDER. NOTE: SPECIFIC INSTALLATION CONDITIONS FOR THIS CONDITION COULD INCLUDE THE FOLLOWING, BUT SHOULD BE SPECIFIC TO THE PROJECT: A. A ROW OF FILTER FABRIC FENCING, BACKED BY ONE ROW OF STAKED EROSION/SEDIMENTATION BALES PLACED END TO END, SHALL BE PLACED UP-GRADIENT OF ALL RESOURCE AREAS ALONG THE LIMIT OF ACTIVITY BETWEEN ALL DISTURBED AREAS AND THE WETLAND. B. FILTER FABRIC FENCING SHALL BE SET AND STAKED EVERY 18'36" INCHES AT THE UPLAND SIDE OF THE EXCAVATED COMPENSATION AREA. FILTER FABRIC SHALL BE NO LESS THAN 15 INCHES HIGH.

SC#16. STABILIZED SLOPES SHALL BE MAINTAINED AS DESIGNED AND CONSTRUCTED BY THE PROPERTY OWNER OF RECORD, WHETHER 'BIOENGINEERED' OR MECHANICALLY-STABILIZED SLOPES.

SC#17. ADDITIONAL ALTERATION PROHIBITED: THERE SHALL BE NO ADDITIONAL ALTERATIONS OF AREAS UNDER CONSERVATION COMMISSION JURISDICTION WITHOUT THE REQUIRED REVIEW AND PERMIT(S). THIS CONDITION SHALL SURVIVE THE EXPIRATION OF THIS ORDER, AND SHALL BE INCLUDED AS A CONTINUING CONDITION IN PERPETUITY ON THE CERTIFICATE OF COMPLIANCE.

Massachusetts Department of Environmental Protection

Bureau of Resource Protection - Wetlands

WPA Form 5 - Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

MassDEP File #:274-0037

eDEP Transaction #:1076074

City/Town:ROWE

D. Findings Under Municipal Wetlands Bylaw or Ordinance

1. Is a municipal wetlands bylaw or ordinance applicable? Yes No

2. The Conservation Commission hereby (check one that applies):

a. DENIES the proposed work which cannot be conditioned to meet the standards set forth in a municipal ordinance or bylaw specifically:

1. Municipal Ordinance or Bylaw _____

2. Citation _____

Therefore, work on this project may not go forward unless and until a revised Notice of Intent is submitted which provides measures which are adequate to meet these standards, and a final Order or Conditions is issued. Which are necessary to comply with a municipal ordinance or bylaw:

b. APPROVES the proposed work, subject to the following additional conditions.

1. Municipal Ordinance or Bylaw _____

2. Citation _____

3. The Commission orders that all work shall be performed in accordance with the following conditions and with the Notice of Intent referenced above. To the extent that the following conditions modify or differ from the plans, specifications, or other proposals submitted with the Notice of Intent, the conditions shall control.

The special conditions relating to municipal ordinance or bylaw are as follows:

Massachusetts Department of Environmental Protection

Bureau of Resource Protection - Wetlands

WPA Form 5 - Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

MassDEP File #:274-0037

eDEP Transaction #:1076074

City/Town:ROWE

E. Signatures

This Order is valid for three years from the date of issuance, unless otherwise specified pursuant to General Condition #4. If this is an Amended Order of Conditions, the Amended Order expires on the same date as the original Order of Conditions.

4/10/2019

1. Date of Original Order

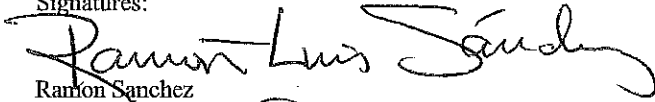
Please indicate the number of members who will sign this form. This Order must be signed by a majority of the Conservation Commission.

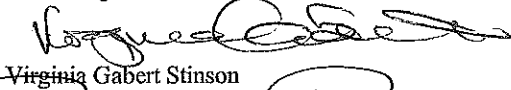
3

2. Number of Signers

The Order must be mailed by certified mail (return receipt requested) or hand delivered to the applicant. A copy also must be mailed or hand delivered at the same time to the appropriate Department of Environmental Protection Regional Office, if not filing electronically, and the property owner, if different from applicant.

Signatures:


Ramon Sanchez


Virginia Gabert Stinson


Prudence Berry

by hand delivery on

by certified mail, return receipt requested, on

Date April 11, 2019

Date

F. Appeals

The applicant, the owner, any person aggrieved by this Order, any owner of land abutting the land subject to this Order, or any ten residents of the city or town in which such land is located, are hereby notified of their right to request the appropriate MassDEP Regional Office to issue a Superseding Order of Conditions. The request must be made by certified mail or hand delivery to the Department, with the appropriate filing fee and a completed Request for Departmental Action Fee Transmittal Form, as provided in 310 CMR 10.03(7) within ten business days from the date of issuance of this Order. A copy of the request shall at the same time be sent by certified mail or hand delivery to the Conservation Commission and to the applicant, if he/she is not the appellant.

Any appellants seeking to appeal the Department's Superseding Order associated with this appeal will be required to demonstrate prior participation in the review of this project. Previous participation in the permit proceeding means the submission of written information to the Conservation Commission prior to the close of the public hearing, requesting a Superseding Order, or providing written information to the Department prior to issuance of a Superseding Order.

The request shall state clearly and concisely the objections to the Order which is being appealed and how the Order does not contribute to the protection of the interests identified in the Massachusetts Wetlands Protection Act

Massachusetts Department of Environmental Protection

Bureau of Resource Protection - Wetlands

WPA Form 5 - Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

MassDEP File #:274-0037

eDEP Transaction #:1076074

City/Town:ROWE

(M.G.L. c. 131, § 40), and is inconsistent with the wetlands regulations (310 CMR 10.00). To the extent that the Order is based on a municipal ordinance or bylaw, and not on the Massachusetts Wetlands Protection Act or regulations, the Department has no appellate jurisdiction.

G. Recording Information

This Order of Conditions must be recorded in the Registry of Deeds or the Land Court for the district in which the land is located, within the chain of title of the affected property. In the case of recorded land, the Final Order shall also be noted in the Registry's Grantor Index under the name of the owner of the land subject to the Order. In the case of registered land, this Order shall also be noted on the Land Court Certificate of Title of the owner of the land subject to the Order of Conditions. The recording information on this page shall be submitted to the Conservation Commission listed below.

ROWE
Conservation Commission

Detach on dotted line, have stamped by the Registry of Deeds and submit to the Conservation Commission.

To:

ROWE
Conservation Commission

Please be advised that the Order of Conditions for the Project at:

KINGS HIGHWAY ROAD
Project Location

274-0037
MassDEP File Number

Has been recorded at the Registry of Deeds of:

County Book Page

for:

Property Owner JENNIFER MORSE

and has been noted in the chain of title of the affected property in:

Book Page

In accordance with the Order of Conditions issued on:

Date

If recorded land, the instrument number identifying this transaction is:

Instrument Number

If registered land, the document number identifying this transaction is:

Document Number

**Massachusetts Department of Environmental
Protection**
Bureau of Resource Protection - Wetlands
WPA Form 5 - Order of Conditions
Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:
MassDEP File #:274-0037
eDEP Transaction #:1076074
City/Town:ROWE

Signature of Applicant

Rev. 4/1/2010

ATTACHMENT C
US ARMY CORP OF ENGINEERS GENERAL PERMIT

(10/01/2019) -56



DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS
NEW ENGLAND DISTRICT
696 VIRGINIA ROAD
CONCORD MA 01742-2751

August 6, 2019

Regulatory Division
File Number: NAE-2019-01540

Jennifer Morse
Town of Rowe
321 Zoar Road
Rowe, Massachusetts 01367

Dear Ms. Morse:

We have reviewed your application to temporarily discharge fill material into 200 ft.² (conservative estimate) of Pelham Brook in order to install sandbags to divert water flow, and temporarily discharge fill material in an additional 49 ft.² of Pelham Brook in order to install a pump system to do bridge work in the dry. The purpose of the project is to replace the existing, deteriorated bridge (in uplands) over Pelham Brook with a new and wider bridge. All waterways to be affected will be restored to better than pre-project conditions. This project is located in Pelham Brook at King's Highway Road, Rowe, Massachusetts. The work is shown on the enclosed plans titled "BRIDGE REPLACEMENT: TOWN OF ROWE," on 8 sheets, and dated "7-MAR- 2019."

Based on the information that you have provided, we verify that the activity is authorized under General Permit # 14 of the enclosed April 16, 2018 Federal permit known as the Massachusetts General Permits (GPs).

Please review the enclosed GPs carefully, including the general conditions beginning on page 19, to be sure that you and whoever does the work understand its requirements. A copy of the GPs and this verification letter shall be available at the project site throughout the time the work is underway. Performing work within our jurisdiction that is not specifically authorized by this determination or failing to comply with any special condition provided above or all of the terms and conditions of the GPs may subject you to the enforcement provisions of our regulations. You must perform this work in compliance with the terms and conditions of the GPs and also in compliance with the following special condition:

-You must complete and return the enclosed **Work Start Notification Form** to this office at least two weeks before the anticipated starting date.

This authorization presumes that the work as described above and as shown on your plans noted above is in waters of the U.S.

This authorization expires on April 5, 2023. You must commence or be under contract to commence the work authorized herein by April 5, 2023, and complete the work by April 5, 2024.

If not, you must contact this office to determine the need for further authorization before beginning or continuing the activity. We recommend that you contact us *before* this authorization expires to discuss reissuance. Please contact us immediately if you change the plans or construction methods for work within our jurisdiction. We must approve any changes before you undertake them.

This authorization does not obviate the need to obtain other Federal, State, or local authorizations required by law.

This authorization becomes valid only after the Massachusetts Department of Environmental Protection (MassDEP) issues or waives Water Quality Certification (WQC) as required under Section 401 of the Clean Water Act. In the event the MassDEP denies the 401 WQC, this determination becomes null and void. The address of the MassDEP regional office for your area is provided on page 47 of the enclosed MA GPs.

We continually strive to improve our customer service. In order for us to better serve you, we would appreciate your completing our Customer Service Survey located at http://corpsmapu.usace.army.mil/cm_apex/f?p=regulatory_survey.

Please contact Alan Anacheka-Nasemann of my staff at (978) 318-8214 or via e-mail at: Alan.R.Anacheka-Nasemann@usace.army.mil if you have any questions.

Sincerely,



Barbara H. Newman
Chief, Permits & Enforcement Branch
Regulatory Division

Enclosures

cc:

Keith Nelson, Gill Engineering Associates, Needham, MA; knelson@gill-eng.com

Ed Reiner, U.S. EPA, Region 1, Boston, MA; reiner.ed@epa.gov

David Cameron, DEP WERO, Springfield, MA; david.cameron@state.ma.us (DEP File No. 274-0037)

Rowe Conservation Commission, c/o Town Clerk, Rowe, MA; townclerk@rowe-ma.gov



**US Army Corps
of Engineers**®
New England District

WORK-START NOTIFICATION FORM
(Minimum Notice: Two weeks before work begins)

EMAIL TO: alan.r.anacheka-nasemann@usace.army.mil and cenae-r@usace.army.mil;

or

MAIL TO:

Alan R. Anacheka-Nasemann
Regulatory Division
U.S. Army Corps of Engineers, New England District
696 Virginia Road
Concord, Massachusetts 01742-2751

Corps of Engineers Permit No. NAE-2019-01540 was issued to the Town of Rowe. This work is located in Pelham Brook and authorized temporary discharge of fill material into 200 ft.² (conservative estimate) of Pelham Brook in order to install sandbags to divert water flow, and temporarily discharge fill material in an additional 49 ft.² of Pelham Brook in order to install a pump system to do bridge work in the dry.

The people (e.g., contractor) listed below will do the work, and they understand the permit's conditions and limitations.

PLEASE PRINT OR TYPE

Name of Person/Firm: _____

Business Address: _____

Phone & email: () _____ () _____

Proposed Work Dates: Start: _____ Finish: _____

Permittee/Agent Signature: _____ Date: _____

Printed Name: _____ Title: _____

Date Permit Issued: _____ Date Permit Expires: _____

FOR USE BY THE CORPS OF ENGINEERS

PM: _____ Submittals Required: _____

Inspection Recommendation: _____



**US Army Corps
of Engineers®**
New England District

COMPLIANCE CERTIFICATION FORM

(Minimum Notice: Permittee must sign and return notification
within one month of the completion of work.)

Permit Number: NAE-2019-01540

Project Manager: Anacheka-Nasemann

Name of Permittee: Town of Rowe

Permit Issuance Date: August 6, 2019

Please sign this certification and return it to our office upon completion of the activity and any mitigation required by the permit. You must submit this after the mitigation is complete, but not the mitigation monitoring, which requires separate submittals.

```

*****
* E-MAIL TO: cenae-r@usace.army.mil; or
*
* MAIL TO: Permits and Enforcement Branch A
*           U.S. Army Corps of Engineers, New England District
*           Regulatory Division
*           696 Virginia Road
*           Concord, Massachusetts 01742-2751
*****

```

Please note that your permitted activity is subject to a compliance inspection by an U.S. Army Corps of Engineers representative. If you fail to comply with this permit you are subject to permit suspension, modification, or revocation.

I hereby certify that the work authorized by the above referenced permit was completed in accordance with the terms and conditions of the above referenced permit, and any required mitigation was completed in accordance with the permit conditions.

Signature of Permittee

Date

Printed Name

Date of Work Completion

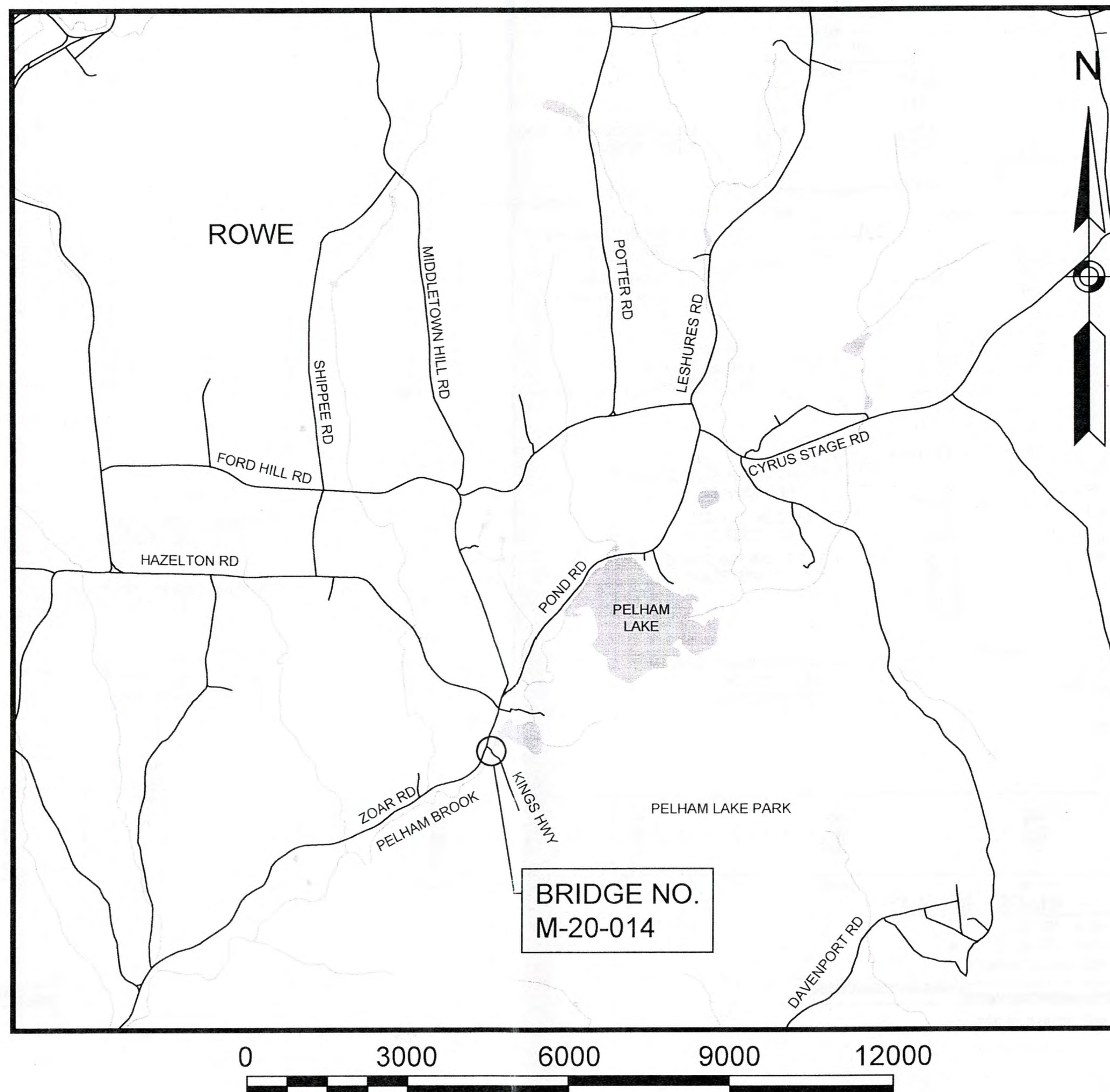
() _____
Telephone Number

() _____
Telephone Number

TOWN OF ROWE

KINGS HIGHWAY OVER
 PELHAM BROOK
 BRIDGE NO. R-10-003
 IN THE TOWN OF
 ROWE, MA
 FRANKLIN COUNTY

ENVIRONMENTAL PERMITTING PLANS



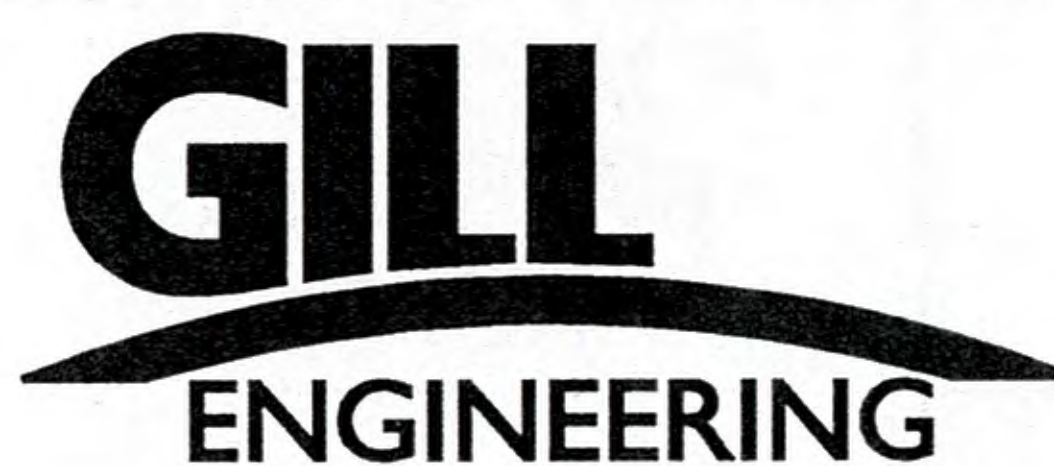
INDEX

SHEET NO.	SHEET TITLE
1	TITLE SHEET
2	ROADWAY & WATERWAY PROFILE
3	EXISTING CONDITIONS PLAN
4	GENERAL PLAN & LONGITUDINAL SECTION
5	STAGE CONSTRUCTION PLAN
6	DEMO & CONTROL OF WATER
7	ROADWAY PLAN & TYPICAL SECTION
8	TEMPORARY BRIDGE PLAN & PROFILE

RESOURCE IMPACTS (TEMPORARY & PERMANENT)
 BANKS = 735 LF
 LAND UNDER WATERBODIES & WATERWAYS = 1193 SF
 LAND DREDGED = 782 CY
 OHW ELEVATION = VARIES 1322.3' 15' UPSTREAM
 TO 1327.3' 22' DOWNSTREAM

SCALE: 1" = 3000'

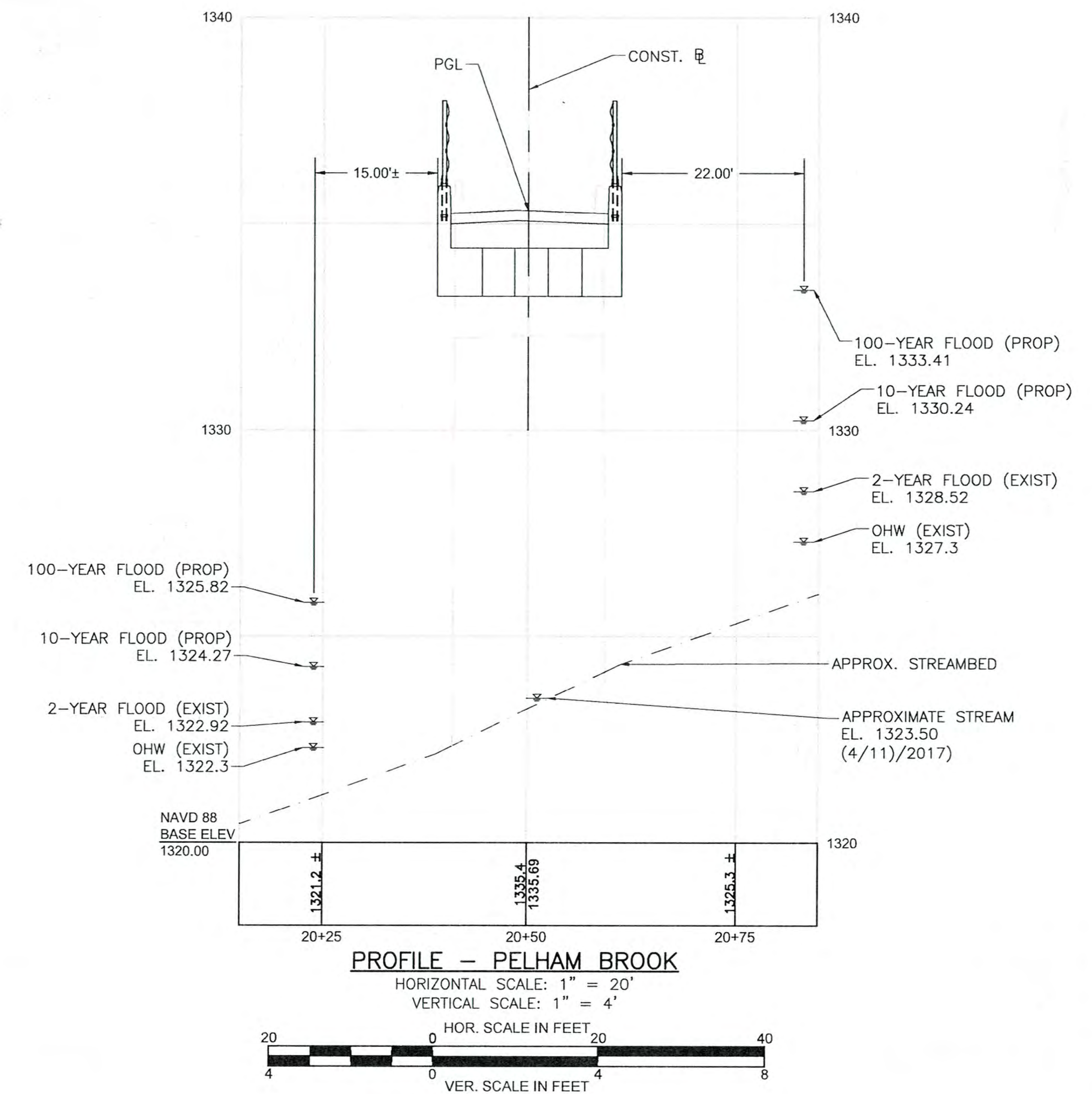
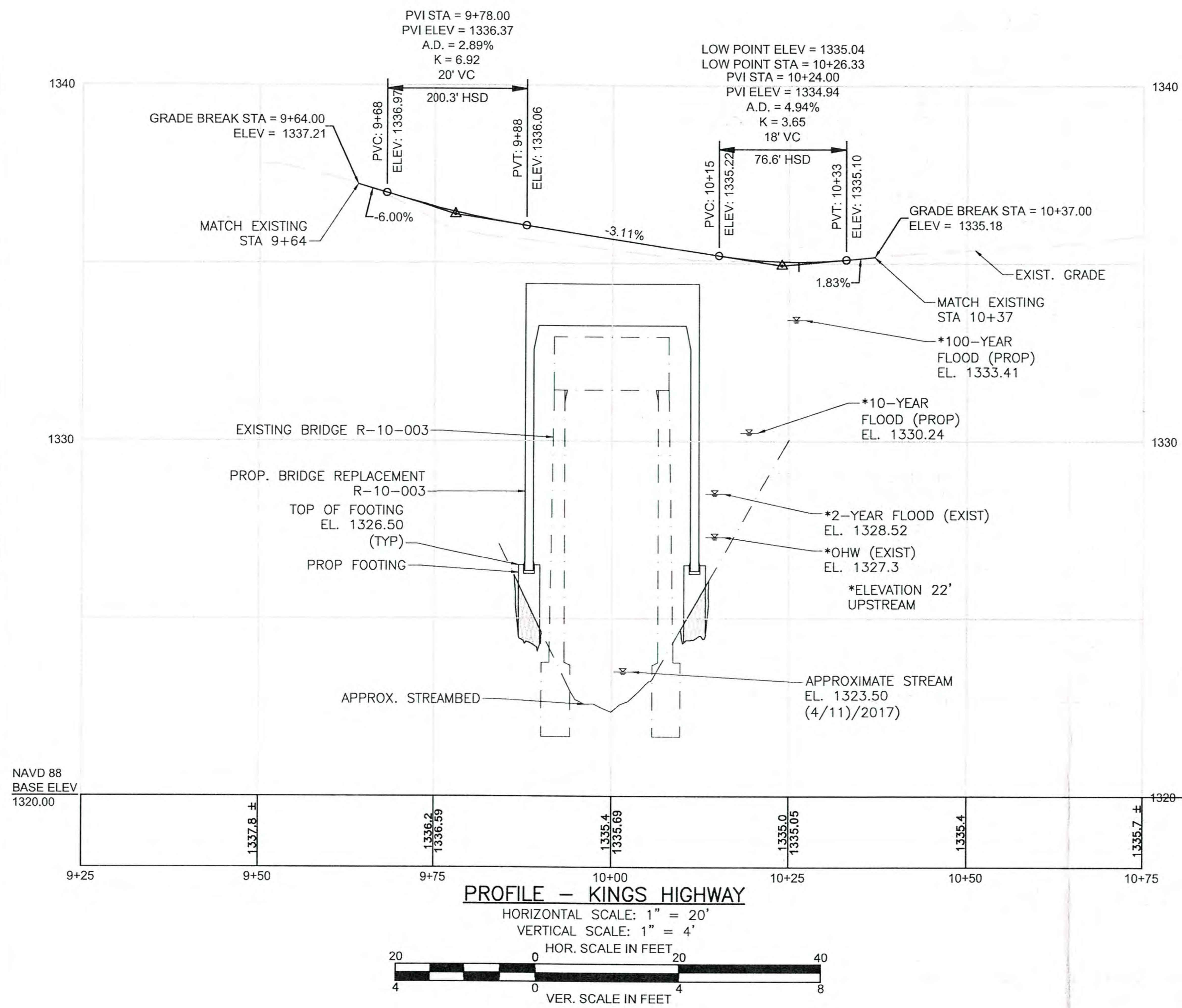
SUBMITTAL DATE: 07-MAR-2019



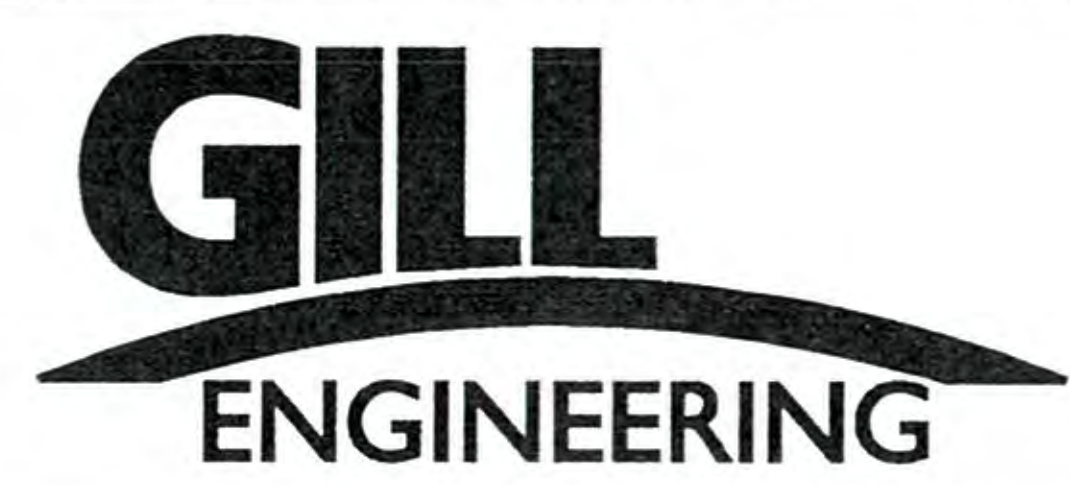
BRIDGE REPLACEMENT
 TOWN OF ROWE

BRIDGE REPLACEMENT FOR ROWE R-10-003
 KINGS HIGHWAY OVER PELHAM BROOK

TITLE SHEET SHEET
 1
 OF 8



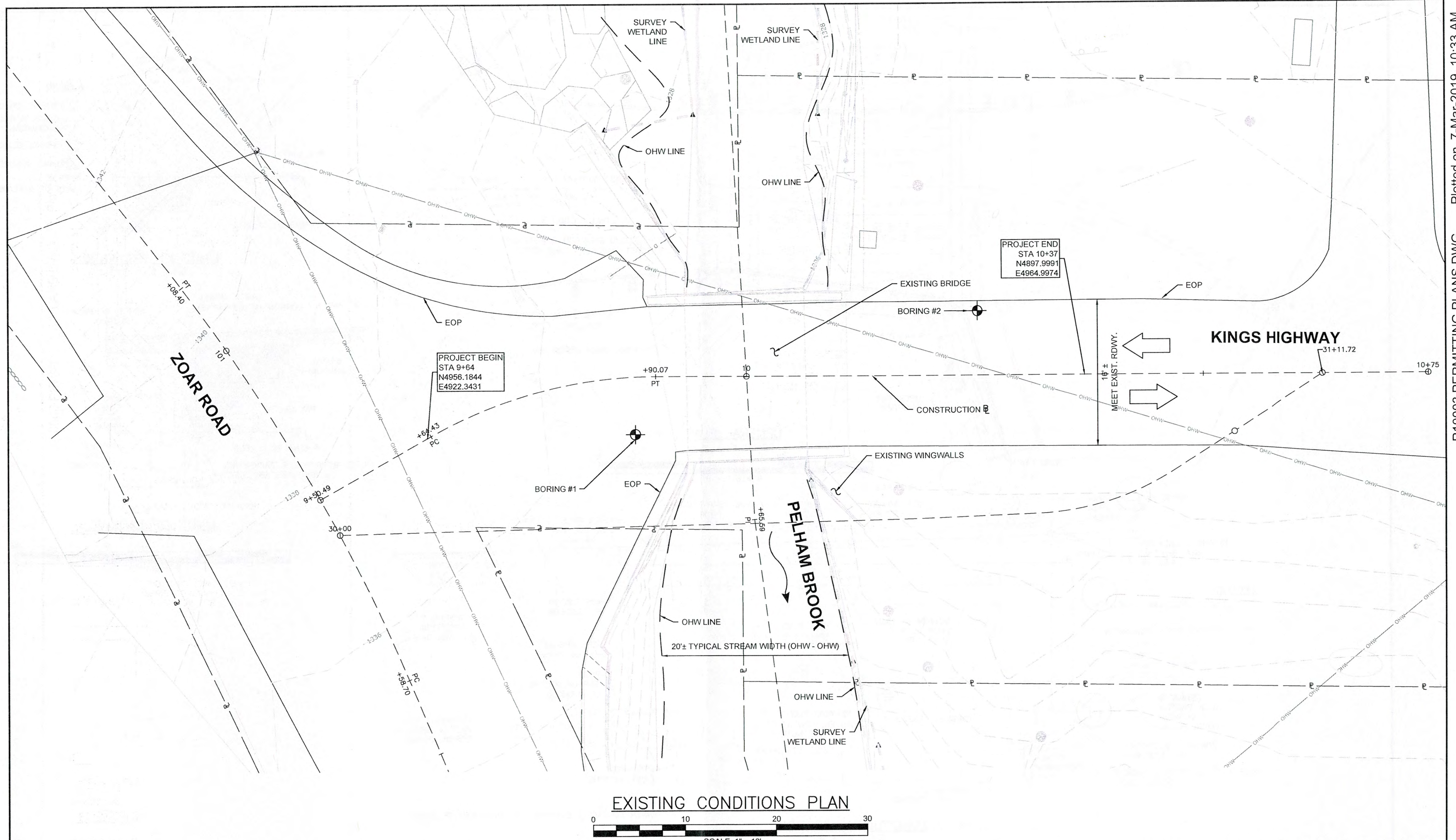
SUBMITTAL DATE: 07-MAR-2019



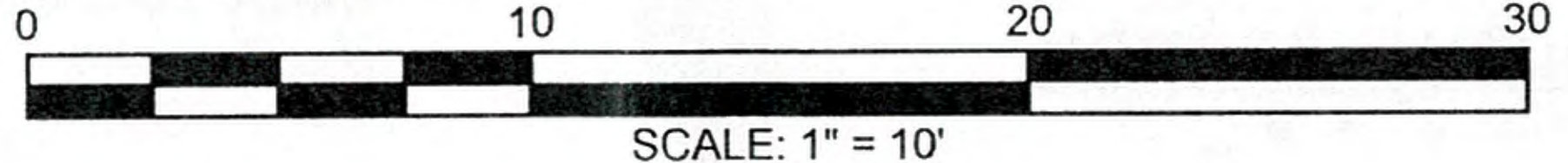
**BRIDGE REPLACEMENT
TOWN OF ROWE**

BRIDGE REPLACEMENT FOR ROWE R-10-003
KINGS HIGHWAY OVER PELHAM BROOK

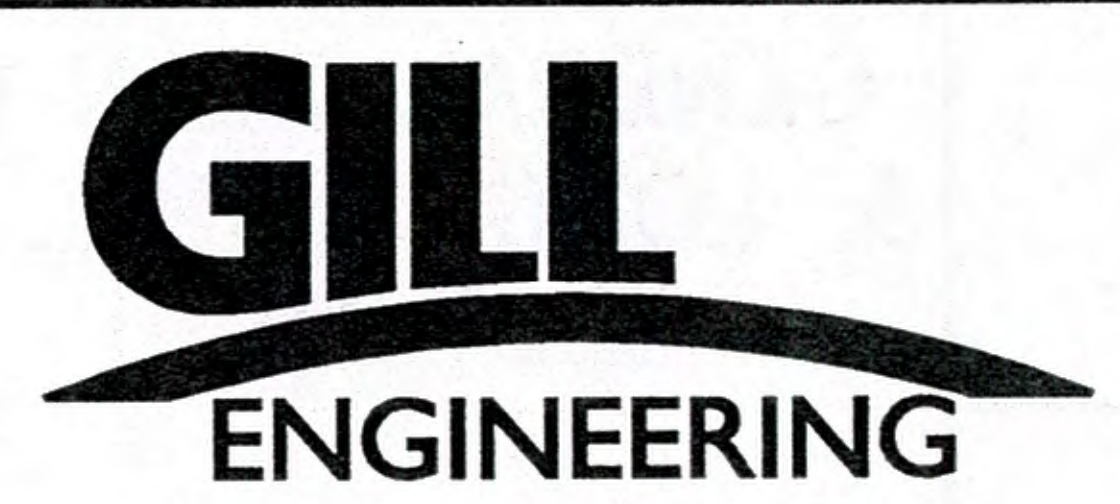
ROADWAY & WATERWAY PROFILE
SHEET 2 OF 8



EXISTING CONDITIONS PLAN



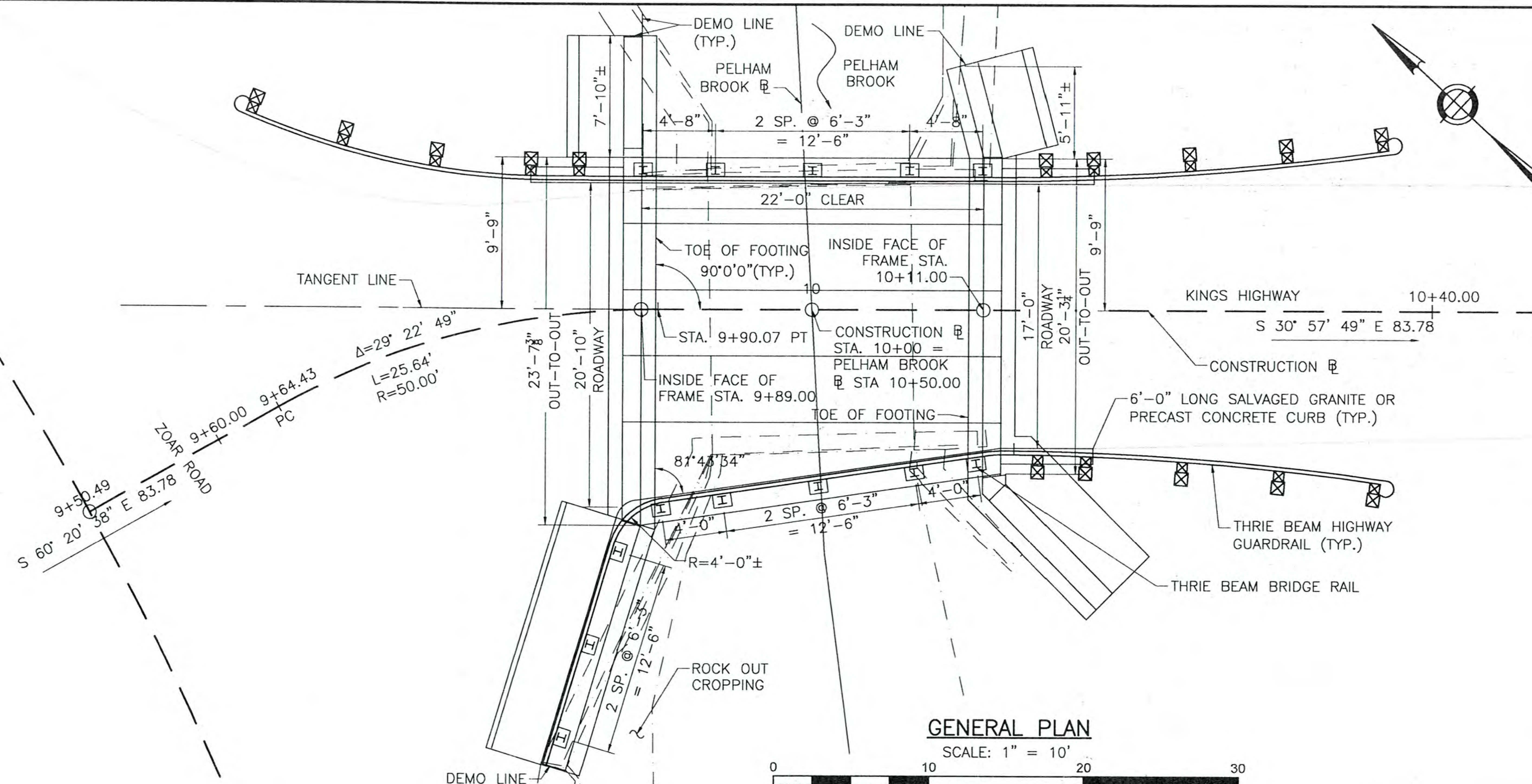
SUBMITTAL DATE: 07-MAR-2019



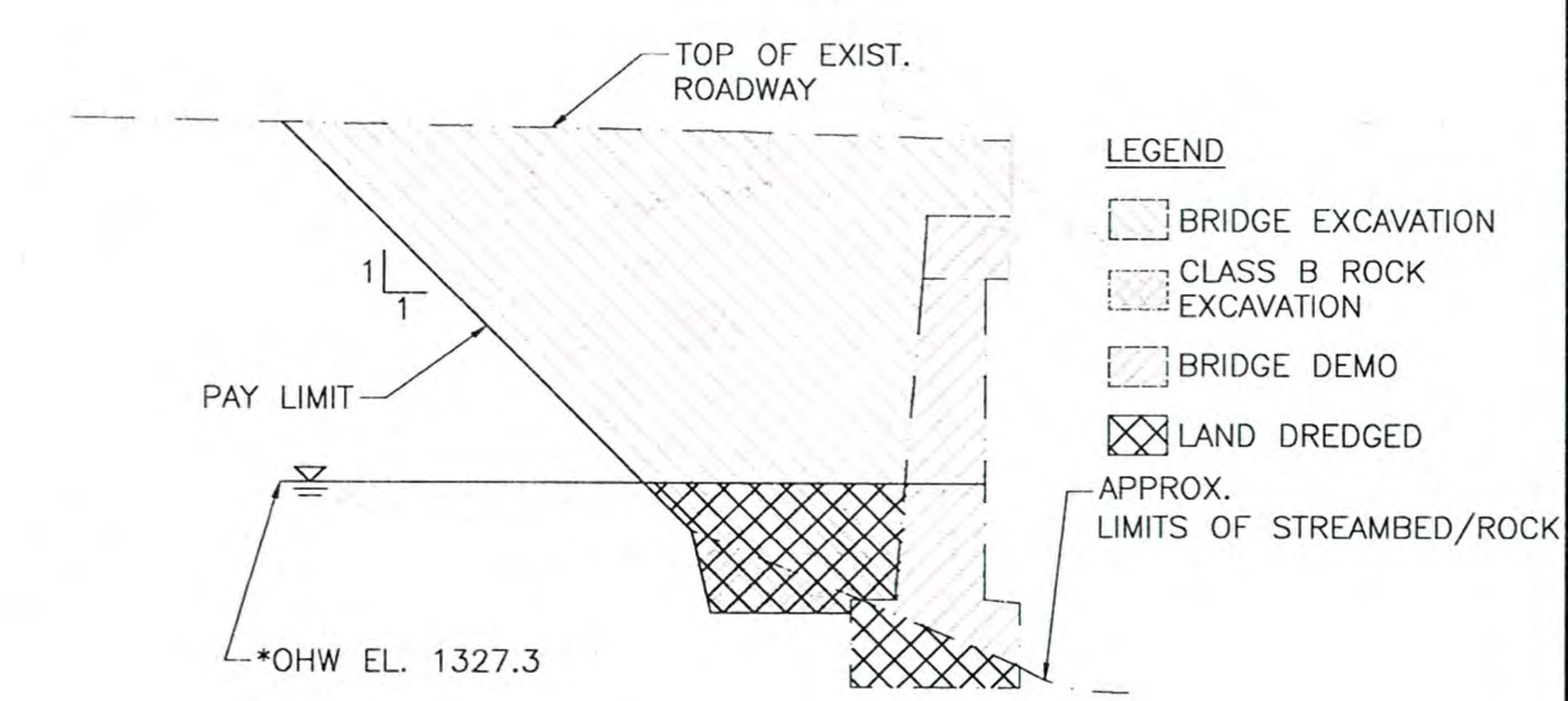
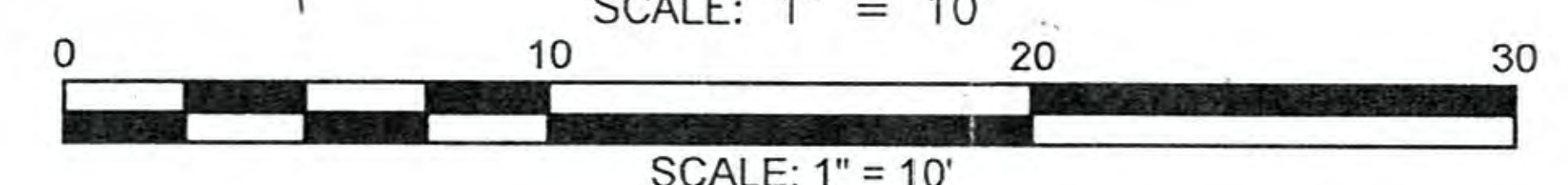
BRIDGE REPLACEMENT
TOWN OF ROWE

BRIDGE REPLACEMENT FOR ROWE R-10-003
KINGS HIGHWAY OVER PELHAM BROOK

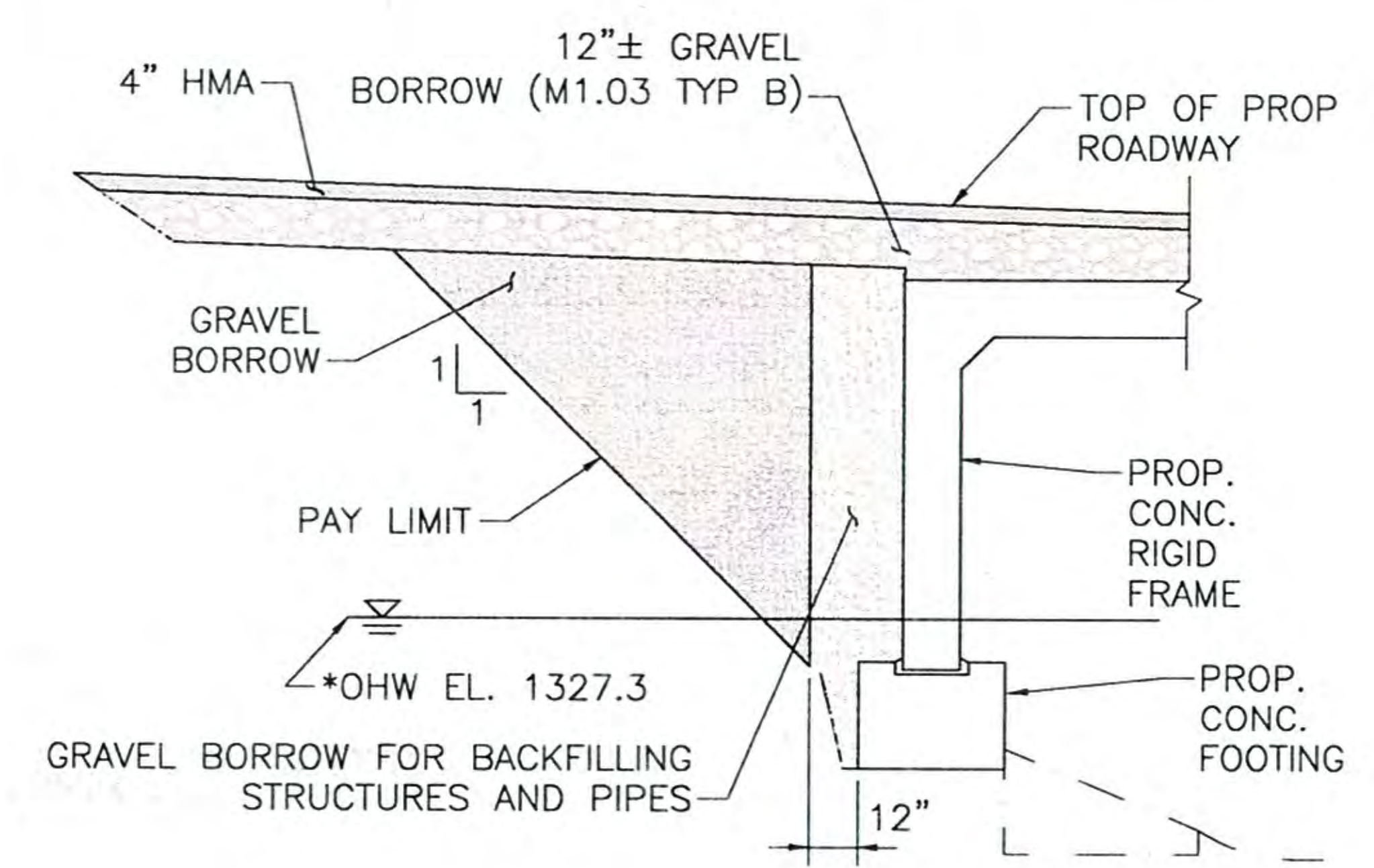
EXISTING CONDITIONS PLAN
SHEET 3 OF 8



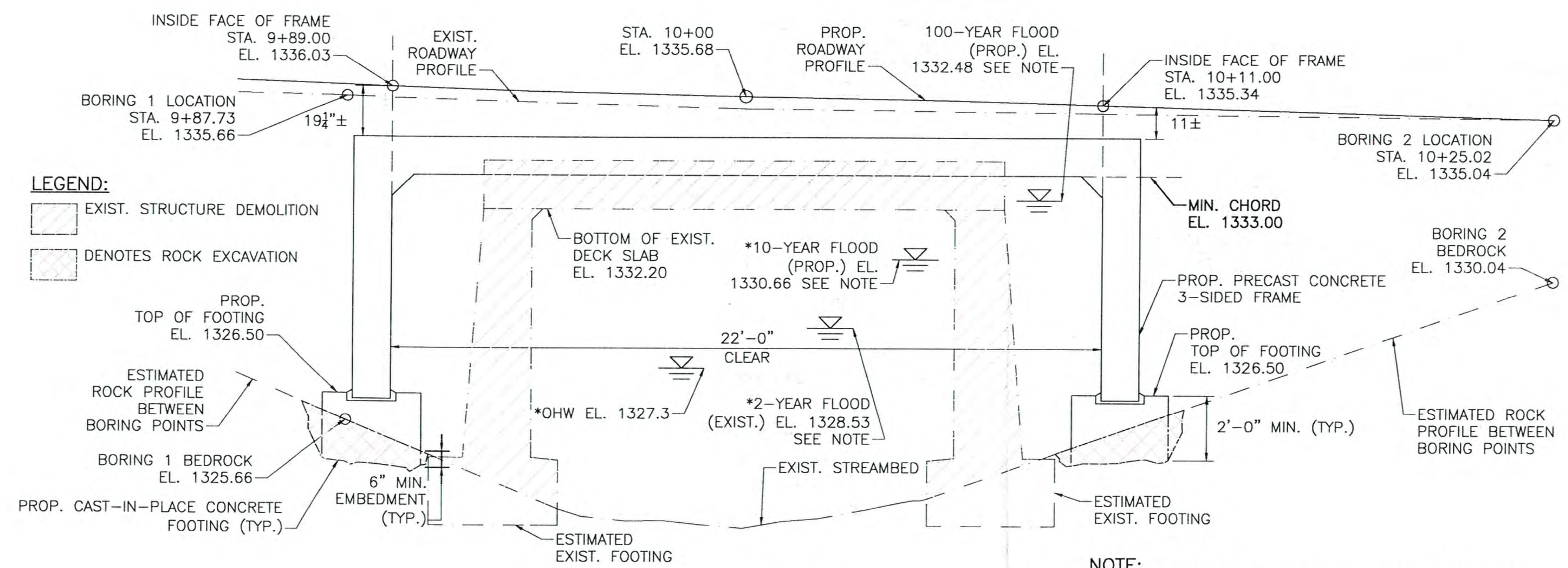
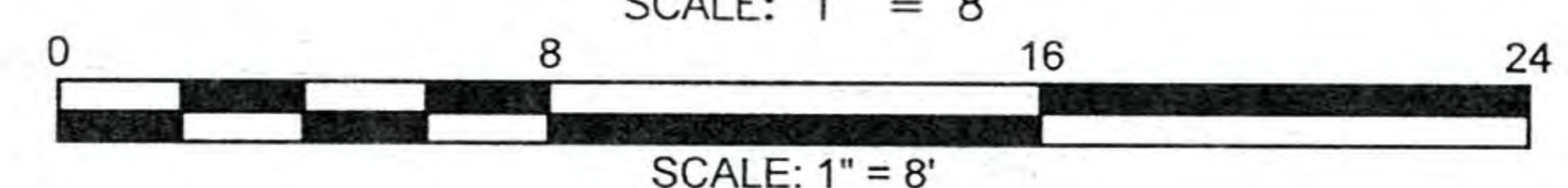
GENERAL PLAN
SCALE: 1" = 10'



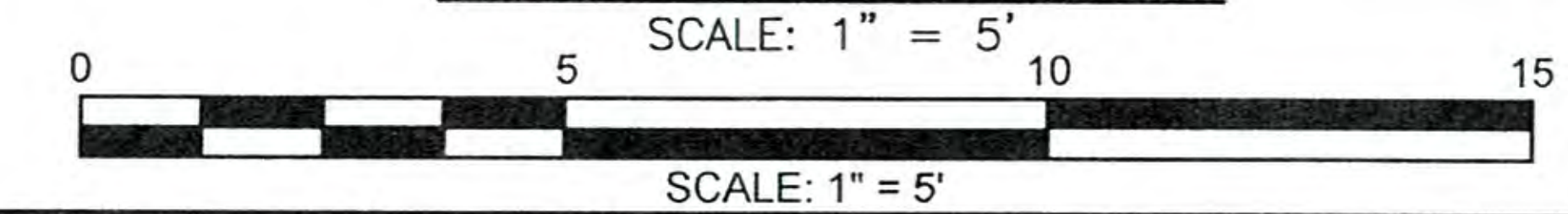
LIMITS OF EXCAVATION
SCALE: 1/8" = 1'-0"



LIMITS OF BACKFILL
SCALE: 1" = 8'



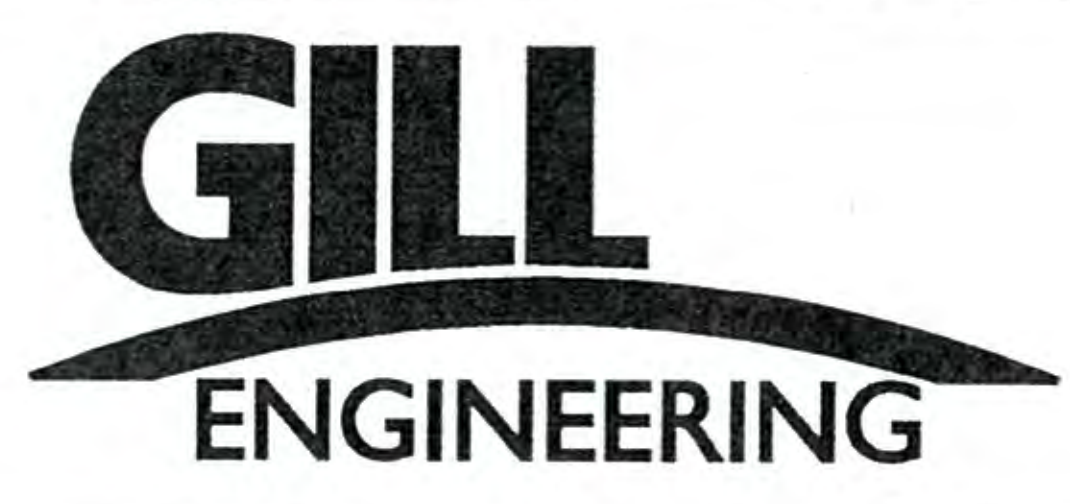
LONGITUDINAL SECTION
SCALE: 1" = 5'



- LEGEND:**
- EXIST. STRUCTURE DEMOLITION
 - DENOTES ROCK EXCAVATION

NOTE:
WATER SURFACE ELEVATIONS 22± UPSTREAM OF BRIDGE

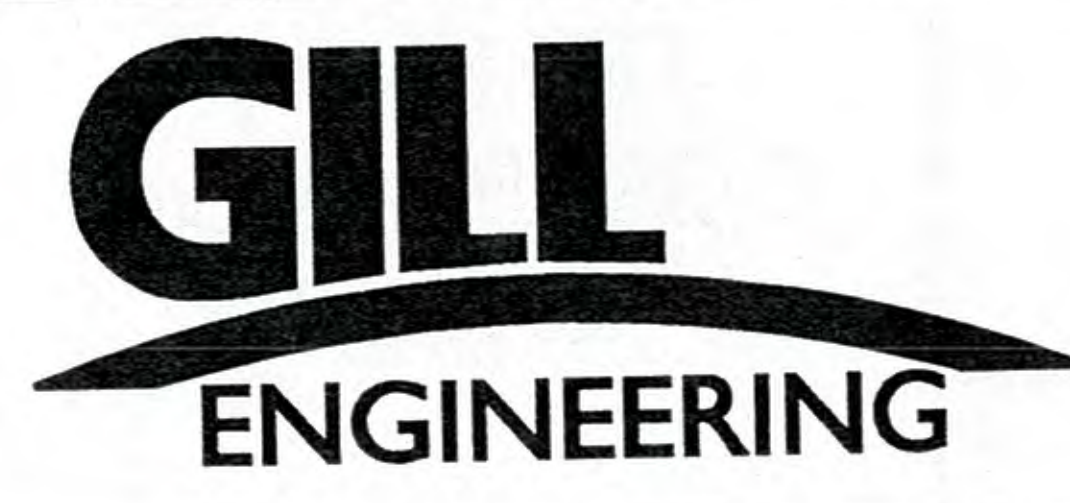
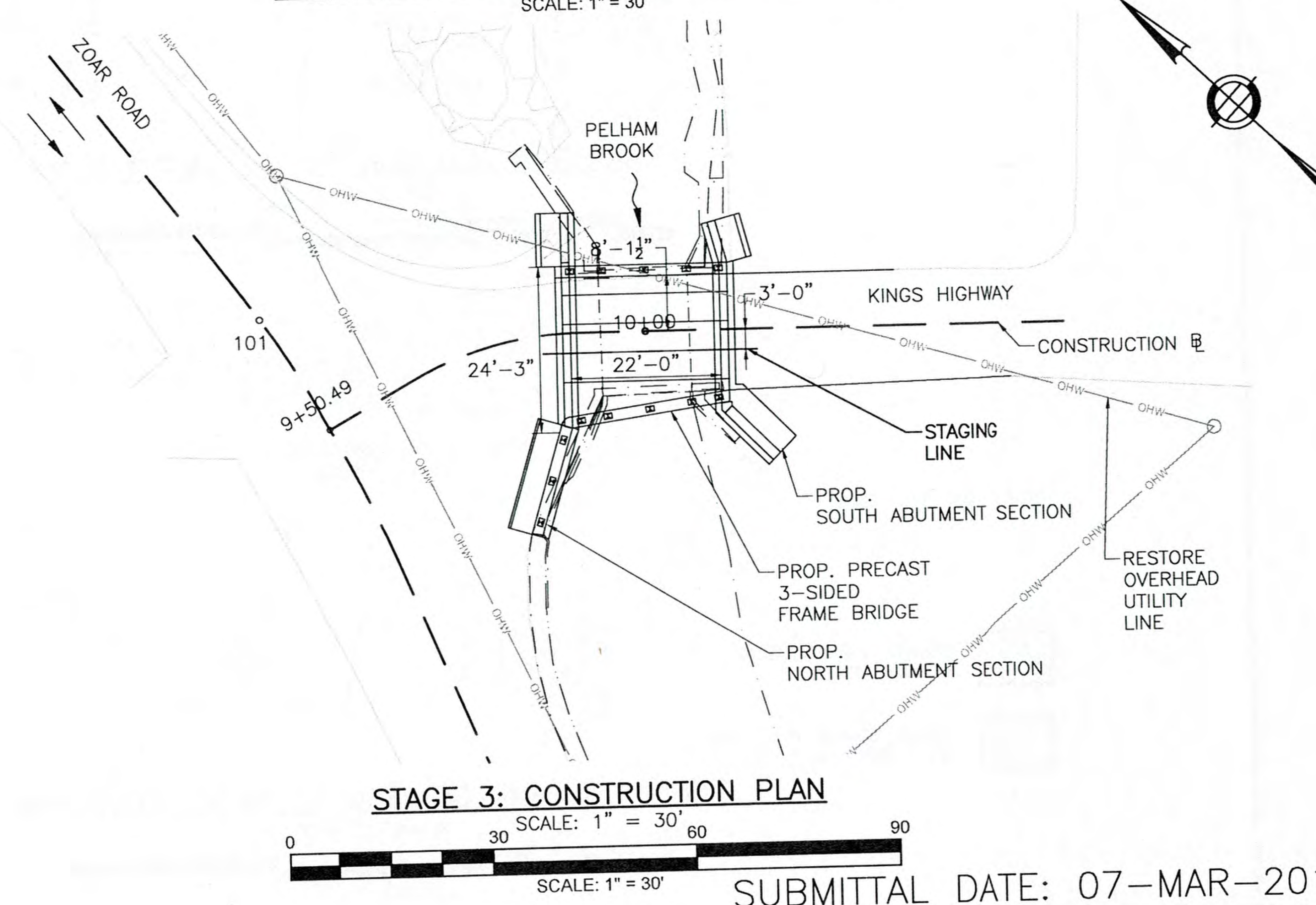
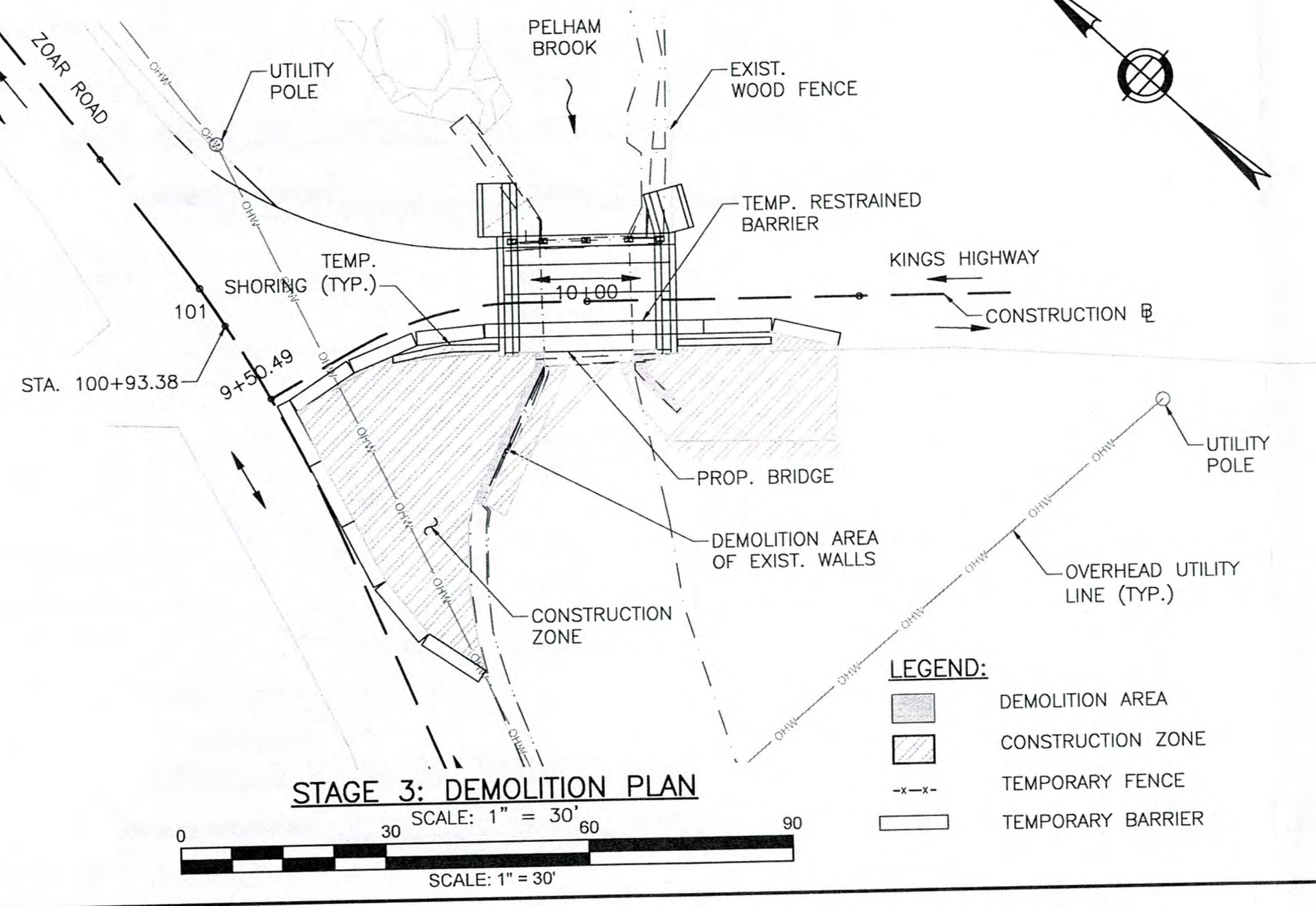
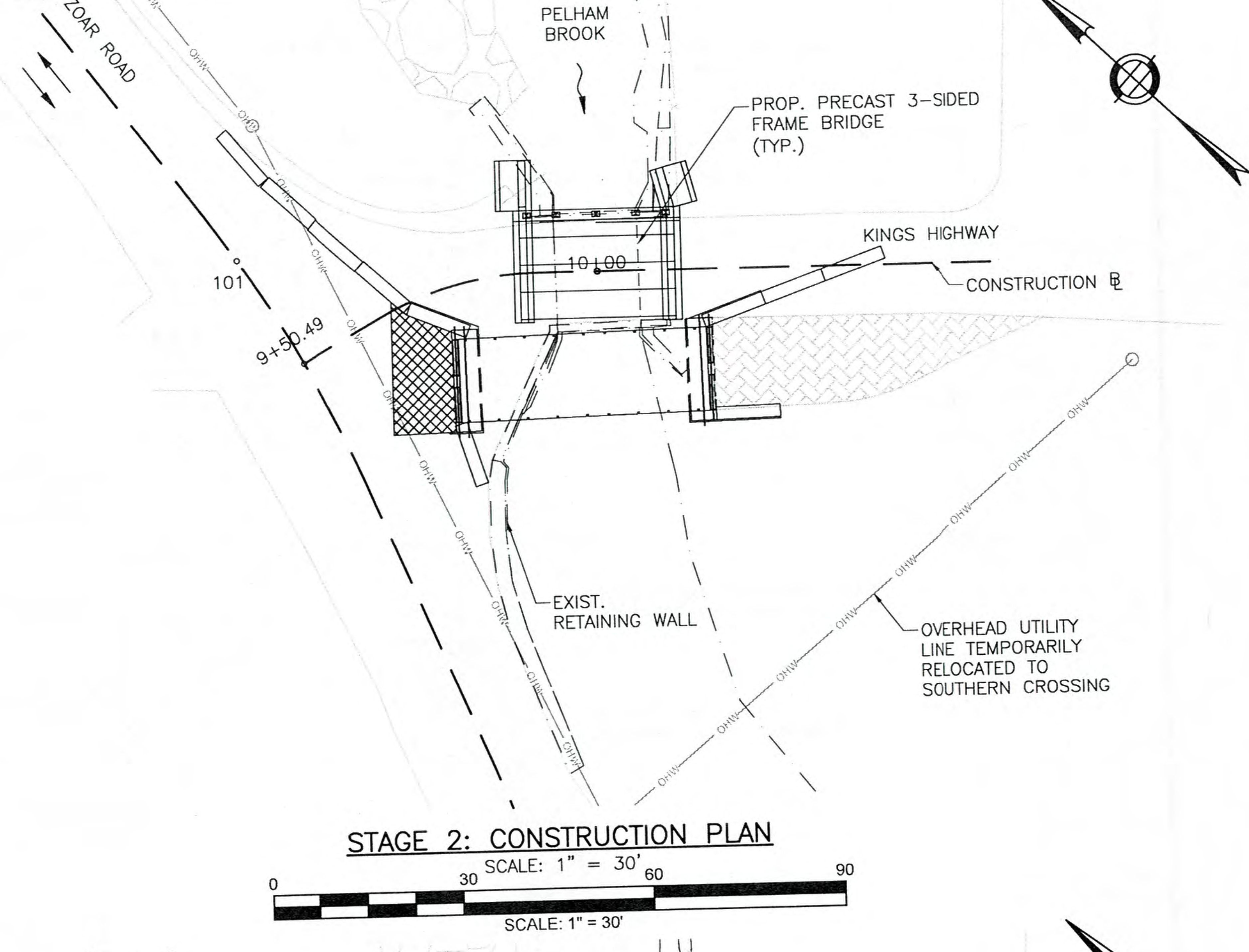
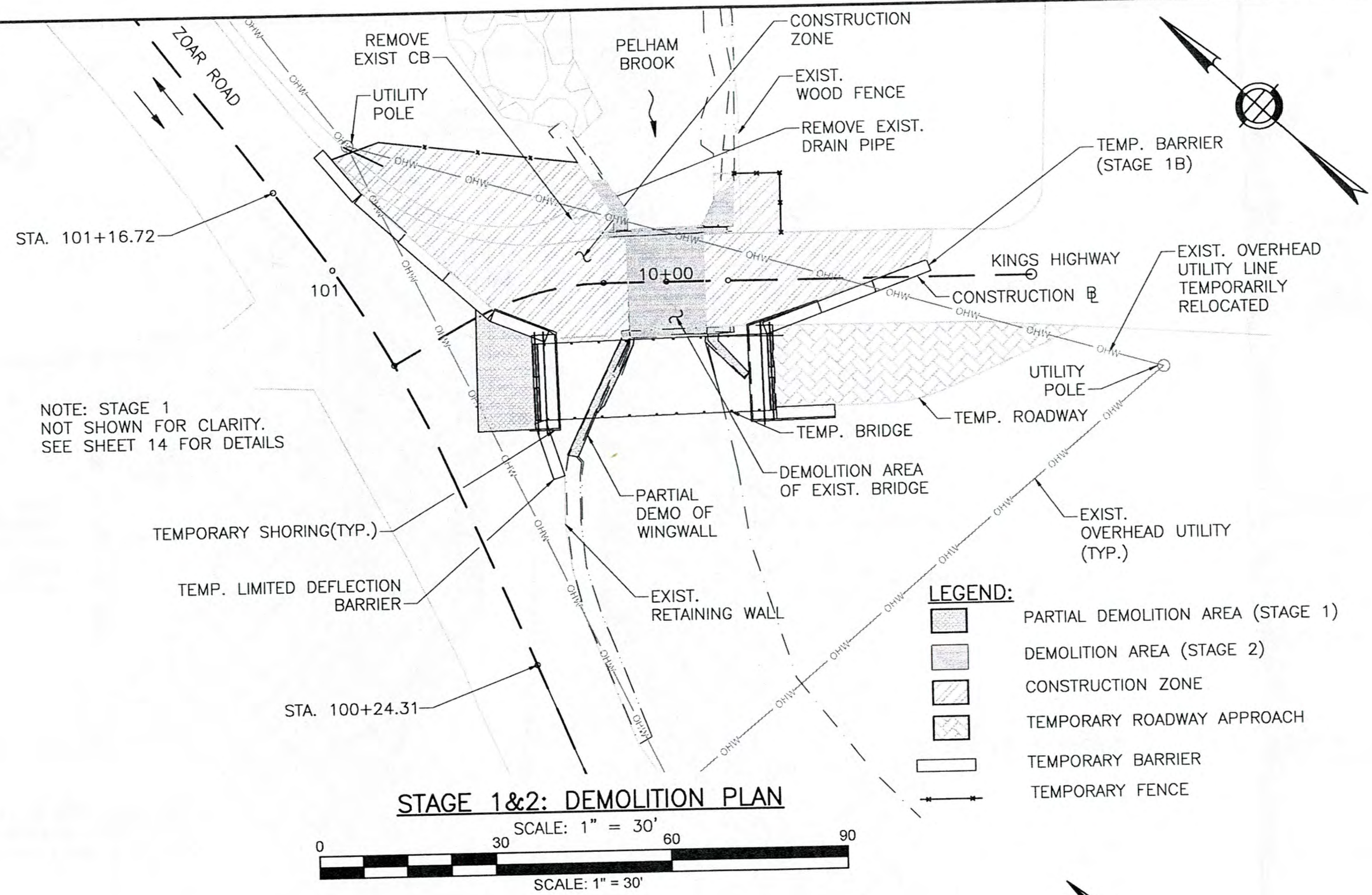
SUBMITTAL DATE: 07-MAR-2019



**BRIDGE REPLACEMENT
TOWN OF ROWE**

BRIDGE REPLACEMENT FOR ROWE R-10-003
KINGS HIGHWAY OVER PELHAM BROOK

GENERAL PLAN SHEET
& LONGITUDINAL SECTION
4
OF 8



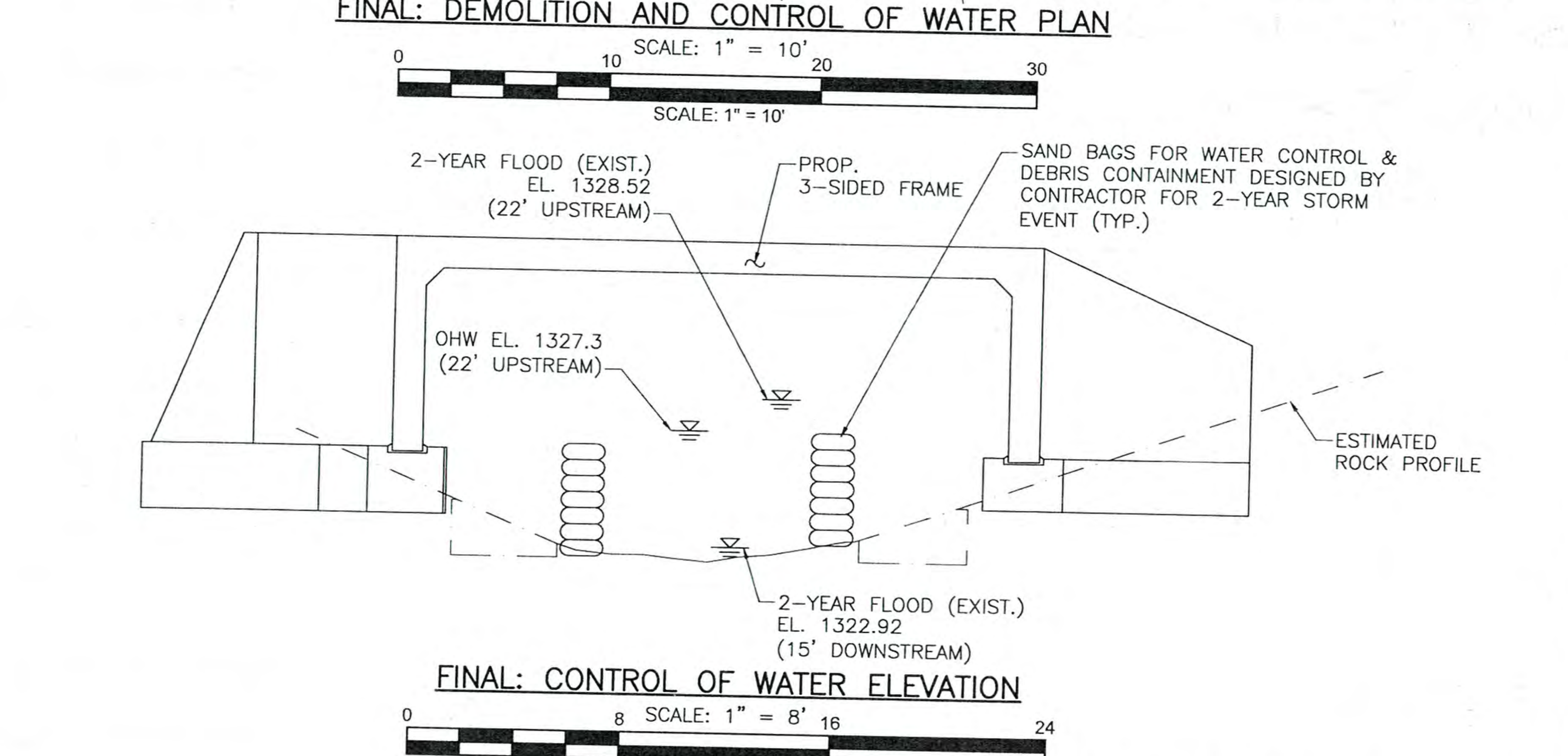
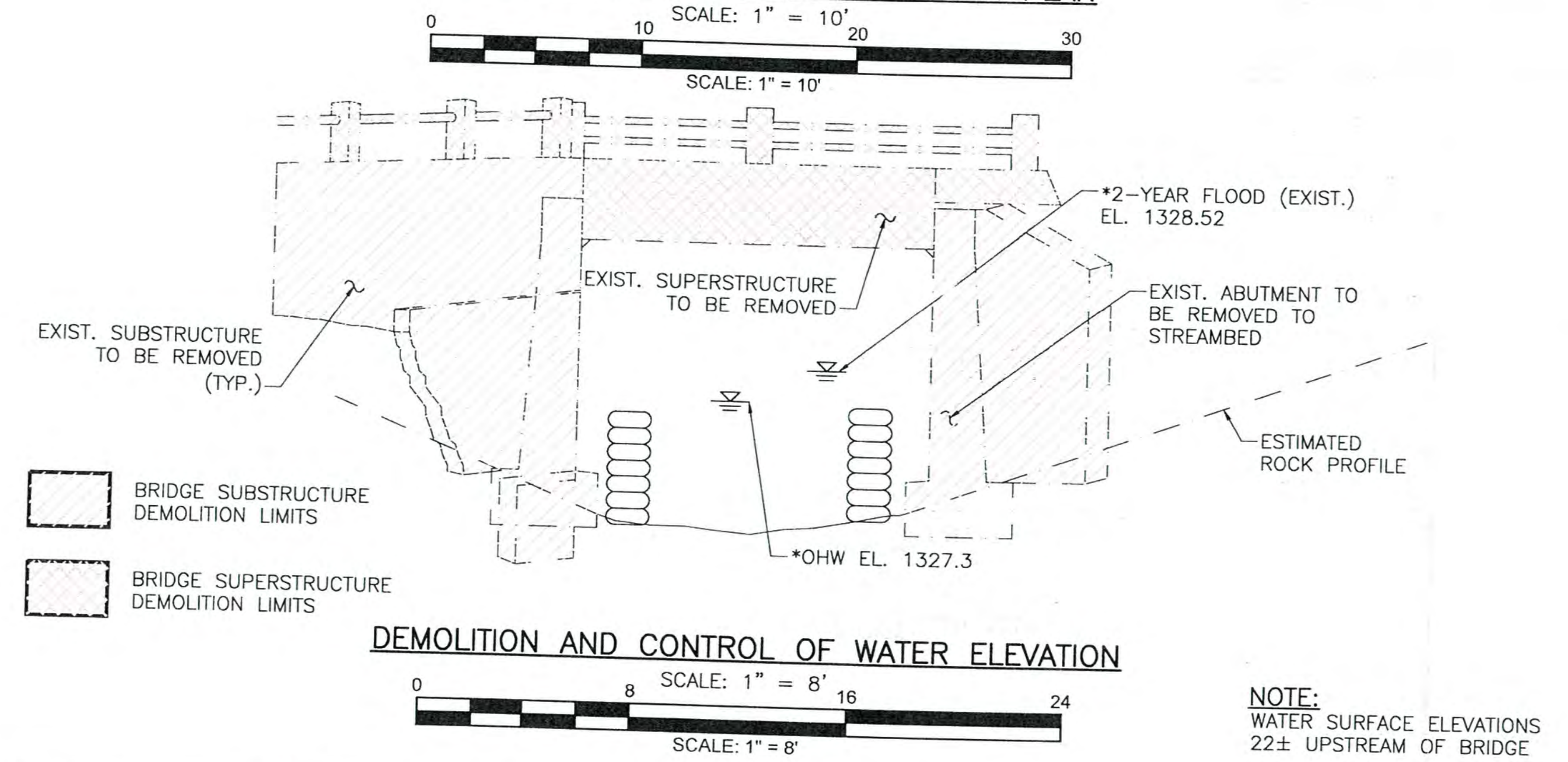
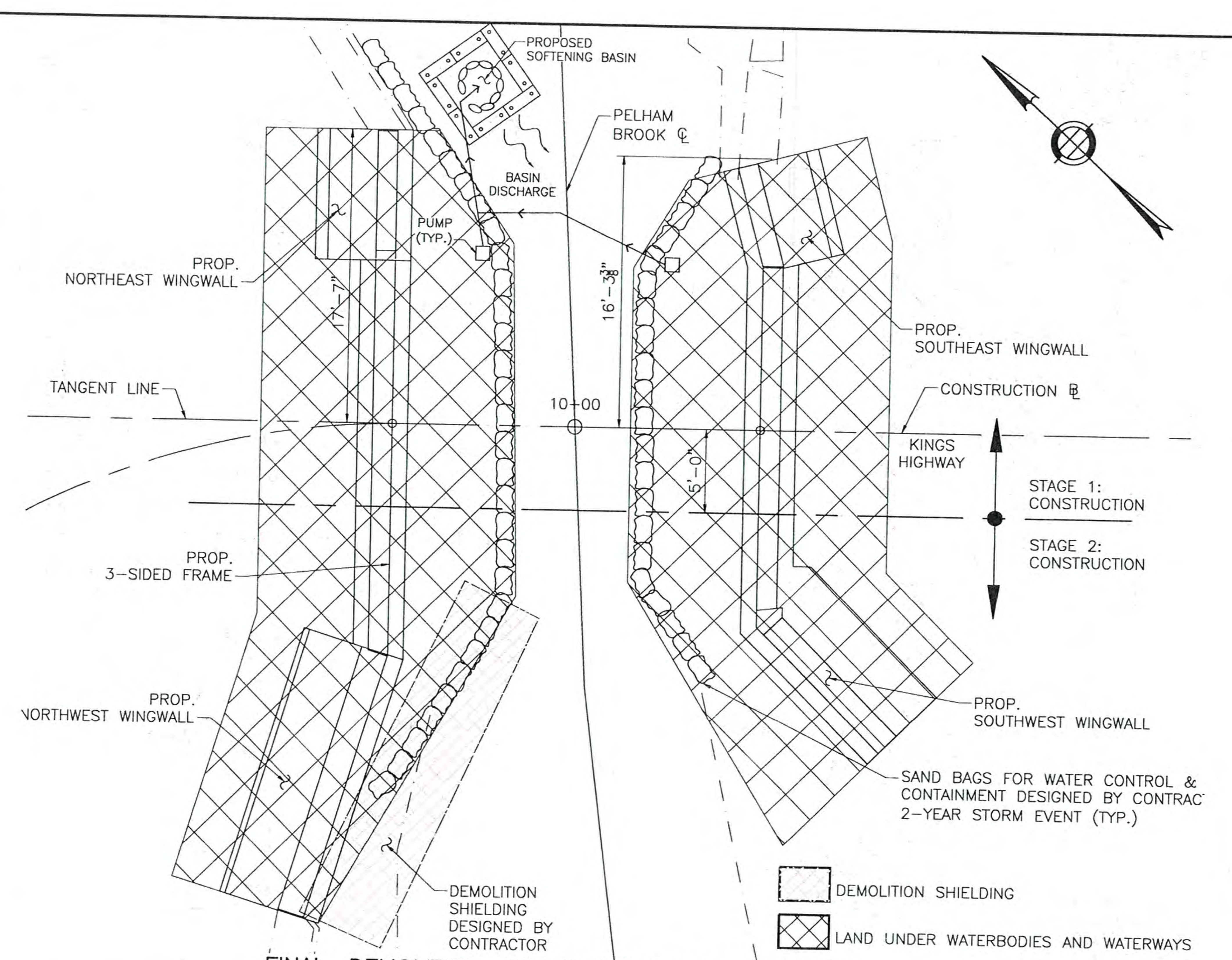
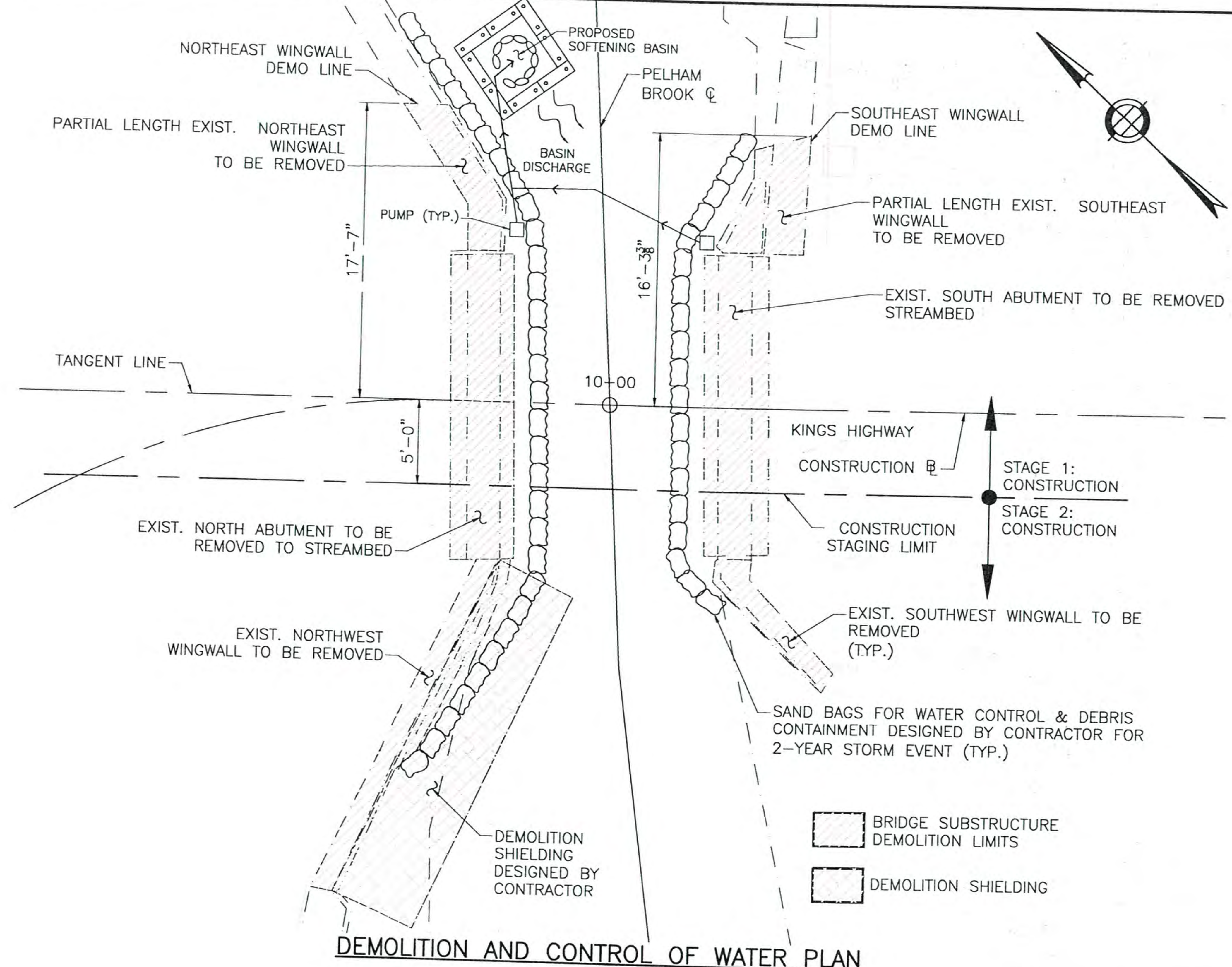
BRIDGE REPLACEMENT TOWN OF ROWE

BRIDGE REPLACEMENT FOR ROWE R-10-003 KINGS HIGHWAY OVER PELHAM BROOK

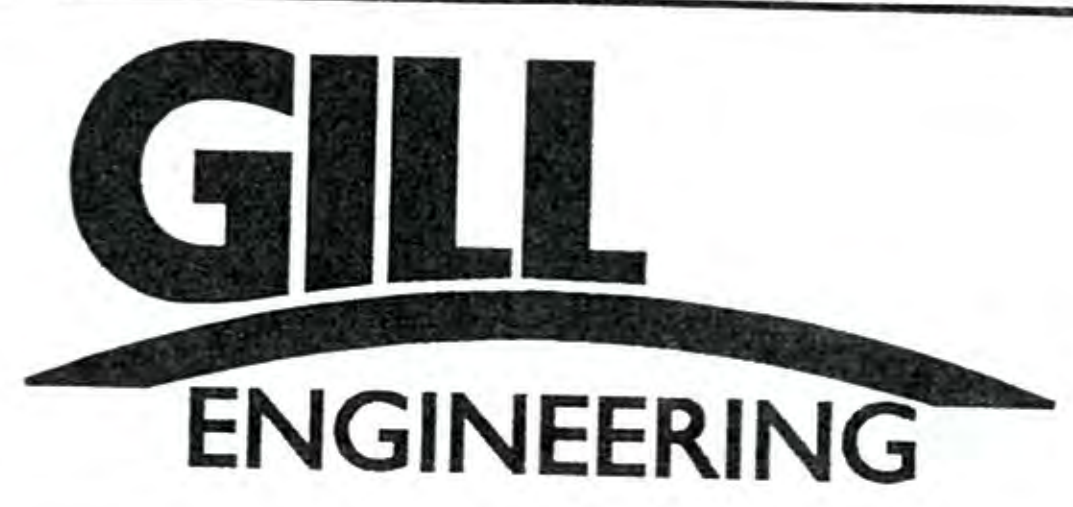
STAGE CONSTRUCTION PLAN
SHEET 5 OF 8

Gill Engineering Associates, Inc. 63 Kendrick Street Needham, MA 02494 781-355-7100 www.gill-eng.com

SUBMITTAL DATE: 07-MAR-2019



NOTE:
WATER SURFACE ELEVATIONS
22± UPSTREAM OF BRIDGE



**BRIDGE REPLACEMENT
TOWN OF ROWE**

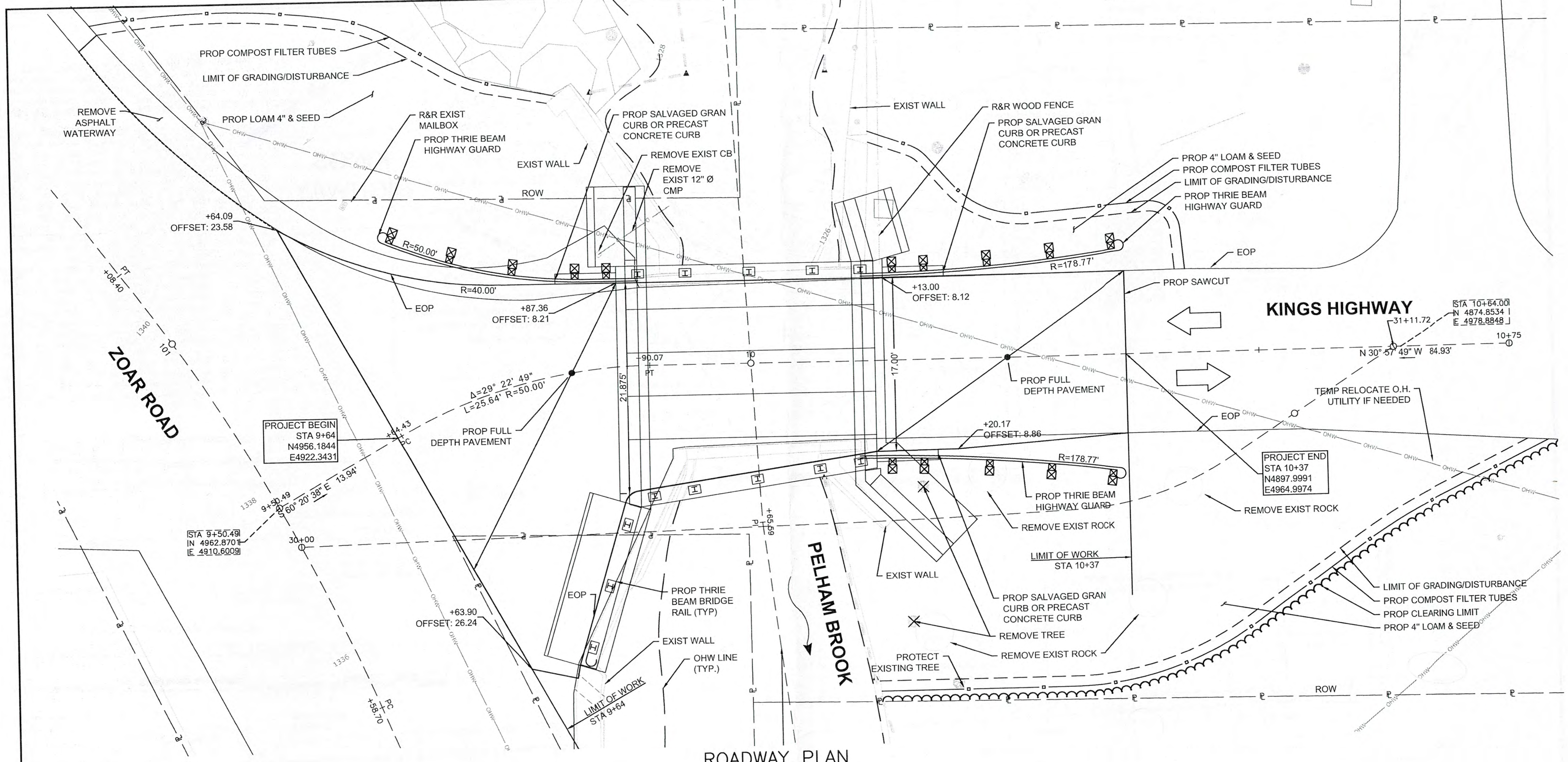
Gill Engineering Associates, Inc. 63 Kendrick Street

Needham, MA 02494 781-355-7100 www.gill-eng.com

BRIDGE REPLACEMENT FOR ROWE R-10-003
KINGS HIGHWAY OVER PELHAM BROOK

SUBMITTAL DATE: 07-MAR-2019

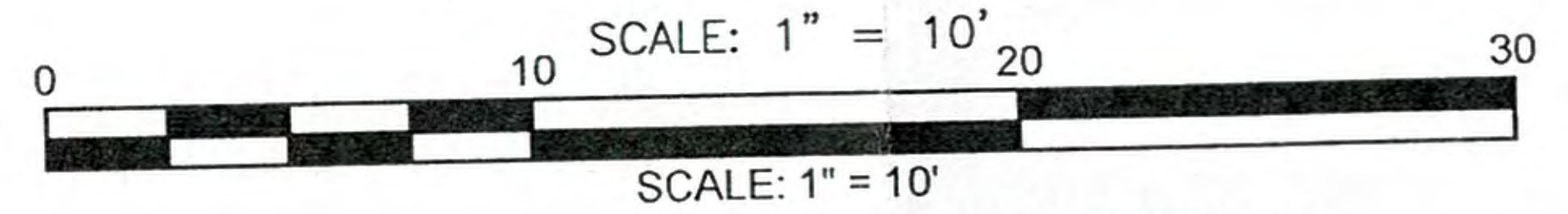
DEMO & CONTROL OF WATER SHEET 6 OF 8



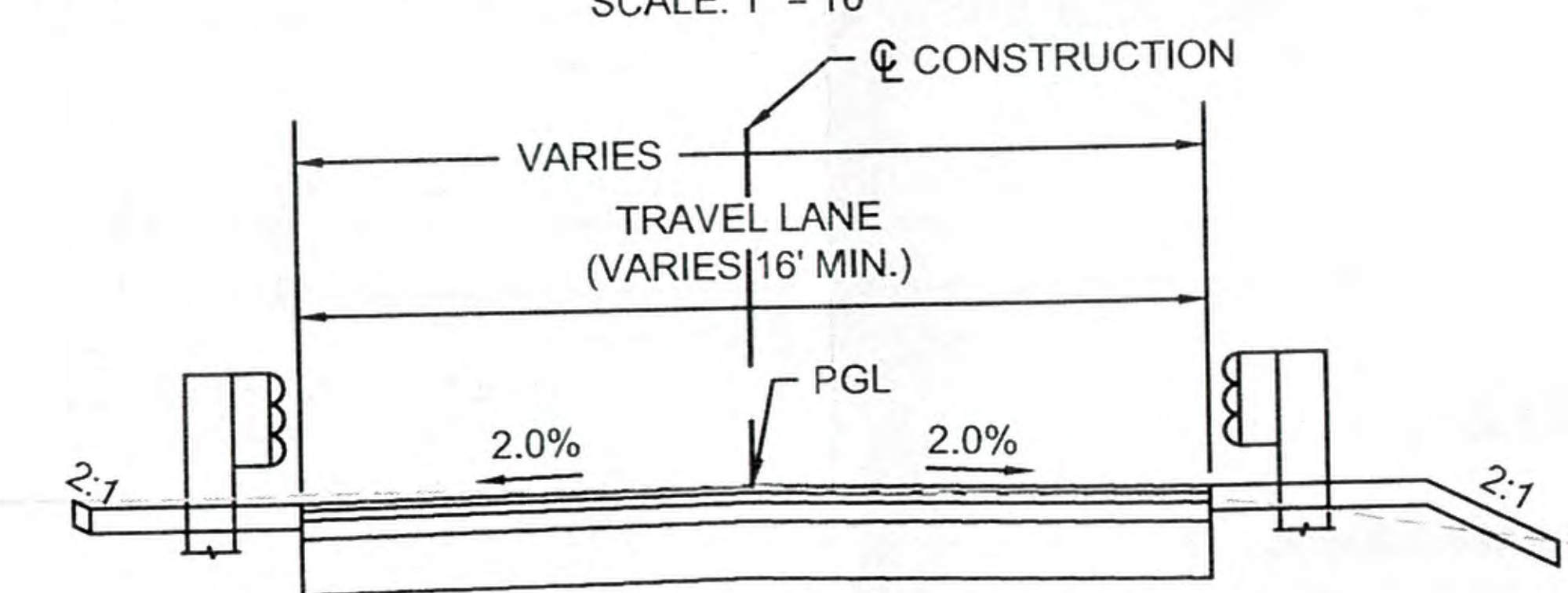
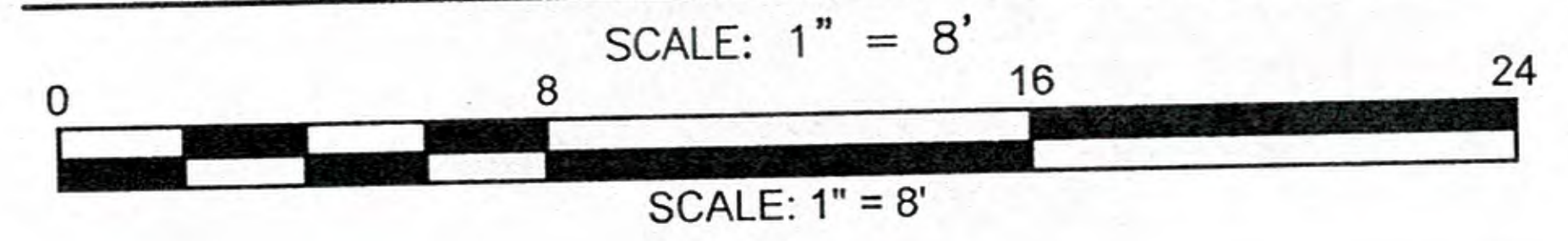
PROJECT BEGIN
STA 9+64
N4956.1844
E4922.3431

PROJECT END
STA 10+37
N4897.9991
E4964.9974

ROADWAY PLAN



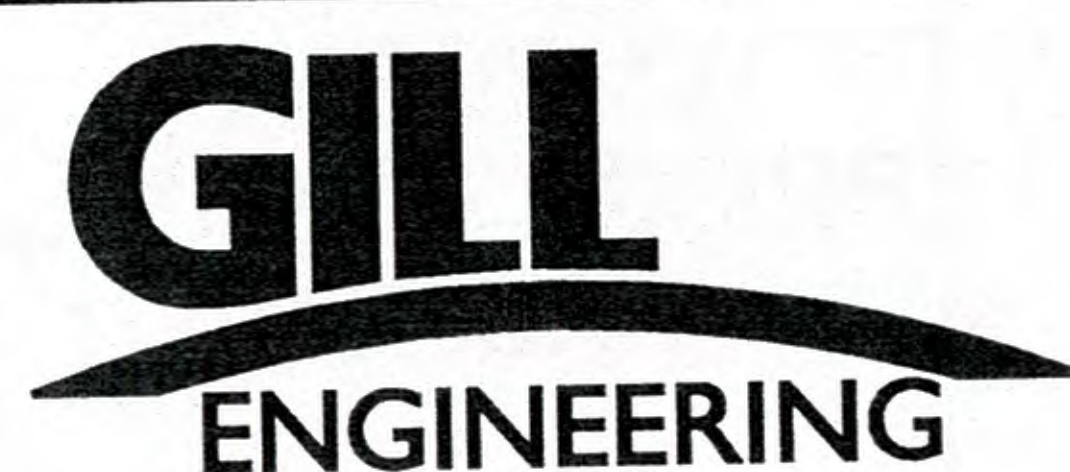
TYPICAL SECTION - FULL DEPTH



PAVEMENT NOTES:

- PROPOSED FULL DEPTH PAVEMENT
SURFACE COURSE: 1.5" HOT MIX ASPHALT - DENSE BINDER COURSE FOR BRIDGES
2.5" HOT MIX ASPHALT - DENSE BINDER COURSE FOR BRIDGES
BASE: 12" GRAVEL BORROW, TYPE B
(EXISTING BASE MATERIAL MAY REMAIN IF SUITABLE AS DETERMINED BY THE ENGINEER)
TACK COAT: 0.05 GAL PER SY

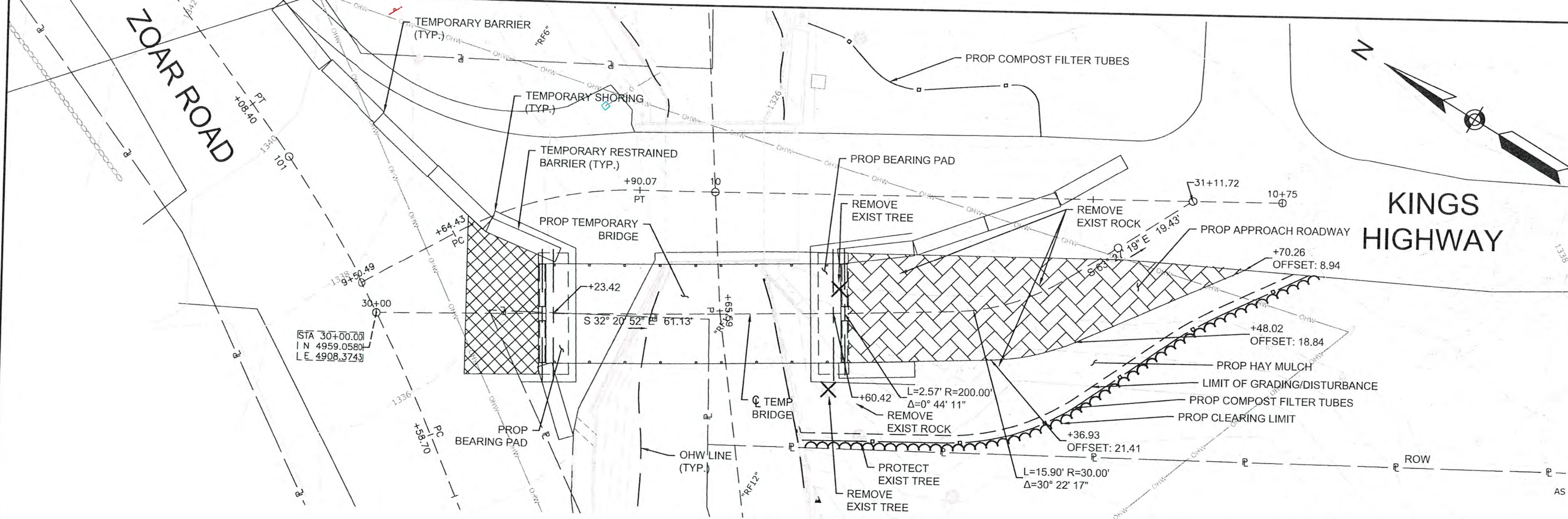
SUBMITTAL DATE: 07-MAR-2019



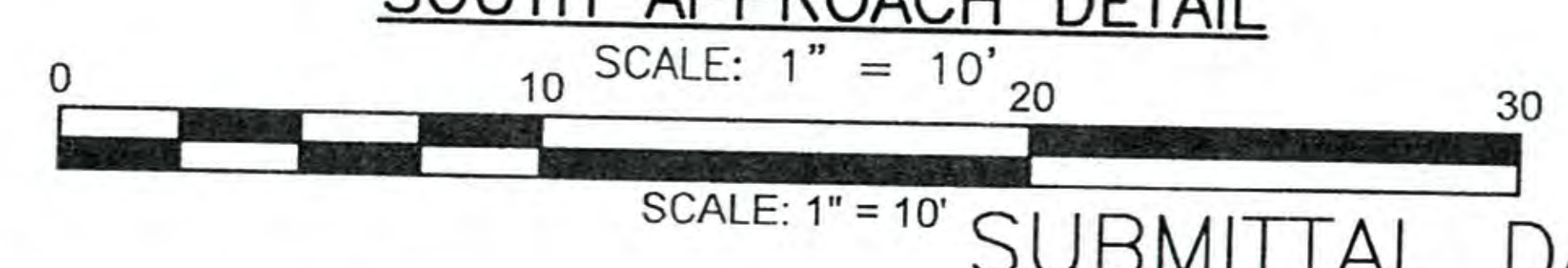
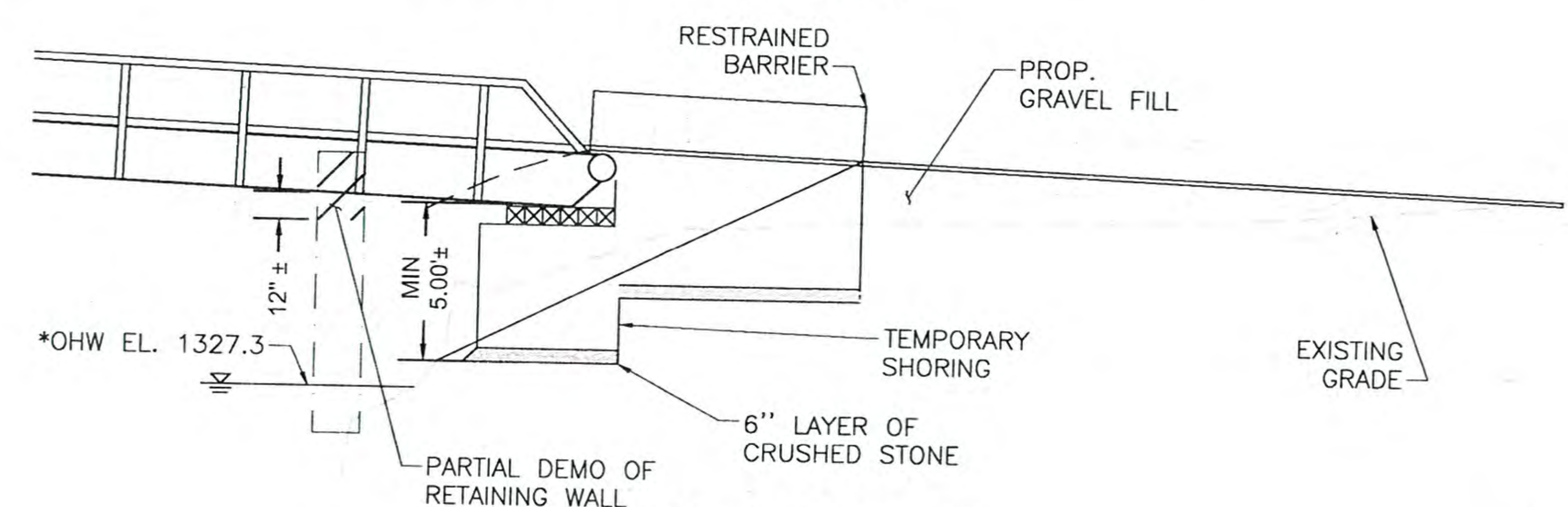
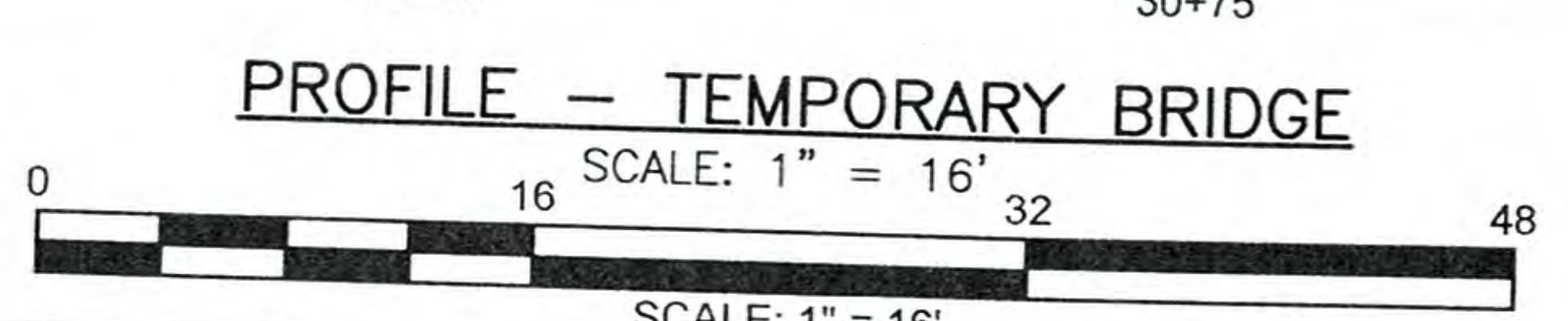
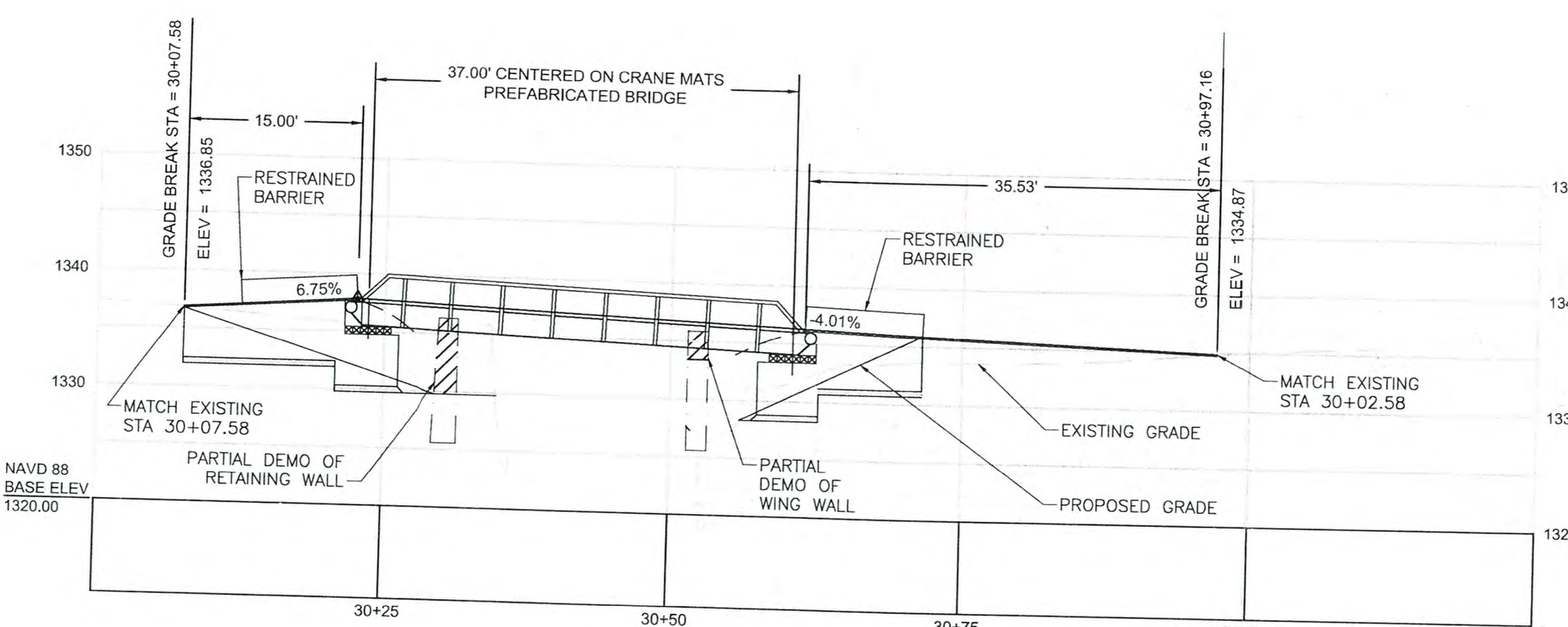
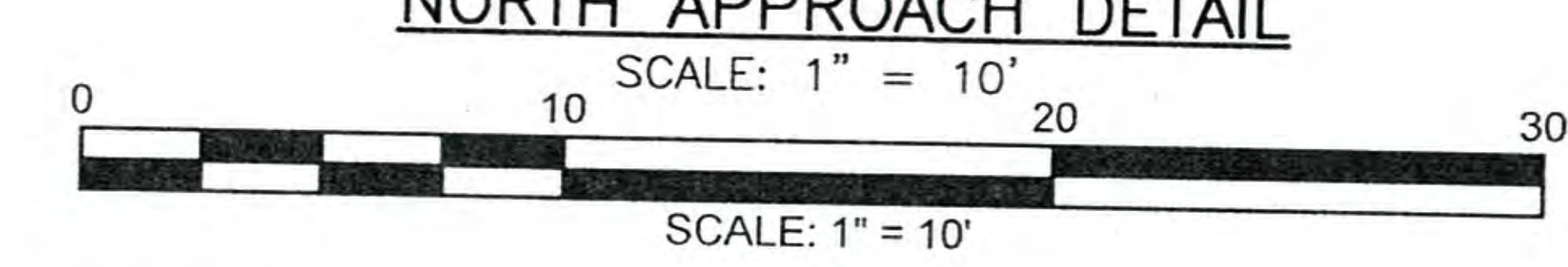
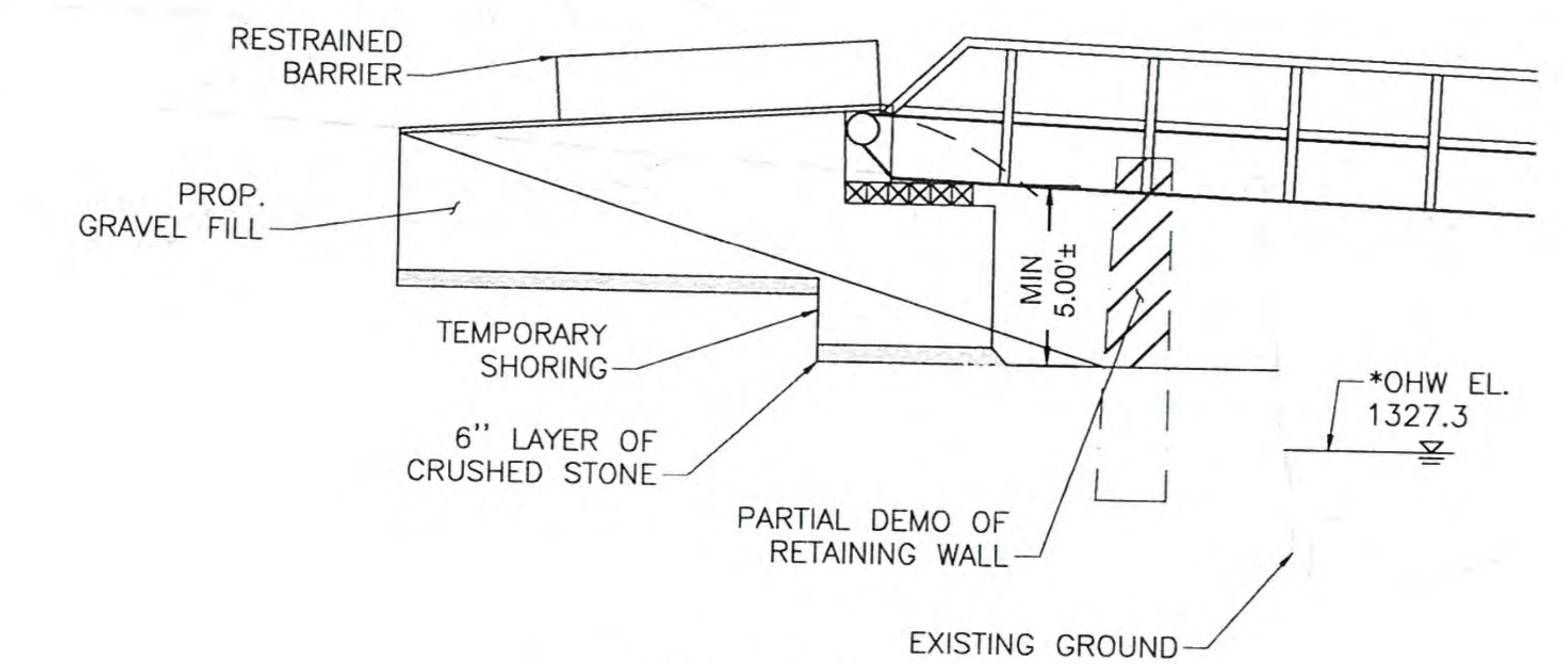
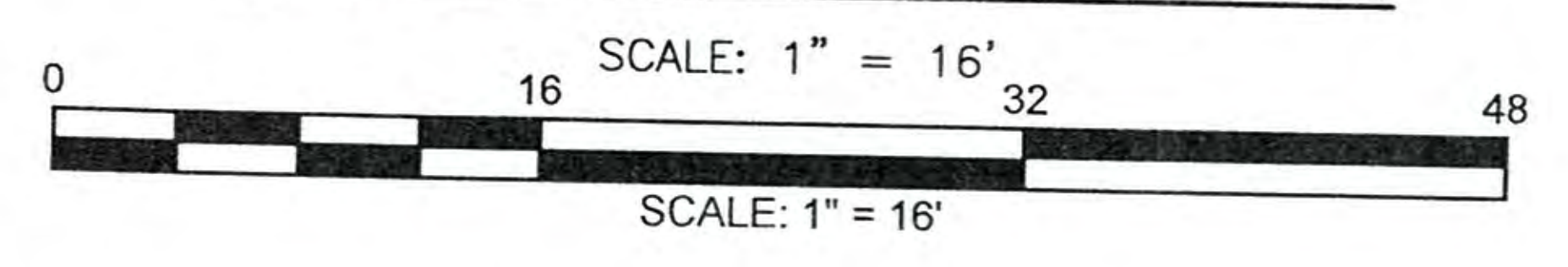
BRIDGE REPLACEMENT
TOWN OF ROWE

BRIDGE REPLACEMENT FOR ROWE R-10-003
KINGS HIGHWAY OVER PELHAM BROOK

ROADWAY PLAN SHEET
& TYPICAL
SECTION
7
OF 8



- NOTES:**
1. THE WORK AND THE MATERIAL SHALL CONFORM TO THE RELEVANT PROVISIONS OF THE MASSDOT STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES, 1988 AND SUPPLEMENTAL SPECIFICATIONS DATED JULY 1, 2015.
 2. GRAVEL SHALL BE COMPACTED IN LAYERS NOT EXCEEDING 8 INCHES IN DEPTH AND SHALL BE COMPACTED TO NOT LESS THAN 95% OF THE MAXIMUM DRY DENSITY OF THE MATERIAL AS DETERMINED BY THE STANDARD AASHTO TEST DESIGNATION T99 COMPACTION TEST METHOD C AT OPTIMUM MOISTURE CONTENT.
 3. THE TEMPORARY BRIDGE WAS DESIGNED AND FABRICATED BY ADM WELDING AND FABRICATION, WARREN, PA. IT IS CURRENTLY OWNED BY TOWN OF SHELBURNE. SEE SPECIAL PROVISIONS FOR AN AGREEMENT ON ITS USE AND PROCUREMENT.
 4. THE TEMPORARY BRIDGE MEETS STATUTORY LOADING WITH OCCASIONAL USE. THE TIMBER DECKING SHALL BE WHITE OAK SELECT STRUCTURAL GRADING OR BETTER.
 5. DIMENSIONS AND DETAILS SHOWN ARE BASED ON LIMITED FIELD INVESTIGATIONS DURING DESIGN AND ARE NOT GUARANTEED. THE CONTRACTOR SHALL DETERMINE AND VERIFY ALL DIMENSIONS AND DETAILS NECESSARY TO COMPLETE THE WORK BY SURVEY.
 6. CONTRACTOR MAY ELECT TO USE ITS OWN TEMPORARY BRIDGE. THIS WILL REQUIRE A COMPLETE DESIGN SUBMITTAL PER SPECIAL PROVISIONS.



SUBMITTAL DATE: 07-MAR-2019



**BRIDGE REPLACEMENT
TOWN OF ROWE**

Gill Engineering Associates, Inc. 63 Kendrick Street Needham, MA 02494 781-355-7100 www.gill-eng.com

BRIDGE REPLACEMENT FOR ROWE R-10-003
KINGS HIGHWAY OVER PELHAM BROOK

TEMPORARY SHEET
BRIDGE PLAN &
PROFILE
OF 8

ATTACHMENT D
TEMPORARY BRIDGE AGREEMENT

(10/01/2019) -57

Town of Shelburne
51 Bridge Street
Shelburne, MA 01370
(413) 625-0300 x.1
Townadmin@townofshelburnema.gov

August 13, 2019

Town of Rowe
Board of Selectmen
321 Zoar Road
P.O. Box 462
Rowe, MA 01367

Dear Chairman Sokol,

The Town of Shelburne would be happy to rent our temporary bridge structure to the Town of Rowe at the following rates providing that, our Bassett Road Bridge project is complete and the Town no longer has an immediate need for the bridge.

- \$40.00 per day for first 90 (ninety) days
- \$25.00 per day after 90 (ninety) days

Other considerations include:

- The Town of Rowe will accept responsibility for all costs associated with pickup, delivery, and return of bridge structure.
- The Town of Rowe will insure the structure and assume responsibility for all damages while in their possession.
- The Town of Shelburne has the right to revise the Agreement should the Town of Rowe possess the bridge structure for more than a 12 (twelve) month period.

Should your Board accept the terms of this Agreement, please signify by signing this letter and returning it to our Town Administrator, Terry Narkewicz.

Please contact our Highway Superintendent, Mark Shippee once you have a timeframe in mind for use of the structure. We look forward to working with you.

Sincerely,



Matthew Marchese, Chairman
Board of Selectmen

Signature of Acceptance:



Name: Chuck Sokol, Chair
Rowe Board of Selectmen



Date:

**TOWN OF ROWE – KINGS HIGHWAY OVER PELHAM BROOK
BRIDGE REPLACEMENT – BRIDGE NO. R-10-003
FRCOG IFB 20191205**

GENERAL INSTRUCTIONS TO BIDDERS

1. All bids must contain a filled out signed BID FORM and also a properly executed Tax Compliance/Non-Collusion Form, Debarment Form and signed OSHA certification. All of this information can be found within the contents of the Invitation For Bids. Minor defects on a bid submittal may be waived by the Chief Procurement Officer as long as the error or variation is not prejudicial or preferential to the other bidders and that it may be corrected without affect upon substantive elements of the bid such as, but not limited to, price, quality, payment terms or delivery schedule. Resolution will be determined by the Chief Procurement Officer.
2. Bids which are incomplete, not properly endorsed or signed, or otherwise contrary to instructions may be rejected as non-responsive by the Chief Procurement Officer. Conditional bids will not be accepted. Any bid arriving after the time and date of bid opening will not be accepted.
3. As the TOWN OF ROWE is exempt from the payment of Federal Excise Taxes and Massachusetts Sales Tax, prices quoted herein are not to include these taxes.
4. A bidder will be held to the terms and the prices on the bid form for the duration of the contract period if a contract is signed by both parties within 40 days from bid opening.
5. The TOWN reserves the right to reject any and all bids, in total or in part.
6. The supplier will be bound by all applicable statutory provisions of law of the Federal Government and the Commonwealth of Massachusetts.
7. The contractor will be required to indemnify and hold harmless the TOWN OF ROWE for all damages to life and property that may occur due to contractor's negligence or that of his/her employees, subcontractors, etc., during the contract.
8. If in the judgment of the TOWN OF ROWE, any property is needlessly damaged by an act or omission of the contractor, the amount of damages will be deducted from money due the contractor or may be recovered from said contractor in legal action.
9. Any restrictions, qualifications, or deviations from specifications must appear either on the bid form or on an attachment thereto.
10. A contract (or contracts) will be signed between the awarded bidder(s) and the TOWN OF ROWE. **A sample contract is attached.** Any provisions of the contract that cannot be met by a prospective bidder must be brought to the attention of the FRCOG during the open question period, otherwise submittal of a bid constitutes acceptance of the Town's standard terms and conditions.
11. Once bids are opened, the FRCOG Chief Procurement Officer will forward the information to the Town and the Town's Consulting Engineer for review.
12. The contract(s) resulting from this bid will be awarded to the lowest responsible and responsive bidder based upon bid price, past performance and reliability of the bidder, quality of product and/or service, and degree of exclusion, exemption, or restrictions on the bid form. In the event of identical and responsible low bids, a coin toss overseen by the Chief

Procurement Officer will determine the award.

13. Any questions about the technical specifications of the project or the bid process must be directed to FRCOG's Chief Procurement Officer via written question (email bids@frcog.org) .All prospective bidders will be notified if an addendum is required. Bidders are encouraged to check directly with FRCOG before submitting their bid to make sure they have received all Addenda.
14. The FRCOG will in no way be responsible for the actions of the TOWN. Payments of invoices will be made within 30 days upon receipt of invoice by each town which requested services.
15. The Chief Procurement Officer will be available to answer any general questions about bid procedure, etc., but no question will be answered that in any way could give an unfair advantage to a bidder. All inquiries concerning this bid should be directed to:

Andrea Woods, Chief Procurement Officer
Franklin Regional Council of Governments
12 Olive Street, Suite 2
Greenfield, MA 01301
EMAIL bids@frcog.org 413-774-3167x104

16. Police or Flagging Detail is the responsibility of the CONTRACTOR. See Special Provisions/Technical Specifications.
17. The FRCOG and the TOWN OF ROWE do not discriminate on the basis of disability with respect to admission to, access to, or operation of its programs, services or activities. Individuals who may need auxiliary aids should call the Council office.
18. Awards will be based on the estimated quantities provided times the price submitted. The responsive and responsible contractor whose total is lowest for the combination of all items will be awarded unless the Town has a legitimate reason to not award to that particular vendor per MGL Ch30 §39M.
19. The project is being funded by the grants and is subject to all the provisions of the grants. The project may be cancelled if funding becomes unavailable.
20. **OSHA Certification is required**

All contractors working on public works projects will be required to certify that ALL employees employed at the work site have successfully completed an OSHA approved course in construction safety at least 10 hours in duration. This law requires general contractors to have on file records of all employees OSHA 10- hour training and provide proof to the various agencies in charge of the work. This also applies to all subcontractors, hired trucks, and hired equipment with operators. Every bidder must certify that all persons who are employed by them for this bid are certified. Proof does not have to be submitted with this bid, but must be available upon request.

21 Contract execution will be conditioned upon producing:

An insurance certificate as outlined on the INSURANCE REQUIREMENTS page and a 50% Labor and Materials Payment Bond made payable to the TOWN OF ROWE.

Failure or refusal of the successful bidder to execute and deliver a Signed Contract, Certificate of Insurance, and Labor and Materials Bond acceptable to the Chief Procurement Officer within five days after notice of contract award will result in the forfeiture of the Bid Bond as Liquidated Damages. The Contract may be awarded to the next lowest qualified bidder or the IFB re-advertised, if the Town believes it is in the best public interest.

22.

INSURANCE REQUIREMENTS

The Contractor shall at all times during the Contract maintain in full force and effect Employer's Liability, Worker's Compensation, Bodily Injury Liability and Property Damage, and General Liability Insurance, including contractual liability coverage. All insurance shall be by insurers and for policy limits acceptable to the Council and before commencement of work hereunder the Contractor agrees to furnish the Council certificates of insurance or other evidence satisfactory to the Council to the effect that such insurance has been procured and is in force.

For the purpose of the Contract, the Contractor shall carry the following types of insurance in at least the minimum amounts specified below:

COVERAGES	LIMITS OF LIABILITY
Worker's Compensation	Statutory
Employer's Liability	\$500,000.00
Automobile Liability	\$1,000,000.00 combined single limit for bodily injury and property damage
Contractor's Commercial General Liability	\$1,000,000.00 each occurrence \$2,000,000.00 aggregate
Excess Umbrella Liability	\$1,000,000
Contractor's Pollution Liability	\$1,000,000 each occurrence \$3,000,000 aggregate

Contractor's Pollution Liability: The Contractor shall purchase and maintain coverage for bodily injury and property damage resulting from liability arising out of pollution related exposures such as asbestos abatement, lead paint abatement, tank removal, removal of contaminated soil, etc. The policy shall cover the liability of the Contractor during the process of removal, storage, transport and disposal of hazardous waste and contaminated soil and/or asbestos abatement. The policy shall cover coverage for on-site and off-site bodily injury and loss of, damage to, or loss of use of property, directly or indirectly arising out of the discharge, dispersal, release or escape of smoke, vapors, soot, fumes, acids, alkalis, toxic chemicals, liquids or gas, waste materials or other irritants, contaminants or pollutants into or upon the land, the atmosphere or any water course or body of water, whether it be gradual or sudden and accidental. The policy shall also include defense and clean-up costs. The Town shall be named as an additional insured.

The TOWN OF ROWE shall be named as an additional insured under the liability and automobile insurance. The excess/umbrella liability insurance policy should contain a broad form general liability endorsement.

Checklist of Required Signed Bid Documents

Please note that this checklist is provided as a Courtesy; however, the bidder shall carefully read the invitation for bids to assure that all required submittals are attached and should not rely on this checklist.

- Bid Form
- Bid Signature Page with Corporate Resolution or List of Partners if applicable
- Tax Compliance Form
- Non Collusion Form
- Debarment Form
- OSHA Statement
- 5% Bid Bond
- MassDOT Prequalification Letter

Bidder's Name

FORM FOR GENERAL BID
Rowe Kings Highway over Pelham Brook Bridge Replacement
Bid No. 20191205

To the Town of Rowe, Massachusetts, (hereinafter called the "Owner") acting through its Selectboard, duly authorized therefore, who act solely for said Town and without personal liability to themselves:

Ladies/Gentlemen:

The undersigned _____, as bidder, declares that the only persons or parties interested in this bid as principals are those named herein; that the bidder has carefully examined the proposed form of Proposal and the Specifications (and amendments thereto); and he/she bids and agrees, if this bid is accepted, that the bidder will furnish all materials and labor necessary for the completion of the Work as specified in the Proposal, in the manner and time therein prescribed and according to the requirements of Owner as herein set forth.

The Bidder agrees that the Owner will have twenty one (21) consecutive days from date of opening to accept the bid, except as described in the specifications, the unit(s) at the price, therein. The Bidder also understands that the Owner reserves the right to accept or reject any or all bids and to waive any informalities in the Bids if it is in the Owner's interest to do so. The Advertisement for Bidders, Information for Bidders, Specifications, Plans and Bid Form attached thereto, shall become a contract upon the receipt by the Bidder of written acceptance of this bid by the Owner.

The Bidder will take in full payment, therefore, the following price, to wit:

ITEM	QTY	UNITS	DESCRIPTION	UNIT PRICE	EXTENDED
103.	2	EA	TREE REMOVED - DIAMETER UNDER 24 INCHES		
115.1	1	LS	DEMOLITION OF BRIDGE NO. R10003		
120.	5	CY	EARTH EXCAVATION		
140.	225	CY	BRIDGE EXCAVATION		
144.	7	CY	CLASS B ROCK EXCAVATION		
146.	1	EA	DRAINAGE STRUCTURE REMOVED		
151.	60	CY	GRAVEL BORROW		
151.2	42	CY	GRAVEL BORROW FOR BACKFILLING STRUCTURES AND PIPES		
156.	7	TON	CRUSHED STONE		
460.	42	TON	HOT MIX ASPHALT LOW VOLUME NON-HIGHWAY		
464.	5	GAL	ASPHALT EMULSION FOR TACK COAT		

ITEM	QTY	UNITS	DESCRIPTION	UNIT PRICE	EXTENDED
482.3	100	FT	SAWCUTTING ASPHALT PAVEMENT		
504.	18	FT	GRANITE CURB TYPE VA4 - STRAIGHT		
627.3	4	EA	STEEL THRIE BEAM TERMINAL SECTION (SINGLE FACED)		
632.1	15	EA	GUARDRAIL POST - WOOD		
633.1	15	EA	GUARDRAIL OFFSET BLOCK - THRIE BEAM		
634.1	12	EA	THRIE BEAM GUARD PANEL		
657.	60	FT	TEMPORARY FENCE		
698.4	15	SY	GEOTEXTILE FABRIC FOR PERMANENT EROSION CONTROL		
715.1	1	EA	MAIL BOX REMOVED AND RESET		
751.	30	CY	LOAM BORROW		
765.	240	SY	SEEDING		
767.12	160	FT	COMPOST FILTER TUBES		
852.	140	SF	SAFETY SIGNING FOR TRAFFIC MANAGEMENT		
853.2	200	FT	TEMPORARY BARRIER (TL-2)		
853.21	200	FT	TEMPORARY BARRIER REMOVED AND RESET		
853.3	130	FT	TEMPORARY RESTRAINED BARRIER		
853.62	1	EA	TEMPORARY IMPACT ATTENUATOR UNIDIRECTIONAL, REDIRECTIVE (TL-2)		
859.	450 0	DAY	REFLECTORIZED DRUM		
950.1	1	LS	TEMPORARY SHORING		
986.2	3	CY	MODIFIED ROCKFILL		
991.1	1	LS	CONTROL OF WATER - STRUCTURE NO. R10003		
993.1	1	LS	TEMPORARY BRIDGE NO. R10003T		
995.01	1	LS	BRIDGE STRUCTURE, BRIDGE NO. R10003		
			TOTAL CONSTRUCTION BID	\$	
999.001	1	LS	ALLOWANCES- TRAFFIC POLICE	\$	4,000.00
999.300	1	LS	MATERIALS INSPECTION, SAMPLING, & TESTING SERVICES	\$	3,000.00
999.400	1	LS	TEMPORARY BRIDGE RENTAL	\$	4,000.00
			TOTAL BID WITH ALLOWANCES		


Please write the total bid amount in words:

_____ dollars
and _____ cents

I/We hereby agree to provide services for which we have provided pricing in accordance with the specifications in this bid and MassDOT standards and agree to the standard terms and conditions of the sample contract attached.

The BIDDER acknowledges receipt of the following addenda:

No. _____, dated _____, 20____
No. _____, dated _____, 20____
No. _____, dated _____, 20____

Authorized Signature  _____ Printed Name _____

Company Name * _____ Date _____

Postal Address _____ Email Address _____

_____ zip _____ Phone: _____

.....
The Office of the Attorney General, Washington, DC, requires the following information on all bid proposals amounting to \$1,000.00 or more:

_____ Federal Tax ID Number (this number is regularly used by companies when filing their "EMPLOYER'S FEDERAL TAX RETURN, U.S." Treasury Department Form 941

***IF A CORPORATION, INCLUDE WITH YOUR BID A CORPORATE RESOLUTION LISTING ALL DULY AUTHORIZED SIGNERS ON BEHALF OF THE CORPORATION AND CHECK HERE**

***IF A PARTNERSHIP, INCLUDE A LIST OF NAMES/ADDRESSES OF ALL PARTNERS AND CHECK HERE**

***IF A PROPRIETORSHIP, COMPLETELY FILL OUT INFORMATION ABOVE ONLY AND CHECK HERE**

TAX COMPLIANCE AND NON-COLLUSION STATEMENTS

Any person or corporation that fails to date, sign with original signature, and submit the following statements shall not be awarded this contract.

Tax Compliance

Pursuant to M.G.L. Ch. 62C, Sec. 49A, I certify under the penalties of perjury that, to the best knowledge and belief, I am in compliance with all laws of the Commonwealth relating to taxes, reporting of employees and contractors, and withholding and remitting child support.



Authorized Official's Signature

Title of Person Signing

Typed or Printed Name of Person Signing

Company Name

Telephone Number

Address

Fax Number

Address

Date

Email Address

Certificate of Non-Collusion

The undersigned certifies under penalties of perjury that this bid has been made and submitted in good faith and without collusion or fraud with any other person. As used in this certification, the word "person" shall mean any natural person, business, partnership, corporation, union, committee, club, or other organization, entity, or group of individuals.

Date _____



Authorized Official's Signature

Typed or Printed Name of Person Signing

Company or Corporation

Name and Tel # of Person who will be filling out the Quarterly Reports

DEBARMENT STATEMENT

Any person or corporation that fails to date, sign with original signature, and submit the following statement shall not be awarded this contract.

Debarment (Chapter 550, Acts of 1991)

The undersigned certifies under penalties of perjury that the said undersigned is not presently debarred from doing public construction work in the Commonwealth of Massachusetts under the provisions of Section 29F of Chapter 29 of the General Laws, or any other applicable debarment provisions of any other Chapter of the General Laws, or any Rule or Regulation promulgated thereunder.

Date _____



Authorized Official's Signature


Typed or Printed Name of Person Signing

Company or Corporation

OSHA CERTIFICATION

I hereby certify that all of our employees who will be employed at the work site have successfully passed the OSHA approved 10-hour safety course, and we have proof on file. I also certify that I am able to furnish labor that can work in harmony with all other elements of labor employed or to be employed in the work.

Date _____

 _____
Authorized Official's Signature

Typed or Printed Name of Person Signing

Company or Corporation

ATTACHMENT E

A CONTRACT SUBSTANTIALLY IN ACCORD WITH THIS SAMPLE CONTRACT WILL BE REQUIRED TO BE EXECUTED WITH THE SELECTED CONTRACTOR. SUBMISSION OF A BID DENOTES ACCEPTANCE OF THESE TERMS AND CONDITIONS.

SAMPLE CONTRACT

THIS CONTRACT, made and entered into this _____ day of __, 20__ by and between the Town of Rowe, Massachusetts (hereinafter called the "Town" or "Awarding Authority"), and **COMPANY NAME, ADDRESS, PHONE** (hereinafter called the "Contractor").

WITNESSETH:

WHEREAS, the Contractor did on the _____ day of DECEMBER, 2019, submit a Bid for **KINGS HIGHWAY OVER PELHAM BROOK BRIDGE REPLACEMENT** and to perform such work as may be incidental thereto; and

WHEREAS, the Town did on the ___ day of __, 20__, award said bid to the Contractor;

NOW, THEREFORE, in consideration of the following mutual agreements and covenants, it is understood and agreed by and between the parties as follows:

1. The Contractor is hereby granted the license and privilege within the territorial jurisdiction of the Town to perform all of the work called for and described in the Contract Documents.
2. The Contract Documents shall include the following documents, and this Contract does hereby expressly incorporate same herein as fully as if set forth verbatim in this Contract:
 1. This Instrument
 2. Special Provisions/Technical Specifications
 3. General Provisions
 4. The authorization of the governing body authorizing the work and services contemplated herein.
 5. Insurance Certificates evidencing the Insurance required.
 6. Payment Bond
 7. Any addenda or changes to the foregoing documents agreed to by the parties hereto.
 8. Engineering Plans
3. All provisions of the Contract Documents shall be strictly complied with and conformed to by the Contractor, and no amendment to this Contract shall be made except upon the written consent of the parties, which consents shall not be unreasonably withheld. No amendment shall be construed to release either party from any obligation of the contract Documents except as specifically provided for in such amendment.
4. This Contract is entered into subject to the following conditions:
 - a. The Contractor shall procure and keep in full force and effect throughout the term of this Contract all of the insurance policies specified in, and required by, the Contract Documents.

- b. The Contractor shall not be liable for the failure to wholly perform his duties if such failure is caused by catastrophe, riot, war, governmental order or regulation, strike, fire, accident, act of God or other similar or different contingency beyond the reasonable control of the Contractor.
- c. In the event that any provision or portion thereof of any Contract Document shall be found to be invalid or unenforceable, then such provision or portion thereof shall be reformed in accordance with the applicable laws. The invalidity or unenforceability of any provision or portion of any Contract Document shall not affect the validity or enforceability of any other provision or portion of the Contract Document, so long as the contract documents continue to fairly reflect the intent of the parties.
- d. Contractor's faithful performance of all obligations contained herein.

IN WITNESS WHEREOF, We, the contracting parties, by our duly authorized agents, hereto affix our signatures as of this _____ day of _____, 20 .

Town of Rowe, Massachusetts

By _____
Authorized signature for CONTRACTOR

Selectboard

Printed Name of above

Selectboard

Selectboard

Company
Name _____

Address

Address

CONTRACT GENERAL SPECIFICATIONS

1.00 DEFINITIONS

- | | |
|-------------------------|-----------------|
| 1.01 Town | 1.03 Contractor |
| 1.02 Contract Documents | 1.04 Engineer |

2.00 SCOPE OF WORK

3.00 COMPLIANCE WITH LAWS

- 3.01 Records
- 3.02 Prevailing Wages

4.00 WORKFORCE QUALIFICATIONS

5.00 NON-DISCRIMINATION

6.00 INDEMNITY

7.00 LICENSES AND TAXES

8.00 INSURANCE

9.00 BOND

- 9.01 Performance Bond – not required for this project
- 9.02 Payment Bond – REQUIRED FOR THIS PROJECT

10.00 BASIS OF PAYMENT / APPROPRIATION

11.00 MATERIALS AND EQUIPMENT WARRANTY

12.00 RISK OF LOSS

13.00 TIME FOR COMPLETION OF WORK

14.00 TRANSFERABILITY OF CONTRACT

15.00 MODIFICATIONS

16.00 TERMINATION

17.00 CHOICE OF LAW

18.00 NOTICES

19.00 CONFLICT OF INTEREST

20.00 ENTIRE UNDERSTANDING

1.00 DEFINITIONS

1.01 Town – The Town of Rowe, Massachusetts.
Awarding Authority – The Town of Rowe, Massachusetts

1.02 Contract Documents - The Invitation for Bids, and any addenda thereto, General Instructions to Bidders, Contractor's Bid, General Contract Specifications, authorization of the governing body authorizing the work and services contemplated herein, the Contract Payment Bond, if required, the Contract, Resolution of the Board of Directors of the Contractor authorizing Contractor's signatory the power to sign this Contract and bind the corporation to full performance hereunder, Insurance Certificates evidencing the insurance coverage required, Warranty Documentation, and any addenda or changes to the foregoing documents agreed to by the Town and the Contractor.

1.03 Contractor - The person, corporation, or partnership performing KINGS HIGHWAY OVER PELHAM BROOK BRIDGE REPLACEMENT under contract with the Town.

1.04 Engineer – The Engineer of Record for this project is **GILL ENGINEERING ASSOCIATES, INC., Needham, MA**

2.00 SCOPE OF WORK

The work under this Contract shall consist of the items contained in the Invitation for Bids, including all the supervision, materials, equipment, labor and all other items necessary to complete said work in accordance with the Contract Documents.

3.00 COMPLIANCE WITH LAWS

3.01 The Contractor shall comply with applicable laws, by-laws and codes of the local, state and federal government. 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 [MGL c 30 §39R(b)] and make such records available to the Awarding Authority.

3.02 MA Prevailing Wages ARE REQUIRED FOR THIS PROJECT

The Contractor shall comply and shall cause its subcontracts to comply with Massachusetts General Law c. 149 § 27B, which requires that a true and accurate record be kept of all persons employed on the project for which the prevailing wage rates have been provided. The Contractor and all Subcontractors shall keep these records and preserve them for a period of six years from the date of completion of the Contract. The Contractor shall, and shall cause its Subcontractors to submit weekly copies of their weekly payroll records to the Awarding Authority. Attention is directed to the "Information about Prevailing Wage Schedules for Awarding Authorities and Contractors" on the attached COMMONWEALTH OF MASSACHUSETTS DEPARTMENT OF LABOR STANDARDS Prevailing Wage Rates. All requirements for reporting and posting wages shall be followed by the Contractor when required.

4.00 WORKFORCE QUALIFICATIONS

The Contractor shall: (i) employ competent workers; (ii) enforce strict discipline and good

order among the Contractor's employees and other persons carrying out the Work; (iii) not permit employment of unfit persons or persons not skilled in tasks assigned to them. Whenever the Town shall notify the Contractor in writing that any work is, in the Town's designee's opinion, incompetent, unfaithful, disorderly, or otherwise unsatisfactory, such employee shall be discharged from the Work and shall not again be employed on the Work except with the consent of the Town.

Contractor shall provide OSHA certifications of any personnel on site when requested by the Awarding Authority or with submittal of first Certified Payroll. Contractor certifies that all of their employees who will be employed at the work site have successfully passed the OSHA approved 10-hour safety course, and they are able to furnish labor that can work in harmony with all other elements of labor employed or to be employed in the Work.

5.00 NON-DISCRIMINATION

The Contractor shall not discriminate against any person because of race, color, religious creed, national origin, gender, ancestry, sexual orientation, age, handicap, gender identity, genetic information, military service or any other protected class under the law.

6.00 INDEMNITY

- a. To the fullest extent permitted by law, the Contractor shall defend, indemnify, and save harmless the Town and its respective duly elected or appointed officials, agents and employees from and against all demands, claims, damages, liabilities, losses, costs, and expenses (including, but not limited to, reasonable attorney fees) (referred to collectively as "demands") arising out of or resulting from any work performed pursuant to this Agreement including but not limited to any negligent acts, errors, or omissions of the Contractor, any subContractor, or any person directly or indirectly employed by any of them, or by a defect of a product or design supplied by the Contractor or subContractor. Such obligation shall not negate, abridge, or reduce in any way any additional indemnification rights of the Town, that otherwise may exist under statute or in law or equity.
- b. The Contractor shall defend, indemnify, and hold harmless the Town from any and all demands relating to wages, overtime compensation, or other employee benefits by employees employed directly or indirectly by the Contractor for work performed in connection with the work hereunder or required by state or federal law, including but not limited to Fair Labor Standards Act and Massachusetts Prevailing Wage Law.
- c. The indemnification obligations of the Contractor and subContractor shall not be limited in any way by any limitations on the amount or type of damages, compensations, or benefits payable by or for the Contractor or subContractor under any federal or state law.
- d. In the event of a breach of this Agreement by the Contractor, the Contractor shall pay the Town all reasonable attorney fees, costs and other litigation expenses incurred by the Town in enforcing its rights as a result of said breach in addition to any damages for said breach.

7.00 LICENSES AND TAXES

The Contractor shall obtain all licenses and permits (other than the license and permit granted by the Contract) and promptly pay all taxes required by the Town.

8.00 INSURANCE

The Contractor shall at all times during the Contract maintain in full force and effect Employer's Liability, Worker's Compensation, Bodily Injury Liability, Property Damage and General Liability Insurance, including contractual liability coverage for the provisions of Section 5.00. All insurance shall be by insurers and for policy limits acceptable to the Town and before commencement of work hereunder the Contractor agrees to furnish the Town certificates of insurance or other evidence satisfactory to the Town to the effect that such insurance has been procured and is in force.

For the purpose of the Contract, the Contractor shall carry the following types of insurance in at least the limits specified below:

COVERAGES	LIMITS OF LIABILITY
Worker's Compensation	Statutory
Employer's Liability	\$500,000.00
Automobile Liability	\$1,000,000.00 combined single limit for bodily injury and property damage
Contractor's Commercial General Liability	\$1,000,000.00 each occurrence \$2,000,000.00 aggregate
Excess Umbrella Liability	\$1,000,000
Contractor's Pollution Liability	\$1,000,000 each occurrence \$3,000,000 aggregate

The TOWN OF ROWE shall be named as additional insured under the liability and automobile insurance. The general liability insurance policy should contain a broad form general liability endorsement.

9.00 BOND

9.01 Performance Bond - Not required for this project

9.02 Payment Bond - Labor and Materials Payment Bond in the amount of 50% OF THE TOTAL CONSTRUCTION BID. Bond should be payable to THE TOWN OF ROWE, MASSACHUSETTS

10.00 BASIS OF PAYMENT / APPROPRIATION

10.01 Rates - The charges shall not exceed the rates fixed by the Contract Documents.

THE TOTAL COST FOR THE PROJECT SHALL NOT EXCEED

_____ unless amended as allowed in Article 15 of this contract.
Payments to be made per MassDOT Method of Measurement and Payment upon acceptance of work and proper invoices received.

10.02 Appropriation - The Awarding Authority certifies that at the time of the execution of this Contract, sufficient appropriations exist and shall be encumbered to fund the Contract Price.

Payments are subject to appropriation and shall be made only for work performed in accordance with the terms of this Contract. The Contractor shall not be obligated to perform, and may not perform, work outside the duration and scope of this Contract without an appropriation amendment to this Contract, and a sufficient appropriation(s) to support such additional work. The Awarding Authority may immediately terminate or suspend this Contract in the event that the appropriation(s) funding this Contract is eliminated or reduced to an amount which will be insufficient to support anticipated future obligations under this Contract.

11.00 MATERIALS AND EQUIPMENT WARRANTY

Materials and equipment to be installed as part of the Work (both or either of which are hereinafter referred to as “materials”) shall be new, unused, of recent manufacture, assembled, and used in accordance with the best construction practices.

The Town may reject unsuitable work, notwithstanding that such work and materials may have previously been accepted for payment. If any part of the Work shall be found defective at any time before the final acceptance of the whole Work, the Contractor shall promptly correct such defect in a manner satisfactory to the Town. If any material brought upon the site for use in the Work shall be deemed as not in conformity with the Contract Documents, the Contractor shall promptly remove such materials from the site.

12.00 RISK OF LOSS

The Contractor shall bear the risk of loss with respect to any of its or its agents’ employees or subcontractors’ vehicles, equipment or tools brought onto or left at the worksite and for any materials stored at the worksite.

13.00 TIME FOR COMPLETION OF WORK

The Work shall be completed no later than ***JUNE 30, 2020*** subject only to extensions specifically permitted in accordance with the terms of this Contract. The date is tied to a grant ending date.

14.00 TRANSFERABILITY OF CONTRACT

No assignment of the Contract or any right accruing under this Contract shall be made in whole or in part by the Contractor without the express written consent of the Town, which consent shall not be unreasonably withheld; in the event of any assignment, the assignee shall assume the liability and duties of the Contractor, but said assignment shall in no way relieve the Contractor of his liabilities or duties pursuant to the Contract.

15.00 MODIFICATIONS

No modifications, waiver or change shall be made in the terms and conditions of this Contract, except as may be mutually agreed upon in writing by all parties hereto and as may be permitted by MGL C. 30, §39M.

16.00 TERMINATION

The Town may terminate this Contract by providing the Contractor with written notice if the

Contractor violates any of the terms of this Contract.

In the event of suspension, the Town will set forth the specific grounds for the suspension, any actions the Contractor could take to correct the problems or situations, and a stated period of time for the Contractor to comply with the corrections required. Failure to correct the problems or situations that necessitated the suspension within the stated period of time shall be grounds for termination.

The Town shall have the right to terminate this Contract without cause upon fifteen (15) days' notice to the Contractor and all preceding paragraphs herein shall be applicable to this termination. See Article 10.02 Appropriation.

17.00 CHOICE OF LAW

This Contract shall be construed under and governed by the laws of the Commonwealth of Massachusetts. The Contractor, and agents thereof, agree to bring any federal or state proceedings arising under this Contract, in which either the Commonwealth or the Awarding Authority is party, in a court of competent jurisdiction in the County of Franklin, Massachusetts. The parties agree to pursue Dispute Resolution before proceeding to Court. This section shall not be construed to limit any rights a party may have to intervene in any action, in any court or wherever, pending, in which the other is a party.

18.00 NOTICES

Any and all notices or other communications required or permitted by this Contract or by law to be served or given to either the Town or the Contractor by the other party shall be in writing and shall be deemed duly served and given when personally delivered to the party to whom it is directed, or in lieu of such personal services when sent by U.S. mail, first-class, postage prepaid, addressed to the **TOWN OF ROWE, 321 ZOAR RD, ROWE, MA 01370** or the Contractor at
_____ **NAME ADDRESS**

19.00 CONFLICT OF INTEREST

Each party shall adhere to the provisions of Massachusetts General Laws, Chapter 268A, with respect to the Conduct of Public Employees. In addition, no member, officer, or employee of either party, or its designees, or agents, no member of the governing body of the locality in which the program is situated, and no other public official of such locality or localities who exercises any functions or responsibilities with respect to the program during his tenure or for one (1) year thereafter (or such longer period as may be provided in Chapter 268A of the Massachusetts General Laws), shall have any interest in any contract or subcontract, or the proceeds thereof, for work to be performed in connection with the program assisted under this Agreement. Each party shall incorporate, or cause to be incorporated, in all such contracts or subcontracts a provision prohibiting such interest, pursuant to the purposes of this subsection.

20.00 ENTIRE UNDERSTANDING

This Contract, together with all documents included by reference pursuant to Clause 1.03 of this Contract, represents the entire understanding of the parties, and neither party is relying upon any representation not contained herein.

SAMPLE PAYMENT BOND FORM

TOWN OF ROWE
321 ZOAR ROAD
ROWE, MA 01367

KNOW ALL MEN BY THESE PRESENTS:

That we, Contractors Name as **Principal**
And Surety Name as **Surety**, are held and firmly bound unto
The Town of Rowe, Massachusetts, as **Obligee**, in the sum of

Contract Sum in Words _____ **dollars** **\$ Contract in Numbers.**

to be paid to the Obligee, for which payments, well and truly to be made, we bind ourselves, our respective heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the said **Principal** has made a contract with the **Obligee**, bearing the date of Contract Date
for the construction of Kings Highway Bridge Replacement Here in, Franklin County, Massachusetts
Project Title

NOW the conditions of this obligation are such that if the **Principal** and all subcontractors under said contract shall pay for all labor performed or furnished and for all materials used or employed in said contract and in any and all duly authorized modifications, alterations, extensions of time, changes or additions to said contract that may hereafter be made, notice to the **Surety** of such modifications, alterations, extensions of time, changes or additions being hereby waived, the foregoing to include any other purposes or items set out in, and to be subject to, provisions of M.G.L. c.30 §39A, and M.G.L. c.149 §29, as amended, then this obligation shall become null and void; otherwise it shall remain in full force and virtue.

IN WITNESS WHEREOF, the **Principal** and **Surety** have hereunto set their hands and seals this:

NN th Day of Month 20

PRINCIPAL _____
By: _____
Seal
Attest: _____

SURETY _____
By: _____
Attorney-in Fact
Attest _____

The rate for this bond is _____ % for the first \$ _____ and _____ % for the next \$ _____

The total premium for this bond is \$ _____



The Massachusetts Prevailing Wage Law M.G.L. c. 149, §§26-27

NOTICE TO AWARDING AUTHORITIES

The enclosed wage schedule applies only to the specific project listed at the top of the schedule, and these rates will remain in effect for the duration of the project.

You should request an updated wage schedule from the Division of Occupational Safety if you have not opened bids or selected a contractor within 90 days of the date of issuance of the enclosed wage schedule.

The wage schedule shall be incorporated in any advertisement or call for bids for the project for which it has been issued.

Once a contractor has been selected by the awarding authority, the wage schedule shall be made a part of the contract for that project.

NOTICE TO CONTRACTORS

The enclosed wage schedule must be posted in a conspicuous place at the work site during the life of the project.

The wages listed on the enclosed wage schedule must be paid to employees on public works projects regardless of whether they are employed by the prime contractor, a filed sub-bidder, or any sub-contractor.

The enclosed wage schedule applies to all phases of the project, including the final clean-up. Contractors whose only role is to perform final clean-up must pay their employees according to this wage schedule.

All apprentices must be registered with the Massachusetts Division of Apprenticeship Training (DAT) in order to be paid at the lower apprentice rates. All apprentices must keep his/her apprentice identification card on his/her person during all work hours. If a worker is not registered with DAT, they must be paid the "total rate" listed on the wage schedule regardless of experience or skill level. For further information, please call 617-626-5409, or write to DAT, 19 Staniford Street, Floor 1, P.O. Box 146759, Boston, MA 02114.

**WEEKLY PAYROLL RECORDS REPORT
& STATEMENT OF COMPLIANCE**

In accordance with Massachusetts General Law c. 149, §27B, a true and accurate record must be kept of all persons employed on the public works project for which the enclosed rates have been provided. A Payroll Form has been printed on the reverse of this page and includes all the information required to be kept by law. Every contractor or subcontractor is required to keep these records and preserve them for a period of three years from the date of completion of the contract.

In addition, every contractor and subcontractor is required to submit a copy of their weekly payroll records to the awarding authority. This is required to be done on a weekly basis. Once collected, the awarding authority is also required to preserve those records for three years from the date of completion of the project.

Each such contractor or subcontractor shall furnish to the awarding authority directly within 15 days after completion of its portion of the work, a statement, executed by the contractor, subcontractor or by any authorized officer thereof who supervised the payment of wages, this form.

STATEMENT OF COMPLIANCE

_____, 20_____

I, _____, _____
(Name of signatory party) (Title)

do hereby state:

That I pay or supervise the payment of the persons employed by
_____ on the _____
(Contractor, subcontractor or public body) (Building or project)

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

Signature _____
Title _____

MASSACHUSETTS WEEKLY CERTIFIED PAYROLL REPORT FORM



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

NOTE: Pursuant to MGL Ch. 149 s.27B, every contractor and subcontractor is required to submit a "true and accurate" copy of their weekly payroll records directly to the awarding authority. Failure to comply may result in the commencement of a criminal action or the issuance of a civil citation.



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

Prevailing Wage Rates

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

CHARLES D. BAKER
Governor

ROSALIN ACOSTA
Secretary

KARYN E. POLITO
Lt. Governor

WILLIAM D MCKINNEY
Director

Awarding Authority: Town of Rowe
Contract Number: **City/Town:** ROWE
Description of Work: Kings Highway Bridge Replacement - Replace concrete slab bridge with precast concrete bridge
Job Location: Kings Highway, Rowe, MA

Information about Prevailing Wage Schedules for Awarding Authorities and Contractors

- 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 from the Department of Labor Standards (“DLS”) 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 any sub-contractor.
- All apprentices working on the project are required to be registered with the Massachusetts Department of Labor Standards, Division of Apprentice Standards (DLS/DAS). Apprentice must keep his/her apprentice identification card on his/her person 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 DLS/DAS regardless of whether or not they are registered with any other federal, state, local, or private agency must be paid the journeyworker's rate for the trade.**
- 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. Awarding authorities are required to request these updates 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, 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. Contractors are required to obtain the wage schedules from awarding authorities, and to pay no less than these rates to covered workers. The annual update requirement is not applicable to 27F “rental of equipment” contracts.
- Every contractor or subcontractor which performs construction work on the project is required to 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. A sample of a payroll reporting form may be obtained at <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.
- Employees not receiving the prevailing wage rate set forth on the wage schedule may report the violation to the Fair Labor Division of the office of the Attorney General at (617) 727-3465.
- 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

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
Construction						
(2 AXLE) DRIVER - EQUIPMENT <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE B</i>	08/01/2019	\$34.25	\$12.41	\$12.70	\$0.00	\$59.36
	12/01/2019	\$34.25	\$12.41	\$13.72	\$0.00	\$60.38
	06/01/2020	\$35.15	\$12.41	\$13.72	\$0.00	\$61.28
	08/01/2020	\$35.15	\$12.91	\$13.72	\$0.00	\$61.78
	12/01/2020	\$35.15	\$12.91	\$14.82	\$0.00	\$62.88
	06/01/2021	\$35.95	\$12.91	\$14.82	\$0.00	\$63.68
	08/01/2021	\$35.95	\$13.41	\$14.82	\$0.00	\$64.18
	12/01/2021	\$35.95	\$13.41	\$16.01	\$0.00	\$65.37
(3 AXLE) DRIVER - EQUIPMENT <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE B</i>	08/01/2019	\$34.32	\$12.41	\$12.70	\$0.00	\$59.43
	12/01/2019	\$34.32	\$12.41	\$13.72	\$0.00	\$60.45
	06/01/2020	\$35.22	\$12.41	\$13.72	\$0.00	\$61.35
	08/01/2020	\$35.22	\$12.91	\$13.72	\$0.00	\$61.85
	12/01/2020	\$35.22	\$12.91	\$14.82	\$0.00	\$62.95
	06/01/2021	\$36.02	\$12.91	\$14.82	\$0.00	\$63.75
	08/01/2021	\$36.02	\$13.41	\$14.82	\$0.00	\$64.25
	12/01/2021	\$36.02	\$13.41	\$16.01	\$0.00	\$65.44
(4 & 5 AXLE) DRIVER - EQUIPMENT <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE B</i>	08/01/2019	\$34.44	\$12.41	\$12.70	\$0.00	\$59.55
	12/01/2019	\$34.44	\$12.41	\$13.72	\$0.00	\$60.57
	06/01/2020	\$35.34	\$12.41	\$13.72	\$0.00	\$61.47
	08/01/2020	\$35.34	\$12.91	\$13.72	\$0.00	\$61.97
	12/01/2020	\$35.34	\$12.91	\$14.82	\$0.00	\$63.07
	06/01/2021	\$36.14	\$12.91	\$14.82	\$0.00	\$63.87
	08/01/2021	\$36.14	\$13.41	\$14.82	\$0.00	\$64.37
	12/01/2021	\$36.14	\$13.41	\$16.01	\$0.00	\$65.56
ADS/SUBMERSIBLE PILOT <i>PILE DRIVER LOCAL 56 (ZONE 3)</i>	08/01/2019	\$102.78	\$9.90	\$21.15	\$0.00	\$133.83
For apprentice rates see "Apprentice- PILE DRIVER"						
AIR TRACK OPERATOR <i>LABORERS - ZONE 4 (BUILDING & SITE)</i>	06/01/2019	\$27.98	\$7.85	\$12.87	\$0.00	\$48.70
	12/01/2019	\$28.73	\$7.85	\$12.87	\$0.00	\$49.45
	06/01/2020	\$29.38	\$7.85	\$12.87	\$0.00	\$50.10
	12/01/2020	\$30.03	\$7.85	\$12.87	\$0.00	\$50.75
For apprentice rates see "Apprentice- LABORER"						
AIR TRACK OPERATOR (HEAVY & HIGHWAY) <i>LABORERS - ZONE 4 (HEAVY & HIGHWAY)</i>	06/01/2019	\$29.16	\$7.85	\$13.92	\$0.00	\$50.93
	12/01/2019	\$29.93	\$7.85	\$13.92	\$0.00	\$51.70
	06/01/2020	\$30.72	\$7.85	\$13.92	\$0.00	\$52.49
	12/01/2020	\$31.51	\$7.85	\$13.92	\$0.00	\$53.28
	06/01/2021	\$32.33	\$7.85	\$13.92	\$0.00	\$54.10
	12/01/2021	\$33.14	\$7.85	\$13.92	\$0.00	\$54.91
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"						
ASBESTOS WORKER (PIPES & TANKS) <i>HEAT & FROST INSULATORS LOCAL 6 (SPRINGFIELD)</i>	06/01/2019	\$32.40	\$12.50	\$8.35	\$0.00	\$53.25
	12/01/2019	\$33.30	\$12.50	\$8.35	\$0.00	\$54.15
	06/01/2020	\$34.20	\$12.50	\$8.35	\$0.00	\$55.05
	12/01/2020	\$35.10	\$12.50	\$8.35	\$0.00	\$55.95

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
ASPHALT RAKER <i>LABORERS - ZONE 4 (BUILDING & SITE)</i>	06/01/2019	\$27.48	\$7.85	\$12.87	\$0.00	\$48.20
	12/01/2019	\$28.23	\$7.85	\$12.87	\$0.00	\$48.95
	06/01/2020	\$28.88	\$7.85	\$12.87	\$0.00	\$49.60
	12/01/2020	\$29.53	\$7.85	\$12.87	\$0.00	\$50.25
For apprentice rates see "Apprentice- LABORER"						
ASPHALT RAKER (HEAVY & HIGHWAY) <i>LABORERS - ZONE 4 (HEAVY & HIGHWAY)</i>	06/01/2019	\$28.66	\$7.85	\$13.92	\$0.00	\$50.43
	12/01/2019	\$29.43	\$7.85	\$13.92	\$0.00	\$51.20
	06/01/2020	\$30.22	\$7.85	\$13.92	\$0.00	\$51.99
	12/01/2020	\$31.01	\$7.85	\$13.92	\$0.00	\$52.78
	06/01/2021	\$31.83	\$7.85	\$13.92	\$0.00	\$53.60
	12/01/2021	\$32.64	\$7.85	\$13.92	\$0.00	\$54.41
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"						
AUTOMATIC GRADER-EXCAVATOR (RECLAIMER) <i>OPERATING ENGINEERS LOCAL 98</i>	06/01/2019	\$35.05	\$11.69	\$14.08	\$0.00	\$60.82
	12/01/2019	\$35.65	\$11.69	\$14.35	\$0.00	\$61.69
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
BACKHOE/FRONT-END LOADER OPERATOR <i>OPERATING ENGINEERS LOCAL 98</i>	06/01/2019	\$35.05	\$11.69	\$14.08	\$0.00	\$60.82
	12/01/2019	\$35.65	\$11.69	\$14.35	\$0.00	\$61.69
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
BARCO-TYPE JUMPING TAMPER <i>LABORERS - ZONE 4 (BUILDING & SITE)</i>	06/01/2019	\$27.48	\$7.85	\$12.87	\$0.00	\$48.20
	12/01/2019	\$28.23	\$7.85	\$12.87	\$0.00	\$48.95
	06/01/2020	\$28.88	\$7.85	\$12.87	\$0.00	\$49.60
	12/01/2020	\$29.53	\$7.85	\$12.87	\$0.00	\$50.25
For apprentice rates see "Apprentice- LABORER"						
BATCH/CEMENT PLANT - ON SITE <i>OPERATING ENGINEERS LOCAL 98</i>	06/01/2019	\$34.52	\$11.69	\$14.08	\$0.00	\$60.29
	12/01/2019	\$35.12	\$11.69	\$14.35	\$0.00	\$61.16
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
BLOCK PAVER, RAMMER / CURB SETTER <i>LABORERS - ZONE 4 (BUILDING & SITE)</i>	06/01/2019	\$27.98	\$7.85	\$12.87	\$0.00	\$48.70
	12/01/2019	\$28.73	\$7.85	\$12.87	\$0.00	\$49.45
	06/01/2020	\$29.38	\$7.85	\$12.87	\$0.00	\$50.10
	12/01/2020	\$30.03	\$7.85	\$12.87	\$0.00	\$50.75
For apprentice rates see "Apprentice- LABORER"						
BLOCK PAVER, RAMMER / CURB SETTER (HEAVY & HIGHWAY) <i>LABORERS - ZONE 4 (HEAVY & HIGHWAY)</i>	06/01/2019	\$29.16	\$7.85	\$13.92	\$0.00	\$50.93
	12/01/2019	\$29.93	\$7.85	\$13.92	\$0.00	\$51.70
	06/01/2020	\$30.72	\$7.85	\$13.92	\$0.00	\$52.49
	12/01/2020	\$31.51	\$7.85	\$13.92	\$0.00	\$53.28
	06/01/2021	\$32.33	\$7.85	\$13.92	\$0.00	\$54.10
	12/01/2021	\$33.14	\$7.85	\$13.92	\$0.00	\$54.91
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"						
BOILER MAKER <i>BOILERMAKERS LOCAL 29</i>	01/01/2019	\$44.71	\$7.07	\$17.72	\$0.00	\$69.50
	01/01/2020	\$46.10	\$7.07	\$17.98	\$0.00	\$71.15

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - BOILERMAKER - Local 29

Effective Date - 01/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	65	\$29.06	\$7.07	\$11.52	\$0.00	\$47.65
2	65	\$29.06	\$7.07	\$11.52	\$0.00	\$47.65
3	70	\$31.30	\$7.07	\$12.40	\$0.00	\$50.77
4	75	\$33.53	\$7.07	\$13.30	\$0.00	\$53.90
5	80	\$35.77	\$7.07	\$14.18	\$0.00	\$57.02
6	85	\$38.00	\$7.07	\$15.07	\$0.00	\$60.14
7	90	\$40.24	\$7.07	\$15.95	\$0.00	\$63.26
8	95	\$42.47	\$7.07	\$16.84	\$0.00	\$66.38

Effective Date - 01/01/2020

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	65	\$29.97	\$7.07	\$11.69	\$0.00	\$48.73
2	65	\$29.97	\$7.07	\$11.69	\$0.00	\$48.73
3	70	\$32.27	\$7.07	\$12.59	\$0.00	\$51.93
4	75	\$34.58	\$7.07	\$13.49	\$0.00	\$55.14
5	80	\$36.88	\$7.07	\$14.38	\$0.00	\$58.33
6	85	\$39.19	\$7.07	\$15.29	\$0.00	\$61.55
7	90	\$41.49	\$7.07	\$16.18	\$0.00	\$64.74
8	95	\$43.80	\$7.07	\$17.09	\$0.00	\$67.96

Notes:

Apprentice to Journeyworker Ratio:1:4

BRICK/STONE/ARTIFICIAL MASONRY (INCL. MASONRY WATERPROOFING)	08/01/2019	\$42.81	\$10.75	\$19.41	\$0.00	\$72.97
BRICKLAYERS LOCAL 3 (SPRINGFIELD/PITTSFIELD)	02/01/2020	\$43.36	\$10.75	\$19.41	\$0.00	\$73.52
	08/01/2020	\$44.71	\$10.75	\$19.56	\$0.00	\$75.02
	02/01/2021	\$45.26	\$10.75	\$19.56	\$0.00	\$75.57
	08/01/2021	\$46.66	\$10.75	\$19.72	\$0.00	\$77.13
	02/01/2022	\$47.19	\$10.75	\$19.72	\$0.00	\$77.66

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - BRICK/PLASTER/CEMENT MASON - Local 3 Springfield/Pittsfield

Effective Date - 08/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$21.41	\$10.75	\$19.41	\$0.00	\$51.57
2	60	\$25.69	\$10.75	\$19.41	\$0.00	\$55.85
3	70	\$29.97	\$10.75	\$19.41	\$0.00	\$60.13
4	80	\$34.25	\$10.75	\$19.41	\$0.00	\$64.41
5	90	\$38.53	\$10.75	\$19.41	\$0.00	\$68.69

Effective Date - 02/01/2020

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$21.68	\$10.75	\$19.41	\$0.00	\$51.84
2	60	\$26.02	\$10.75	\$19.41	\$0.00	\$56.18
3	70	\$30.35	\$10.75	\$19.41	\$0.00	\$60.51
4	80	\$34.69	\$10.75	\$19.41	\$0.00	\$64.85
5	90	\$39.02	\$10.75	\$19.41	\$0.00	\$69.18

Notes:

Apprentice to Journeyworker Ratio:1:5

BULLDOZER/POWER SHOVEL/TREE SHREDDER /CLAM SHELL OPERATING	06/01/2019	\$35.05	\$11.69	\$14.08	\$0.00	\$60.82
ENGINEERS LOCAL 98 For apprentice rates see "Apprentice- OPERATING ENGINEERS"	12/01/2019	\$35.65	\$11.69	\$14.35	\$0.00	\$61.69
CAISSON & UNDERPINNING BOTTOM MAN LABORERS - FOUNDATION AND MARINE	06/01/2019	\$40.25	\$7.85	\$16.05	\$0.00	\$64.15
	12/01/2019	\$41.25	\$7.85	\$16.05	\$0.00	\$65.15
	06/01/2020	\$42.24	\$7.85	\$16.05	\$0.00	\$66.14
	12/01/2020	\$43.22	\$7.85	\$16.05	\$0.00	\$67.12
	06/01/2021	\$44.24	\$7.85	\$16.05	\$0.00	\$68.14
	12/01/2021	\$45.25	\$7.85	\$16.05	\$0.00	\$69.15
For apprentice rates see "Apprentice- LABORER"						
CAISSON & UNDERPINNING LABORER LABORERS - FOUNDATION AND MARINE	06/01/2019	\$39.10	\$7.85	\$16.05	\$0.00	\$63.00
	12/01/2019	\$40.10	\$7.85	\$16.05	\$0.00	\$64.00
	06/01/2020	\$41.09	\$7.85	\$16.05	\$0.00	\$64.99
	12/01/2020	\$42.07	\$7.85	\$16.05	\$0.00	\$65.97
	06/01/2021	\$43.09	\$7.85	\$16.05	\$0.00	\$66.99
	12/01/2021	\$44.10	\$7.85	\$16.05	\$0.00	\$68.00
For apprentice rates see "Apprentice- LABORER"						
CAISSON & UNDERPINNING TOP MAN LABORERS - FOUNDATION AND MARINE	06/01/2019	\$39.10	\$7.85	\$16.05	\$0.00	\$63.00
	12/01/2019	\$40.10	\$7.85	\$16.05	\$0.00	\$64.00
	06/01/2020	\$41.09	\$7.85	\$16.05	\$0.00	\$64.99
	12/01/2020	\$42.07	\$7.85	\$16.05	\$0.00	\$65.97
	06/01/2021	\$43.09	\$7.85	\$16.05	\$0.00	\$66.99
	12/01/2021	\$44.10	\$7.85	\$16.05	\$0.00	\$68.00
For apprentice rates see "Apprentice- LABORER"						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
CARBIDE CORE DRILL OPERATOR <i>LABORERS - ZONE 4 (BUILDING & SITE)</i>	06/01/2019	\$27.48	\$7.85	\$12.87	\$0.00	\$48.20
	12/01/2019	\$28.23	\$7.85	\$12.87	\$0.00	\$48.95
	06/01/2020	\$28.88	\$7.85	\$12.87	\$0.00	\$49.60
	12/01/2020	\$29.53	\$7.85	\$12.87	\$0.00	\$50.25

For apprentice rates see "Apprentice- LABORER"

CARPENTER <i>CARPENTERS LOCAL 336 - HAMPDEN HAMPSHIRE FRANKLIN</i>	09/02/2019	\$37.54	\$7.84	\$16.87	\$0.00	\$62.25
	03/01/2020	\$38.04	\$7.84	\$16.87	\$0.00	\$62.75
	09/01/2020	\$38.54	\$7.84	\$16.87	\$0.00	\$63.25
	03/01/2021	\$39.04	\$7.84	\$16.87	\$0.00	\$63.75
	09/01/2021	\$39.54	\$7.84	\$16.87	\$0.00	\$64.25
	03/01/2022	\$40.04	\$7.84	\$16.87	\$0.00	\$64.75
	09/01/2022	\$40.54	\$7.84	\$16.87	\$0.00	\$65.25
	03/01/2023	\$41.04	\$7.84	\$16.87	\$0.00	\$65.75

Apprentice - CARPENTER - Local 336 Hampden Hampshire Franklin

Effective Date - 09/02/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$18.77	\$7.84	\$1.32	\$0.00	\$27.93
2	60	\$22.52	\$7.84	\$1.32	\$0.00	\$31.68
3	70	\$26.28	\$7.84	\$12.91	\$0.00	\$47.03
4	75	\$28.16	\$7.84	\$12.91	\$0.00	\$48.91
5	80	\$30.03	\$7.84	\$14.23	\$0.00	\$52.10
6	80	\$30.03	\$7.84	\$14.23	\$0.00	\$52.10
7	90	\$33.79	\$7.84	\$15.55	\$0.00	\$57.18
8	90	\$33.79	\$7.84	\$15.55	\$0.00	\$57.18

Effective Date - 03/01/2020

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$19.02	\$7.84	\$1.32	\$0.00	\$28.18
2	60	\$22.82	\$7.84	\$1.32	\$0.00	\$31.98
3	70	\$26.63	\$7.84	\$12.91	\$0.00	\$47.38
4	75	\$28.53	\$7.84	\$12.91	\$0.00	\$49.28
5	80	\$30.43	\$7.84	\$14.23	\$0.00	\$52.50
6	80	\$30.43	\$7.84	\$14.23	\$0.00	\$52.50
7	90	\$34.24	\$7.84	\$15.55	\$0.00	\$57.63
8	90	\$34.24	\$7.84	\$15.55	\$0.00	\$57.63

Notes:

% Indentured After 10/1/17; 45/45/55/55/70/70/80/80
Step 1&2 \$26.05/ 3&4 \$31.09/ 5&6 \$48.35/ 7&8 \$53.42

Apprentice to Journeyworker Ratio:1:5

CARPENTER WOOD FRAME <i>CARPENTERS LOCAL 336 - HAMPDEN HAMPSHIRE FRANKLIN</i>	10/01/2019	\$23.49	\$7.07	\$7.86	\$0.00	\$38.42
--	------------	---------	--------	--------	--------	---------

All Aspects of New Wood Frame Work

Apprentice - CARPENTER (Wood Frame) - 336 Hampden Hampshire

Effective Date - 10/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$14.09	\$7.07	\$0.00	\$0.00	\$21.16
2	60	\$14.09	\$7.07	\$0.00	\$0.00	\$21.16
3	65	\$15.27	\$7.07	\$7.86	\$0.00	\$30.20
4	70	\$16.44	\$7.07	\$7.86	\$0.00	\$31.37
5	75	\$17.62	\$7.07	\$7.86	\$0.00	\$32.55
6	80	\$18.79	\$7.07	\$7.86	\$0.00	\$33.72
7	85	\$19.97	\$7.07	\$7.86	\$0.00	\$34.90
8	90	\$21.14	\$7.07	\$7.86	\$0.00	\$36.07

Notes:

% Indentured After 10/1/17; 45/45/55/55/70/70/80/80
Step 1&2 \$17.64/ 3&4 \$24.74/ 5&6 \$31.37/ 7&8 \$33.72

Apprentice to Journeyworker Ratio:1:5

CEMENT MASONRY/PLASTERING BRICKLAYERS LOCAL 3 (SPRINGFIELD/PITTSFIELD)	07/01/2019	\$40.46	\$12.70	\$17.64	\$0.62	\$71.42
	01/01/2020	\$41.94	\$12.70	\$17.64	\$0.62	\$72.90

Apprentice - CEMENT MASONRY/PLASTERING - Springfield/Pittsfield

Effective Date - 07/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$20.23	\$12.70	\$15.41	\$0.00	\$48.34
2	60	\$24.28	\$12.70	\$17.64	\$0.62	\$55.24
3	65	\$26.30	\$12.70	\$17.64	\$0.62	\$57.26
4	70	\$28.32	\$12.70	\$17.64	\$0.62	\$59.28
5	75	\$30.35	\$12.70	\$17.64	\$0.62	\$61.31
6	80	\$32.37	\$12.70	\$17.64	\$0.62	\$63.33
7	90	\$36.41	\$12.70	\$17.64	\$0.62	\$67.37

Effective Date - 01/01/2020

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$20.97	\$12.70	\$15.41	\$0.00	\$49.08
2	60	\$25.16	\$12.70	\$17.64	\$0.62	\$56.12
3	65	\$27.26	\$12.70	\$17.64	\$0.62	\$58.22
4	70	\$29.36	\$12.70	\$17.64	\$0.62	\$60.32
5	75	\$31.46	\$12.70	\$17.64	\$0.62	\$62.42
6	80	\$33.55	\$12.70	\$17.64	\$0.62	\$64.51
7	90	\$37.75	\$12.70	\$17.64	\$0.62	\$68.71

Notes:

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

Apprentice to Journeyworker Ratio:1:3

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
CHAIN SAW OPERATOR <i>LABORERS - ZONE 4 (BUILDING & SITE)</i>	06/01/2019	\$27.48	\$7.85	\$12.87	\$0.00	\$48.20
	12/01/2019	\$28.23	\$7.85	\$12.87	\$0.00	\$48.95
	06/01/2020	\$28.88	\$7.85	\$12.87	\$0.00	\$49.60
	12/01/2020	\$29.53	\$7.85	\$12.87	\$0.00	\$50.25
For apprentice rates see "Apprentice- LABORER"						
COMPRESSOR OPERATOR <i>OPERATING ENGINEERS LOCAL 98</i>	06/01/2019	\$34.52	\$11.69	\$14.08	\$0.00	\$60.29
	12/01/2019	\$35.12	\$11.69	\$14.35	\$0.00	\$61.16
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
CRANE OPERATOR <i>OPERATING ENGINEERS LOCAL 98</i>	06/01/2019	\$38.55	\$11.69	\$14.08	\$0.00	\$64.32
	12/01/2019	\$39.15	\$11.69	\$14.35	\$0.00	\$65.19
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
DELEADER (BRIDGE) <i>PAINTERS LOCAL 35 - ZONE 3</i>	07/01/2019	\$50.66	\$8.20	\$21.45	\$0.00	\$80.31
	01/01/2020	\$50.96	\$8.20	\$22.10	\$0.00	\$81.26
	07/01/2020	\$52.06	\$8.20	\$22.10	\$0.00	\$82.36
	01/01/2021	\$53.16	\$8.20	\$22.10	\$0.00	\$83.46

Apprentice - PAINTER Local 35 - BRIDGES/TANKS

Effective Date - 07/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$25.33	\$8.20	\$0.00	\$0.00	\$33.53
2	55	\$27.86	\$8.20	\$5.78	\$0.00	\$41.84
3	60	\$30.40	\$8.20	\$6.30	\$0.00	\$44.90
4	65	\$32.93	\$8.20	\$6.83	\$0.00	\$47.96
5	70	\$35.46	\$8.20	\$18.30	\$0.00	\$61.96
6	75	\$38.00	\$8.20	\$18.83	\$0.00	\$65.03
7	80	\$40.53	\$8.20	\$19.35	\$0.00	\$68.08
8	90	\$45.59	\$8.20	\$20.40	\$0.00	\$74.19

Effective Date - 01/01/2020

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$25.48	\$8.20	\$0.00	\$0.00	\$33.68
2	55	\$28.03	\$8.20	\$5.94	\$0.00	\$42.17
3	60	\$30.58	\$8.20	\$6.48	\$0.00	\$45.26
4	65	\$33.12	\$8.20	\$7.02	\$0.00	\$48.34
5	70	\$35.67	\$8.20	\$18.51	\$0.00	\$62.38
6	75	\$38.22	\$8.20	\$19.05	\$0.00	\$65.47
7	80	\$40.77	\$8.20	\$19.59	\$0.00	\$68.56
8	90	\$45.86	\$8.20	\$20.67	\$0.00	\$74.73

Notes:

Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

DEMO: ADZEMAN <i>LABORERS - ZONE 4 (BUILDING & SITE)</i>	06/01/2019	\$39.30	\$7.85	\$15.85	\$0.00	\$63.00
	12/01/2019	\$40.30	\$7.85	\$15.85	\$0.00	\$64.00

For apprentice rates see "Apprentice- LABORER"

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
DEMO: BACKHOE/LOADER/HAMMER OPERATOR <i>LABORERS - ZONE 4 (BUILDING & SITE)</i>	06/01/2019	\$40.30	\$7.85	\$15.85	\$0.00	\$64.00
	12/01/2019	\$41.30	\$7.85	\$15.85	\$0.00	\$65.00
For apprentice rates see "Apprentice- LABORER"						
DEMO: BURNERS <i>LABORERS - ZONE 4 (BUILDING & SITE)</i>	06/01/2019	\$40.05	\$7.85	\$15.85	\$0.00	\$63.75
	12/01/2019	\$41.05	\$7.85	\$15.85	\$0.00	\$64.75
For apprentice rates see "Apprentice- LABORER"						
DEMO: CONCRETE CUTTER/SAWYER <i>LABORERS - ZONE 4 (BUILDING & SITE)</i>	06/01/2019	\$40.30	\$7.85	\$15.85	\$0.00	\$64.00
	12/01/2019	\$41.30	\$7.85	\$15.85	\$0.00	\$65.00
For apprentice rates see "Apprentice- LABORER"						
DEMO: JACKHAMMER OPERATOR <i>LABORERS - ZONE 4 (BUILDING & SITE)</i>	06/01/2019	\$40.05	\$7.85	\$15.85	\$0.00	\$63.75
	12/01/2019	\$41.05	\$7.85	\$15.85	\$0.00	\$64.75
For apprentice rates see "Apprentice- LABORER"						
DEMO: WRECKING LABORER <i>LABORERS - ZONE 4 (BUILDING & SITE)</i>	06/01/2019	\$39.30	\$7.85	\$15.85	\$0.00	\$63.00
	12/01/2019	\$40.30	\$7.85	\$15.85	\$0.00	\$64.00
For apprentice rates see "Apprentice- LABORER"						
DIVER <i>PILE DRIVER LOCAL 56 (ZONE 3)</i>	08/01/2019	\$68.52	\$9.90	\$21.15	\$0.00	\$99.57
For apprentice rates see "Apprentice- PILE DRIVER"						
DIVER TENDER <i>PILE DRIVER LOCAL 56 (ZONE 3)</i>	08/01/2019	\$48.94	\$9.90	\$21.15	\$0.00	\$79.99
For apprentice rates see "Apprentice- PILE DRIVER"						
DIVER TENDER (EFFLUENT) <i>PILE DRIVER LOCAL 56 (ZONE 3)</i>	08/01/2019	\$73.41	\$9.90	\$21.15	\$0.00	\$104.46
For apprentice rates see "Apprentice- PILE DRIVER"						
DIVER/SLURRY (EFFLUENT) <i>PILE DRIVER LOCAL 56 (ZONE 3)</i>	08/01/2019	\$102.78	\$9.90	\$21.15	\$0.00	\$133.83
For apprentice rates see "Apprentice- PILE DRIVER"						
ELECTRICIAN (Including Core Drilling) <i>ELECTRICIANS LOCAL 7</i>	06/30/2019	\$42.66	\$10.75	\$12.33	\$0.00	\$65.74
	12/29/2019	\$43.41	\$11.00	\$12.60	\$0.00	\$67.01

Apprentice - ELECTRICIAN - Local 7

Effective Date - 06/30/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$17.06	\$5.85	\$0.51	\$0.00	\$23.42
2	45	\$19.20	\$5.85	\$0.58	\$0.00	\$25.63
3	50	\$21.33	\$10.75	\$6.94	\$0.00	\$39.02
4	55	\$23.46	\$10.75	\$7.00	\$0.00	\$41.21
5	65	\$27.73	\$10.75	\$8.13	\$0.00	\$46.61
6	70	\$29.86	\$10.75	\$9.20	\$0.00	\$49.81

Notes:

Steps 1-2 are 1000 hrs; Steps 3-6 are 1500 hrs.

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

ELEVATOR CONSTRUCTOR <i>ELEVATOR CONSTRUCTORS LOCAL 41</i>	01/01/2019	\$53.11	\$15.58	\$17.51	\$0.00	\$86.20
	01/01/2020	\$54.85	\$15.73	\$18.41	\$0.00	\$88.99
	01/01/2021	\$56.69	\$15.88	\$19.31	\$0.00	\$91.88
	01/01/2022	\$58.62	\$16.03	\$20.21	\$0.00	\$94.86

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - ELEVATOR CONSTRUCTOR - Local 41

Effective Date - 01/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$26.56	\$15.58	\$0.00	\$0.00	\$42.14
2	55	\$29.21	\$15.58	\$17.51	\$0.00	\$62.30
3	65	\$34.52	\$15.58	\$17.51	\$0.00	\$67.61
4	70	\$37.18	\$15.58	\$17.51	\$0.00	\$70.27
5	80	\$42.49	\$15.58	\$17.51	\$0.00	\$75.58

Effective Date - 01/01/2020

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$27.43	\$15.73	\$0.00	\$0.00	\$43.16
2	55	\$30.17	\$15.73	\$18.41	\$0.00	\$64.31
3	65	\$35.65	\$15.73	\$18.41	\$0.00	\$69.79
4	70	\$38.40	\$15.73	\$18.41	\$0.00	\$72.54
5	80	\$43.88	\$15.73	\$18.41	\$0.00	\$78.02

Notes:

Steps 1-2 are 6 mos.; Steps 3-5 are 1 year

Apprentice to Journeyworker Ratio:1:1

ELEVATOR CONSTRUCTOR HELPER <i>ELEVATOR CONSTRUCTORS LOCAL 41</i>	01/01/2019	\$37.18	\$15.58	\$17.51	\$0.00	\$70.27
	01/01/2020	\$38.40	\$15.73	\$18.41	\$0.00	\$72.54
	01/01/2021	\$39.68	\$15.88	\$19.31	\$0.00	\$74.87
	01/01/2022	\$41.03	\$16.03	\$20.21	\$0.00	\$77.27
For apprentice rates see "Apprentice - ELEVATOR CONSTRUCTOR"						
FENCE & BEAM RAIL ERECTOR <i>LABORERS - ZONE 4 (BUILDING & SITE)</i>	06/01/2019	\$27.48	\$7.85	\$12.87	\$0.00	\$48.20
	12/01/2019	\$28.23	\$7.85	\$12.87	\$0.00	\$48.95
	06/01/2020	\$28.88	\$7.85	\$12.87	\$0.00	\$49.60
	12/01/2020	\$29.53	\$7.85	\$12.87	\$0.00	\$50.25
For apprentice rates see "Apprentice- LABORER"						
FENCE & GUARD RAIL ERECTOR (HEAVY & HIGHWAY) <i>LABORERS - ZONE 4 (HEAVY & HIGHWAY)</i>	06/01/2019	\$28.66	\$7.85	\$13.92	\$0.00	\$50.43
	12/01/2019	\$29.43	\$7.85	\$13.92	\$0.00	\$51.20
	06/01/2020	\$30.22	\$7.85	\$13.92	\$0.00	\$51.99
	12/01/2020	\$31.01	\$7.85	\$13.92	\$0.00	\$52.78
	06/01/2021	\$31.83	\$7.85	\$13.92	\$0.00	\$53.60
	12/01/2021	\$32.64	\$7.85	\$13.92	\$0.00	\$54.41
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"						
FIELD ENG.INST/ROD-BLDG,SITE,HVY/HWY <i>OPERATING ENGINEERS LOCAL 98</i>	06/01/1999	\$18.84	\$4.80	\$4.10	\$0.00	\$27.74
FIELD ENG.PARTY CHIEF:BLDG,SITE,HVY/HWY <i>OPERATING ENGINEERS LOCAL 98</i>	06/01/1999	\$21.33	\$4.80	\$4.10	\$0.00	\$30.23
FIELD ENG.SURVEY CHIEF-BLDG,SITE,HVY/HWY <i>OPERATING ENGINEERS LOCAL 98</i>	06/01/1999	\$22.33	\$4.80	\$4.10	\$0.00	\$31.23
FIRE ALARM INSTALLER <i>ELECTRICIANS LOCAL 7</i>	06/30/2019	\$42.66	\$10.75	\$12.33	\$0.00	\$65.74
	12/29/2019	\$43.41	\$11.00	\$12.60	\$0.00	\$67.01

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
For apprentice rates see "Apprentice- ELECTRICIAN"						
FIRE ALARM REPAIR / MAINTENANCE	06/30/2019	\$42.66	\$10.75	\$12.33	\$0.00	\$65.74
LOCAL 7 / COMMISSIONING <i>ELECTRICIANS</i>	12/29/2019	\$43.41	\$11.00	\$12.60	\$0.00	\$67.01
For apprentice rates see "Apprentice- TELECOMMUNICATIONS TECHNICIAN"						
FIREMAN	06/01/2019	\$34.52	\$11.69	\$14.08	\$0.00	\$60.29
<i>OPERATING ENGINEERS LOCAL 98</i>	12/01/2019	\$35.12	\$11.69	\$14.35	\$0.00	\$61.16

Apprentice - OPERATING ENGINEERS - Local 98 Class 3

Effective Date - 06/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$20.71	\$11.69	\$14.08	\$0.00	\$46.48
2	70	\$24.16	\$11.69	\$14.08	\$0.00	\$49.93
3	80	\$27.62	\$11.69	\$14.08	\$0.00	\$53.39
4	90	\$31.07	\$11.69	\$14.08	\$0.00	\$56.84

Effective Date - 12/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$21.07	\$11.69	\$14.35	\$0.00	\$47.11
2	70	\$24.58	\$11.69	\$14.35	\$0.00	\$50.62
3	80	\$28.10	\$11.69	\$14.35	\$0.00	\$54.14
4	90	\$31.61	\$11.69	\$14.35	\$0.00	\$57.65

Notes:

Steps 1-2 are 1000 hrs.; Steps 3-4 are 2000 hrs.

Apprentice to Journeyworker Ratio:1:6

FLAGGER & SIGNALER (HEAVY & HIGHWAY)	06/01/2019	\$22.50	\$7.85	\$13.92	\$0.00	\$44.27
<i>LABORERS - ZONE 4 (HEAVY & HIGHWAY)</i>	12/01/2019	\$23.50	\$7.85	\$13.92	\$0.00	\$45.27
	06/01/2020	\$23.50	\$7.85	\$13.92	\$0.00	\$45.27
	12/01/2020	\$24.50	\$7.85	\$13.92	\$0.00	\$46.27
	06/01/2021	\$24.50	\$7.85	\$13.92	\$0.00	\$46.27
	12/01/2021	\$24.50	\$7.85	\$13.92	\$0.00	\$46.27

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

FLOORCOVERER	09/01/2019	\$37.44	\$7.84	\$16.87	\$0.00	\$62.15
<i>FLOORCOVERERS LOCAL 2168 ZONE III</i>						

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - FLOORCOVERER - Local 2168 Zone III

Effective Date - 09/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$18.72	\$7.84	\$1.32	\$0.00	\$27.88
2	55	\$20.59	\$7.84	\$1.32	\$0.00	\$29.75
3	60	\$22.46	\$7.84	\$12.91	\$0.00	\$43.21
4	65	\$24.34	\$7.84	\$12.91	\$0.00	\$45.09
5	70	\$26.21	\$7.84	\$14.23	\$0.00	\$48.28
6	75	\$28.08	\$7.84	\$14.23	\$0.00	\$50.15
7	80	\$29.95	\$7.84	\$15.55	\$0.00	\$53.34
8	85	\$31.82	\$7.84	\$15.55	\$0.00	\$55.21

Notes: Steps are 750 hrs.
 % After 09/1/17; 45/45/55/55/70/70/80/80 (1500hr Steps)
 Step 1&2 \$26.01/ 3&4 \$31.03/ 5&6 \$48.28/ 7&8 \$53.34

Apprentice to Journeyworker Ratio:1:1

FORK LIFT <i>OPERATING ENGINEERS LOCAL 98</i>	06/01/2019	\$34.74	\$11.69	\$14.08	\$0.00	\$60.51
	12/01/2019	\$35.34	\$11.69	\$14.35	\$0.00	\$61.38
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
GENERATORS/LIGHTING PLANTS <i>OPERATING ENGINEERS LOCAL 98</i>	06/01/2019	\$31.29	\$11.69	\$14.08	\$0.00	\$57.06
	12/01/2019	\$31.89	\$11.69	\$14.35	\$0.00	\$57.93
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
GLAZIER (GLASS PLANK/AIR BARRIER/INTERIOR SYSTEMS) <i>GLAZIERS LOCAL 1333</i>	06/01/2019	\$38.18	\$10.60	\$9.90	\$0.00	\$58.68
	06/01/2020	\$39.18	\$10.80	\$10.45	\$0.00	\$60.43

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - GLAZIER - Local 1333

Effective Date - 06/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$19.09	\$10.60	\$1.80	\$0.00	\$31.49
2	56	\$21.48	\$10.60	\$1.80	\$0.00	\$33.88
3	63	\$23.86	\$10.60	\$2.40	\$0.00	\$36.86
4	69	\$26.25	\$10.60	\$2.40	\$0.00	\$39.25
5	75	\$28.64	\$10.60	\$2.90	\$0.00	\$42.14
6	81	\$31.02	\$10.60	\$2.90	\$0.00	\$44.52
7	88	\$33.41	\$10.60	\$9.90	\$0.00	\$53.91
8	94	\$35.79	\$10.60	\$9.90	\$0.00	\$56.29

Effective Date - 06/01/2020

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$19.59	\$10.80	\$1.80	\$0.00	\$32.19
2	56	\$22.04	\$10.80	\$1.80	\$0.00	\$34.64
3	63	\$24.49	\$10.80	\$2.45	\$0.00	\$37.74
4	69	\$26.94	\$10.80	\$2.45	\$0.00	\$40.19
5	75	\$29.39	\$10.80	\$3.15	\$0.00	\$43.34
6	81	\$31.83	\$10.80	\$3.15	\$0.00	\$45.78
7	88	\$34.28	\$10.80	\$10.45	\$0.00	\$55.53
8	94	\$36.73	\$10.80	\$10.45	\$0.00	\$57.98

Notes:

Apprentice to Journeyworker Ratio:1:3

GRADER/TRENCHING MACHINE/DERRICK <i>OPERATING ENGINEERS LOCAL 98</i>	06/01/2019	\$35.05	\$11.69	\$14.08	\$0.00	\$60.82
	12/01/2019	\$35.65	\$11.69	\$14.35	\$0.00	\$61.69
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
HVAC (DUCTWORK) <i>SHEETMETAL WORKERS LOCAL 63</i>	07/01/2019	\$35.74	\$10.64	\$16.22	\$1.77	\$64.37
	01/01/2020	\$36.99	\$10.64	\$16.22	\$1.77	\$65.62
For apprentice rates see "Apprentice- SHEET METAL WORKER"						
HVAC (ELECTRICAL CONTROLS) <i>ELECTRICIANS LOCAL 7</i>	06/30/2019	\$42.66	\$10.75	\$12.33	\$0.00	\$65.74
	12/29/2019	\$43.41	\$11.00	\$12.60	\$0.00	\$67.01
For apprentice rates see "Apprentice- ELECTRICIAN"						
HVAC (TESTING AND BALANCING - AIR) <i>SHEETMETAL WORKERS LOCAL 63</i>	07/01/2019	\$35.74	\$10.64	\$16.22	\$1.77	\$64.37
	01/01/2020	\$36.99	\$10.64	\$16.22	\$1.77	\$65.62
For apprentice rates see "Apprentice- SHEET METAL WORKER"						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
HVAC (TESTING AND BALANCING -WATER) <i>PLUMBERS & PIPEFITTERS LOCAL 104</i>	09/17/2019	\$41.21	\$8.75	\$16.35	\$0.00	\$66.31
	03/17/2020	\$42.21	\$8.75	\$16.35	\$0.00	\$67.31
	09/17/2020	\$43.21	\$8.75	\$16.35	\$0.00	\$68.31
	03/17/2021	\$44.21	\$8.75	\$16.35	\$0.00	\$69.31
	09/17/2021	\$45.21	\$8.75	\$16.35	\$0.00	\$70.31
	03/17/2022	\$46.46	\$8.75	\$16.35	\$0.00	\$71.56
	09/17/2022	\$47.46	\$8.75	\$16.35	\$0.00	\$72.56
	03/17/2023	\$48.71	\$8.75	\$16.35	\$0.00	\$73.81
	09/17/2023	\$49.71	\$8.75	\$16.35	\$0.00	\$74.81
	03/17/2024	\$50.96	\$8.75	\$16.35	\$0.00	\$76.06

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

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
HVAC MECHANIC <i>PLUMBERS & PIPEFITTERS LOCAL 104</i>	09/17/2019	\$41.21	\$8.75	\$16.35	\$0.00	\$66.31
	03/17/2020	\$42.21	\$8.75	\$16.35	\$0.00	\$67.31
	09/17/2020	\$43.21	\$8.75	\$16.35	\$0.00	\$68.31
	03/17/2021	\$44.21	\$8.75	\$16.35	\$0.00	\$69.31
	09/17/2021	\$45.21	\$8.75	\$16.35	\$0.00	\$70.31
	03/17/2022	\$46.46	\$8.75	\$16.35	\$0.00	\$71.56
	09/17/2022	\$47.46	\$8.75	\$16.35	\$0.00	\$72.56
	03/17/2023	\$48.71	\$8.75	\$16.35	\$0.00	\$73.81
	09/17/2023	\$49.71	\$8.75	\$16.35	\$0.00	\$74.81
	03/17/2024	\$50.96	\$8.75	\$16.35	\$0.00	\$76.06

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

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
HYDRAULIC DRILLS (HEAVY & HIGHWAY) <i>LABORERS - ZONE 4 (HEAVY & HIGHWAY)</i>	06/01/2019	\$29.16	\$7.85	\$13.92	\$0.00	\$50.93
	12/01/2019	\$29.93	\$7.85	\$13.92	\$0.00	\$51.70
	06/01/2020	\$30.72	\$7.85	\$13.92	\$0.00	\$52.49
	12/01/2020	\$31.51	\$7.85	\$13.92	\$0.00	\$53.28
	06/01/2021	\$32.33	\$7.85	\$13.92	\$0.00	\$54.10
	12/01/2021	\$33.14	\$7.85	\$13.92	\$0.00	\$54.91

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

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
INSULATOR (PIPES & TANKS) <i>HEAT & FROST INSULATORS LOCAL 6 (SPRINGFIELD)</i>	09/01/2019	\$38.75	\$12.80	\$16.40	\$0.00	\$67.95

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

Effective Date - 09/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$19.38	\$12.80	\$11.90	\$0.00	\$44.08
2	60	\$23.25	\$12.80	\$12.80	\$0.00	\$48.85
3	70	\$27.13	\$12.80	\$13.70	\$0.00	\$53.63
4	80	\$31.00	\$12.80	\$14.60	\$0.00	\$58.40

Notes:

Steps are 1 year

Apprentice to Journeyworker Ratio:1:4

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
IRONWORKER/WELDER <i>IRONWORKERS LOCAL 7 (SPRINGFIELD AREA)</i>	09/16/2019	\$35.10	\$8.00	\$20.75	\$0.00	\$63.85
	03/16/2020	\$35.95	\$8.00	\$20.75	\$0.00	\$64.70
	09/16/2020	\$36.85	\$8.00	\$20.75	\$0.00	\$65.60
	03/16/2021	\$37.70	\$8.00	\$20.75	\$0.00	\$66.45

Apprentice - IRONWORKER - Local 7 Springfield

Effective Date - 09/16/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$21.06	\$8.00	\$20.75	\$0.00	\$49.81
2	70	\$24.57	\$8.00	\$20.75	\$0.00	\$53.32
3	75	\$26.33	\$8.00	\$20.75	\$0.00	\$55.08
4	80	\$28.08	\$8.00	\$20.75	\$0.00	\$56.83
5	85	\$29.84	\$8.00	\$20.75	\$0.00	\$58.59
6	90	\$31.59	\$8.00	\$20.75	\$0.00	\$60.34

Effective Date - 03/16/2020

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$21.57	\$8.00	\$20.75	\$0.00	\$50.32
2	70	\$25.17	\$8.00	\$20.75	\$0.00	\$53.92
3	75	\$26.96	\$8.00	\$20.75	\$0.00	\$55.71
4	80	\$28.76	\$8.00	\$20.75	\$0.00	\$57.51
5	85	\$30.56	\$8.00	\$20.75	\$0.00	\$59.31
6	90	\$32.36	\$8.00	\$20.75	\$0.00	\$61.11

Notes:

Structural 1:6; Ornamental 1:4

Apprentice to Journeyworker Ratio:

JACKHAMMER & PAVING BREAKER OPERATOR <i>LABORERS - ZONE 4 (BUILDING & SITE)</i>	06/01/2019	\$27.48	\$7.85	\$12.87	\$0.00	\$48.20
	12/01/2019	\$28.23	\$7.85	\$12.87	\$0.00	\$48.95
	06/01/2020	\$28.88	\$7.85	\$12.87	\$0.00	\$49.60
	12/01/2020	\$29.53	\$7.85	\$12.87	\$0.00	\$50.25

For apprentice rates see "Apprentice- LABORER"

LABORER <i>LABORERS - ZONE 4 (BUILDING & SITE)</i>	06/01/2019	\$27.23	\$7.85	\$12.87	\$0.00	\$47.95
	12/01/2019	\$27.98	\$7.85	\$12.87	\$0.00	\$48.70
	06/01/2020	\$28.63	\$7.85	\$12.87	\$0.00	\$49.35
	12/01/2020	\$29.28	\$7.85	\$12.87	\$0.00	\$50.00

Apprentice - LABORER - Zone 4 Building and Site

Effective Date - 06/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$16.34	\$7.85	\$12.87	\$0.00	\$37.06
2	70	\$19.06	\$7.85	\$12.87	\$0.00	\$39.78
3	80	\$21.78	\$7.85	\$12.87	\$0.00	\$42.50
4	90	\$24.51	\$7.85	\$12.87	\$0.00	\$45.23

Effective Date - 12/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$16.79	\$7.85	\$12.87	\$0.00	\$37.51
2	70	\$19.59	\$7.85	\$12.87	\$0.00	\$40.31
3	80	\$22.38	\$7.85	\$12.87	\$0.00	\$43.10
4	90	\$25.18	\$7.85	\$12.87	\$0.00	\$45.90

Notes:

Apprentice to Journeyworker Ratio:1:5

LABORER (HEAVY & HIGHWAY)	06/01/2019	\$28.41	\$7.85	\$13.92	\$0.00	\$50.18
LABORERS - ZONE 4 (HEAVY & HIGHWAY)	12/01/2019	\$29.18	\$7.85	\$13.92	\$0.00	\$50.95
	06/01/2020	\$29.97	\$7.85	\$13.92	\$0.00	\$51.74
	12/01/2020	\$30.76	\$7.85	\$13.92	\$0.00	\$52.53
	06/01/2021	\$31.58	\$7.85	\$13.92	\$0.00	\$53.35
	12/01/2021	\$32.39	\$7.85	\$13.92	\$0.00	\$54.16

Apprentice - LABORER (Heavy and Highway) - Zone 4

Effective Date - 06/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$17.05	\$7.85	\$13.92	\$0.00	\$38.82
2	70	\$19.89	\$7.85	\$13.92	\$0.00	\$41.66
3	80	\$22.73	\$7.85	\$13.92	\$0.00	\$44.50
4	90	\$25.57	\$7.85	\$13.92	\$0.00	\$47.34

Effective Date - 12/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$17.51	\$7.85	\$13.92	\$0.00	\$39.28
2	70	\$20.43	\$7.85	\$13.92	\$0.00	\$42.20
3	80	\$23.34	\$7.85	\$13.92	\$0.00	\$45.11
4	90	\$26.26	\$7.85	\$13.92	\$0.00	\$48.03

Notes:

Apprentice to Journeyworker Ratio:1:5

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
LABORER: CARPENTER TENDER <i>LABORERS - ZONE 4 (BUILDING & SITE)</i>	06/01/2019	\$27.23	\$7.85	\$12.87	\$0.00	\$47.95
	12/01/2019	\$27.98	\$7.85	\$12.87	\$0.00	\$48.70
	06/01/2020	\$28.63	\$7.85	\$12.87	\$0.00	\$49.35
	12/01/2020	\$29.28	\$7.85	\$12.87	\$0.00	\$50.00
For apprentice rates see "Apprentice- LABORER"						
LABORER: CEMENT FINISHER TENDER <i>LABORERS - ZONE 4 (BUILDING & SITE)</i>	06/01/2019	\$27.23	\$7.85	\$12.87	\$0.00	\$47.95
	12/01/2019	\$27.98	\$7.85	\$12.87	\$0.00	\$48.70
	06/01/2020	\$28.63	\$7.85	\$12.87	\$0.00	\$49.35
	12/01/2020	\$29.28	\$7.85	\$12.87	\$0.00	\$50.00
For apprentice rates see "Apprentice- LABORER"						
LABORER: HAZARDOUS WASTE/ASBESTOS REMOVER <i>LABORERS - ZONE 4 (BUILDING & SITE)</i>	06/01/2019	\$27.33	\$7.85	\$12.87	\$0.00	\$48.05
	12/01/2019	\$28.08	\$7.85	\$12.87	\$0.00	\$48.80
For apprentice rates see "Apprentice- LABORER"						
LABORER: MASON TENDER <i>LABORERS - ZONE 4 (BUILDING & SITE)</i>	06/01/2019	\$29.23	\$7.85	\$12.87	\$0.00	\$49.95
	12/01/2019	\$29.98	\$7.85	\$12.87	\$0.00	\$50.70
	06/01/2020	\$30.63	\$7.85	\$12.87	\$0.00	\$51.35
	12/01/2020	\$31.28	\$7.85	\$12.87	\$0.00	\$52.00
For apprentice rates see "Apprentice- LABORER"						
LABORER: MASON TENDER (HEAVY & HIGHWAY) <i>LABORERS - ZONE 4 (HEAVY & HIGHWAY)</i>	06/01/2019	\$28.66	\$7.85	\$13.92	\$0.00	\$50.43
	12/01/2019	\$29.43	\$7.85	\$13.92	\$0.00	\$51.20
	06/01/2020	\$30.22	\$7.85	\$13.92	\$0.00	\$51.99
	12/01/2020	\$31.01	\$7.85	\$13.92	\$0.00	\$52.78
	06/01/2021	\$31.83	\$7.85	\$13.92	\$0.00	\$53.60
	12/01/2021	\$32.64	\$7.85	\$13.92	\$0.00	\$54.41
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"						
LABORER: MULTI-TRADE TENDER <i>LABORERS - ZONE 4 (BUILDING & SITE)</i>	06/01/2019	\$27.23	\$7.85	\$12.87	\$0.00	\$47.95
	12/01/2019	\$27.98	\$7.85	\$12.87	\$0.00	\$48.70
	06/01/2020	\$28.63	\$7.85	\$12.87	\$0.00	\$49.35
	12/01/2020	\$29.28	\$7.85	\$12.87	\$0.00	\$50.00
For apprentice rates see "Apprentice- LABORER"						
LABORER: TREE REMOVER <i>LABORERS - ZONE 4 (BUILDING & SITE)</i>	06/01/2019	\$27.23	\$7.85	\$12.87	\$0.00	\$47.95
	12/01/2019	\$27.98	\$7.85	\$12.87	\$0.00	\$48.70
	06/01/2020	\$28.63	\$7.85	\$12.87	\$0.00	\$49.35
	12/01/2020	\$29.28	\$7.85	\$12.87	\$0.00	\$50.00
This classification applies to all tree work associated with the removal of standing trees, and trimming and removal of branches and limbs when the work is not done for a utility company for the purpose of operation, maintenance or repair of utility company equipment. For apprentice rates see "Apprentice- LABORER"						
LASER BEAM OPERATOR <i>LABORERS - ZONE 4 (BUILDING & SITE)</i>	06/01/2019	\$27.48	\$7.85	\$12.87	\$0.00	\$48.20
	12/01/2019	\$28.23	\$7.85	\$12.87	\$0.00	\$48.95
	06/01/2020	\$28.88	\$7.85	\$12.87	\$0.00	\$49.60
	12/01/2020	\$29.53	\$7.85	\$12.87	\$0.00	\$50.25
For apprentice rates see "Apprentice- LABORER"						
LASER BEAM OPERATOR (HEAVY & HIGHWAY) <i>LABORERS - ZONE 4 (HEAVY & HIGHWAY)</i>	06/01/2019	\$28.66	\$7.85	\$13.92	\$0.00	\$50.43
	12/01/2019	\$29.43	\$7.85	\$13.92	\$0.00	\$51.20
	06/01/2020	\$30.22	\$7.85	\$13.92	\$0.00	\$51.99
	12/01/2020	\$31.01	\$7.85	\$13.92	\$0.00	\$52.78
	06/01/2021	\$31.83	\$7.85	\$13.92	\$0.00	\$53.60
	12/01/2021	\$32.64	\$7.85	\$13.92	\$0.00	\$54.41
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
MARBLE & TILE FINISHERS <i>BRICKLAYERS LOCAL 3 (SPR/PITT) - MARBLE & TILE</i>	08/01/2019	\$35.17	\$10.75	\$18.87	\$0.00	\$64.79
	02/01/2020	\$35.67	\$10.75	\$18.87	\$0.00	\$65.29
	08/01/2020	\$36.67	\$10.75	\$18.99	\$0.00	\$66.41
	02/01/2021	\$37.17	\$10.75	\$18.99	\$0.00	\$66.91
	08/01/2021	\$38.17	\$10.75	\$19.12	\$0.00	\$68.04
	02/01/2022	\$38.62	\$10.75	\$19.12	\$0.00	\$68.49

Apprentice - MARBLE-TILE FINISHER-Local 3 Marble/Tile (Spr/Pitt)

Effective Date - 08/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$17.59	\$10.75	\$18.87	\$0.00	\$47.21
2	60	\$21.10	\$10.75	\$18.87	\$0.00	\$50.72
3	70	\$24.62	\$10.75	\$18.87	\$0.00	\$54.24
4	80	\$28.14	\$10.75	\$18.87	\$0.00	\$57.76
5	90	\$31.65	\$10.75	\$18.87	\$0.00	\$61.27

Effective Date - 02/01/2020

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$17.84	\$10.75	\$18.87	\$0.00	\$47.46
2	60	\$21.40	\$10.75	\$18.87	\$0.00	\$51.02
3	70	\$24.97	\$10.75	\$18.87	\$0.00	\$54.59
4	80	\$28.54	\$10.75	\$18.87	\$0.00	\$58.16
5	90	\$32.10	\$10.75	\$18.87	\$0.00	\$61.72

Notes:

Apprentice to Journeyworker Ratio:1:5

MARBLE MASON/TILE LAYER(SP/PT)SeeBrick

BRICKLAYERS LOCAL 3 (SPR/PITT) - MARBLE & TILE

See "BRICK/STONE/ARTIFICIAL MASONRY(INCL.MASONRY WATERPROOFING)

MECH. SWEEPER OPERATOR (ON CONST. SITES) <i>OPERATING ENGINEERS LOCAL 98</i>	06/01/2019	\$35.05	\$11.69	\$14.08	\$0.00	\$60.82
	12/01/2019	\$35.65	\$11.69	\$14.35	\$0.00	\$61.69

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

MECHANIC/WELDER/BOOM TRUCK <i>OPERATING ENGINEERS LOCAL 98</i>	06/01/2019	\$34.52	\$11.69	\$14.08	\$0.00	\$60.29
	12/01/2019	\$35.12	\$11.69	\$14.35	\$0.00	\$61.16

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

MILLWRIGHT (Zone 3) <i>MILLWRIGHTS LOCAL 1121 - Zone 3</i>	04/01/2019	\$37.11	\$9.90	\$18.50	\$0.00	\$65.51
---	------------	---------	--------	---------	--------	---------

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - MILLWRIGHT - Local 1121 Zone 3

Effective Date - 04/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	55	\$20.41	\$9.90	\$5.31	\$0.00	\$35.62
2	65	\$24.12	\$9.90	\$15.13	\$0.00	\$49.15
3	75	\$27.83	\$9.90	\$16.10	\$0.00	\$53.83
4	85	\$31.54	\$9.90	\$17.06	\$0.00	\$58.50

Notes:

Steps are 2,000 hours

Apprentice to Journeyworker Ratio:1:5

MORTAR MIXER	06/01/2019	\$27.48	\$7.85	\$12.87	\$0.00	\$48.20
<i>LABORERS - ZONE 4 (BUILDING & SITE)</i>	12/01/2019	\$28.23	\$7.85	\$12.87	\$0.00	\$48.95
	06/01/2020	\$28.88	\$7.85	\$12.87	\$0.00	\$49.60
	12/01/2020	\$29.53	\$7.85	\$12.87	\$0.00	\$50.25

For apprentice rates see "Apprentice- LABORER"

OILER	06/01/2019	\$30.21	\$11.69	\$14.08	\$0.00	\$55.98
<i>OPERATING ENGINEERS LOCAL 98</i>	12/01/2019	\$30.81	\$11.69	\$14.35	\$0.00	\$56.85

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

OTHER POWER DRIVEN EQUIPMENT - CLASS VI	06/01/2019	\$28.23	\$11.69	\$14.08	\$0.00	\$54.00
<i>OPERATING ENGINEERS LOCAL 98</i>	12/01/2019	\$28.83	\$11.69	\$14.35	\$0.00	\$54.87

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

PAINTER (BRIDGES/TANKS)	07/01/2019	\$50.66	\$8.20	\$21.45	\$0.00	\$80.31
<i>PAINTERS LOCAL 35 - ZONE 3</i>	01/01/2020	\$50.96	\$8.20	\$22.10	\$0.00	\$81.26
	07/01/2020	\$52.06	\$8.20	\$22.10	\$0.00	\$82.36
	01/01/2021	\$53.16	\$8.20	\$22.10	\$0.00	\$83.46

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - PAINTER Local 35 - BRIDGES/TANKS

Effective Date - 07/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$25.33	\$8.20	\$0.00	\$0.00	\$33.53
2	55	\$27.86	\$8.20	\$5.78	\$0.00	\$41.84
3	60	\$30.40	\$8.20	\$6.30	\$0.00	\$44.90
4	65	\$32.93	\$8.20	\$6.83	\$0.00	\$47.96
5	70	\$35.46	\$8.20	\$18.30	\$0.00	\$61.96
6	75	\$38.00	\$8.20	\$18.83	\$0.00	\$65.03
7	80	\$40.53	\$8.20	\$19.35	\$0.00	\$68.08
8	90	\$45.59	\$8.20	\$20.40	\$0.00	\$74.19

Effective Date - 01/01/2020

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$25.48	\$8.20	\$0.00	\$0.00	\$33.68
2	55	\$28.03	\$8.20	\$5.94	\$0.00	\$42.17
3	60	\$30.58	\$8.20	\$6.48	\$0.00	\$45.26
4	65	\$33.12	\$8.20	\$7.02	\$0.00	\$48.34
5	70	\$35.67	\$8.20	\$18.51	\$0.00	\$62.38
6	75	\$38.22	\$8.20	\$19.05	\$0.00	\$65.47
7	80	\$40.77	\$8.20	\$19.59	\$0.00	\$68.56
8	90	\$45.86	\$8.20	\$20.67	\$0.00	\$74.73

Notes:
Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

PAINTER (SIGN, PICTORIAL & DISPLAY) PAINTERS LOCAL 35 - ZONE 3	06/01/2013	\$25.81	\$7.07	\$7.05	\$0.00	\$39.93
---	------------	---------	--------	--------	--------	---------

Apprentice - PAINTER SIGN - Local 35 Zone 3

Effective Date - 06/01/2013

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$12.91	\$7.07	\$0.00	\$0.00	\$19.98
2	55	\$14.20	\$7.07	\$2.45	\$0.00	\$23.72
3	60	\$15.49	\$7.07	\$2.45	\$0.00	\$25.01
4	65	\$16.78	\$7.07	\$2.45	\$0.00	\$26.30
5	70	\$18.07	\$7.07	\$7.05	\$0.00	\$32.19
6	75	\$19.36	\$7.07	\$7.05	\$0.00	\$33.48
7	80	\$20.65	\$7.07	\$7.05	\$0.00	\$34.77
8	85	\$21.94	\$7.07	\$7.05	\$0.00	\$36.06
9	90	\$23.23	\$7.07	\$7.05	\$0.00	\$37.35

Notes:
Steps are 4 mos.

Apprentice to Journeyworker Ratio:1:1

PAINTER (SPRAY OR SANDBLAST, NEW) *	07/01/2019	\$34.03	\$8.20	\$17.55	\$0.00	\$59.78
* If 30% or more of surfaces to be painted are new construction, NEW paint rate shall be used. PAINTERS LOCAL 35 - ZONE 3	01/01/2020	\$34.33	\$8.20	\$18.20	\$0.00	\$60.73
	07/01/2020	\$35.43	\$8.20	\$18.20	\$0.00	\$61.83
	01/01/2021	\$36.53	\$8.20	\$18.20	\$0.00	\$62.93

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - PAINTER Local 35 Zone 3 - Spray/Sandblast - New

Effective Date - 07/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$17.02	\$8.20	\$0.00	\$0.00	\$25.22
2	55	\$18.72	\$8.20	\$3.63	\$0.00	\$30.55
3	60	\$20.42	\$8.20	\$3.96	\$0.00	\$32.58
4	65	\$22.12	\$8.20	\$4.29	\$0.00	\$34.61
5	70	\$23.82	\$8.20	\$15.57	\$0.00	\$47.59
6	75	\$25.52	\$8.20	\$15.90	\$0.00	\$49.62
7	80	\$27.22	\$8.20	\$16.23	\$0.00	\$51.65
8	90	\$30.63	\$8.20	\$16.89	\$0.00	\$55.72

Effective Date - 01/01/2020

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$17.17	\$8.20	\$0.00	\$0.00	\$25.37
2	55	\$18.88	\$8.20	\$3.80	\$0.00	\$30.88
3	60	\$20.60	\$8.20	\$4.14	\$0.00	\$32.94
4	65	\$22.31	\$8.20	\$4.49	\$0.00	\$35.00
5	70	\$24.03	\$8.20	\$15.78	\$0.00	\$48.01
6	75	\$25.75	\$8.20	\$16.13	\$0.00	\$50.08
7	80	\$27.46	\$8.20	\$16.47	\$0.00	\$52.13
8	90	\$30.90	\$8.20	\$17.16	\$0.00	\$56.26

Notes:
Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

PAINTER (SPRAY OR SANDBLAST, REPAINT)	07/01/2019	\$31.35	\$8.20	\$17.55	\$0.00	\$57.10
PAINTERS LOCAL 35 - ZONE 3	01/01/2020	\$31.65	\$8.20	\$18.20	\$0.00	\$58.05
	07/01/2020	\$32.75	\$8.20	\$18.20	\$0.00	\$59.15
	01/01/2021	\$33.85	\$8.20	\$18.20	\$0.00	\$60.25

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - PAINTER Local 35 Zone 3 - Spray/Sandblast - Repaint

Effective Date - 07/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$15.68	\$8.20	\$0.00	\$0.00	\$23.88
2	55	\$17.24	\$8.20	\$3.63	\$0.00	\$29.07
3	60	\$18.81	\$8.20	\$3.96	\$0.00	\$30.97
4	65	\$20.38	\$8.20	\$4.29	\$0.00	\$32.87
5	70	\$21.95	\$8.20	\$15.57	\$0.00	\$45.72
6	75	\$23.51	\$8.20	\$15.90	\$0.00	\$47.61
7	80	\$25.08	\$8.20	\$16.23	\$0.00	\$49.51
8	90	\$28.22	\$8.20	\$16.89	\$0.00	\$53.31

Effective Date - 01/01/2020

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$15.83	\$8.20	\$0.00	\$0.00	\$24.03
2	55	\$17.41	\$8.20	\$3.80	\$0.00	\$29.41
3	60	\$18.99	\$8.20	\$4.14	\$0.00	\$31.33
4	65	\$20.57	\$8.20	\$4.49	\$0.00	\$33.26
5	70	\$22.16	\$8.20	\$15.78	\$0.00	\$46.14
6	75	\$23.74	\$8.20	\$16.13	\$0.00	\$48.07
7	80	\$25.32	\$8.20	\$16.47	\$0.00	\$49.99
8	90	\$28.49	\$8.20	\$17.16	\$0.00	\$53.85

Notes:

Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

PAINTER / TAPER (BRUSH, NEW) *	07/01/2019	\$32.63	\$8.20	\$17.55	\$0.00	\$58.38
* If 30% or more of surfaces to be painted are new construction, NEW paint rate shall be used. PAINTERS LOCAL 35 - ZONE 3	01/01/2020	\$32.93	\$8.20	\$18.20	\$0.00	\$59.33
	07/01/2020	\$34.03	\$8.20	\$18.20	\$0.00	\$60.43
	01/01/2021	\$35.13	\$8.20	\$18.20	\$0.00	\$61.53

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - PAINTER - Local 35 Zone 3 - BRUSH NEW

Effective Date - 07/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$16.32	\$8.20	\$0.00	\$0.00	\$24.52
2	55	\$17.95	\$8.20	\$3.63	\$0.00	\$29.78
3	60	\$19.58	\$8.20	\$3.96	\$0.00	\$31.74
4	65	\$21.21	\$8.20	\$4.29	\$0.00	\$33.70
5	70	\$22.84	\$8.20	\$15.57	\$0.00	\$46.61
6	75	\$24.47	\$8.20	\$15.90	\$0.00	\$48.57
7	80	\$26.10	\$8.20	\$16.23	\$0.00	\$50.53
8	90	\$29.37	\$8.20	\$16.89	\$0.00	\$54.46

Effective Date - 01/01/2020

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$16.47	\$8.20	\$0.00	\$0.00	\$24.67
2	55	\$18.11	\$8.20	\$3.80	\$0.00	\$30.11
3	60	\$19.76	\$8.20	\$4.14	\$0.00	\$32.10
4	65	\$21.40	\$8.20	\$4.49	\$0.00	\$34.09
5	70	\$23.05	\$8.20	\$15.78	\$0.00	\$47.03
6	75	\$24.70	\$8.20	\$16.13	\$0.00	\$49.03
7	80	\$26.34	\$8.20	\$16.47	\$0.00	\$51.01
8	90	\$29.64	\$8.20	\$17.16	\$0.00	\$55.00

Notes:
Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

PAINTER / TAPER (BRUSH, REPAINT)	07/01/2019	\$29.95	\$8.20	\$17.55	\$0.00	\$55.70
PAINTERS LOCAL 35 - ZONE 3	01/01/2020	\$30.25	\$8.20	\$18.20	\$0.00	\$56.65
	07/01/2020	\$31.35	\$8.20	\$18.20	\$0.00	\$57.75
	01/01/2021	\$32.45	\$8.20	\$18.20	\$0.00	\$58.85

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - PAINTER Local 35 Zone 3 - BRUSH REPAINT

Effective Date - 07/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$14.98	\$8.20	\$0.00	\$0.00	\$23.18
2	55	\$16.47	\$8.20	\$3.63	\$0.00	\$28.30
3	60	\$17.97	\$8.20	\$3.96	\$0.00	\$30.13
4	65	\$19.47	\$8.20	\$4.29	\$0.00	\$31.96
5	70	\$20.97	\$8.20	\$15.57	\$0.00	\$44.74
6	75	\$22.46	\$8.20	\$15.90	\$0.00	\$46.56
7	80	\$23.96	\$8.20	\$16.23	\$0.00	\$48.39
8	90	\$26.96	\$8.20	\$16.89	\$0.00	\$52.05

Effective Date - 01/01/2020

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$15.13	\$8.20	\$0.00	\$0.00	\$23.33
2	55	\$16.64	\$8.20	\$3.80	\$0.00	\$28.64
3	60	\$18.15	\$8.20	\$4.14	\$0.00	\$30.49
4	65	\$19.66	\$8.20	\$4.49	\$0.00	\$32.35
5	70	\$21.18	\$8.20	\$15.78	\$0.00	\$45.16
6	75	\$22.69	\$8.20	\$16.13	\$0.00	\$47.02
7	80	\$24.20	\$8.20	\$16.47	\$0.00	\$48.87
8	90	\$27.23	\$8.20	\$17.16	\$0.00	\$52.59

Notes:

Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

PAINTER TRAFFIC MARKINGS (HEAVY/HIGHWAY)	06/01/2019	\$28.41	\$7.85	\$13.92	\$0.00	\$50.18
LABORERS - ZONE 4 (HEAVY & HIGHWAY)	12/01/2019	\$29.18	\$7.85	\$13.92	\$0.00	\$50.95
	06/01/2020	\$29.97	\$7.85	\$13.92	\$0.00	\$51.74
	12/01/2020	\$30.76	\$7.85	\$13.92	\$0.00	\$52.53
	06/01/2021	\$31.58	\$7.85	\$13.92	\$0.00	\$53.35
	12/01/2021	\$32.39	\$7.85	\$13.92	\$0.00	\$54.16

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

PANEL & PICKUP TRUCKS DRIVER	08/01/2019	\$34.08	\$12.41	\$12.70	\$0.00	\$59.19
TEAMSTERS JOINT COUNCIL NO. 10 ZONE B	12/01/2019	\$34.08	\$12.41	\$13.72	\$0.00	\$60.21
	06/01/2020	\$34.98	\$12.41	\$13.72	\$0.00	\$61.11
	08/01/2020	\$34.98	\$12.91	\$13.72	\$0.00	\$61.61
	12/01/2020	\$34.98	\$12.91	\$14.82	\$0.00	\$62.71
	06/01/2021	\$35.78	\$12.91	\$14.82	\$0.00	\$63.51
	08/01/2021	\$35.78	\$13.41	\$14.82	\$0.00	\$64.01
	12/01/2021	\$35.78	\$13.41	\$16.01	\$0.00	\$65.20

PIER AND DOCK CONSTRUCTOR (UNDERPINNING AND DECK)	08/01/2019	\$43.79	\$9.90	\$21.15	\$0.00	\$74.84
---	------------	---------	--------	---------	--------	---------

PILE DRIVER LOCAL 56 (ZONE 3)

For apprentice rates see "Apprentice- PILE DRIVER"

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
PILE DRIVER <i>PILE DRIVER LOCAL 56 (ZONE 3)</i>	08/01/2019	\$43.79	\$9.90	\$21.15	\$0.00	\$74.84

Apprentice - PILE DRIVER - Local 56 Zone 3

Effective Date - 08/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

Notes: Apprentice wages shall be no less than the following Steps;
 (Same as set in Zone 1)
 1\$54.34/2\$58.99/3\$63.65/4\$65.98/5\$68.31/6\$68.31/7\$72.96/8\$72.96

Apprentice to Journeyworker Ratio:1:5

PIPELAYER <i>LABORERS - ZONE 4 (BUILDING & SITE)</i>	06/01/2019	\$27.48	\$7.85	\$12.87	\$0.00	\$48.20
	12/01/2019	\$28.23	\$7.85	\$12.87	\$0.00	\$48.95
	06/01/2020	\$28.88	\$7.85	\$12.87	\$0.00	\$49.60
	12/01/2020	\$29.53	\$7.85	\$12.87	\$0.00	\$50.25

For apprentice rates see "Apprentice- LABORER"

PIPELAYER (HEAVY & HIGHWAY) <i>LABORERS - ZONE 4 (HEAVY & HIGHWAY)</i>	06/01/2019	\$28.66	\$7.85	\$13.92	\$0.00	\$50.43
	12/01/2019	\$29.43	\$7.85	\$13.92	\$0.00	\$51.20
	06/01/2020	\$30.22	\$7.85	\$13.92	\$0.00	\$51.99
	12/01/2020	\$31.01	\$7.85	\$13.92	\$0.00	\$52.78
	06/01/2021	\$31.83	\$7.85	\$13.92	\$0.00	\$53.60
	12/01/2021	\$32.64	\$7.85	\$13.92	\$0.00	\$54.41

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

PLUMBER & PIPEFITTER <i>PLUMBERS & PIPEFITTERS LOCAL 104</i>	09/17/2019	\$41.21	\$8.75	\$16.35	\$0.00	\$66.31
	03/17/2020	\$42.21	\$8.75	\$16.35	\$0.00	\$67.31
	09/17/2020	\$43.21	\$8.75	\$16.35	\$0.00	\$68.31
	03/17/2021	\$44.21	\$8.75	\$16.35	\$0.00	\$69.31
	09/17/2021	\$45.21	\$8.75	\$16.35	\$0.00	\$70.31
	03/17/2022	\$46.46	\$8.75	\$16.35	\$0.00	\$71.56
	09/17/2022	\$47.46	\$8.75	\$16.35	\$0.00	\$72.56
	03/17/2023	\$48.71	\$8.75	\$16.35	\$0.00	\$73.81
	09/17/2023	\$49.71	\$8.75	\$16.35	\$0.00	\$74.81
	03/17/2024	\$50.96	\$8.75	\$16.35	\$0.00	\$76.06

Apprentice - PLUMBER/PIPEFITTER - Local 104

Effective Date - 09/17/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	45	\$18.54	\$8.75	\$9.60	\$0.00	\$36.89
2	50	\$20.61	\$8.75	\$9.60	\$0.00	\$38.96
3	55	\$22.67	\$8.75	\$9.60	\$0.00	\$41.02
4	60	\$24.73	\$8.75	\$9.60	\$0.00	\$43.08
5	65	\$26.79	\$8.75	\$9.60	\$0.00	\$45.14
6	70	\$28.85	\$8.75	\$9.60	\$0.00	\$47.20
7	75	\$30.91	\$8.75	\$9.60	\$0.00	\$49.26
8	80	\$32.97	\$8.75	\$9.60	\$0.00	\$51.32
9	80	\$32.97	\$8.75	\$16.35	\$0.00	\$58.07
10	80	\$32.97	\$8.75	\$16.35	\$0.00	\$58.07

Effective Date - 03/17/2020

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	45	\$18.99	\$8.75	\$9.60	\$0.00	\$37.34
2	50	\$21.11	\$8.75	\$9.60	\$0.00	\$39.46
3	55	\$23.22	\$8.75	\$9.60	\$0.00	\$41.57
4	60	\$25.33	\$8.75	\$9.60	\$0.00	\$43.68
5	65	\$27.44	\$8.75	\$9.60	\$0.00	\$45.79
6	70	\$29.55	\$8.75	\$9.60	\$0.00	\$47.90
7	75	\$31.66	\$8.75	\$9.60	\$0.00	\$50.01
8	80	\$33.77	\$8.75	\$9.60	\$0.00	\$52.12
9	80	\$33.77	\$8.75	\$16.35	\$0.00	\$58.87
10	80	\$33.77	\$8.75	\$16.35	\$0.00	\$58.87

Notes: **1:1,2:5,3:9,4:12

Apprentice to Journeyworker Ratio:**

PNEUMATIC CONTROLS (TEMP.)	09/17/2019	\$41.21	\$8.75	\$16.35	\$0.00	\$66.31
PLUMBERS & PIPEFITTERS LOCAL 104	03/17/2020	\$42.21	\$8.75	\$16.35	\$0.00	\$67.31
	09/17/2020	\$43.21	\$8.75	\$16.35	\$0.00	\$68.31
	03/17/2021	\$44.21	\$8.75	\$16.35	\$0.00	\$69.31
	09/17/2021	\$45.21	\$8.75	\$16.35	\$0.00	\$70.31
	03/17/2022	\$46.46	\$8.75	\$16.35	\$0.00	\$71.56
	09/17/2022	\$47.46	\$8.75	\$16.35	\$0.00	\$72.56
	03/17/2023	\$48.71	\$8.75	\$16.35	\$0.00	\$73.81
	09/17/2023	\$49.71	\$8.75	\$16.35	\$0.00	\$74.81
	03/17/2024	\$50.96	\$8.75	\$16.35	\$0.00	\$76.06

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

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
PNEUMATIC DRILL/TOOL OPERATOR (HEAVY & HIGHWAY) <i>LABORERS - ZONE 4 (HEAVY & HIGHWAY)</i>	06/01/2019	\$28.66	\$7.85	\$13.92	\$0.00	\$50.43
	12/01/2019	\$29.43	\$7.85	\$13.92	\$0.00	\$51.20
	06/01/2020	\$30.22	\$7.85	\$13.92	\$0.00	\$51.99
	12/01/2020	\$31.01	\$7.85	\$13.92	\$0.00	\$52.78
	06/01/2021	\$31.83	\$7.85	\$13.92	\$0.00	\$53.60
	12/01/2021	\$32.64	\$7.85	\$13.92	\$0.00	\$54.41
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)						
POWDERMAN & BLASTER <i>LABORERS - ZONE 4 (BUILDING & SITE)</i>	06/01/2019	\$28.23	\$7.85	\$12.87	\$0.00	\$48.95
	12/01/2019	\$28.98	\$7.85	\$12.87	\$0.00	\$49.70
	06/01/2020	\$29.63	\$7.85	\$12.87	\$0.00	\$50.35
	12/01/2020	\$30.28	\$7.85	\$12.87	\$0.00	\$51.00
For apprentice rates see "Apprentice- LABORER"						
POWDERMAN & BLASTER (HEAVY & HIGHWAY) <i>LABORERS - ZONE 4 (HEAVY & HIGHWAY)</i>	06/01/2019	\$29.41	\$7.85	\$13.92	\$0.00	\$51.18
	12/01/2019	\$30.18	\$7.85	\$13.92	\$0.00	\$51.95
	06/01/2020	\$30.97	\$7.85	\$13.92	\$0.00	\$52.74
	12/01/2020	\$31.76	\$7.85	\$13.92	\$0.00	\$53.53
	06/01/2021	\$32.58	\$7.85	\$13.92	\$0.00	\$54.35
	12/01/2021	\$33.39	\$7.85	\$13.92	\$0.00	\$55.16
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)						
PUMP OPERATOR (CONCRETE) <i>OPERATING ENGINEERS LOCAL 98</i>	06/01/2019	\$35.05	\$11.69	\$14.08	\$0.00	\$60.82
	12/01/2019	\$35.65	\$11.69	\$14.35	\$0.00	\$61.69
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
PUMP OPERATOR (DEWATERING, OTHER) <i>OPERATING ENGINEERS LOCAL 98</i>	06/01/2019	\$34.52	\$11.69	\$14.08	\$0.00	\$60.29
	12/01/2019	\$35.12	\$11.69	\$14.35	\$0.00	\$61.16
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
READY-MIX CONCRETE DRIVER <i>TEAMSTERS 404 - Construction Service (Northampton)</i>	05/01/2016	\$20.54	\$10.57	\$8.39	\$0.00	\$39.50
RIDE-ON MOTORIZED BUGGY OPERATOR <i>LABORERS - ZONE 4 (BUILDING & SITE)</i>	06/01/2019	\$27.48	\$7.85	\$12.87	\$0.00	\$48.20
	12/01/2019	\$28.23	\$7.85	\$12.87	\$0.00	\$48.95
	06/01/2020	\$28.88	\$7.85	\$12.87	\$0.00	\$49.60
	12/01/2020	\$29.53	\$7.85	\$12.87	\$0.00	\$50.25
For apprentice rates see "Apprentice- LABORER"						
ROLLER OPERATOR <i>OPERATING ENGINEERS LOCAL 98</i>	06/01/2019	\$33.91	\$11.69	\$14.08	\$0.00	\$59.68
	12/01/2019	\$34.51	\$11.69	\$14.35	\$0.00	\$60.55
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
ROOFER (Coal tar pitch) <i>ROOFERS LOCAL 248</i>	07/16/2019	\$32.66	\$10.05	\$16.20	\$0.00	\$58.91
For apprentice rates see "Apprentice- ROOFER"						
ROOFER (Inc.Roofers Waterproofng &Roofers Damproofg) <i>ROOFERS LOCAL 248</i>	07/16/2019	\$32.16	\$10.05	\$15.70	\$0.00	\$57.91

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - ROOFER - Local 248

Effective Date - 07/16/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$19.30	\$10.05	\$0.00	\$0.00	\$29.35
2	65	\$20.90	\$10.05	\$15.70	\$0.00	\$46.65
3	70	\$22.51	\$10.05	\$15.70	\$0.00	\$48.26
4	75	\$24.12	\$10.05	\$15.70	\$0.00	\$49.87
5	80	\$25.73	\$10.05	\$15.70	\$0.00	\$51.48
6	85	\$27.34	\$10.05	\$15.70	\$0.00	\$53.09
7	90	\$28.94	\$10.05	\$15.70	\$0.00	\$54.69
8	95	\$30.55	\$10.05	\$15.70	\$0.00	\$56.30

Notes:

Steps are 750 hrs.Roofer(Tear Off)1:1; Same as above

Apprentice to Journeyworker Ratio:1:3

ROOFER SLATE / TILE / PRECAST CONCRETE <i>ROOFERS LOCAL 248</i>	07/16/2019	\$32.66	\$10.05	\$16.20	\$0.00	\$58.91
For apprentice rates see "Apprentice- ROOFER"						
SCRAPER <i>OPERATING ENGINEERS LOCAL 98</i>	06/01/2019	\$34.52	\$11.69	\$14.08	\$0.00	\$60.29
	12/01/2019	\$35.12	\$11.69	\$14.35	\$0.00	\$61.16
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
SELF-POWERED ROLLERS AND COMPACTORS (TAMPERS) <i>OPERATING ENGINEERS LOCAL 98</i>	06/01/2019	\$33.91	\$11.69	\$14.08	\$0.00	\$59.68
	12/01/2019	\$34.51	\$11.69	\$14.35	\$0.00	\$60.55
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
SELF-PROPELLED POWER BROOM <i>OPERATING ENGINEERS LOCAL 98</i>	06/01/2019	\$31.29	\$11.69	\$14.08	\$0.00	\$57.06
	12/01/2019	\$31.89	\$11.69	\$14.35	\$0.00	\$57.93
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
SHEETMETAL WORKER <i>SHEETMETAL WORKERS LOCAL 63</i>	07/01/2019	\$35.74	\$10.64	\$16.22	\$1.77	\$64.37
	01/01/2020	\$36.99	\$10.64	\$16.22	\$1.77	\$65.62

Apprentice - SHEET METAL WORKER - Local 63

Effective Date - 07/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	45	\$16.08	\$6.21	\$4.67	\$0.00	\$26.96
2	50	\$17.87	\$6.55	\$5.19	\$0.00	\$29.61
3	55	\$19.66	\$6.88	\$9.33	\$1.08	\$36.95
4	60	\$21.44	\$7.22	\$9.33	\$1.14	\$39.13
5	65	\$23.23	\$7.55	\$9.33	\$1.20	\$41.31
6	70	\$25.02	\$7.88	\$9.33	\$1.27	\$43.50
7	75	\$26.81	\$8.22	\$9.33	\$1.33	\$45.69
8	80	\$28.59	\$9.30	\$15.18	\$1.59	\$54.66
9	85	\$30.38	\$9.64	\$15.18	\$1.66	\$56.86
10	90	\$32.17	\$9.98	\$15.18	\$1.72	\$59.05

Effective Date - 01/01/2020

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	45	\$16.65	\$6.21	\$4.67	\$0.00	\$27.53
2	50	\$18.50	\$6.55	\$5.19	\$0.00	\$30.24
3	55	\$20.34	\$6.88	\$9.33	\$1.08	\$37.63
4	60	\$22.19	\$7.22	\$9.33	\$1.14	\$39.88
5	65	\$24.04	\$7.55	\$9.33	\$1.20	\$42.12
6	70	\$25.89	\$7.88	\$9.33	\$1.27	\$44.37
7	75	\$27.74	\$8.22	\$9.33	\$1.33	\$46.62
8	80	\$29.59	\$9.30	\$15.18	\$1.59	\$55.66
9	85	\$31.44	\$9.64	\$15.18	\$1.66	\$57.92
10	90	\$33.29	\$9.98	\$15.18	\$1.72	\$60.17

Notes:

Apprentice to Journeyworker Ratio:1:3

SPECIALIZED EARTH MOVING EQUIP < 35 TONS TEAMSTERS JOINT COUNCIL NO. 10 ZONE B	08/01/2019	\$34.54	\$12.41	\$12.70	\$0.00	\$59.65
	12/01/2019	\$34.54	\$12.41	\$13.72	\$0.00	\$60.67
	06/01/2020	\$35.44	\$12.41	\$13.72	\$0.00	\$61.57
	08/01/2020	\$35.44	\$12.91	\$13.72	\$0.00	\$62.07
	12/01/2020	\$35.44	\$12.91	\$14.82	\$0.00	\$63.17
	06/01/2021	\$36.24	\$12.91	\$14.82	\$0.00	\$63.97
	08/01/2021	\$36.24	\$13.41	\$14.82	\$0.00	\$64.47
	12/01/2021	\$36.24	\$13.41	\$16.01	\$0.00	\$65.66

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
SPECIALIZED EARTH MOVING EQUIP > 35 TONS <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE B</i>	08/01/2019	\$34.83	\$12.41	\$12.70	\$0.00	\$59.94
	12/01/2019	\$34.83	\$12.41	\$13.72	\$0.00	\$60.96
	06/01/2020	\$35.73	\$12.41	\$13.72	\$0.00	\$61.86
	08/01/2020	\$35.73	\$12.91	\$13.72	\$0.00	\$62.36
	12/01/2020	\$35.73	\$12.91	\$14.82	\$0.00	\$63.46
	06/01/2021	\$36.53	\$12.91	\$14.82	\$0.00	\$64.26
	08/01/2021	\$36.53	\$13.41	\$14.82	\$0.00	\$64.76
	12/01/2021	\$36.53	\$13.41	\$16.01	\$0.00	\$65.95
SPRINKLER FITTER <i>SPRINKLER FITTERS LOCAL 669</i>	01/01/2019	\$41.51	\$10.02	\$13.08	\$0.00	\$64.61

Apprentice - SPRINKLER FITTER - Local 669

Effective Date - 01/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	45	\$18.68	\$7.75	\$0.00	\$0.00	\$26.43
2	50	\$20.76	\$7.75	\$0.00	\$0.00	\$28.51
3	55	\$22.83	\$10.02	\$7.25	\$0.00	\$40.10
4	60	\$24.91	\$10.02	\$7.25	\$0.00	\$42.18
5	65	\$26.98	\$10.02	\$7.50	\$0.00	\$44.50
6	70	\$29.06	\$10.02	\$7.50	\$0.00	\$46.58
7	75	\$31.13	\$10.02	\$7.50	\$0.00	\$48.65
8	80	\$33.21	\$10.02	\$7.50	\$0.00	\$50.73
9	85	\$35.28	\$10.02	\$7.50	\$0.00	\$52.80
10	90	\$37.36	\$10.02	\$7.50	\$0.00	\$54.88

Notes:

Apprentice to Journeyworker Ratio:1:1

TELECOMMUNICATION TECHNICIAN <i>ELECTRICIANS LOCAL 7</i>	06/30/2019	\$42.66	\$10.75	\$12.33	\$0.00	\$65.74
	12/29/2019	\$43.41	\$11.00	\$12.60	\$0.00	\$67.01

Apprentice - TELECOMMUNICATION TECHNICIAN - Local 7

Effective Date - 06/30/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$17.06	\$5.85	\$0.51	\$0.00	\$23.42
2	45	\$19.20	\$5.85	\$0.58	\$0.00	\$25.63
3	50	\$21.33	\$10.75	\$6.94	\$0.00	\$39.02
4	55	\$23.46	\$10.75	\$7.00	\$0.00	\$41.21
5	65	\$27.73	\$10.75	\$8.13	\$0.00	\$46.61
6	70	\$29.86	\$10.75	\$9.20	\$0.00	\$49.81

Notes:

Steps are 800 hours

Apprentice to Journeyworker Ratio:1:1

TERRAZZO FINISHERS BRICKLAYERS LOCAL 3 (SPR/PITT) - MARBLE & TILE	08/01/2019	\$53.34	\$10.75	\$21.30	\$0.00	\$85.39
	02/01/2020	\$53.98	\$10.75	\$21.30	\$0.00	\$86.03
	08/01/2020	\$55.33	\$10.75	\$21.45	\$0.00	\$87.53
	02/01/2021	\$55.97	\$10.75	\$21.45	\$0.00	\$88.17
	08/01/2021	\$57.37	\$10.75	\$21.61	\$0.00	\$89.73
	02/01/2022	\$57.96	\$10.75	\$21.61	\$0.00	\$90.32

Apprentice - TERRAZZO FINISHER-Local 3 Marble/Tile (Spr/Ptt)

Effective Date - 08/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$26.67	\$10.75	\$21.30	\$0.00	\$58.72
2	60	\$32.00	\$10.75	\$21.30	\$0.00	\$64.05
3	70	\$37.34	\$10.75	\$21.30	\$0.00	\$69.39
4	80	\$42.67	\$10.75	\$21.30	\$0.00	\$74.72
5	90	\$48.01	\$10.75	\$21.30	\$0.00	\$80.06

Effective Date - 02/01/2020

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$26.99	\$10.75	\$21.30	\$0.00	\$59.04
2	60	\$32.39	\$10.75	\$21.30	\$0.00	\$64.44
3	70	\$37.79	\$10.75	\$21.30	\$0.00	\$69.84
4	80	\$43.18	\$10.75	\$21.30	\$0.00	\$75.23
5	90	\$48.58	\$10.75	\$21.30	\$0.00	\$80.63

Notes:

Apprentice to Journeyworker Ratio:1:5

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
TERRAZZO MECHANIC <i>BRICKLAYERS LOCAL 3 (SPR/PITT) - MARBLE & TILE</i>	08/01/2019	\$54.42	\$10.75	\$21.30	\$0.00	\$86.47
	02/01/2020	\$55.05	\$10.75	\$21.30	\$0.00	\$87.10
	08/01/2020	\$56.40	\$10.75	\$21.45	\$0.00	\$88.60
	02/01/2021	\$57.04	\$10.75	\$21.45	\$0.00	\$89.24
	08/01/2021	\$58.44	\$10.75	\$21.61	\$0.00	\$90.80
	02/01/2022	\$59.01	\$10.75	\$21.61	\$0.00	\$91.37

Apprentice - TERRAZZO MECH - Local 3 Marble/Tile (Spr/Pitt)

Effective Date - 08/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$27.21	\$10.75	\$21.30	\$0.00	\$59.26
2	60	\$32.65	\$10.75	\$21.30	\$0.00	\$64.70
3	70	\$38.09	\$10.75	\$21.30	\$0.00	\$70.14
4	80	\$43.54	\$10.75	\$21.30	\$0.00	\$75.59
5	90	\$48.98	\$10.75	\$21.30	\$0.00	\$81.03

Effective Date - 02/01/2020

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$27.53	\$10.75	\$21.30	\$0.00	\$59.58
2	60	\$33.03	\$10.75	\$21.30	\$0.00	\$65.08
3	70	\$38.54	\$10.75	\$21.30	\$0.00	\$70.59
4	80	\$44.04	\$10.75	\$21.30	\$0.00	\$76.09
5	90	\$49.55	\$10.75	\$21.30	\$0.00	\$81.60

Notes:

Apprentice to Journeyworker Ratio:1:5

TEST BORING DRILLER <i>LABORERS - FOUNDATION AND MARINE</i>	06/01/2019	\$40.50	\$7.85	\$16.05	\$0.00	\$64.40
	12/01/2019	\$41.50	\$7.85	\$16.05	\$0.00	\$65.40
	06/01/2020	\$42.49	\$7.85	\$16.05	\$0.00	\$66.39
	12/01/2020	\$43.47	\$7.85	\$16.05	\$0.00	\$67.37
	06/01/2021	\$44.49	\$7.85	\$16.05	\$0.00	\$68.39
	12/01/2021	\$45.50	\$7.85	\$16.05	\$0.00	\$69.40

For apprentice rates see "Apprentice- LABORER"

TEST BORING DRILLER HELPER <i>LABORERS - FOUNDATION AND MARINE</i>	06/01/2019	\$39.22	\$7.85	\$16.05	\$0.00	\$63.12
	12/01/2019	\$40.22	\$7.85	\$16.05	\$0.00	\$64.12
	06/01/2020	\$41.21	\$7.85	\$16.05	\$0.00	\$65.11
	12/01/2020	\$42.19	\$7.85	\$16.05	\$0.00	\$66.09
	06/01/2021	\$43.21	\$7.85	\$16.05	\$0.00	\$67.11
	12/01/2021	\$44.22	\$7.85	\$16.05	\$0.00	\$68.12

For apprentice rates see "Apprentice- LABORER"

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
TEST BORING LABORER <i>LABORERS - FOUNDATION AND MARINE</i>	06/01/2019	\$39.10	\$7.85	\$16.05	\$0.00	\$63.00
	12/01/2019	\$40.10	\$7.85	\$16.05	\$0.00	\$64.00
	06/01/2020	\$41.09	\$7.85	\$16.05	\$0.00	\$64.99
	12/01/2020	\$42.07	\$7.85	\$16.05	\$0.00	\$65.97
	06/01/2021	\$43.09	\$7.85	\$16.05	\$0.00	\$66.99
	12/01/2021	\$44.10	\$7.85	\$16.05	\$0.00	\$68.00
For apprentice rates see "Apprentice- LABORER"						
TRACTORS <i>OPERATING ENGINEERS LOCAL 98</i>	06/01/2019	\$33.91	\$11.69	\$14.08	\$0.00	\$59.68
	12/01/2019	\$34.51	\$11.69	\$14.35	\$0.00	\$60.55
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
TRAILERS FOR EARTH MOVING EQUIPMENT <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE B</i>	08/01/2019	\$35.12	\$12.41	\$12.70	\$0.00	\$60.23
	12/01/2019	\$35.12	\$12.41	\$13.72	\$0.00	\$61.25
	06/01/2020	\$36.02	\$12.41	\$13.72	\$0.00	\$62.15
	08/01/2020	\$36.02	\$12.91	\$13.72	\$0.00	\$62.65
	12/01/2020	\$36.02	\$12.91	\$14.82	\$0.00	\$63.75
	06/01/2021	\$36.82	\$12.91	\$14.82	\$0.00	\$64.55
	08/01/2021	\$36.82	\$13.41	\$14.82	\$0.00	\$65.05
	12/01/2021	\$36.82	\$13.41	\$16.01	\$0.00	\$66.24
TUNNEL WORK - COMPRESSED AIR <i>LABORERS (COMPRESSED AIR)</i>	06/01/2019	\$51.38	\$7.85	\$16.45	\$0.00	\$75.68
	12/01/2019	\$52.38	\$7.85	\$16.45	\$0.00	\$76.68
	06/01/2020	\$53.37	\$7.85	\$16.45	\$0.00	\$77.67
	12/01/2020	\$54.35	\$7.85	\$16.45	\$0.00	\$78.65
	06/01/2021	\$55.37	\$7.85	\$16.45	\$0.00	\$79.67
	12/01/2021	\$56.38	\$7.85	\$16.45	\$0.00	\$80.68
For apprentice rates see "Apprentice- LABORER"						
TUNNEL WORK - COMPRESSED AIR (HAZ. WASTE) <i>LABORERS (COMPRESSED AIR)</i>	06/01/2019	\$53.38	\$7.85	\$16.45	\$0.00	\$77.68
	12/01/2019	\$54.38	\$7.85	\$16.45	\$0.00	\$78.68
	06/01/2020	\$55.37	\$7.85	\$16.45	\$0.00	\$79.67
	12/01/2020	\$56.35	\$7.85	\$16.45	\$0.00	\$80.65
	06/01/2021	\$57.37	\$7.85	\$16.45	\$0.00	\$81.67
	12/01/2021	\$58.38	\$7.85	\$16.45	\$0.00	\$82.68
For apprentice rates see "Apprentice- LABORER"						
TUNNEL WORK - FREE AIR <i>LABORERS (FREE AIR TUNNEL)</i>	06/01/2019	\$43.45	\$7.85	\$16.45	\$0.00	\$67.75
	12/01/2019	\$44.45	\$7.85	\$16.45	\$0.00	\$68.75
	06/01/2020	\$45.44	\$7.85	\$16.45	\$0.00	\$69.74
	12/01/2020	\$46.42	\$7.85	\$16.45	\$0.00	\$70.72
	06/01/2021	\$47.44	\$7.85	\$16.45	\$0.00	\$71.74
	12/01/2021	\$48.45	\$7.85	\$16.45	\$0.00	\$72.75
For apprentice rates see "Apprentice- LABORER"						
TUNNEL WORK - FREE AIR (HAZ. WASTE) <i>LABORERS (FREE AIR TUNNEL)</i>	06/01/2019	\$45.45	\$7.85	\$16.45	\$0.00	\$69.75
	12/01/2019	\$46.45	\$7.85	\$16.45	\$0.00	\$70.75
	06/01/2020	\$47.44	\$7.85	\$16.45	\$0.00	\$71.74
	12/01/2020	\$48.42	\$7.85	\$16.45	\$0.00	\$72.72
	06/01/2021	\$49.44	\$7.85	\$16.45	\$0.00	\$73.74
	12/01/2021	\$50.45	\$7.85	\$16.45	\$0.00	\$74.75
For apprentice rates see "Apprentice- LABORER"						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
VAC-HAUL <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE B</i>	08/01/2019	\$34.54	\$12.41	\$12.70	\$0.00	\$59.65
	12/01/2019	\$34.54	\$12.41	\$13.72	\$0.00	\$60.67
	06/01/2020	\$35.44	\$12.41	\$13.72	\$0.00	\$61.57
	08/01/2020	\$35.44	\$12.91	\$13.72	\$0.00	\$62.07
	12/01/2020	\$35.44	\$12.91	\$14.82	\$0.00	\$63.17
	06/01/2021	\$36.24	\$12.91	\$14.82	\$0.00	\$63.97
	08/01/2021	\$36.24	\$13.41	\$14.82	\$0.00	\$64.47
	12/01/2021	\$36.24	\$13.41	\$16.01	\$0.00	\$65.66
WAGON DRILL OPERATOR (HEAVY & HIGHWAY) <i>LABORERS - ZONE 4 (HEAVY & HIGHWAY)</i>	06/01/2019	\$28.66	\$7.85	\$13.92	\$0.00	\$50.43
	12/01/2019	\$29.43	\$7.85	\$13.92	\$0.00	\$51.20
	06/01/2020	\$30.22	\$7.85	\$13.92	\$0.00	\$51.99
	12/01/2020	\$31.01	\$7.85	\$13.92	\$0.00	\$52.78
	06/01/2021	\$31.83	\$7.85	\$13.92	\$0.00	\$53.60
	12/01/2021	\$32.64	\$7.85	\$13.92	\$0.00	\$54.41
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)						
WATER METER INSTALLER <i>PLUMBERS & PIPEFITTERS LOCAL 104</i>	09/17/2019	\$41.21	\$8.75	\$16.35	\$0.00	\$66.31
	03/17/2020	\$42.21	\$8.75	\$16.35	\$0.00	\$67.31
	09/17/2020	\$43.21	\$8.75	\$16.35	\$0.00	\$68.31
	03/17/2021	\$44.21	\$8.75	\$16.35	\$0.00	\$69.31
	09/17/2021	\$45.21	\$8.75	\$16.35	\$0.00	\$70.31
	03/17/2022	\$46.46	\$8.75	\$16.35	\$0.00	\$71.56
	09/17/2022	\$47.46	\$8.75	\$16.35	\$0.00	\$72.56
	03/17/2023	\$48.71	\$8.75	\$16.35	\$0.00	\$73.81
	09/17/2023	\$49.71	\$8.75	\$16.35	\$0.00	\$74.81
	03/17/2024	\$50.96	\$8.75	\$16.35	\$0.00	\$76.06
For apprentice rates see "Apprentice- PLUMBER/PIPEFITTER" or "PLUMBER/GASFITTER"						
Outside Electrical - West						
EQUIPMENT OPERATOR <i>OUTSIDE ELECTRICAL WORKERS - WEST LOCAL 42</i>	09/01/2019	\$44.67	\$8.00	\$12.55	\$0.00	\$65.22
	For apprentice rates see "Apprentice- LINEMAN"					
GROUNDMAN <i>OUTSIDE ELECTRICAL WORKERS - WEST LOCAL 42</i>	09/01/2019	\$30.58	\$8.00	\$5.48	\$0.00	\$44.06
	For apprentice rates see "Apprentice- LINEMAN"					
GROUNDMAN / TRUCK DRIVER <i>OUTSIDE ELECTRICAL WORKERS - WEST LOCAL 42</i>	09/01/2019	\$39.97	\$8.00	\$10.96	\$0.00	\$58.93
	For apprentice rates see "Apprentice- LINEMAN"					
HEAVY EQUIPMENT OPERATOR <i>OUTSIDE ELECTRICAL WORKERS - WEST LOCAL 42</i>	09/01/2019	\$47.01	\$8.00	\$13.22	\$0.00	\$68.23
	For apprentice rates see "Apprentice- LINEMAN"					
JOURNEYMAN LINEMAN <i>OUTSIDE ELECTRICAL WORKERS - WEST LOCAL 42</i>	09/01/2019	\$51.71	\$8.00	\$15.55	\$0.00	\$75.26

Apprentice - LINEMAN (Outside Electrical) - West Local 42

Effective Date - 09/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$31.03	\$8.00	\$3.43	\$0.00	\$42.46
2	65	\$33.61	\$8.00	\$3.51	\$0.00	\$45.12
3	70	\$36.20	\$8.00	\$3.59	\$0.00	\$47.79
4	75	\$38.78	\$8.00	\$5.16	\$0.00	\$51.94
5	80	\$41.37	\$8.00	\$5.24	\$0.00	\$54.61
6	85	\$43.95	\$8.00	\$5.32	\$0.00	\$57.27
7	90	\$46.54	\$8.00	\$7.40	\$0.00	\$61.94

Notes:

Apprentice to Journeyworker Ratio:1:2

TELEDATA CABLE SPLICER <i>OUTSIDE ELECTRICAL WORKERS - WEST LOCAL 42</i>	02/04/2019	\$30.73	\$4.70	\$3.17	\$0.00	\$38.60
TELEDATA LINEMAN/EQUIPMENT OPERATOR <i>OUTSIDE ELECTRICAL WORKERS - WEST LOCAL 42</i>	02/04/2019	\$28.93	\$4.70	\$3.14	\$0.00	\$36.77
TELEDATA WIREMAN/INSTALLER/TECHNICIAN <i>OUTSIDE ELECTRICAL WORKERS - WEST LOCAL 42</i>	02/04/2019	\$28.93	\$4.70	\$3.14	\$0.00	\$36.77
TRACTOR-TRAILER DRIVER <i>OUTSIDE ELECTRICAL WORKERS - WEST LOCAL 42</i>	09/01/2019	\$44.67	\$8.00	\$12.55	\$0.00	\$65.22
TREE TRIMMER <i>OUTSIDE ELECTRICAL WORKERS - WEST LOCAL 42</i>	01/31/2016	\$18.51	\$3.55	\$0.00	\$0.00	\$22.06
TREE TRIMMER GROUNDMAN <i>OUTSIDE ELECTRICAL WORKERS - WEST LOCAL 42</i>	01/31/2016	\$16.32	\$3.55	\$0.00	\$0.00	\$19.87

This classification applies only to tree work done: (a) for a utility company, R.E.A. cooperative, or railroad or coal mining company, and (b) for the purpose of operating, maintaining, or repairing the utility company's equipment, and (c) by a person who is using hand or mechanical cutting methods and is not on the ground. This classification does not apply to wholesale tree removal.

This classification applies only to tree work done: (a) for a utility company, R.E.A. cooperative, or railroad or coal mining company, and (b) for the purpose of operating, maintaining, or repairing the utility company's equipment, and (c) by a person who is using hand or mechanical cutting methods and is on the ground. This classification does not apply to wholesale tree removal.

Additional Apprentice Information:

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

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

All steps are six months (1000 hours.)

Ratios are expressed in allowable number of apprentices to journeymen or fraction thereof, unless otherwise specified.

** Multiple ratios are listed in the comment field.

*** APP to JM; 1:1, 2:2, 2:3, 3:4, 4:4, 4:5, 4:6, 5:7, 6:7, 6:8, 6:9, 7:10, 8:10, 8:11, 8:12, 9:13, 10:13, 10:14, etc.

**** APP to JM; 1:1, 1:2, 2:3, 2:4, 3:5, 4:6, 4:7, 5:8, 6:9, 6:10, 7:11, 8:12, 8:13, 9:14, 10:15, 10:16, etc.