

November 11, 2019

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATION
DEPARTMENT OF ADMINISTRATION

DIVISION OF PURCHASES BID NO. 7599789

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

RHODE ISLAND CONTRACT NO.2019-CB-027

FEDERAL-AID PROJECT NO. FAP Nos: 3RD-PRTY(258), NHP-0037(012), NHPG-0037(013), NHP-TIGR(003)

Bridge Group 51A - Rt 37 C-2

Route 37 from Pontiac Branch RR (Abandoned) to U.S. Route 1.
Pontiac Ave. from Rt. 37 EB Ramps to Sockanossett Cross Rd. Intersection.

CITY/TOWN OF Warwick, Cranston

COUNTY OF KENT, PROVIDENCE

NOTICE TO PROSPECTIVE BIDDERS

ADDENDUM NO. 5 Prospective bidders and all concerned are hereby notified of the following changes in the Plans, Specifications, Proposal and Distribution of Quantities for this contract. These changes shall be incorporated in the Plans, Specifications, Proposal and Distribution of Quantities, and shall become an integral part of the Contract Documents.

A. Contract Documents

1. Specifications - Contract Specific

a. Page CS-4

Delete Page CS-4 in its entirety and replace it with revised Page CS-4 (R-1) attached to this Addendum No. 5. The page has been revised.

b. Page CS-7

Delete Page CS-7 in its entirety and replace it with revised Page CS-7 (R-1) and add Page CS-7a attached to this Addendum No. 5. The page has been revised.

c. Page CS-15

Delete Page CS-15 in its entirety and replace it with revised Page CS-15 (R-1) and add Page CS-16 attached to this Addendum No. 5. The page has been revised.

2. Specifications - Job Specific

a. Job Specific Index

Delete the Job Specific Index pages in their entirety and replace them with revised Job Specific Index pages (R-2) attached to this Addendum No. 5. The index has been revised.

b. Page JS-26a and JS-26b

Insert new Pages JS-26a and JS-26b attached to this Addendum No. 5. New specifications have been added.

- c. Pages JS-55 through JS-57
Delete Pages JS-55 through JS-57 in their entirety and replace them with revised Pages JS-55 (R-1) through JS-57 (R-1) attached to this Addendum No. 5. The specification was revised.
- d. Pages JS-102 through JS-104
Delete Pages JS-102 through JS-104 in their entirety and replace them with revised Pages JS-102 (R-1) through JS-104 (R-1) attached to this Addendum No. 5. The specification was revised.
- e. Page JS-106a through JS-106c
Insert new Pages JS-106a and JS-106c attached to this Addendum No. 5. New specification has been added.
- f. Page JS-119a through JS-119f
Insert new Pages JS-119a and JS-119f attached to this Addendum No. 5. New specifications have been added.
- g. Pages JS-130 through JS-134
Delete Pages JS-130 through JS-134 in their entirety and replace them with revised Pages JS-130 (R-1) through JS-134 (R-1) attached to this Addendum No. 5. The specification was revised.
- h. Page JS-195a through JS-195d
Insert new Pages JS-195a through JS-195d attached to this Addendum No. 5. Three new specifications have been added.
- i. Page JS-197 and JS-197a
Delete Page JS-197 in its entirety and replace it with Page JS-197 (R-1) and new page JS-197a attached to this Addendum No. 5. The specification has been revised.
- j. Page 91a
Insert new Pages JS-91a attached to this Addendum No. 5. A new specification has been added.

B. Distribution of Quantities

- 1. Index Pages
Delete all index pages in their entirety and replace with revised pages Index 1 (R-2) through Index 9 (R-2) attached to this Addendum No. 5. Items highlighted in bold have been revised, added or deleted.
- 2. Page 2 and Page 3
Delete Page 2 and Page 3 in their entirety and replace with revised Page 2 (R-1) and Page 3 (R-1) and insert Page 2a attached to this Addendum No. 5. Item Code 201.0403 has been revised.
- 3. Page 12 through Page 17
Delete Page 12 through Page 17 in their entirety and replace with revised Page 12 (R-1) through Page 17 (R-1) and add Page 15a attached to this Addendum No. 5. Item Codes 202.0100, 202.0700 and 203.0100 have been revised.
- 4. Page 22 through Page 24
Delete Page 22 through Page 24 in their entirety and replace with revised Page 22 (R-1) through Page 24 (R-1) and add Page 23a attached to this Addendum No. 5. Item Codes 302.0100 has been revised.

5. Page 63 through Page 67

Delete Page 63 through Page 67 in their entirety and replace with revised Page 63 (R-1) through Page 67 (R-1) attached to this Addendum No. 5. Item Code 813.9910 was deleted. Item Codes 817.9901, 818.9901 and 818.9902 were revised.

6. Page 75 and Page 76

Delete Page 75 and Page 76 in their entirety and replace with revised Page 75 (R-1) and Page 76 (R-1) and insert Page 75a attached to this Addendum No. 5. Item Code 905.0110 was revised.

7. Page 143 through Page 144

Delete Page 143 through Page 144 in their entirety and replace with revised Page 143 (R-2), 144 (R-1) and Page 145 through 147 and insert Page 143a attached to this Addendum No. 5. Item Code 601.0300 and 813.0210 were revised. Item Code 201.0405, 808.1641, 808.9904, 810.0210, 810.0702, 817.9903, 818.9904, 818.9905 were added.

C. Drawings/Plans - Change/Addition

1. Volume 1

a. Plan Sheets 13 through 17

Delete plan sheets 13 through 17 in their entirety and replace them with revised Sheet 13 (R-1) through 17 (R-1) attached to this Addendum No. 5. The sheets have been revised.

b. Plan Sheets 154 through 195

Delete plan sheets 154 through 194 in their entirety and replace them with revised Sheets 154 (R-1) through 195 (R-1) attached to this Addendum No. 5. The sheets have been revised.

2. Volume 4

a. Multiple Plan Sheets

Delete plan sheets 2, 3, 4, 7, 8, 10, 15, 17, 22, 23, 25, 27, 28, 29, 33, 34, 35, 37, 38, 41, 43, 48, 49, 50, 52, 53, 54, 55, 59, 62, 63, 64, 65, 66, 67 and 71 in their entirety and replace them with revised Sheet 2 (R-1), 3 (R-1), 4 (R-1), 7 (R-1), 8 (R-1), 10 (R-1), 15 (R-1), 17 (R-1), 22 (R-1), 23 (R-1), 25 (R-1), 27 (R-1), 28 (R-1), 29 (R-1), 33 (R-1), 34 (R-1), 35 (R-1), 37 (R-1), 38 (R-1), 41 (R-1), 43 (R-1), 48 (R-1), 49 (R-1), 50 (R-1), 52 (R-1), 53 (R-1), 54 (R-1), 55 (R-1), 59 (R-1), 62 (R-1), 63 (R-1), 64 (R-1), 65 (R-1), 66 (R-1), 67 (R-1) and 71 (R-1) attached to this Addendum No. 5. The sheets have been revised.

3. Volume 7

a. Multiple Plan Sheets

Delete plan sheets 2, 3, 5, 6, 7, 11, 12, 13, 14, 15, 17, 21, 23, 24, 26, 29, 30, 31, 32, 33, 34, 38 in their entirety and replace them with revised Sheet 2 (R-1), 3 (R-1), 5 (R-1), 6 (R-1), 7 (R-1), 11 (R-1), 12 (R-1), 13 (R-1), 14 (R-1), 15 (R-1), 17 (R-1), 21 (R-1), 23 (R-1), 24 (R-1), 26 (R-1), 29 (R-1), 30 (R-1), 31 (R-1), 32 (R-1), 33 (R-1), 34 (R-1) and 38 (R-1) attached to this Addendum No. 5. The sheets have been revised.



RI Department of Transportation

Manager, Division of Project Management

3. UTILITY AND MUNICIPAL NOTIFICATION AND COORDINATION

Existing utilities have been shown on the Plans using the best available information. The Contractor shall check and verify the location of all existing utilities both underground and overhead in accordance with the "Dig Safe Program Law" enacted by the Rhode Island Legislation Bill No. 79S-291, which became effective July 1, 1979. The Contractor should be aware that not all utility companies subscribe to the Dig Safe Program. It is the Contractor's responsibility to ensure that all utility companies have been notified and all utilities have been marked prior to commencing their work. Any damage to existing utilities shall be replaced or repaired to the satisfaction of the Engineer at no additional cost to the State.

The Contractor shall schedule his construction so as to allow for a coordinated highway/bridge and utility effort. Upon award, the Contractor shall notify the lead utility relative to his anticipated highway/bridge construction start date.

It is required that the Contractor notify each utility company no less than two (2) weeks in advance of any work near the existing utility facilities to remain. National Grid (gas), if involved, requires six (6) weeks advance notice.

The applicable utility/municipality representatives are as follows:

NATIONAL GRID - ELECTRIC

NATIONAL GRID - GAS

Mr. Kelson McDaniel
Lead Project Manager
Resource Planning NE
National Grid
Cell: 401.256.6123
Direct: 401.525.5575
kelson.mcdaniel@nationalgrid.com

COX COMMUNICATIONS

Mr. David Velilla
Capital Support & Utility Contractor

appropriate.

The Contractor shall coordinate his work to ensure that all utility relocations, if any, may proceed without delay. The Contractor shall comply with requirements and limitations defined in the General Notes. The Contractor shall, immediately upon commencing work at the site, perform all work necessary for the preparation of utility company involvement prior to beginning any other work on the project. Such work will include, but not be limited to, site preparation, tree-trimming, earthwork, removals and relocations or disposals, traffic control, survey, etc., which involve the relocation of overhead wires or underground utilities. All drainage work, including new construction, modifications and cleaning, shall be completed and accepted by the Engineer prior to commencing pavement removal.

Plans have been developed based upon the sequence of construction at each bridge described in the contract drawings. The Contractor may modify this sequence as needed to suit his preferred means and methods.

It is expected that the contractor shall mobilize multiple crews to complete the work within the allotted contract time.

b. Special Requirements

Bridge Nos. 062701, 062801 and 062901 shall be installed using accelerated construction techniques. It is expected that four weekend closure periods will be used to complete this work including two weekends for the Route 37 Eastbound structures and two weekends for the Route 37 Westbound structures. Detour routes shall be established according to the contract plans.

Steel girder end repairs to girder webs and bearing stiffeners for Bridge No. 063301 shall be completed within 60 days of Notice to Proceed.

Bridge Nos. 063601 and 063701 carrying Route 37 over AMTRAK can not start work until June 1, 2021. Applicable shop drawing submittals should be submitted by September 1, 2020 and will have a required 60-day review period. RIDOT and AMTRAK reviews will be concurrent.

5. SPECIAL REQUIREMENTS FOR TRAFFIC PROTECTION

In addition to the requirements of the RI Standard Specifications and the special requirements of other sections of these Contract Documents, the following requirements shall be undertaken by the Contractor:

- a. The Contractor is advised that the signs and other traffic control devices shown on the Maintenance and Protection of Traffic Plans are minimum requirements, and it is the Contractor's responsibility to supplement these as directed by the Engineer if necessary to ensure public safety. All maintenance and protection of traffic devices must be in place and approved by the Engineer before any construction may commence. All maintenance and protection of traffic shall conform to the latest edition and revisions of the Manual on Uniform Traffic Control Devices (MUTCD).

- b. The Contractor shall be responsible for maintaining appropriate construction related signing at all times. All temporary construction signs not appropriate for the construction activity taking place shall be removed, covered, or otherwise concealed to the satisfaction of the Engineer. This includes the period between erecting the signs and the start of construction, as well as when a construction phase is completed or suspended.
- c. R.I. Std. 26.1.0 cones shall be used when traffic control set-up is utilized only during

transportation management strategies that will be used to manage the work zone safety and mobility impacts of this project. In the event of a discrepancy between information in the TMP and information elsewhere in the Contract Documents, the former shall govern.

All full closures, splits, or shifts unless approved by the Administrator of Project Management or his designee shall be scheduled to begin on Friday or Saturday night as determined by the TMP to allow motoring public time to adjust to new travel patterns while allowing RIDOT the opportunity to evaluate its success. Construction work can commence on the Monday following the evaluation period. TMP modifications or revisions may be required in advance to allow for weekend work.

All full closures, splits, or shifts unless approved by the Administrator of Project Management or his designee shall not be installed or remain in place during the winter shutdown period.

The Contractor's attention is called to the Standard Specifications for Road & Bridge Construction, Amended August 2013, **SECTION 103.02 – POST-QUALIFICATION REQUIREMENTS AND AWARD OF CONTRACT**, which describes the requirements for the Contractor's designation of a TMP Implementation Manager for the Contract.

The Contractor's attention is called to the Standard Specifications for Road & Bridge Construction, Amended August 2013, **SECTION – 105.21 WORK ZONE TRAINING**, which describes the requirements for the training of all Contractor and Subcontractor personnel involved in work zone design, implementation, operation, inspection, management, and/or enforcement.

The Department's latest *Training Guidelines for Personnel Responsible for Work Zone Safety & Mobility* is available under the "Work Zone Safety & Mobility" section at:

<http://www.dot.ri.gov/business/contractorsandconsultants.php>

27. Coordination with Commissions on Historical Cemeteries

The Contractor shall be aware that there are two historical cemeteries located within the limits of the project: Lincoln Park Cemetery (Warwick Historical Cemetery No. 11) located in proximity to Bridge 063801 and Cranston Historical Cemetery No. 61 in proximity to Bridge 062601 and Pontiac Avenue. All project work within 25 feet of the existing cemeteries is limited to within the existing roadway or ROW. In the event that any additional human remains are identified during construction, the following commissions should be notified:

Rhode Island Advisory Commission on Historical Cemeteries and Warwick Commission on Historical Cemeteries

Ms. Margaret Malcolm, Chair
137 Irving Road
Warwick, RI 02888
401-467-8142

pmalcolm@cox.net

Cranston Historical Cemeteries Commission

Mr. Gregg Mierka, Chairman

1351 Cranston Street

Cranston, RI 02910

401-944-9226

ribattery@verizon.net

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CODE 701.9901 – ELECTRIC MANHOLE
CODE 701.9902 – 5” PVC ELECT. CONDUIT
CODE 701.9903 – 4” PVC ELECT. CONDUIT
CODE 701.9904 – ELECTRIC SERVICE HANDHOLE
CODE 701.9911 – TELEPHONE MANHOLE
CODE 701.9912 – 4” PVC TELEPHONE CONDUIT
CODE 701.9921 – CATV MANHOLE
CODE 701.9922 – 4” PVC QUADRADUCT

DESCRIPTION:

This work shall include the installation of utility manholes, handholes and underground conduit at locations shown on the plans or as directed by the Engineer. All work shall be completed in accordance with the standards established by National Grid (Electric), Verizon (Telephone) and Cox Communications (CATV). The work shall include excavation, trench excavation, backfill, concrete encasement, subbase and temporary restoration of pavement.

MATERIALS:

All materials shall comply with the standards established by each utility company including National Grid for all electric components, Verizon for all telephone components and Cox Communications for all CATV components.

CONSTRUCTION METHODS:

Contact information for each utility is included in Paragraph 3 of the Contract Specific segment of these specifications. All work for National Grid facilities must be completed by an Approved Subcontractor as listed in Paragraph 3. All facilities shall be installed in compliance with the requirements of the respective utility and shall be subject to approval of their inspection.

METHOD OF MEASUREMENT:

“Electric Manhole,” “Electric Service Handhole,” “Telephone Manhole,” and “CATV Manhole” will be measured for payment by each number of structures installed in accordance with the Plans and/or as directed by the Engineer.

“5” PVC Elect. Conduit,” “4” PVC Elect. Conduit,” “4” PVC Telephone Conduit” and “4” PVC Quadraduct” will be measured for payment by the number of linear feet of conduit installed in accordance with the Plans and/or as directed by the Engineer.

BASIS OF PAYMENT:

Item Code 701.9901 – Electric Manhole, 701.9904 – Electric Service Handhole, 701.9911 – Telephone Manhole and 701.9921 – CATV Manhole will be paid for at the respective contract unit price per each as listed in the Proposal. The prices so-stated constitute full and complete

compensation for all labor, materials, attachments, installation, excavation, backfill, subbase, tools and equipment and for all incidentals required to finish the work, complete and accepted by the Engineer.

Item Code 701.9902 – 5” PVC Elect. Conduit, 701.9903 – 4” PVC Elect. Conduit, 701.9912 – 4” PVC Telephone Conduit and 701.9922 – 4” PVC Quadraduct will be paid for at the respective contract unit price per linear foot per conduit as listed in the Proposal. The prices so-stated constitute full and complete compensation for all labor, materials, attachments, installation, trench excavation, backfill, concrete encasement, subbase, and all tools, labor and other items incidental thereto.

CODE 800.9930

CONSTRUCTION SITE ACCESS – BRIDGE 062801 AND BRIDGE 062901

DESCRIPTION:

The item “Site Access” shall consist of the field location and protection of existing utilities, the design and construction of temporary work platforms, temporary earth retaining systems, crane mats, excavation, temporary fill and grading that the Contractor elects to use in order to access the work under the existing bridge and on the shoreline of the Pawtuxet River, as shown on the plans and allowed by the Permits. The work platforms shown on the plans are optional. The Contractor may adjust the design details provided they are in conformance with the permits. This item shall also include furnishing and installing load test piles, of the same type as will be used for the temporary work platforms, at the locations shown on the plans. Also included is the removal of all Site Access facilities, upon completion of the work.

The information shown on the plans pertaining to site access, sequence of construction and erection procedures conveys the assumptions made by the designer in designing the structure and is for information only. The Contractor shall be responsible for selecting the means and methods for construction, subject to the design and testing parameters and environmental permit restrictions. The Contractor shall also design calculations, construction schematics, construction sequences and procedures to the Engineer for review.

The information depicted on the plans has been permitted by the governing local and state agencies. The Contractor shall be responsible for obtaining any revised permits due to changes or modifications to the permitted plans which effects environmental impacts from all governing local and state agencies.

The Contractor shall note that obtaining approvals from DEP is an untimely process and should be taken into consideration when selecting the means and methods for construction.

MATERIALS:

Materials shall be selected by the Contractor and shall be suitable and fit for the intended purpose of supporting the minimum design loads.

Temporary fill shall consist of sound, tough, durable particles of crushed or uncrushed stone and gravel, and shall be washed or well screened to eliminate fine particles.

CONSTRUCTION METHODS:

When the Contractor’s means and methods for construction meet all requirements established in the regulatory permits for the project, he shall, at least 30 calendar days prior to the start of

construction of the temporary work platforms, submit to the Engineer, for his review and approval, detailed final site access and methodology working drawings and computations of his proposal. The working drawings and calculations must be prepared, stamped and signed by a Professional Engineer licensed in the State of Rhode Island. These plans shall include, but shall not be limited to:

- 1) The limits of existing utilities, temporary fill, temporary earth retaining systems, excavation and limits and details for temporary work platforms and existing utility protection.
- 2) All details of the work platform pile arrangement, required pile capacities and driving criteria for piles.
- 3) All details for framing, details and the capacities of framework and work platform, and decking details.

The low chord of the temporary work platform must be a minimum elevation of 24.4 feet.

If the Contractor's means and methods for construction do not meet all requirements established in the regulatory permits for the project, he shall allot the time in his schedule to obtain revised permits and the Engineer's approval.

The furnishing of such plans, methods and calculations shall not serve to relieve the Contractor of his responsibility for the safety of the work and the successful completion of the project. The Contractor's proposal must meet all requirements established in regulatory permits for the project.

The temporary work platform and temporary earth retaining systems shall be of sufficient strength and sufficiently braced to accommodate all construction loads. Any effects to the permanent works, including, but not limited to, the existing cast iron sewer main and existing ductile iron cooling water supply pipe and ductile iron return pipe, caused or induced by the construction or use of the temporary work platforms and temporary earth retaining systems shall be evaluated and included in the design submissions.

The Contractor shall accurately locate the position of, and adequately protect all underground utilities prior to driving temporary piles for the work platform.

METHOD OF MEASUREMENT:

This item will not be measured for payment.

BASIS OF PAYMENT:

Item CODE 800.9930 "CONSTRUCTION SITE ACCESS – BRIDGE 062801 AND BRIDGE 062901" will be paid for at the contract "Lump Sum" price as listed in the Proposal. The price

so stated shall include the design, construction and removal of temporary work platforms, temporary earth retaining systems, and temporary fill, and shall include the location of and protection of existing utilities, and shall constitute full and complete compensation for all labor, materials, tools, equipment, and all incidentals required to complete the work as described in these Special Provisions and elsewhere in the Contract Documents, complete in place and accepted by the Engineer.

Partial payments for this Lump Sum item will be made in accordance with Special Provision Code 109.07.

CODE 808.9904
PREFORMED POLYETHYLENE FOAM JOINT FILLER ¼”

Work under this item shall conform to the relevant portions of Section 808 of the Standard Specifications and the following:

DESCRIPTION:

The work under this item shall consist of installing preformed joint filler of the type and thickness called for on the plans or as directed by the Engineer.

MATERIALS: Materials shall conform to subsection M.02.11.1, Preformed Expansion Joint Filler.

CONSTRUCTION METHODS:

Construction methods shall conform to section with Section 808.03.8, Joint Fillers and Sealants, paragraph a. Preformed Polyethylene Foam Joint Filler.

METHOD OF MEASUREMENT:

“Preformed Polyethylene Foam Joint Filler ¼” ” will be measured by the number of square feet of those materials actually installed in accordance with the Plans and/or as directed by the Engineer.

BASIS OF PAYMENT:

The accepted quantities of "Preformed Polyethylene Foam Joint Filler ¼" ” will be paid for at the respective contract unit prices per square foot as listed in the Proposal. The prices so-stated constitute full and complete compensation for all labor, materials, and equipment, and all incidentals required to finish the work, complete and accepted by the Engineer.

CODE 817.9901
REPAIRS TO STRUCTURAL CONCRETE MASONRY
(PATCHING MORTAR)

DESCRIPTION:

The work included under this code shall consist of making structure concrete masonry repairs to the bridge at locations indicated on the Plans or as directed by the Engineer. Work shall consist of saw cutting; removing existing bearings; storing existing bearings for reinstallation if necessary; removing and disposing deteriorated concrete; furnishing and installing welded wire fabric, anchors, and supplemental reinforcement repairs as required; preparing bonding surfaces of concrete, and providing a bonding agent; installing formwork; replacing the deteriorated concrete with new patching mortar; and finishing and curing to the lines and grades specified at the locations indicated on the Plans, and reinstalling existing bearings, all in accordance with this Specification and/or as may be directed by the Engineer.

Work under this special provision shall be defined as follows:

Type 1 Patch Repair:

This repair is intended to apply to deteriorated concrete removal areas where no reinforcing is exposed, less than half the circumference of the existing reinforcing is exposed, or the area is less than 1 square foot. The depth of the repair does NOT extend beyond the reinforcing steel. The Engineer shall be the sole judge in determining the repair locations. All repairs shall be performed only as directed by the Engineer.

Related Items of Work Covered Elsewhere. Related items of work covered in other Provisions of these Specifications include the following:

- a. Item 810.9901 – EMBEDDED GALVANIC ANODES

MATERIALS:

Type 1 Patch Repair

Materials shall be in accordance with relevant provisions of Subsection 817.02 of the Standard Specifications.

Patching Mortar. Except as noted herein, patching mortar shall conform to the requirements of **SECTION 817** of the Standard Specifications.

- a. **Other Requirements.** Patching Mortar shall also conform to the following additional

requirements.

1. Patching mortar shall be accepted as a compatible material by the galvanic anode manufacturer and have specifications demonstrating an electrical resistivity not exceeding of 15,000 ohm-cm or as otherwise required by the galvanic anode manufacturer.

Steel. Except as noted herein, reinforcing steel shall conform to the requirements of **SECTION 810** of the Standard Specifications.

a. Other Requirements. Steel shall also conform to the following additional requirements.

1. All supplemental steel used for reinforcement bar repairs shall be galvanized.

Wire Reinforcement. Wire reinforcement shall be 2"x2" – W1.4xW1.4 (minimum), galvanized, welded wire fabric shall conform to the requirements of Subsection M.05.02 of the Standard Specifications.

Bonding Agents. Except as noted herein, bonding agents shall conform to the requirements of **SECTION 817** of the Standard Specifications.

a. Other Requirements. Bonding Agent shall also conform to the following additional requirements.

1. Bonding agent shall be accepted as a compatible material by the galvanic anode manufacturer and have specifications demonstrating an electrical resistivity not exceeding of 15,000 ohm-cm or as otherwise required by the galvanic anode manufacturer.

CONSTRUCTION METHODS:

Construction shall be in accordance with relevant provisions of Subsection 817.03 of the Standard Specifications except as follows:

Formwork. Forms used for the patching work are to be used where depth of removal exceeds 1½" on vertical surfaces being repaired; as needed to restore existing surfaces; or as needed to support build out repairs. Forms shall be capable of supporting the quantity of fresh patching mortar needed to install the patch and shall otherwise conform to the applicable requirements of Subsection 808.03.4 of the Standard Specifications.

METHOD OF MEASUREMENT:

Item Code 817.9901 "Repairs to Structural Concrete Masonry (Patching)" will be measured for payment by the "Cubic Foot" of new patching mortar (exposed surface area) actually placed, in accordance with this Special Provision and elsewhere in the Contract Documents and/or as directed by the Engineer.

BASIS OF PAYMENT:

The accepted quantity of Item Code 817.9901 “Repairs to Structural Concrete Masonry (Patching Mortar)” will be paid for at the contract price per “Cubic Foot” as listed in the Proposal. The price so stated will constitute full and complete compensation for all labor, tools, materials, tools, equipment, formwork and all incidentals required to finish the work as described in these Special Provisions and elsewhere in the Contract Documents, complete in place and accepted by the Engineer.

Costs for furnishing and installing welded wire fabric and reinforcing steel will be paid under the respective pay items.

CODE 817.9903
REPAIRS TO STRUCTURAL CONCRETE MASONRY
(TYPE 2S)

DESCRIPTION:

The work included under this code shall consist of making structure concrete masonry repairs to the bridge at locations indicated on the Plans or as directed by the Engineer. Work shall consist of saw cutting; removing existing bearings; storing existing bearings for reinstallation if necessary; removing and disposing deteriorated concrete; furnishing and installing welded wire fabric, anchors, and supplemental reinforcement repairs as required; preparing bonding surfaces of concrete, and providing a bonding agent; installing formwork; replacing the deteriorated concrete with new patching mortar; and finishing and curing to the lines and grades specified at the locations indicated on the Plans, and reinstalling existing bearings, all in accordance with this Specification and/or as may be directed by the Engineer.

Work under this special provision shall be defined as follows:

Type 2S Concrete Repair:

This repair is intended to apply to deteriorated concrete removal areas where more than half the reinforcing is exposed, the area is greater than 1 square foot, or the depth of the repair extends beyond the reinforcing steel. The Engineer shall be the sole judge in determining the repair locations. All repairs shall be performed only as directed by the Engineer.

Except as modified in this Special Provision, all work under this item shall be performed in accordance with Section 817 of the Rhode Island Standard Specifications for Road and Bridge Construction, amended 2018, including all the revisions (Standard Specifications).

Related Items of Work Covered Elsewhere. Related items of work covered in other Provisions of these Specifications include the following:

- a. Item 810.9901 – EMBEDDED GALVANIC ANODES

MATERIALS:

Type 2S Concrete Repair:

Materials shall be in accordance with relevant provisions of Subsection 817.02 of the Standard Specifications and as follows:

Patching Mortar. Except as noted herein, patching mortar shall conform to the requirements of **SECTION 817** of the Standard Specifications.

- a. **Other Requirements.** Patching Mortar shall also conform to the following additional

requirements.

1. Patching mortar shall be accepted as a compatible material by the galvanic anode manufacturer and have specifications demonstrating an electrical resistivity not exceeding of 15,000 ohm-cm or as otherwise required by the galvanic anode manufacturer.

Steel. Except as noted herein, reinforcing steel shall conform to the requirements of **SECTION 810** of the Standard Specifications.

a. Other Requirements. Steel shall also conform to the following additional requirements.

1. All supplemental steel used for reinforcement bar repairs shall be galvanized.

Wire Reinforcement. Wire reinforcement shall be 2"x2" – W1.4xW1.4 (minimum), galvanized, welded wire fabric shall conform to the requirements of Subsection M.05.02 of the Standard Specifications.

Bonding Agents. Except as noted herein, bonding agents shall conform to the requirements of **SECTION 817** of the Standard Specifications.

a. Other Requirements. Bonding Agent shall also conform to the following additional requirements.

1. Bonding agent shall be accepted as a compatible material by the galvanic anode manufacturer and have specifications demonstrating an electrical resistivity not exceeding of 15,000 ohm-cm or as otherwise required by the galvanic anode manufacturer.

CONSTRUCTION METHODS:

Construction shall be in accordance with relevant provisions of Subsection 817.03 of the Standard Specifications except as follows:

Formwork. Forms used for the patching work are to be used where depth of removal exceeds 1½" on vertical or underside surfaces being repaired; as needed to restore existing surfaces; or as needed to support build out repairs. Forms shall be capable of supporting the quantity of fresh patching mortar needed to install the patch and shall otherwise conform to the applicable requirements of Subsection 808.03.4 of the Standard Specifications.

METHOD OF MEASUREMENT:

Item Code 817.9903 "Repairs to Structural Concrete Masonry (Type 2S)" will be measured for payment by the "Cubic Foot" of new patching mortar (exposed surface area) actually placed, in accordance with this Special Provision and elsewhere in the Contract Documents and/or as directed by the Engineer.

BASIS OF PAYMENT:

The accepted quantity of Item Code 817.9903 “Repairs to Structural Concrete Masonry (Type 2S)” will be paid for at the contract price per “Cubic Foot” as listed in the Proposal. The price so stated will constitute full and complete compensation for all labor, tools, materials, tools, equipment, formwork and all incidentals required to finish the work as described in these Special Provisions and elsewhere in the Contract Documents, complete in place and accepted by the Engineer.

Costs for furnishing and installing welded wire fabric and reinforcing steel will be included for payment under this item and will not be paid for separately.

CODE 818.9904
PORTLAND CEMENT CONCRETE DECK REPAIRS
(PARTIAL DEPTH REMOVAL) BR 063601 & 063701

DESCRIPTION:

This work shall consist of making Portland Cement Concrete Deck Repairs (Partial Depth Removal) to underside of concrete deck over Amtrak RR in accordance with the plans and this specification, or where directed by the Engineer, complete and accepted by the Engineer.

MATERIALS:

The materials shall conform to the following requirements:

1. High Early Strength Concrete – The high early strength concrete shall conform to one of the following:
 - a. The Contractor shall design and submit to the Engineer for approval a high early strength concrete mix. This mix shall be air-entrained, and shall be composed of Portland cement, fine and coarse aggregates, approved admixtures and additives, and water. The mix shall contain between 4% and 7% entrained air, and shall attain a 2-hour compressive strength of 2,500 psi. Additionally, the mix shall contain shrinkage compensating additives such that there will be no separation of the patched area from the parent concrete. This shrinkage-compensating additive shall be utilized so as to produce expansion in the high early strength concrete of no more than 3%.
 - b. In lieu of the above high early strength concrete mix, the Contractor may propose the use of a proprietary type mix that will meet the same physical requirements as those stated above. A mix design shall be submitted for this material, stating the percentage of each component to be utilized.
2. Regardless of the type of high early strength concrete proposed by the Contractor, substantive data that demonstrates the ability of the material to meet the specification requirements shall be submitted with the proposed mix design at least 2 weeks prior to its use.
3. Galvanized Deformed Steel Bars: Section 810.
4. Epoxy Coating Repair material: Shall be compatible with the epoxy coating, inert in concrete, and suitable for repairs in the field. The patching material shall be either identified on the container as meeting the requirements of Annex A1 of ASTM D3963 or shall be accompanied by a Materials Certificate certifying that the material meets the requirements of Annex A1.

CONSTRUCTION METHODS:

Repairs paid under this item shall be done over Amtrak RR. The contractor shall coordinate all work activities with the railroad. Additional shielding, or other specialized equipment or methods may be necessary to perform these repairs.

Repairs shall conform to Section 818 of the RI Standard Specifications with latest revisions, except as modified in this special provision.

Repairs shall be performed with no traffic above or below repair. No traffic shall be allowed to pass over the repair area until concrete has reached its minimum 2 hour compressive strength.

Repairs may require forming and pumping. Method of attaching forms to the deck will be by the contractor. Forms shall be removed after patch has cured for 24 hours minimum, or until a compressive strength of 5000 psi min. has been obtained.

Special care shall be exercised to ensure that the repair depth be minimized, and in no case shall Portland Cement Concrete Deck Repair (Partial Depth Removal) extend deeper than 4”.

Contractor to field verify repair areas as shown on the plans and adjust dimensions as required.

All loose, deteriorated or unsound concrete shall be removed as designated on the plans or as designated by the Engineer.

“Jackhammers” or “Chipping hammers” shall weigh no more than 15 pounds and hand tools shall be used adjacent to sawcuts and in direct contact with reinforcing.

Rebar to remain within limits of designated repair areas shall be thoroughly cleaned.

Main reinforcement (#6 bars) which have deteriorated down to between 3/8” and 9/16” in diameter, shall be spliced with a #5 bar with a lap splice length of 1’-3” measured from the beginning of section loss (i.e. bar length required = 2’-6” + length of section loss). Main reinforcement which has deteriorated down to less than 3/8” diameter shall be spliced with a #6 bar with a lap splice length of 1’-9” (i.e. bar length required = 3’-6” + length of section loss). Additional area of repair to accommodate splice, if it extends beyond approved repair area shall be measured for payment by 6” wide x length required.

For bidding purposes, Contractor shall assume all bars will require splicing and ½ will be #5 and ½ will be #6. These bars, including any and all field cutting and tying in place, will not be paid for separately.

Distribution reinforcement, need not be supplemented with additional reinforcement regardless of deterioration, however, care shall be exercised to salvage as much distribution reinforcement, as possible.

All finished repaired surfaces shall be smooth and flush with adjacent surfaces.

All material removed from bridge deck shall be carefully contained during removal and legally disposed of at no extra cost. Shielding shall be utilized and shall conform to Section 803.0500 of the Specification.

METHOD OF MEASUREMENT:

Item Code 818.9904, "Portland Cement Concrete Deck Repairs (Partial Depth Removal) BR 063601 & 063701", will be measured for payment by the number of square feet of such repairs actually made, regardless of depth, in accordance with the Plans and this specification and/or as directed by the Engineer.

BASIS OF PAYMENT:

The accepted quantity of Item Code 818.9904, "Portland Cement Concrete Deck Repairs (Partial Depth Removal) BR 063601 & 063701" will be paid at the respective contract unit price per square foot as listed in the Proposal. The price so stated shall constitute full and complete compensation for all labor, tools, materials, equipment, including saw cutting concrete, removal of all deteriorated concrete, furnishing and installing deformed steel bars where necessary, reconstructing the slab with new concrete, providing all required methods and materials to complete work over the railroad, and providing and subsequent removal of temporary protective shields as required, including all other incidentals, complete and accepted by the Engineer.

CODE 818.9905
PORTLAND CEMENT CONCRETE DECK REPAIRS
(FULL DEPTH REMOVAL) BR 063601 & 063701

DESCRIPTION:

This work shall consist of making Portland Cement Concrete Deck Repairs (Full Depth Removal) to concrete decks over Amtrak RR in accordance with the plans and this specification, or where directed by the Engineer, complete and accepted by the Engineer.

MATERIALS:

The materials shall conform to the following requirements:

1. High Early Strength Concrete – The high early strength concrete shall conform to one of the following:
 - a. The Contractor shall design and submit to the Engineer for approval a high early strength concrete mix. This mix shall be air-entrained, and shall be composed of Portland cement, fine and coarse aggregates, approved admixtures and additives, and water. The mix shall contain between 4% and 7% entrained air, and shall attain a 2-hour compressive strength of 2,500 psi. Additionally, the mix shall contain shrinkage compensating additives such that there will be no separation of the patched area from the parent concrete. This shrinkage-compensating additive shall be utilized so as to produce expansion in the high early strength concrete of no more than 3%.
 - b. In lieu of the above high early strength concrete mix, the Contractor may propose the use of a proprietary type mix that will meet the same physical requirements as those stated above. A mix design shall be submitted for this material, stating the percentage of each component to be utilized.
2. Regardless of the type of high early strength concrete proposed by the Contractor, substantive data that demonstrates the ability of the material to meet the specification requirements shall be submitted with the proposed mix design at least 2 weeks prior to its use.
3. Galvanized Deformed Steel Bars: Section 810.
4. Epoxy Coating Repair material: Shall be compatible with the epoxy coating, inert in concrete, and suitable for repairs in the field. The patching material shall be either identified on the container as meeting the requirements of Annex A1 of ASTM D3963 or shall be accompanied by a Materials Certificate certifying that the material meets the requirements of Annex A1.

CONSTRUCTION METHODS:

Repairs paid under this item shall be done over Amtrak RR. The contractor shall coordinate all work activities with the railroad. Additional shielding, or other specialized equipment or methods may be necessary to perform these repairs.

Repairs shall conform to Section 818 of the RI Standard Specifications with latest revisions. Construction methods shall conform to Item Code 818.9904, "Portland Cement Concrete Deck Repairs (Partial Depth Removal) BR 063601 & 063701," except as amended below.

1. Assessment of the Repair Type: Determination of repair types shall be done as early as possible within the work window to allow time to complete the repair work and achieve the required patching material strength prior to opening the lane(s) to traffic. The Contractor shall have the necessary tools, materials, equipment and supplies on site during deck repair operations that in the event it is determined that a full depth repair is required, the Contractor can proceed with the repair within the current work window.
2. Removal of Deteriorated Material: When determined that a full depth repair is required, no concrete removal operations will resume until after the following work has been completed:
 - a) The existing bituminous overlay or concrete wearing course has been removed.
 - b) The existing waterproofing system has been removed.

The removal of these materials to the limits shown on the plans and where ordered by the Engineer will be paid for under this item.

The lateral limits of each area to be repaired will be delineated by the Engineer and suitably marked. The outlines of each repair area shall then be cut into the slab to a depth of 1/2 inch with an approved power-saw capable of making straight cuts. In the event that reinforcing steel is encountered within the upper 1/2 inch depth during sawing operations, the depth of saw-cut shall immediately be adjusted to a shallower depth so as not to damage the steel bars. If so directed by the Engineer, saw cutting shall again be carried down to the 1/2 inch depth at other locations of repair provided reinforcing steel is not again encountered. Where over-breakage occurs resulting in a featheredge, the featheredge be squared up to a vertical edge in an approved manner. Where sawing is impractical, the areas shall be outlined by chisel or other approved means

3. Mixing, Placing and Finishing: Mixing and placing concrete shall be done in accordance with the applicable portions of Section 808. Mixing and placing shall not be executed unless the ambient temperature is above 40°F and rising.

The concrete mix shall be properly placed to insure complete contact around all reinforcing steel and against existing concrete at patch edges and compacted to a level slightly above the surrounding deck surface. Vibrators of the appropriate size shall be used for all consolidation of the concrete, regardless of the size of the patch area, with no hand tamping or rodding allowed. Concrete may be moved horizontally with the aid of hand tools, but not with the use of vibrators (excess vibration shall be avoided).

All finished repaired surfaces shall be smooth and flush with adjacent surfaces.

4. Curing: Immediately after finishing of the patch area, a sheet of 4 mil polyethylene shall be placed over the repair area, in conjunction with insulating curing material. This material shall

be a minimum of 2-inch thick closed cell extruded polystyrene insulation board that conforms with the requirements of ASTM C578. It shall have a minimum certified R-value of 10. The insulating material shall extend a minimum of 12 inches beyond the limits of the patch area, and shall be kept in intimate contact with the surrounding pavement surface to prevent lifting of the material. It shall be weighted down with sandbags that weight at least 15 pounds each. The sandbags shall be placed a minimum of 2 feet on center around the patch area.

Cured patches, having a hollow sound when chain dragged or tapped (indicating delamination), shall be replaced by the Contractor at its expense until a patch acceptable to the Engineer is in place.

5. Testing: The Contractor shall form, cure and test all concrete test cylinders under supervision of the Engineer. The dimensions, type of cylinder mold, number of cylinders, and method of curing shall be as directed by the Engineer. The Contractor shall provide a portable compressive testing machine, on site, for the purpose of testing all compressive strength cylinders. All testing shall be in accordance with the requirements of ASTM C39. NOTE: This compressive testing machine must be calibrated in accordance with the provisions of Section 5, ASTM C39.
6. Time Schedule: Traffic will not be allowed on any areas where the Contractor has placed and finished concrete until the material has properly cured as specified, has developed the required strength of 2,500 psi as determined by the compressive strength test, and a temporary bituminous patch has been placed, or until the Engineer authorizes its opening to traffic.

METHOD OF MEASUREMENT:

Item Code 818.9905, "Portland Cement Concrete Deck Repairs (Full Depth Removal) BR 063601 & 063701," will be measured by the number of square feet of such repairs actually made, regardless of slab thickness, in accordance with the Plans and this specification and/or as directed by the Engineer.

BASIS OF PAYMENT:

The accepted quantity of Item Code 818.9905, "Portland Cement Concrete Deck Repairs (Full Depth Removal) BR 063601 & 063701" will be paid at the respective contract unit price per square foot as listed in the Proposal. The price so stated shall constitute full and complete compensation for all labor, tools, materials, equipment, including saw cutting bituminous overlay and concrete, removal of all bituminous overlay and deteriorated concrete for the full depth of the deck slab, furnishing and installing deformed steel bars where necessary, reconstructing the slab with new concrete, and providing and subsequent removal of temporary protective shields as required, including all other incidentals to complete work over the railroad, complete and accepted by the Engineer.

**CODE 824.9920 TEMPORARY JACKING AND SHORING OF BEAMS & GIRDERS
– BRIDGE NO. 063001**

**CODE 824.9921 TEMPORARY JACKING AND SHORING OF BEAMS & GIRDERS
– BRIDGE NO. 063101**

**CODE 824.9922 TEMPORARY JACKING AND SHORING OF BEAMS & GIRDERS
– BRIDGE NO. 063801**

**CODE 824.9923 TEMPORARY JACKING AND SHORING OF BEAMS & GIRDERS
– BRIDGE NO. 063601**

**CODE 824.9924 TEMPORARY JACKING AND SHORING OF BEAMS & GIRDERS
– BRIDGE NO. 063701**

**CODE 824.9925 TEMPORARY JACKING AND SHORING OF BEAMS & GIRDERS
--BRIDGE NO. 063401**

DESCRIPTION:

The work under this item shall consist of jacking and shoring beams/girders in order to perform structural concrete masonry repairs to the beam seat/abutment stem, and structural steel repairs as indicated on the Contract Drawings and/or as directed by the Engineer. The work shall include designing, furnishing, fabricating, erecting, jacking and removing the temporary jacking and shoring assembly as required to perform the repairs. The jacking and shoring assembly (jack, column, base plate and anchor bolts) shall be founded on top of the existing abutment footing or on top of a cribbing system founded on the existing earth as determined by the Contractor's Engineer. The applicable beams/girders and locations of the jacking and shoring assemblies are indicated on the Contract Drawings.

This item of work shall also include the removal, stockpiling and resetting of the concrete slope paving blocks; the excavation and stockpiling of fill; the subsequent backfilling and compaction of the existing fill material; providing, placing and removing a cribbing system or anchorage to the existing abutment footing; providing, installing, and removing a support system to maintain the existing bearings during reconstruction of the concrete bearing pads; the restoration of the site to its original conditions upon the completion of the work; and all incidentals necessary to properly perform the work in accordance with the Contract Documents and as specified in this Special Provision, complete and accepted by the Engineer.

If the contractor elects to construct a temporary jacking and shoring system as shown in the plans, this item of work shall also include design, installation, maintenance, and completion of a temporary earth retaining system adjacent to Amtrak RR. Also included shall be removal and replacement of ballast.

MATERIALS:

Materials shall conform to the applicable requirements of Subsection 824.02 "Materials", M.05

“Metals”, and M.11 “Timber” of the Rhode Island Standard Specifications for Road and Bridge Construction, amended 2018, including the latest revisions.

CONSTRUCTION METHODS:

All work shall be performed in accordance with the phased sequence of construction and the Maintenance and Protection of Traffic Plans as well as the restrictions noted in the contract TMP and CS pages.

The Contractor shall assure that no debris or any other foreign material falls onto the roadways beneath. Should any debris fall onto the ground, all work shall stop until such time as the debris has been recovered and a revised procedure of operation submitted for approval. Any delay caused as a result of cessation of work shall not relieve the Contractor of any responsibilities under this contract, including the timely completion of the work.

A qualified representative of the manufacturer of the jacks shall be present in the field to give the Contractor such technical site assistance as may be necessary to assure that the jacking is performed properly and safely.

At no time shall the beam/girder jacking be performed unless the Engineer is present. The Contractor shall provide a minimum of two day advance notice to the Engineer, prior to the beam/girder jacking.

In order to insure that the structure is supported on the jack for the least possible amount of time, the Contractor shall have all materials, equipment, tools, spare parts, and labor on hand prior to commencing with the jacking operation and beam seat repair and bearing removal and replacement at the abutment.

The Contractor shall submit to the Engineer, a record of the jacking loads encountered just prior to the dial lock-off or final shimming, clearly indicating the corresponding jack number, substructure location, and beam/girder number.

Care must be taken to minimize disturbance to the existing site conditions. All equipment, shoring and bracing systems shall be removed upon completion of the work, and the area restored to its original condition to the approval of the Engineer, at no additional cost to the State of Rhode Island.

Temporary excavation and/or filling and the removal, stockpiling and resetting of the existing slope pavers, when required, shall be limited to the minimum amount which will be required to provide a work area to erect and maintain the shoring system. In areas where the soil is disturbed by the Contractor, compost filter sock (as directed by the Engineer) to control erosion will be required and shall be provided by the Contractor.

Whether the beam/girder is jacked from a shoring system founded on top of the existing abutment footing or on top of a cribbing system founded on the existing ground, the lateral stability of the system must be maintained throughout the jacking process.

The Contractor shall be responsible for submitting shop drawings showing the proposed method, details, and backup computations for review and approval by the Engineer. The proposed method, details and backup computations shall contain provisions for the shoring and bracing, including installation of stiffeners and beam/girder jacking seats where required. In addition to the above requirements, the following shall apply:

1. The Contractor shall carefully lower the structure by using the hydraulic system of the jacks.
2. Materials and equipment used to perform these operations shall be capable of supporting the beams/girders under full load, including dead and live loads.
3. Minimum jack capacities shall be as indicated on the Contract Drawings.
4. The Contractor shall jack the structure only the height necessary to relieve the load from the bearing to accommodate the proposed work (bearing replacement, structural steel repair, and/or beam seat repair) but not to exceed 1/16 inch.
5. Designs and shop drawings shall be submitted to the Engineer in accordance with the Special Provision entitled "Plans and Shop Drawings", and shall be sealed by an Engineer registered in the State of Rhode Island. The submission shall contain a description and plan of the proposed methods and materials in sufficient detail to permit evaluation of the system for structural adequacy. Included with the submittal shall be details showing the proposed method to support the bearings during reconstruction of the pedestals. Specific jack related items to be submitted with the shop drawings include:
 - a. A hydraulic schematic.
 - b. General jacking procedure, including lowering of the structure.
 - c. A Proof Test Certificate for the jacks, gauges, and fittings and all accessories.
 - d. A certificate verifying 2% accuracy of all gages.
 - e. Catalog cut sheets and assembly drawings of each size of jack.
 - f. A theoretical conversion chart for converting pressures to loads.
6. The Contractor shall consider the possibility of the lead time, if any, to obtain the required jacks. Any resulting delays in operations will not result in claims for additional payment to the State of Rhode Island, nor an extension of the project completion date.
7. The hydraulic system of the jacks shall not be relied upon to sustain the jacking load once the lifting has been completed.
8. The beam/girder elevations shall be the same before and after the completion of work.
9. In the case of a failure of the hydraulic system of a jack, the beam/girder shall be supported such that the jack can be replaced. All repairs as required by the Engineer (including associated design) shall be performed by the Contractor prior to further jacking, at no additional cost to the State. The Contractor shall provide one (1) emergency back-up jack

on site in case of a failure of the jack.

10. In the case of bearings which are being replaced, the Contractor shall insure that the existing bearing is unrestrained in the vertical direction prior to jacking, such that the bearing provides no resistance to the jacking. The cost of freeing the bearing, if necessary, shall be included in the cost of this item.
11. The Contractor shall be warned that the existing bearings may become unstable once the weight of the structure has been transferred to the jack, and shall take necessary precautions to prevent the bearing from falling and causing damage or injury.
12. Plans of the existing structures are included on the contract advertising CD and are available at the Rhode Island Department of Transportation.
13. The Contractor shall thoroughly familiarize himself with the site conditions prior to commencing work.
14. Where applicable, the existing railings and guardrails adjacent to roadway expansion joints shall be disconnected prior to the jacking operation and be reinstalled at the completion of the work.
15. Survey work as directed shall be performed prior to the commencement of jacking.
16. Beveled bearing/shim plates shall be provided at locations where necessary.
17. The certified jack capacity and stroke shall be clearly indicated on each jack. The minimum stroke requirement shall be 2 inches for each jack.
18. Thermal movement and rotation of each beam/girder shall be accommodated by the use of PTFE pads and/or tilt saddles or by other approved means.
19. The shoring system must be designed for all applied lateral loads in accordance with the latest AASHTO Specifications. Details must be submitted to the Engineer for review and approval as part of the shop drawing submittals.
20. Materials and equipment used to perform the work shall be capable of safely supporting the beam/girder's full dead and live load.
21. At the locations where the beam/girder is jacked for a beam seat repair, bearing replacement, and/or structural steel repair, the shoring system shall be in place prior to the commencement of the work, and shall remain in place until the completion of all of the repair/rehabilitation work.

METHOD OF MEASUREMENT:

The item will not be measured for payment.

BASIS OF PAYMENT:

No separate payment will be made for this item. The costs for this work shall be included in the Lump Sum bid price for the respective bridge repair item, Item Code 800.9920 “Repairs to Route 37 Bridge No. 063001”, Item Code 800.9921 “Repairs to Route 37 Bridge No. 063101”, Item Code 800.9924 “Repairs to Route 37 Bridge No. 063401”, Item Code 800.9925 “Repairs to Route 37 Bridge No. 063801”, Item Code 800.9926 “Repairs to Route 37 Bridge No. 063601” or Item Code 800.9927 “Repairs to Route 37 Bridge No. 063701.” Those costs shall constitute full and complete compensation for all labor, tools, materials, equipment, and incidentals required to finish the work as described in this Special Provision and elsewhere in the Contract Documents, complete and accepted by the Engineer.

CODE T08.9901
UNDERPASS LUMINAIRE

DESCRIPTION: This item shall consist of furnishing and installing a light emitting diode (LED) pendant mounted luminaire of the wattage, distribution, and voltage as specified and shown in RI Standard 18.3.7, completely wired and mounted to a bracket under the bridge in accordance with the plans and specifications.

MATERIALS: Materials shall conform to Subsection Section M.15.05 of the Standard Specifications and the following:

Luminaires are required to meet average illuminance and uniformity ratio as recommended by the Illuminating Engineering Society of North America (RP-8-00) for the given roadway application as calculated by the Department.

The housing of the luminaire shall be heavy-duty cast aluminum and shall be completely sealed against moisture and environmental contaminants with an IP65 rating. The fixture shall be equipped with a surface mounted 16" x 16" x 8" galvanized back box for connection to pendant mounted conduits. The back box shall be rated for outdoor use, shall be painted the same color as the luminaire, and shall be supplied as an option by the manufacturer of the luminaire. All hardware integral to the luminaire shall be stainless steel.

LED optics shall consist of sealed LED modules with an IP66 rating. The luminaire optics shall provide warm white light at a standard 4000K CCT with no sacrifice in lumen output. The LED luminaire shall draw approximately 200 watts or less and shall operate at a drive current of 700mA. The luminaire shall provide an initial delivered lumen output of 11,970 lumens or greater, and shall provide an Wide Symmetric light distribution. The luminaire shall produce a minimum of 110 lumens per watt. Lumen maintenance shall be greater than 90% at 50,000 hours. Theoretical L85 shall be 50,000 hours at 25°C.

LED drivers shall be Class 1 with a power factor >90%, THD<20%, and a life expectancy of 100,000 hours with <1% failure rate. The LED luminaire shall be provided with integral surge protector which meets a minimum Category C low operation (per ANSI/IEEE C62.41.2). The electrical components shall have a quick disconnect harness. The LED luminaire shall be suitable for temperature operation from -40°C to 40°C (-40°F to 104°F). The luminaire shall operate at MV 120-277 volts.

The LED luminaire shall carry a limited 5 year warranty on the LEDs and the Driver, and shall be ARRA compliant.

CONSTRUCTION METHODS: The LED luminaire shall be pendant mounted to a bracket on the underside of the bridge deck at the location indicated on the plans. The pendant mounted luminaire shall be securely anchored to the bottom of the bridge deck using stainless steel threaded inserts cast into the deck. Length of inserts and embedment depth shall be as recommended by the anchor manufacturer for the given load. The installed luminaire shall be properly oriented,

connected to the power supply conductors, cleaned, and ready for operation. The luminaire shall be leveled by placing an electronic (digital) level along the flat bottom face of the luminaire.

The Contractor shall ensure that once installed the LED pendant mounted luminaire functions properly.

METHOD OF MEASUREMENT: “Underpass Luminaire” will be measured per each luminaire installed in accordance with the plans or as directed by the Engineer.

BASIS OF PAYMENT: The accepted quantities of "Underpass Luminaire" will be paid for at the respective contract unit price per each as listed in the Proposal. The prices so-stated constitute full and complete compensation for all labor, materials, and equipment and for all incidentals required to finish the work, complete and accepted by the Engineer.

CODE T08.9902 – ALUMINUM LIGHTING STD 30 X 8

Work under this item shall conform to the requirements of Section T08 of the Standard Specifications and the following:

T.08.02 MATERIALS. *add the following:*

"Aluminum Lighting Std 30 X 8" shall consist of 30-foot high aluminum poles with 8-foot davits on one side of the pole.

T.08.04 METHOD OF MEASUREMENT. *Modify as follows:*

T08.04.1 Light Standards. *Delete the first sentence and replace it with the following:*

"Aluminum Lighting Std 30 X 8" will be measured by the number of units actually furnished and installed in accordance with the Plans and/or as directed by the Engineer.

T.08.05 BASIS OF PAYMENT. *Modify as follows:*

T.08.05.05.1 Light Standards. *Delete the first sentence and replace it with the following:*

The accepted quantities of "Aluminum Lighting Std 30 X 8" will be paid for at the contract unit price per each as listed in the Proposal.

CODE T08.9903

RAISE LIGHT STANDARD TO GRADE

DESCRIPTION: This item shall consist of removing an existing lighting pole from a concrete foundation, excavating around the foundation, removing and resetting the foundation at the proper line and grade for the reconstructed roadway at the locations shown on the plans or as directed by the Engineer. Said work shall also include conduit to tie back into the foundation at the new location.

MATERIALS: Materials shall conform to Section M15 of the Standard Specifications.

CONSTRUCTION METHODS: Disconnect power source and lock-out the circuit before removing the light pole. Disconnect power cabling at the pole and pull cabling back to nearest pull box or hand hole. Remove light pole and stack/store pole for future resetting. Dig around the existing foundation and cut conduit 12" from the foundation to allow for future re-connection. Remove foundation for proper line and grade work. After finish grade is established, dig hole 12" larger than the foundation, reset foundation and backfill with 2B stone to secure in place. Tie-in conduit with coupling and re-pull cable to light pole and reconnect cabling. Re-activate power when work is complete and approved by owner.

METHOD OF MEASUREMENT: "Raise Light Standard to Grade" will be measured per each light standard raised in accordance with the plans or as directed by the Engineer.

BASIS OF PAYMENT: The accepted quantities of "Raise Light Standard to Grade" will be paid for at the respective contract unit price per each as listed in the Proposal. The prices so-stated constitute full and complete compensation for all labor, materials, and equipment and for all incidentals required to finish the work, complete and accepted by the Engineer.

CODE T11.9901
20 FOOT GALVANIZED STEEL MAST ARM TRAFFIC SIGNAL POST
AND FOUNDATION, STD. 19.2.0

CODE T11.9902
25 FOOT GALVANIZED STEEL MAST ARM TRAFFIC SIGNAL POST
AND FOUNDATION, STD. 19.2.0

CODE T11.9903
35 FOOT GALVANIZED STEEL MAST ARM TRAFFIC SIGNAL POST
AND FOUNDATION, STD. 19.2.0

CODE T11.9904
50 FOOT GALVANIZED STEEL MAST ARM TRAFFIC SIGNAL POST
AND FOUNDATION, STD. 19.2.0

CODE T11.9905
20 FOOT GALVANIZED STEEL MAST ARM TRAFFIC SIGNAL POST
AND FOUNDATION, STD. 19.2.0 MODIFIED I

CODE T11.9906
DUAL MAST ARM (30x30) GALVANIZED STEEL MAST ARM TRAFFIC SIGNAL POST
AND FOUNDATION, STD. 19.2.0

DESCRIPTION: This work consists of furnishing and installing Galvanized Steel Mast Arms and Poles with Foundations at the locations indicated on the Plans and/or as directed by the Engineer, all in accordance with the Standard Specifications.

All traffic signal mast arms, poles and foundations shall conform to **SECTION T.11; TRAFFIC SIGNAL STANDARDS AND POSTS**, of the Standard Specifications.

MATERIALS: All materials shall be in accordance with the applicable provisions of **Subsection T.11.02** of the Standard Specifications.

CONSTRUCTION METHODS: Traffic signal mast arms, poles, and foundations shall be installed in accordance with the applicable provisions of **Subsection T.11.03** of the Standard Specifications.

The Contractor shall perform soil borings for all mast arm structures to aide in the Contractor's determination of soil types and classifications for use in the design of the mast arm foundations. The boring logs, soil types and classifications shall be submitted with the mast arm foundation shop drawing submittal package.

METHOD OF MEASUREMENT: All traffic signal mast arms, posts and foundations shall be measured for payment by the unit "EACH" of such units actually furnished and installed in accordance with the Plans or as directed by the Engineer.

BASIS OF PAYMENT: The "20 FOOT GALVANIZED STEEL MAST ARM TRAFFIC SIGNAL POST AND FOUNDATION, STD. 19.2.0", "25 FOOT GALVANIZED STEEL MAST ARM TRAFFIC SIGNAL POST AND FOUNDATION, STD. 19.2.0", "35 FOOT GALVANIZED STEEL MAST ARM TRAFFIC SIGNAL POST AND FOUNDATION, STD. 19.2.0", "50 FOOT GALVANIZED STEEL MAST ARM TRAFFIC SIGNAL POST AND FOUNDATION, STD. 19.2.0", "20 FOOT GALVANIZED STEEL MAST ARM TRAFFIC SIGNAL POST AND FOUNDATION, STD. 19.2.0 MODIFIED I" and "DUAL MAST ARM (30X30) GALVANIZED STEEL MAST ARM TRAFFIC SIGNAL POST AND FOUNDATION, STD. 19.2.0"

shall be paid for at their respective contract unit price bid per "EACH" as listed in the Proposal. The price so-stated shall constitute full compensation for all design, materials, labor, tools, soil borings, determination of soil types and classifications, equipment and all incidentals required to finish the work, complete in place and accepted by the Engineer.

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003	201.0402 Cont.	129+50 TO 136+50		200.00	0011	02
		PONTIAC AVENUE				
		STA. 16+20 TO STA. 17+35 LT		105.00	0011	02
		STA. 16+20 TO STA. 21+37 RT		560.00	0011	02
		STA. 20+61 TO STA. 21+98 LT		140.00	0011	02
		STA. 22+23 TO STA. 22+81 LT		196.00	0011	02
		STA. 27+57 TO STA. 27+89 RT		29.00	0011	02
		ROUTE 37 WB OFF-RAMP TO PONTIAC AVENUE				
		STA. 200+09 TO STA. 200+85 LT		78.00	0003	04
		STA. 200+33 TO STA. 200+69 LT & RT		87.00	0003	04
		STA. 200+65 TO STA. 205+45 RT		492.00	0003	04
		ROUTE 37 WB ON-RAMP FROM PONTIAC AVENUE				
		STA. 299+58 TO STA. 308+10 LT		960.00	0003	04
		STA. 301+20 TO STA. 308+17 LT & RT		696.00	0003	04
		SOCKANOSSET CROSS ROAD				
		STA. 410+42 TO STA. 412+94 RT		318.00	0021	03
		STA. 410+53 TO STA. 410+63 RT		36.00	0021	03
		STA. 410+68 TO STA. 412+82 LT		242.00	0021	03
		STA 196+00 TO BRIDGE 629				
		WB 196+00 TO 205+00		804.00	0011	02
Item 201.0402 Total:				8,198.00		
004	201.0403	REMOVE AND DISPOSE SIDEWALKS	SY			
		BRIDGE 638				
		BR 638		220.00	0011	02
		JEFFERSON BLVD				
		JEFFERSON BLVD		110.00	0011	02
		PONTIAC AVENUE				
		STA. 16+21 TO STA. 21+48 RT		299.00	0011	02

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004	201.0403	Cont.				
		STA. 21+78 TO STA. 21+95	RT	38.00	0011	02
		STA. 22+03 TO STA. 22+61	RT	32.00	0011	02

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004	201.0403	Cont.				
		STA. 26+82 TO STA. 27+00 RT		5.00	0011	02
		STA. 27+53 TO STA. 27+95 RT		25.00	0011	02
		SOCKANOSSET CROSS ROAD				
		STA. 411+84 TO STA. 412+94 RT		67.00	0021	03
		STA. 411+98 TO STA. 412+82 LT		50.00	0021	03
Item 201.0403 Total:				846.00		
005	201.0407	REMOVE AND DISPOSE PAVEMENT AND RIGID BASE	SY			
		BRIDGE 628				
		EB 204+50 TO 209+00		88.00	0011	02
		Bridge 629 to STA 213+00				
		EB 207+25 TO 213+00		2,191.10	0011	02
		I-95 Off Ramp				
		WB 210+00 TO 216+00		300.00	0011	02
		ROUTE 37 WB OFF-RAMP TO PONTIAC AVENUE				
		STA. 200+21 TO STA. 205+58		289.00	0011	02
		LT/RT				
		ROUTE 37 WB ON-RAMP FROM PONTIAC AVENUE				
		STA. 299+67 TO STA. 308+23		2,210.00	0003	04
		LT/RT				
		STA 196+00 TO BRIDGE 629				
		WB 196+00 TO 205+00		3,482.70	0011	02
Item 201.0407 Total:				8,560.80		
006	201.0409	REMOVE AND DISPOSE FLEXIBLE PAVEMENT	SY			
		BRIDGE 627 EB				
		EB 190+00 TO 194+00		220.00	0011	02
		BRIDGE 627 TO STA 196+00				
		WB 192+50 TO 196+00		397.80	0011	02

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Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
025	201.9901 Cont.	AVENUE				
		ROUTE 37 WB OFF-RAMP TO PONTIAC AVENUE		4.00	0021	03
		ROUTE 37 WB ON-RAMP FROM PONTIAC AVENUE				
		AS NEEDED		20.00	0003	04
		RT 37 EB				
		BR 062801		2.00	0021	03
		RT 37 WB				
		BR 062901		4.00	0021	03
		STA. 183+00 TO 197+00		11.00	0021	03
		STA. 197+00 TO 205+00		12.00	0021	03
		STA. 210+00 TO 213+00		7.00	0021	03
Item 201.9901 Total:				71.00		
026	201.9902	REMOVE & DISPOSE OF LIGHT STD, LUMINAIRE	EACH			
		RTE 37				
		RTE 37		4.00	0011	02
Item 201.9902 Total:				4.00		
027	201.9903	REMOVE & DISPOSE SERVICE LOAD CENTER & FOUNDATION	EACH			
		RTE 37				
		RTE 37		1.00	0011	02
Item 201.9903 Total:				1.00		
028	202.0100	EARTH EXCAVATION	CY			
		BRIDGE 627 EB				
		EB 190+00 TO 194+00		200.00	0011	02
		BRIDGE 627 TO STA 196+00				
		WB 192+50 TO 196+00		600.00	0011	02
		BRIDGE 628				

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Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
028	202.0100 Cont.	EB 204+50 TO 209+00		400.00	0011	02
		Bridge 629 to STA 213+00				
		WB 207+25 TO 213+00		1,300.00	0011	02
		BRIDGE 635				
		234+50 TO 238+00		350.00	0011	02
		FROM L01.0106				
		FROM L01.0106		314.00	0011	02
		FROM L01.0107				
		FROM L01.0107		258.00	0011	02
		FRONTAGE ROAD				
		STA. 99+75 TO STA. 108+75		1,640.00	0003	04
		I-95 Off Ramp				
		WB 210+00 TO 216+00		1,500.00	0011	02
		PONTIAC AVENUE				
		STA. 16+20 TO STA. 23+80		1,730.00	0011	02
		ROUTE 37 WB OFF-RAMP TO PONTIAC AVENUE				
		STA. 200+50 TO STA. 205+58		790.00	0011	02
		ROUTE 37 WB ON-RAMP FROM PONTIAC AVENUE				
		STA. 299+68 TO STA. 308+15		920.00	0003	04
		STA 182+50 TO BRIDGE 627				
		WB182+50 TO 190+50		750.00	0011	02
		STA 196+00 TO BRIDGE 629				
		WB 196+00 TO 205+00		4,100.00	0011	02
		STU 1 BASIN				
		STU 1 BASIN		355.00	0011	02
		STU 2 BASIN				
		STU 2 BASIN		3,375.00	0011	02
		STU 3 BASIN				
		STU 3 BASIN		560.00	0011	02
		STU 4 SWALE				
		STU 4 SWALE		21.00	0011	02

Distribution of Quantities

Project Name - Bridge Group 51A - Rt 37 C-2

Estimate Name - Addendum 5

R.I. Contract No. - 2019-CB-027

FAP Nos: 3RD-PRTY(258), NHP-0037(012), NHPG-0037(013), NHP-TIGR(003)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
028	202.0100 Cont.	STU 5 BASIN				
		STU 5 BASIN		450.00	0011	02
		STU 6 FOREBAY				
		STU 6 FOREBAY		42.00	0011	02
		SWALE BIORETENTION SOIL				
		SWALE BIORETENTION SOIL		172.00	0011	02
Item 202.0100 Total:				19,827.00		
029	202.0200	ROCK EXCAVATION COMMON	CY			
		PROJECT WIDE				
		100+00		550.00	0011	02
Item 202.0200 Total:				550.00		
030	202.0400	MUCK EXCAVATION	CY			
		Pontiac Avenue				
		Sta 17+70 to 17+90 LT		7.00	0011	02
		Sta 17+74 to 17+88 RT		7.00	0011	02
		STA 18+07 to 18+20 RT		7.00	0011	02
		Route 37 WB Off Ramp to Pontiac Avenue				
		Sta 202+30 to 203+50 LT		7.00	0011	02
Item 202.0400 Total:				28.00		
031	202.0700	COMMON BORROW	CY			
		BRIDGE 627 EB				
		EB 190+00 TO 194+00		50.00	0011	02
		BRIDGE 627 TO STA 196+00				
		WB 192+50 TO 196+00			0011	02
		BRIDGE 628				
		EB 204+50 TO 209+00			0011	02
		Bridge 629 to STA 213+00				
		EB 207+25 TO 213+00		1,100.00	0011	02
		BRIDGE 635				

Distribution of Quantities

Project Name - Bridge Group 51A - Rt 37 C-2

Estimate Name - Addendum 5

R.I. Contract No. - 2019-CB-027

FAP Nos: 3RD-PTY(258), NHP-0037(012), NHPG-0037(013), NHP-TIGR(003)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
031	202.0700	Cont.		5.00	0011	02
		234+50 TO 238+00				
		FRONTAGE ROAD				
		STA. 99+75 TO STA. 23+80		4,020.00	0003	04
		I-95 Off Ramp				
		WB 210+00 TO 216+00		35.00	0011	02
		JEFFERSON BOULEVARD				
		129+50 TO 136+50		5.00	0011	02
		PONTIAC AVENUE				
		STA. 16+20 TO STA. 23+80		20.00	0011	02
		PRESERVATION BRIDGES				
		BR 626		30.00	0011	02
		BR 630		25.00	0011	02
		BR 632		40.00	0011	02
		BR 633		40.00	0011	02
		BR 634		50.00	0011	02
		BR 636		35.00	0011	02
		BR 637		35.00	0011	02
		BR 638		150.00	0011	02
		BR631		28.00	0011	02
		ROUTE 37 WB OFF-RAMP TO PONTIAC AVENUE				
		STA. 200+50 TO STA. 205+58		130.00	0011	02
		ROUTE 37 WB ON-RAMP FROM PONTIAC AVENUE				
		STA. 299+68 TO STA. 308+15		1,570.00	0003	04
		STA 182+50 TO BRIDGE 627				
		WB 182+50 TO 190+50		150.00	0011	02
		STA 196+00 TO BRIDGE 629				
		WB 196+00 TO 205+00		850.00	0011	02
		STU 1				
		STU 1		126.00	0011	02
		STU 2				
		STU 2		256.00	0011	02

Distribution of Quantities

Project Name - Bridge Group 51A - Rt 37 C-2

Estimate Name - Addendum 5

R.I. Contract No. - 2019-CB-027

FAP Nos: 3RD-PRTY(258), NHP-0037(012), NHPG-0037(013), NHP-TIGR(003)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
031	202.0700 Cont.	STU 3				
		STU 3		361.00	0011	02
		STU 4				
		STU 4		916.00	0011	02
		STU 5				
		STU 5		16.00	0011	02
		STU 6				
		STU 6		48.00	0011	02
Item 202.0700 Total:				10,091.00		

Distribution of Quantities

Project Name - Bridge Group 51A - Rt 37 C-2

Estimate Name - Addendum 5

R.I. Contract No. - 2019-CB-027

FAP Nos: 3RD-PRTY(258), NHP-0037(012), NHPG-0037(013), NHP-TIGR(003)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
032	203.0100	STRUCTURAL EXCAVATION EARTH	CY			
		EXISTING BRIDGE NO. 062701				
		EXISTING EAST ABUTMENT		1,251.00	0011	02
		EXISTING WEST ABUTMENT		821.00	0011	02
		NE GRS WALL		100.00	0011	02
		NW GRS WALL		192.00	0011	02
		SE GRS WALL		90.00	0011	02
		SW GRS WALL		128.00	0011	02
		EXISTING BRIDGE NO. 062801				
		ABUTMENTS AND WINGWALLS		1,310.00	0011	02
		EXISTING BRIDGE NO. 062901				
		ABUTMENTS AND WINGWALLS		1,710.00	0011	02
		EXISTING BRIDGE NO. 063501				
		ABUTMENTS AND WINGWALLS		2,400.00	0011	02
		EXISTING BRIDGE NO. 626				
		EXISTING BRIDGE NO. 626		30.00	0011	02
		EXISTING BRIDGE NO. 630				
		EXISTING BRIDGE NO. 630		32.00	0011	02
		EXISTING BRIDGE NO. 631				
		EXISTING BRIDGE NO. 631		40.00	0011	02
		EXISTING BRIDGE NO. 632				
		EXISTING BRIDGE NO. 632		40.00	0011	02
		EXISTING BRIDGE NO. 633				
		EXISTING BRIDGE NO. 633		50.00	0011	02
		EXISTING BRIDGE NO. 634				
		EXISTING BRIDGE NO. 634		61.00	0011	02
		EXISTING BRIDGE NO. 636				
		EXISTING BRIDGE NO. 636		45.00	0011	02
		EXISTING BRIDGE NO. 637				
		EXISTING BRIDGE NO. 637		50.00	0011	02
		EXISTING BRIDGE NO. 638				
		EXISTING BRIDGE NO. 638		175.00	0011	02
		SOCKANOSSET CROSS ROAD				

Distribution of Quantities

Project Name - Bridge Group 51A - Rt 37 C-2

Estimate Name - Addendum 5

R.I. Contract No. - 2019-CB-027

FAP Nos: 3RD-PTY(258), NHP-0037(012), NHPG-0037(013), NHP-TIGR(003)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
032	203.0100	Cont. STA. 412+43 TO STA. 412+79 RT		31.00	0021	03
				Item 203.0100 Total:		8,556.00
033	203.0700	PERVIOUS FILL	CY			
		PROPOSED BRIDGE NO. 062801				
		ABUTMENTS AND WINGWALLS		2,720.00	0011	02
		PROPOSED BRIDGE NO. 062901				
		ABUTMENTS AND WINGWALLS		2,130.00	0011	02
				Item 203.0700 Total:		4,850.00
034	204.0100	TRIMMING AND FINE GRADING	SY			
		BRIDGE 627 EB				
		EB 190+00 TO 194+00		1,264.70	0011	02
		BRIDGE 627 TO STA 196+00				
		WB 192+50 TO 196+00		636.40	0011	02
		BRIDGE 627 WB				
		WB 190+50 TO 192+50		167.10	0011	02
		BRIDGE 628				
		EB 204+50 TO 209+00		173.30	0011	02
		Bridge 629 to STA 213+00				
		EB 207+25 TO 213+00		3,608.90	0011	02
		BRIDGE 635				
		234+50 TO 238+00		645.60	0011	02
		I-95 Off Ramp				
		WB 210+00 TO 216+00		1,123.30	0011	02
		IMPROVEMENTS TO PONTIAC AVENUE				
		AND ROUTE 37 WEST RAMPS				
		FROM ITEM 401.1000		14,880.00	0011	02
		FROM ITEM 905.0110		879.00	0011	02
		FROM ITEM 920.0055		80.00	0011	02
		FROM ITEM L01.0104		9,185.00	0011	02
		JEFFERSON BOULEVARD				
		129+50 TO 136+50		222.20	0011	02

Distribution of Quantities

Project Name - Bridge Group 51A - Rt 37 C-2

Estimate Name - Addendum 5

R.I. Contract No. - 2019-CB-027

FAP Nos: 3RD-PRTY(258), NHP-0037(012), NHPG-0037(013), NHP-TIGR(003)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
040	213.0100	Cont.				
		234+50 TO 236+00 RT		150.00	0011	02
		236+70 TO 238+00 LT		130.00	0011	02
		236+90 TO 238+00 RT		110.00	0011	02
		ROUTE 37 WB OFF-RAMP TO PONTIAC AVENUE				
		STA. 201+00 TO STA. 203+10 RT		216.00	0011	02
		STA. 201+00 TO STA. 205+58 LT		447.00	0011	02
		ROUTE 37 WB ON-RAMP FROM PONTIAC AVENUE				
		STA. 300+50 TO STA. 308+02 RT		755.00	0003	04
Item 213.0100 Total:				9,235.00		
041	301.0300	CRUSHED STONE OR CRUSHED GRAVEL	CY			
		BASE MODIFIED				
		ACCESS ROAD				
		199+00-201+25 RT		57.00	0011	02
		STU 4				
		STU 4		33.00	0011	02
Item 301.0300 Total:				90.00		
042	302.0100	GRAVEL BORROW SUBBASE COURSE	CY			
		BRIDGE 627 EB				
		EB 190+00 TO 194+00		200.00	0011	02
		BRIDGE 627 TO STA 196+00				
		WB 192+50 TO 196+00		400.00	0011	02
		BRIDGE 627 WB				
		WB 190+50 TO 192+50		167.10	0011	02
		BRIDGE 628				
		EB 204+50 TO 209+00		200.00	0011	02
		Bridge 629 to STA 213+00				
		EB 207+25 TO 213+00		1,000.00	0011	02
		BRIDGE 635				
		234+50 TO 238+00		250.00	0011	02

Distribution of Quantities

Project Name - Bridge Group 51A - Rt 37 C-2

Estimate Name - Addendum 5

R.I. Contract No. - 2019-CB-027

FAP Nos: 3RD-PTY(258), NHP-0037(012), NHPG-0037(013), NHP-TIGR(003)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
042	302.0100 Cont.	FRONTAGE ROAD				
		STA. 99+95 TO STA. 108+97 LT & RT		741.00	0003	04
		I-95 Off Ramp				
		WB 210+00 TO 216+00		1,000.00	0011	02
		IMPROVEMENTS TO PONTIAC AVENUE				
		FROM ITEM 905.0115		15.00	0011	02
		FROM ITEM 906.0100		31.00	0011	02
		FROM ITEM 906.0101		5.00	0011	02
		FROM ITEM 906.0110		285.00	0011	02
		FROM ITEM 906.0111		16.00	0011	02
		FROM ITEM 906.0210		27.00	0011	02
		FROM ITEM 906.0211		11.00	0011	02
		JEFFERSON BOULEVARD				
		129+50 TO 136+50		163.00	0011	02
		PONTIAC AVENUE				
		STA. 14+20 TO STA. 14+26 RT		1.00	0011	02
		STA. 15+58 TO STA. 15+64 RT		1.00	0011	02
		STA. 16+20 TO STA. 21+08 RT		64.00	0011	02
		STA. 16+20 TO STA. 23+80 LT & RT		1,096.00	0011	02
		STA. 21+54 TO STA. 23+40 LT & RT		35.00	0011	02
		STA. 22+09 TO STA. 22+60 RT		9.00	0011	02
		STA. 24+46 TO STA. 24+50 LT		1.00	0011	02
		STA. 25+20 TO STA. 25+25 LT		1.00	0011	02
		STA. 27+55 TO STA. 27+95 RT		5.00	0011	02
		PRESERVATION BRIDGES				
		BR 630		9.00	0011	02
		BR 631		13.00	0011	02
		BR 633		10.00	0011	02
		BR 634		13.00	0011	02
		BR 636		15.00	0011	02

Distribution of Quantities

Project Name - Bridge Group 51A - Rt 37 C-2

Estimate Name - Addendum 5

R.I. Contract No. - 2019-CB-027

FAP Nos: 3RD-PRTY(258), NHP-0037(012), NHPG-0037(013), NHP-TIGR(003)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
042	302.0100	Cont.				
		BR 637		15.00	0011	02
		BR 638		75.00	0011	02
		ROUTE 37 WB OFF-RAMP TO PONTIAC AVENUE				
		STA. 200+22 TO STA. 205+58		381.00	0011	02
		LT 7 RT				
		STA. 200+35 TO STA. 201+33		63.00	0011	02
		RT & RT				

Distribution of Quantities

Project Name - Bridge Group 51A - Rt 37 C-2

Estimate Name - Addendum 5

R.I. Contract No. - 2019-CB-027

FAP Nos: 3RD-PTY(258), NHP-0037(012), NHPG-0037(013), NHP-TIGR(003)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
042	302.0100 Cont.	ROUTE 37 WB ON-RAMP FROM PONTIAC AVENUE STA. 299+60 TO STA. 308+31 LT & RT SOCKANOSSET CROSS ROAD STA. 410+33 TO STA. 413+93 LT & RT STA. 410+42 TO STA. 412+93 RT STA. 412+57 TO STA. 412+82 LT STA 182+50 TO BRIDGE 627 WB 182+50 TO 190+50 STA 196+00 TO BRIDGE 629 WB 196+00 TO 205+00				
				720.00	0003	04
				95.00	0021	03
				34.00	0021	03
				7.00	0021	03
				500.00	0011	02
				2,700.00	0011	02
		Item 302.0100 Total:		10,374.10		
043	310.9904	PEA GRAVEL ROUTE 37 STU 4	CY			
				17.00	0011	02
		Item 310.9904 Total:		17.00		
044	401.1000	CLASS 19.0 HMA BRIDGE 627 EB EB 190+00 TO 194+00 BRIDGE 627 TO STA 196+00 WB 192+50 TO 196+00 BRIDGE 628 EB 204+50 TO 209+00 FRONTAGE ROAD STA. 100+35 TO STA. 108+97 LT & RT I-95 Off Ramp WB 210+00 TO 216+00 JEFFERSON BOULEVARD	TON			
				603.40	0011	02
				657.30	0011	02
				289.20	0011	02
				911.00	0003	04
				633.70	0021	03

Distribution of Quantities

Project Name - Bridge Group 51A - Rt 37 C-2

Estimate Name - Addendum 5

R.I. Contract No. - 2019-CB-027

FAP Nos: 3RD-PTY(258), NHP-0037(012), NHPG-0037(013), NHP-TIGR(003)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
135	808.9902 Cont.	WEST APPROACH		14.00	0011	02
				Item 808.9902 Total:		28.00
136	808.9903	CAST-IN-PLACE CONCRETE SINGLE FACE LF F-SHAPE BARRIER BRIDGE NO. 062701 BARRIER ALONG EAST ABUTMENT BARRIER ALONG WEST ABUTMENT	LF	12.00 12.00	0011 0011	02 02
				Item 808.9903 Total:		24.00
137	810.9901	EMBEDDED GALVANIC ANODES EXISTING BRIDGE NO. 626 EXISTING BRIDGE NO. 626 EXISTING BRIDGE NO. 630 EXISTING BRIDGE NO. 630 EXISTING BRIDGE NO. 631 EXISTING BRIDGE NO. 631 EXISTING BRIDGE NO. 632 EXISTING BRIDGE NO. 632 EXISTING BRIDGE NO. 633 EXISTING BRIDGE NO. 633 EXISTING BRIDGE NO. 634 EXISTING BRIDGE NO. 634 EXISTING BRIDGE NO. 636 EXISTING BRIDGE NO. 636 EXISTING BRIDGE NO. 637 EXISTING BRIDGE NO. 637 EXISTING BRIDGE NO. 638 EXISTING BRIDGE NO. 638	EACH	200.00 600.00 1,164.00 1,100.00 450.00 50.00 555.00 550.00 4,184.00	0011 0011 0011 0011 0011 0011 0011 0011 0011 0011	02 02 02 02 02 02 02 02 02 02
				Item 810.9901 Total:		8,853.00
138	813.9910	HEAT APPLIED PRE-FABRICATED MEMBRANE	SY			

Distribution of Quantities

Project Name - Bridge Group 51A - Rt 37 C-2

Estimate Name - Addendum 5

R.I. Contract No. - 2019-CB-027

FAP Nos: 3RD-PTY(258), NHP-0037(012), NHPG-0037(013), NHP-TIGR(003)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
138	813.9910 Cont.	EXISTING BRIDGE NO. 626				
		EXISTING BRIDGE NO. 626			0011	02
		EXISTING BRIDGE NO. 630				
		EXISTING BRIDGE NO. 630			0011	02
		EXISTING BRIDGE NO. 631				
		EXISTING BRIDGE NO. 631			0011	02
		EXISTING BRIDGE NO. 632				
		EXISTING BRIDGE NO. 632			0011	02
		EXISTING BRIDGE NO. 633				
		EXISTING BRIDGE NO. 633			0011	02
		EXISTING BRIDGE NO. 634				
		EXISTING BRIDGE NO. 634			0011	02
		EXISTING BRIDGE NO. 636				
		EXISTING BRIDGE NO. 636			0011	02
		EXISTING BRIDGE NO. 637				
		EXISTING BRIDGE NO. 637			0011	02
		EXISTING BRIDGE NO. 638				
		EXISTING BRIDGE NO. 638			0011	02
Item 813.9910 Total:					**DELETED**	
139	817.2112	REPAIRS TO STRUCTURE CONCRETE	CF			
		MASONRY - PATCHING MORTAR				
		BRIDGE NO. 126401				
		BRIDGE NO. 126401		3.00	0011	02
Item 817.2112 Total:				3.00		
140	817.9901	REPAIRS TO STRUCTURAL CONCRETE	CF			
		MASONRY (PATCHING MORTAR)				
		EXISTING BRIDGE NO. 626				
		EXISTING BRIDGE NO. 626		35.00	0011	02
		EXISTING BRIDGE NO. 630				
		EXISTING BRIDGE NO. 630		12.00	0011	02
		EXISTING BRIDGE NO. 631				

Distribution of Quantities

Project Name - Bridge Group 51A - Rt 37 C-2

Estimate Name - Addendum 5

R.I. Contract No. - 2019-CB-027

FAP Nos: 3RD-PTY(258), NHP-0037(012), NHPG-0037(013), NHP-TIGR(003)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
140	817.9901 Cont.	EXISTING BRIDGE NO. 631		15.00	0011	02
		EXISTING BRIDGE NO. 632				
		EXISTING BRIDGE NO. 632		245.00	0011	02
		EXISTING BRIDGE NO. 633				
		EXISTING BRIDGE NO. 633		40.00	0011	02
		EXISTING BRIDGE NO. 634				
		EXISTING BRIDGE NO. 634		35.00	0011	02
		EXISTING BRIDGE NO. 636				
		EXISTING BRIDGE NO. 636		20.00	0011	02
		EXISTING BRIDGE NO. 637				
		EXISTING BRIDGE NO. 637		20.00	0011	02
		EXISTING BRIDGE NO. 638				
		EXISTING BRIDGE NO. 638		32.00	0011	02
Item 817.9901 Total:				454.00		
141	817.9902	REPAIRS TO STRUCTURAL CONCRETE	CY			
		MASONRY (FORM AND CAST IN PLACE)				
		EXISTING BRIDGE NO. 630				
		EXISTING BRIDGE NO. 630		26.00	0011	02
		EXISTING BRIDGE NO. 631				
		EXISTING BRIDGE NO. 631		62.00	0011	02
		EXISTING BRIDGE NO. 634				
		EXISTING BRIDGE NO. 634		20.00	0011	02
		EXISTING BRIDGE NO. 636				
		EXISTING BRIDGE NO. 636		30.00	0011	02
		EXISTING BRIDGE NO. 637				
		EXISTING BRIDGE NO. 637		30.00	0011	02
		EXISTING BRIDGE NO. 638				
		EXISTING BRIDGE NO. 638		180.00	0011	02
Item 817.9902 Total:				348.00		
142	817.9904	EXPANSION JOINT HEADER REPAIRS	CF			
		WITH POLYMER MORTAR				

Distribution of Quantities

Project Name - Bridge Group 51A - Rt 37 C-2

Estimate Name - Addendum 5

R.I. Contract No. - 2019-CB-027

FAP Nos: 3RD-PTY(258), NHP-0037(012), NHPG-0037(013), NHP-TIGR(003)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
142	817.9904 Cont.	EXISTING BRIDGE NO. 631				
		EXISTING BRIDGE NO. 631		14.00	0011	02
		EXISTING BRIDGE NO. 636				
		EXISTING BRIDGE NO. 636		140.00	0011	02
		EXISTING BRIDGE NO. 637				
		EXISTING BRIDGE NO. 637		150.00	0011	02
		EXISTING BRIDGE NO. 638				
		EXISTING BRIDGE NO. 638		138.00	0011	02
Item 817.9904 Total:				442.00		
143	817.9905	BRIDGE NO. 126401 CULVERT FLOOR	LF			
		CRACK REPAIR				
		BRIDGE NO. 126401				
		CULVERT FLOOR		246.00	0011	02
Item 817.9905 Total:				246.00		
144	818.9901	PORTLAND CEMENT CONCRETE DECK	SF			
		REPAIRS (PARTIAL DEPTH REMOVAL)				
		EXISTING BRIDGE NO. 626				
		EXISTING BRIDGE NO. 626		600.00	0011	02
		EXISTING BRIDGE NO. 630				
		EXISTING BRIDGE NO. 630		25.00	0011	02
		EXISTING BRIDGE NO. 631				
		EXISTING BRIDGE NO. 631		336.00	0011	02
		EXISTING BRIDGE NO. 632				
		EXISTING BRIDGE NO. 632		500.00	0011	02
		EXISTING BRIDGE NO. 633				
		EXISTING BRIDGE NO. 633		450.00	0011	02
		EXISTING BRIDGE NO. 634				
		EXISTING BRIDGE NO. 634		110.00	0011	02
		EXISTING BRIDGE NO. 636				
		EXISTING BRIDGE NO. 636		100.00	0011	02
		EXISTING BRIDGE NO. 637				

Distribution of Quantities

Project Name - Bridge Group 51A - Rt 37 C-2

Estimate Name - Addendum 5

R.I. Contract No. - 2019-CB-027

FAP Nos: 3RD-PTY(258), NHP-0037(012), NHPG-0037(013), NHP-TIGR(003)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
144	818.9901 Cont.	EXISTING BRIDGE NO. 637		200.00	0011	02
		EXISTING BRIDGE NO. 638				
		EXISTING BRIDGE NO. 638		177.00	0011	02
Item 818.9901 Total:				2,498.00		
145	818.9902	PORTLAND CEMENT CONCRETE DECK	SF			
		REPAIRS (FULL DEPTH REMOVAL)				
		EXISTING BRIDGE NO. 626				
		EXISTING BRIDGE NO. 626		60.00	0011	02
		EXISTING BRIDGE NO. 630				
		EXISTING BRIDGE NO. 630		3.00	0011	02
		EXISTING BRIDGE NO. 631				
		EXISTING BRIDGE NO. 631		38.00	0011	02
		EXISTING BRIDGE NO. 632				
		EXISTING BRIDGE NO. 632		60.00	0011	02
		EXISTING BRIDGE NO. 633				
		EXISTING BRIDGE NO. 633		50.00	0011	02
		EXISTING BRIDGE NO. 634				
		EXISTING BRIDGE NO. 634		15.00	0011	02
		EXISTING BRIDGE NO. 636				
		EXISTING BRIDGE NO. 636		10.00	0011	02
		EXISTING BRIDGE NO. 637				
		EXISTING BRIDGE NO. 637		20.00	0011	02
		EXISTING BRIDGE NO. 638				
		EXISTING BRIDGE NO. 638		20.00	0011	02
Item 818.9902 Total:				276.00		
146	818.9903	PRECAST RIGID PAVEMENT TRANSITION	SF			
		SLAB				
		BRIDGE 627 EB				
		EB 190+00 TO 194+00		2,268.00	0011	02
		BRIDGE 627 WB				
		WB 190+50 TO 192+50		1,536.00	0011	02

Distribution of Quantities

Project Name - Bridge Group 51A - Rt 37 C-2

Estimate Name - Addendum 5

R.I. Contract No. - 2019-CB-027

FAP Nos: 3RD-PRTY(258), NHP-0037(012), NHPG-0037(013), NHP-TIGR(003)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
165	901.9906	Cont. PONTIAC AVENUE				
		SAY 50% OF DRAINAGE CROSSINGS		3.00	0003	04
Item 901.9906 Total:				12.00		
166	901.9907	STEEL DEEP POST - SLOPE BREAK	EACH			
		CONDITION				
		IMPROVEMENTS TO PONTIAC AVENUE				
		SAY 5% OF ALL POSTS		20.00	0021	03
		ROUTE 37 MAINLINE				
		ROUTE 37 MAINLINE		600.00	0011	02
Item 901.9907 Total:				620.00		
167	901.9908	MGS LONG SPAN LSC-2 GUARDRAIL	EACH			
		PROJECT WIDE				
		100+00		10.00	0021	03
Item 901.9908 Total:				10.00		
168	903.0410	TEMPORARY CHAIN LINK FENCE	LF			
		PROJECT WIDE				
		100+00		200.00	0011	02
Item 903.0410 Total:				200.00		
169	905.0110	PORTLAND CEMENT SIDEWALK	CY			
		MONOLITHIC STANDARD 43.1.0				
		BRIDGE 638				
		638		25.00	0021	03
		JEFFERSON BOULEVARD				
		STA 133+50 TO 134+50 LT		10.00	0021	03
		STA 133+50 TO 134+50 RT		10.00	0021	03
		PONTIAC AVENUE				
		STA. 14+20 TO STA. 14+26 RT		0.50	0021	03
		STA. 15+58 TO STA. 15+64 RT		0.50	0021	03
		STA. 16+21 TO STA. 21+08 RT		32.00	0021	03

Distribution of Quantities

Project Name - Bridge Group 51A - Rt 37 C-2

Estimate Name - Addendum 5

R.I. Contract No. - 2019-CB-027

FAP Nos: 3RD-PRTY(258), NHP-0037(012), NHPG-0037(013), NHP-TIGR(003)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
169	905.0110	Cont. STA. 21+54 TO STA. 23+41 LT/RT		18.00	0021	03

Distribution of Quantities

Project Name - Bridge Group 51A - Rt 37 C-2

Estimate Name - Addendum 5

R.I. Contract No. - 2019-CB-027

FAP Nos: 3RD-PRTY(258), NHP-0037(012), NHPG-0037(013), NHP-TIGR(003)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
169	905.0110	Cont.				
		STA. 22+06 TO STA. 22+60 RT		4.00	0021	03
		STA. 24+46 TO STA. 24+50 LT		0.50	0021	03
		STA. 25+20 TO STA. 25+25 LT		0.50	0021	03
		STA. 27+54 TO STA. 27+95 RT		3.00	0021	03
		PROPOSED BRIDGE 063501				
		BRIDGE 063501		27.00	0021	03
		ROUTE 37 WB OFF-RAMP TO PONTIAC AVENUE				
		STA 300+38 TO 301+32 RT		21.00	0021	03
		SOCKANOSSET CROSS ROAD				
		STA 410+42 TO 412+95 RT		17.00	0021	03
		STA 412+56 TO 412+82 LT		4.00	0021	03
Item 905.0110 Total:				173.00		
170	905.0140	BITUMINOUS SIDEWALK STANDARD 43.2.0 TON				
		SOCKANOSSET CROSS ROAD				
		STA. 410+47 TO STA. 410+54 RT		13.00	0021	03
Item 905.0140 Total:				13.00		
171	906.0100	SLOPE FACED GRANITE CURB - QUARRY	LF			
		SPLIT STRAIGHT STANDARD 7.4.0				
		PONTIAC AVENUE				
		STA. 21+57 TO STA. 23+37 LT		180.00	0011	02
		STA. 21+64 TO STA. 21+88 RT		24.00	0011	02
		STA. 22+18 TO STA. 23+37 LT		119.00	0011	02
		ROUTE 37 WB OFF-RAMP TO PONTIAC AVENUE				
		STA. 200+38 TO STA. 200+64 RT		40.00	0011	02
		STA. 200+39 TO STA. 200+43 RT		3.00	0011	02
		STA. 200+50 TO STA. 201+32 RT		82.00	0011	02
		STA. 200+75 TO STA. 201+32 RT		63.00	0011	02
Item 906.0100 Total:				511.00		

Distribution of Quantities

Project Name - Bridge Group 51A - Rt 37 C-2

Estimate Name - Addendum 5

R.I. Contract No. - 2019-CB-027

FAP Nos: 3RD-PTY(258), NHP-0037(012), NHPG-0037(013), NHP-TIGR(003)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
354	T07.9901	Cont. COBRAHEAD CUTOFF LUMINAIRE				
		PONTIAC AVE.				
		CORRIDOR WIDE		15.00	0011	02
Item T07.9901 Total:				15.00		
355	T07.9902	WIRELESS LIGHTING CONTROLLER	EACH			
		RT 37 & RAMPS				
		CORRIDOR WIDE		19.00	0011	02
Item T07.9902 Total:				19.00		
S356	T12.9908	ACTUATED CONTROLLER TS-2, TYPE 1	EACH			
		W/8 PHASE ASSEMBLY GROUND MOUNTED				
		INCLUDING CABINET STD. 19.1.0 ON				
		EXISTING FOUNDATION				
		TRAFFIC SIGNAL PLAN NO. 1				
		AS SHOWN ON PLANS		1.00	0003	04
Item T12.9908 Total:				1.00		
357	601.0300	CLASS A PORTLAND CEMENT CONCRETE	CY			
		PONTIAC AVENUE				
		STA 27+34 TO 27+88 RT		1.50	0011	02
		PRESERVATION BRIDGES				
		BR 632		9.00	0011	02
		BR 633		9.00	0011	02
		ROUTE 37 WB OFF-RAMP TO PONTIAC				
		AVENUE				
		STA. 200+09 TO STA. 200+85 LT		3.00	0011	02
		SOCKANOSSET CROSS ROAD				
		STA 410+26 TO 410+42 RT		2.50	0011	02
		STA 410+40 TO 410+53 RT		2.50	0011	02
		STA 410+70 TO 410+83 LT		9.50	0011	02
Item 601.0300 Total:				37.00		

Distribution of Quantities

Project Name - Bridge Group 51A - Rt 37 C-2

Estimate Name - Addendum 5

R.I. Contract No. - 2019-CB-027

FAP Nos: 3RD-PRTY(258), NHP-0037(012), NHPG-0037(013), NHP-TIGR(003)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
358	703.9903	8" PERFORATED POLYVINYL CHLORIDE PIPE M278 UNDERDRAIN WITH FILTER MATERIAL STANDARD 1.1.0	LF			

Distribution of Quantities

Project Name - Bridge Group 51A - Rt 37 C-2

Estimate Name - Addendum 5

R.I. Contract No. - 2019-CB-027

FAP Nos: 3RD-PRTY(258), NHP-0037(012), NHPG-0037(013), NHP-TIGR(003)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
358	703.9903 Cont.	ROUTE 37				
		STU 3		10.00	0011	02
Item 703.9903 Total:				10.00		
359	708.9901	CLEANING AND FLUSHING CULVERTS ALL LF SIZES				
		PONTIAC AVENUE				
		STA. 17+80 LT&RT		162.00	0011	02
		ROUTE 37 WB OFF RAMP TO PONTIAC AVENUE				
		STA. 203+35 LT&RT		309.00	0011	02
Item 708.9901 Total:				471.00		
360	813.0210	HEAT-APPLIED PREFABRICATED MEMBRANE SY BRIDGES				
		BR 626		30.00	0011	02
		BR 630		5.00	0011	02
		BR 631		20.00	0011	02
		BR 632		25.00	0011	02
		BR 633		25.00	0011	02
		BR 634		10.00	0011	02
		BR 636		10.00	0011	02
		BR 637		15.00	0011	02
		BR 638		10.00	0011	02
Item 813.0210 Total:				150.00		
361	921.0100	SLOPE PAVING 16X8X4''	SY			
		BRIDGE 628/629				
		BR 628 EAST ABUT		51.00	0011	02
		BR 628 WEST ABUT		77.00	0011	02
		BR 629 EAST ABUT		68.00	0011	02
		BR 629 WEST ABUT		128.00	0011	02
Item 921.0100 Total:				324.00		

Distribution of Quantities

Project Name - Bridge Group 51A - Rt 37 C-2

Estimate Name - Addendum 5

R.I. Contract No. - 2019-CB-027

FAP Nos: 3RD-PTY(258), NHP-0037(012), NHPG-0037(013), NHP-TIGR(003)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
362	201.0405	REMOVE AND DISPOSE MASONRY	CY			
		BR 632				
		632		9.00	0011	02
		BR 633				
		633		9.00	0011	02
Item 201.0405 Total:				18.00		
363	808.9904	PREFORMED POLYETHYLENE FOAM JOINT FILLER 1/4"	SF			
		PRESERVATION BRIDGES				
		BR. 632		180.00	0011	02
		BR. 633		180.00	0011	02
Item 808.9904 Total:				360.00		
364	810.0210	GALVANIZED BAR REINFORCEMENT GRADE 60	LBS			
		PRESERVATION BRIDGES				
		BR 626		100.00	0011	02
		BR 630		1,300.00	0011	02
		BR 631		3,000.00	0011	02
		BR 632		200.00	0011	02
		BR 633		60.00	0011	02
		BR 634		1,000.00	0011	02
		BR 636		1,500.00	0011	02
		BR 637		1,500.00	0011	02
		BR 638		4,000.00	0011	02
Item 810.0210 Total:				12,660.00		
365	810.0702	WELDED WIRE FABRIC (GALVANIZED)	SF			
		PRESERVATION BRIDGES				
		BR 626		20.00	0011	02
		BR 630		7.00	0011	02
		BR 631		8.00	0011	02

Distribution of Quantities

Project Name - Bridge Group 51A - Rt 37 C-2

Estimate Name - Addendum 5

R.I. Contract No. - 2019-CB-027

FAP Nos: 3RD-PTY(258), NHP-0037(012), NHPG-0037(013), NHP-TIGR(003)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
365	810.0702	Cont.				
		BR 632		870.00	0011	02
		BR 633		790.00	0011	02
		BR 634		20.00	0011	02
		BR 636		40.00	0011	02
		BR 637		40.00	0011	02
		BR 638		20.00	0011	02
Item 810.0702 Total:				1,815.00		
366	817.9903	REPAIRS TO STRUCTURAL CONCRETE	CF			
		MASONRY (TYPE 2S)				
		PRESERVATION BRIDGES				
		BR 626		70.00	0011	02
		BR 630		26.00	0011	02
		BR 631		30.00	0011	02
		BR 632		500.00	0011	02
		BR 633		85.00	0011	02
		BR 634		70.00	0011	02
		BR 636		45.00	0011	02
		BR 637		45.00	0011	02
		BR 638		65.00	0011	02
Item 817.9903 Total:				936.00		
367	818.9904	PORTLAND CEMENT CONCRETE DECK	SF			
		REPAIRS (PARTIAL DEPTH REMOVAL) BR				
		063601 & 063701				
		PRESERVATION BRIDGES				
		BR 636		60.00	0011	02
		BR 637		45.00	0011	02
Item 818.9904 Total:				105.00		
368	818.9905	PORTLAND CEMENT CONCRETE DECK	SF			
		REPAIRS (FULL DEPTH REMOVAL) BR				
		063601 & 963701				

Distribution of Quantities

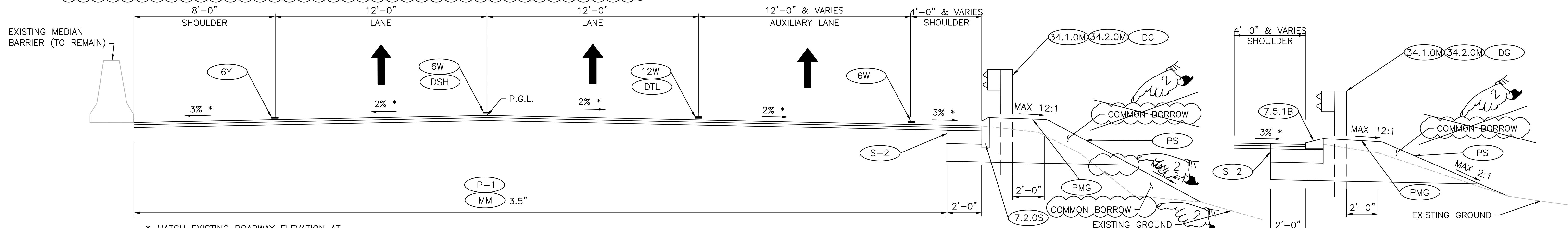
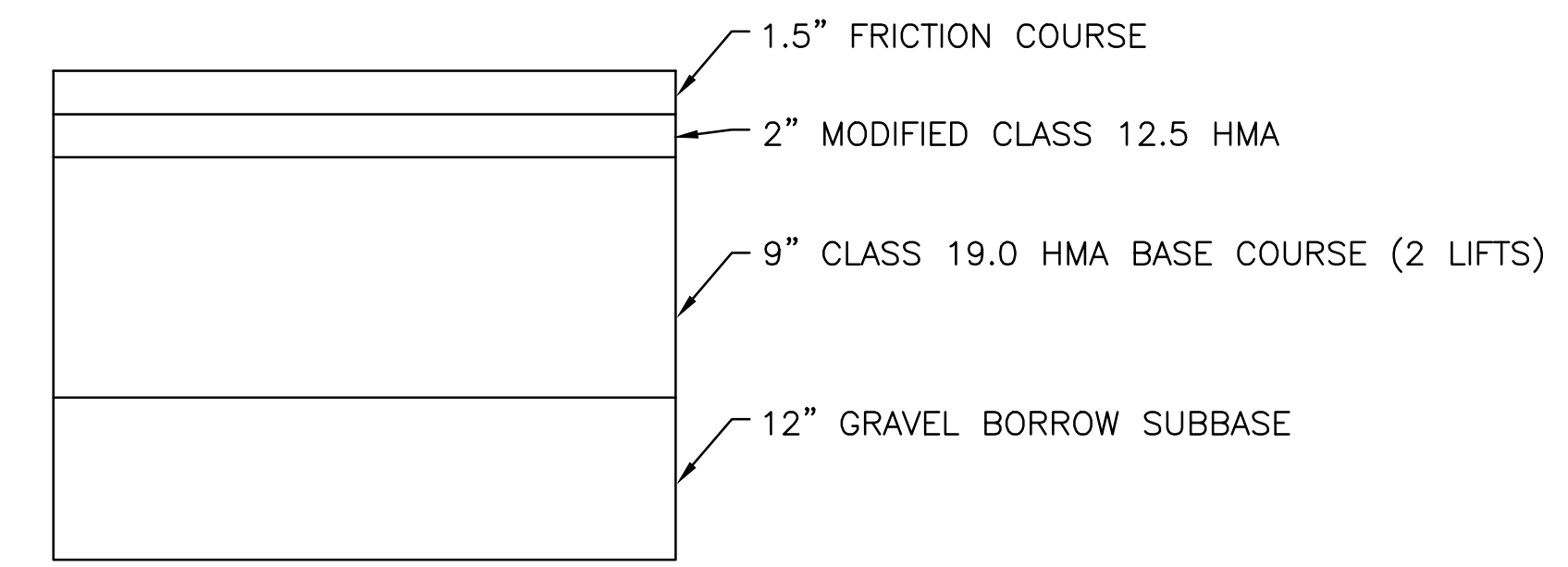
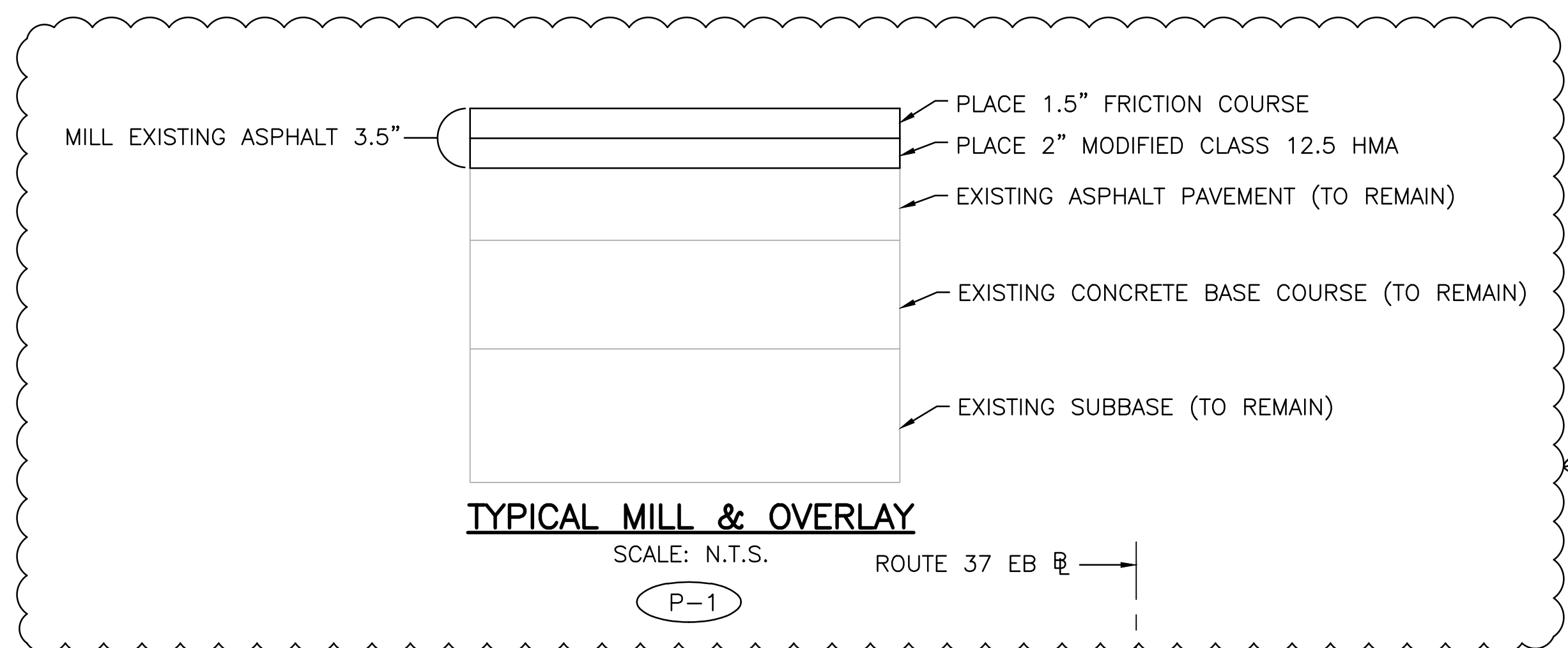
Project Name - Bridge Group 51A - Rt 37 C-2

Estimate Name - Addendum 5

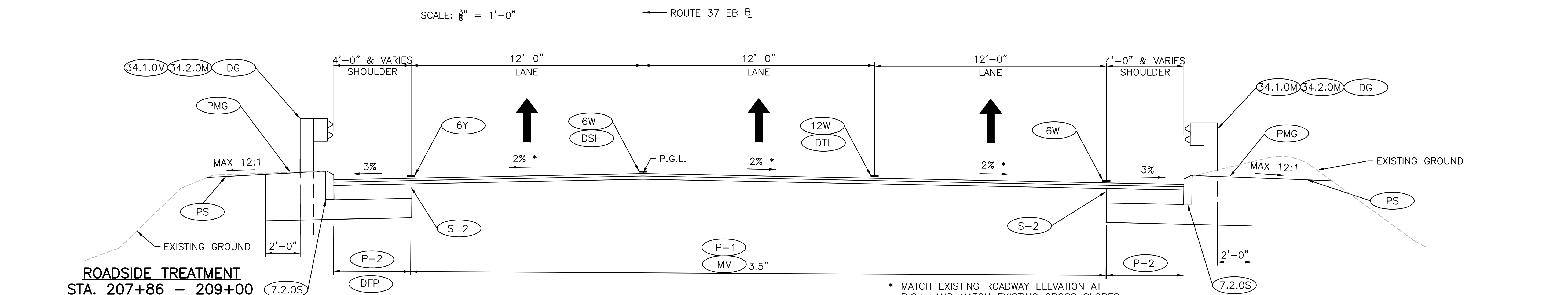
R.I. Contract No. - 2019-CB-027

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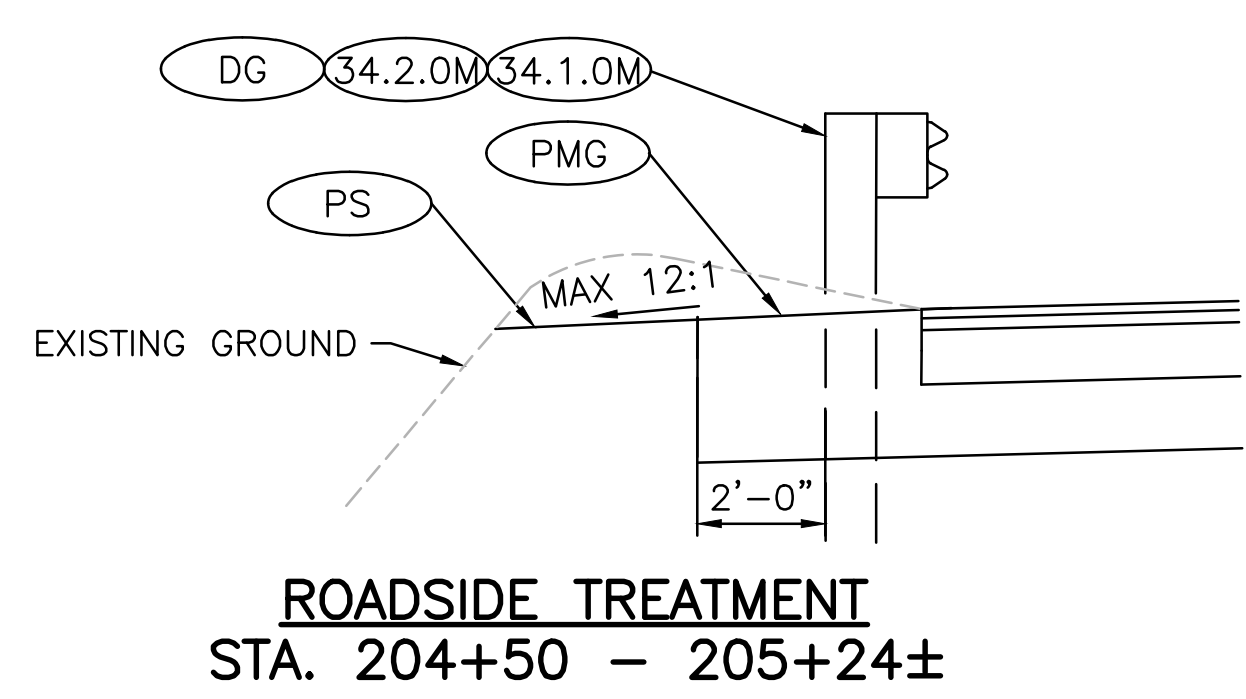
Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
368	818.9905 Cont.	PRESERVATION BRIDGES				
		BR 636		6.00	0011	02
		BR 637		5.00	0011	02
Item 818.9905 Total:				11.00		



* MATCH EXISTING ROADWAY ELEVATION AT P.G.L. AND MATCH EXISTING CROSS SLOPES. THE PROPOSED CROSS SLOPES ARE BASED ON LIMITED FIELD SURVEY AND REVIEW OF RECORD DRAWINGS.



* MATCH EXISTING ROADWAY ELEVATION AT P.G.L. AND MATCH EXISTING CROSS SLOPES. THE PROPOSED CROSS SLOPES ARE BASED ON LIMITED FIELD SURVEY AND REVIEW OF RECORD DRAWINGS.



REVISIONS		
NO.	DATE	BY
1	10/31/19	EKM
2	11/07/19	EKM

RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

BRIDGE GROUP 51A - RT. 37 C-2

CRANSTON / WARWICK RHODE ISLAND

TYPICAL SECTIONS SHEET 1

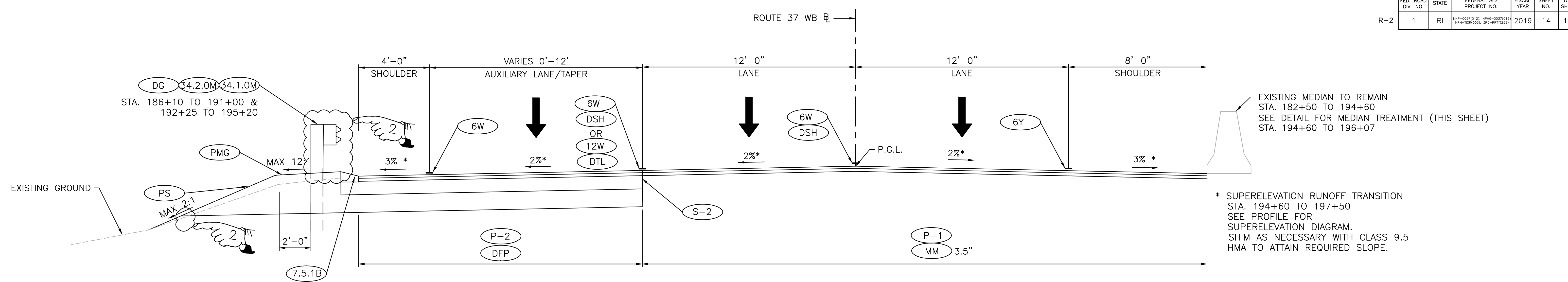
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ADDENDUM No. 5



630 PRESTON AVENUE
MERIDEN, CT 06450

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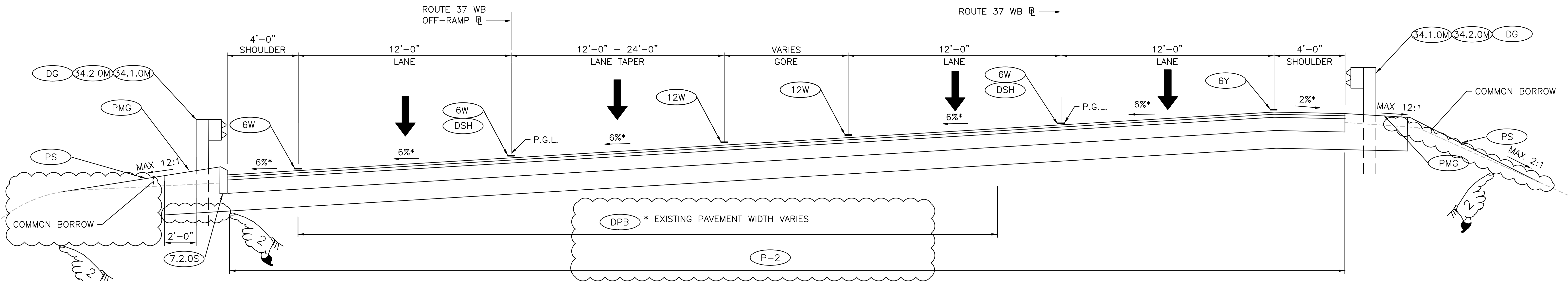


**MILL AND PAVE & MINOR WIDENING TYPICAL SECTION
ROUTE 37 WB AT BRIDGE 062701**

WB STA. 182+50 - 190+82 &
192+42 - 196+00

SCALE: 3/8" = 1'-0"

* SUPERELEVATION RUNOFF TRANSITION
STA. 194+60 TO 197+50
SEE PROFILE FOR
SUPERELEVATION DIAGRAM.
SHIM AS NECESSARY WITH CLASS 9.5
HMA TO ATTAIN REQUIRED SLOPE.

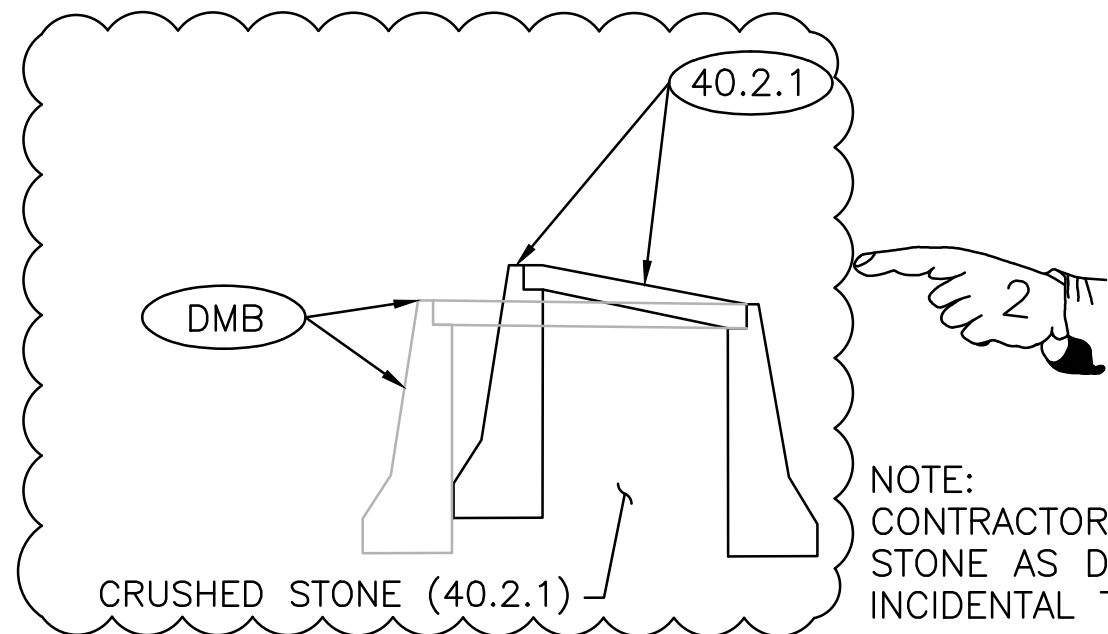


**FULL DEPTH RECONSTRUCTION
TYPICAL SECTION
ROUTE 37 WB**

WB STA. 196+00 - 200+13

SCALE: 3/8" = 1'-0"

* SUPERELEVATION RUNOFF
TRANSITION STA. 194+60 TO 197+50.
SEE PROFILE FOR
SUPERELEVATION DIAGRAM.



**MEDIAN TREATMENT DETAIL
WB STA. 194+60 - 196+07**

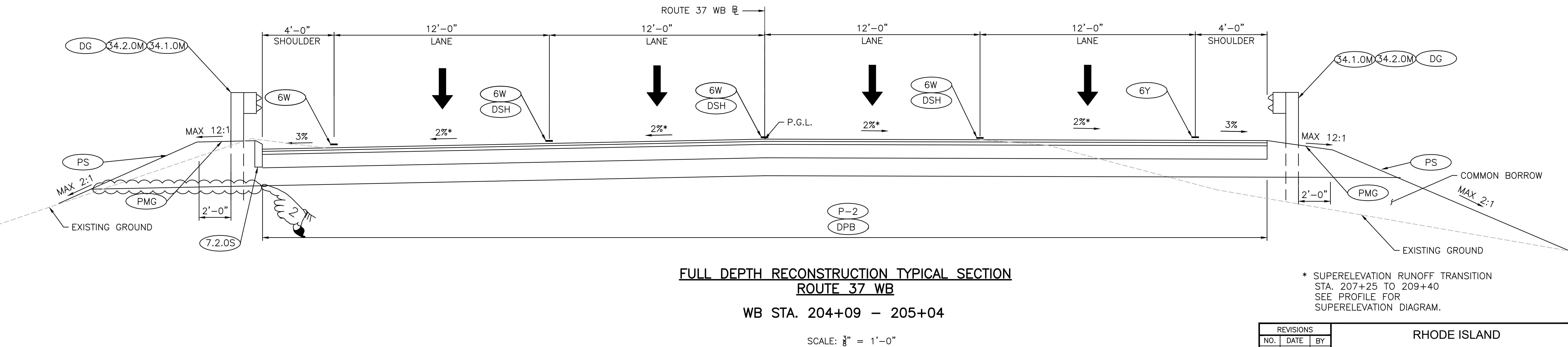
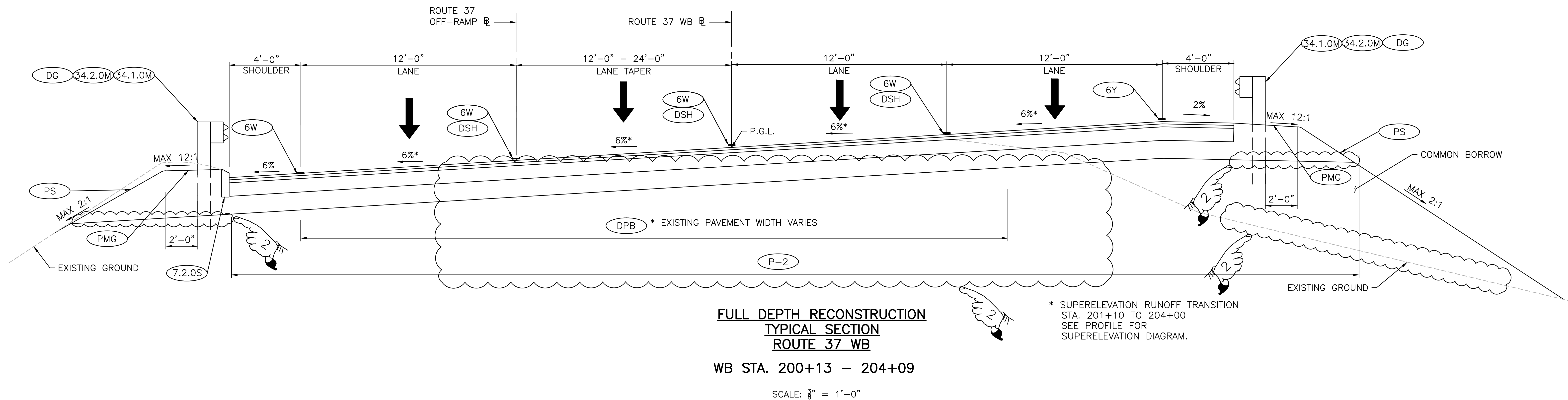
NOTE:
CONTRACTOR SHALL INSTALL CRUSHED
STONE AS DIRECTED BY THE ENGINEER
INCIDENTAL TO THE WORK

ADDENDUM No. 5



REVISIONS			RHODE ISLAND DEPARTMENT OF TRANSPORTATION	
NO.	DATE	BY		
1	10/31/19	EKM	BRIDGE GROUP 51A - RT. 37 C-2	
2	11/07/19	EKM	CRANSTON / WARWICK RHODE ISLAND	
			TYPICAL SECTIONS SHEET 2	
			CHECKED BY _____ DATE _____ SCALE AS NOTED	

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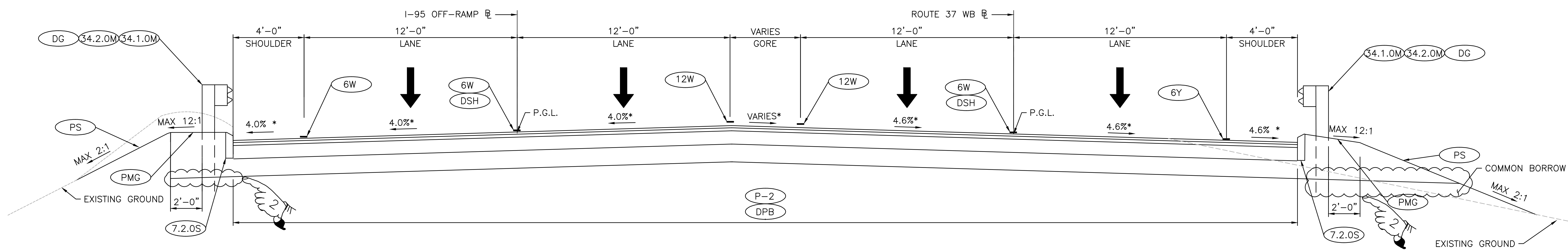


0013C_V1_015_HWY TYPICAL SECTIONS SHEET 3_R-2.dwg Plotted on Friday, November 8, 2019 1:08:27 PM

ADDENDUM No. 5

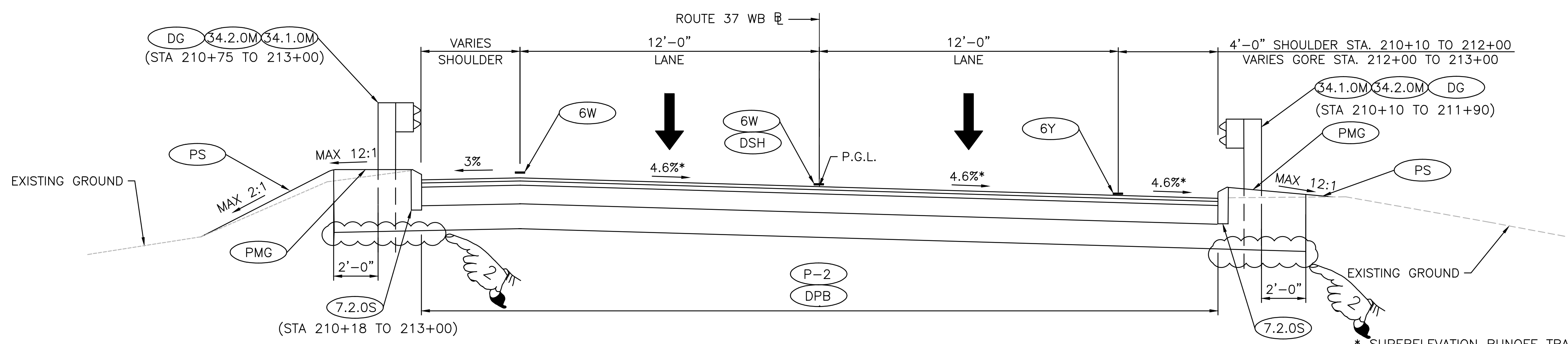


REVISIONS			RHODE ISLAND DEPARTMENT OF TRANSPORTATION	
NO.	DATE	BY		
1	10/31/19	EKM		
2	11/07/19	EKM		
			BRIDGE GROUP 51A - RT. 37 C-2	
			CRANSTON / WARWICK RHODE ISLAND	
			TYPICAL SECTIONS SHEET 3	
			CHECKED BY _____ DATE _____ SCALE AS NOTED	



FULL DEPTH RECONSTRUCTION TYPICAL SECTION
ROUTE 37 WB
 WB STA. 207+20 - 210+10
 SCALE: 3/8" = 1'-0"

* SUPERELEVATION RUNOFF TRANSITION
 STA. 207+25 TO 209+40
 SEE PROFILE FOR
 SUPERELEVATION DIAGRAM.



FULL DEPTH RECONSTRUCTION TYPICAL SECTION
ROUTE 37 WB
 WB STA. 210+10 - 213+00
 SCALE: 3/8" = 1'-0"

* SUPERELEVATION RUNOFF TRANSITION
 STA. 212+50 TO 213+00
 SEE PROFILE FOR
 SUPERELEVATION DIAGRAM.

0013C_V1_016_HWY TYPICAL SECTIONS SHEET 4_R-2.dwg Plotted on Friday, November 8, 2019 1:10:16 PM

ADDENDUM No. 5



REVISIONS		
NO.	DATE	BY
1	10/31/19	EKM
2	11/07/19	EKM

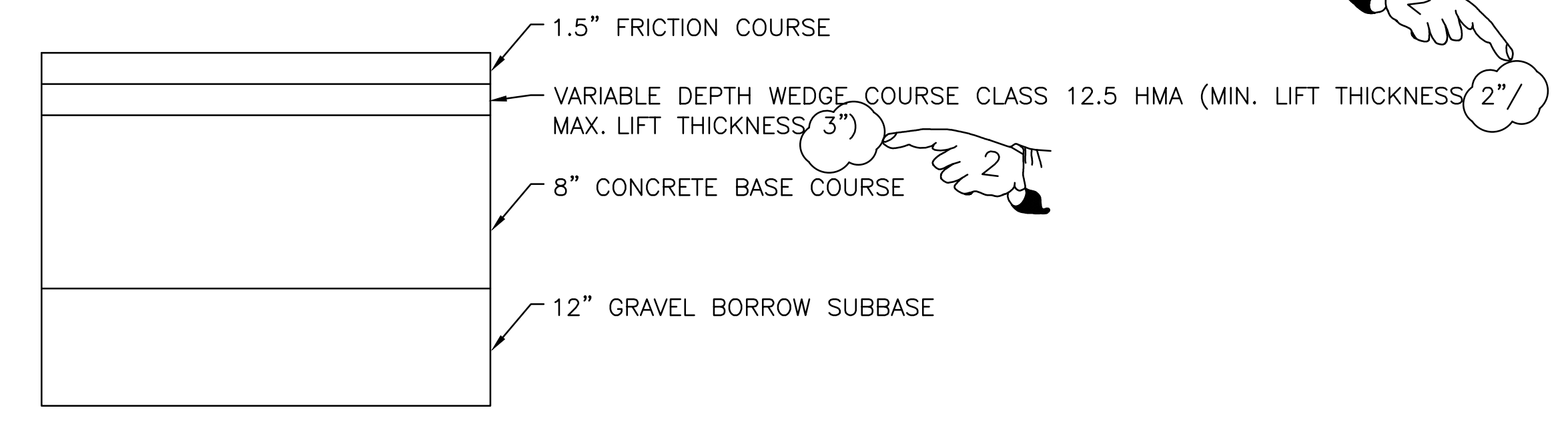
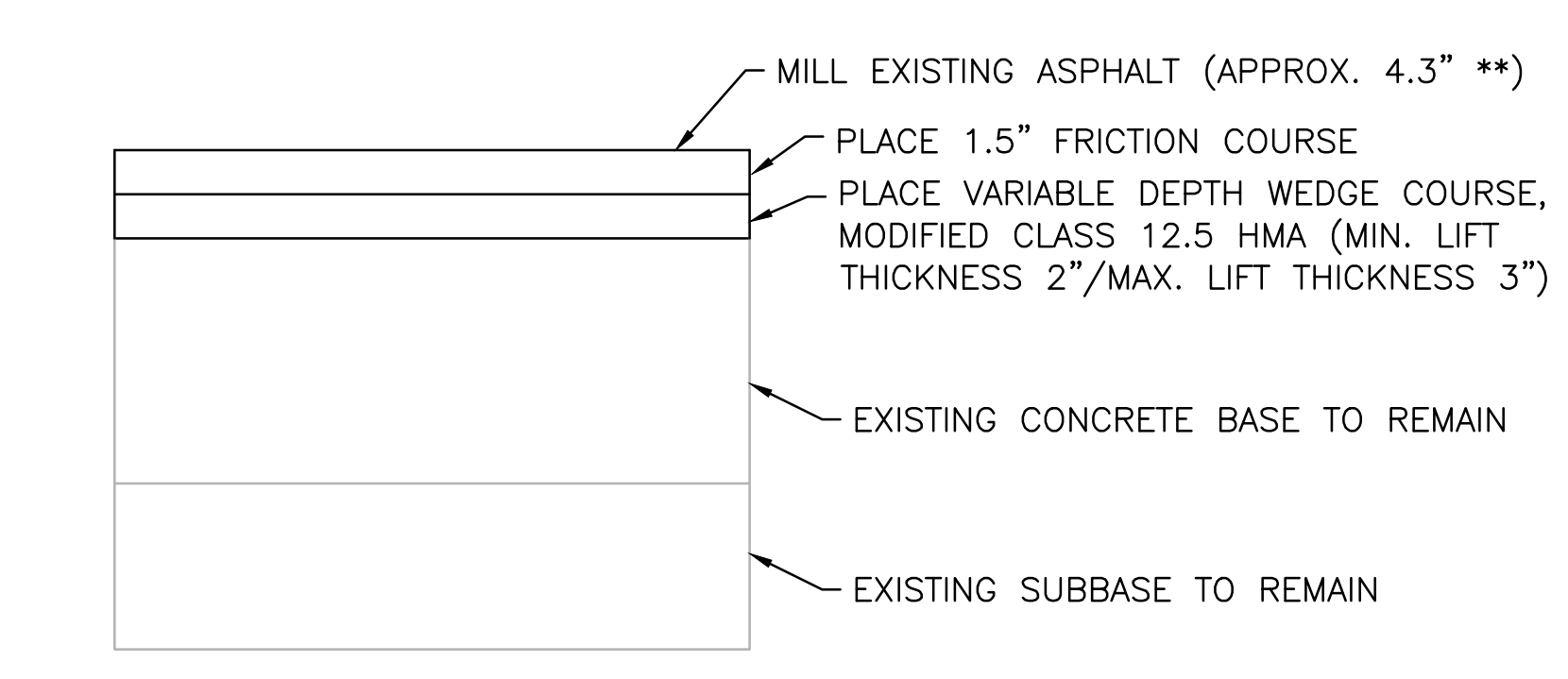
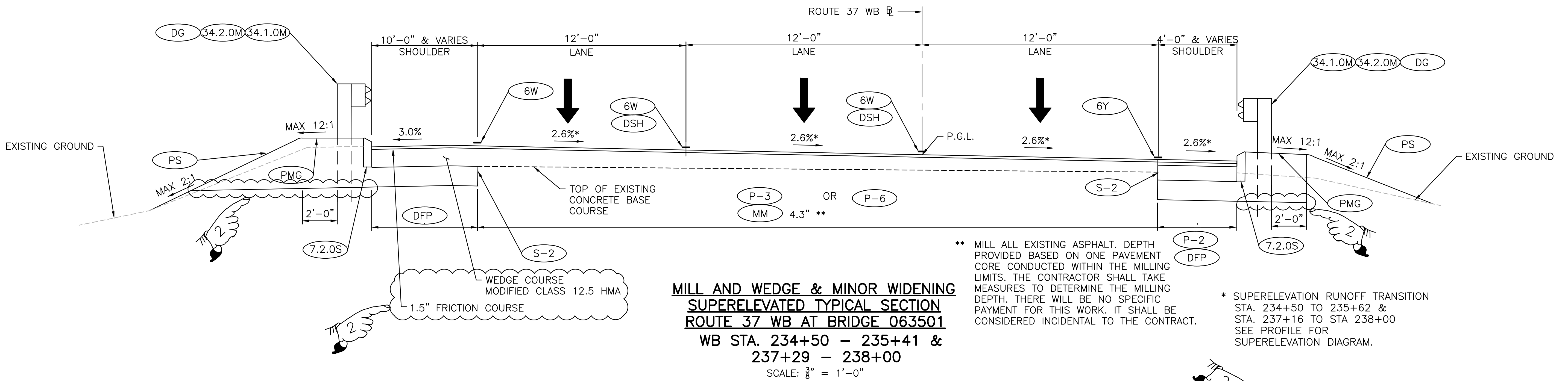
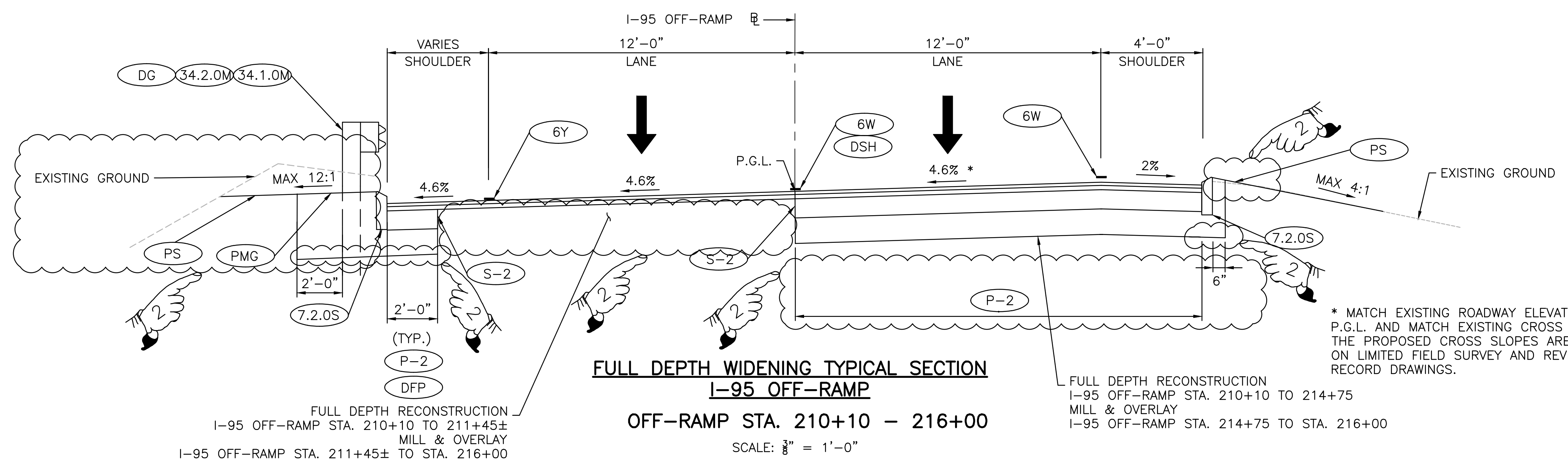
RHODE ISLAND
 DEPARTMENT OF TRANSPORTATION

BRIDGE GROUP 51A - RT. 37 C-2

CRANSTON / WARWICK RHODE ISLAND

TYPICAL SECTIONS SHEET 4

CHECKED BY _____ DATE _____ SCALE AS NOTED



WB STA. 235+41 TO SLEEPER SLAB & SLEEPER SLAB TO WB STA. 237+29
SCALE: N.T.S.

ADDENDUM No. 5



REVISIONS		
NO.	DATE	BY
1	10/31/19	EKM
2	11/07/19	EKM

**RHODE ISLAND
DEPARTMENT OF TRANSPORTATION**

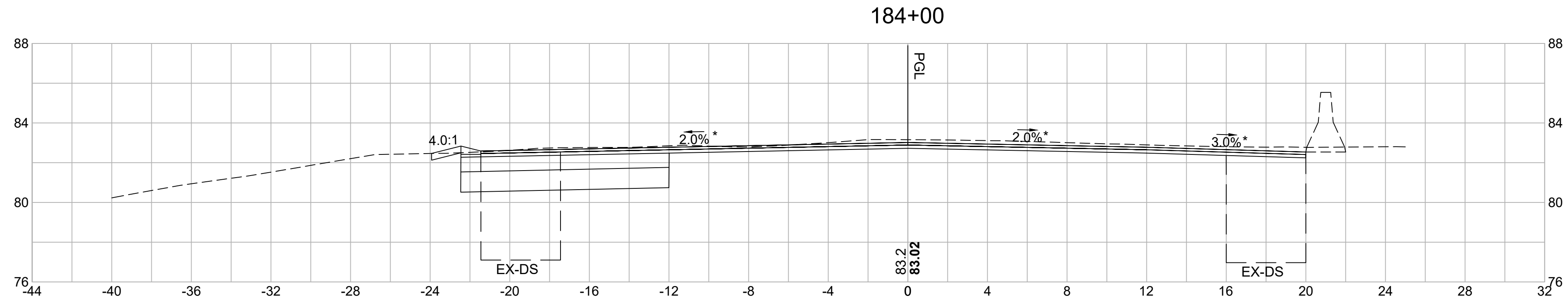
BRIDGE GROUP 51A - RT. 37 C-2

CRANSTON / WARWICK RHODE ISLAND

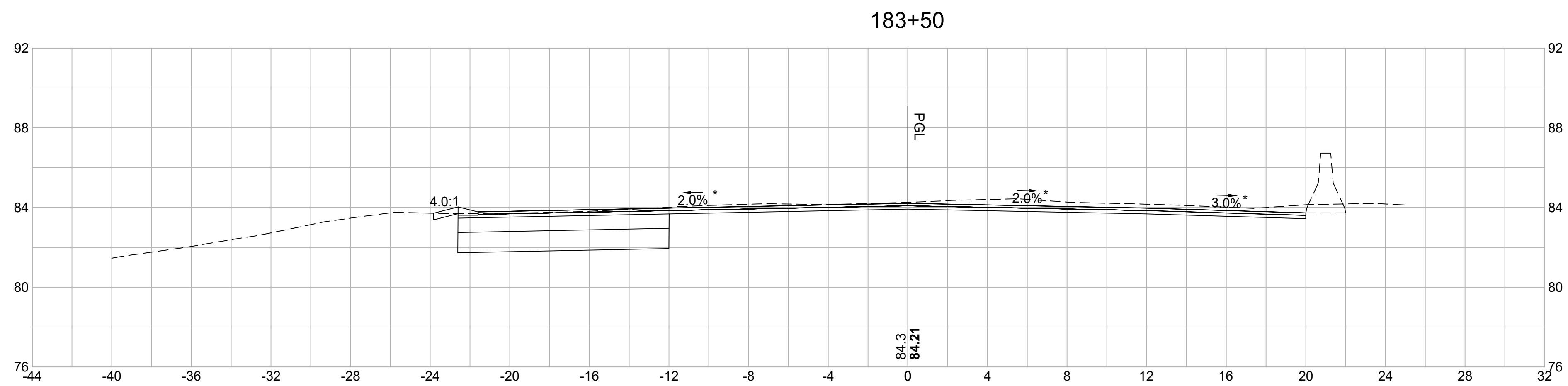
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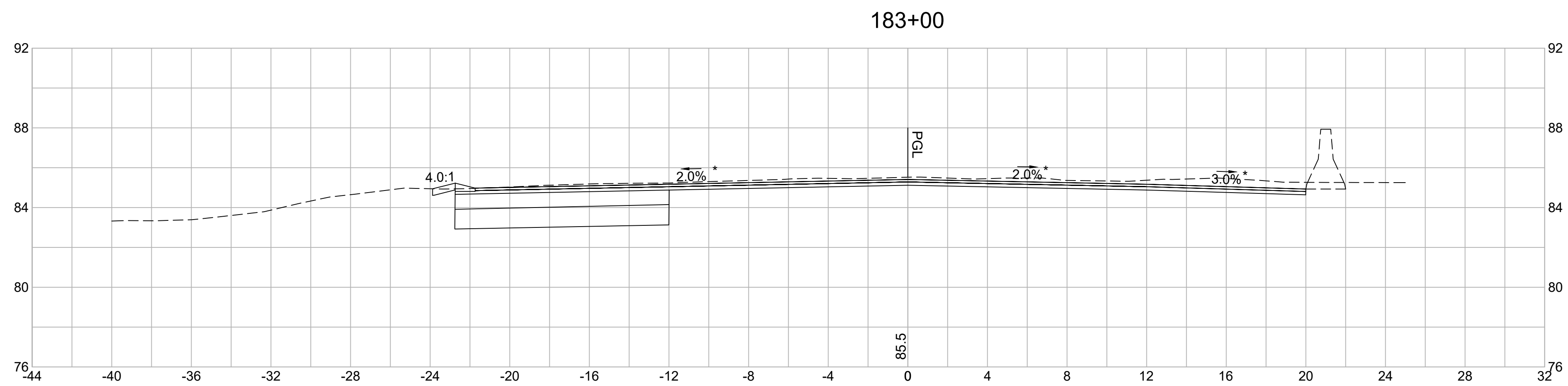
0013C_V1_017_HWY TYPICAL SECTIONS SHEET 5_R-2.dwg Plotted on Friday, November 8, 2019 1:11:38 PM



CUT AREA: 22 SF
FILL AREA: 0 SF



CUT AREA: 22 SF
FILL AREA: 0 SF



CUT AREA: 22 SF
FILL AREA: 0 SF

*THE CONTRACTOR SHALL MATCH THE EXISTING ROADWAY ELEVATION AT THE P.G.L. AND MATCH THE EXISTING CROSS SLOPES. THE PROPOSED CROSS SLOPES ARE ILLUSTRATED BASED ON LIMITED FIELD SURVEY AND REVIEW OF RECORD DRAWINGS.

REVISIONS		
NO.	DATE	BY
1	11/07/19	EKM

RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

BRIDGE GROUP 51A - RT. 37 C-2

CRANSTON / WARWICK RHODE ISLAND

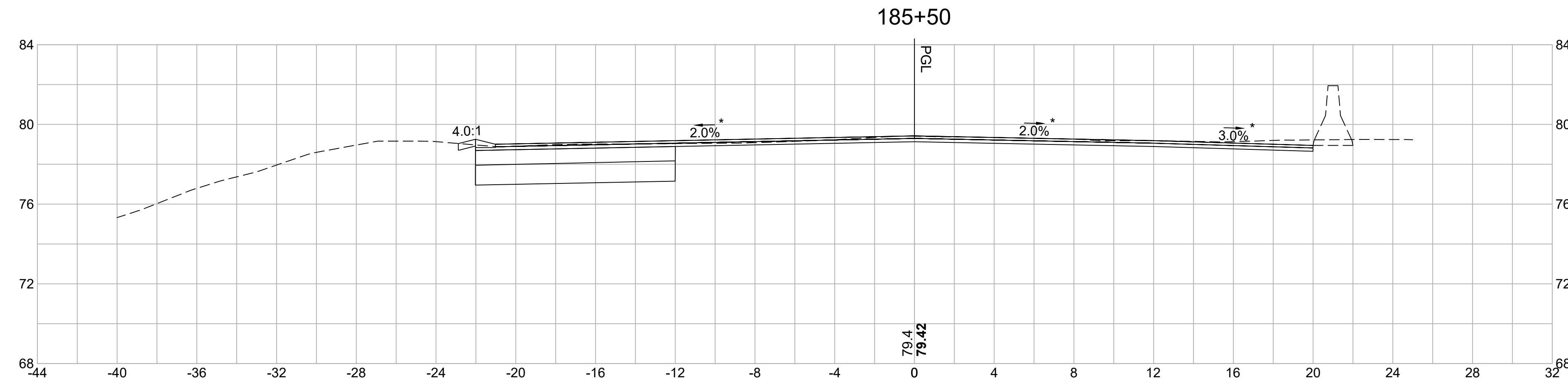
ROUTE 37 WB CROSS
SECTIONS

CHECKED BY _____ DATE _____ SCALE AS NOTED

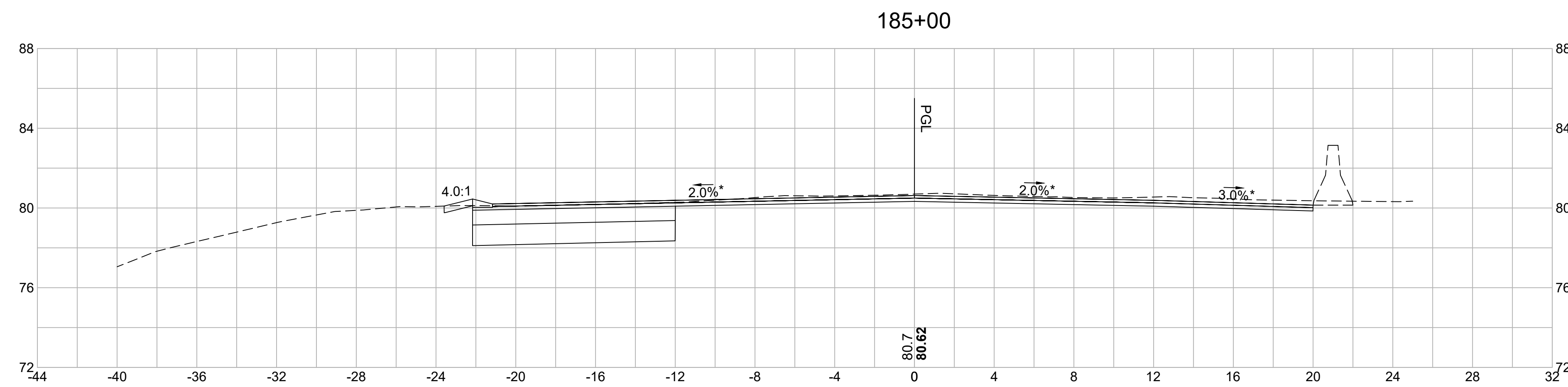
ADDENDUM No. 5



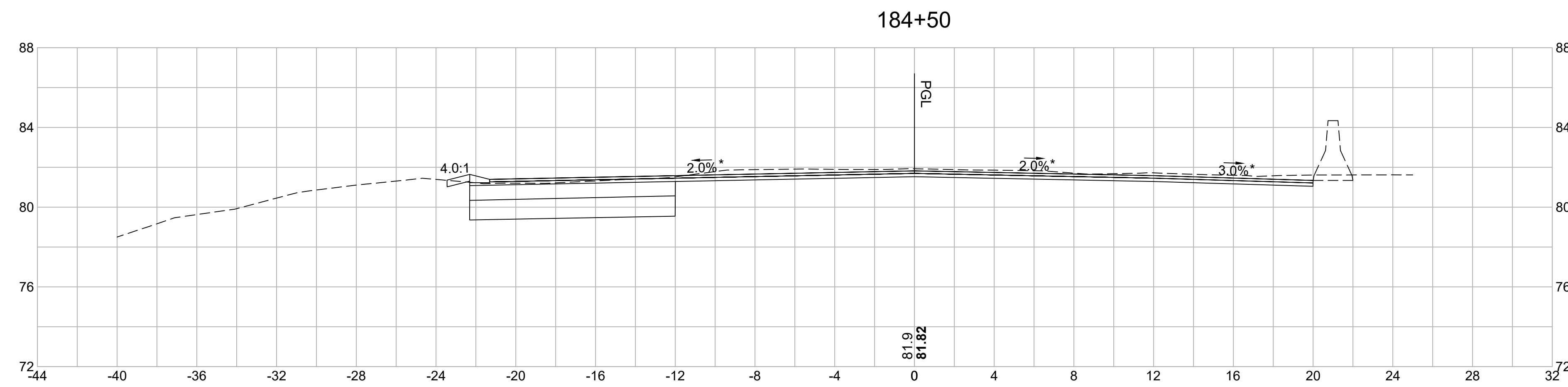
530 PRESTON AVENUE
MERIDEN, CT 06450



CUT AREA: 19 SF
FILL AREA: 0 SF



CUT AREA: 20 SF
FILL AREA: 0 SF



CUT AREA: 19 SF
FILL AREA: 0 SF

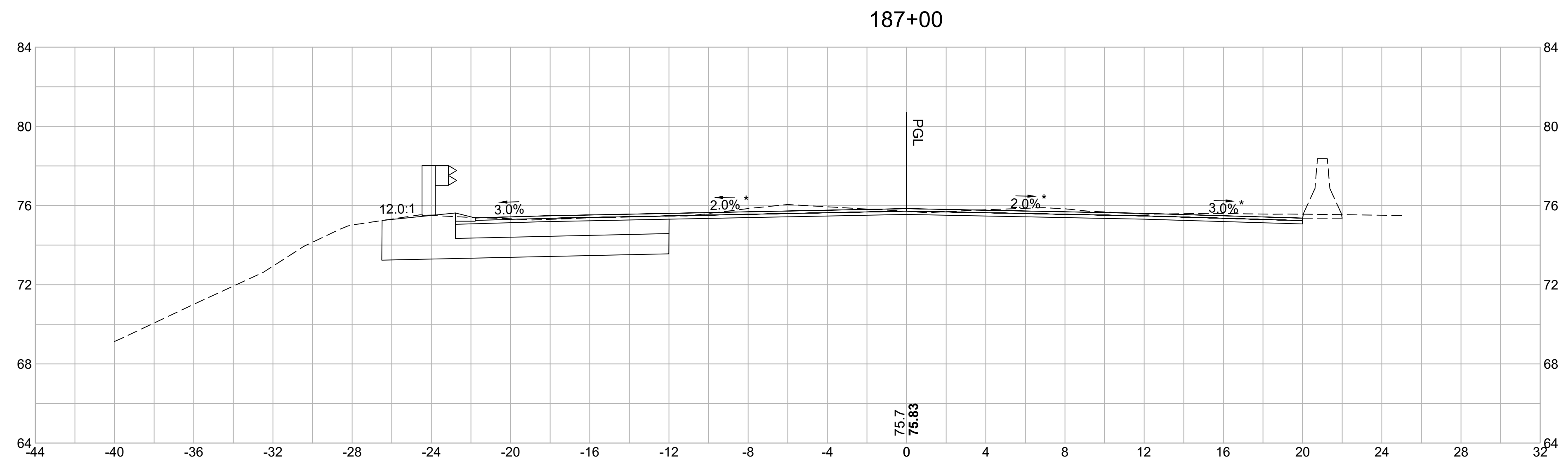
*THE CONTRACTOR SHALL MATCH THE EXISTING ROADWAY ELEVATION AT THE P.G.L. AND MATCH THE EXISTING CROSS SLOPES. THE PROPOSED CROSS SLOPES ARE ILLUSTRATED BASED ON LIMITED FIELD SURVEY AND REVIEW OF RECORD DRAWINGS.

ADDENDUM No. 5

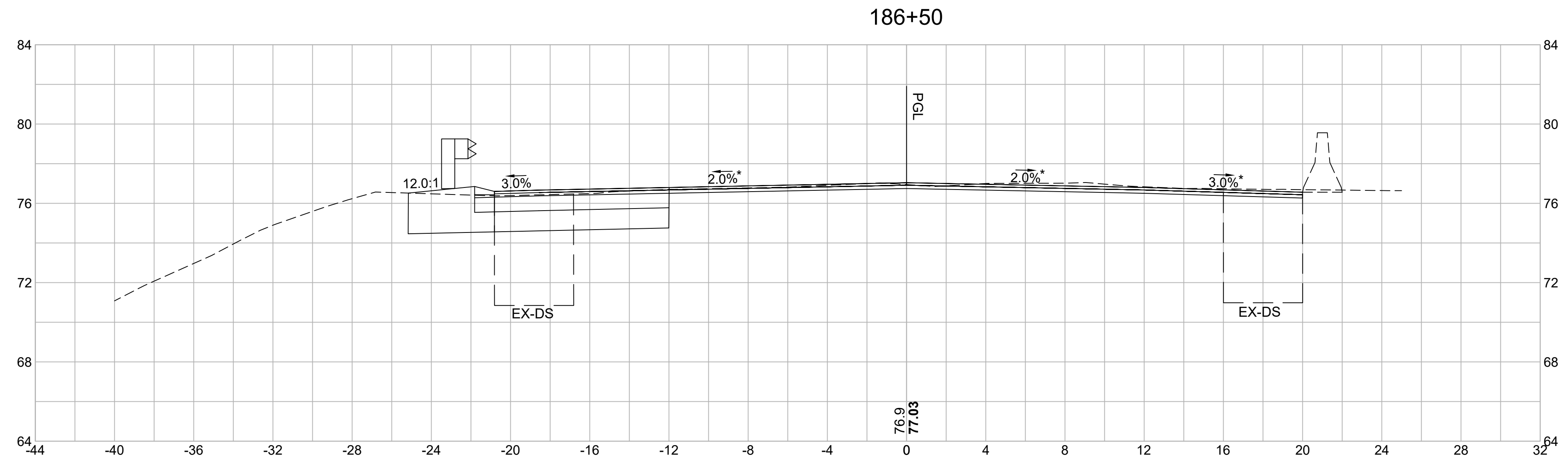


REVISIONS			NO.	DATE	BY

RHODE ISLAND DEPARTMENT OF TRANSPORTATION
BRIDGE GROUP 51A - RT. 37 C-2
CRANSTON / WARWICK RHODE ISLAND
ROUTE 37 WB CROSS SECTIONS
CHECKED BY _____ DATE _____ SCALE AS NOTED

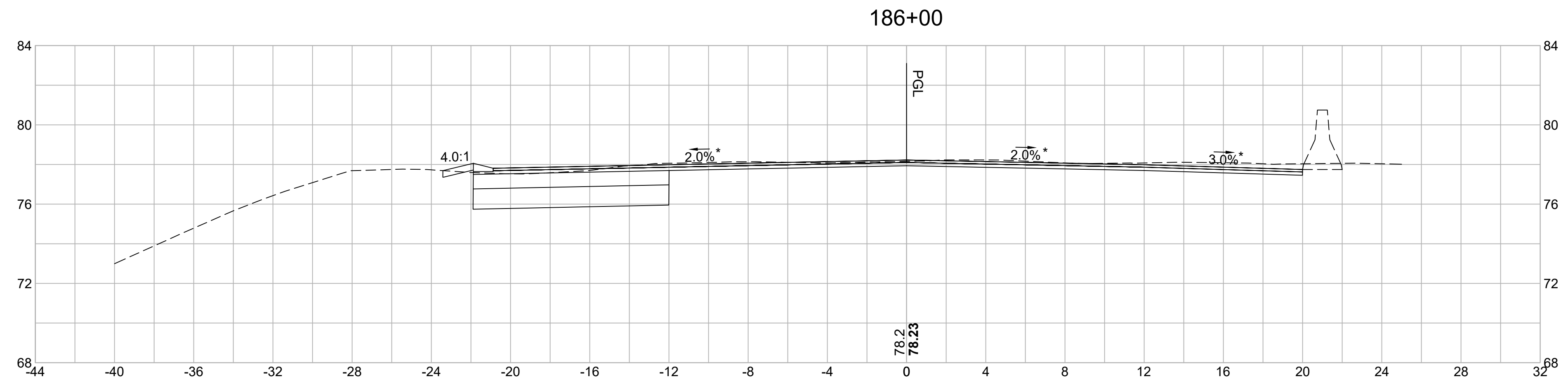


CUT AREA: 29 SF
FILL AREA: 0 SF



CUT AREA: 25 SF
FILL AREA: 0 SF

*THE CONTRACTOR SHALL MATCH THE EXISTING ROADWAY ELEVATION AT THE P.G.L. AND MATCH THE EXISTING CROSS SLOPES. THE PROPOSED CROSS SLOPES ARE ILLUSTRATED BASED ON LIMITED FIELD SURVEY AND REVIEW OF RECORD DRAWINGS.



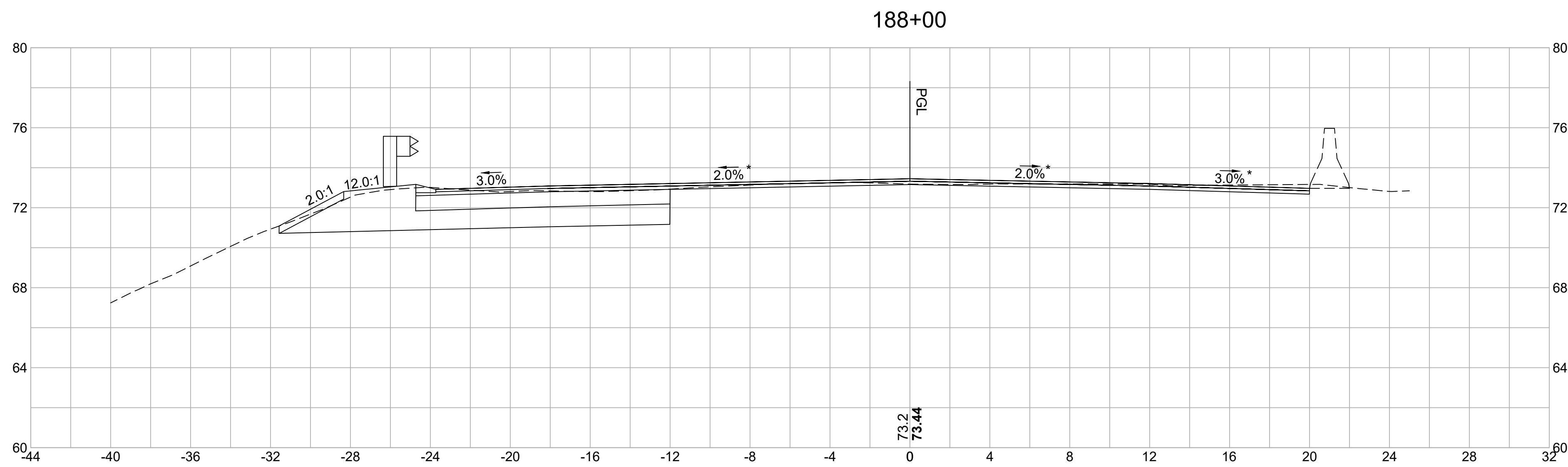
CUT AREA: 19 SF
FILL AREA: 0 SF

ADDENDUM No. 5



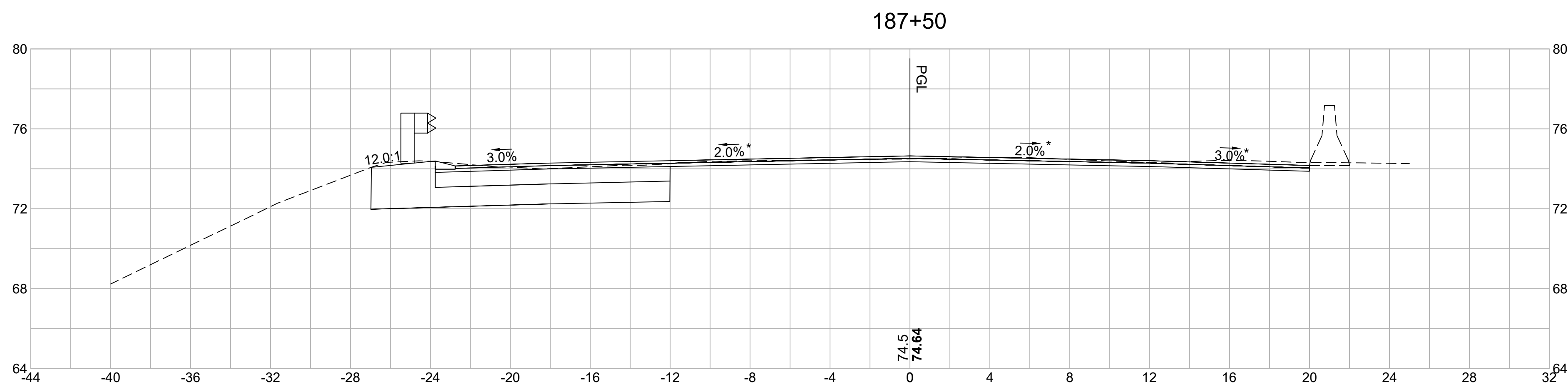
531 PRESTON AVENUE
MERIDEN, CT 06450

REVISIONS			RHODE ISLAND DEPARTMENT OF TRANSPORTATION	
NO.	DATE	BY		
1	11/07/19	EKM	BRIDGE GROUP 51A - RT. 37 C-2	
			CRANSTON / WARWICK RHODE ISLAND	
			ROUTE 37 WB CROSS SECTIONS	
			CHECKED BY _____	DATE _____ SCALE AS NOTED



CUT AREA: 34 SF
FILL AREA: 0 SF

*THE CONTRACTOR SHALL MATCH THE EXISTING ROADWAY ELEVATION AT THE P.G.L. AND MATCH THE EXISTING CROSS SLOPES. THE PROPOSED CROSS SLOPES ARE ILLUSTRATED BASED ON LIMITED FIELD SURVEY AND REVIEW OF RECORD DRAWINGS.



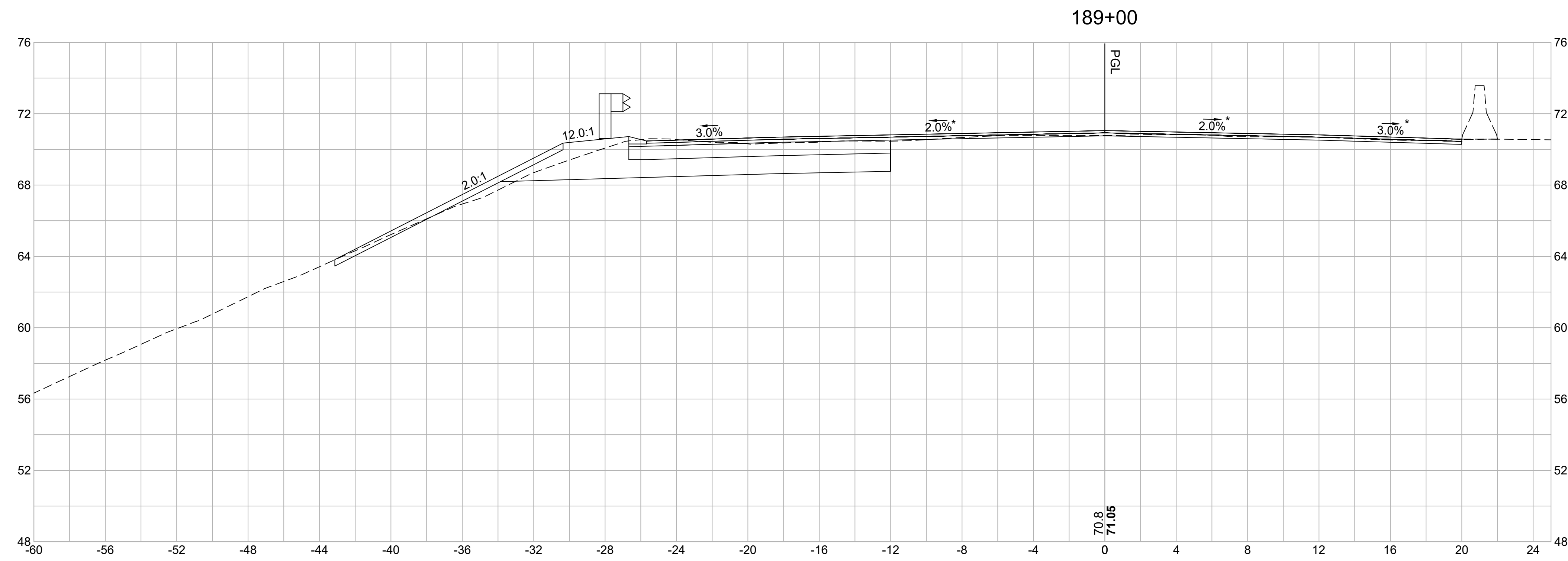
CUT AREA: 30 SF
FILL AREA: 0 SF

ADDENDUM No. 5



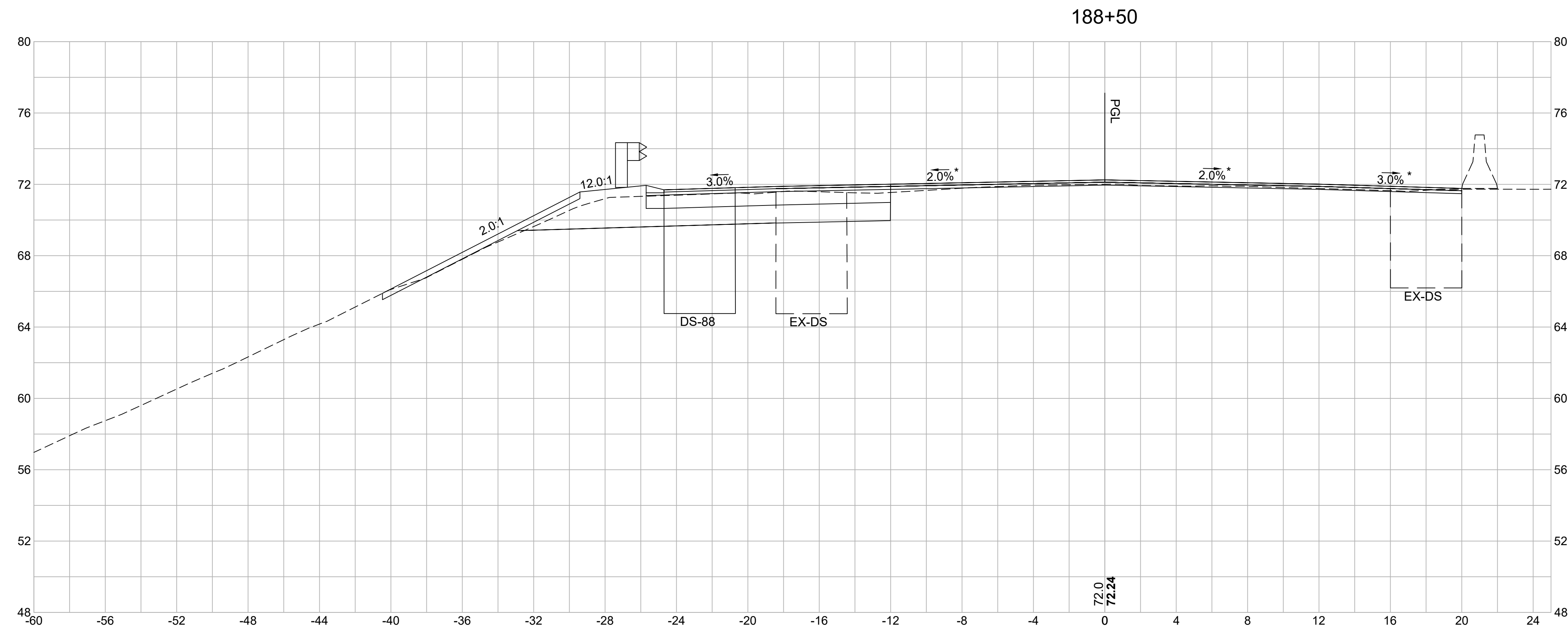
530 PRESTON AVENUE
MERIDEN, CT 06450

REVISIONS			RHODE ISLAND DEPARTMENT OF TRANSPORTATION	
NO.	DATE	BY		
1	11/07/19	EKM	BRIDGE GROUP 51A - RT. 37 C-2	
			CRANSTON / WARWICK RHODE ISLAND	
			ROUTE 37 WB CROSS SECTIONS	
			CHECKED BY _____	DATE _____ SCALE AS NOTED



CUT AREA: 34 SF
FILL AREA: 1 SF

*THE CONTRACTOR SHALL MATCH THE EXISTING ROADWAY ELEVATION AT THE P.G.L. AND MATCH THE EXISTING CROSS SLOPES. THE PROPOSED CROSS SLOPES ARE ILLUSTRATED BASED ON LIMITED FIELD SURVEY AND REVIEW OF RECORD DRAWINGS.



CUT AREA: 31 SF
FILL AREA: 0 SF

REVISIONS		
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1	11/07/19	EKM

**RHODE ISLAND
DEPARTMENT OF TRANSPORTATION**

BRIDGE GROUP 51A - RT. 37 C-2

CRANSTON / WARWICK RHODE ISLAND

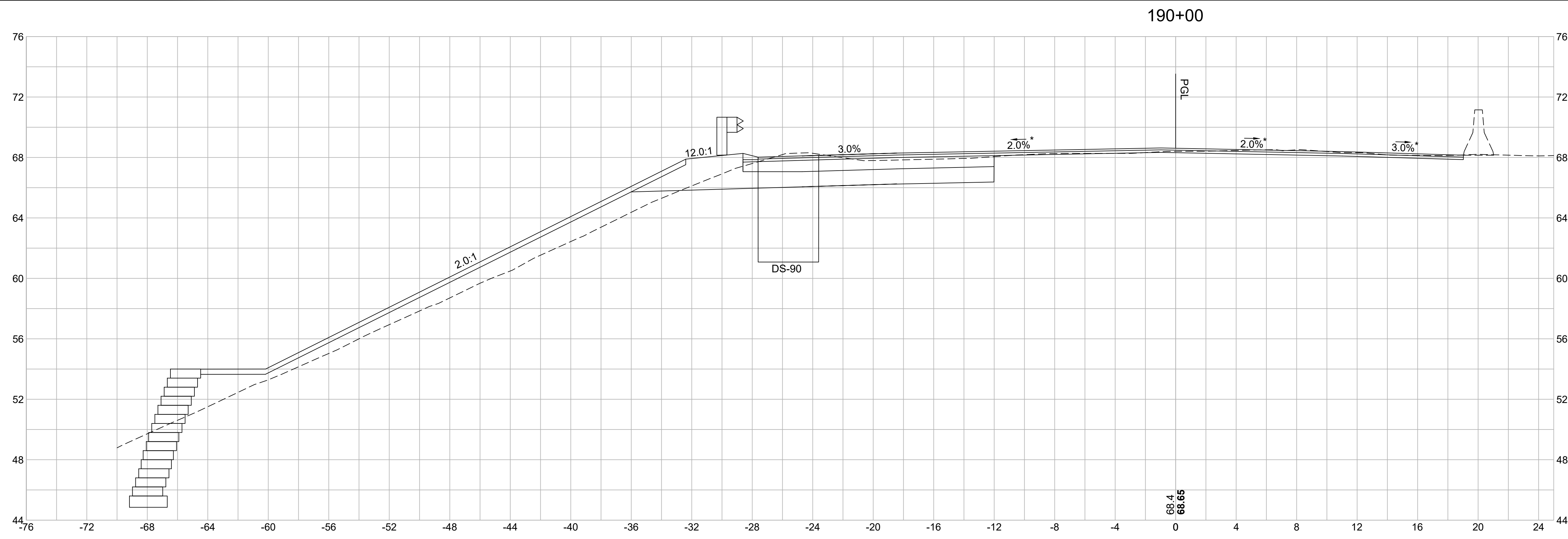
**ROUTE 37 WB CROSS
SECTIONS**

CHECKED BY _____ DATE _____ SCALE AS NOTED

ADDENDUM No. 5

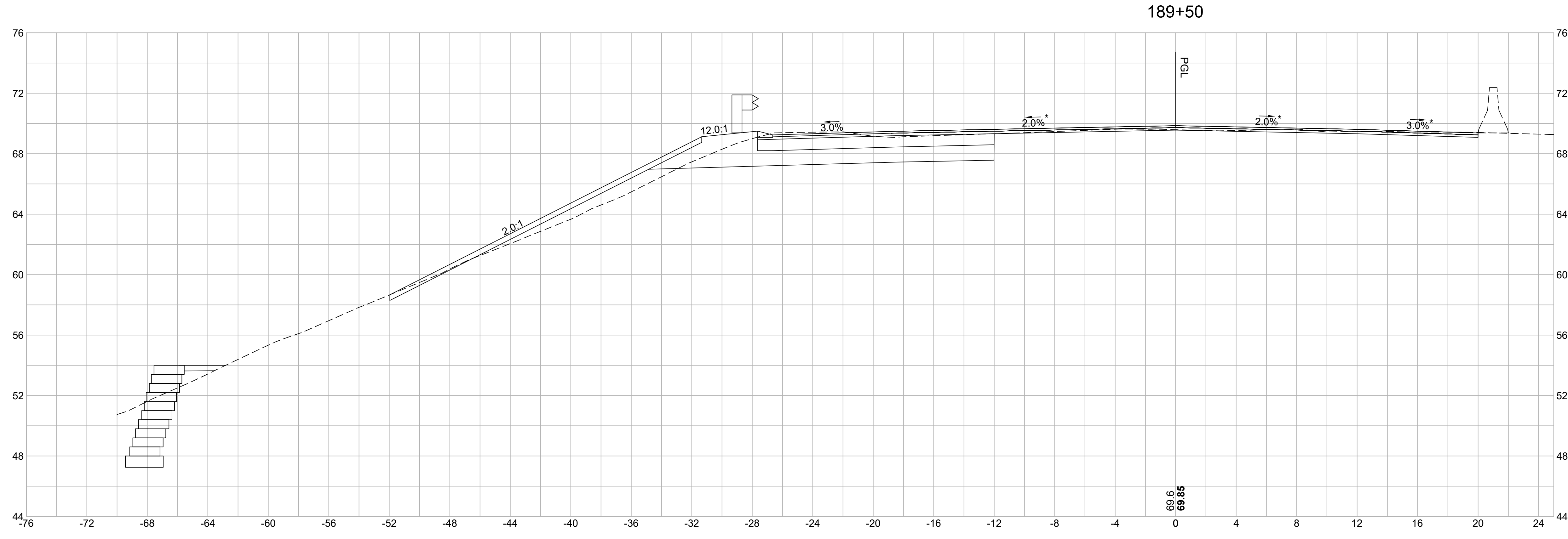


FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
R-1	RI	RI-0037(012), RI-0037(013), RI-0037(014), RI-0037(015)	2019	159	197



CUT AREA: 33 SF
FILL AREA: 52 SF

*THE CONTRACTOR SHALL MATCH THE EXISTING ROADWAY ELEVATION AT THE P.G.L. AND MATCH THE EXISTING CROSS SLOPES. THE PROPOSED CROSS SLOPES ARE ILLUSTRATED BASED ON LIMITED FIELD SURVEY AND REVIEW OF RECORD DRAWINGS.

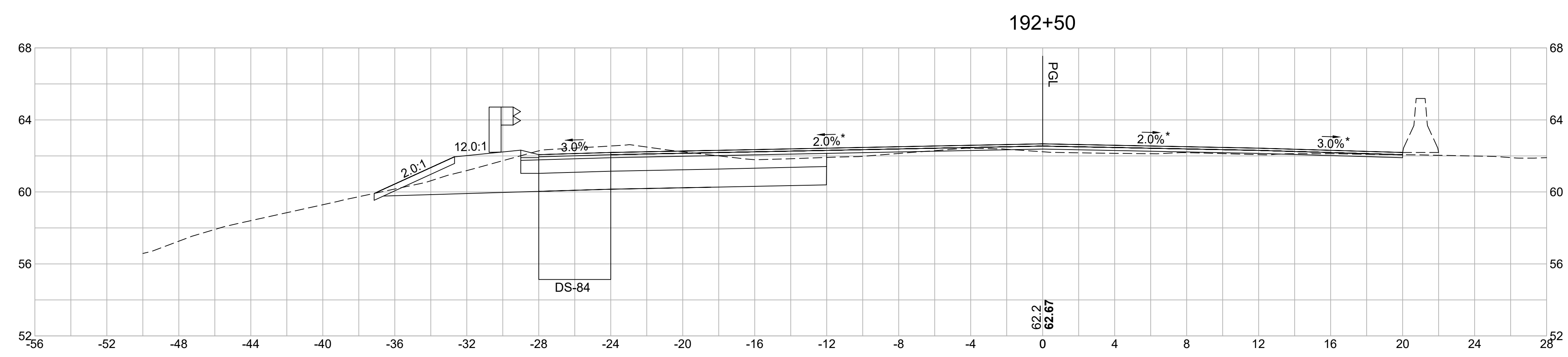


CUT AREA: 35 SF
FILL AREA: 20 SF

ADDENDUM No. 5



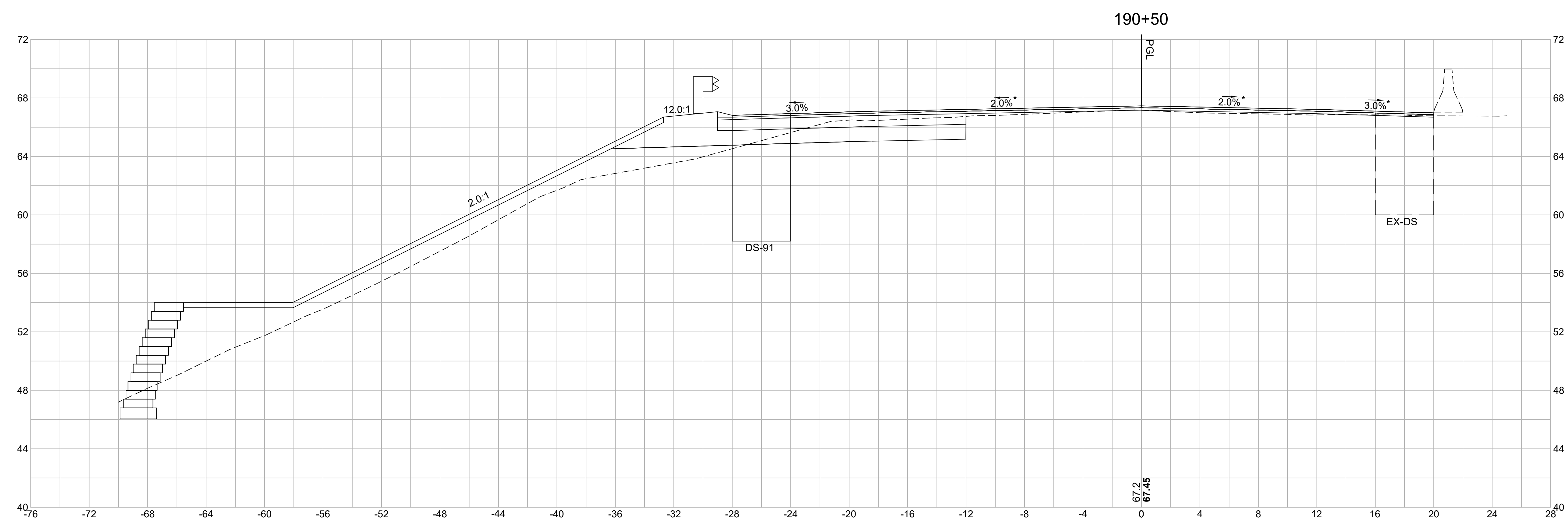
REVISIONS			RHODE ISLAND DEPARTMENT OF TRANSPORTATION	
NO.	DATE	BY		
1	11/07/19	EKM	BRIDGE GROUP 51A - RT. 37 C-2	
			CRANSTON / WARWICK RHODE ISLAND	
			ROUTE 37 WB CROSS SECTIONS	
			CHECKED BY _____	DATE _____ SCALE AS NOTED



CUT AREA: 43 SF
FILL AREA: 4 SF

*THE CONTRACTOR SHALL MATCH THE EXISTING ROADWAY ELEVATION AT THE P.G.L. AND MATCH THE EXISTING CROSS SLOPES. THE PROPOSED CROSS SLOPES ARE ILLUSTRATED BASED ON LIMITED FIELD SURVEY AND REVIEW OF RECORD DRAWINGS.

EXCLUDED CROSS SECTIONS ACROSS BRIDGE 062701



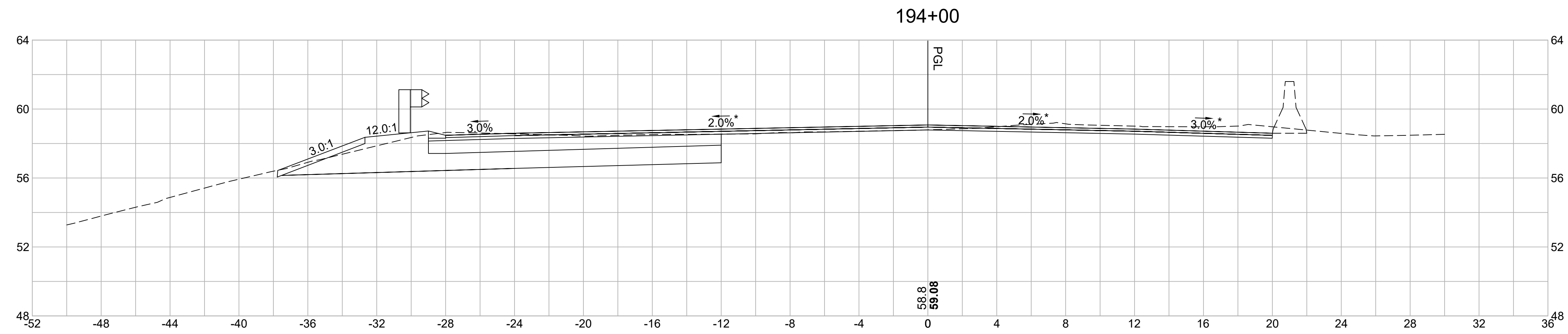
CUT AREA: 18 SF
FILL AREA: 80 SF

ADDENDUM No. 5

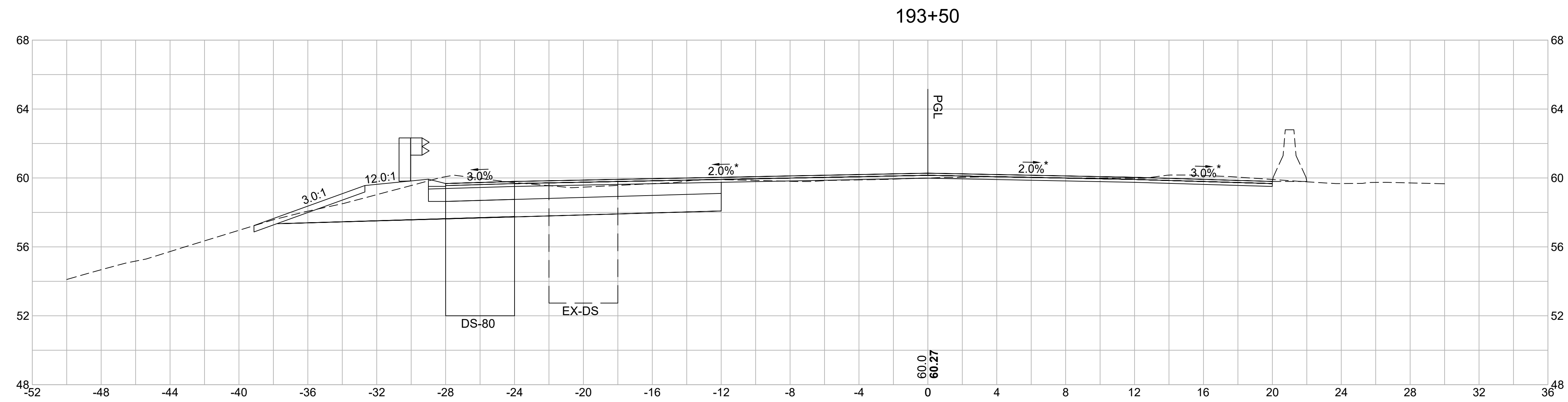


REVISIONS		
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RHODE ISLAND DEPARTMENT OF TRANSPORTATION	
BRIDGE GROUP 51A - RT. 37 C-2	
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ROUTE 37 WB CROSS SECTIONS	
CHECKED BY	DATE
	SCALE AS NOTED

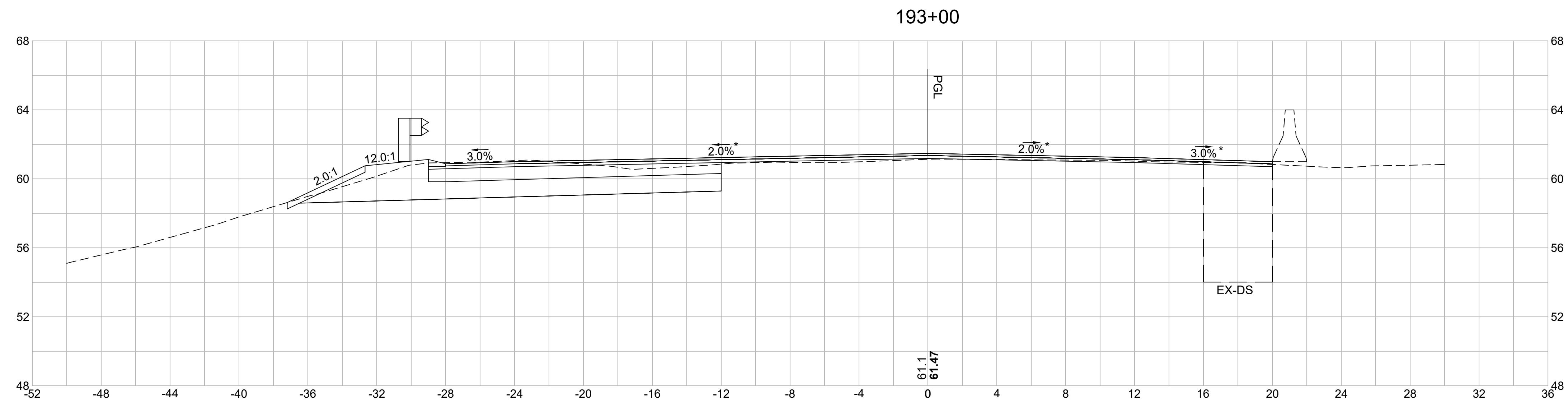


CUT AREA: 43 SF
FILL AREA: 1 SF



CUT AREA: 44 SF
FILL AREA: 1 SF

*THE CONTRACTOR SHALL MATCH THE EXISTING ROADWAY ELEVATION AT THE P.G.L. AND MATCH THE EXISTING CROSS SLOPES. THE PROPOSED CROSS SLOPES ARE ILLUSTRATED BASED ON LIMITED FIELD SURVEY AND REVIEW OF RECORD DRAWINGS.



CUT AREA: 40 SF
FILL AREA: 1 SF

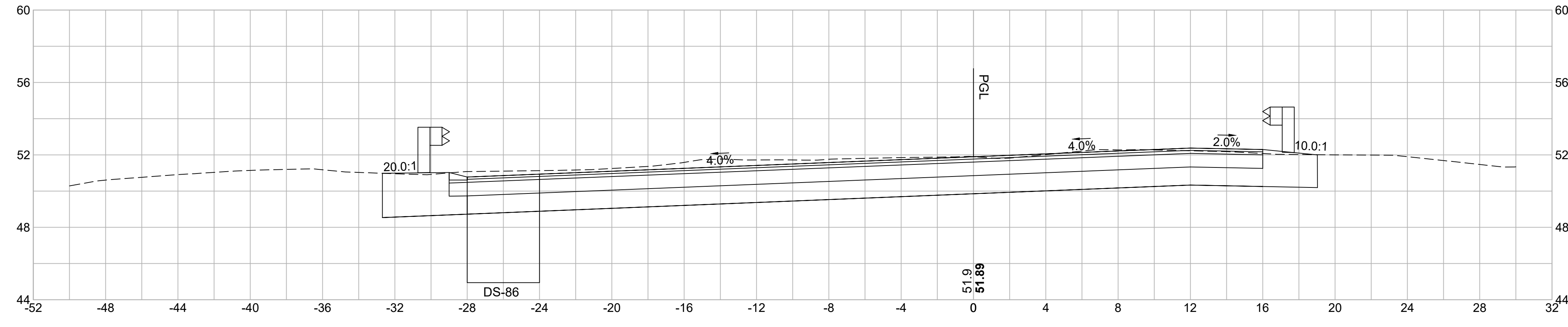
ADDENDUM No. 5



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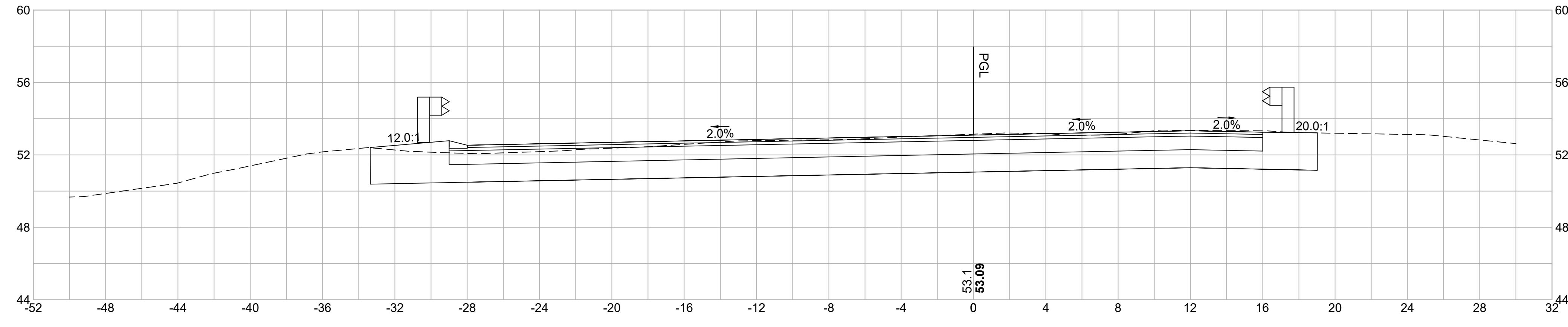
RHODE ISLAND	
DEPARTMENT OF TRANSPORTATION	
BRIDGE GROUP 51A - RT. 37 C-2	
CRANSTON / WARWICK	RHODE ISLAND
ROUTE 37 WB CROSS SECTIONS	
CHECKED BY _____	DATE _____
SCALE AS NOTED	

197+00



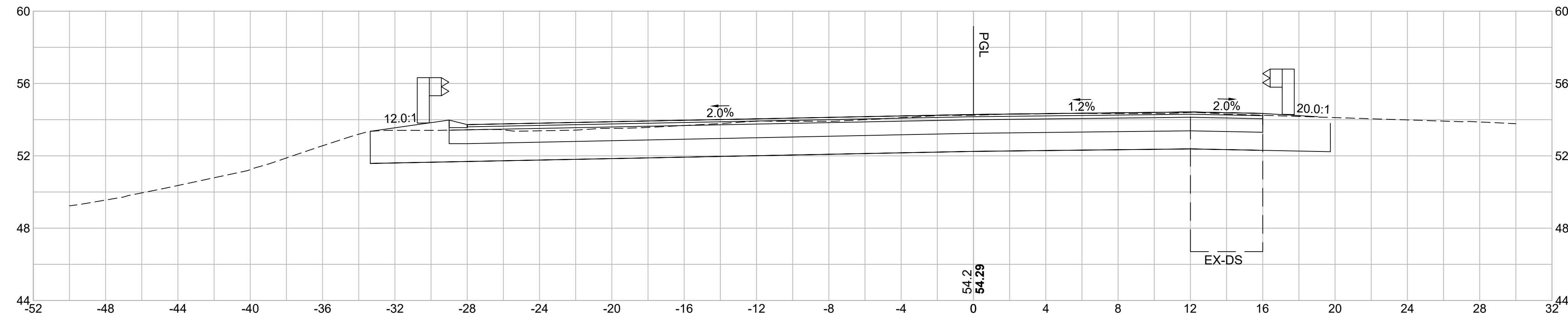
CUT AREA: 111 SF
FILL AREA: 0 SF

196+50



CUT AREA: 100 SF
FILL AREA: 0 SF

196+00



CUT AREA: 99 SF
FILL AREA: 0 SF

*THE CONTRACTOR SHALL MATCH THE EXISTING ROADWAY ELEVATION AT THE P.G.L. AND MATCH THE EXISTING CROSS SLOPES. THE PROPOSED CROSS SLOPES ARE ILLUSTRATED BASED ON LIMITED FIELD SURVEY AND REVIEW OF RECORD DRAWINGS.

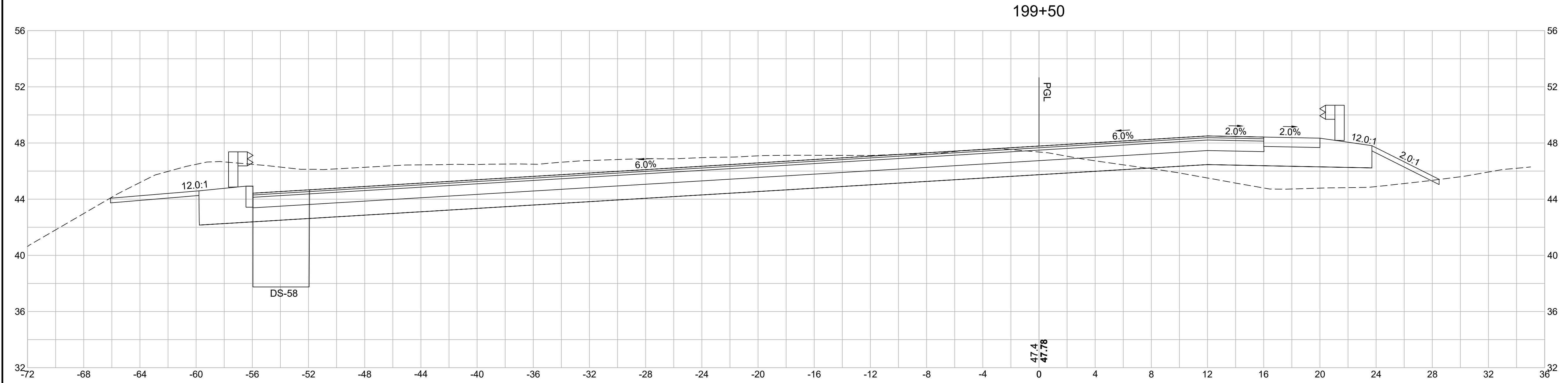
REVISIONS		
NO.	DATE	BY
1	11/07/19	EKM

RHODE ISLAND DEPARTMENT OF TRANSPORTATION	
BRIDGE GROUP 51A - RT. 37 C-2	
CRANSTON / WARWICK	RHODE ISLAND
ROUTE 37 WB CROSS SECTIONS	
CHECKED BY _____	DATE _____ SCALE AS NOTED

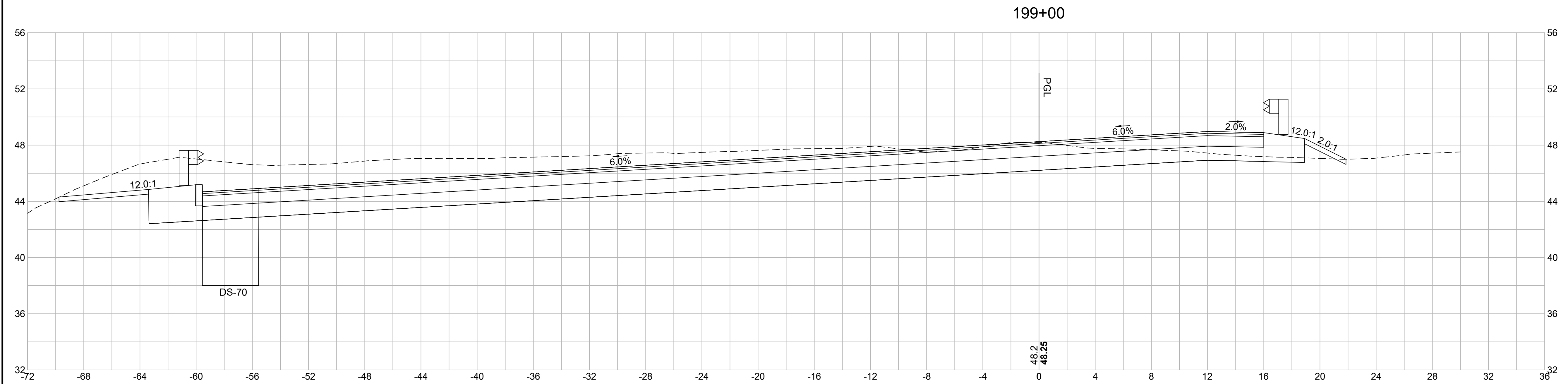
ADDENDUM No. 5



530 PRESTON AVENUE
MERRIDEN, CT 06450



CUT AREA: 186 SF
FILL AREA: 25 SF



CUT AREA: 216 SF
FILL AREA: 2 SF

REVISIONS		
NO.	DATE	BY
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RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

BRIDGE GROUP 51A - RT. 37 C-2

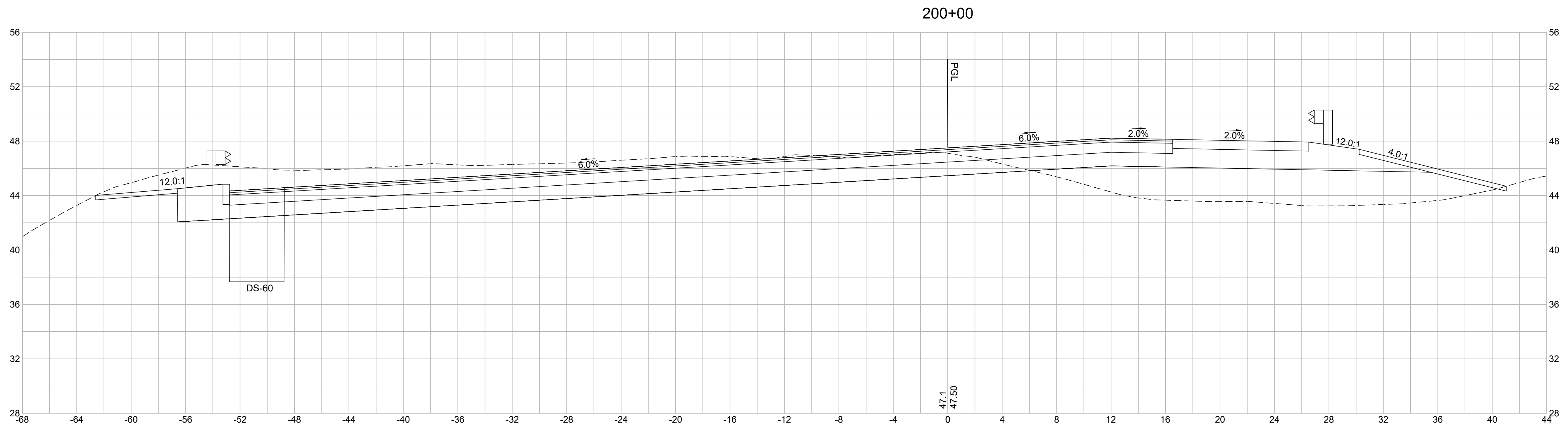
CRANSTON / WARWICK RHODE ISLAND

ROUTE 37 WB CROSS
SECTIONS

CHECKED BY _____ DATE _____ SCALE AS NOTED

ADDENDUM No. 5





CUT AREA: 166 SF
FILL AREA: 70 SF

ADDENDUM No. 5



530 PRESTON AVENUE
MERRIDEN, CT 06450

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RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

BRIDGE GROUP 51A - RT. 37 C-2

CRANSTON / WARWICK RHODE ISLAND

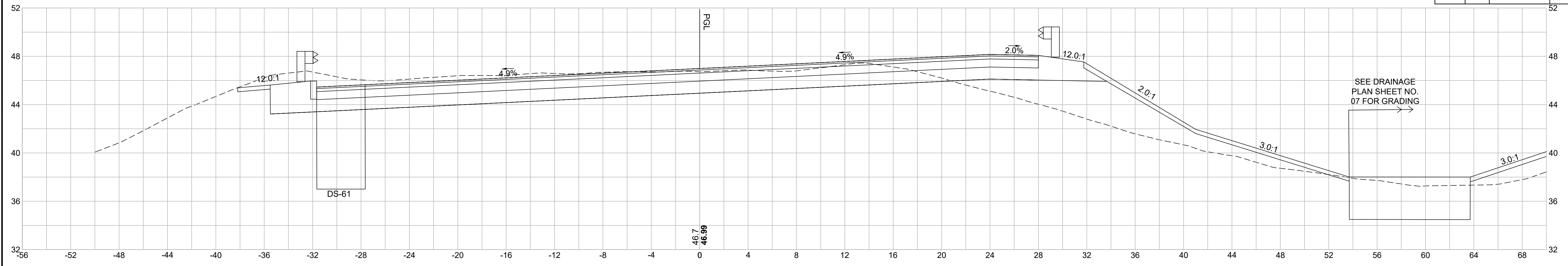
ROUTE 37 WB CROSS SECTIONS

CHECKED BY _____ DATE _____ SCALE AS NOTED

CUT AREA: 117 SF
 FILL AREA: 51 SF R-1

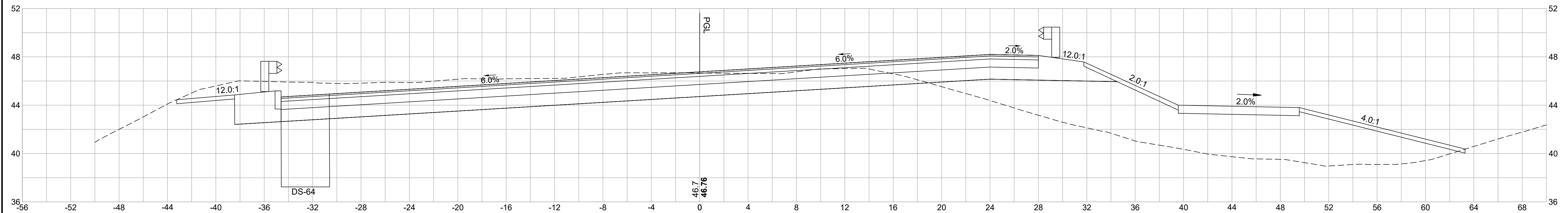
FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
1	RI	RI-0037(012), RI-0037(013), RI-0037(020), RI-0037(021), RI-0037(022)	2019	167	197

201+50



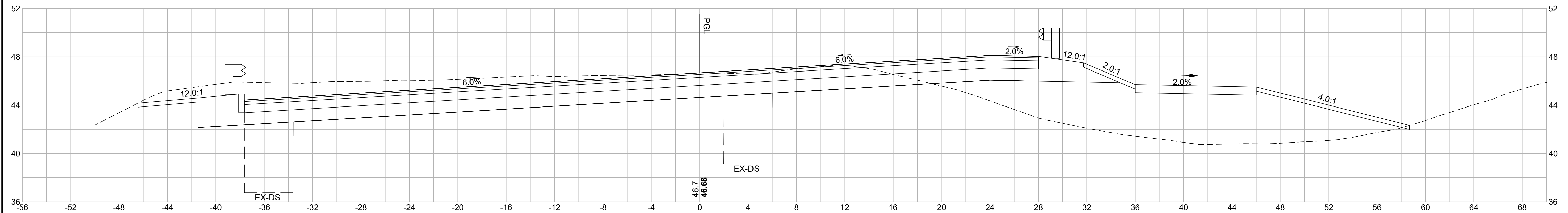
SEE DRAINAGE PLAN SHEET NO. 07 FOR GRADING

201+00



CUT AREA: 132 SF
 FILL AREA: 128 SF

200+50



CUT AREA: 150 SF
 FILL AREA: 114 SF

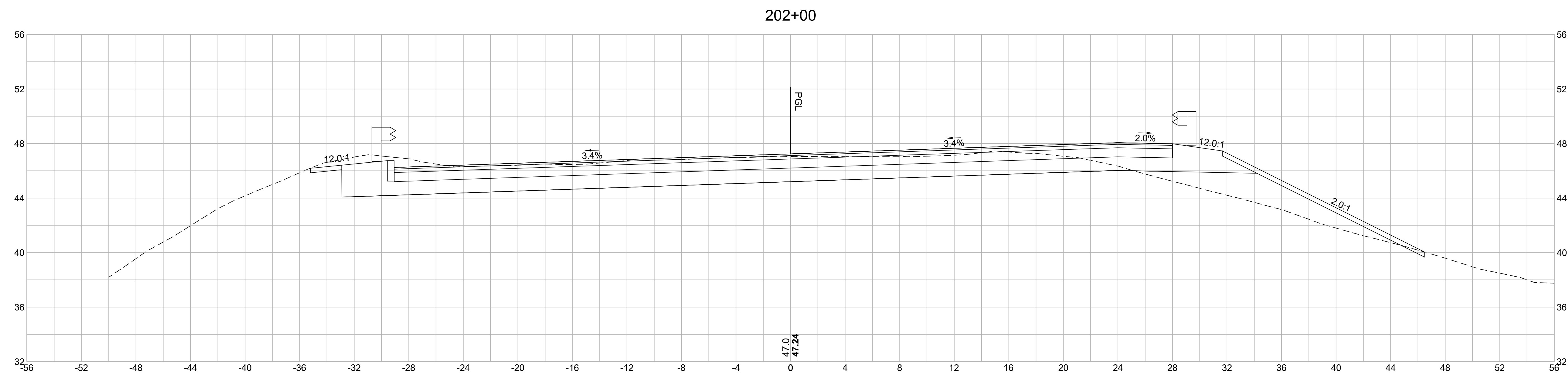
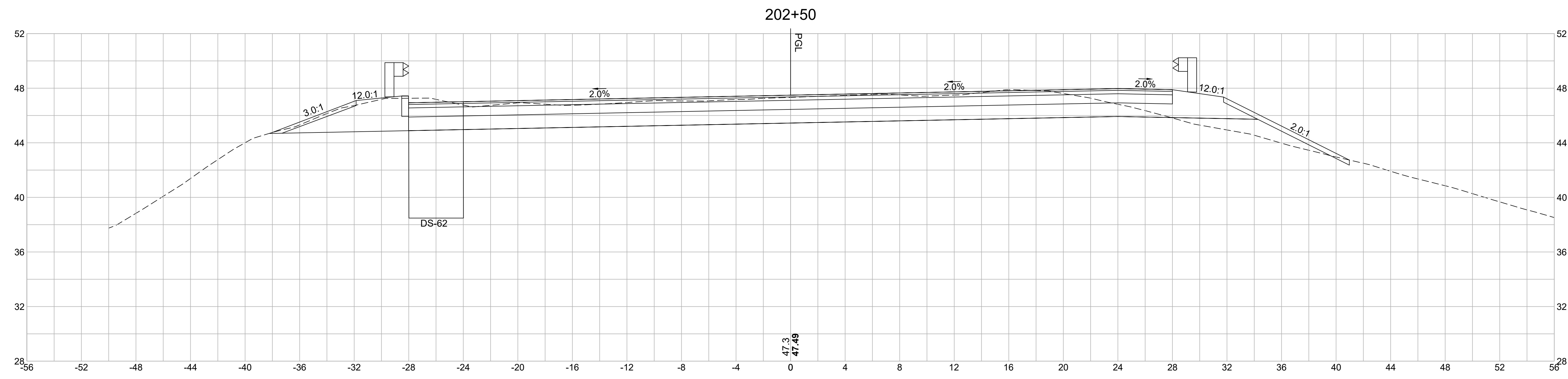
REVISIONS		
NO.	DATE	BY
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RHODE ISLAND
 DEPARTMENT OF TRANSPORTATION
 BRIDGE GROUP 51A - RT. 37 C-2
 CRANSTON / WARWICK RHODE ISLAND
 ROUTE 37 WB CROSS SECTIONS

ADDENDUM No. 5



CHECKED BY _____ DATE _____ SCALE AS NOTED



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NO.	DATE	BY
1	11/07/19	EKM

RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

BRIDGE GROUP 51A - RT. 37 C-2

CRANSTON / WARWICK RHODE ISLAND

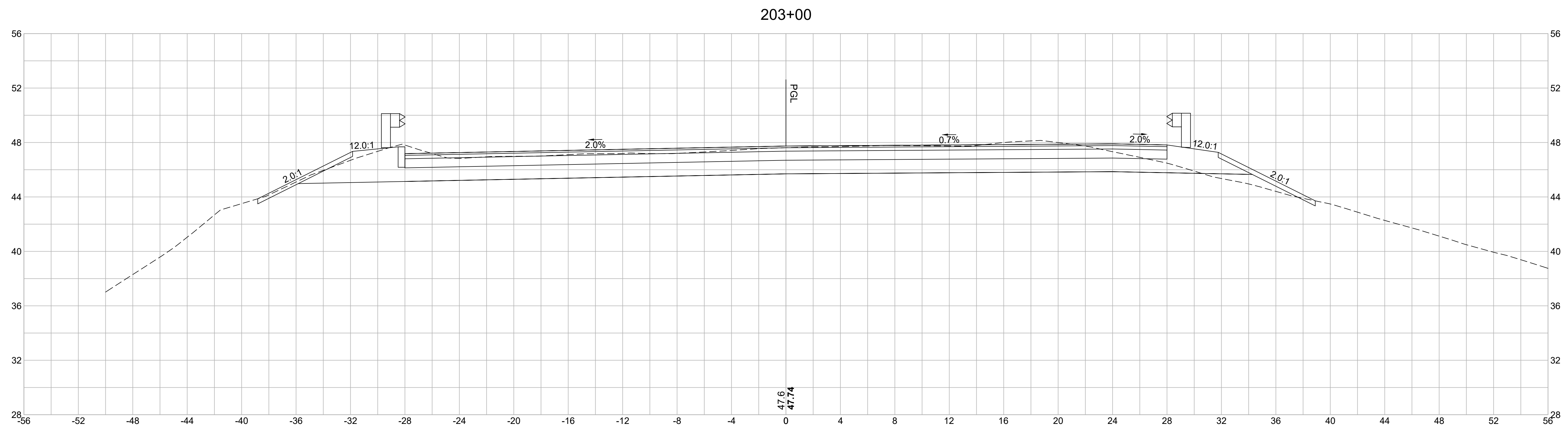
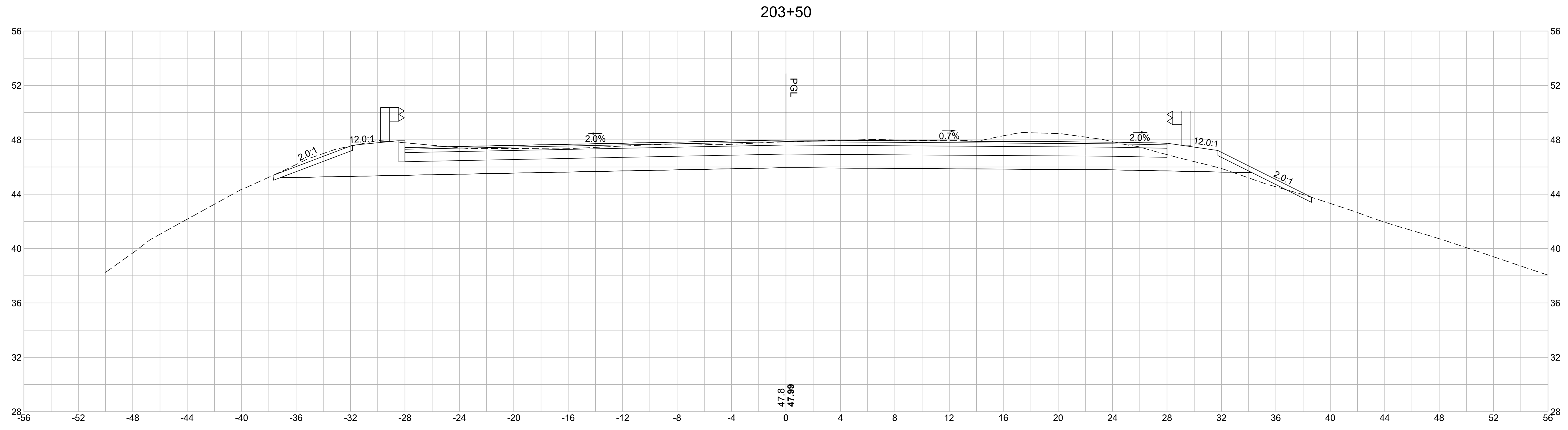
ROUTE 37 WB CROSS
SECTIONS

CHECKED BY _____ DATE _____ SCALE AS NOTED

ADDENDUM No. 5



FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
R-1	1	RI	2019	169	197



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RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

BRIDGE GROUP 51A - RT. 37 C-2

CRANSTON / WARWICK RHODE ISLAND

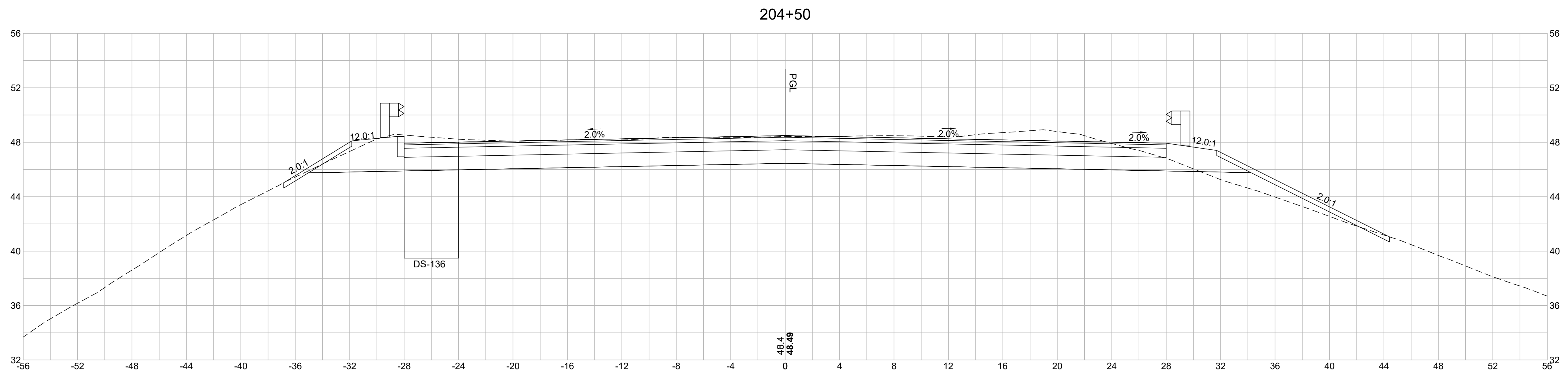
ROUTE 37 WB CROSS SECTIONS

CHECKED BY _____ DATE _____ SCALE AS NOTED

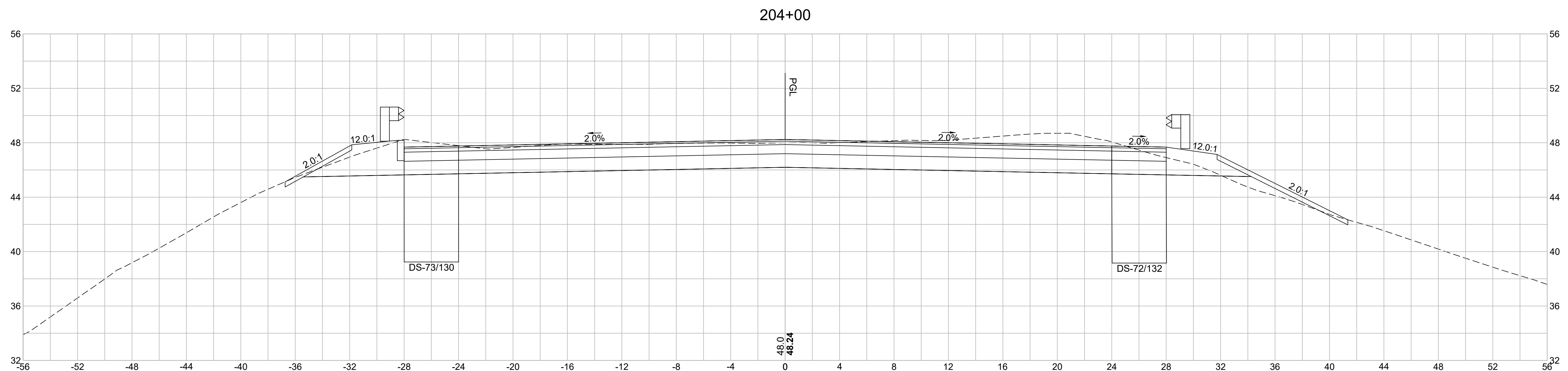
ADDENDUM No. 5



FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
R-1	1	RI	2019	170	197



CUT AREA: 133 SF
FILL AREA: 9 SF



CUT AREA: 132 SF
FILL AREA: 4 SF

REVISIONS		
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RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

BRIDGE GROUP 51A - RT. 37 C-2

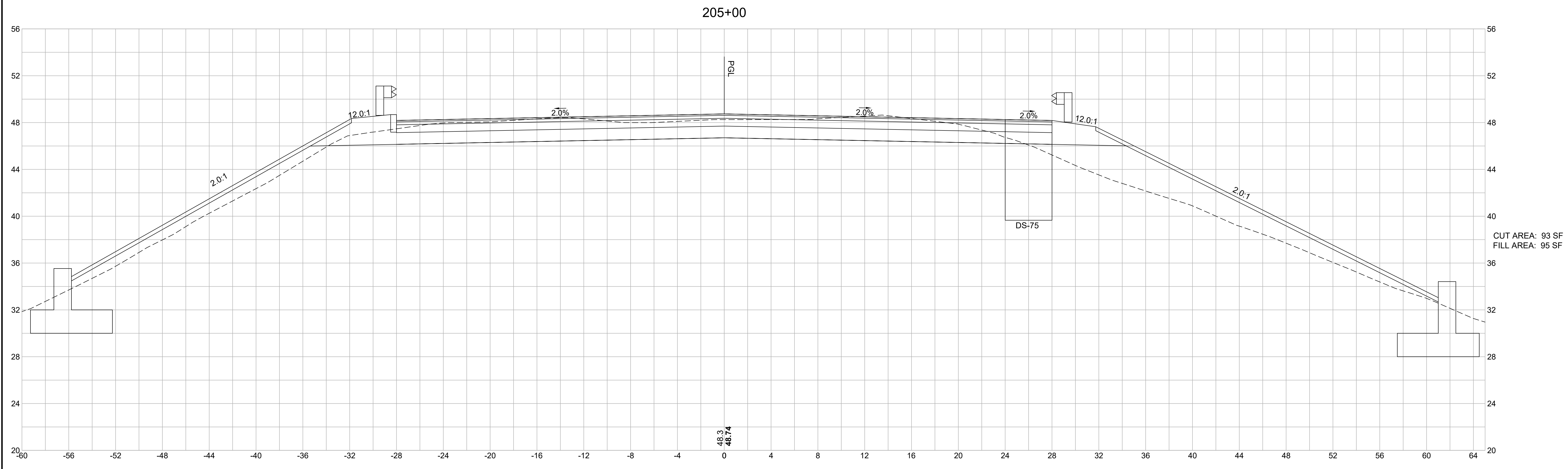
CRANSTON / WARWICK RHODE ISLAND

ROUTE 37 WB CROSS
SECTIONS

CHECKED BY _____ DATE _____ SCALE AS NOTED

ADDENDUM No. 5





ADDENDUM No. 5



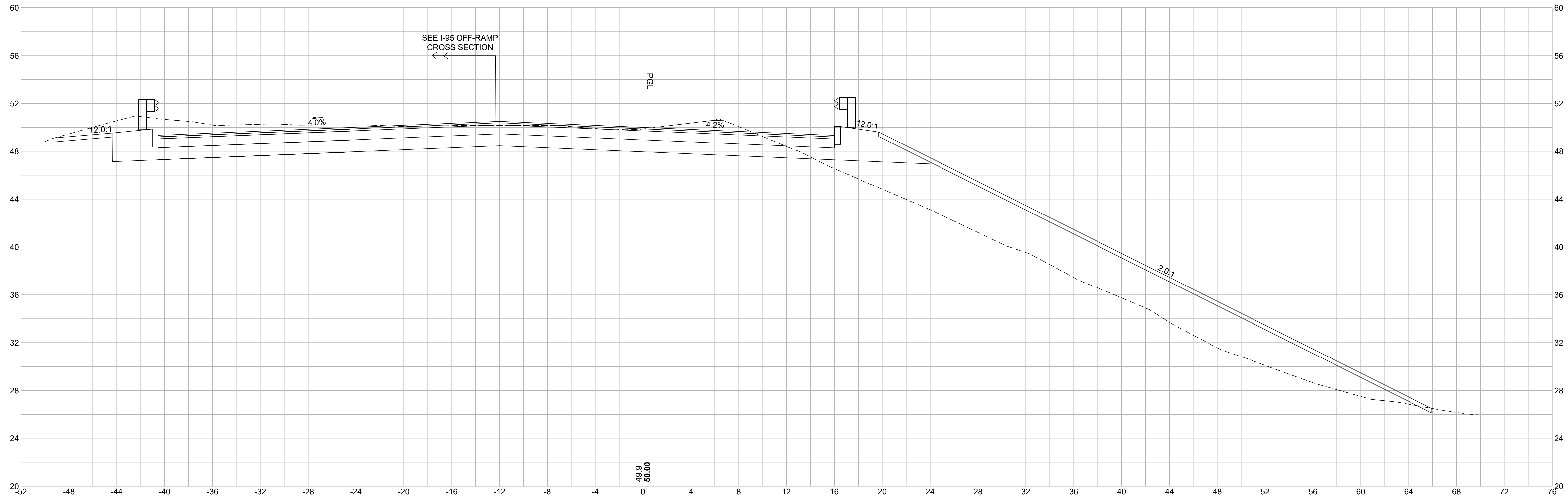
531 PRESTON AVENUE
MERIDEN, CT 06450

REVISIONS		
NO.	DATE	BY
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RHODE ISLAND DEPARTMENT OF TRANSPORTATION	
BRIDGE GROUP 51A - RT. 37 C-2	
CRANSTON / WARWICK	RHODE ISLAND
ROUTE 37 WB CROSS SECTIONS	
CHECKED BY _____	DATE _____ SCALE AS NOTED

208+00

CUT AREA: 50 SF
FILL AREA: 158 SF



ADDENDUM No. 5



REVISIONS		
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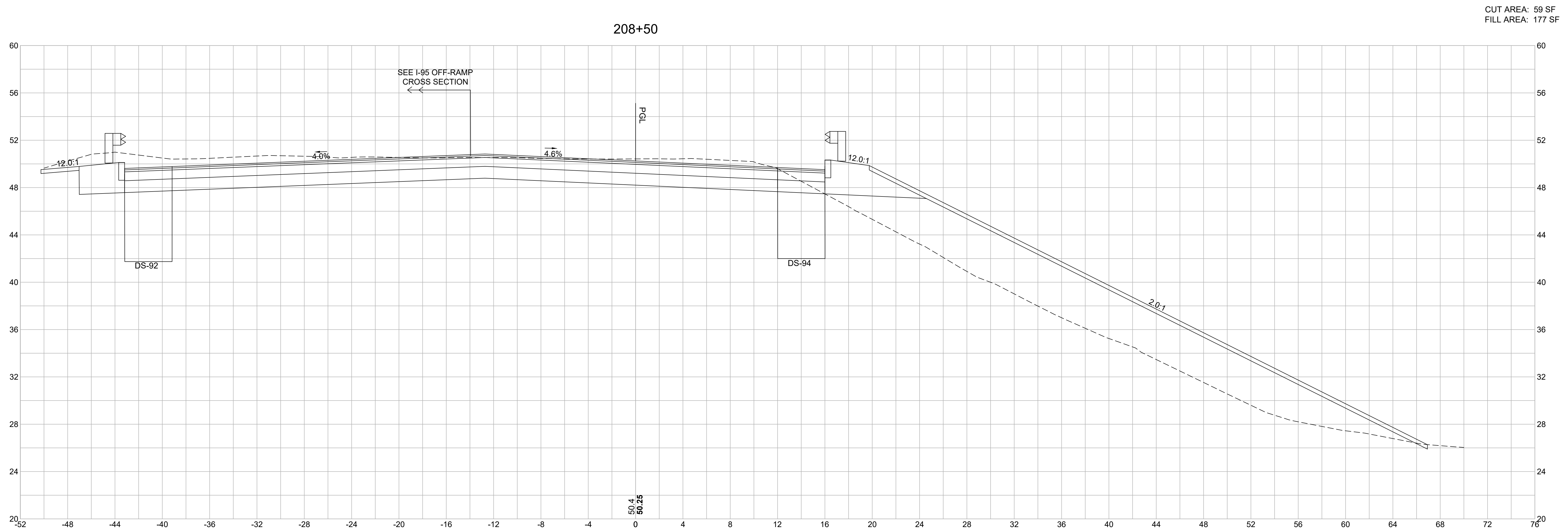
RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

BRIDGE GROUP 51A - RT. 37 C-2

CRANSTON / WARWICK RHODE ISLAND

ROUTE 37 WB CROSS SECTIONS

CHECKED BY _____ DATE _____ SCALE AS NOTED



CUT AREA: 59 SF
FILL AREA: 177 SF

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RHODE ISLAND
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BRIDGE GROUP 51A - RT. 37 C-2

CRANSTON / WARWICK RHODE ISLAND

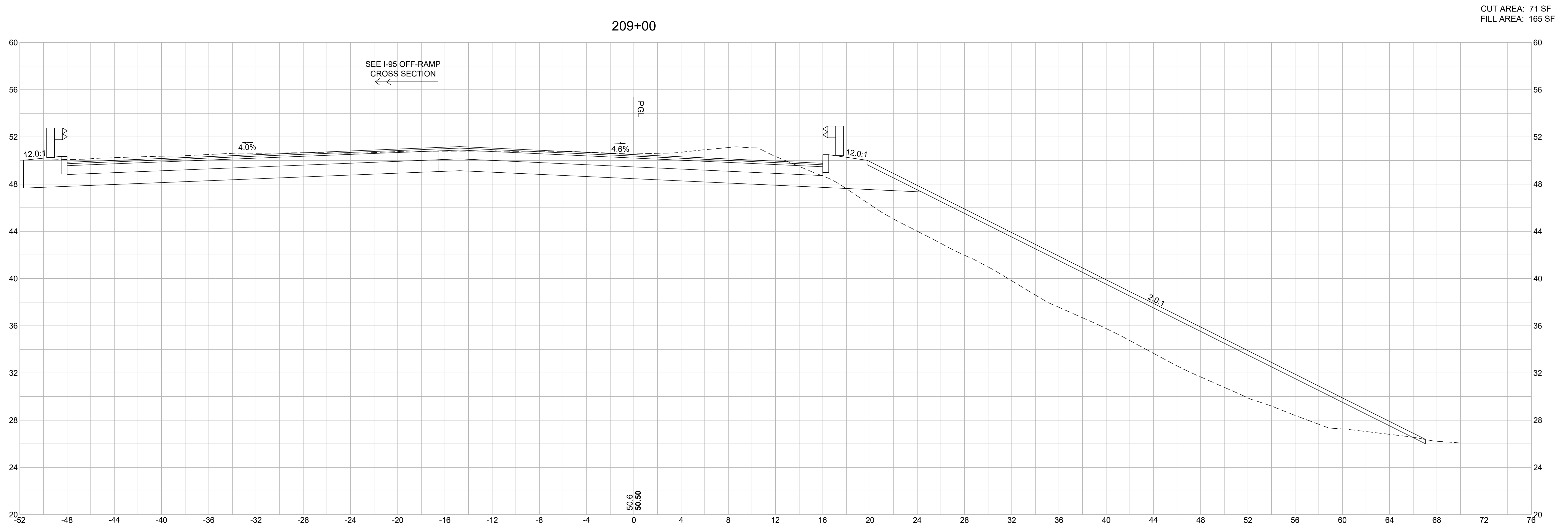
ROUTE 37 WB CROSS SECTIONS

CHECKED BY _____ DATE _____ SCALE AS NOTED

ADDENDUM No. 5



531 PRESTON AVENUE
MERIDEN, CT 06450



CUT AREA: 71 SF
 FILL AREA: 165 SF

209+00

SEE I-95 OFF-RAMP
 CROSS SECTION
 ←←

PGL

12.0:1

4.0%

4.6%

12.0:1

2.0:1

50.6
 50.50

REVISIONS		
NO.	DATE	BY
1	11/07/19	EKM

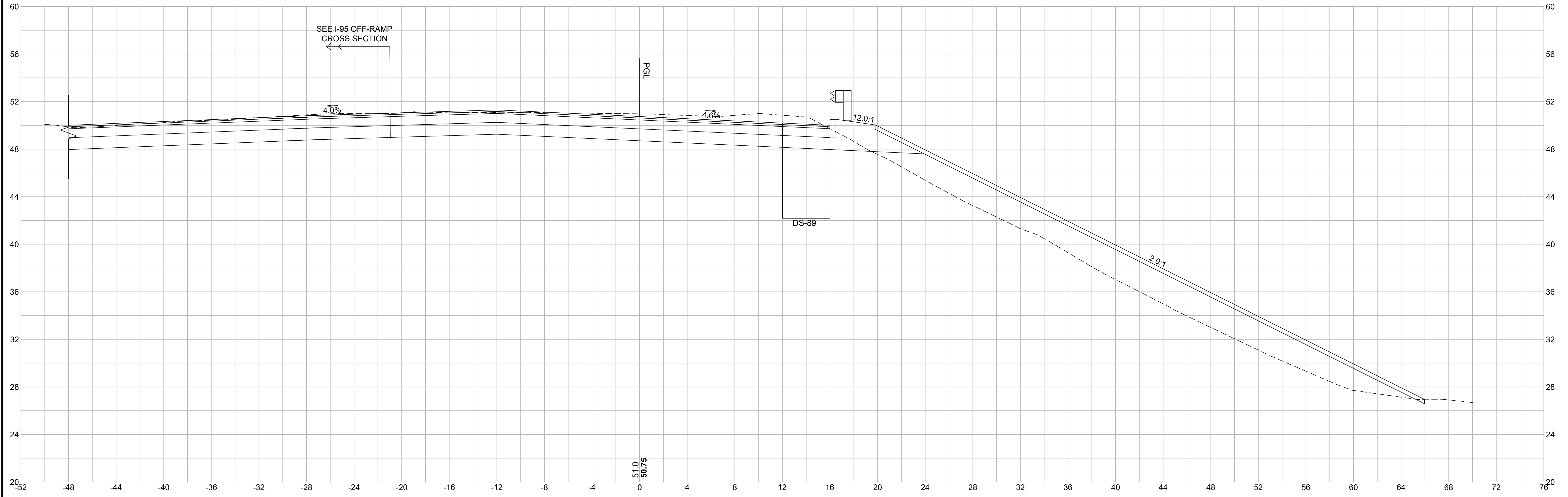
RHODE ISLAND DEPARTMENT OF TRANSPORTATION	
BRIDGE GROUP 51A - RT. 37 C-2	
CRANSTON / WARWICK	RHODE ISLAND
ROUTE 37 WB CROSS SECTIONS	
CHECKED BY _____	DATE _____ SCALE AS NOTED

ADDENDUM No. 5



209+50

CUT AREA: 85 SF
FILL AREA: 112 SF



ADDENDUM No. 5



530 PRESTON AVENUE
MERIDEN, CT 06450

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NO.	DATE	BY
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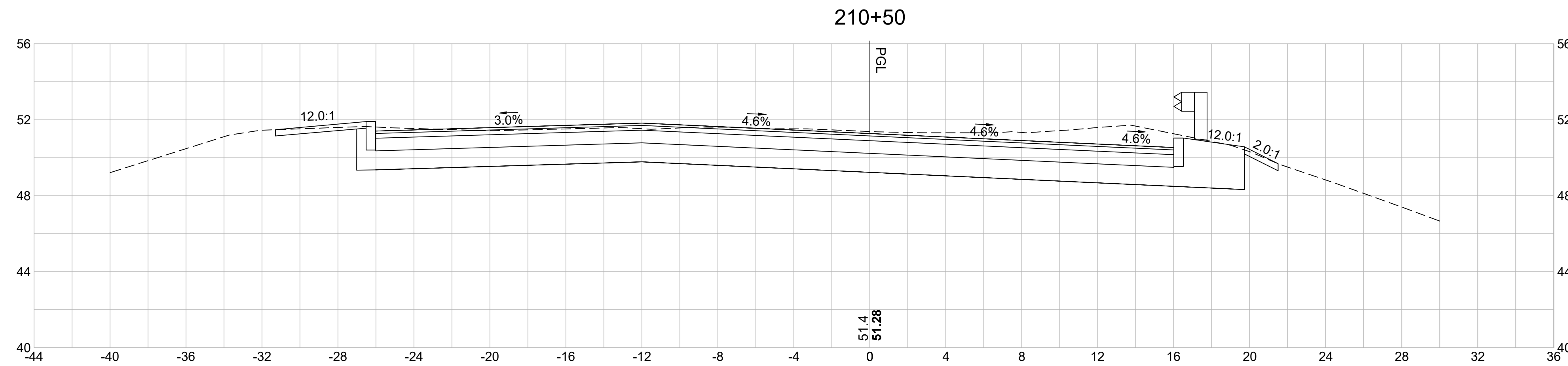
RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

BRIDGE GROUP 51A - RT. 37 C-2

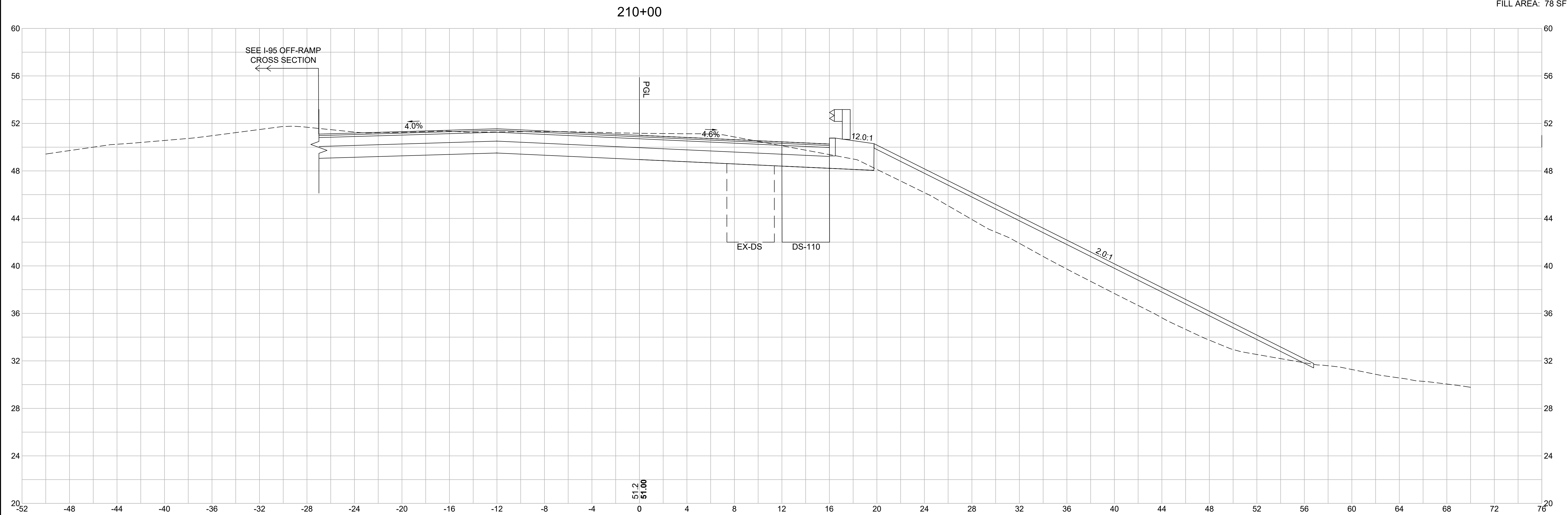
CRANSTON / WARWICK RHODE ISLAND

ROUTE 37 WB CROSS SECTIONS

CHECKED BY _____ DATE _____ SCALE AS NOTED



CUT AREA: 105 SF
FILL AREA: 0 SF



CUT AREA: 90 SF
FILL AREA: 78 SF

REVISIONS		
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1	11/07/19	EKM

RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

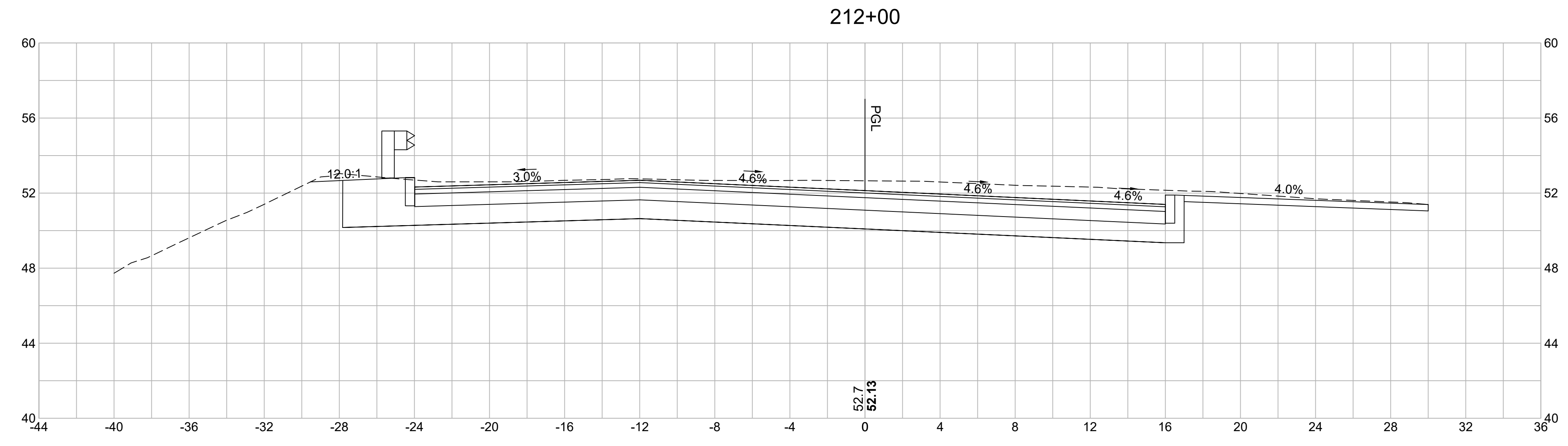
BRIDGE GROUP 51A - RT. 37 C-2
CRANSTON / WARWICK RHODE ISLAND

ROUTE 37 WB CROSS SECTIONS

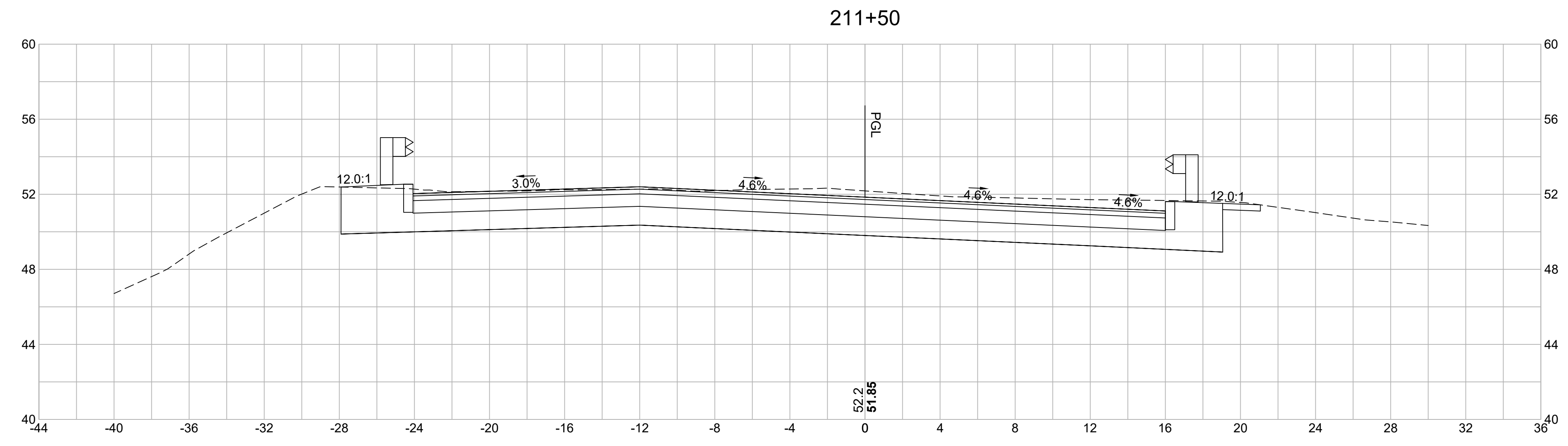
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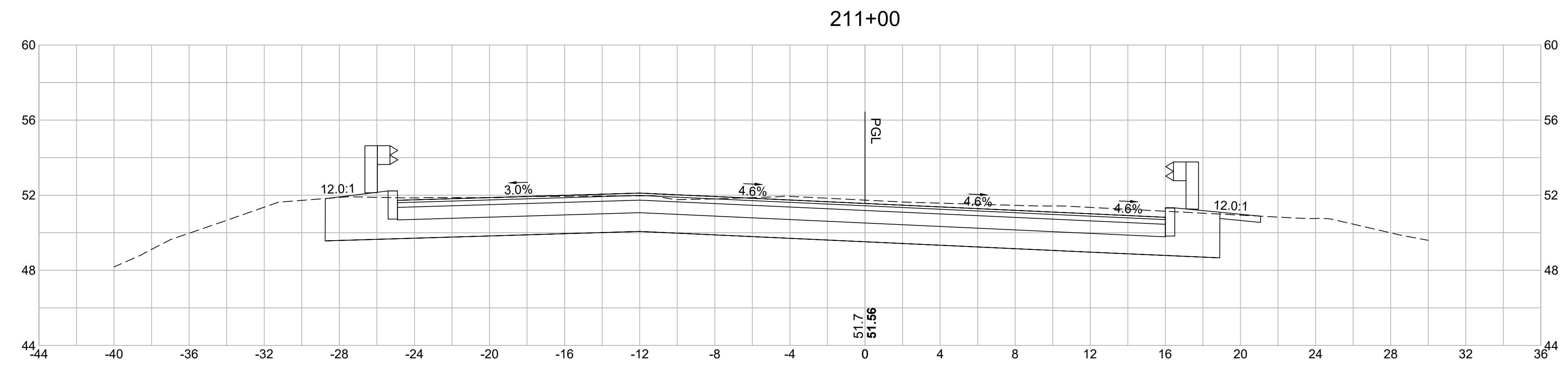
CHECKED BY _____ DATE _____ SCALE AS NOTED



CUT AREA: 117 SF
FILL AREA: 0 SF



CUT AREA: 107 SF
FILL AREA: 0 SF



CUT AREA: 104 SF
FILL AREA: 0 SF

ADDENDUM No. 5



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RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

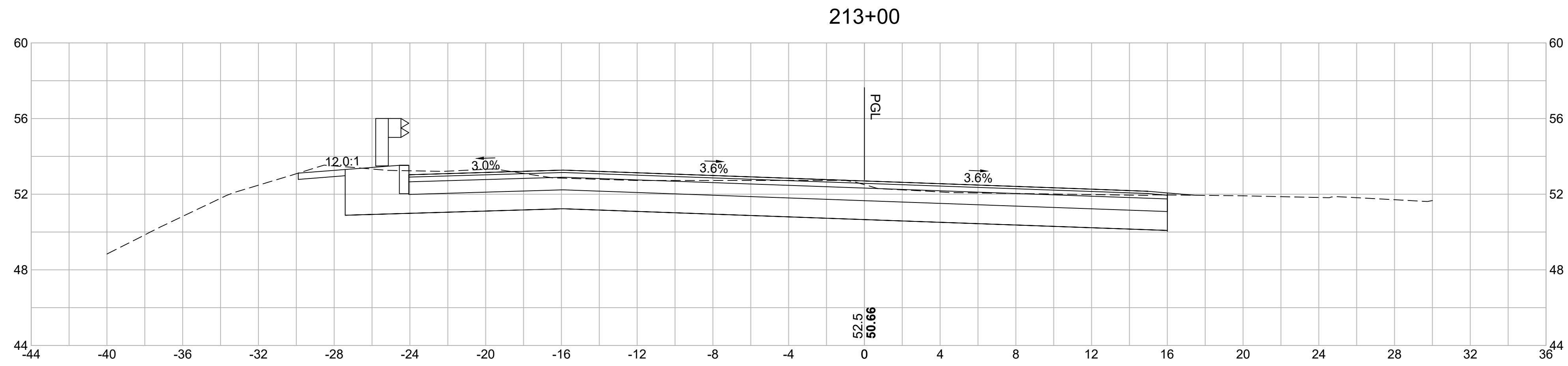
BRIDGE GROUP 51A - RT. 37 C-2

CRANSTON / WARWICK RHODE ISLAND

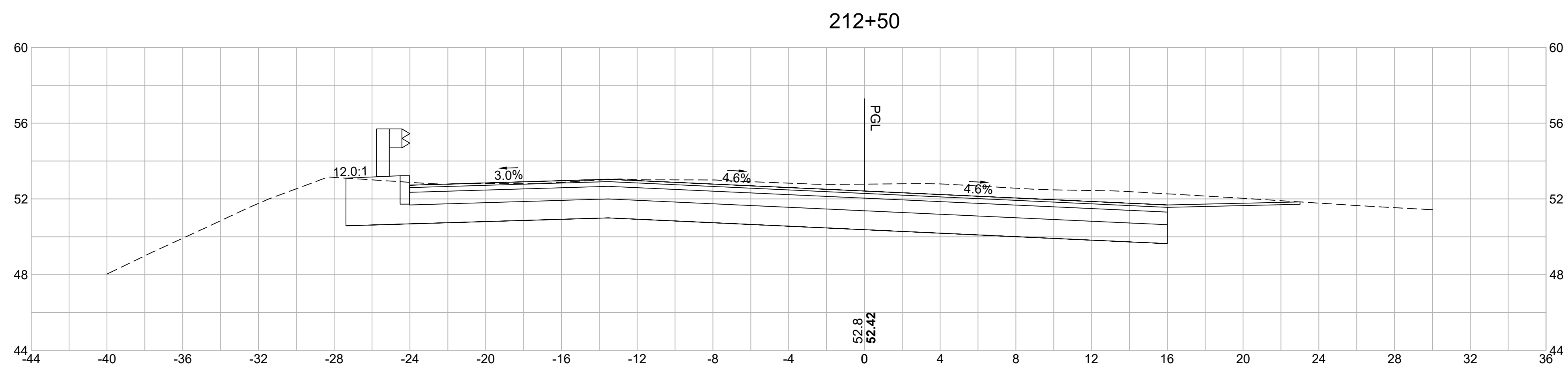
ROUTE 37 WB CROSS SECTIONS

CHECKED BY _____ DATE _____ SCALE AS NOTED

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
R-1	1	RI	2019	178	197



CUT AREA: 82 SF
FILL AREA: 0 SF



CUT AREA: 103 SF
FILL AREA: 0 SF

REVISIONS			RHODE ISLAND DEPARTMENT OF TRANSPORTATION	
NO.	DATE	BY		
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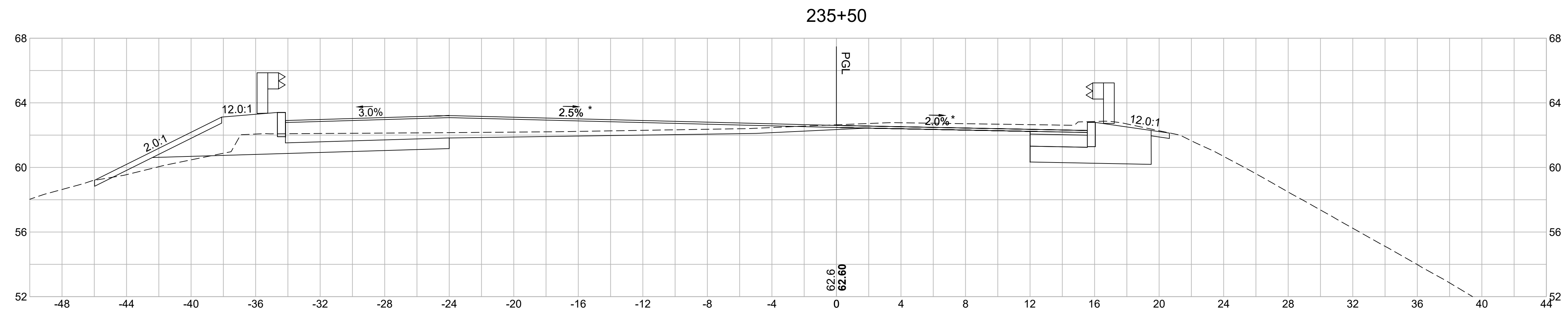
BRIDGE GROUP 51A - RT. 37 C-2
CRANSTON / WARWICK RHODE ISLAND

ROUTE 37 WB CROSS SECTIONS

ADDENDUM No. 5

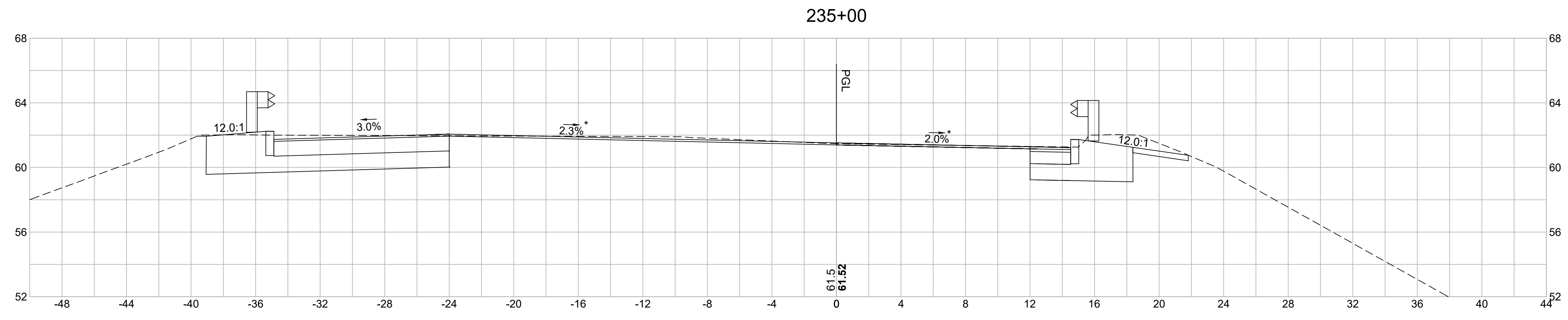


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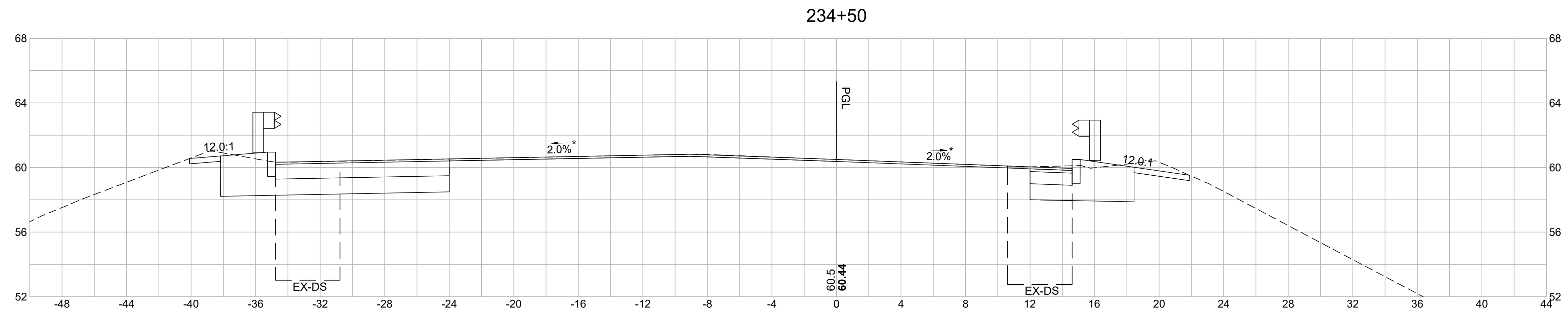


CUT AREA: 44 SF
FILL AREA: 5 SF

*THE CONTRACTOR SHALL MATCH THE EXISTING ROADWAY ELEVATION AT THE P.G.L. AND MATCH THE EXISTING CROSS SLOPES. THE PROPOSED CROSS SLOPES ARE ILLUSTRATED BASED ON LIMITED FIELD SURVEY AND REVIEW OF RECORD DRAWINGS.



CUT AREA: 51 SF
FILL AREA: 0 SF



CUT AREA: 47 SF
FILL AREA: 0 SF

REVISIONS		
NO.	DATE	BY
1	11/07/19	EKM

RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

BRIDGE GROUP 51A - RT. 37 C-2

CRANSTON / WARWICK RHODE ISLAND

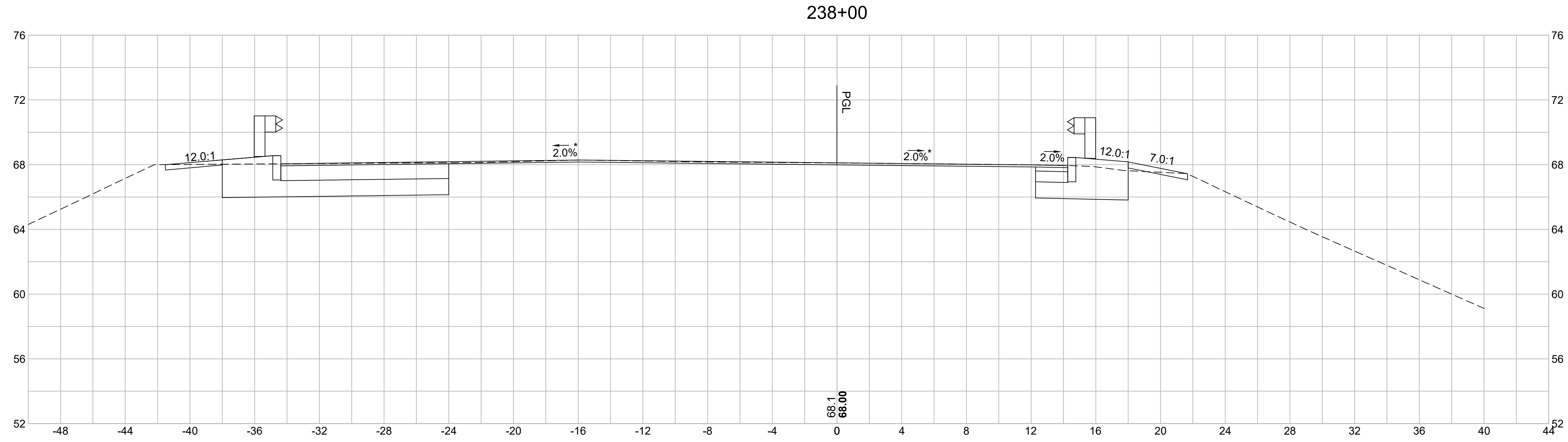
ROUTE 37 WB CROSS SECTIONS

CHECKED BY _____ DATE _____ SCALE AS NOTED

ADDENDUM No. 5

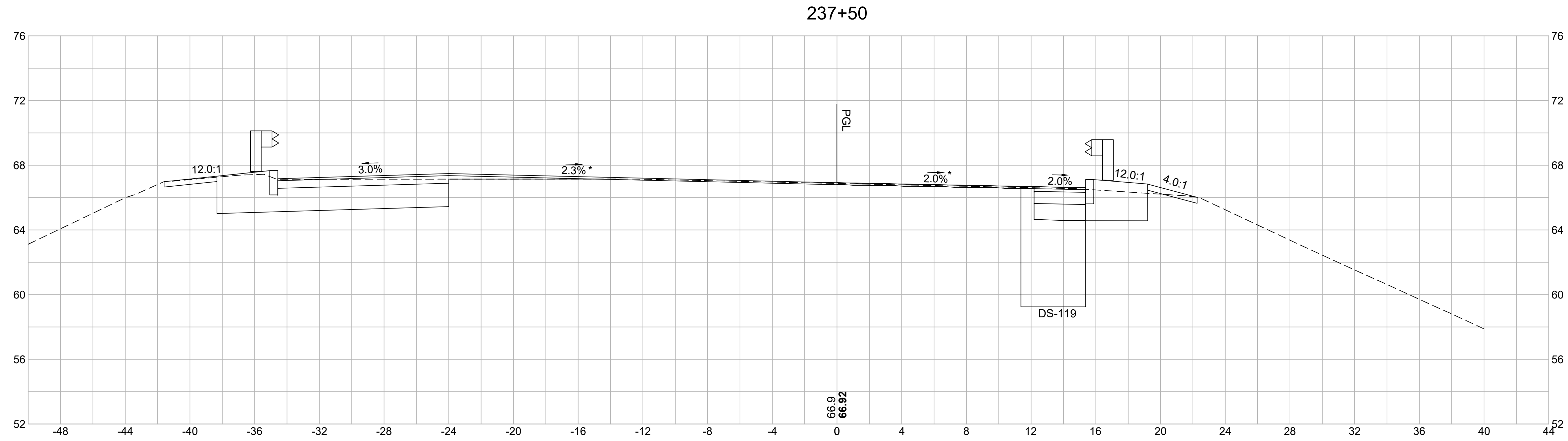


530 PRESTON AVENUE
MERIDEN, CT 06450



*THE CONTRACTOR SHALL MATCH THE EXISTING ROADWAY ELEVATION AT THE P.G.L. AND MATCH THE EXISTING CROSS SLOPES. THE PROPOSED CROSS SLOPES ARE ILLUSTRATED BASED ON LIMITED FIELD SURVEY AND REVIEW OF RECORD DRAWINGS.

CUT AREA: 40 SF
FILL AREA: 0 SF



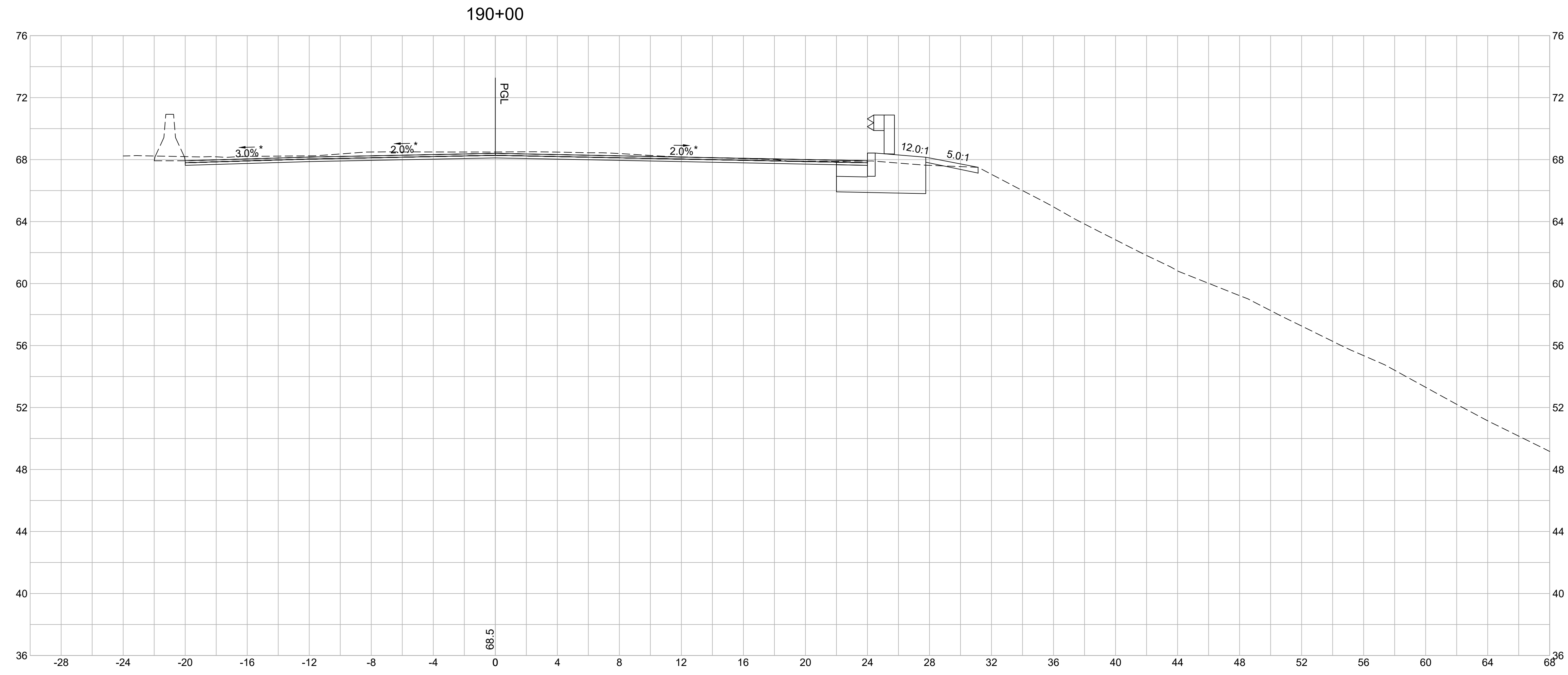
CUT AREA: 42 SF
FILL AREA: 0 SF

ADDENDUM No. 5



REVISIONS			RHODE ISLAND DEPARTMENT OF TRANSPORTATION	
NO.	DATE	BY		
1	11/07/19	EKM	BRIDGE GROUP 51A - RT. 37 C-2	
			CRANSTON / WARWICK RHODE ISLAND	
			ROUTE 37 WB CROSS SECTIONS	
			CHECKED BY _____	DATE _____ SCALE AS NOTED

*THE CONTRACTOR SHALL MATCH THE EXISTING ROADWAY ELEVATION AT THE P.G.L. AND MATCH THE EXISTING CROSS SLOPES. THE PROPOSED CROSS SLOPES ARE ILLUSTRATED BASED ON LIMITED FIELD SURVEY AND REVIEW OF RECORD DRAWINGS.



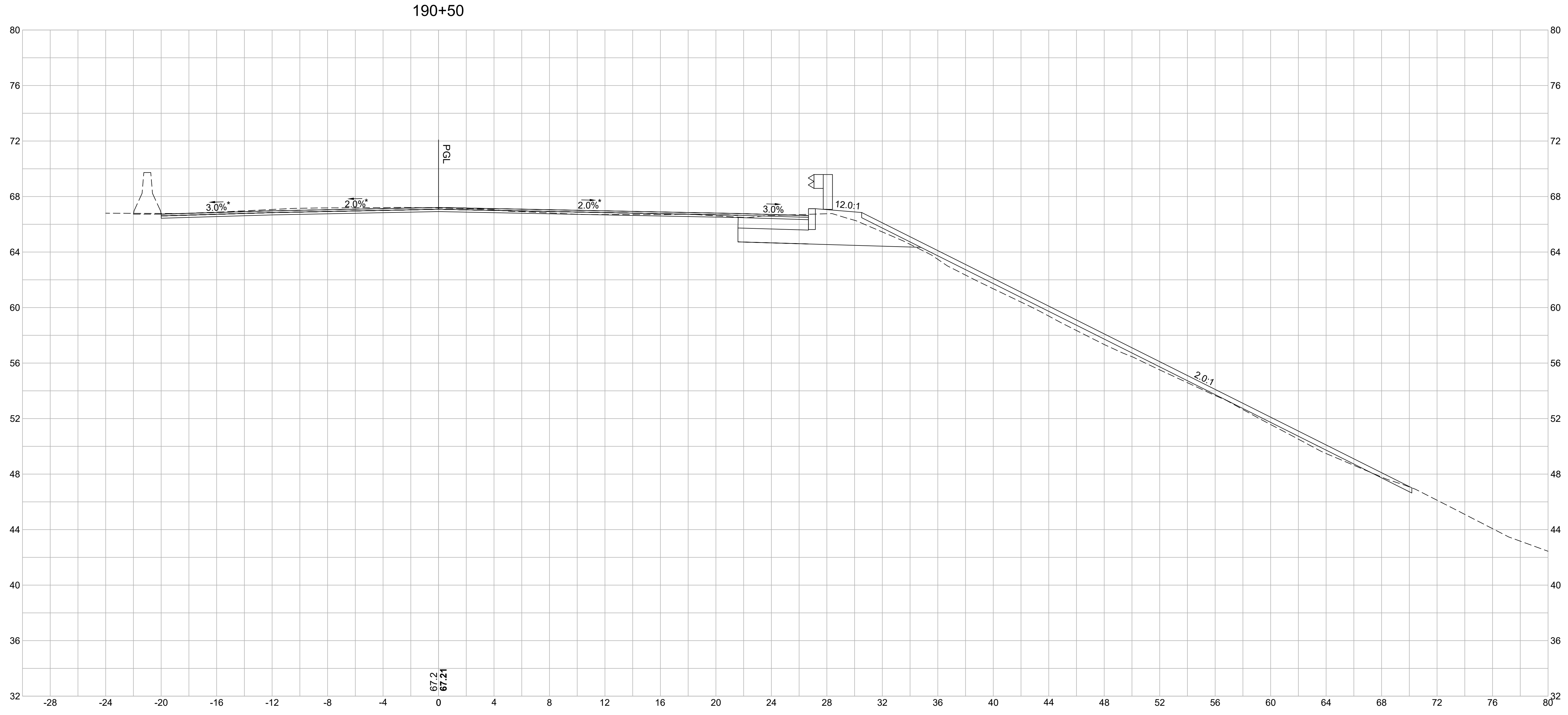
CUT AREA: 11 SF
FILL AREA: 1 SF

ADDENDUM No. 5



REVISIONS			RHODE ISLAND DEPARTMENT OF TRANSPORTATION	
NO.	DATE	BY		
1	11/07/19	EKM	BRIDGE GROUP 51A - RT. 37 C-2	
			CRANSTON / WARWICK RHODE ISLAND	
			ROUTE 37 EB CROSS SECTIONS	
			CHECKED BY _____ DATE _____ SCALE AS NOTED	

*THE CONTRACTOR SHALL MATCH THE EXISTING ROADWAY ELEVATION AT THE P.G.L. AND MATCH THE EXISTING CROSS SLOPES. THE PROPOSED CROSS SLOPES ARE ILLUSTRATED BASED ON LIMITED FIELD SURVEY AND REVIEW OF RECORD DRAWINGS.



CUT AREA: 21 SF
FILL AREA: 22 SF

190+50

ADDENDUM No. 5



REVISIONS		
NO.	DATE	BY
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RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

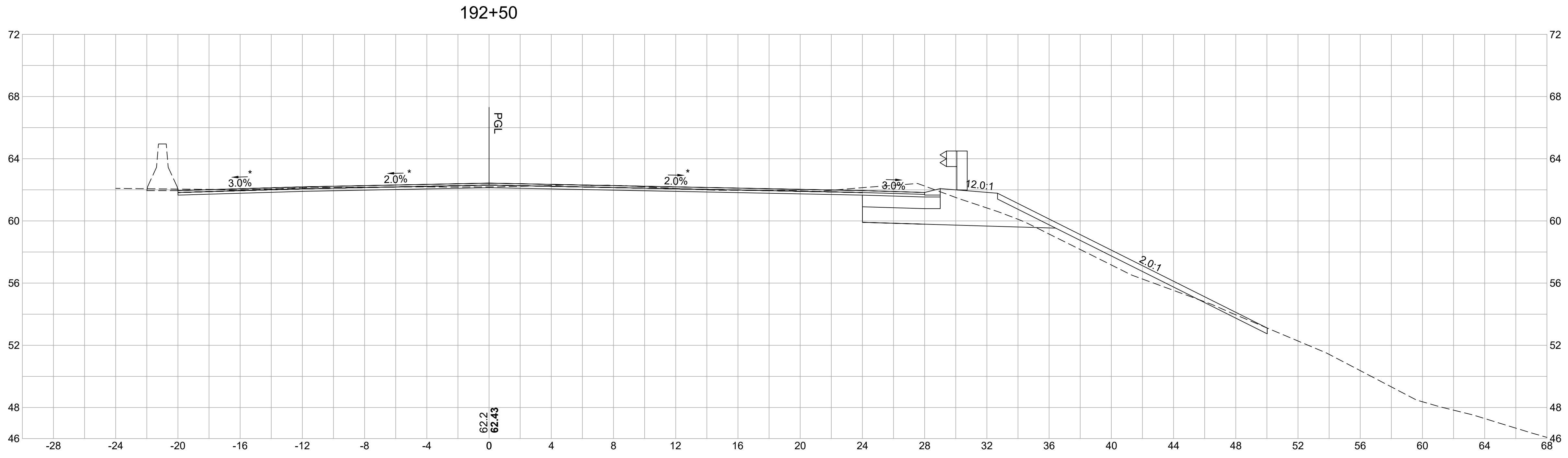
BRIDGE GROUP 51A - RT. 37 C-2

CRANSTON / WARWICK RHODE ISLAND

ROUTE 37 EB CROSS SECTIONS

CHECKED BY _____ DATE _____ SCALE AS NOTED

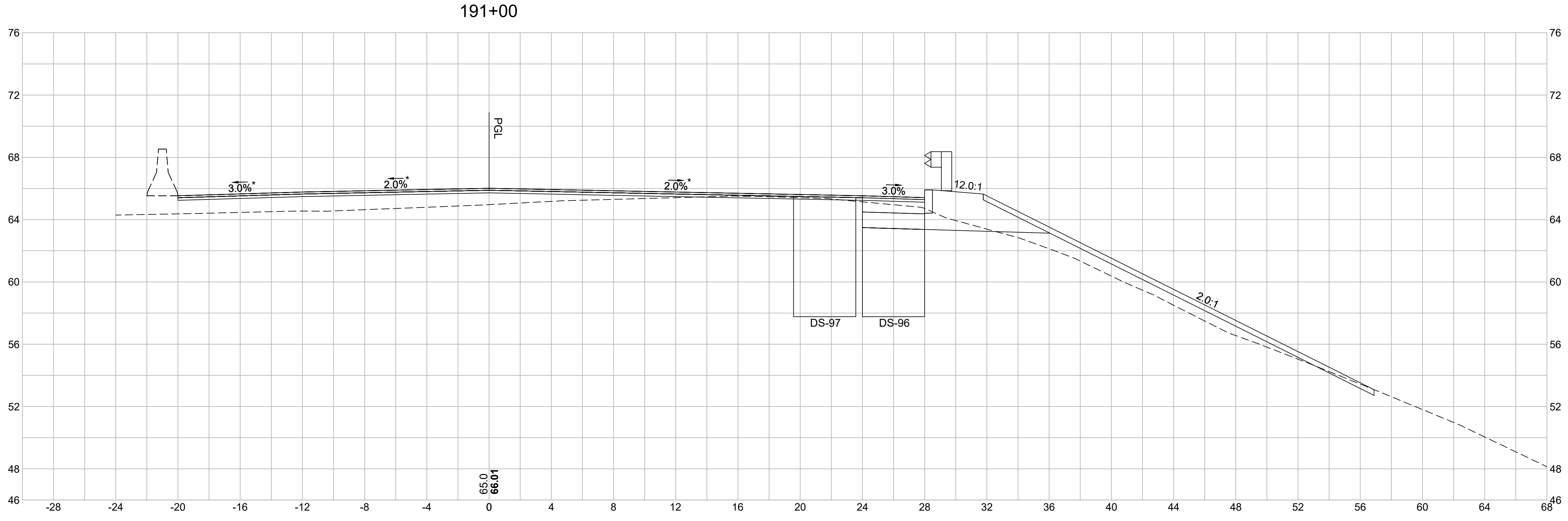
FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
R-1	1	RI	2019	183	197



EXCLUDED CROSS SECTIONS ACROSS BRIDGE 062701

*THE CONTRACTOR SHALL MATCH THE EXISTING ROADWAY ELEVATION AT THE P.G.L. AND MATCH THE EXISTING CROSS SLOPES. THE PROPOSED CROSS SLOPES ARE ILLUSTRATED BASED ON LIMITED FIELD SURVEY AND REVIEW OF RECORD DRAWINGS.

CUT AREA: 19 SF
FILL AREA: 10 SF



CUT AREA: 9 SF
FILL AREA: 21 SF

ADDENDUM No. 5



531 PRESTON AVENUE
MERIDEN, CT 06450

REVISIONS		
NO.	DATE	BY
1	11/07/19	EKM

RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

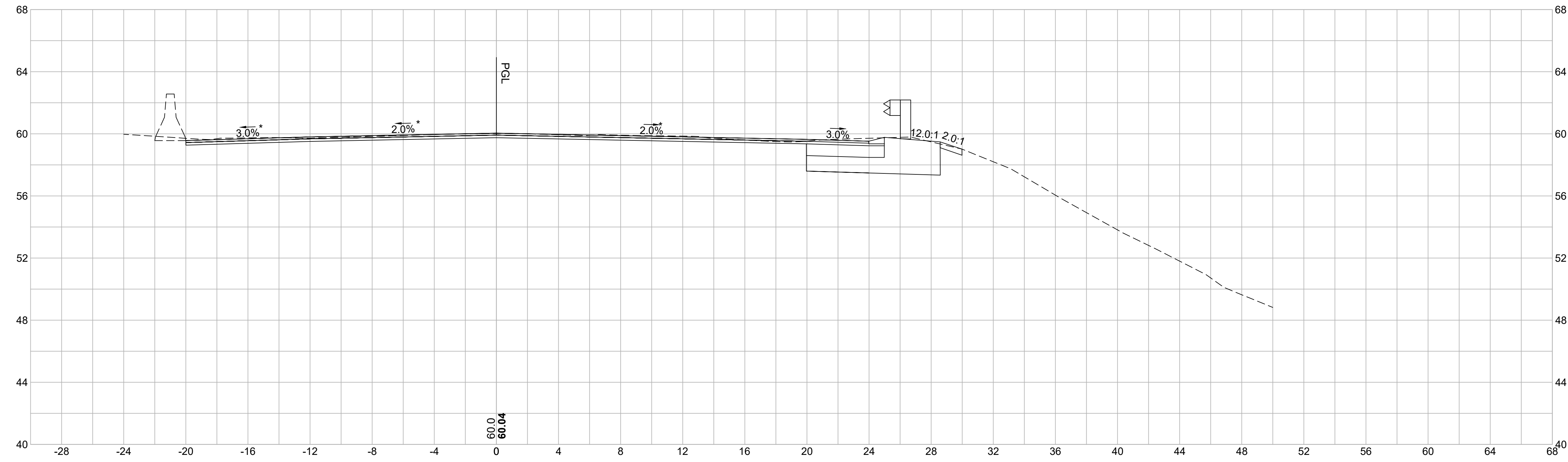
BRIDGE GROUP 51A - RT. 37 C-2

CRANSTON / WARWICK RHODE ISLAND

ROUTE 37 EB CROSS SECTIONS

CHECKED BY _____ DATE _____ SCALE AS NOTED

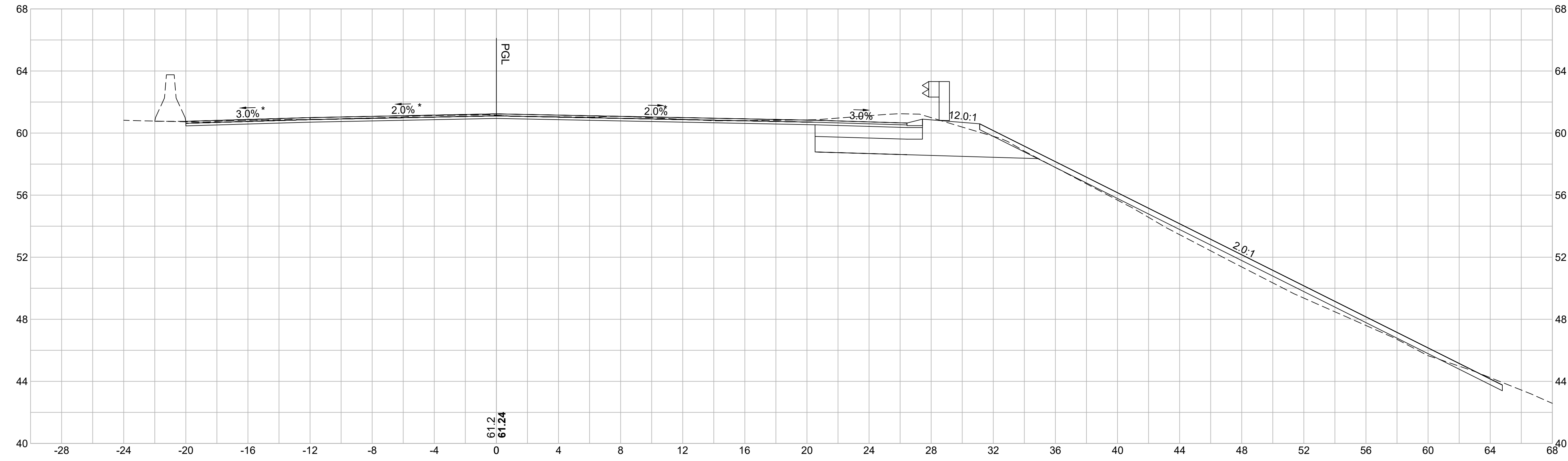
193+50



*THE CONTRACTOR SHALL MATCH THE EXISTING ROADWAY ELEVATION AT THE P.G.L. AND MATCH THE EXISTING CROSS SLOPES. THE PROPOSED CROSS SLOPES ARE ILLUSTRATED BASED ON LIMITED FIELD SURVEY AND REVIEW OF RECORD DRAWINGS.

CUT AREA: 19 SF
FILL AREA: 0 SF

193+00



CUT AREA: 28 SF
FILL AREA: 12 SF

ADDENDUM No. 5



530 PRESTON AVENUE
MERRIDEN, CT 06450

REVISIONS		
NO.	DATE	BY
1	11/07/19	EKM

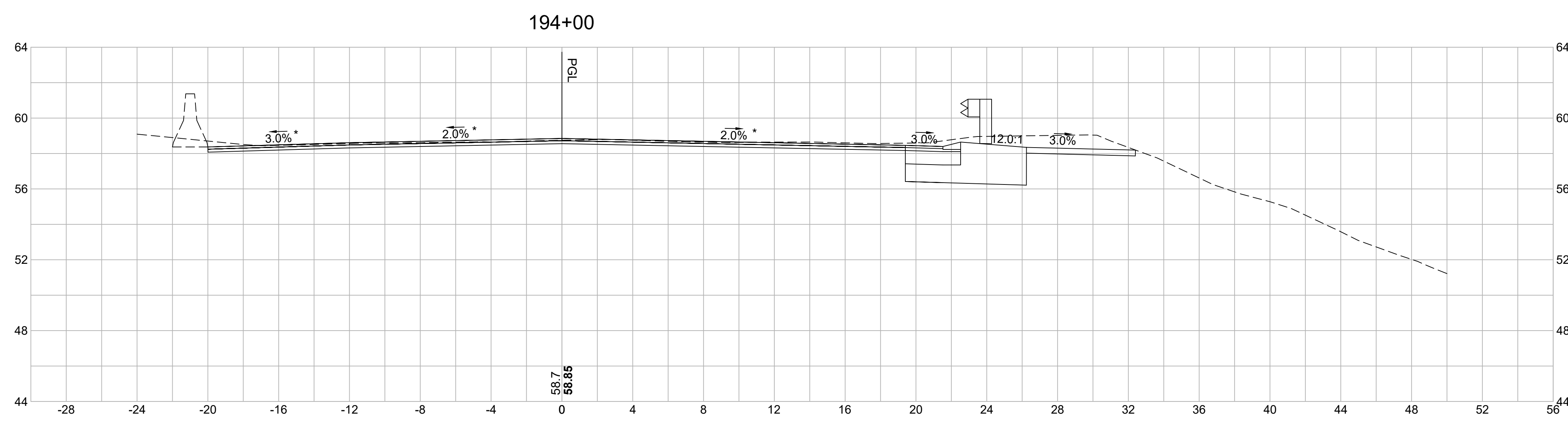
RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

BRIDGE GROUP 51A - RT. 37 C-2

CRANSTON / WARWICK RHODE ISLAND

ROUTE 37 EB CROSS SECTIONS

CHECKED BY _____ DATE _____ SCALE AS NOTED



CUT AREA: 23 SF
FILL AREA: 0 SF

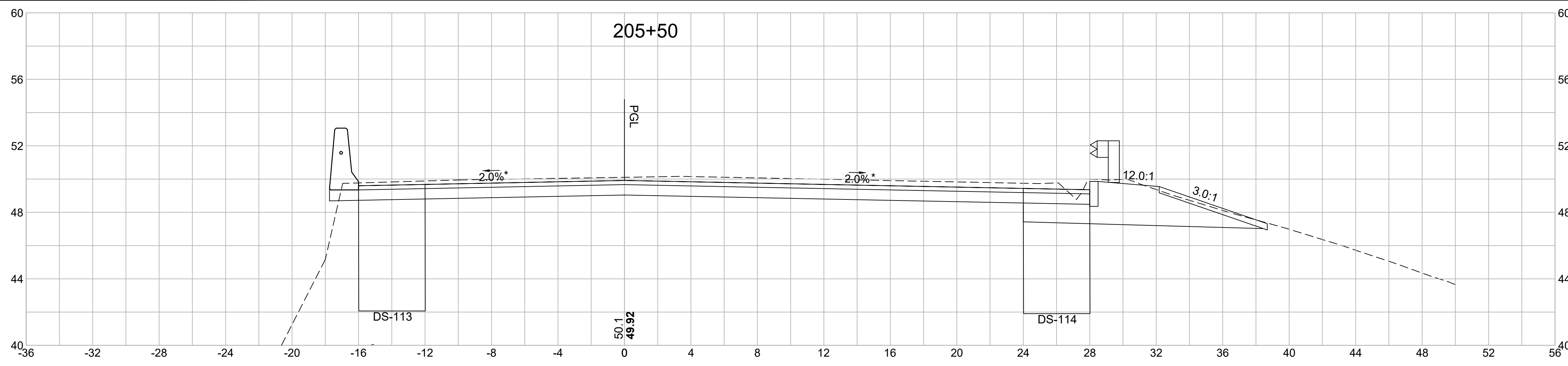
ADDENDUM No. 5



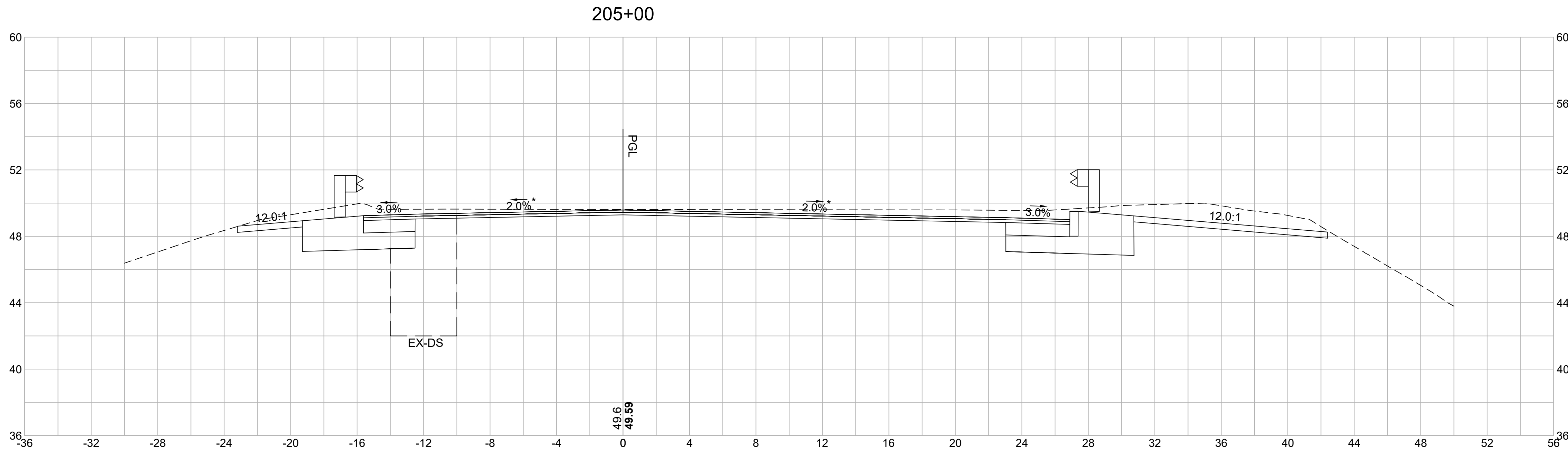
530 PRESTON AVENUE
MERIDEN, CT 06450

REVISIONS			RHODE ISLAND DEPARTMENT OF TRANSPORTATION	
NO.	DATE	BY		
1	11/07/19	EKM	BRIDGE GROUP 51A - RT. 37 C-2	
			CRANSTON / WARWICK RHODE ISLAND	
			ROUTE 37 EB CROSS SECTIONS	
			CHECKED BY _____ DATE _____ SCALE AS NOTED	

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
R-1	RI	RI-0037(012), RI-0037(013), RI-0037(021), RI-0037(022), RI-0037(023)	2019	186	197

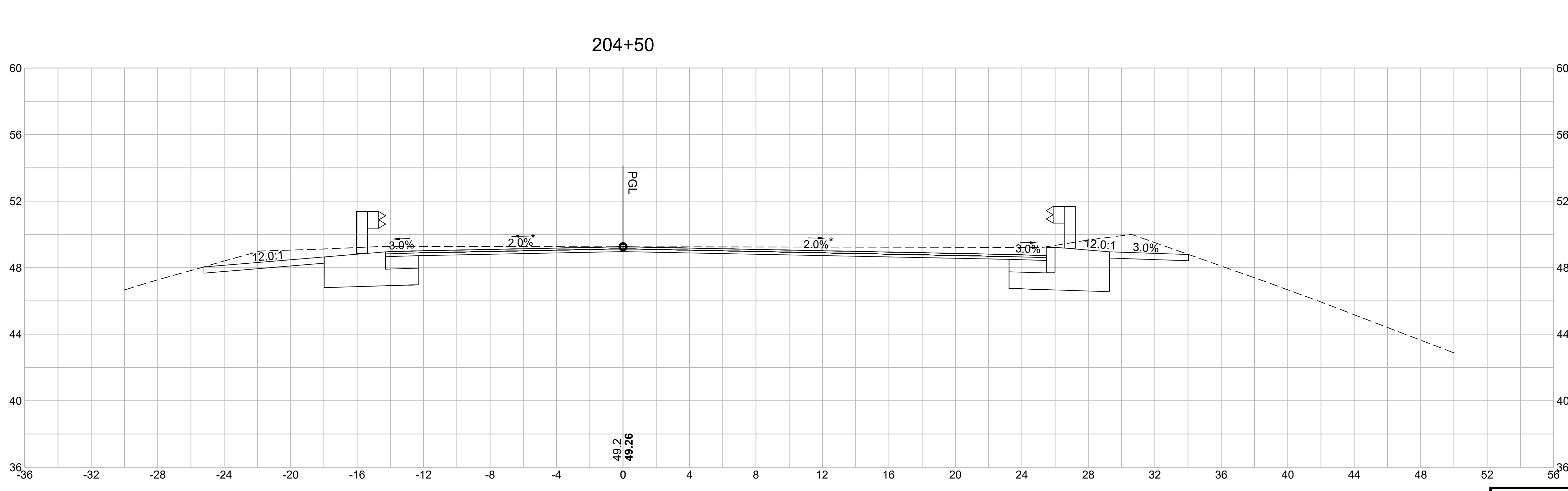


CUT AREA: 28 SF
FILL AREA: 0 SF



CUT AREA: 55 SF
FILL AREA: 0 SF

*THE CONTRACTOR SHALL MATCH THE EXISTING ROADWAY ELEVATION AT THE P.G.L. AND MATCH THE EXISTING CROSS SLOPES. THE PROPOSED CROSS SLOPES ARE ILLUSTRATED BASED ON LIMITED FIELD SURVEY AND REVIEW OF RECORD DRAWINGS.



CUT AREA: 41 SF
FILL AREA: 0 SF

ADDENDUM No. 5



REVISIONS		
NO.	DATE	BY
1	11/07/19	EKM

RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

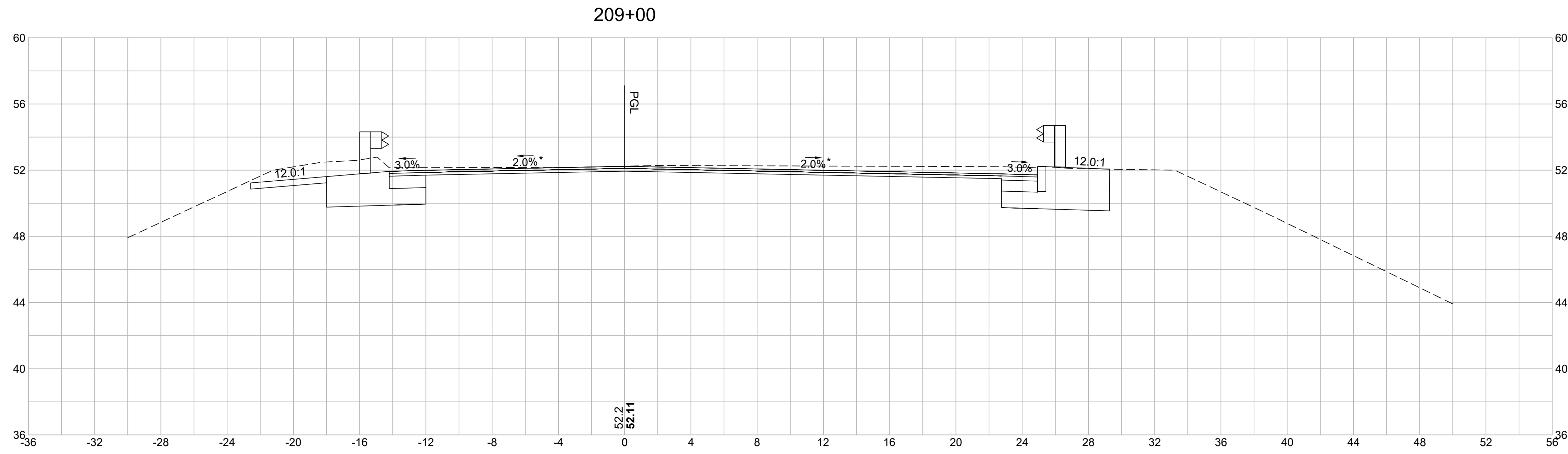
BRIDGE GROUP 51A - RT. 37 C-2

CRANSTON / WARWICK RHODE ISLAND

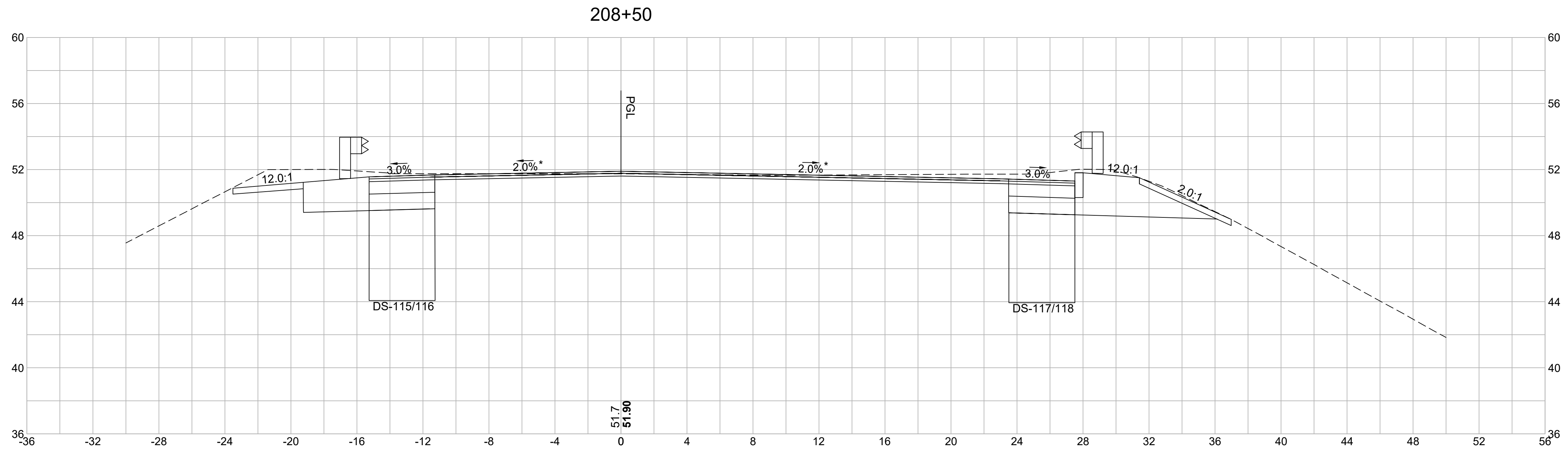
ROUTE 37 EB CROSS SECTIONS

CHECKED BY _____ DATE _____ SCALE AS NOTED

*THE CONTRACTOR SHALL MATCH THE EXISTING ROADWAY ELEVATION AT THE P.G.L. AND MATCH THE EXISTING CROSS SLOPES. THE PROPOSED CROSS SLOPES ARE ILLUSTRATED BASED ON LIMITED FIELD SURVEY AND REVIEW OF RECORD DRAWINGS.



CUT AREA: 36 SF
FILL AREA: 0 SF



CUT AREA: 50 SF
FILL AREA: 0 SF

REVISIONS		
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RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

BRIDGE GROUP 51A - RT. 37 C-2

CRANSTON / WARWICK RHODE ISLAND

ROUTE 37 EB CROSS SECTIONS

CHECKED BY _____ DATE _____ SCALE AS NOTED

ADDENDUM No. 5



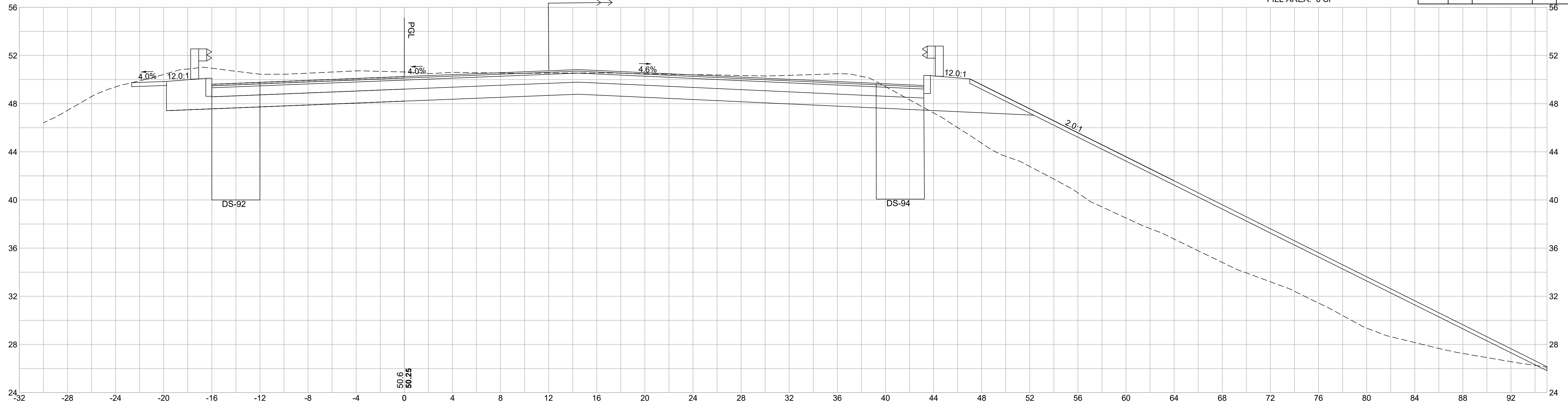
FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
1	RI	RI-0037(012), RI-0037(013) RI-0037(001), RI-0037(002), RI-0037(003)	2019	188	197

CUT AREA: 84 SF
FILL AREA: 0 SF

R-1

208+50

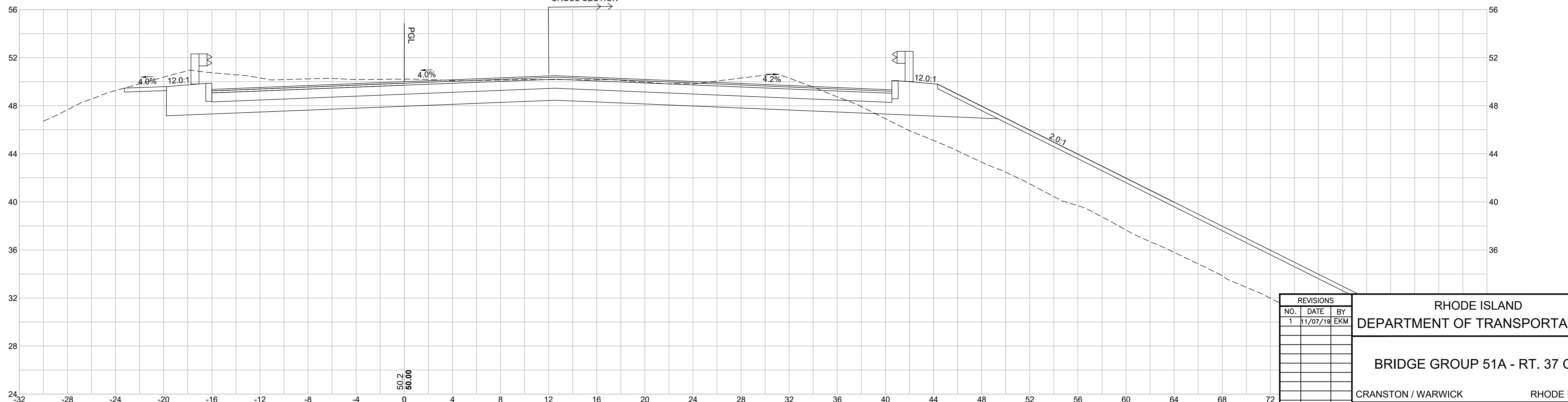
SEE RTE. 37 WB
CROSS SECTION



208+00

SEE RTE. 37 WB
CROSS SECTION

CUT AREA: 82 SF
FILL AREA: 0 SF



ADDENDUM No. 5

REVISIONS		
NO.	DATE	BY
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RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

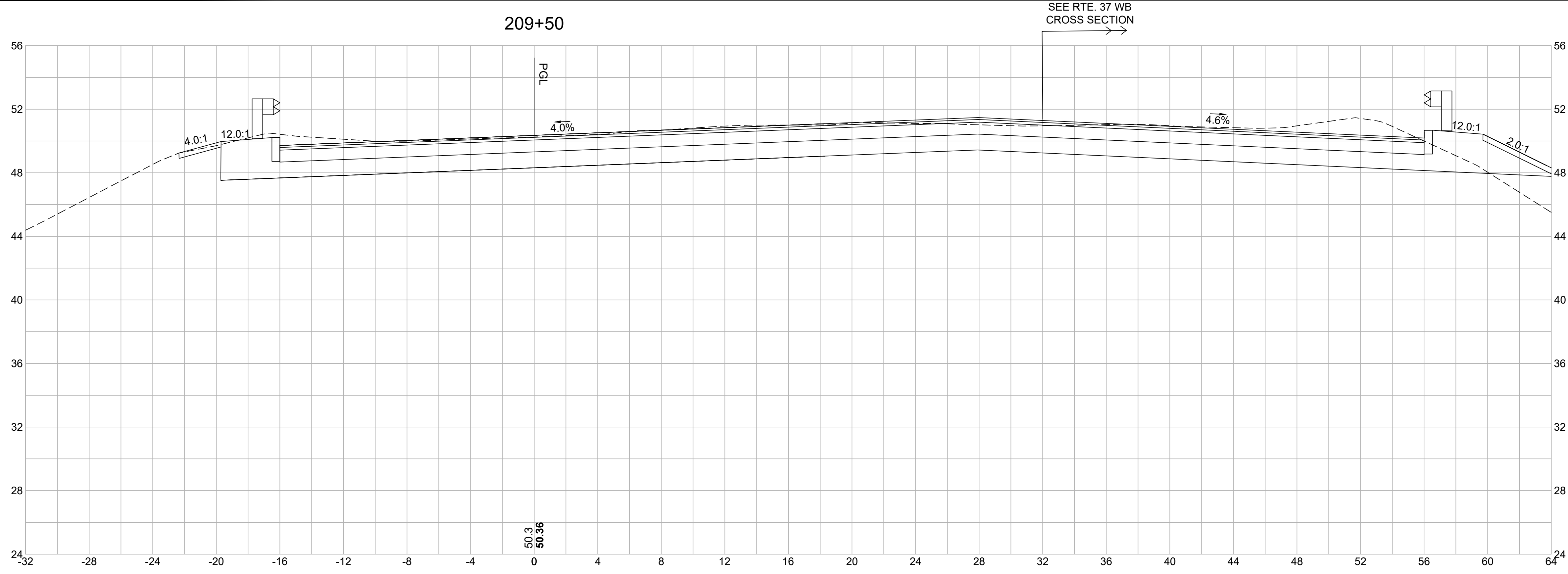
BRIDGE GROUP 51A - RT. 37 C-2

CRANSTON / WARWICK RHODE ISLAND

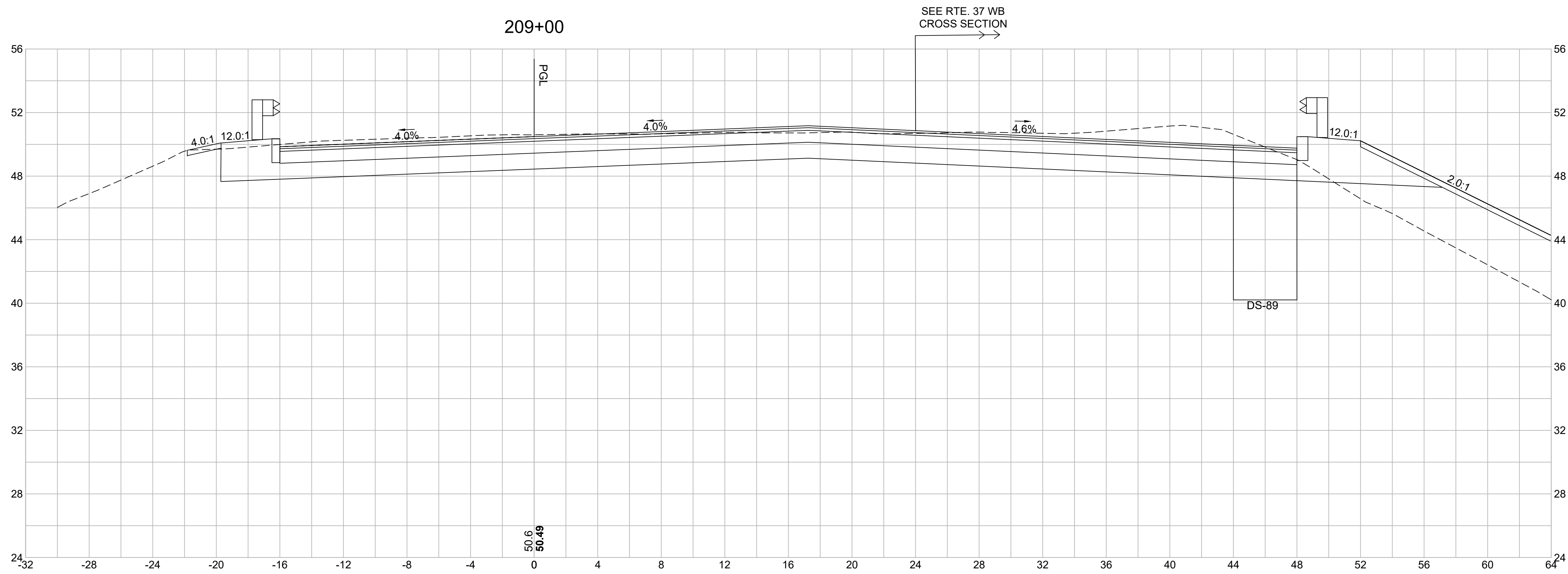
**I-95 OFF RAMP CROSS
SECTIONS**

CHECKED BY _____ DATE _____ SCALE AS NOTED





CUT AREA: 69 SF
FILL AREA: 0 SF

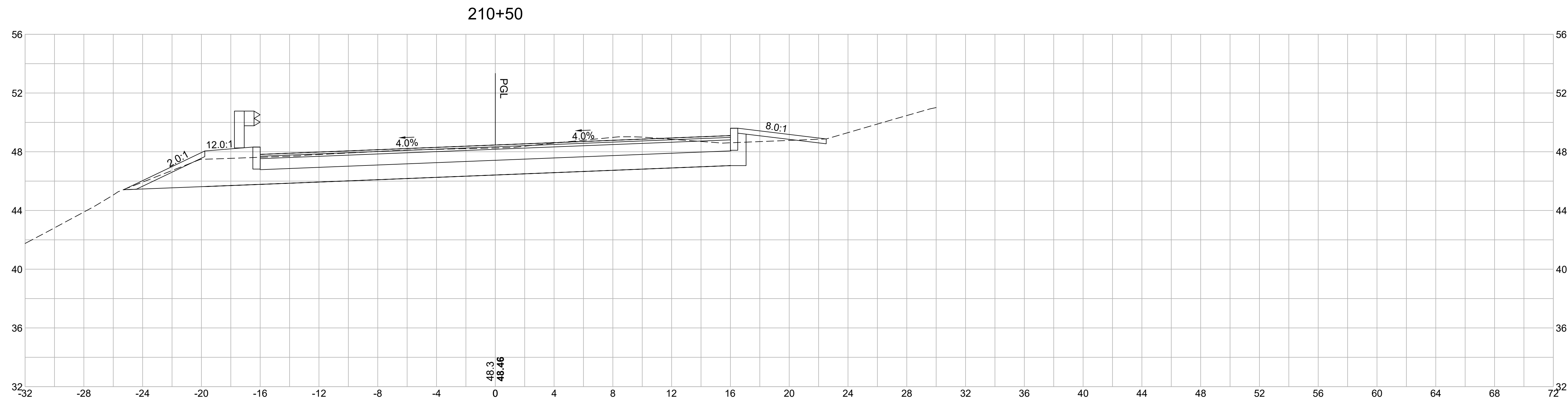


CUT AREA: 68 SF
FILL AREA: 0 SF

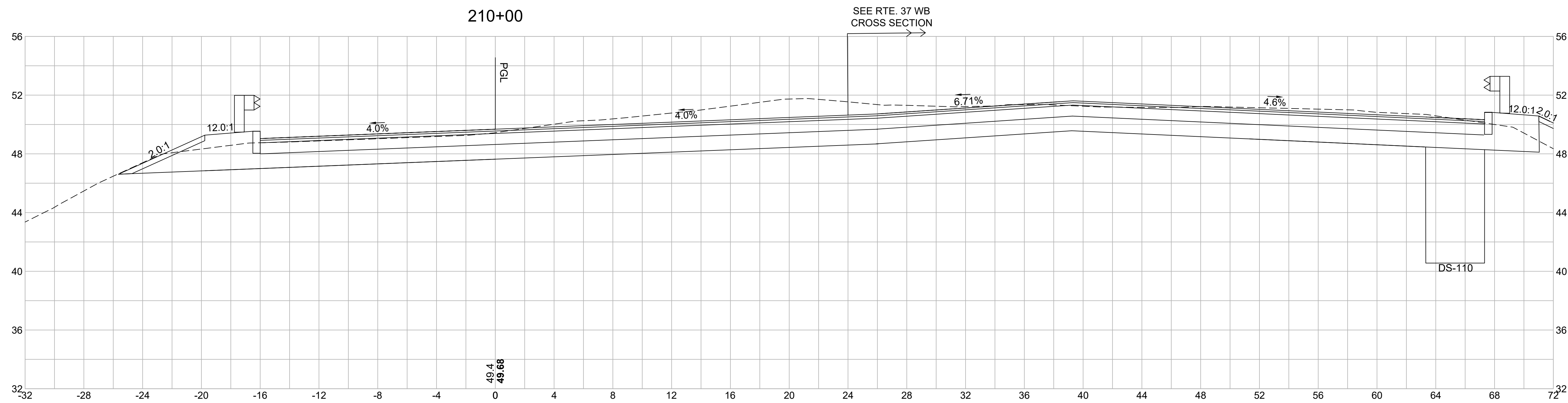
ADDENDUM No. 5



REVISIONS			RHODE ISLAND DEPARTMENT OF TRANSPORTATION	
NO.	DATE	BY		
1	11/07/19	EKM	BRIDGE GROUP 51A - RT. 37 C-2	
			CRANSTON / WARWICK RHODE ISLAND	
			I-95 OFF RAMP CROSS SECTIONS	
			CHECKED BY _____ DATE _____ SCALE AS NOTED	

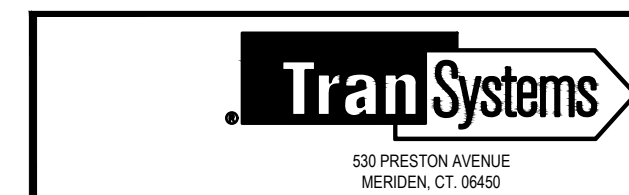


CUT AREA: 77 SF
FILL AREA: 0 SF



CUT AREA: 104 SF
FILL AREA: 0 SF

ADDENDUM No. 5



530 PRESTON AVENUE
MERIDEN, CT 06450

REVISIONS		
NO.	DATE	BY
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RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

BRIDGE GROUP 51A - RT. 37 C-2

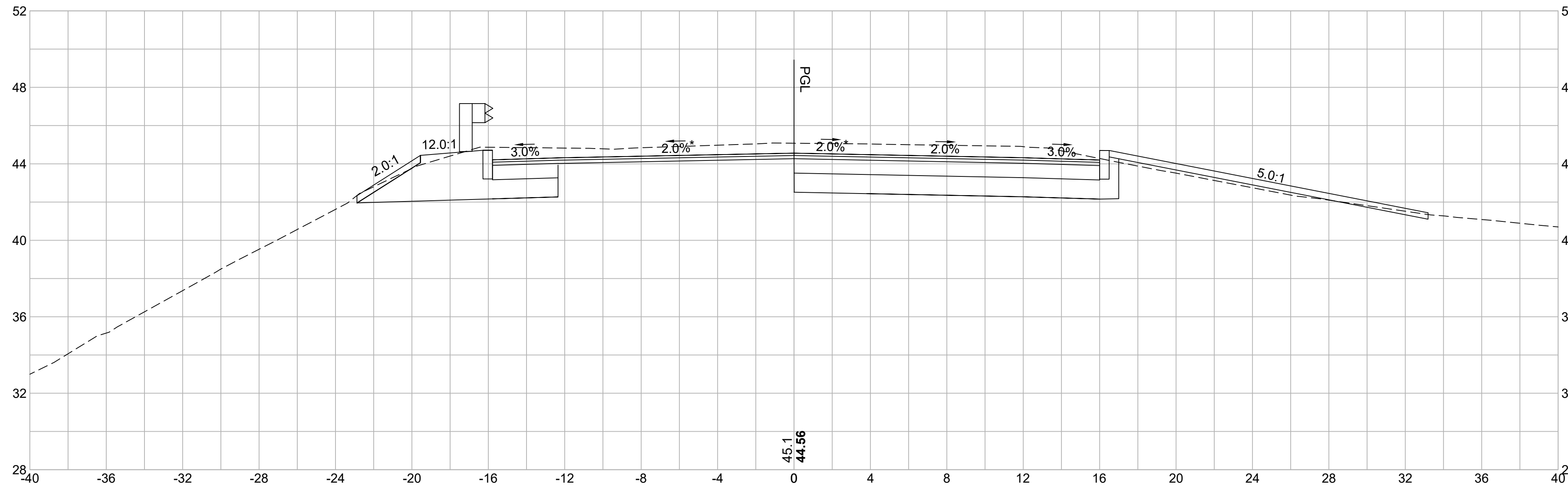
CRANSTON / WARWICK RHODE ISLAND

I-95 OFF RAMP CROSS
SECTIONS

CHECKED BY _____ DATE _____ SCALE AS NOTED

R-1

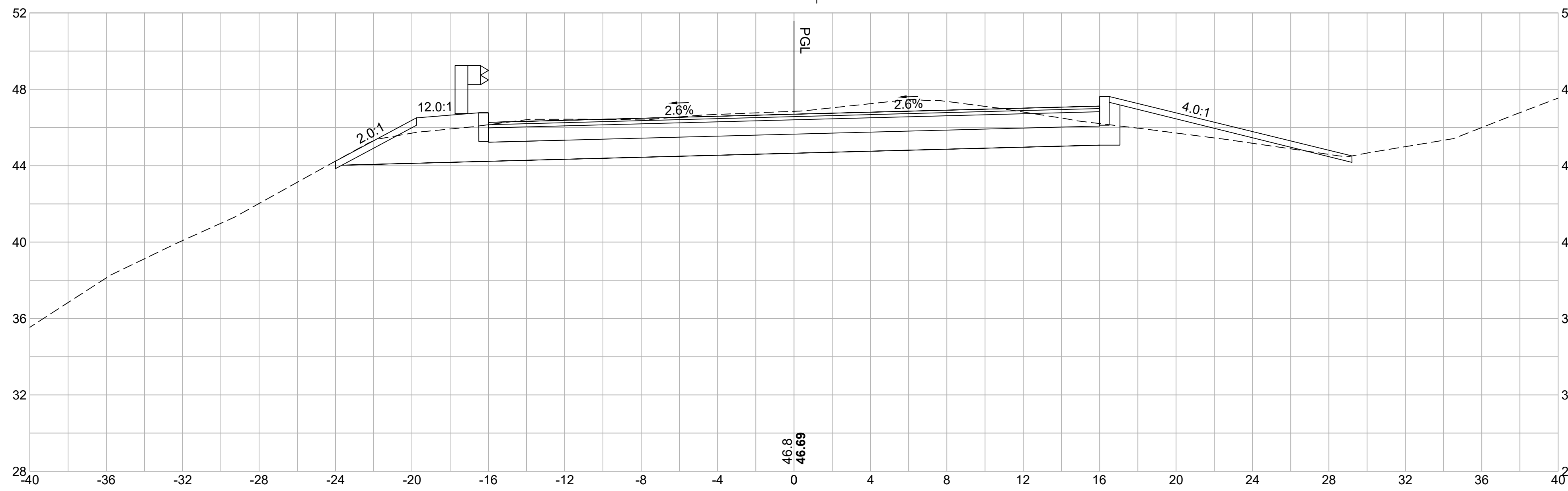
211+50



CUT AREA: 65 SF
FILL AREA: 7 SF

*THE CONTRACTOR SHALL MATCH THE EXISTING ROADWAY ELEVATION AT THE P.G.L. AND MATCH THE EXISTING CROSS SLOPES. THE PROPOSED CROSS SLOPES ARE ILLUSTRATED BASED ON LIMITED FIELD SURVEY AND REVIEW OF RECORD DRAWINGS.

211+00

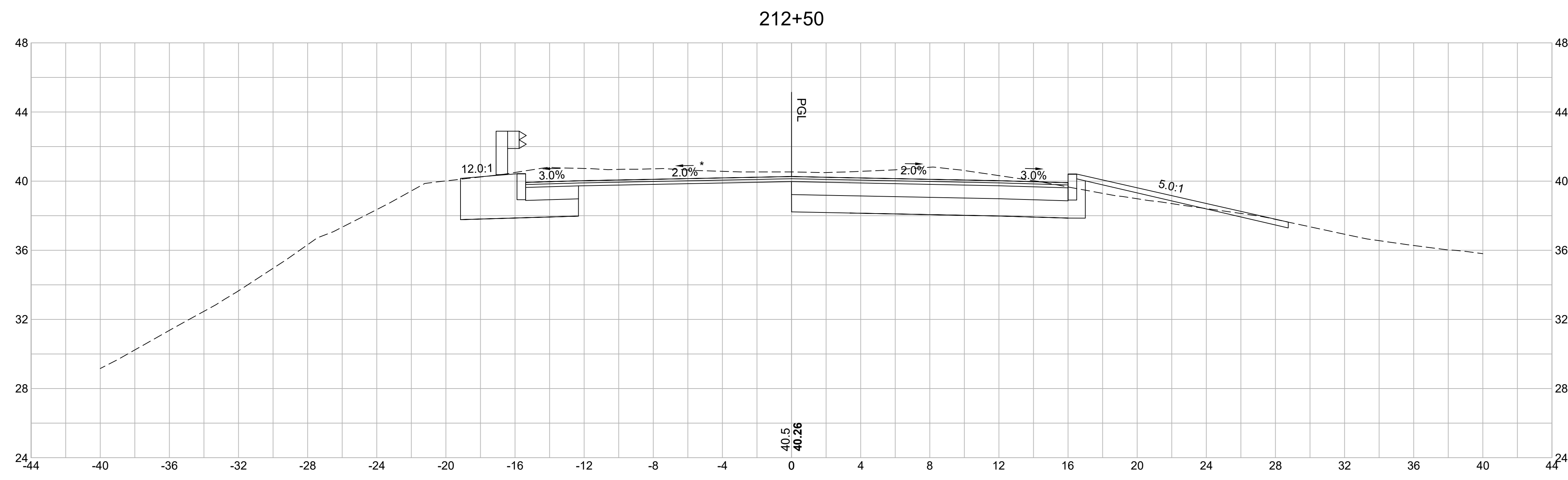


CUT AREA: 80 SF
FILL AREA: 9 SF

ADDENDUM No. 5

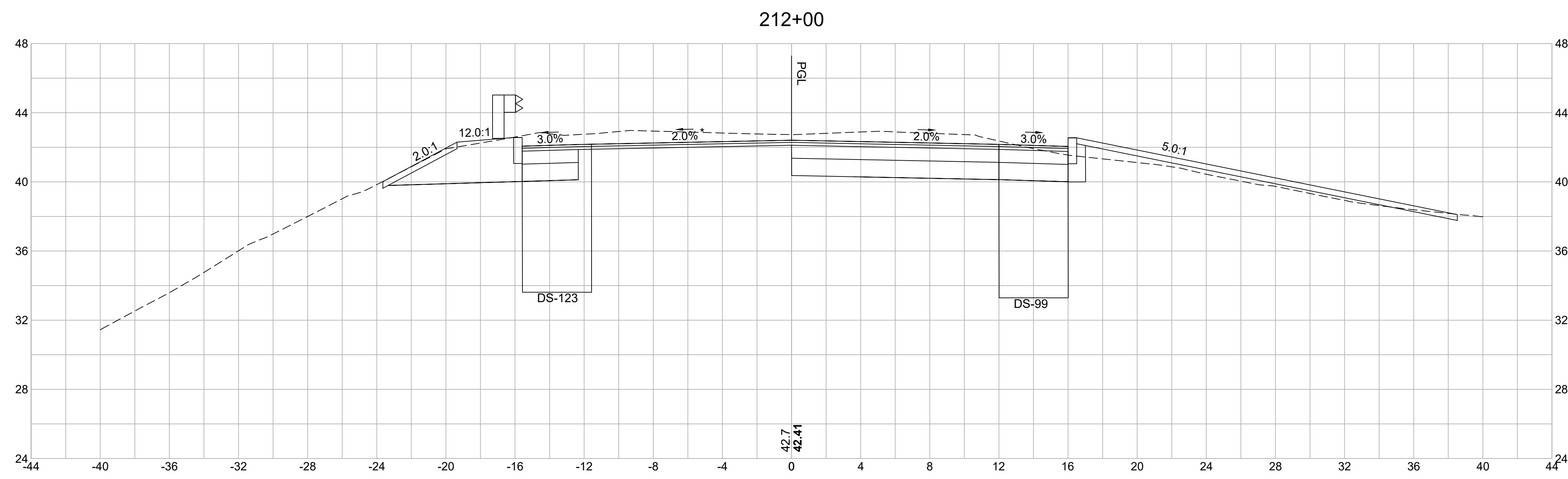


REVISIONS			RHODE ISLAND DEPARTMENT OF TRANSPORTATION	
NO.	DATE	BY		
1	11/07/19	EKM	BRIDGE GROUP 51A - RT. 37 C-2	
			CRANSTON / WARWICK RHODE ISLAND	
			I-95 OFF RAMP CROSS SECTIONS	
			CHECKED BY _____ DATE _____ SCALE AS NOTED	



CUT AREA: 58 SF
FILL AREA: 5 SF

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CUT AREA: 63 SF
FILL AREA: 11 SF

ADDENDUM No. 5



REVISIONS		
NO.	DATE	BY
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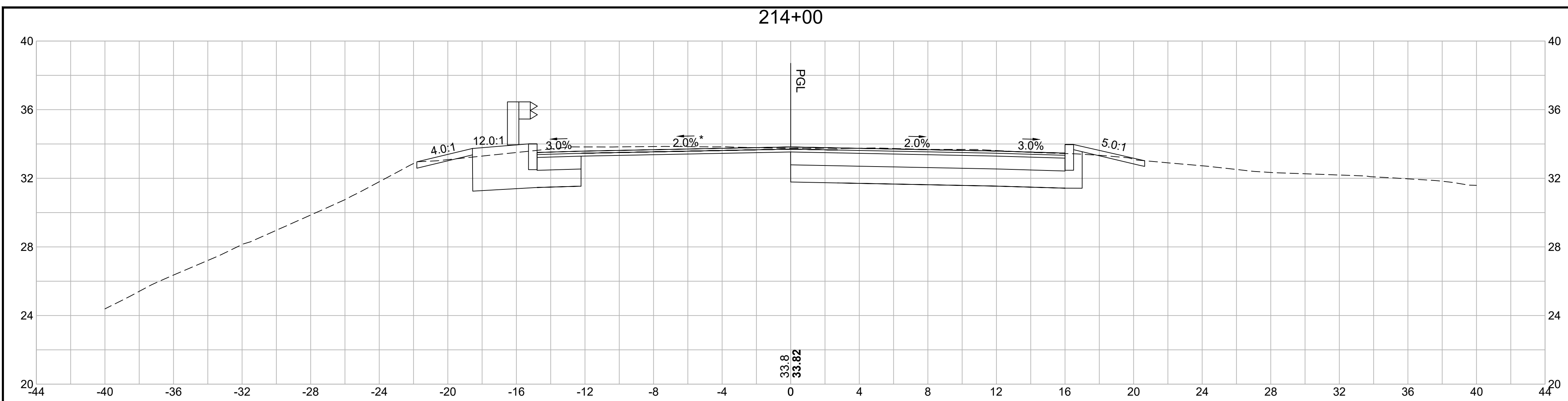
RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

BRIDGE GROUP 51A - RT. 37 C-2

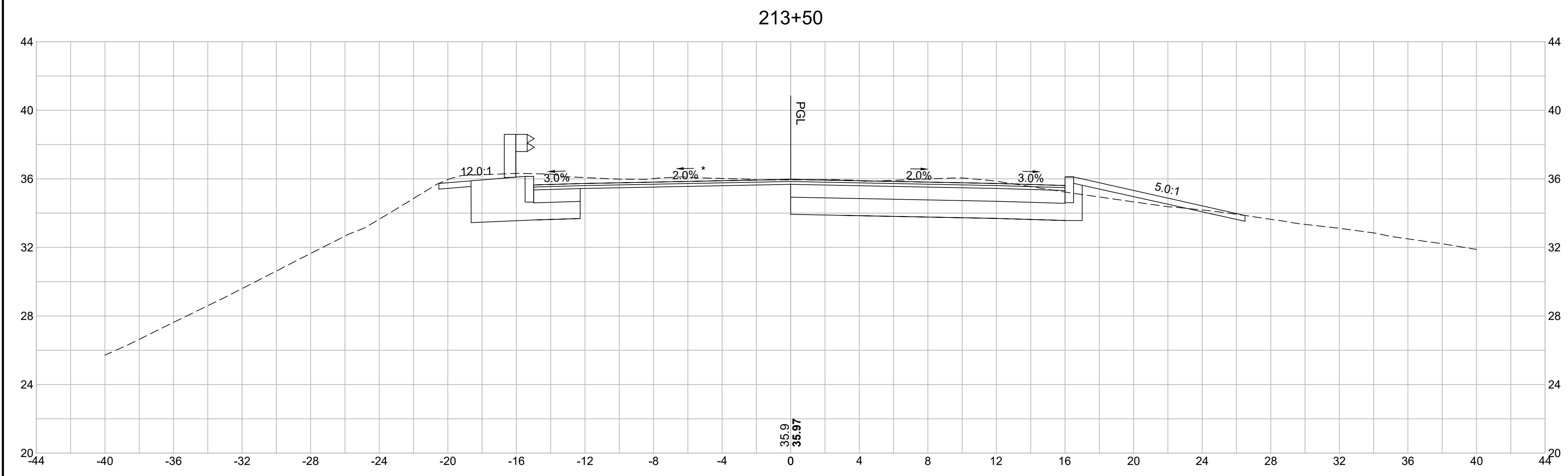
CRANSTON / WARWICK RHODE ISLAND

I-95 OFF RAMP CROSS SECTIONS

CHECKED BY _____ DATE _____ SCALE AS NOTED

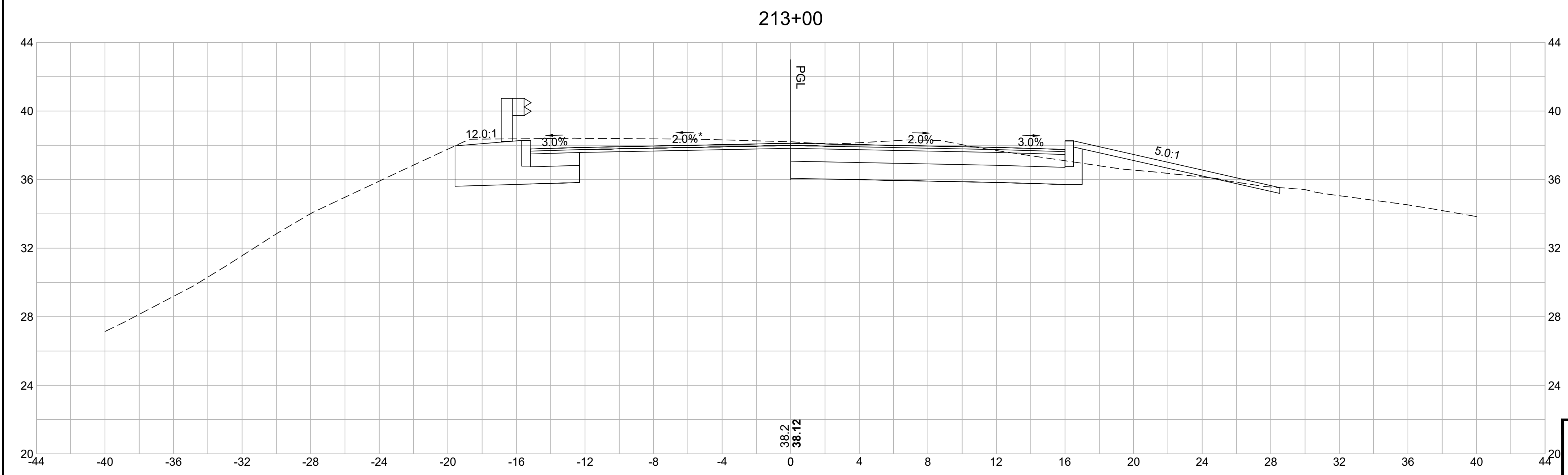


CUT AREA: 49 SF
FILL AREA: 2 SF



CUT AREA: 53 SF
FILL AREA: 5 SF

*THE CONTRACTOR SHALL MATCH THE EXISTING ROADWAY ELEVATION AT THE P.G.L. AND MATCH THE EXISTING CROSS SLOPES. THE PROPOSED CROSS SLOPES ARE ILLUSTRATED BASED ON LIMITED FIELD SURVEY AND REVIEW OF RECORD DRAWINGS.



CUT AREA: 53 SF
FILL AREA: 7 SF

ADDENDUM No. 5



REVISIONS		
NO.	DATE	BY
1	11/07/19	EKM

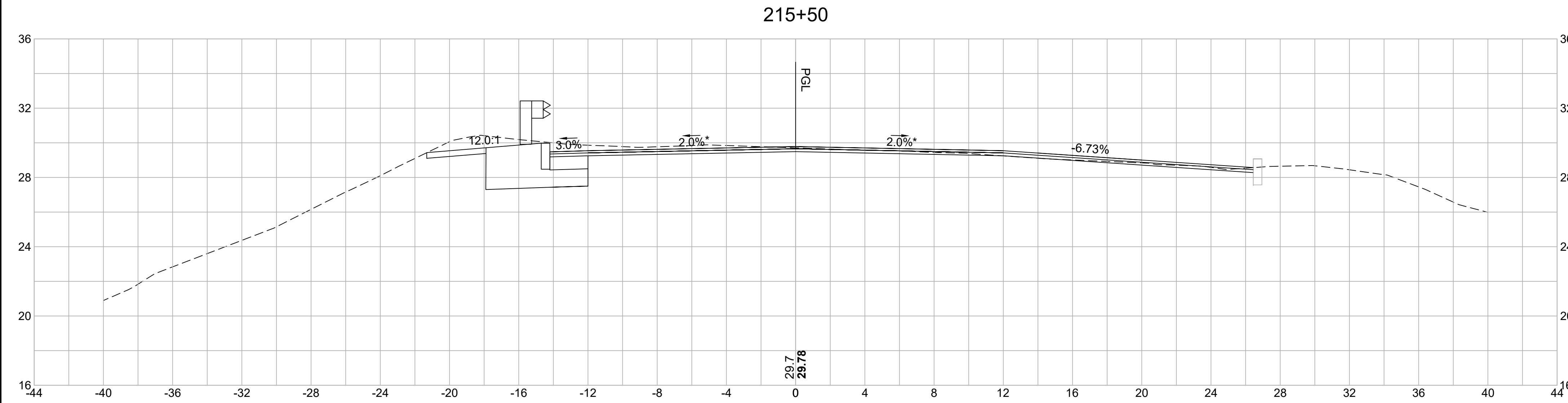
RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

BRIDGE GROUP 51A - RT. 37 C-2

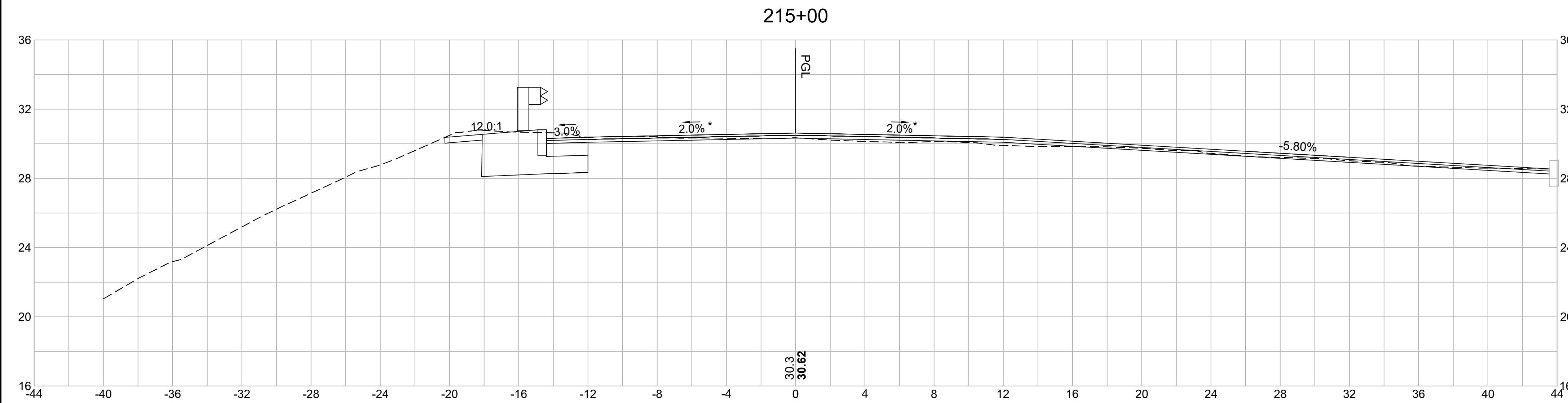
CRANSTON / WARWICK RHODE ISLAND

I-95 OFF RAMP CROSS SECTIONS

CHECKED BY _____ DATE _____ SCALE AS NOTED

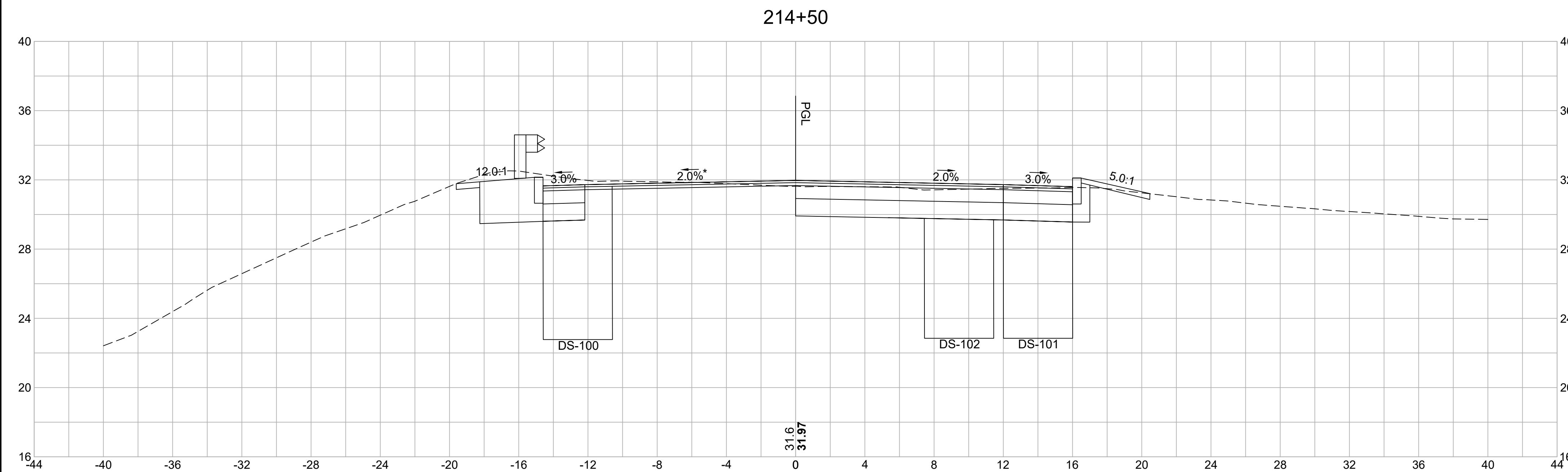


CUT AREA: 19 SF
FILL AREA: 0 SF



CUT AREA: 16 SF
FILL AREA: 0 SF

*THE CONTRACTOR SHALL MATCH THE EXISTING ROADWAY ELEVATION AT THE P.G.L. AND MATCH THE EXISTING CROSS SLOPES. THE PROPOSED CROSS SLOPES ARE ILLUSTRATED BASED ON LIMITED FIELD SURVEY AND REVIEW OF RECORD DRAWINGS.



CUT AREA: 48 SF
FILL AREA: 2 SF

ADDENDUM No. 5



REVISIONS		
NO.	DATE	BY
1	11/07/19	EKM

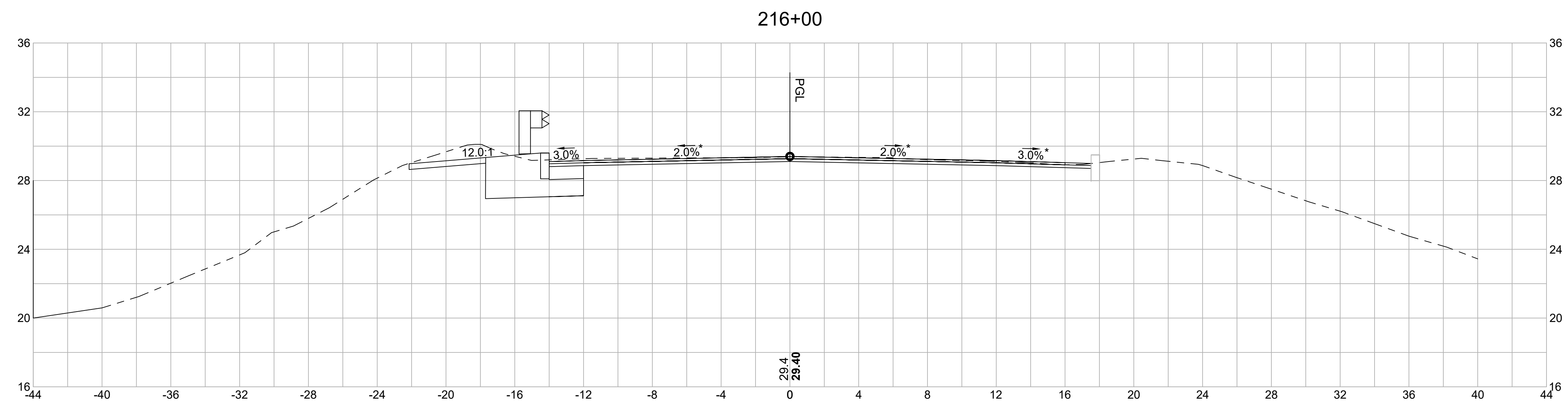
RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

BRIDGE GROUP 51A - RT. 37 C-2

CRANSTON / WARWICK RHODE ISLAND

I-95 OFF RAMP CROSS
SECTIONS

CHECKED BY _____ DATE _____ SCALE AS NOTED



*THE CONTRACTOR SHALL MATCH THE EXISTING ROADWAY ELEVATION AT THE P.G.L. AND MATCH THE EXISTING CROSS SLOPES. THE PROPOSED CROSS SLOPES ARE ILLUSTRATED BASED ON LIMITED FIELD SURVEY AND REVIEW OF RECORD DRAWINGS.

CUT AREA: 17 SF
FILL AREA: 0 SF

ADDENDUM No. 5



530 PRESTON AVENUE
MERRIDEN, CT 06450

REVISIONS			RHODE ISLAND DEPARTMENT OF TRANSPORTATION	
NO.	DATE	BY		
1	11/07/19	EKM	BRIDGE GROUP 51A - RT. 37 C-2	
			CRANSTON / WARWICK RHODE ISLAND	
			I-95 OFF RAMP CROSS SECTIONS	
			CHECKED BY _____ DATE _____ SCALE AS NOTED	

GENERAL NOTES:

- ALL CONSTRUCTION INDICATED ON THESE PLANS SHALL BE IN ACCORDANCE WITH:
 - THE 2013 REVISION OF AND SUPPLEMENTS TO THE RHODE ISLAND DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (RI STANDARD SPECIFICATIONS).
 - THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO) LRFD BRIDGE CONSTRUCTION SPECIFICATIONS, 8TH EDITION, 2017, INCLUDING THE LATEST INTERIM REVISIONS.
 - THE SPECIFICATIONS ACCOMPANYING THESE PLANS.
- DIMENSIONS, STATIONS, AND ELEVATIONS ARE SHOWN TO THE NEAREST ONE-HUNDREDTH OF A FOOT OR ONE-EIGHTH OF AN INCH, EXCEPT STRUCTURAL STEEL DIMENSIONS WHICH ARE TO THE NEAREST ONE-SIXTEENTH OF AN INCH.
- ALL ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).
- COORDINATES USED ON THESE PLANS ARE BASED ON THE STATEWIDE COORDINATE SYSTEM, THE NORTH AMERICAN DATUM OF 1983 (NAD 83).
- TOPOGRAPHIC CONDITIONS WERE OBTAINED FROM AERIAL PHOTOGRAMMETRY. ACCURACY OF VERTICAL TOPOGRAPHY IS WITHIN ONE-HALF OF A FOOT.
- ANGLES ARE SHOWN TO THE NEAREST SECOND.
- ALL ABUTMENTS AND WALLS ARE DRAWN LOOKING AT THE EXPOSED FACES.
- IF THIS PROJECT IS ON A HURRICANE EVACUATION AND DIVERSIONARY ROUTE AS DESIGNATED ON THE COVER SHEET, THE CONTRACTOR IS ADVISED THAT, UPON 12 (TWELVE) HOURS NOTICE, THE ROADWAY SHALL BE OPEN TO EVACUEES AND EMERGENCY PERSONNEL. ANY EXTRA WORK NECESSARY TO COMPLY WITH THIS REQUIREMENT WILL BE REIMBURSED UNDER FORCE ACCOUNT PROCEDURES.
- THE EXISTING UTILITIES SHOWN ON THE PLANS ARE APPROXIMATE AND WERE LOCATED USING THE BEST AVAILABLE INFORMATION. NO BUILDING SERVICE CONNECTIONS (ELECTRIC, TELEPHONE, GAS, WATER, SANITARY AND OTHERS) ARE SHOWN. THE CONTRACTOR IS TO ASSUME THAT SERVICES TO ALL BUILDINGS ARE PRESENT.
- BOTH FEDERAL AND STATE LAW (RI. GENERAL LAW 39-1.2) REQUIRE NOTIFICATION OF APPROPRIATE UTILITY COMPANIES BEFORE DIGGING, TRENCHING, BLASTING, DEMOLISHING, BORING, BACK FILLING, GRADING, LANDSCAPING, OR OTHER EARTH MOVING OPERATIONS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY ALL UTILITY COMPANIES (INCLUDING THROUGH THE "DIG SAFE" PROGRAM) TO ENSURE THAT ALL UTILITIES, BOTH UNDERGROUND AND OVERHEAD, HAVE BEEN MARKED BEFORE COMMENCEMENT OF SUCH WORK. THE CONTRACTOR SHOULD UNDERSTAND THAT NOT ALL UTILITIES SUBSCRIBE TO THE "DIG SAFE" PROGRAM. ANY DAMAGE TO EXISTING UTILITIES MARKED IN THE FIELD, OR AS A RESULT OF FAILING TO CONTACT THE APPROPRIATE UTILITY COMPANIES, SHALL BE REPAIRED OR REPLACED (AS DEEMED APPROPRIATE BY THE STATE AND/OR THE IMPACTED UTILITY COMPANY) AT NO ADDITIONAL COST TO THE STATE.

DESIGN DATA:

1. DESIGN SPECIFICATIONS

- THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 8TH EDITION, 2017 INCLUDING ALL INTERIM REVISIONS TO DATE.
- THE RHODE ISLAND LRFD BRIDGE DESIGN MANUAL 2007 EDITION INCLUDING ALL REVISIONS TO DATE.
- ALL OTHER APPLICABLE DESIGN SPECIFICATIONS ARE REFERENCED IN SECTION 1 OF THE RHODE ISLAND LRFD BRIDGE DESIGN MANUAL DATED 2007.
- THE 2013 REVISION OF AND SUPPLEMENTS TO THE RHODE ISLAND DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (RI STANDARD SPECIFICATIONS).
- IN CASE OF CONFLICT, THE RHODE ISLAND LRFD BRIDGE DESIGN MANUAL SHALL GOVERN.

2. LOAD MODIFIERS

THE LOAD MODIFIERS FOR THIS PROJECT ARE AS FOLLOWS:

- THE LOAD MODIFIER FOR DUCTILITY SHALL BE TAKEN AS 1.00 FOR ALL LIMIT STATES.
- THE LOAD MODIFIER FOR REDUNDANCY SHALL BE TAKEN AS 1.00 FOR ALL LIMIT STATES.
- THE LOAD MODIFIER FOR OPERATIONAL IMPORTANCE SHALL BE TAKEN AS 1.05 FOR ALL LIMIT STATES.

3. LOAD FACTORS

ALL LOAD FACTORS SHALL BE IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, EXCEPT AS MODIFIED IN THE RHODE ISLAND LRFD BRIDGE DESIGN MANUAL.

4. LIVE LOADS

- THE DESIGN VEHICULAR LIVE LOAD SHALL BE THE HL-93 DESIGNATION ADJUSTED FOR DYNAMIC LOAD ALLOWANCE AND MULTIPLE PRESENCE FACTOR.

DESIGN DATA (CONT.):

5. TRAFFIC DATA

- ADT 18,987 (EB) / 20,070 (WB) VPD
- DHV 1,180 (EB) / 1,340 (WB) VPH
- PERCENT TRUCK 6.2%
- DESIGN SPEED 60 MPH

MATERIALS:

STRUCTURAL STEEL:

- AASHTO DESIGNATION M 270, GRADE 36
- AASHTO DESIGNATION M 270, GRADE 50
- AASHTO DESIGNATION M 270, GRADE 50W

REINFORCING STEEL:

- AASHTO DESIGNATION M31, GRADE 60

CONCRETE STRENGTHS:

- CLASS HP 3/4" f'c=5,000 PSI

REPAIRS TO STRUCTURAL CONCRETE MASONRY (FORM AND CAST IN PLACE).

- HIGH EARLY STRENGTH f'c=7,500 PSI

CONCRETE DECK REPAIR (PARTIAL DECK REMOVAL)
CONCRETE DECK REPAIR (FULL DECK REMOVAL)

- BITUMINOUS CONCRETE PAVEMENT

MODIFIED CLASS 9.5 HMA
CLASS 9.5 HMA FOR PATCHING

CONCRETE NOTES:

- CLASSES OF CONCRETE SHALL BE HIGH PERFORMANCE CLASS HP AS DESCRIBED IN THE RI STANDARD SPECIFICATIONS AND THE SPECIAL PROVISIONS OF THE SPECIFICATIONS. REFER TO THE "MATERIAL" NOTES FOR CLASSES OF CONCRETE SPECIFIED FOR VARIOUS COMPONENTS.
- THE CONTRACTOR MAY, AT THE APPROVAL OF THE ENGINEER, PROPOSE THE USE OF SELF-CONSOLIDATING CONCRETE FOR ANY CLASS OF CONCRETE ON THIS PROJECT. SECTION 606 "SELF CONSOLIDATING CONCRETE (SCC)", CONTAINS THE REQUIREMENTS FOR MODIFYING ALL CLASSES OF CONCRETE MIX DESIGN FOR SELF-CONSOLIDATING APPLICATIONS.
- ALL PORTLAND CEMENT CONCRETE SHALL BE AIR-ENTRAINED.
- ALL REINFORCING STEEL SHALL BE GALVANIZED. ALL WIRE TIES AND MISCELLANEOUS HARDWARE USED FOR PLACEMENT OF GALVANIZED REINFORCING SHALL ALSO BE GALVANIZED. GALVANIZED COATING FOR REINFORCING STEEL SHALL CONFORM TO ASTM A767 CLASS 1.
- ALL CRITICAL LAP SPLICES SHALL BE AS SHOWN ON THE PLANS OR DESCRIBED IN THE SPECIAL PROVISIONS. ALL SPLICES NOT SHOWN ON THE PLANS SHALL BE LAPPED IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS FOR CLASS B LAP SPLICES.
- UNLESS OTHERWISE INDICATED ON THE PLANS, ALL MAIN REINFORCING BARS SHALL HAVE THE FOLLOWING MINIMUM COVER:

CONCRETE CAST AGAINST OR PERMANENTLY EXPOSED TO EARTH (FOOTINGS, ABUTMENT AND WALL FACES, BACKWALLS)	3"
DECK SLABS (WITH WEARING SURFACE)	TOP 2" (+1/4", -0") BOTTOM 1" (+1/8", -0")
ALL OTHER BARS	2"

COVER TO TIES AND STIRRUPS MAY BE 0.5 INCH LESS THAN THE ABOVE VALUES SPECIFIED FOR MAIN REINFORCING, BUT IN NO CASE LESS THAN 1.5 INCHES.
- HORIZONTAL CONSTRUCTION JOINTS OTHER THAN THOSE SHOWN ON PLANS WILL NOT BE PERMITTED WITHOUT A WRITTEN REQUEST BY THE CONTRACTOR AND PRIOR AUTHORIZATION BY THE ENGINEER.
- UNLESS OTHERWISE NOTED ON THE PLANS, ALL EXPOSED CONCRETE SURFACES VISIBLE IN ELEVATION TO ONE FOOT BELOW FINAL GROUND LINE (AND THE UNDERSIDE OF ALL CONCRETE DECK SLABS OUTSIDE OF THE FASCIA BEAMS), SHALL RECEIVE A CONCRETE SURFACE RUBBED FINISH IN ACCORDANCE WITH THE RI STANDARD SPECIFICATIONS.
- THE ENTIRE TOPSIDE SURFACES OF ABUTMENT AND PIER CAP BEAM SEATS, AS WELL AS VERTICAL FACES OF BACKWALLS, AND PARAPETS/BARRIERS SHALL BE PROVIDED WITH A FILM-FORMING SEALER (M12.03.1) CONCRETE SURFACE TREATMENT-PROTECTIVE COATING IN ACCORDANCE WITH SECTION 820 OF THE RI STANDARD SPECIFICATIONS.
- ALL EXPOSED EDGES AND REENTRANT CORNERS NOT OTHERWISE DETAILED ON THE PLANS SHALL HAVE A MINIMUM 3/4" CHAMFER.

CONCRETE NOTES (CONT):

- ALL JOINT SEALANT SHALL BE POLYURETHANE, POLYURETHANE ELASTOMERIC, OR SILICONE SEALANT AS DESIGNATED ON THE PLANS. THE COLOR OF THE JOINT SEALANT, WHERE EXPOSED, SHALL BE NEUTRAL (LIGHT GRAY OR TAN). THE COLOR OF THE SEALANT, WHERE NOT EXPOSED, WILL BE AT THE DISCRETION OF THE CONTRACTOR.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PREVENTING CONCRETE STAINS OR DISCOLORATIONS DURING CONSTRUCTION UNTIL SUCH TIME WHEN THE SURFACES ARE APPROVED AND ACCEPTED. ANY CONCRETE STAINS OR DISCOLORATIONS OCCURRING PRIOR TO ACCEPTANCE OF THE SURFACES SHALL BE REMOVED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE STATE.
- UNLESS OTHERWISE NOTED ON THE PLANS, JOINT FILLER IS TO BE A PREFORMED, NON-EXPANSIVE, NON-EXTRUDING TYPE IN ACCORDANCE WITH SECTION M.02.11.1 OF THE RI STANDARD SPECIFICATIONS.
- UNLESS OTHERWISE INDICATED ON THE PLANS, ALL DECK FORMS SHALL BE OF THE REMOVABLE TYPE THAT WILL PRODUCE THE DIMENSIONS SHOWN ON THE PLANS.
- EMBEDMENT LENGTHS FOR DRILLED AND GROUTED DOWELS SHALL BE IN ACCORDANCE WITH SECTION 819 OF THE RI STANDARD SPECIFICATIONS.
- IN ACCORDANCE WITH THE RI STANDARD SPECIFICATIONS, ALL METAL TIES, NON-METALLIC TIES OR ANCHORAGES WHICH ARE REQUIRED FOR CONCRETE FORMWORK SHALL BE SO CONSTRUCTED THAT THEY CAN BE REMOVED TO AT LEAST ONE INCH BELOW THE EXPOSED SURFACE OF THE CONCRETE WITHOUT CAUSING DAMAGE TO THE CONCRETE SURFACE. SNAP TIES MAY BE USED ONLY IF APPROVED BY THE ENGINEER. IF THE CONTRACTOR PROPOSES TO USE THEM, A CATALOG CUT AND OTHER NECESSARY INFORMATION MUST BE SUBMITTED TO THE ENGINEER TO DEMONSTRATE THAT THE TIES WILL SNAP-OFF FAR ENOUGH INTO THE CONCRETE TO ALLOW FOR PROPER PATCHING. SNAP TIES MUST PROVIDE ADEQUATE STRENGTH TO SUPPORT THE FORMS. ALL CAVITIES SHALL BE FILLED WITH AN APPROVED CEMENT MORTAR MEETING THE REQUIREMENTS OF ASTM C 928.

ADDENDUM No. 5



REVISIONS			NO.	DATE	BY
1	11/8/19	DRC			

RHODE ISLAND					
DEPARTMENT OF TRANSPORTATION					
BRIDGE GROUP 51A - RT. 37 C-2					
CRANSTON			RHODE ISLAND		
BRIDGE GENERAL NOTES					
SHEET 1					
CHECKED BY _____ DATE _____ SCALE AS NOTED					

0013C_V4_002_BRIDGE GENERAL NOTES SHEET 1_R-1.dwg Plotted on Friday, November 8, 2019 2:14:11 PM

STRUCTURAL STEEL NOTES:

- FRAMING DIMENSIONS ARE GIVEN ALONG CENTERLINES OF STRINGERS AND ALONG CENTERLINES OF BEARINGS ON ABUTMENTS. THE FABRICATOR IS RESPONSIBLE FOR INCORPORATING THE CAMBER, CROSS SLOPE, AND OTHER EFFECTS THAT MAY IMPACT THE OVERALL LENGTHS, DIMENSIONS AND/OR THE DETAILING.
- THE SHOPS FABRICATING THE STRUCTURAL STEEL MUST BE CERTIFIED FOR "SIMPLE STEEL BRIDGE STRUCTURES (SBR)" IN ACCORDANCE WITH THE AISC QUALITY CERTIFICATION PROGRAM OR EQUIVALENT.

THE SHOPS SHALL ALSO BE CERTIFIED UNDER THE AISC "SOPHISTICATED PAINT ENDORSEMENT (SPE)" QUALITY PROGRAM OR THE SSPC-QP3 PAINT CERTIFICATION PROGRAM.

THE FABRICATOR MUST SUBMIT PROOF OF CURRENT CERTIFICATION AS SPECIFIED.
- SHOP DRAWINGS FOR ALL FABRICATED STEEL INCLUDING BEARINGS, EXPANSION JOINTS, RAILINGS AND FALSEWORK SHALL BE SUBMITTED TO THE ENGINEER IN SUFFICIENT TIME TO PERMIT CAREFUL CHECKING PRIOR TO FABRICATION. THE CONTRACTOR SHALL INCLUDE A WRITTEN STRUCTURAL STEEL WELDING PROCEDURE WHICH INCLUDES: WELDING PROCEDURE SPECIFICATIONS, WELDING SOUNDNESS TEST, OR RADIOGRAPHY REPORT.
- INSPECTION OF WELDS INCLUDING RADIOGRAPHIC TESTING (RT) AND MAGNETIC PARTICLE TESTING (MT) SHALL BE IN ACCORDANCE WITH THE RI STANDARD SPECIFICATIONS AND THE AASHTO/AWS BRIDGE WELDING CODE, EXCEPT THAT THE REMAINING PERCENTAGE OF ALL GROOVE WELDS NOT RT TESTED SHALL BE MT OR DYE-PENETRANT TESTED.
- STRUCTURAL STEEL SHAPES AND PLATES SHALL CONFORM TO THE LATEST PROVISIONS OF AASHTO DESIGNATION M 270 GRADE 36 OR GRADE 50 AS DESIGNATED ON THE PLANS.
- ALL AASHTO M 270 STRUCTURAL STEEL USED IN THIS STRUCTURE (INCLUDING CONNECTION PLATES AND STIFFENERS), SHALL MEET THE ZONE 2 CHARPY V-NOTCH FRACTURE TOUGHNESS TEST REQUIREMENTS AS SPECIFIED IN TABLE C6.6.2.1-1 OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS FOR "NONFRACTURE-CRITICAL" COMPONENTS. THE ZONE 2 FRACTURE TOUGHNESS REQUIREMENTS ARE AS FOLLOWS:

NONFRACTURE-CRITICAL

GRADE 36 15 FT-LBS @ 40°F (UP TO 4 INCHES THICK)
GRADE 50 OR 50W 15 FT-LBS @ 40°F (UP TO AND INCLUDING 2 INCHES THICK)
GRADE 50 OR 50W 20 FT-LBS @ 40°F (FROM 2 INCH THICK UP TO AND INCLUDING 4 INCHES THICK)

SAMPLING AND TESTING PROCEDURES SHALL BE IN ACCORDANCE WITH AASHTO T 243. THE FREQUENCY OF TESTING SHALL BE IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS.

THE CHARPY V-NOTCH FRACTURE TOUGHNESS TEST REQUIREMENT IS NOT MANDATORY FOR THE FOLLOWING STEEL COMPONENTS:
 - BEARINGS, MASONRY PLATES AND SOLE PLATES
 - DRAINAGE MATERIAL
- WELDING SHALL BE IN ACCORDANCE WITH THE LATEST BRIDGE WELDING CODE AASHTO/AWS D1.5 (INCLUDING ALL INTERIMS TO DATE) AND APPLICABLE SUPPLEMENTAL AWS PUBLICATIONS.
- ALL HIGH STRENGTH BOLTS SHALL CONFORM TO AASHTO DESIGNATION M 164 (ASTM A325), AND THEY SHALL BE INSTALLED IN ACCORDANCE WITH SECTION 824 OF THE RI STANDARD SPECIFICATIONS.
- WASHERS MEETING AASHTO DESIGNATION M 293 (ASTM A325) ARE TO BE USED OVER ALL HOLES THAT ARE MORE THAN 1/16" IN DIAMETER GREATER THAN THE BOLT DIAMETER AND UNDER ALL PARTS TURNED DURING ASSEMBLY.
- WELDING ELECTRODES SHALL HAVE THE SAME CORROSION RESISTANCE AS THE BASE METAL AND SHALL BE FREE OF MOISTURE AT THE TIME OF USE.
- STRUCTURAL STEEL SHALL BE PREPARED AND PAINTED IN ACCORDANCE WITH THE RI STANDARD SPECIFICATIONS.
- PRIOR TO FABRICATION, ALL MATERIALS SHALL FIRST BE SOLVENT CLEANED TO SSPC-SP1 TO REMOVE ALL OIL, GREASE AND DIRT; FOLLOWED BY BLAST-CLEANING TO SSPC-SP10 TO REMOVE ALL MILL SCALE, RUST, AND OTHER DELETERIOUS MATERIALS FROM THE SURFACES OF THE STEEL TO BE FABRICATED.
- PRIOR TO SHOP COATING AS SPECIFIED IN SECTION 825 OF THE RI STANDARD SPECIFICATIONS, ALL CORNERS AND EDGES OF STEEL WHICH HAVE BEEN FLAME CUT OR OTHERWISE HARDENED SHALL BE SOFTENED BY GRINDING OR BLAST-CLEANING TO PROVIDE A SURFACE SUITABLE FOR APPLICATION OF THE SPECIFIED PAINT SYSTEM.

UPON COMPLETION OF ALL FABRICATION AND PRIOR TO THE APPLICATION OF THE SHOP PRIMER COAT THE STRUCTURAL STEEL SHALL BE RESTORED TO AN SSPC-SP10 CONDITION.

COLOR OF TOP COAT FOR ALL SHOP AND FIELD COATINGS SHALL MATCH THE COLOR OF THE EXISTING PAINT. THE CONTRACTOR SHALL CONSULT RECORD PLAN SETS FOR NECESSARY INFORMATION.
- WELDING OF ATTACHMENTS TO GIRDER FLANGES OR WEBS FOR CONSTRUCTION PURPOSES IS NOT PERMITTED EXCEPT WHEN APPROVED BY THE ENGINEER.

STRUCTURAL STEEL NOTES (CONT.):

- BOLTED CONNECTIONS SHALL BE DESIGNED AS SLIP-CRITICAL CONNECTIONS. THE FAYING SURFACES SHALL SATISFY CLASS B SURFACE CONDITION AS DEFINED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, CLASS C SURFACE CONDITIONS FOR GALVANIZED PLATES.
- ALL FILLET WELDS SHALL BE IN ACCORDANCE WITH THE BRIDGE WELDING CODE AASHTO/AWS D1.5 TABLE 2.1 (1/4" MINIMUM).
- WHEN STEEL DIE STAMPS ARE USED TO IDENTIFY PIECES AND MEMBERS, FABRICATORS SHALL UTILIZE LOW STRESS STAMPS.
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT THE EXPANSION JOINT SYSTEM PROVIDED WILL BE COMPATIBLE WITH BOTH THE END OF DECK OR PIER HAUNCHES AND/OR THE STRUCTURAL STEEL FRAMING CONFIGURATION. THAT IS, THE EXPANSION JOINT SYSTEM AND ALL ITS INHERENT COMPONENTS AND ATTACHMENT DEVICES SHALL BE SIZED OR ARRANGED TO BE COMPATIBLE WITH THE GIRDER AND DIAPHRAGM FLANGES, CONNECTION PLATES, BOLTS, SHEAR STUDS AND REINFORCING STEEL THAT SHARE THE END HAUNCH REGION.

GENERAL NOTES REGARDING TEMPORARY CONSTRUCTION CONDITIONS:

1. DESIGN WIND PRESSURES FOR CONSTRUCTION:

MINIMUM WIND PRESSURES TO BE USED BY THE CONTRACTOR FOR DESIGN DURING THE CONSTRUCTION CONTRACT (WITH THE EXCEPTION OF SIGNS) SHALL BE FROM THE FOLLOWING TABLE:

HEIGHT ABOVE GROUND	WIND PRESSURE (PSF)
UP TO 17'	23
OVER 17' AND UP TO 33'	27
OVER 33' AND UP TO 50'	30
OVER 50' AND UP TO 75'	34
OVER 75' AND UP TO 100'	37

TABLE NOTES:

A. APPLICATION OF THE TABULAR PRESSURE:

- BRIDGE COMPONENTS DURING CONSTRUCTION, PRIOR TO THE INSTALLATION OF THE PERMANENT BRACING SYSTEMS, NOT INCLUDING CRANE LIFTING.
- FALSE WORK, SHORING, AND SCAFFOLDING AS DEFINED IN FHWA "GUIDE DESIGN SPECIFICATION FOR BRIDGE TEMPORARY WORKS", EXCLUDING 3-DIMENSIONAL LATTICED OR TRUSSED FRAMES OR TOWERS;
- TEMPORARY SHIELDING.

WIND PRESSURES FOR ALL OTHER STRUCTURES SHALL BE CALCULATED BASED ON ASCE "DESIGN LOADS ON STRUCTURES DURING CONSTRUCTION", SEI/ASCE 37-02 (ALL REFERENCES TO THE ASCE 7 IN THE SEI/ASCE 37-02 PUBLICATION, SHALL BE THE LATEST REVISION OF ASCE 7). THE EXPOSURE CATEGORY SHALL BE B.

B. FOR STRUCTURES SITUATED ABOVE LIVE INTERSTATE TRAFFIC, THE TABULAR VALUES SHALL BE INCREASED BY 5 PSF.

JOB SPECIFIC NOTES:

- THE ITEM "ASPHALTIC PLUG EXPANSION JOINT SYSTEM" SHALL BE CONSIDERED EQUIVALENT TO AND INTERCHANGEABLE WITH "ASPHALTIC EXPANSION JOINT SYSTEM."
- THE "ASPHALTIC EXPANSION JOINT SYSTEM" AND ALL ITEMS ASSOCIATED WITH ITS INSTALLATION, INCLUDING "ASPHALTIC EXPANSION JOINT SYSTEM", "CUTTING AND MATCHING ASPHALT", "COLD APPLIED LIQUID MEMBRANE", AND "MODIFIED CLASS 9.5 HMA", WILL BE PAID FOR UNDER THE RESPECTIVE PAY ITEMS "REPAIRS TO ROUTE 37 BRIDGE NO. 063XXX".
- FOR PERMANENT REPAIRS TO THE ASPHALT OVERLAY AS PART OF A FULL DEPTH DECK REPAIR, THE ITEMS "CLASS 9.5 HMA FOR PATCHING", AND "HEAT APPLIED PRE-FABRICATED MEMBRANE", WILL BE MEASURED BY THEIR RESPECTIVE PAY UNITS (TON, SQUARE YARD,) AND PAID FOR AT THEIR RESPECTIVE CONTRACT UNIT PRICES.

REVISIONS		
NO.	DATE	BY
1	11/8/19	DRC

RHODE ISLAND	
DEPARTMENT OF TRANSPORTATION	
BRIDGE GROUP 51A - RT. 37 C-2	
CRANSTON	RHODE ISLAND
BRIDGE GENERAL NOTES	
SHEET 2	
CHECKED BY _____ DATE _____ SCALE AS NOTED	

ADDENDUM No. 5



0013C_V4_003_BRIDGE GENERAL NOTES SHEET 2_R-1.dwg Plotted on Friday, November 8, 2019 2:14:21 PM

REPAIR KEY:

THE GENERAL SCOPE OF THE REHABILITATION AND REPAIRS FOR THE BRIDGE INCLUDES, BUT IS NOT LIMITED TO THE FOLLOWING:

BEARING REPAIRS:

- (B1) - JACK UP SUPERSTRUCTURE AND REPLACE BEARINGS
- (B2) - JACK UP SUPERSTRUCTURE AND RESET BEARINGS

DECK REPAIRS:

- (D1) - DECK UNDERSIDE REPAIR
- (D2) - DECK UNDERSIDE REPAIR OVER RAILROAD
- (D3) - EXPANSION JOINT HEADER REPAIR
- (D4) - REMOVE DETERIORATED CONCRETE AND PERFORM CONCRETE REPAIR TO BARRIER / CURB
- (D5) - REPLACE MISSING GUARDRAIL ATTACHMENT BRACKET AND TIGHTEN ATTACHMENT BOLTS
- (D6) - CLEAN AND FLUSH DRAIN TROUGHS AND SCUPPERS
- (D7) - REPLACE GRANITE IDENTIFICATION TABLET

JOINT REPAIRS:

- (J1) - INSTALL ASPHALTIC PLUG EXPANSION JOINT WITH BRIDGING PLATE AND PREFORMED JOINT SEAL
- (J2) - INSTALL ASPHALTIC PLUG EXPANSION JOINT WITHOUT BRIDGING PLATE
- (J3) - INSTALL WATERPROOFING AT APPROACH SLAB / BACKWALL JOINT
- (J4) - INSTALL PREFORMED JOINT SEAL AT MEDIAN JOINT
- (J5) - INSTALL PREFORMED JOINT SEAL AT PARAPETS
- (J6) - INSTALL PREFORMED JOINT SEAL AT EXPANSION JOINT

SUBSTRUCTURE REPAIRS:

- (S1) - CLEAN CONCRETE SURFACES AND COAT WITH AN EPOXY RESIN PROTECTIVE COATING
- (S2) - RECONSTRUCT EXISTING BEARING SEAT/PEDESTAL
- (S3) - REMOVE DETERIORATED CONCRETE AND PERFORM CONCRETE REPAIR
- (S4) - REMOVE SPALLED OR DETERIORATED CONCRETE AND RECONSTRUCT TOP OF BACKWALL
- (S5) - REMOVE EXISTING FACE OF SUBSTRUCTURE 6" MIN. UP TO LIMIT OF DETERIORATED CONCRETE AND RESURFACE
- (S6) - REBUILD EXISTING CONCRETE SHEAR BLOCK AS REQUIRED
- (S7) - STRUCTURAL CONCRETE CRACK REPAIR BY EPOXY INJECTION
- (S8) - REMOVE SPALLED OR DETERIORATED CONCRETE AND REBUILD TO FORM REINFORCED COLUMN ENCASEMENT
- (S9) - EXCAVATE TO TOP OF EXISTING FOOTING AND CONSTRUCT WEB WALL
- (S10) - SLOPE PAVING REPAIRS
- (S11) - APPLY ANTI-GRAFFITI COATING

SUPERSTRUCTURE REPAIRS:

- (F1) - CLEAN AND SANDBLAST EXISTING PAINT PROTECTIVE SYSTEM AND REPAINT
- (F2) - MISCELLANEOUS STRUCTURAL STEEL REPAIRS
- (F3) - REMOVE DETERIORATED CONCRETE AND PERFORM CONCRETE REPAIR
- (F4) - REPAIR BEAM END SPALLS
- (F5) - COVER PLATE WELD REPAIRS BY PEENING

ROADWAY REPAIRS:

- (R1) - REPLACE DAMAGED GUARDRAIL
- (R2) - REPLACE DAMAGED GRANITE CURB
- (R3) - REPLACE MISSING LIGHT STANDARD HANDHOLE COVER AND ANCHOR BOLT COVERS
- (R4) - REPAIR JUNCTION BOX COVER

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DECK UNDERSIDE REPAIR LOCATION PLAN	7

QUANTITIES

ITEM CODE	DESCRIPTION	UNIT (2)	TOTAL
800.9928	REPAIRS TO ROUTE 37 BRIDGE NO. 062601	LS	1
(1)	HIGH PRESSURE WATER CLEANING OF BRIDGE STRUCTURES	EA	1
(1)	PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES	SY	1125
(1)	PREFORMED JOINT SEAL	LF	130
202.0700	COMMON BORROW	CY	30
203.0100	STRUCTURAL EXCAVATION EARTH	CY	30
401.3003	CLASS 9.5 HMA FOR PATCHING	TON	2
403.0300	ASPHALT EMULSION TACK COAT	SY	11
810.0210	GALVANIZED BAR REINFORCEMENT GRADE 60	LB	100
810.0702	WELDED WIRE FABRIC (GALVANIZED)	SF	20
810.9901	EMBEDDED GALVANIC ANODES	EA	200
813.0210	HEAT APPLIED PRE-FABRICATED MEMBRANE	SY	30
817.9901	REPAIRS TO STRUCTURAL CONCRETE MASONRY (PATCHING MORTAR)	CF	35
817.9903	REPAIRS TO STRUCTURAL CONCRETE MASONRY (TYPE 2S)	CF	70
818.9901	PORTLAND CEMENT CONCRETE DECK REPAIR (PARTIAL DECK REMOVAL)	SF	600
818.9902	PORTLAND CEMENT CONCRETE DECK REPAIR (FULL DECK REMOVAL)	SF	60
833.0400	GRANITE IDENTIFICATION TABLET	EA	1
836.0100	STRUCTURAL CONCRETE CRACK REPAIR BY EPOXY-RESIN BASE ADHESIVE INJECTION	LF	115
842.0100	ANTI-GRAFFITI COATING	SF	10125

(1) ITEMS IN REPAIRS TO ROUTE 37 BRIDGE NO. 062601 LUMP SUM ITEM 800.9928 GIVEN FOR INFORMATION ONLY.

BRIDGE 062601

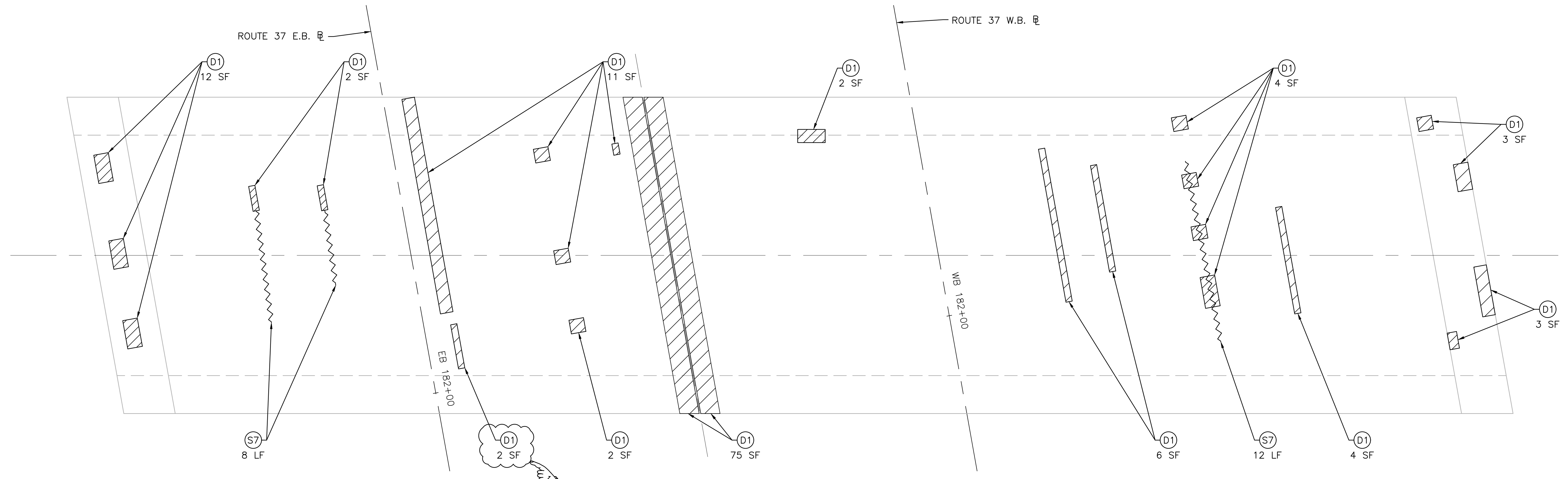
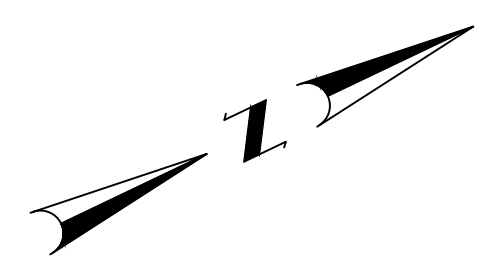
REVISIONS		
NO.	DATE	BY
1	11/8/19	DRC

RHODE ISLAND	
DEPARTMENT OF TRANSPORTATION	
BRIDGE GROUP 51A - RT. 37 C-2	
CRANSTON	RHODE ISLAND
REPAIR KEY, INDEX OF SHEETS & QUANTITIES	
CHECKED BY _____	DATE _____ SCALE AS NOTED

ADDENDUM No. 5

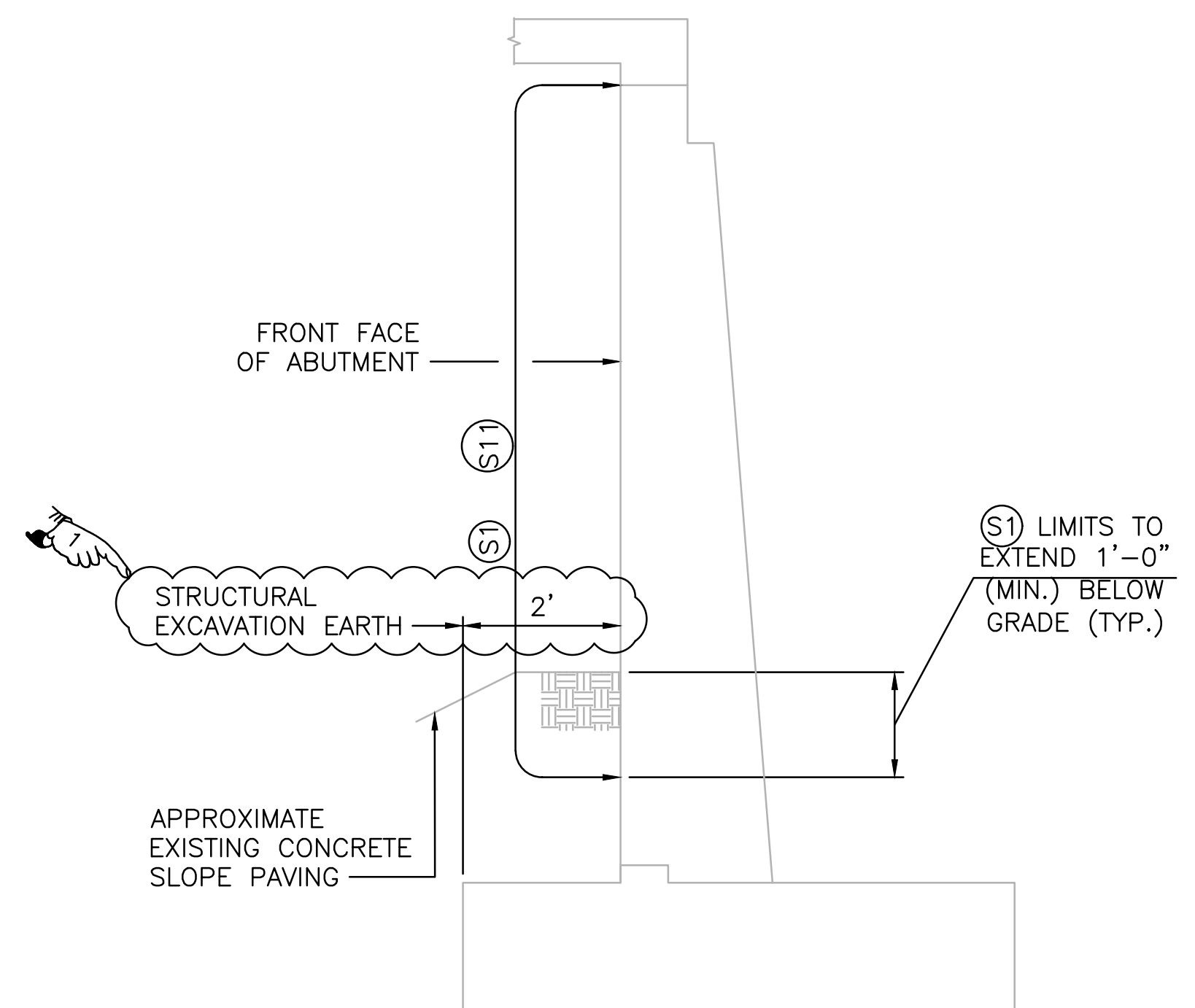


530 PRESTON AVENUE
MERCEN, CT 06450



DECK UNDERSIDE REPAIR LOCATION PLAN

SCALE: 1/4" = 1'-0"



LIMITS OF S1 & S11 AT ABUTMENTS & WINGWALLS

SECTION A
NOT TO SCALE

NOTES:

1. APPLY NON-SACRIFICIAL, OPAQUE ANTI-GRAFFITI COATING TO THE LIMITS SHOWN. THE COLOR CHOSEN FOR THE COATING SYSTEM CHOSEN SHALL BE SIMILAR TO THE EXISTING STRUCTURE, AND SHALL BE SUFFICIENTLY OPAQUE TO CONCEAL THE EXISTING GRAFFITI.
2. THE CONTRACTOR MAY ELECT TO REMOVE THE EXISTING GRAFFITI PRIOR TO APPLYING THE ANTI-GRAFFITI COATING. NO ADDITIONAL PAYMENT SHALL BE MADE FOR THIS CLEANING. THE COST TO CLEAN SHALL BE PAID UNDER THE ITEM "ANTI-GRAFFITI COATING".
3. THE COST TO REPLACE EXCAVATED MATERIAL SHALL BE PAID UNDER ITEM CODE 202.0700, "COMMON BORROW."

BRIDGE 062601

REVISIONS			RHODE ISLAND	
NO.	DATE	BY	DEPARTMENT OF TRANSPORTATION	
1	11/8/19	DRC	BRIDGE GROUP 51A - RT. 37 C-2	
			CRANSTON RHODE ISLAND	
			DECK UNDERSIDE REPAIR LOCATION PLAN	
			CHECKED BY _____ DATE _____ SCALE AS NOTED	

ADDENDUM No. 5



0013C_V4_007_DECK UNDERSIDE REPAIR LOCATION PLAN - BRIDGE 062601_R-1.dwg Plotted on Friday, November 8, 2019 2:14:41 PM

REPAIR KEY:

THE GENERAL SCOPE OF THE REHABILITATION AND REPAIRS FOR THE BRIDGE INCLUDES, BUT IS NOT LIMITED TO THE FOLLOWING:

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
1	RI	HP-00370121, HP-00370131, HP-100(003), 3RD-PRY(208)	2019	8	75

BEARING REPAIRS:

- (B1) - JACK UP SUPERSTRUCTURE AND REPLACE BEARINGS
- (B2) - JACK UP SUPERSTRUCTURE AND RESET BEARINGS

DECK REPAIRS:

- (D1) - DECK UNDERSIDE REPAIR
- (D2) - DECK UNDERSIDE REPAIR OVER RAILROAD
- (D3) - EXPANSION JOINT HEADER REPAIR
- (D4) - REMOVE DETERIORATED CONCRETE AND PERFORM CONCRETE REPAIR TO BARRIER / CURB
- (D5) - REPLACE MISSING GUARDRAIL ATTACHMENT BRACKET AND TIGHTEN ATTACHMENT BOLTS
- (D6) - CLEAN AND FLUSH DRAIN TROUGHS AND SCUPPERS

JOINT REPAIRS:

- (J1) - INSTALL ASPHALTIC PLUG EXPANSION JOINT WITH BRIDGING PLATE AND PREFORMED JOINT SEAL
- (J2) - INSTALL ASPHALTIC PLUG EXPANSION JOINT WITHOUT BRIDGING PLATE
- (J3) - INSTALL WATERPROOFING AT APPROACH SLAB / BACKWALL JOINT
- (J4) - INSTALL PREFORMED JOINT SEAL AT MEDIAN JOINT
- (J5) - INSTALL PREFORMED JOINT SEAL AT PARAPETS

SUBSTRUCTURE REPAIRS:

- (S1) - CLEAN CONCRETE SURFACES AND COAT WITH AN EPOXY RESIN PROTECTIVE COATING
- (S2) - RECONSTRUCT EXISTING BEARING SEAT/PEDESTAL
- (S3) - REMOVE DETERIORATED CONCRETE AND PERFORM CONCRETE REPAIR
- (S4) - REMOVE SPALLED OR DETERIORATED CONCRETE AND RECONSTRUCT TOP OF BACKWALL
- (S5) - REMOVE EXISTING FACE OF SUBSTRUCTURE 6" MIN. UP TO LIMIT OF DETERIORATED CONCRETE AND RESURFACE
- (S6) - REBUILD EXISTING CONCRETE SHEAR BLOCK AS REQUIRED
- (S7) - STRUCTURAL CONCRETE CRACK REPAIR BY EPOXY INJECTION
- (S8) - REMOVE SPALLED OR DETERIORATED CONCRETE AND REBUILD TO FORM REINFORCED COLUMN ENCASEMENT
- (S9) - EXCAVATE TO TOP OF EXISTING FOOTING AND CONSTRUCT WEB WALL
- (S10) - SLOPE PAVING REPAIRS

SUPERSTRUCTURE REPAIRS:

- (F1) - CLEAN AND SANDBLAST EXISTING PAINT PROTECTIVE SYSTEM AND REPAINT
- (F2) - MISCELLANEOUS STRUCTURAL STEEL REPAIRS
- (F3) - REMOVE DETERIORATED CONCRETE AND PERFORM CONCRETE REPAIR
- (F4) - REPAIR BEAM SPALLS
- (F5) - COVER PLATE WELD REPAIRS BY PEENING

ROADWAY REPAIRS:

- (R1) - REPLACE DAMAGED GUARDRAIL
- (R2) - REPLACE DAMAGED GRANITE CURB
- (R3) - REPLACE MISSING LIGHT STANDARD HANDHOLE COVER AND ANCHOR BOLT COVERS
- (R4) - REPAIR JUNCTION BOX COVER

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QUANTITIES			
ITEM CODE	DESCRIPTION	UNIT	TOTAL
800.9920	REPAIRS TO ROUTE 37 BRIDGE NO. 063001	LS	1
(1)	MODIFIED CLASS 9.5 HMA	TON	15
(1)	ASPHALT EMULSION TACK COAT	SY	9
(1)	HEAT APPLIED PRE-FABRICATED MEMBRANE	SY	57
(1)	HIGH PRESSURE WATER CLEANING OF BRIDGE STRUCTURES	EA	1
(1)	PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES	SY	250
(1)	ASPHALTIC EXPANSION JOINT SYSTEM	LF	80
(1)	PREFORMED JOINT SEAL	LF	28
(1)	PEENING COVER PLATE WELDS	EA	14
(1)	TEMPORARY JACKING AND SHORING OF BEAMS & GIRDERS - BRIDGE NO. 063001	EA	14
(1)	REPAINTING EXISTING STRUCTURAL STEEL - BRIDGE NO. 063001	LS	1
(1)	CONTAINMENT, COLLECTION, STORAGE AND DISPOSAL OF DEBRIS AND SPENT MATERIALS	LS	1
(1)	PERSONNEL PROTECTION DURING PAINTING AND CLEANING OPERATIONS	LS	1
(1)	ELASTOMERIC BEARINGS LAMINATED	EA	14
(1)	FULL DEPTH REMOVAL AND DISPOSAL OF BITUMINOUS PAVEMENT FROM CONCRETE BRIDGE DECKS	SY	54
(1)	CUTTING AND MATCHING ASPHALT	LF	332
202.0700	COMMON BORROW	CY	25
203.0100	STRUCTURAL EXCAVATION EARTH	CY	32
302.0100	GRAVEL BORROW SUBBASE COURSE	CY	9
401.3003	CLASS 9.5 HMA FOR PATCHING	TON	1
403.0300	ASPHALT EMULSION TACK COAT	SY	1
810.0210	GALVANIZED BAR REINFORCEMENT GRADE 60	LB	1300
810.0702	WELDED WIRE FABRIC (GALVANIZED)	SF	7
810.9901	EMBEDDED GALVANIC ANODES	EA	600
813.0210	HEAT APPLIED PRE-FABRICATED MEMBRANE	SY	5
817.9901	REPAIRS TO STRUCTURAL CONCRETE MASONRY (PATCHING MORTAR)	CF	12
817.9903	REPAIRS TO STRUCTURAL CONCRETE MASONRY (TYPE 2S)	CF	26
817.9902	REPAIRS TO STRUCTURAL CONCRETE MASONRY (FORM AND CAST IN PLACE)	CY	26
818.9901	PORTLAND CEMENT CONCRETE DECK REPAIR (PARTIAL DECK REMOVAL)	SF	25
818.9902	PORTLAND CEMENT CONCRETE DECK REPAIR (FULL DECK REMOVAL)	SF	3
824.9910	STEEL BEAM/GIRDER REPAIRS - BRIDGE NO. 063001	LB	300
836.0100	STRUCTURAL CONCRETE CRACK REPAIR BY EPOXY-RESIN BASE ADHESIVE INJECTION	LF	10

(1) ITEMS IN "REPAIRS TO ROUTE 37 BRIDGE NO. 063001" LUMP SUM ITEM 800.9920 GIVEN FOR INFORMATION ONLY.

BRIDGE 063001

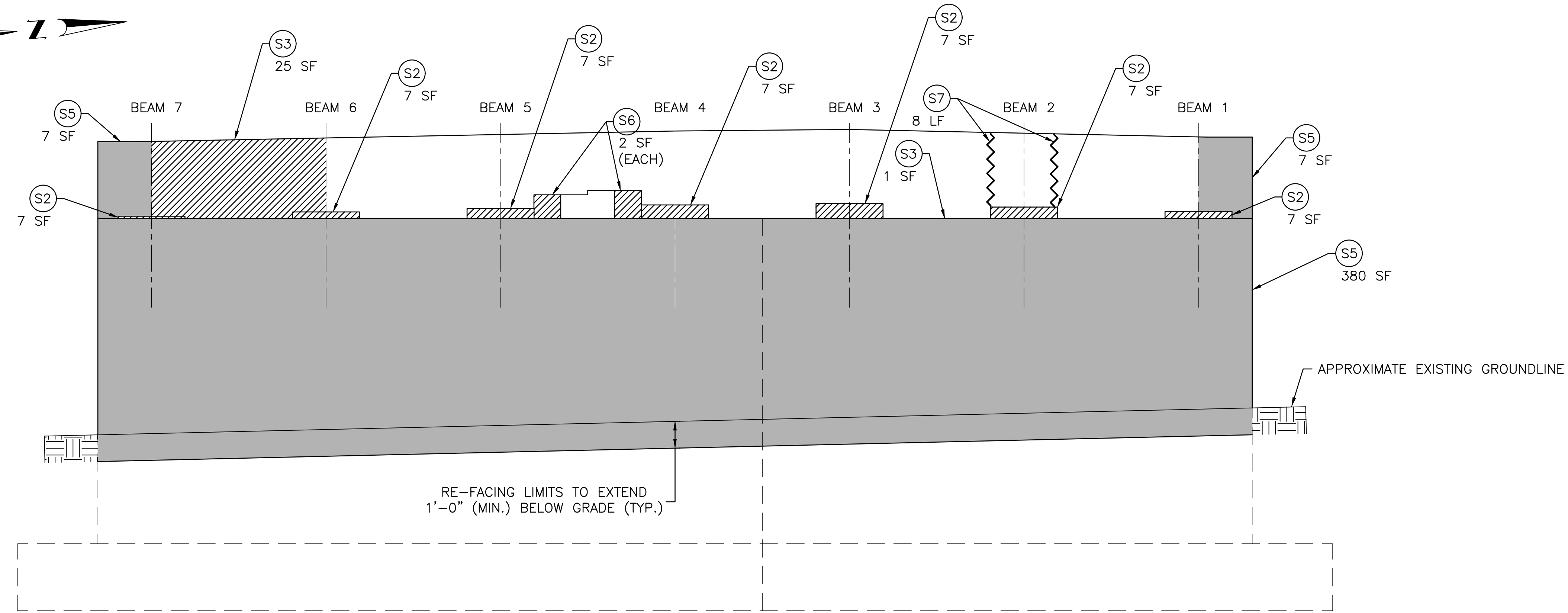
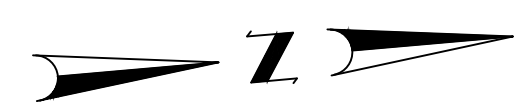
REVISIONS			RHODE ISLAND DEPARTMENT OF TRANSPORTATION
NO.	DATE	BY	
1	11/8/19	DRC	BRIDGE GROUP 51A - RT. 37 C-2
			CRANSTON RHODE ISLAND
			REPAIR KEY, INDEX OF SHEETS & QUANTITIES
			CHECKED BY _____ DATE _____ SCALE AS NOTED

ADDENDUM No. 5



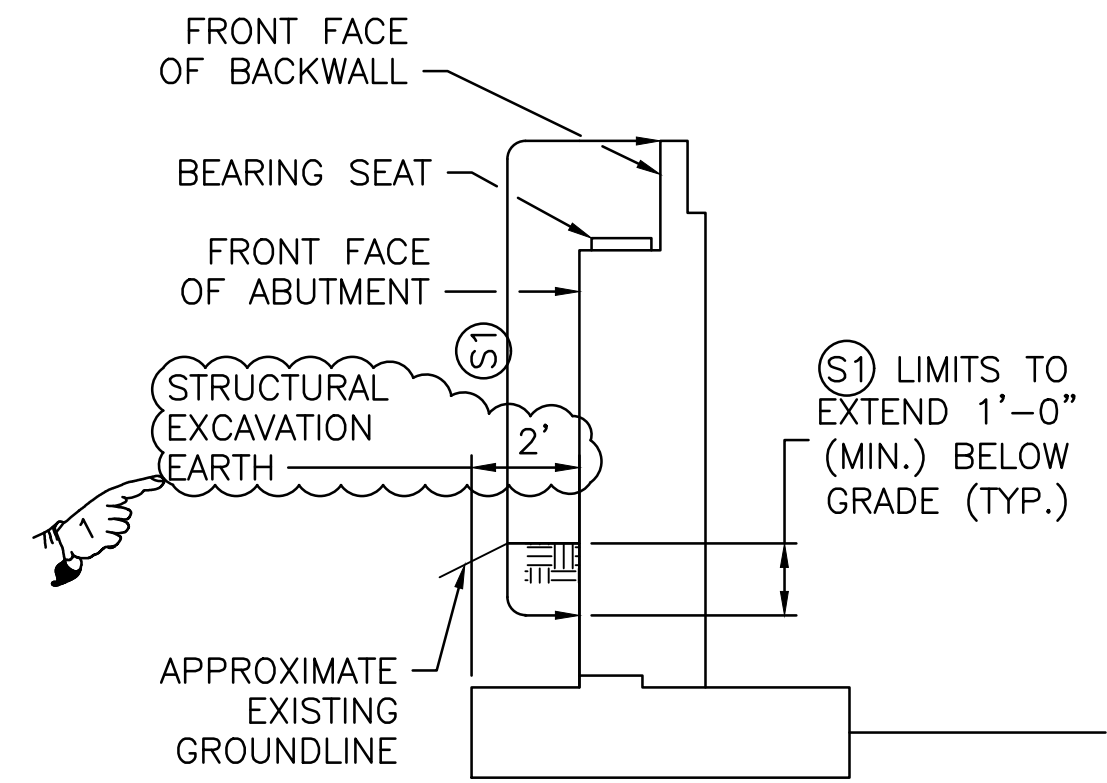
0013C_V4_008_REPAIR KEY, INDEX OF SHEETS & QUANTITIES - BRIDGE 063001 - R_1.dwg Plotted on Friday, November 8, 2019 2:14:52 PM

R-1



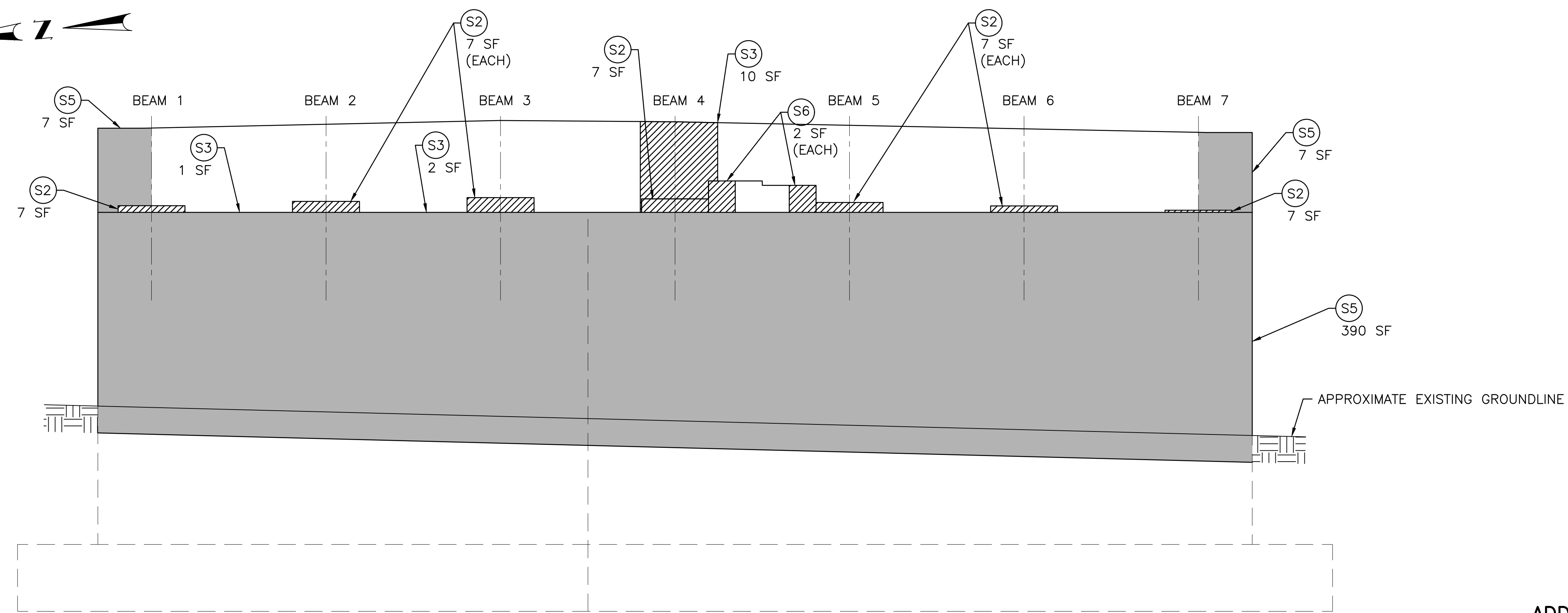
ABUTMENT A (WEST) ELEVATION

SCALE: 3/8"=1'-0"



NOTES:

- FOR GENERAL NOTES, SEE SHEETS 2 & 3.
- FOR REPAIR KEY, INDEX OF DRAWINGS & QUANTITIES, SEE SHEET 8.
- FOR CONCRETE REPAIR DETAILS, SEE SHEETS 58-63.
- FOR REFACING DETAILS AND PEDESTAL RECONSTRUCTION, SEE SHEET 71.
- REMOVAL, STOCKPILING, REPAIR AND RELAYING OF SLOPE PAVING IS INCIDENTAL TO ITEM CODE 824.9920, "TEMPORARY JACKING AND SHORING OF BEAMS & GIRDERS - BRIDGE NO. 063001".
- BOTTOM OF BEAM ELEVATIONS SHALL BE ACCURATELY SURVEYED PRIOR TO THE START OF BEAM JACKING. FINISHED BEARING PAD ELEVATIONS SHALL BE BASED ON THE PROPOSED BEARING HEIGHT SO THAT THE FINISHED CONDITION BOTTOM OF BEAM ELEVATIONS EXACTLY MATCH THE EXISTING CONDITIONS.
- THE COST TO REPLACE EXCAVATED MATERIAL SHALL BE PAID UNDER ITEM CODE 202.0700, "COMMON BORROW."



ABUTMENT B (EAST) ELEVATION

SCALE: 3/8"=1'-0"

ABUTMENT REPAIRS

LEGEND:

	CONCRETE REPAIR
	RE-FACING
	CRACK

BRIDGE 063001

REVISIONS			RHODE ISLAND	
NO.	DATE	BY	DEPARTMENT OF TRANSPORTATION	
1	11/8/19	DRC	BRIDGE GROUP 51A - RT. 37 C-2	
			CRANSTON	RHODE ISLAND
ABUTMENT REPAIRS				
			CHECKED BY _____	DATE _____
			SCALE AS NOTED	

ADDENDUM No. 5



630 PRESTON AVENUE
MERRIDEN, CT 06450

0013C_V4_010_ABUTMENT REPAIRS - BRIDGE 063001_R-1.dwg Plotted on Friday, November 8, 2019 2:15:01 PM

REPAIR KEY:

THE GENERAL SCOPE OF THE REHABILITATION AND REPAIRS FOR THE BRIDGE INCLUDES, BUT IS NOT LIMITED TO THE FOLLOWING:

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
1	RI	HP-063101(2), HP-063101(1), HP-106(003), 3RD-PRTY(208)	2019	15	75

BEARING REPAIRS:

- (B1) - JACK UP SUPERSTRUCTURE AND REPLACE BEARINGS
- (B2) - JACK UP SUPERSTRUCTURE AND RESET BEARINGS

DECK REPAIRS:

- (D1) - DECK UNDERSIDE REPAIR
- (D2) - DECK UNDERSIDE REPAIR OVER RAILROAD
- (D3) - EXPANSION JOINT HEADER REPAIR
- (D4) - REMOVE DETERIORATED CONCRETE AND PERFORM CONCRETE REPAIR TO BARRIER / CURB
- (D5) - REPLACE MISSING GUARDRAIL ATTACHMENT BRACKET AND TIGHTEN ATTACHMENT BOLTS
- (D6) - CLEAN AND FLUSH DRAIN TROUGHS AND SCUPPERS

JOINT REPAIRS:

- (J1) - INSTALL ASPHALTIC PLUG EXPANSION JOINT WITH BRIDGING PLATE AND PREFORMED JOINT SEAL
- (J2) - INSTALL ASPHALTIC PLUG EXPANSION JOINT WITHOUT BRIDGING PLATE
- (J3) - INSTALL WATERPROOFING AT APPROACH SLAB / BACKWALL JOINT
- (J4) - INSTALL PREFORMED JOINT SEAL AT MEDIAN JOINT
- (J5) - INSTALL PREFORMED JOINT SEAL AT PARAPETS

SUBSTRUCTURE REPAIRS:

- (S1) - CLEAN CONCRETE SURFACES AND COAT WITH AN EPOXY RESIN PROTECTIVE COATING
- (S2) - RECONSTRUCT EXISTING BEARING SEAT/PEDESTAL
- (S3) - REMOVE DETERIORATED CONCRETE AND PERFORM CONCRETE REPAIR
- (S4) - REMOVE SPALLED OR DETERIORATED CONCRETE AND RECONSTRUCT TOP OF BACKWALL
- (S5) - REMOVE EXISTING FACE OF SUBSTRUCTURE 6" MIN. UP TO LIMIT OF DETERIORATED CONCRETE AND RESURFACE
- (S6) - REBUILD EXISTING CONCRETE SHEAR BLOCK AS REQUIRED
- (S7) - STRUCTURAL CONCRETE CRACK REPAIR BY EPOXY INJECTION
- (S8) - REMOVE SPALLED OR DETERIORATED CONCRETE AND REBUILD TO FORM REINFORCED COLUMN ENCASEMENT
- (S9) - EXCAVATE TO TOP OF EXISTING FOOTING AND CONSTRUCT WEB WALL
- (S10) - SLOPE PAVING REPAIRS

SUPERSTRUCTURE REPAIRS:

- (F1) - CLEAN AND SANDBLAST EXISTING PAINT PROTECTIVE SYSTEM AND REPAINT
- (F2) - MISCELLANEOUS STRUCTURAL STEEL REPAIRS
- (F3) - REMOVE DETERIORATED CONCRETE AND PERFORM CONCRETE REPAIR
- (F4) - REPAIR BEAM END SPALLS
- (F5) - COVER PLATE WELD REPAIRS BY PEENING

ROADWAY REPAIRS:

- (R1) - REPLACE DAMAGED GUARDRAIL
- (R2) - REPLACE DAMAGED GRANITE CURB
- (R3) - REPLACE MISSING LIGHT STANDARD HANDHOLE COVER AND ANCHOR BOLT COVERS
- (R4) - REPAIR JUNCTION BOX COVER

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ABUTMENT REPAIRS	17
WINGWALL REPAIRS	18
STEEL REPAIR LOCATION PLAN	19
STEEL REPAIR DETAILS	20
DECK UNDERSIDE REPAIR LOCATION PLAN	21

QUANTITIES			
ITEM CODE	DESCRIPTION	UNIT (2)	TOTAL
800.9921	REPAIRS TO ROUTE 37 BRIDGE NO. 063101	LS	1
(1)	MODIFIED CLASS 9.5 HMA	TON	24
(1)	ASPHALT EMULSION TACK COAT	SY	14
(1)	HEAT APPLIED PRE-FABRICATED MEMBRANE	SY	64
(1)	HIGH PRESSURE WATER CLEANING OF BRIDGE STRUCTURES	EA	1
(1)	PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES	SY	506
(1)	ASPHALTIC EXPANSION JOINT SYSTEM	LF	130
(1)	PREFORMED JOINT SEAL	LF	98
(1)	PEENING COVER PLATE WELDS	EA	18
(1)	TEMPORARY JACKING AND SHORING OF BEAMS & GIRDERS - BRIDGE NO. 063101	EA	18
(1)	REPAINTING EXISTING STRUCTURAL STEEL - BRIDGE NO. 063101	LS	1
(1)	CONTAINMENT, COLLECTION, STORAGE AND DISPOSAL OF DEBRIS AND SPENT MATERIALS	LS	1
(1)	PERSONNEL PROTECTION DURING PAINTING AND CLEANING OPERATIONS	LS	1
(1)	ELASTOMERIC BEARINGS LAMINATED	EA	18
(1)	FULL DEPTH REMOVAL AND DISPOSAL OF BITUMINOUS PAVEMENT FROM CONCRETE BRIDGE DECKS	SY	87
(1)	CUTTING AND MATCHING ASPHALT	LF	672
202.0700	COMMON BORROW	CY	28
203.0100	STRUCTURAL EXCAVATION EARTH	CY	40
302.0100	GRAVEL BORROW SUBBASE COURSE	CY	13
401.3003	CLASS 9.5 HMA FOR PATCHING	TON	1
403.0300	ASPHALT EMULSION TACK COAT	SY	8
810.0210	GALVANIZED BAR REINFORCEMENT GRADE 60	LB	3000
810.0702	WELDED WIRE FABRIC (GALVANIZED)	SF	8
810.9901	EMBEDDED GALVANIC ANODES	EA	1164
813.0210	HEAT APPLIED PRE-FABRICATED MEMBRANE	SY	20
817.9901	REPAIRS TO STRUCTURAL CONCRETE MASONRY (PATCHING MORTAR)	CF	15
817.9902	REPAIRS TO STRUCTURAL CONCRETE MASONRY (FORM AND CAST IN PLACE)	CY	62
817.9903	REPAIRS TO STRUCTURAL CONCRETE MASONRY (TYPE 2S)	CF	30
817.9904	EXPANSION JOINT HEADER REPAIRS WITH POLYMER MORTAR	CF	14
818.9901	PORTLAND CEMENT CONCRETE DECK REPAIR (PARTIAL DECK REMOVAL)	SF	336
818.9902	PORTLAND CEMENT CONCRETE DECK REPAIR (FULL DECK REMOVAL)	SF	38
824.9911	STEEL BEAM/GIRDER REPAIRS - BRIDGE NO. 063101	LB	2415
836.0100	STRUCTURAL CONCRETE CRACK REPAIR BY EPOXY-RESIN BASE ADHESIVE INJECTION	LF	17

- (1) ITEMS IN "REPAIRS TO ROUTE 37 BRIDGE NO. 063101" LUMP SUM ITEM 800.9921 GIVEN FOR INFORMATION ONLY.
- (2) AREAS MARKED AS CONCRETE REPAIR OR RESURFACING / REFACING, OR RECONSTRUCTION THAT ARE INDICATED IN THE DRAWINGS AS SF (SQUARE FEET) ARE FOR INFORMATIONAL PURPOSES ONLY AND ARE NOT TO BE USED AS A BASIS FOR ESTIMATING. METHOD OF MEASUREMENT AND BASIS OF PAYMENT SHALL BE AS INDICATED IN THE SPECIFICATIONS.

BRIDGE 063101

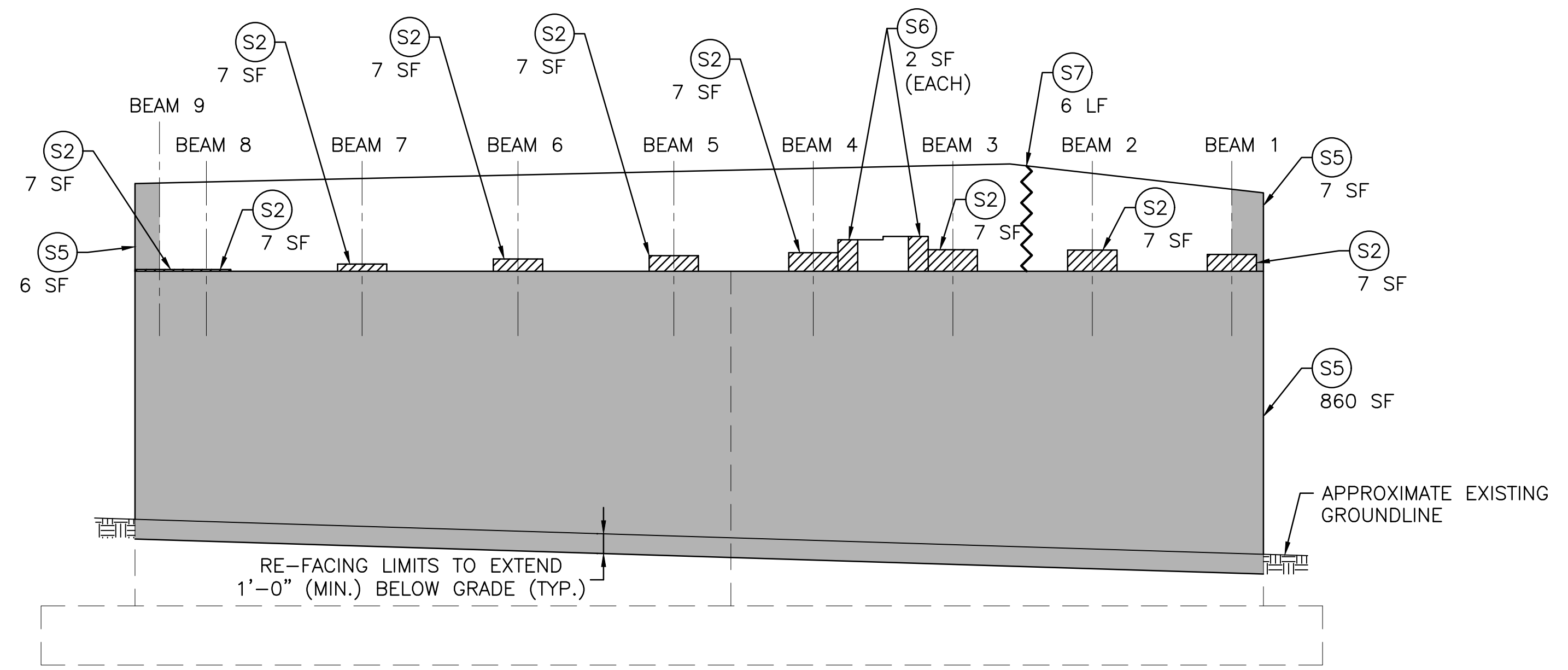
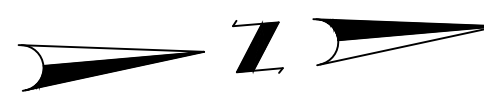
REVISIONS			RHODE ISLAND	
NO.	DATE	BY	DEPARTMENT OF TRANSPORTATION	
1	11/8/19	DRC	BRIDGE GROUP 51A - RT. 37 C-2	
			CRANSTON RHODE ISLAND	
			REPAIR KEY, INDEX OF SHEETS & QUANTITIES	
			CHECKED BY _____ DATE _____ SCALE AS NOTED	

ADDENDUM No. 5

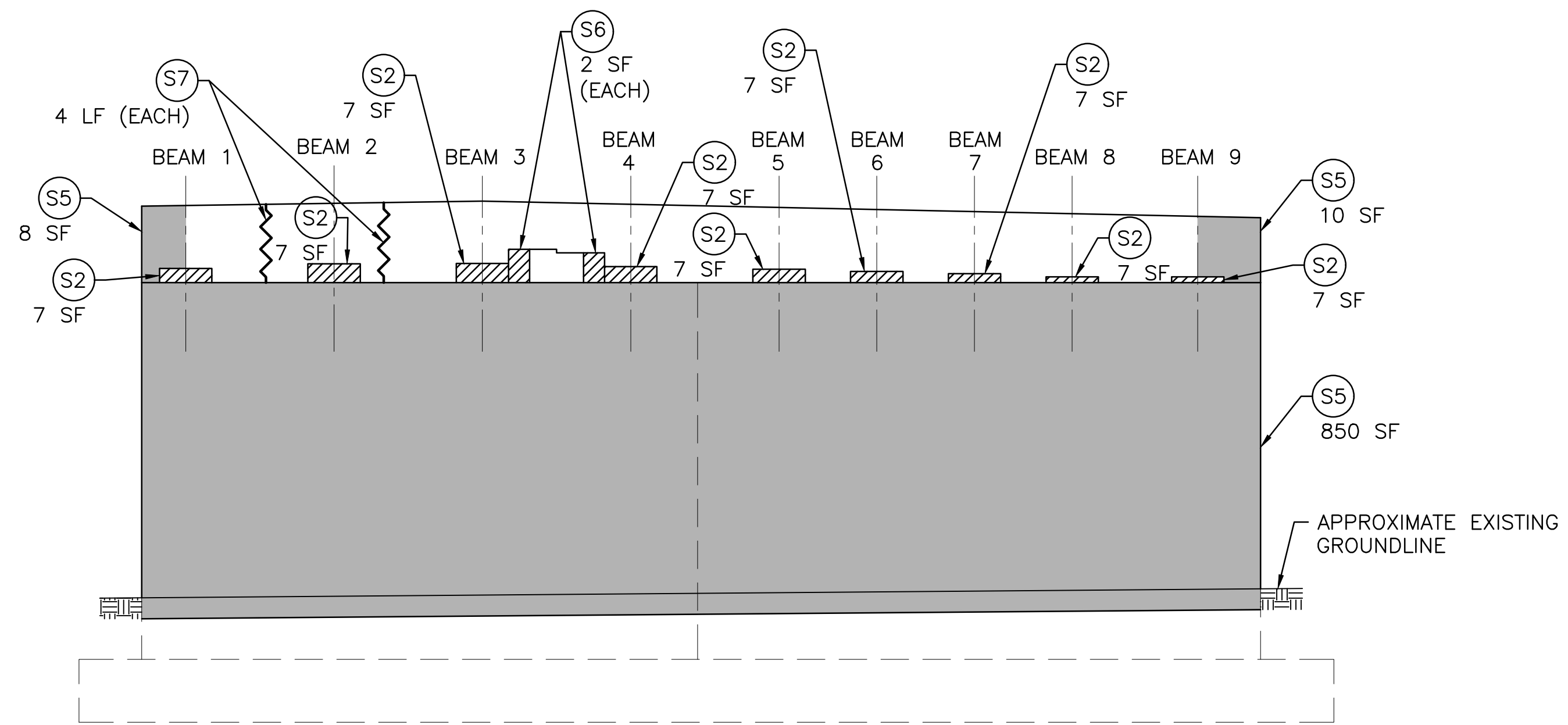


530 PRESTON AVENUE
MERRIDEN, CT 06450

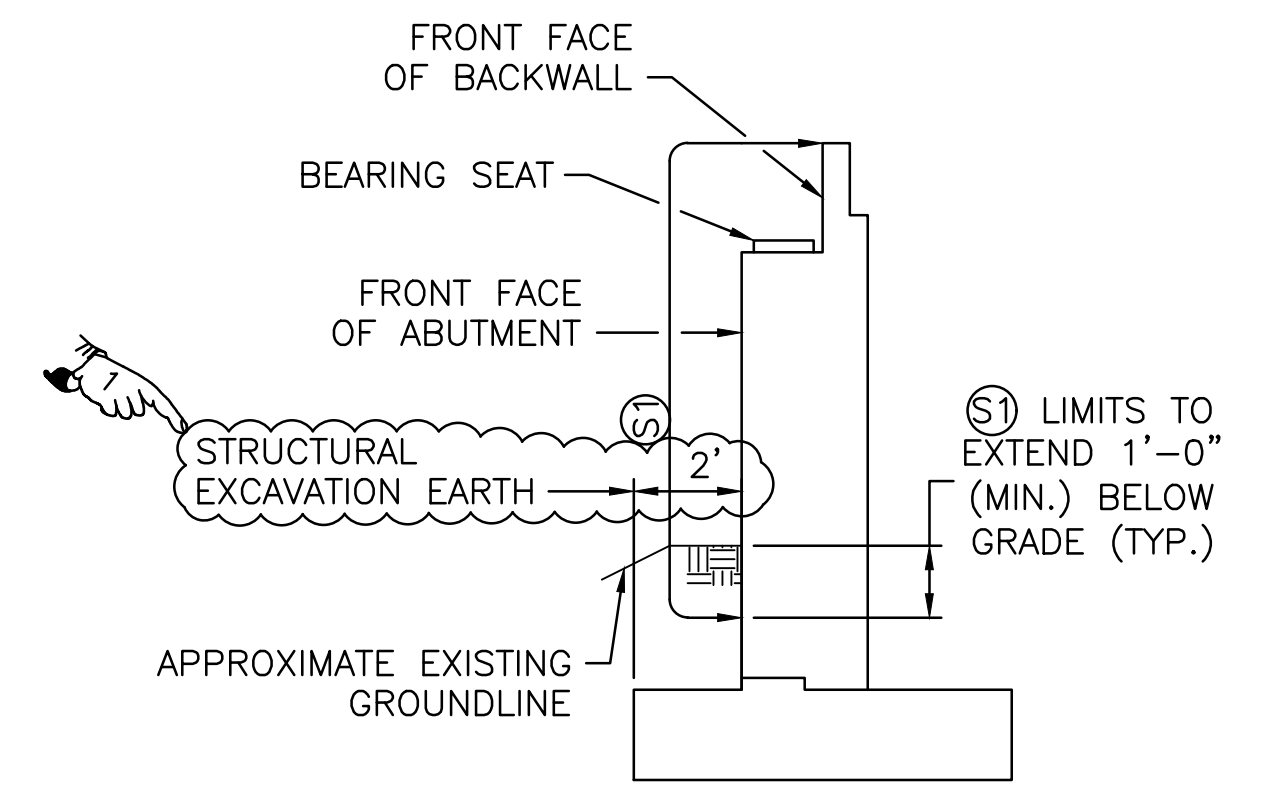
0013C_V4_015_REPAIR KEY, INDEX OF SHEETS & QUANTITIES- BRIDGE 063101_R-1.dwg Plotted on Friday, November 8, 2019 2:15:12 PM



ABUTMENT A (WEST) ELEVATION
SCALE: 3/8"=1'-0"



ABUTMENT B (EAST) ELEVATION
SCALE: 3/8"=1'-0"



LIMITS OF S1 AT ABUTMENTS
SCALE: N.T.S.

NOTES:

- FOR GENERAL NOTES, SEE SHEETS 2 & 3.
- FOR REPAIR KEY, INDEX OF DRAWINGS & QUANTITIES, SEE SHEET 15.
- FOR CONCRETE REPAIR DETAILS, SEE SHEETS 58-61.
- FOR REFACING DETAILS AND PEDESTAL RECONSTRUCTION, SEE SHEET 71.
- REMOVAL, STOCKPILING, REPAIR AND RELAYING OF SLOPE PAVING IS INCIDENTAL TO ITEM CODE 824.9921, "TEMPORARY JACKING AND SHORING OF BEAMS & GIRDERS - BRIDGE NO. 063101".
- BOTTOM OF BEAM ELEVATIONS SHALL BE ACCURATELY SURVEYED PRIOR TO THE START OF BEAM JACKING. FINISHED BEARING PAD ELEVATIONS SHALL BE BASED ON THE PROPOSED BEARING HEIGHT SO THAT THE FINISHED CONDITION BOTTOM OF BEAM ELEVATIONS EXACTLY MATCH THE EXISTING CONDITIONS.
- THE COST TO REPLACE EXCAVATED MATERIAL SHALL BE PAID UNDER ITEM CODE 202.0700, "COMMON BORROW."

LEGEND:

- CONCRETE REPAIR
- RE-FACING
- CRACK

BRIDGE 063101

REVISIONS		
NO.	DATE	BY
1	11/8/19	DRC

RHODE ISLAND
DEPARTMENT OF TRANSPORTATION
BRIDGE GROUP 51A - RT. 37 C-2
CRANSTON RHODE ISLAND

ABUTMENT REPAIRS

CHECKED BY _____ DATE _____ SCALE AS NOTED

ADDENDUM No. 5



630 PRESTON AVENUE
MERRIDEN, CT 06450

REPAIR CALLOUT KEY:

THE GENERAL SCOPE OF THE REHABILITATION AND REPAIRS FOR THE BRIDGE INCLUDES, BUT IS NOT LIMITED TO THE FOLLOWING:

BEARING REPAIRS:

- (B1) - JACK UP SUPERSTRUCTURE AND REPLACE BEARINGS
- (B2) - JACK UP SUPERSTRUCTURE AND RESET BEARINGS

DECK REPAIRS:

- (D1) - DECK UNDERSIDE REPAIR
- (D2) - DECK UNDERSIDE REPAIR OVER RAILROAD
- (D3) - EXPANSION JOINT HEADER REPAIR
- (D4) - REMOVE DETERIORATED CONCRETE AND PERFORM CONCRETE REPAIR TO BARRIER / CURB
- (D5) - REPLACE MISSING GUARDRAIL ATTACHMENT BRACKET AND TIGHTEN ATTACHMENT BOLTS
- (D6) - CLEAN AND FLUSH DRAIN TROUGHS AND SCUPPERS

JOINT REPAIRS:

- (J1) - INSTALL ASPHALTIC PLUG EXPANSION JOINT WITH BRIDGING PLATE AND PREFORMED JOINT SEAL
- (J2) - INSTALL ASPHALTIC PLUG EXPANSION JOINT WITHOUT BRIDGING PLATE
- (J3) - INSTALL WATERPROOFING AT APPROACH SLAB / BACKWALL JOINT
- (J4) - INSTALL PREFORMED JOINT SEAL AT MEDIAN JOINT
- (J5) - INSTALL PREFORMED JOINT SEAL AT PARAPETS

SUBSTRUCTURE REPAIRS:

- (S1) - CLEAN CONCRETE SURFACES AND COAT WITH AN EPOXY RESIN PROTECTIVE COATING
- (S2) - RECONSTRUCT EXISTING BEARING SEAT/PEDESTAL
- (S3) - REMOVE DETERIORATED CONCRETE AND PERFORM CONCRETE REPAIR
- (S4) - REMOVE SPALLED OR DETERIORATED CONCRETE AND RECONSTRUCT TOP OF BACKWALL
- (S5) - REMOVE EXISTING FACE OF SUBSTRUCTURE 6" MIN. UP TO LIMIT OF DETERIORATED CONCRETE AND RESURFACE
- (S6) - REBUILD EXISTING CONCRETE SHEAR BLOCK AS REQUIRED
- (S7) - STRUCTURAL CONCRETE CRACK REPAIR BY EPOXY INJECTION
- (S8) - REMOVE SPALLED OR DETERIORATED CONCRETE AND REBUILD TO FORM REINFORCED COLUMN ENCASEMENT
- (S9) - EXCAVATE TO TOP OF EXISTING FOOTING AND CONSTRUCT WEB WALL
- (S10) - SLOPE PAVING REPAIRS

SUPERSTRUCTURE REPAIRS:

- (F1) - CLEAN AND SANDBLAST EXISTING PAINT PROTECTIVE SYSTEM AND REPAINT
- (F2) - MISCELLANEOUS STRUCTURAL STEEL REPAIRS
- (F3) - REMOVE DETERIORATED CONCRETE AND PERFORM CONCRETE REPAIR
- (F4) - REPAIR BEAM END SPALLS
- (F5) - COVER PLATE WELD REPAIRS BY PEENING

ROADWAY REPAIRS:

- (R1) - REPLACE DAMAGED GUARDRAIL
- (R2) - REPLACE DAMAGED GRANITE CURB
- (R3) - REPLACE MISSING LIGHT STANDARD HANDHOLE COVER AND ANCHOR BOLT COVERS
- (R4) - REPAIR JUNCTION BOX COVER

INDEX OF SHEETS	
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STEEL REPAIR LOCATION PLAN	30
STEEL REPAIR DETAILS	31
DECK UNDERSIDE REPAIR LOCATION PLAN	32

SUMMARY OF ESTIMATED QUANTITIES			
ITEM NO.	DESCRIPTION	UNIT (2)	TOTAL
201.0405	REMOVE AND DISPOSE MASONRY	CY	9
202.0700	COMMON BORROW	CY	40
203.0100	STRUCTURAL EXCAVATION EARTH	CY	40
401.3003	CLASS 9.5 HMA FOR PATCHING	TON	1
403.0300	ASPHALT EMULSION TACK COAT	SY	12
601.0300	CLASS A PORTLAND CEMENT CONCRETE	CY	9
800.9922	REPAIRS TO ROUTE 37 BRIDGE NO. 063201	LS	1
(1)	CLEAN AND FLUSH DRAINS	LS	1
(1)	MISCELLANEOUS JUNCTION BOX AND HANDHOLE REPAIRS	LS	1
(1)	MISCELLANEOUS DRAINAGE REPAIRS	LS	1
(1)	PREFORMED JOINT SEAL	LF	50
(1)	PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES	SY	1000
(1)	ASPHALTIC EXPANSION JOINT SYSTEM	LF	150
(1)	ASPHALT EMULSION TACK COAT	SY	16
(1)	FULL DEPTH REMOVAL AND DISPOSAL OF BITUMINOUS PAVEMENT FROM CONCRETE BRIDGE DECKS	SY	75
(1)	PEENING COVER PLATE WELDS	EA	72
(1)	MODIFIED CLASS 9.5 HMA	TON	18
(1)	HEAT APPLIED PRE-FABRICATED MEMBRANE	SY	75
(1)	CUTTING AND MATCHING ASPHALT	LF	600
808.1641	PREFORMED POLYETHYLENE FOAM JOINT FILLER 1/4"	SF	180
810.0210	GALVANIZED BAR REINFORCEMENT GRADE 60	LB	200
810.0702	WELDED WIRE FABRIC (GALVANIZED)	SF	870
810.9901	EMBEDDED GALVANIC ANODES	EA	1100
813.0210	HEAT APPLIED PRE-FABRICATED MEMBRANE	SY	25
817.9901	REPAIRS TO STRUCTURAL CONCRETE MASONRY (PATCHING MORTAR)	CF	245
817.9903	REPAIRS TO STRUCTURAL CONCRETE MASONRY (TYPE 2S)	CF	500
818.9901	PORTLAND CEMENT CONCRETE DECK REPAIR (PARTIAL DECK REMOVAL)	SF	500
818.9902	PORTLAND CEMENT CONCRETE DECK REPAIR (FULL DECK REMOVAL)	SF	60
824.9912	STEEL BEAM/GIRDER REPAIRS - BRIDGE NO. 063201	LBS	4400
825.9901	LOCALIZED PAINT REMOVAL AND FIELD PAINTING OF EXISTING STEEL	SF	1100
921.9901	SLOPE PAVING REPAIR	SF	200

- (1) ITEMS IN "REPAIRS TO ROUTE 37 BRIDGE NO. 063201" LUMP SUM ITEM 800.9922 GIVEN FOR INFORMATION ONLY.
- (2) AREAS MARKED AS CONCRETE REPAIR OR RESURFACING / REFACING, OR RECONSTRUCTION THAT ARE INDICATED IN THE DRAWINGS AS SF (SQUARE FEET) ARE FOR INFORMATIONAL PURPOSES ONLY AND ARE NOT TO BE USED AS A BASIS FOR ESTIMATING. METHOD OF MEASUREMENT AND BASIS OF PAYMENT SHALL BE AS INDICATED IN THE SPECIFICATIONS.

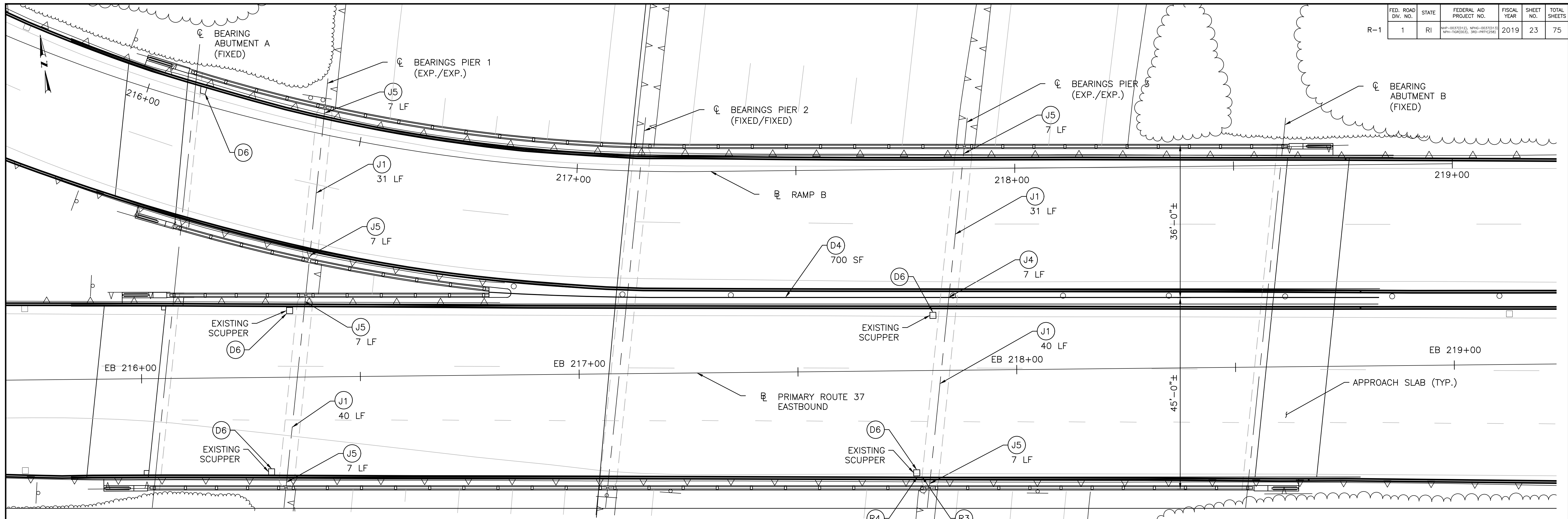
BRIDGE 063201

REVISIONS NO. DATE BY 1 11/8/19 DRC			RHODE ISLAND DEPARTMENT OF TRANSPORTATION BRIDGE GROUP 51A - RT. 37 C-2 CRANSTON RHODE ISLAND REPAIR KEY, INDEX OF SHEETS & QUANTITIES CHECKED BY _____ DATE _____ SCALE AS NOTED	
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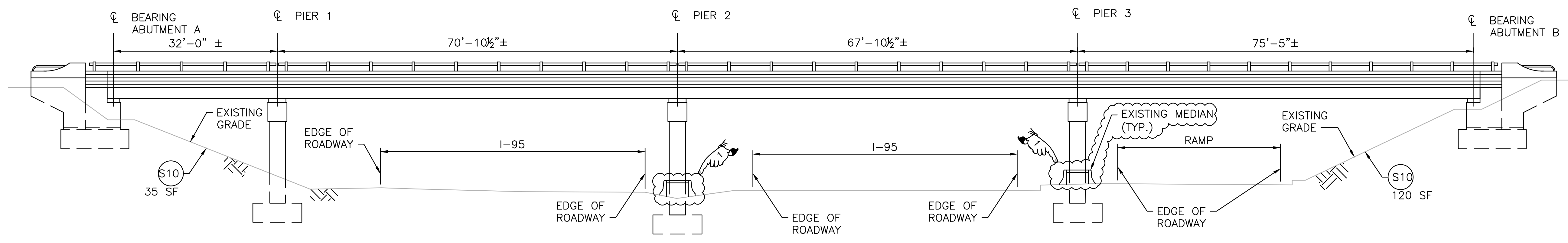
ADDENDUM No. 5



FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
1	RI	RI-063201-01, RI-063201-02, RI-063201-03, RI-063201-04, RI-063201-05, RI-063201-06, RI-063201-07, RI-063201-08, RI-063201-09, RI-063201-10, RI-063201-11, RI-063201-12, RI-063201-13, RI-063201-14, RI-063201-15, RI-063201-16, RI-063201-17, RI-063201-18, RI-063201-19, RI-063201-20, RI-063201-21, RI-063201-22, RI-063201-23, RI-063201-24, RI-063201-25, RI-063201-26, RI-063201-27, RI-063201-28, RI-063201-29, RI-063201-30, RI-063201-31, RI-063201-32, RI-063201-33, RI-063201-34, RI-063201-35, RI-063201-36, RI-063201-37, RI-063201-38, RI-063201-39, RI-063201-40, RI-063201-41, RI-063201-42, RI-063201-43, RI-063201-44, RI-063201-45, RI-063201-46, RI-063201-47, RI-063201-48, RI-063201-49, RI-063201-50, RI-063201-51, RI-063201-52, RI-063201-53, RI-063201-54, RI-063201-55, RI-063201-56, RI-063201-57, RI-063201-58, RI-063201-59, RI-063201-60, RI-063201-61, RI-063201-62, RI-063201-63, RI-063201-64, RI-063201-65, RI-063201-66, RI-063201-67, RI-063201-68, RI-063201-69, RI-063201-70, RI-063201-71, RI-063201-72, RI-063201-73, RI-063201-74, RI-063201-75	2019	23	75



GENERAL PLAN
SCALE: 3/32" = 1'-0"



ELEVATION
SCALE: 3/32" = 1'-0"

DESCRIPTION OF PROPOSED WORK ON BRIDGE NO. 063201

- CLEAN AND FLUSH DRAIN TROUGHS AND SCUPPERS. REPAIR EXISTING DRAINPIPES WHERE INDICATED.
- JOINT REPAIRS AS SHOWN ON THE PLANS.
- SLOPE PAVING REPAIRS AS SHOWN ON THE PLANS IN ACCORDANCE WITH SECTION 921 OF THE RIDOT STANDARD SPECIFICATIONS.
- CONCRETE PATCHING REPAIRS ON THE SUPERSTRUCTURE, ABUTMENTS, PIERS AND/OR AS DIRECTED BY THE ENGINEER. PATCHING MORTAR REPAIRS SHALL BE IN ACCORDANCE WITH SECTION 817 (PATCHING MORTAR) OF THE RIDOT STANDARD SPECIFICATIONS.
- STEEL BEAM REPAIRS AT LOCATIONS SHOWN ON THE PLANS AND AS DIRECTED BY THE ENGINEER.
- LOCALIZED CLEANING AND PAINTING AT STEEL REPAIR LOCATIONS.
- APPLICATION OF CONCRETE SURFACE TREATMENT PROTECTIVE COATING TO THE ENTIRE SURFACE OF THE PIERS, ABUTMENTS AND WINGWALLS AND/OR AS DIRECTED BY THE ENGINEER. SURFACE TREATMENT SHALL BE APPLIED AFTER COMPLETION OF CONCRETE PATCHING AND CRACK REPAIRS AND AS RECOMMENDED BY THE SURFACE TREATMENT MANUFACTURER.

NOTES:

- FOR GENERAL NOTES, SEE SHEET 2 & 3.
- FOR REPAIR CALLOUT KEY, DRAWING INDEX & SUMMARY OF ESTIMATED QUANTITIES, SEE SHEET 22.
- EXISTING BRIDGE INFORMATION TAKEN FROM THE SEPTEMBER 1964 PLAN SET "STATE OF RHODE ISLAND; DEPARTMENT OF PUBLIC WORKS, DIVISION OF ROADS AND BRIDGES; PLAN PROFILE AND SECTIONS OF PROPOSED STATE HIGHWAY; BRIDGE No. 632; TO BE KNOWN AS LINCOLN PARK BRIDGE-SOUTH; WARWICK, KENT COUNTY". QUANTITIES AND DETAILS FOR SUBSTRUCTURE REPAIRS TAKEN FROM THE 2018 "CONDITION EVALUATION REPORT - ROUTE 37 EB BRIDGE NO. 632 OVER I-95 LINCOLN PARK BRIDGE-SOUTH".
- THE ROADWAY BASELINES SHOWN ARE APPROXIMATE AND SHALL BE FOR GENERAL REFERENCE ONLY. THE CONTRACTOR SHALL FIELD VERIFY THE LOCATION OF ALL DETAILS REQUIRED FOR CONSTRUCTION ACTIVITIES PRIOR TO THE START OF WORK.
- FOR JOINT REPLACEMENT DETAILS SEE SHEETS 65-68.

BRIDGE 063201

RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

BRIDGE GROUP 51A - RT. 37 C-2

CRANSTON RHODE ISLAND

GENERAL PLAN & ELEVATION

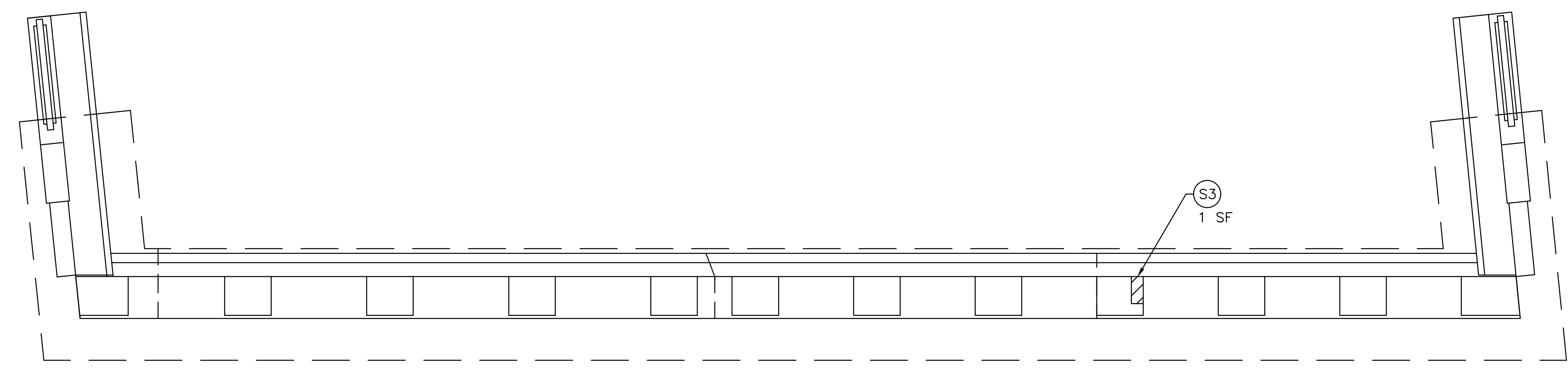
ADDENDUM No. 5



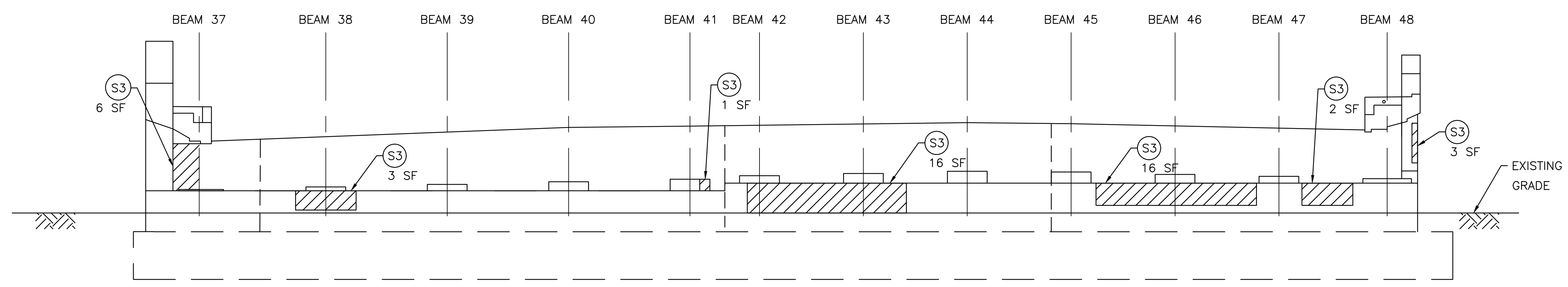
630 PRESTON AVENUE
MERRIDEN, CT 06450

REVISIONS		
NO.	DATE	BY
1	11/8/19	DRC

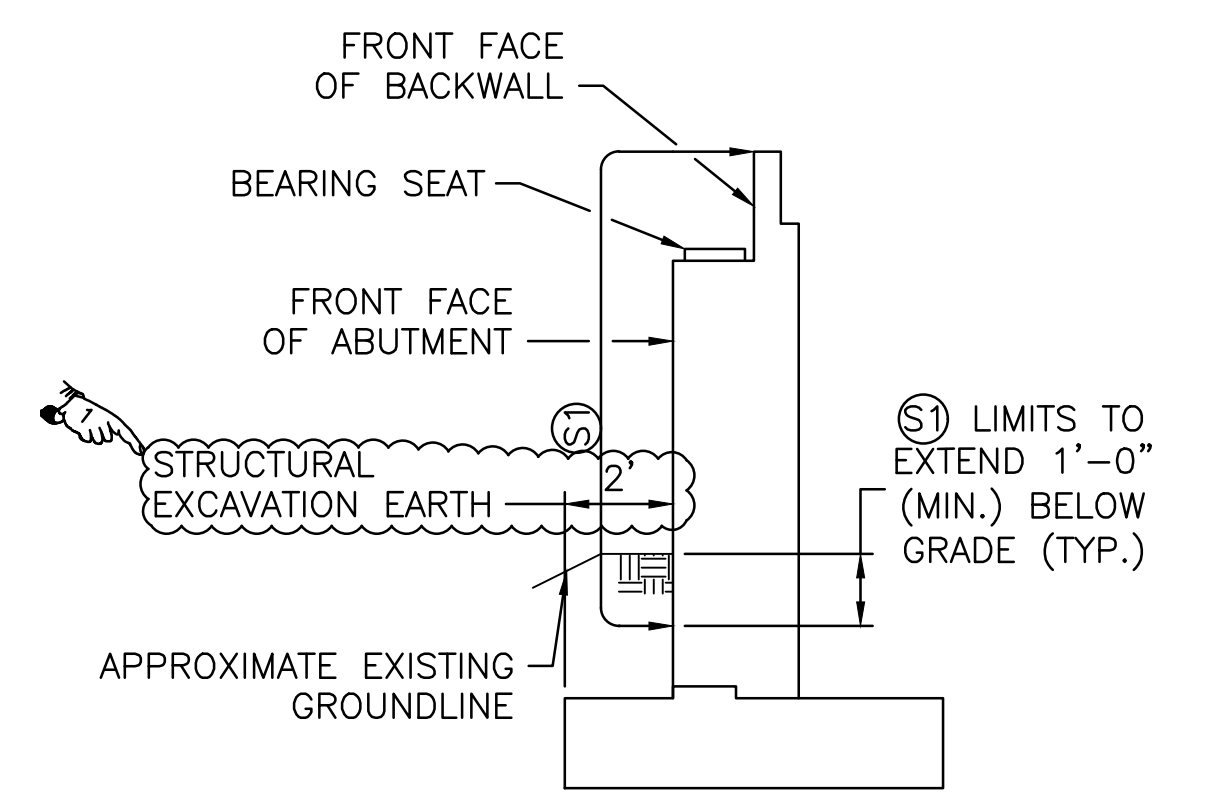
CHECKED BY _____ DATE _____ SCALE AS NOTED



EAST ABUTMENT (ABUTMENT B) PLAN
SCALE 1/4"=1'-0"



EAST ABUTMENT (ABUTMENT B) ELEVATION
SCALE 1/4"=1'-0"



LIMITS OF S1 AT ABUTMENTS
SCALE: N.T.S.

- NOTES:**
- FOR GENERAL NOTES, SEE SHEET 2 & 3.
 - FOR REPAIR CALLOUT KEY, DRAWING INDEX & SUMMARY OF ESTIMATED QUANTITIES, SEE SHEET 22.
 - S1 PROTECTIVE COATING APPLIED TO ALL EXPOSED SURFACES OF ABUTMENT & WINGWALLS.
 - FOR CONCRETE REPAIR DETAILS SEE SHEETS 58-61.
 - THE COST TO REPLACE EXCAVATED MATERIAL SHALL BE PAID UNDER ITEM CODE 202.0700, "COMMON BORROW."
 - PAY LIMIT OF STRUCTURAL EXCAVATION EARTH SHOWN FOR ABUTMENT. PAY LIMITS FOR PIER SIMILAR.

LEGEND:
 CONCRETE REPAIR

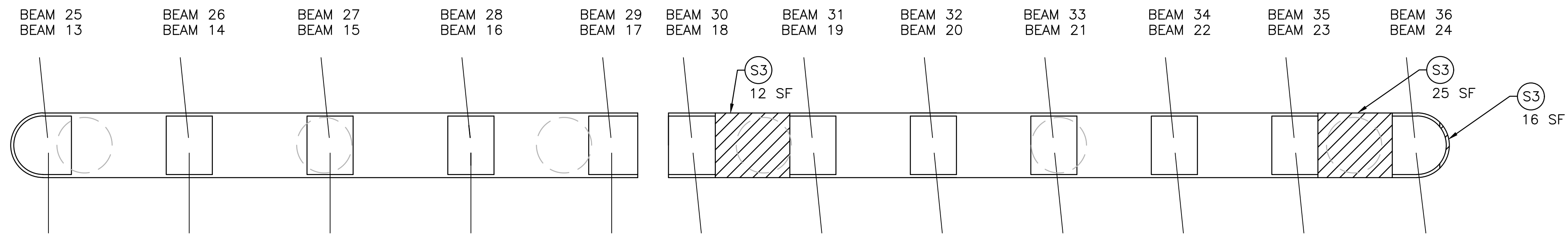
BRIDGE 063201

REVISIONS			RHODE ISLAND	
NO.	DATE	BY	DEPARTMENT OF TRANSPORTATION	
1	11/8/19	DRC	BRIDGE GROUP 51A - RT. 37 C-2	
			CRANSTON	RHODE ISLAND
ABUTMENT B REPAIRS				
			CHECKED BY _____	DATE _____ SCALE AS NOTED

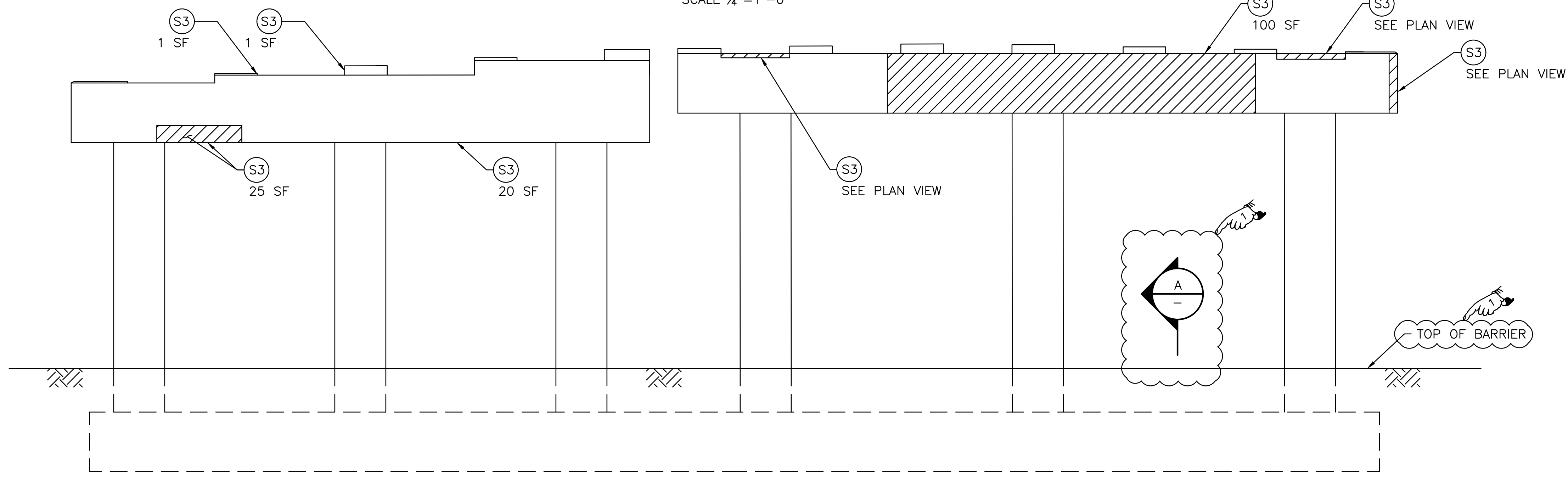
ADDENDUM No. 5



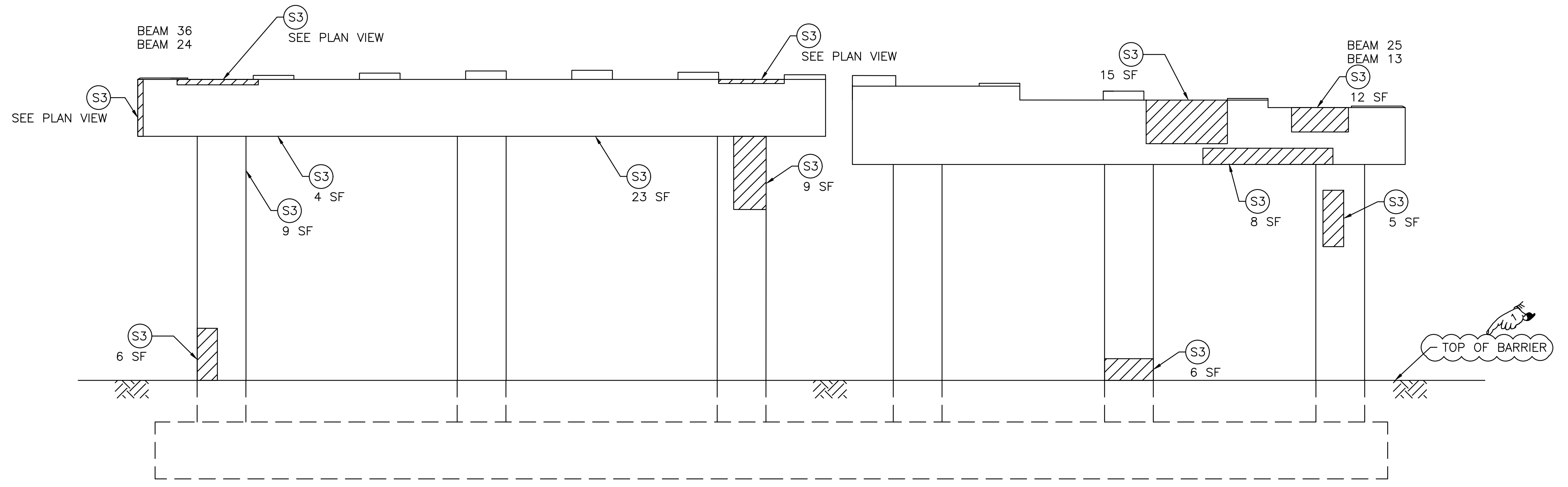
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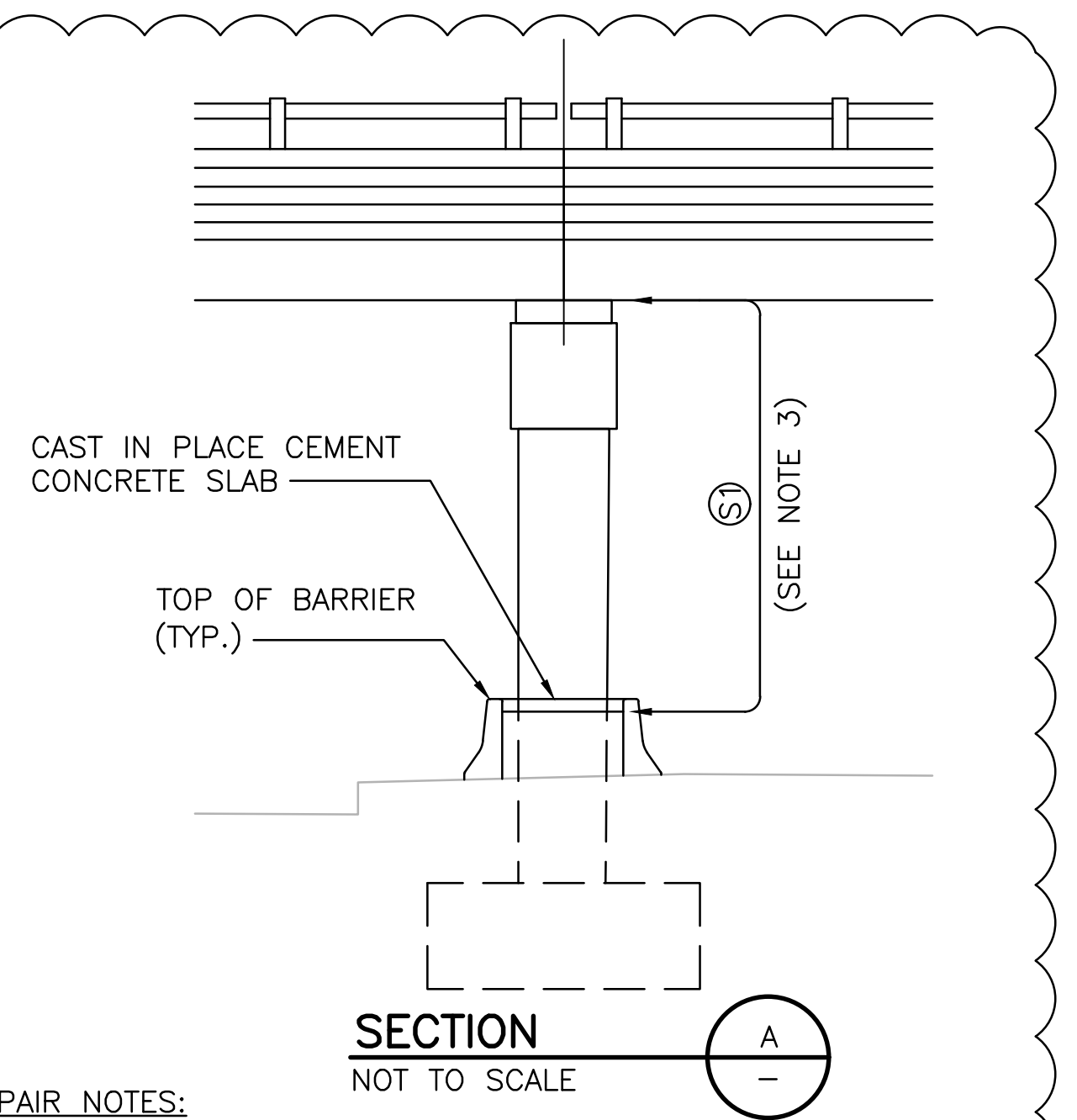
PIER 2 PLAN
SCALE 1/4" = 1'-0"



PIER 2 WEST ELEVATION
SCALE 1/4" = 1'-0"



PIER 2 EAST ELEVATION
SCALE 1/4" = 1'-0"



- PIER REPAIR NOTES:**
1. REMOVE CAST IN PLACE CEMENT CONCRETE SLAB. PAID UNDER ITEM CODE 201.0405, "REMOVE AND DISPOSE MASONRY".
 2. PERFORM REPAIRS AS NECESSARY.
 3. REPLACE CAST IN PLACE CEMENT CONCRETE SLAB. THE COST OF THE CONCRETE SHALL BE PAID UNDER ITEM CODE 601.0300, "CLASS A PORTLAND CEMENT CONCRETE". WELDED WIRE FABRIC SHALL BE PAID UNDER ITEM CODE 810.0702, "WELDED WIRE FABRIC, GALVANIZED".
 4. REFER TO R.I. STANDARD 40.2.1 FOR ADDITIONAL INFORMATION.

- NOTES:**
1. FOR GENERAL NOTES, SEE SHEET 2 & 3.
 2. FOR REPAIR CALLOUT KEY, DRAWING INDEX & SUMMARY OF ESTIMATED QUANTITIES, SEE SHEET 22.
 3. S1 PROTECTIVE COATING APPLIED TO LIMITS SHOWN.
 4. FOR CONCRETE REPAIR DETAILS SEE SHEETS 58-61.

LEGEND:
 CONCRETE REPAIR

BRIDGE 063201

RHODE ISLAND
DEPARTMENT OF TRANSPORTATION
BRIDGE GROUP 51A - RT. 37 C-2
CRANSTON RHODE ISLAND

PIER 2 REPAIRS

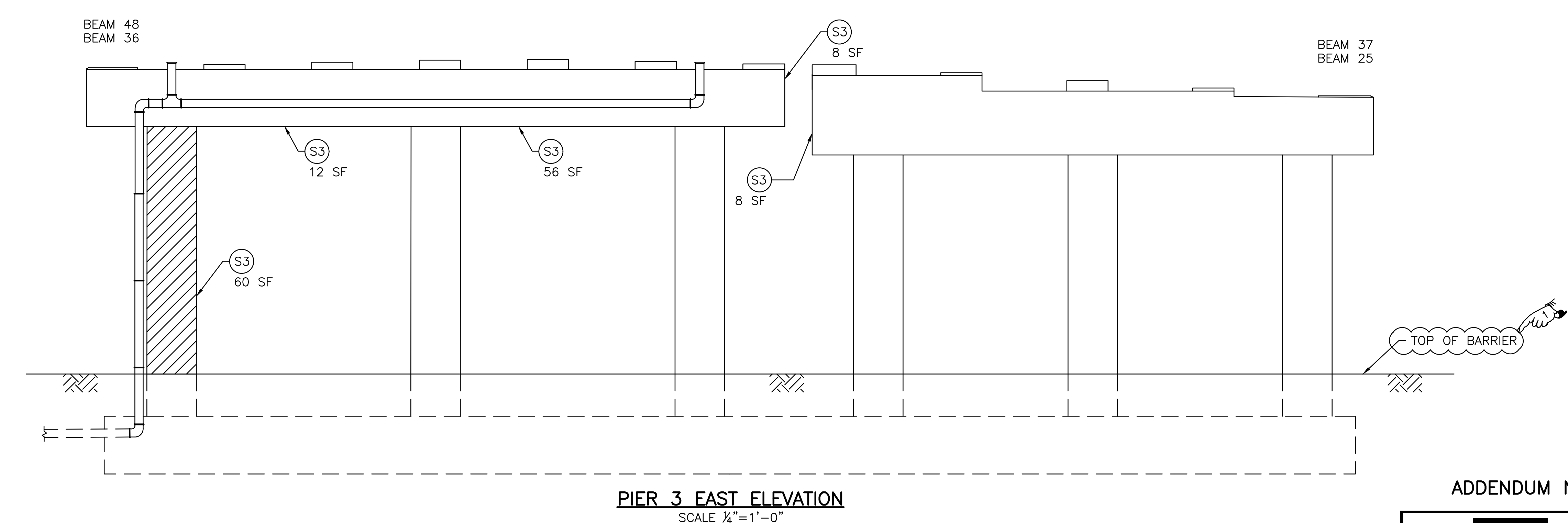
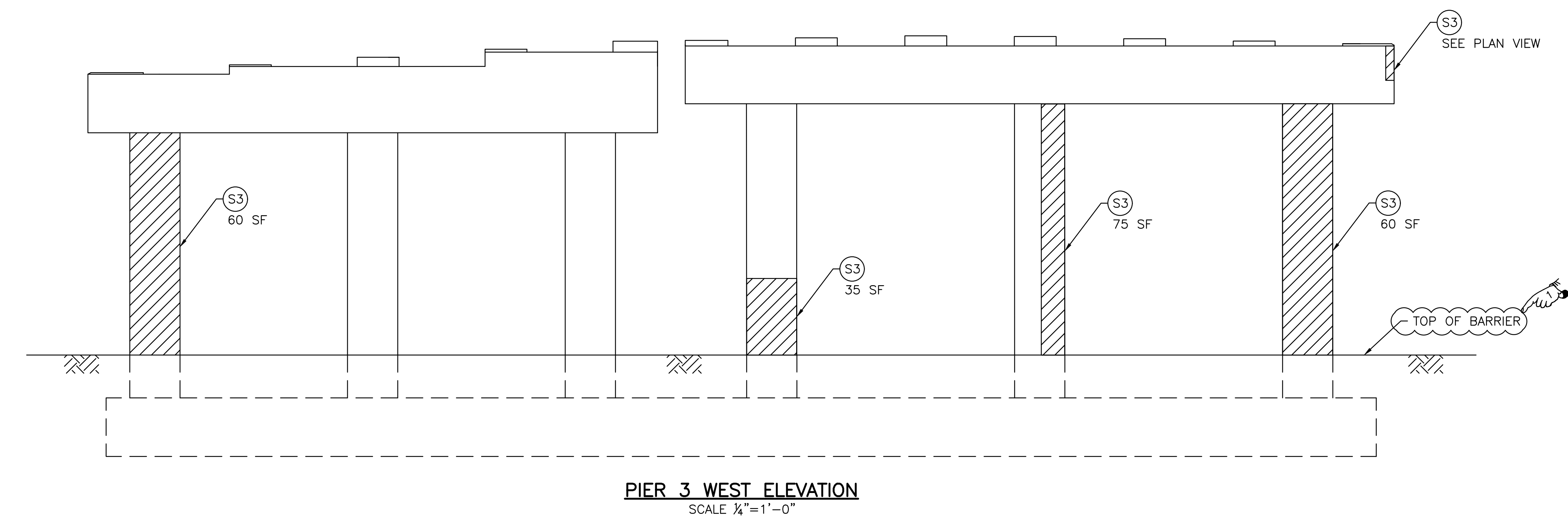
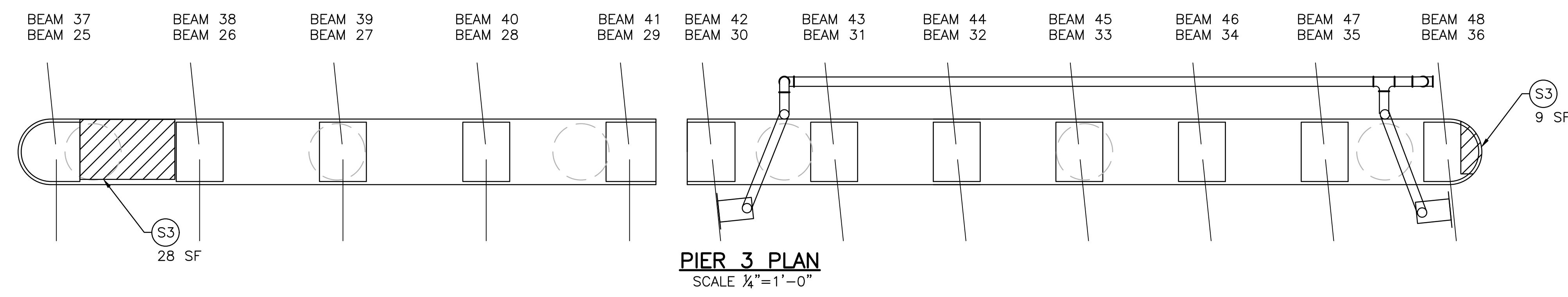
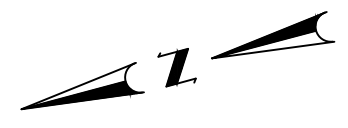
CHECKED BY _____ DATE _____ SCALE AS NOTED

ADDENDUM No. 5



530 PRESTON AVENUE
MERRIDEN, CT 06450

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
1	RI	RI-00370121, RI-00370131, RI-100(003), RI-PRY(208)	2019	29	75



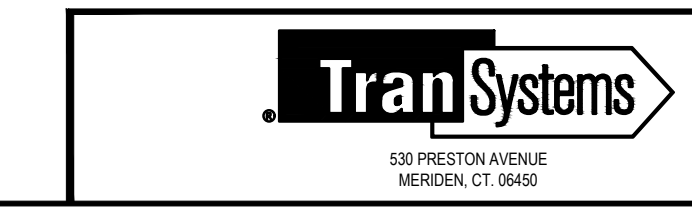
- NOTES:**
- FOR GENERAL NOTES, SEE SHEET 2 & 3.
 - FOR REPAIR CALLOUT KEY, DRAWING INDEX & SUMMARY OF ESTIMATED QUANTITIES, SEE SHEET 22.
 - S1 PROTECTIVE COATING APPLIED TO ALL EXPOSED SURFACES OF PIER.
 - FOR CONCRETE REPAIR DETAILS SEE SHEETS 58-61.

LEGEND:
 CONCRETE REPAIR

BRIDGE 063201

REVISIONS			RHODE ISLAND DEPARTMENT OF TRANSPORTATION	
NO.	DATE	BY	BRIDGE GROUP 51A - RT. 37 C-2	
1	11/8/19	DRC		
			CRANSTON RHODE ISLAND	
			PIER 3 REPAIRS	
			CHECKED BY _____ DATE _____ SCALE AS NOTED	

ADDENDUM No. 5



0013C_V4_029_PIER 3 REPAIRS - BRIDGE 063201_R-1.dwg Plotted on Friday, November 8, 2019 2:19:32 PM

REPAIR CALLOUT KEY:

THE GENERAL SCOPE OF THE REHABILITATION AND REPAIRS FOR THE BRIDGE INCLUDES, BUT IS NOT LIMITED TO THE FOLLOWING:

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
R-1	1	RI	2019	33	75

BEARING REPAIRS:

- (B1) - JACK UP SUPERSTRUCTURE AND REPLACE BEARINGS
- (B2) - JACK UP SUPERSTRUCTURE AND RESET BEARINGS

DECK REPAIRS:

- (D1) - DECK UNDERSIDE REPAIR
- (D2) - DECK UNDERSIDE REPAIR OVER RAILROAD
- (D3) - EXPANSION JOINT HEADER REPAIR
- (D4) - REMOVE DETERIORATED CONCRETE AND PERFORM CONCRETE REPAIR TO BARRIER / CURB
- (D5) - REPLACE MISSING GUARDRAIL ATTACHMENT BRACKET AND TIGHTEN ATTACHMENT BOLTS
- (D6) - CLEAN AND FLUSH DRAIN TROUGHS AND SCUPPERS

JOINT REPAIRS:

- (J1) - INSTALL ASPHALTIC PLUG EXPANSION JOINT WITH BRIDGING PLATE AND PREFORMED JOINT SEAL
- (J2) - INSTALL ASPHALTIC PLUG EXPANSION JOINT WITHOUT BRIDGING PLATE
- (J3) - INSTALL WATERPROOFING AT APPROACH SLAB / BACKWALL JOINT
- (J4) - INSTALL PREFORMED JOINT SEAL AT MEDIAN JOINT
- (J5) - INSTALL PREFORMED JOINT SEAL AT PARAPETS

SUBSTRUCTURE REPAIRS:

- (S1) - CLEAN CONCRETE SURFACES AND COAT WITH AN EPOXY RESIN PROTECTIVE COATING
- (S2) - RECONSTRUCT EXISTING BEARING SEAT/PEDESTAL
- (S3) - REMOVE DETERIORATED CONCRETE AND PERFORM CONCRETE REPAIR
- (S4) - REMOVE SPALLED OR DETERIORATED CONCRETE AND RECONSTRUCT TOP OF BACKWALL
- (S5) - REMOVE EXISTING FACE OF SUBSTRUCTURE 6" MIN. UP TO LIMIT OF DETERIORATED CONCRETE AND RESURFACE
- (S6) - REBUILD EXISTING CONCRETE SHEAR BLOCK AS REQUIRED
- (S7) - STRUCTURAL CONCRETE CRACK REPAIR BY EPOXY INJECTION
- (S8) - REMOVE SPALLED OR DETERIORATED CONCRETE AND REBUILD TO FORM REINFORCED COLUMN ENCASEMENT
- (S9) - EXCAVATE TO TOP OF EXISTING FOOTING AND CONSTRUCT WEB WALL
- (S10) - SLOPE PAVING REPAIRS

SUPERSTRUCTURE REPAIRS:

- (F1) - CLEAN AND SANDBLAST EXISTING PAINT PROTECTIVE SYSTEM AND REPAINT
- (F2) - MISCELLANEOUS STRUCTURAL STEEL REPAIRS
- (F3) - REMOVE DETERIORATED CONCRETE AND PERFORM CONCRETE REPAIR
- (F4) - REPAIR BEAM END SPALLS
- (F5) - COVER PLATE WELD REPAIRS BY PEENING

ROADWAY REPAIRS:

- (R1) - REPLACE DAMAGED GUARDRAIL
- (R2) - REPLACE DAMAGED GRANITE CURB
- (R3) - REPLACE MISSING LIGHT STANDARD HANDHOLE COVER AND ANCHOR BOLT COVERS
- (R4) - REPAIR JUNCTION BOX COVER

DESCRIPTION	SHEET NO.
REPAIR KEY, INDEX OF SHEETS & QUANTITIES	33
GENERAL PLAN & ELEVATION	34
ABUTMENT REPAIRS	35
PIER 1 & 2 REPAIRS	36
PIER 3 REPAIRS	37
STEEL REPAIR LOCATION PLAN	38
STEEL REPAIR DETAILS	39
DECK UNDERSIDE REPAIR LOCATION PLAN	40

ITEM NO.	DESCRIPTION	UNIT (2)	TOTAL
201.0405	REMOVE AND DISPOSE MASONRY	CY	9
202.0700	COMMON BORROW	CY	40
203.0100	STRUCTURAL EXCAVATION EARTH	CY	50
302.0100	GRAVEL BORROW SUBBASE COURSE	CY	10
401.3003	CLASS 9.5 HMA FOR PATCHING	TON	1
403.0300	ASPHALTIC EMULSION TACK COAT	SY	10
601.0300	CLASS A PORTLAND CEMENT CONCRETE	CY	9
800.9923	REPAIRS TO ROUTE 37 BRIDGE NO. 063301	LS	1
(1)	CLEAN AND FLUSH DRAINS	LS	1
(1)	PREFORMED JOINT SEAL	LF	70
(1)	PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES	SY	940
(1)	ASPHALTIC EXPANSION JOINT SYSTEM	LF	200
(1)	ASPHALT EMULSION TACK COAT	SY	22
(1)	FULL DEPTH REMOVAL AND DISPOSAL OF BITUMINOUS PAVEMENT FROM CONCRETE BRIDGE DECKS	SY	110
(1)	PEENING COVER PLATE WELDS	EA	42
(1)	MODIFIED CLASS 9.5 HMA	TON	22
(1)	HEAT APPLIED PRE-FABRICATED MEMBRANE	SY	100
(1)	CUTTING AND MATCHING ASPHALT	LF	800
808.1641	PREFORMED POLYETHYLENE FOAM JOINT FILLER 1/4"	SF	180
810.0210	GALVANIZED BAR REINFORCEMENT GRADE 60	LB	60
810.0702	WELDED WIRE FABRIC (GALVANIZED)	SF	790
810.9901	EMBEDDED GALVANIC ANODES	EA	450
813.0210	HEAT APPLIED PRE-FABRICATED MEMBRANE	SY	25
817.9901	REPAIRS TO STRUCTURAL CONCRETE MASONRY (PATCHING MORTAR)	CF	40
817.9903	REPAIRS TO STRUCTURAL CONCRETE MASONRY (TYPE 2S)	CF	85
818.9901	PORTLAND CEMENT CONCRETE DECK REPAIR (PARTIAL DECK REMOVAL)	SF	450
818.9902	PORTLAND CEMENT CONCRETE DECK REPAIR (FULL DECK REMOVAL)	SF	50
824.9913	STEEL BEAM/GIRDER REPAIRS - BRIDGE NO. 063301	LBS	3500
825.9901	LOCALIZED PAINT REMOVAL AND FIELD PAINTING OF EXISTING STEEL	SF	900
836.0100	STRUCTURAL CONCRETE CRACK REPAIR BY EPOXY-RESIN BASE ADHESIVE INJECTION	LF	100
921.9901	SLOPE PAVING REPAIR	SF	130

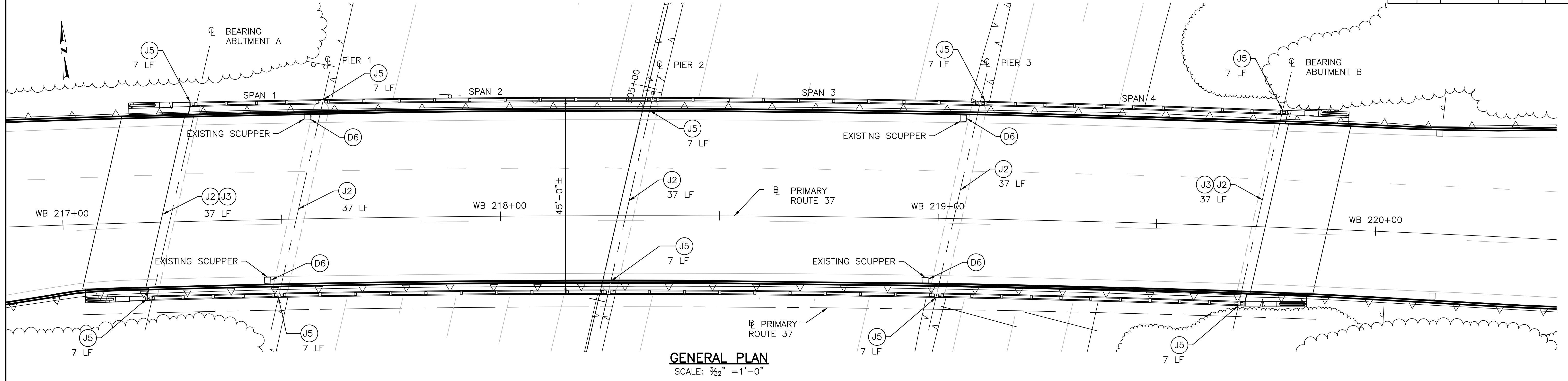
- (1) ITEMS IN "REPAIRS TO ROUTE 37 BRIDGE NO. 063301" LUMP SUM ITEM 800.9923 GIVEN FOR INFORMATION ONLY.
- (2) AREAS MARKED AS CONCRETE REPAIR OR RESURFACING / REFACING, OR RECONSTRUCTION THAT ARE INDICATED IN THE DRAWINGS AS SF (SQUARE FEET) ARE FOR INFORMATIONAL PURPOSES ONLY AND ARE NOT TO BE USED AS A BASIS FOR ESTIMATING. METHOD OF MEASUREMENT AND BASIS OF PAYMENT SHALL BE AS INDICATED IN THE SPECIFICATIONS.

BRIDGE 063301

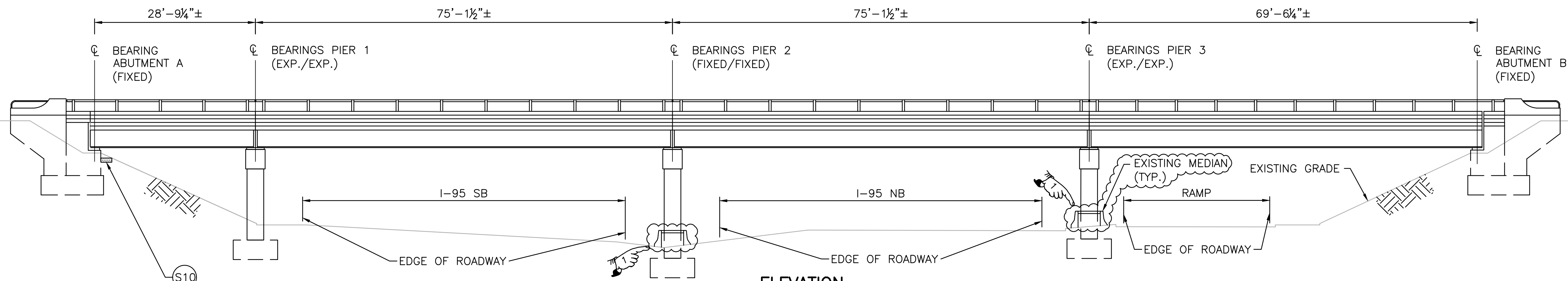
REVISIONS			RHODE ISLAND	
NO.	DATE	BY	DEPARTMENT OF TRANSPORTATION	
1	11/8/19	DRC	BRIDGE GROUP 51A - RT. 37 C-2	
			CRANSTON	RHODE ISLAND
			REPAIR KEY, INDEX OF SHEETS & QUANTITIES	
			CHECKED BY _____	DATE _____
			SCALE AS NOTED	

ADDENDUM No. 5





GENERAL PLAN
SCALE: 3/32" = 1'-0"



ELEVATION
SCALE: 3/32" = 1'-0"

- DESCRIPTION OF PROPOSED WORK ON BRIDGE NO. 063301**
1. CLEAN AND FLUSH DRAIN TROUGHS AND SCUPPERS.
 2. JOINT REPAIRS AS SHOWN ON THE PLANS.
 3. SLOPE PAVING REPAIRS AS SHOWN ON THE PLANS IN ACCORDANCE WITH SECTION 921 OF THE RIDOT STANDARD SPECIFICATIONS.
 4. CONCRETE PATCHING REPAIRS ON THE SUPERSTRUCTURE, ABUTMENTS, PIERS AND/OR AS DIRECTED BY THE ENGINEER. PATCHING MORTAR REPAIRS SHALL BE IN ACCORDANCE WITH SECTION 817 (PATCHING MORTAR) OF THE RIDOT STANDARD SPECIFICATIONS.
 5. CONCRETE CRACK REPAIRS ON THE SUPERSTRUCTURE, ABUTMENTS, PIERS AND/OR AS DIRECTED BY THE ENGINEER.
 6. STEEL BEAM REPAIRS AT LOCATIONS SHOWN ON THE PLANS AND AS DIRECTED BY THE ENGINEER.
 7. LOCALIZED CLEANING AND PAINTING AT STEEL REPAIR LOCATIONS.
 8. APPLICATION OF CONCRETE SURFACE TREATMENT PROTECTIVE COATING TO THE ENTIRE SURFACE OF THE PIERS, ABUTMENTS AND WINGWALLS AND/OR AS DIRECTED BY THE ENGINEER. SURFACE TREATMENT SHALL BE APPLIED AFTER COMPLETION OF CONCRETE PATCHING AND CRACK REPAIRS AND AS RECOMMENDED BY THE SURFACE TREATMENT MANUFACTURER.

- NOTES:**
1. FOR GENERAL NOTES, SEE SHEETS 2 & 3.
 2. FOR REPAIR CALLOUT KEY, DRAWING INDEX & SUMMARY OF ESTIMATED QUANTITIES, SEE SHEET 33.
 3. EXISTING BRIDGE INFORMATION IS TAKEN FROM THE SEPTEMBER 1964 PLAN SET "STATE OF RHODE ISLAND; DEPARTMENT OF PUBLIC WORKS; DIVISION OF ROADS AND BRIDGES; PLAN, PROFILE AND SECTIONS OF PROPOSED STATE HIGHWAY; BRIDGE NO. 633; TO BE KNOWN AS LINCOLN PARK BRIDGE-NORTH; WARWICK, KENT COUNTY". QUANTITIES AND DETAILS FOR SUBSTRUCTURE REPAIRS TAKEN FROM THE 2018 "CONDITION EVALUATION REPORT - ROUTE 37 WB BRIDGE NO. 633 OVER I-95 LINCOLN PARK BRIDGE-NORTH"
 4. THE ROADWAY BASELINES SHOWN ARE APPROXIMATE AND SHALL BE FOR GENERAL REFERENCE ONLY. THE CONTRACTOR SHALL FIELD VERIFY THE LOCATION OF ALL DETAILS REQUIRED FOR CONSTRUCTION ACTIVITIES PRIOR TO THE START OF WORK.
 5. FOR JOINT REPLACEMENT DETAILS SEE SHEETS 65-68.

LEGEND:
 SLOPE PAVING REPAIR

REVISIONS		
NO.	DATE	BY
1	11/8/19	DRC

BRIDGE 063301

RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

BRIDGE GROUP 51A - RT. 37 C-2

CRANSTON RHODE ISLAND

GENERAL PLAN & ELEVATION

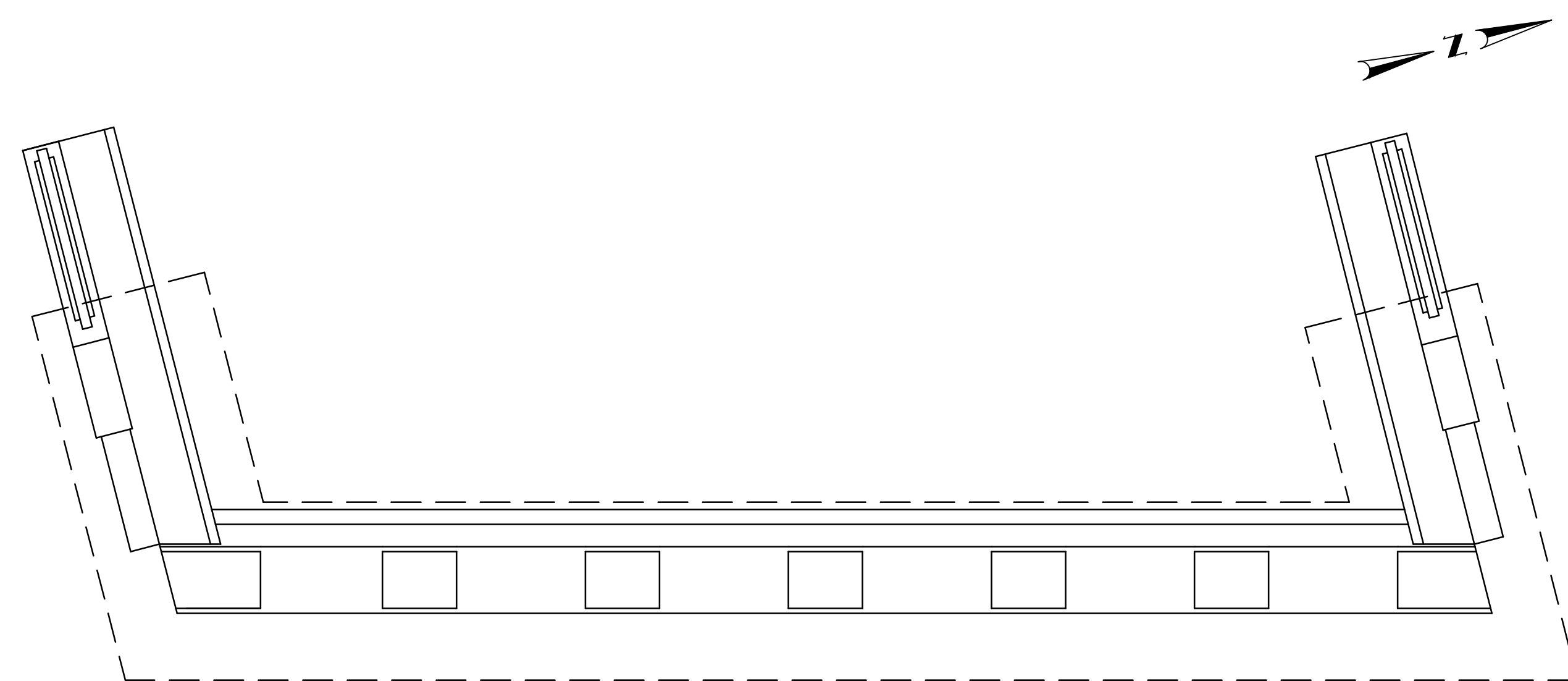
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ADDENDUM No. 5



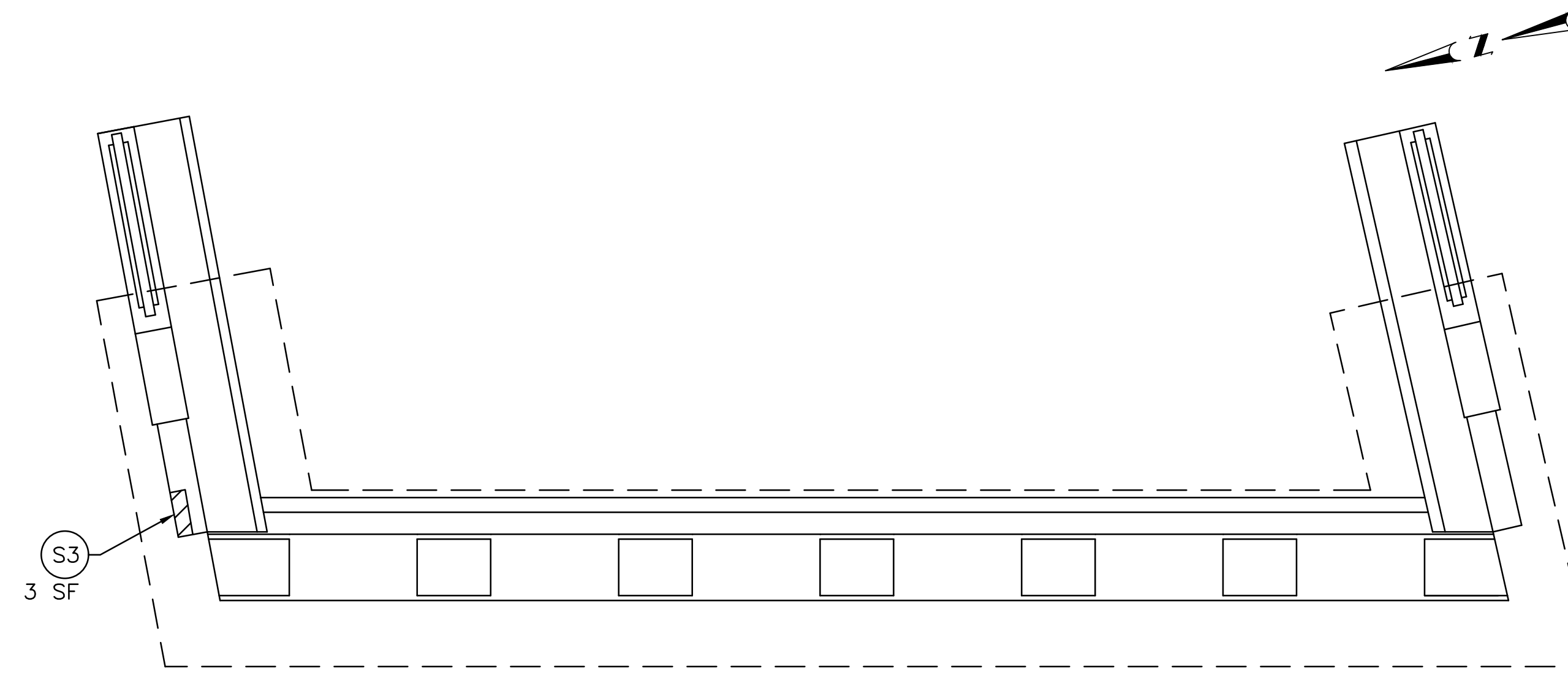
530 PRESTON AVENUE
MERRIDEN, CT 06459

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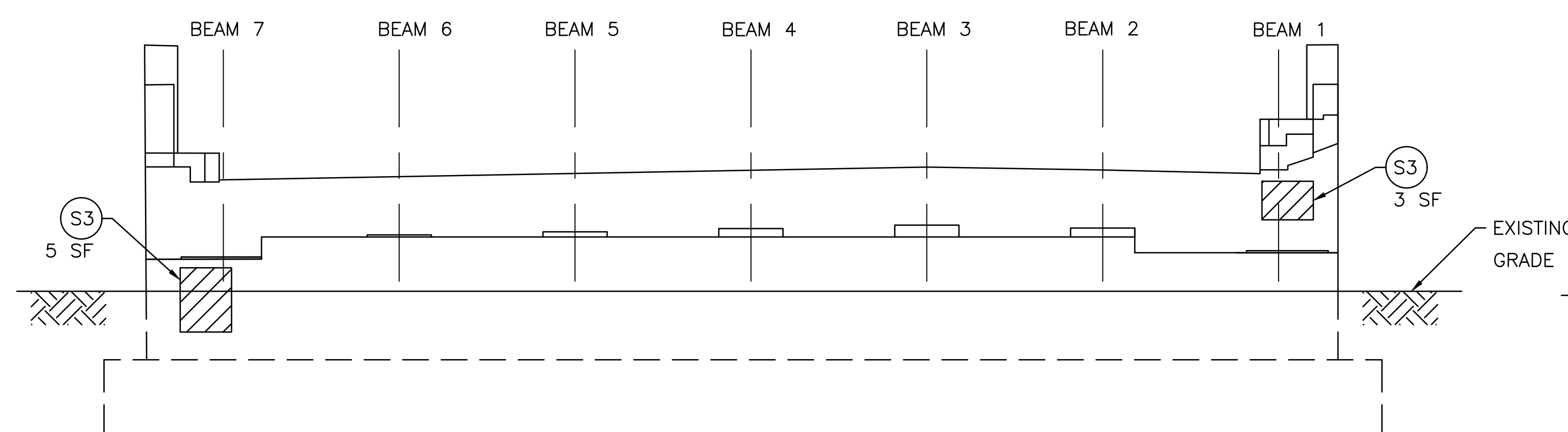
WEST ABUTMENT (ABUTMENT A) PLAN

SCALE: 1/4"=1'-0"



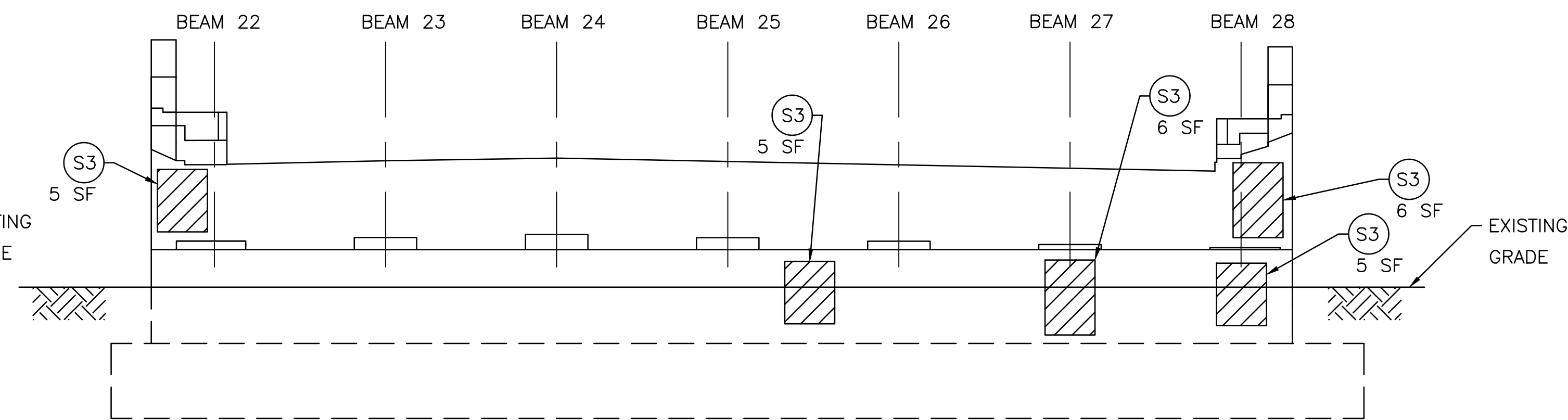
EAST ABUTMENT (ABUTMENT B) PLAN

SCALE: 1/4"=1'-0"



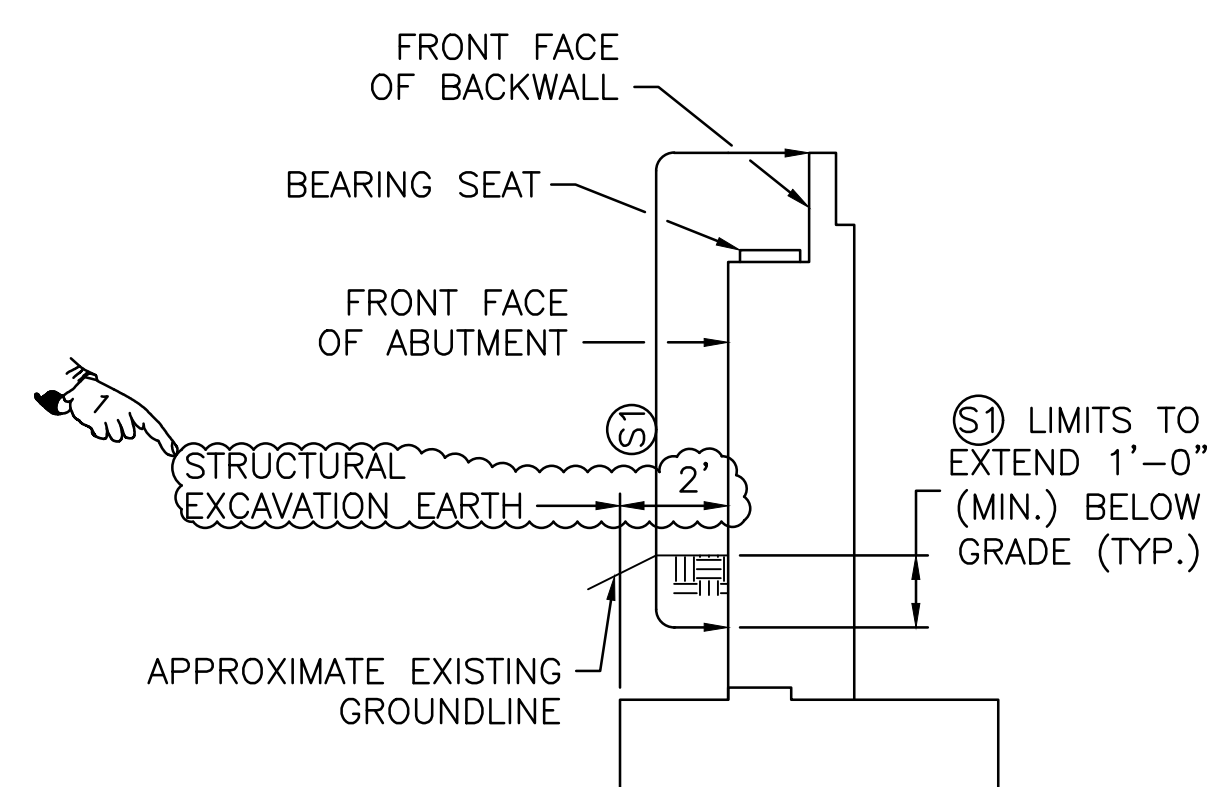
WEST ABUTMENT (ABUTMENT A) ELEVATION

SCALE: 1/4"=1'-0"



EAST ABUTMENT (ABUTMENT B) ELEVATION

SCALE: 1/4"=1'-0"



LIMITS OF S1 AT ABUTMENTS

SCALE: N.T.S.

LEGEND:

CONCRETE REPAIR

NOTES:

- FOR GENERAL NOTES, SEE SHEETS 2 & 3.
- FOR REPAIR CALLOUT KEY, DRAWING INDEX & SUMMARY OF ESTIMATED QUANTITIES, SEE SHEET 33.
- S1 PROTECTIVE COATING TO BE APPLIED TO ALL EXPOSED SURFACES OF EACH ABUTMENT AND ALL WINGWALLS.
- FOR CONCRETE REPAIR DETAILS SEE SHEETS 58-61.
- SLOPE PAVING REPAIR TO BE PERFORMED AT WEST ABUTMENT. IN 2'-0" WIDE X 50'-0" LONG LEVEL PORTION OF SLOPE PAVING ADJACENT TO ABUTMENT, EXISTING HEAVED AND/OR SETTLED SLOPE PAVING STONES TO BE REMOVED, RESET LEVEL AND MORTARED IN PLACE. GRAVEL BORROW SUBBASE TO BE SUPPLIED AND COMPACTED AS NECESSARY TO RESTORE SLOPE PAVING TO ORIGINAL ELEVATION.
- THE COST TO REPLACE EXCAVATED MATERIAL SHALL BE PAID UNDER ITEM CODE 202.0700, "COMMON BORROW."
- PAY LIMIT OF STRUCTURE EXCAVATION EARTH SHOWN FOR ABUTMENT. PAY LIMITS FOR PIER SIMILAR.

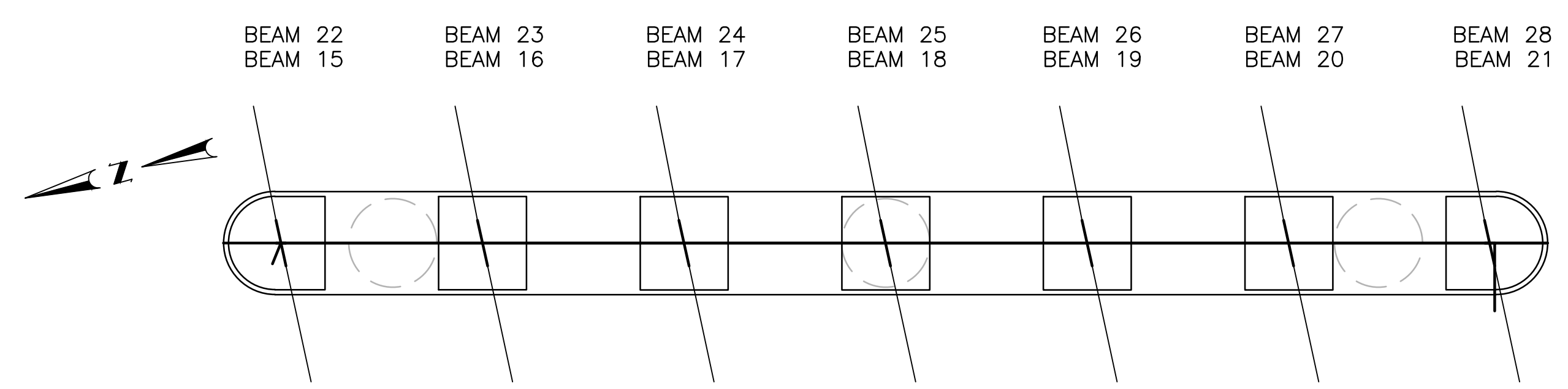
ADDENDUM No. 5

BRIDGE 063301

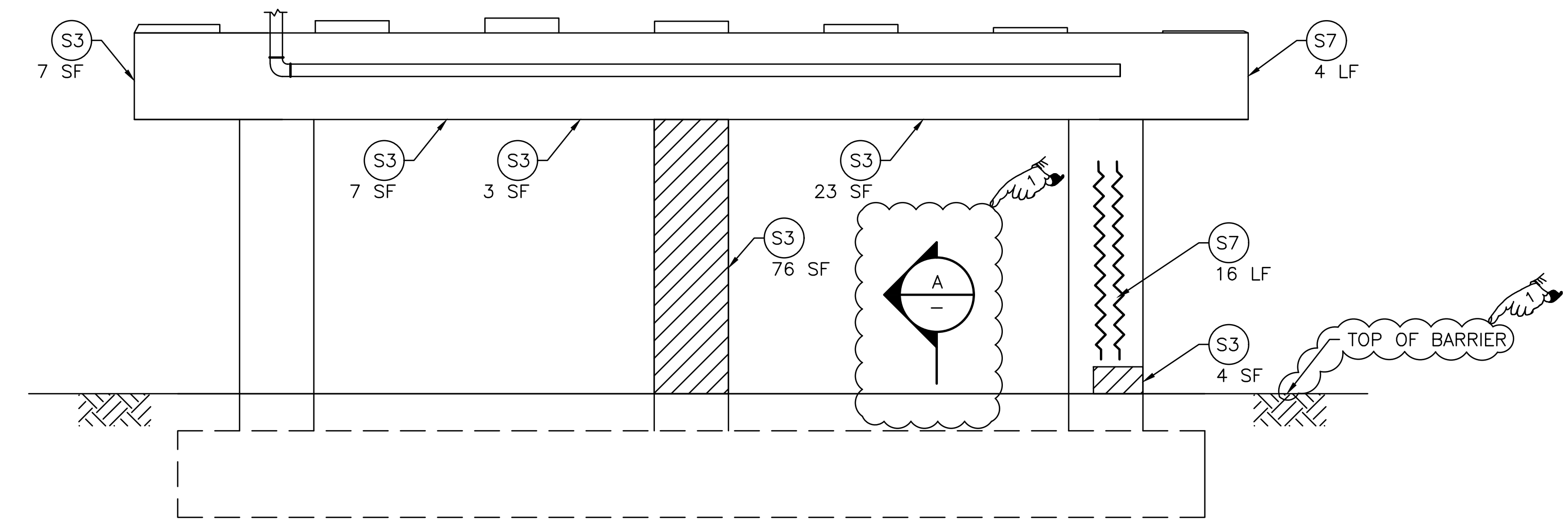
REVISIONS		
NO.	DATE	BY
1	11/8/19	DRC
RHODE ISLAND DEPARTMENT OF TRANSPORTATION		
BRIDGE GROUP 51A - RT. 37 C-2		
CRANSTON		RHODE ISLAND
ABUTMENT REPAIRS		
CHECKED BY _____ DATE _____ SCALE AS NOTED		



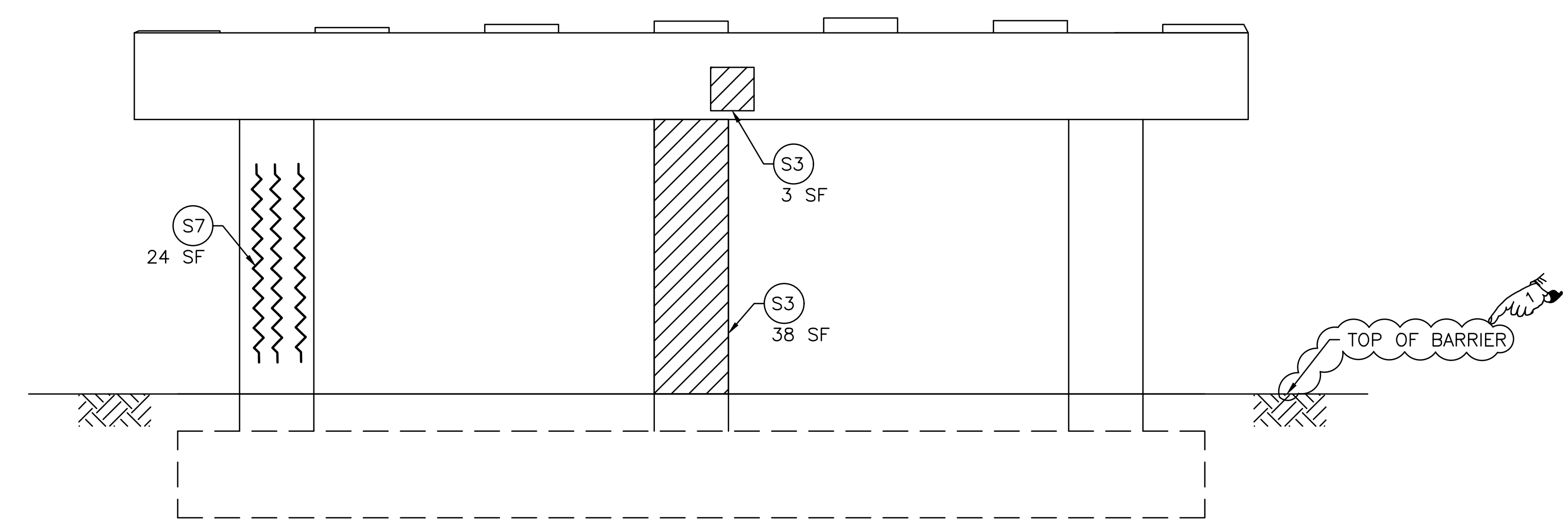
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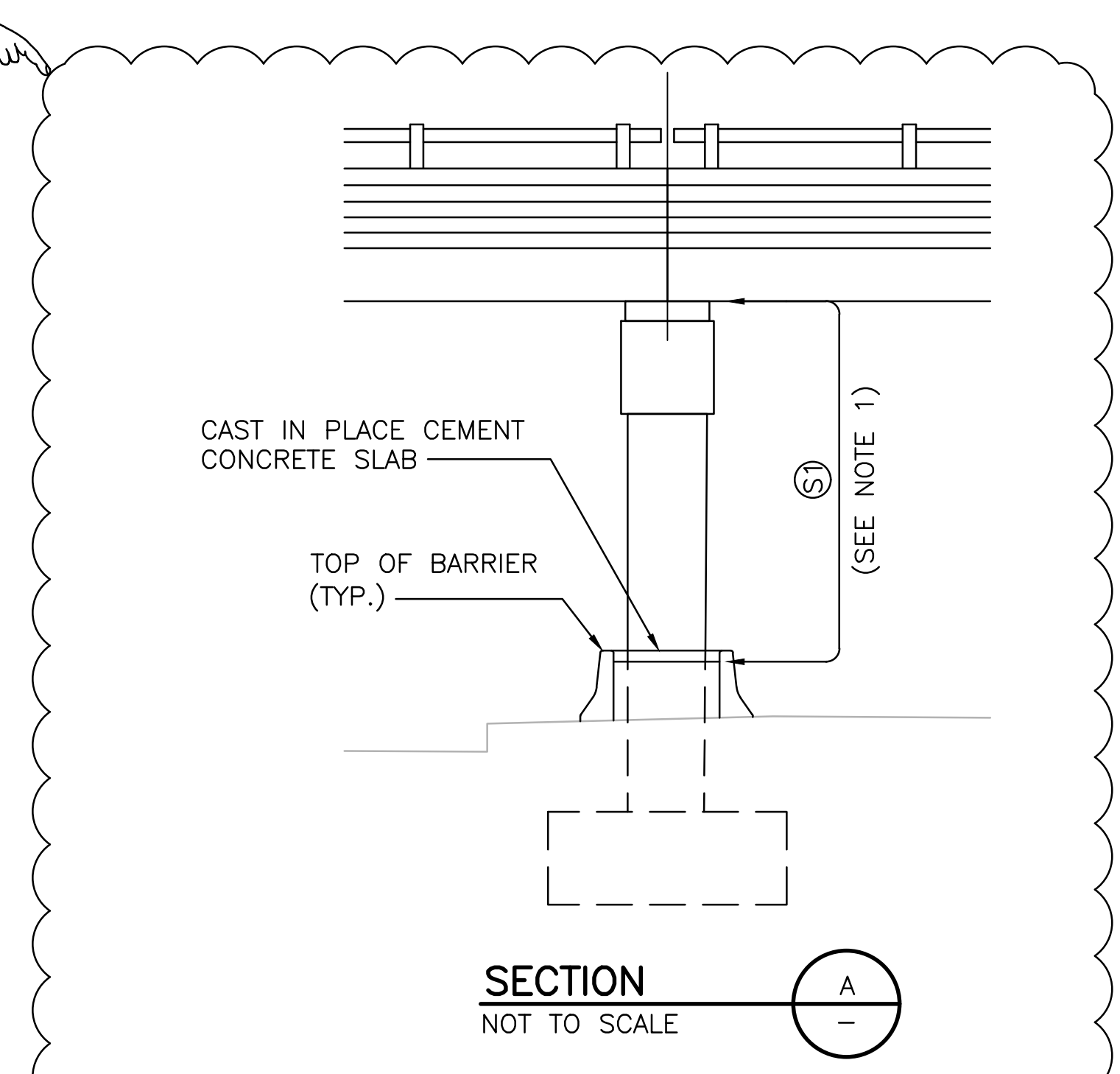
PIER 3 PLAN
SCALE 1/4"=1'-0"



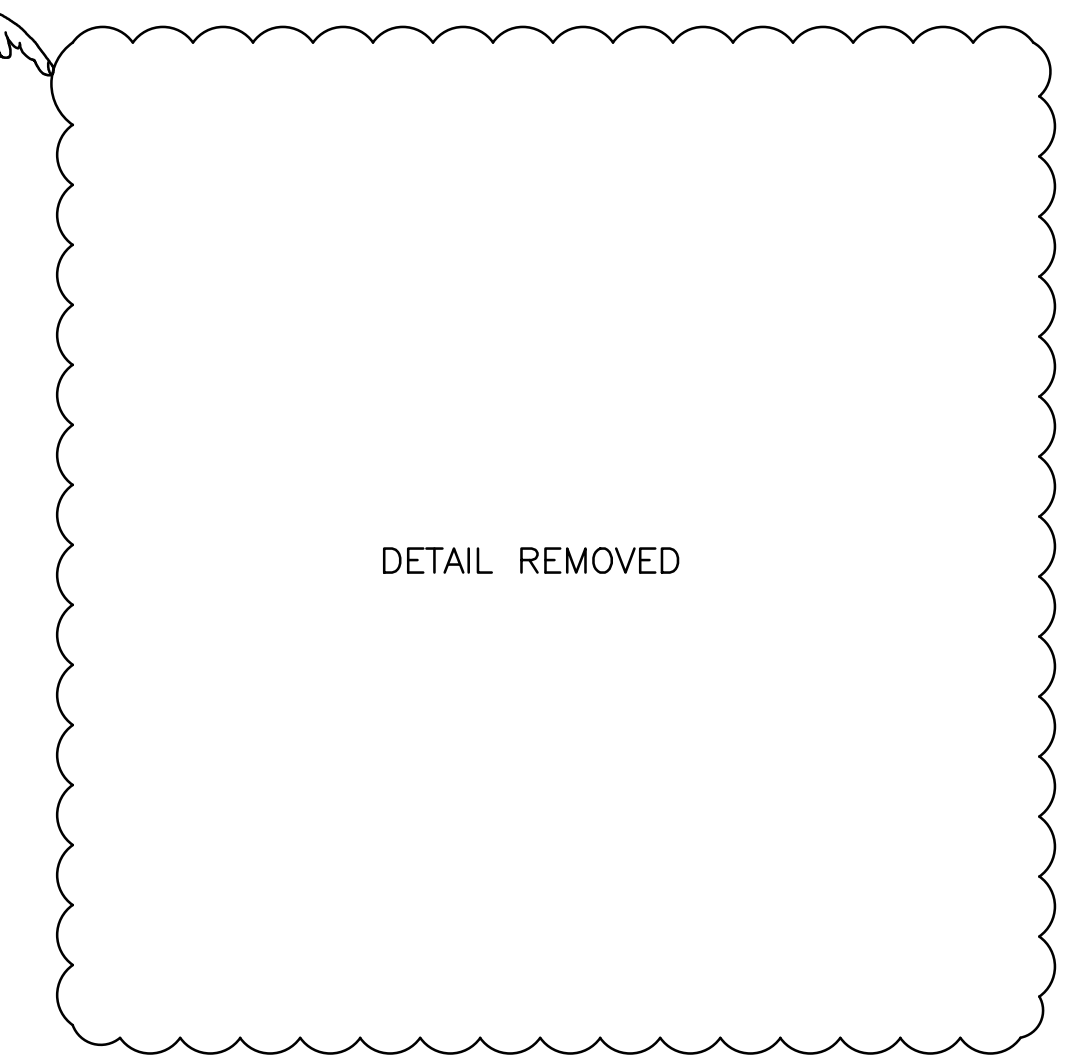
PIER 3 WEST ELEVATION
SCALE 1/4"=1'-0"



PIER 3 EAST ELEVATION
SCALE 1/4"=1'-0"



- PIER REPAIR NOTES:**
1. REMOVE CAST IN PLACE CEMENT CONCRETE SLAB. PAID UNDER ITEM CODE 201.0405, "REMOVE AND DISPOSE MASONRY".
 2. PERFORM REPAIRS AS NECESSARY.
 3. REPLACE CAST IN PLACE CEMENT CONCRETE SLAB. THE COST OF THE CONCRETE SHALL BE PAID UNDER ITEM CODE 601.0300, "CLASS A PORTLAND CEMENT CONCRETE". WELDED WIRE FABRIC SHALL BE PAID UNDER ITEM CODE 810.0702, "WELDED WIRE FABRIC, GALVANIZED".
 4. REFER TO R.I. STANDARD 40.2.1 FOR ADDITIONAL INFORMATION.



- NOTES:**
1. FOR GENERAL NOTES, SEE SHEETS 2 & 3.
 2. FOR REPAIR CALLOUT KEY, DRAWING INDEX & SUMMARY OF ESTIMATED QUANTITIES, SEE SHEET 3.3.
 3. S1 PROTECTIVE COATING TO BE APPLIED TO LIMITS SHOWN.
 4. FOR CONCRETE REPAIR DETAILS SEE SHEETS 58-61.

- LEGEND:**
- CONCRETE REPAIR
 - CRACK REPAIR

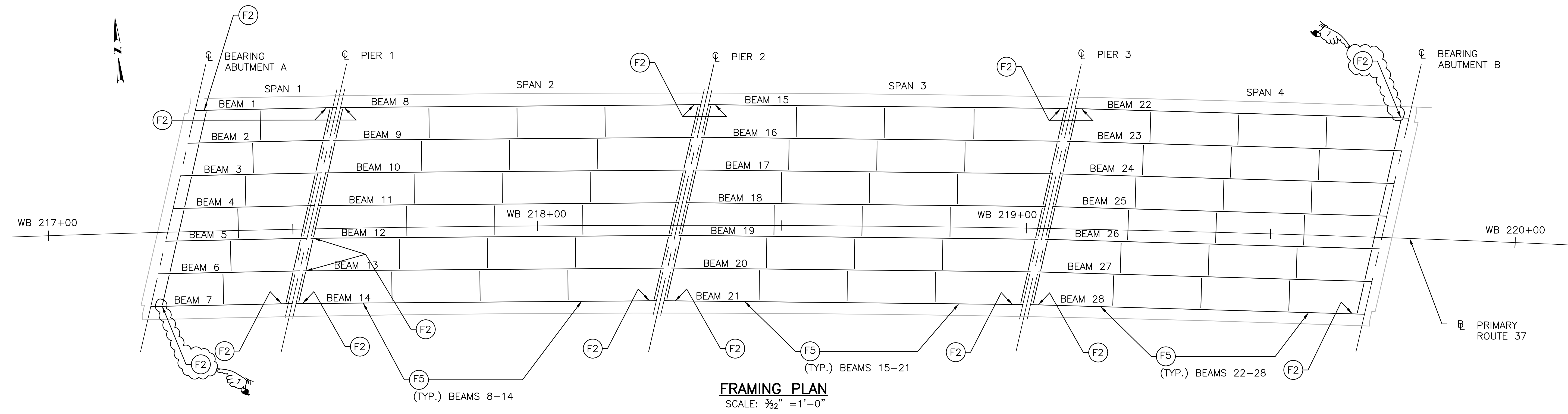
BRIDGE 063301

REVISIONS			RHODE ISLAND	
NO.	DATE	BY	DEPARTMENT OF TRANSPORTATION	
1	11/8/19	DRC	BRIDGE GROUP 51A - RT. 37 C-2	
			CRANSTON	RHODE ISLAND
PIER 3 REPAIRS				
			CHECKED BY _____	DATE _____ SCALE AS NOTED

ADDENDUM No. 5



FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
1	RI	RI-03310121, NP-03310131 RI-DCR(003), SR-PRY(208)	2019	38	75



- NOTES:**
1. FOR GENERAL NOTES, SEE SHEETS 2 & 3.
 2. FOR REPAIR CALLOUT KEY, DRAWING INDEX & SUMMARY OF ESTIMATED QUANTITIES, SEE SHEET 33.
 3. FOR STEEL REPAIR TYPE F2, SEE SHEET 39.
 4. FOR STEEL REPAIR TYPE F5 SEE SHEET 75.

0013C_V4_038_STEEL REPAIR LOCATION PLAN - BRIDGE 063301_R-1.dwg Plotted on Friday, November 8, 2019 2:23:22 PM

BRIDGE 063301

REVISIONS		
NO.	DATE	BY
1	11/8/19	DRC

RHODE ISLAND DEPARTMENT OF TRANSPORTATION	
BRIDGE GROUP 51A - RT. 37 C-2	
CRANSTON	RHODE ISLAND
STEEL REPAIR LOCATION PLAN	
CHECKED BY _____ DATE _____ SCALE AS NOTED	

ADDENDUM No. 5



REPAIR CALLOUT KEY:

THE GENERAL SCOPE OF THE REHABILITATION AND REPAIRS FOR THE BRIDGE INCLUDES, BUT IS NOT LIMITED TO THE FOLLOWING:

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
1	RI	HP-00370121, HP-00370131, HP-1000003, 3RD-PRY(208)	2019	41	75

BEARING REPAIRS:

- (B1) - JACK UP SUPERSTRUCTURE AND REPLACE BEARINGS
- (B2) - JACK UP SUPERSTRUCTURE AND SUPPORT BEARINGS

DECK REPAIRS:

- (D1) - DECK UNDERSIDE REPAIR
- (D2) - DECK UNDERSIDE REPAIR OVER RAILROAD
- (D3) - EXPANSION JOINT HEADER REPAIR
- (D4) - REMOVE DETERIORATED CONCRETE AND PERFORM CONCRETE REPAIR TO BARRIER / CURB
- (D5) - REPLACE MISSING GUARDRAIL ATTACHMENT BRACKET AND TIGHTEN ATTACHMENT BOLTS
- (D6) - CLEAN AND FLUSH DRAIN TROUGHS AND SCUPPERS

JOINT REPAIRS:

- (J1) - INSTALL ASPHALTIC PLUG EXPANSION JOINT WITH BRIDGING PLATE AND PREFORMED JOINT SEAL
- (J2) - INSTALL ASPHALTIC PLUG EXPANSION JOINT WITHOUT BRIDGING PLATE
- (J3) - INSTALL WATERPROOFING AT APPROACH SLAB / BACKWALL JOINT
- (J4) - INSTALL PREFORMED JOINT SEAL AT MEDIAN JOINT
- (J5) - INSTALL PREFORMED JOINT SEAL AT PARAPETS

SUBSTRUCTURE REPAIRS:

- (S1) - CLEAN CONCRETE SURFACES AND COAT WITH AN EPOXY RESIN PROTECTIVE COATING
- (S2) - RECONSTRUCT EXISTING BEARING SEAT/PEDESTAL
- (S3) - REMOVE DETERIORATED CONCRETE AND PERFORM CONCRETE REPAIR
- (S4) - REMOVE SPALLED OR DETERIORATED CONCRETE AND RECONSTRUCT TOP OF BACKWALL
- (S5) - REMOVE EXISTING FACE OF SUBSTRUCTURE 6" MIN. UP TO LIMIT OF DETERIORATED CONCRETE AND RESURFACE
- (S6) - REBUILD EXISTING CONCRETE SHEAR BLOCK AS REQUIRED
- (S7) - STRUCTURAL CONCRETE CRACK REPAIR BY EPOXY INJECTION
- (S8) - REMOVE SPALLED OR DETERIORATED CONCRETE AND REBUILD TO FORM REINFORCED COLUMN ENCASEMENT
- (S9) - EXCAVATE TO TOP OF EXISTING FOOTING AND CONSTRUCT WEB WALL
- (S10) - SLOPE PAVING REPAIRS

SUPERSTRUCTURE REPAIRS:

- (F1) - CLEAN AND SANDBLAST EXISTING PAINT PROTECTIVE SYSTEM AND REPAINT
- (F2) - MISCELLANEOUS STRUCTURAL STEEL REPAIRS
- (F3) - REMOVE DETERIORATED CONCRETE AND PERFORM CONCRETE REPAIR
- (F4) - REPAIR BEAM END SPALLS
- (F5) - COVER PLATE WELD REPAIRS BY PEENING

ROADWAY REPAIRS:

- (R1) - REPLACE DAMAGED GUARDRAIL
- (R2) - REPLACE DAMAGED GRANITE CURB
- (R3) - REPLACE MISSING LIGHT STANDARD HANDHOLE COVER AND ANCHOR BOLT COVERS
- (R4) - REPAIR JUNCTION BOX COVER

INDEX OF SHEETS	
DESCRIPTION	SHEET NO.
REPAIR KEY, INDEX OF SHEETS & QUANTITIES	41
GENERAL PLAN & ELEVATION	42
ABUTMENT A REPAIRS	43
ABUTMENT B REPAIRS	44
WINGWALL REPAIRS	45
STEEL REPAIR LOCATION PLAN	46
DECK UNDERSIDE REPAIR LOCATION PLAN	47

SUMMARY OF ESTIMATED QUANTITIES			
ITEM NO.	DESCRIPTION	UNIT (2)	TOTAL
202.0700	COMMON BORROW	CY	50
203.0100	STRUCTURAL EXCAVATION EARTH	CY	61
302.0100	GRAVEL BORROW SUBBASE COURSE	CY	13
401.3003	CLASS 9.5 HMA FOR PATCHING	TON	1
403.0300	ASPHALT EMULSION TACK COAT	SY	3
800.9924	REPAIRS TO ROUTE 37 BRIDGE NO. 063401	LS	1
(1)	CLEAN AND FLUSH DRAINS	LS	1
(1)	PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES	SY	200
(1)	TEMPORARY JACKING AND SHORING OF BEAMS & GIRDERS - BRIDGE NO. 063401	EA	18
(1)	SUPPORT BEARINGS	EA	18
(1)	REPAINTING EXISTING STRUCTURAL STEEL - BRIDGE NO. 063401	LS	1
(1)	CONTAINMENT, COLLECTION, STORAGE AND DISPOSAL OF DEBRIS AND SPENT MATERIALS	LS	1
(1)	PERSONNEL PROTECTION DURING PAINTING AND CLEANING OPERATIONS	LS	1
810.0210	GALVANIZED BAR REINFORCEMENT GRADE 60	LB	1000
810.0702	WELDED WIRE FABRIC (GALVANIZED)	SF	120
810.9901	EMBEDDED GALVANIC ANODES	EA	50
813.0210	HEAT APPLIED PRE-FABRICATED MEMBRANE	SY	10
817.9901	REPAIRS TO STRUCTURAL CONCRETE MASONRY (PATCHING MORTAR)	CF	35
817.9902	REPAIRS TO STRUCTURAL CONCRETE MASONRY (FORM AND CAST IN PLACE)	CY	20
817.9903	REPAIRS TO STRUCTURAL CONCRETE MASONRY (TYPE 2S)	CF	70
818.9901	PORTLAND CEMENT CONCRETE DECK REPAIR (PARTIAL DECK REMOVAL)	SF	110
818.9902	PORTLAND CEMENT CONCRETE DECK REPAIR (FULL DECK REMOVAL)	SF	15

(1) ITEMS IN "REPAIRS TO ROUTE 37 BRIDGE NO. 063401" LUMP SUM ITEM 800.9924 GIVEN FOR INFORMATION ONLY.
 (2) AREAS MARKED AS CONCRETE REPAIR OR RESURFACING / REFACING, OR RECONSTRUCTION THAT ARE INDICATED IN THE DRAWINGS AS SF (SQUARE FEET) ARE FOR INFORMATIONAL PURPOSES ONLY AND ARE NOT TO BE USED AS A BASIS FOR ESTIMATING. METHOD OF MEASUREMENT AND BASIS OF PAYMENT SHALL BE AS INDICATED IN THE SPECIFICATIONS.

BRIDGE 063401

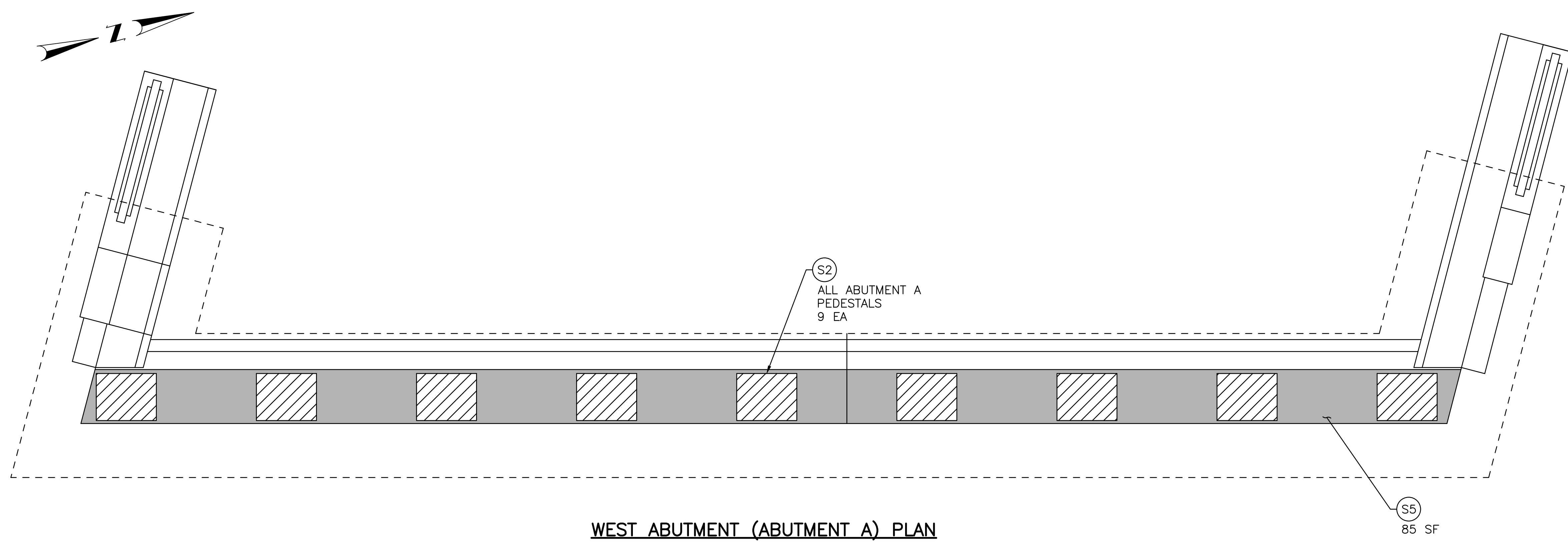
REVISIONS			RHODE ISLAND DEPARTMENT OF TRANSPORTATION
NO.	DATE	BY	
1	11/8/19	DRC	BRIDGE GROUP 51A - RT. 37 C-2
			CRANSTON RHODE ISLAND
			REPAIR KEY, INDEX OF SHEETS & QUANTITIES
			CHECKED BY _____ DATE _____ SCALE AS NOTED

ADDENDUM No. 5

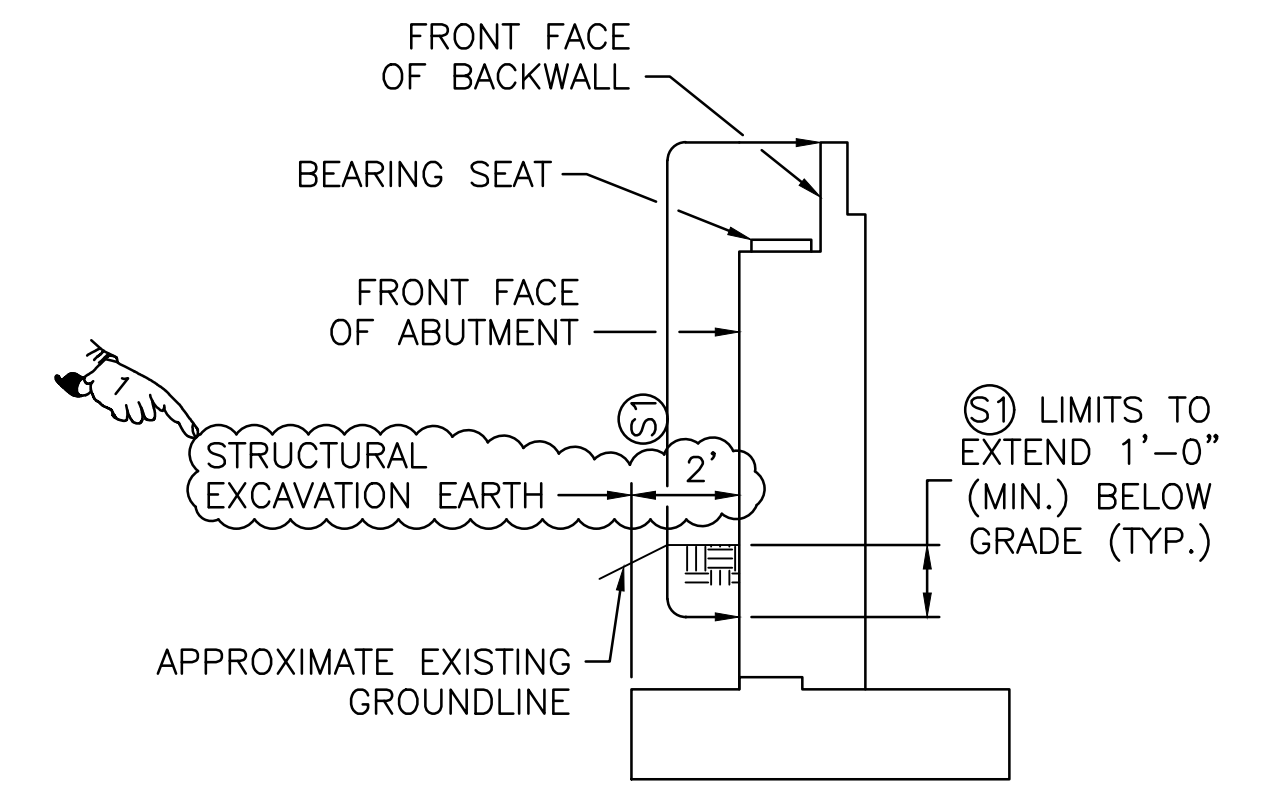


530 PRESTON AVENUE
MERRIDEN, CT 06450

0013C_V4_041_REPAIR KEY, INDEX OF SHEETS & QUANTITIES - BRIDGE 063401_R-1.dwg Plotted on Friday, November 8, 2019 2:23:31 PM



WEST ABUTMENT (ABUTMENT A) PLAN
SCALE 3/8"=1'-0"

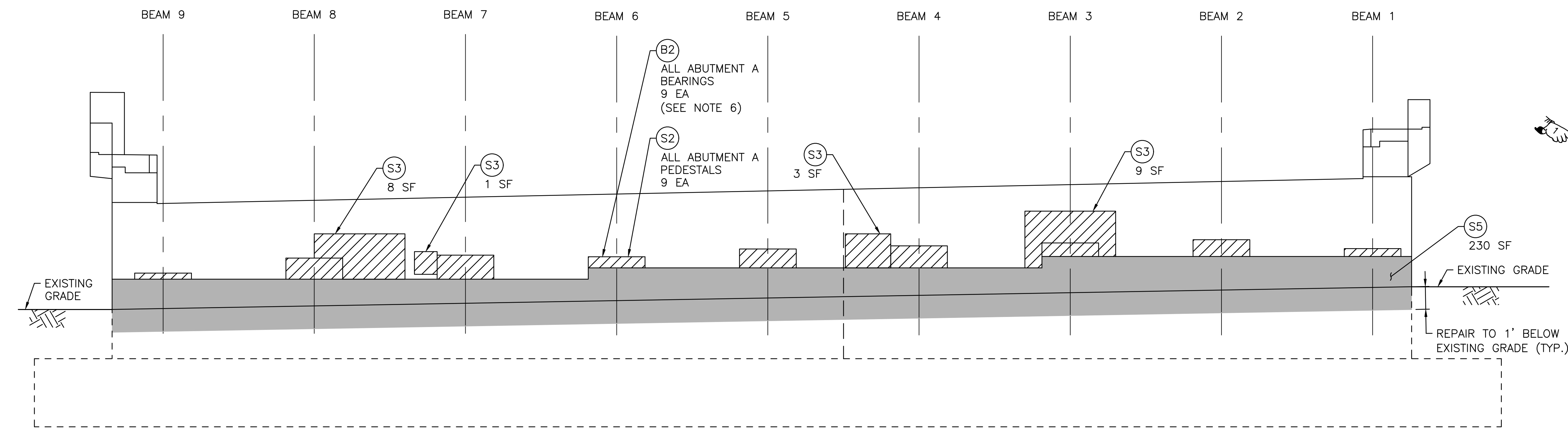


LIMITS OF S1 AT ABUTMENTS
SCALE: N.T.S.

- NOTES:**
- FOR GENERAL NOTES, SEE SHEETS 2 & 3.
 - FOR REPAIR CALLOUT KEY, DRAWING INDEX & SUMMARY OF ESTIMATED QUANTITIES, SEE SHEET 41.
 - S1 PROTECTIVE COATING APPLIED TO ALL EXPOSED SURFACES OF ABUTMENT.
 - FOR CONCRETE REPAIR DETAILS SEE SHEETS 58-61.
 - FOR RE-FACING AND PEDESTAL RECONSTRUCTION DETAILS SEE SHEET 71.
 - THE CONTRACTOR SHALL INSTALL BEARING SUPPORTS PRIOR TO BEGINNING JACKING OPERATIONS. BEARING SUPPORTS SHALL BE CAPABLE OF SECURELY SUPPORTING THE BEARING UNTIL COMPLETION OF THE BEARING PAD REPLACEMENT.
 - THE COST TO REPLACE EXCAVATED MATERIAL SHALL BE PAID UNDER ITEM CODE 202.0700 "COMMON BORROW".
 - PAY LIMIT OF STRUCTURE EXCAVATION EARTH SHOWN FOR ABUTMENT. PAY LIMITS FOR PIER SIMILAR.

LEGEND:

	CONCRETE REPAIR
	RE-FACING



WEST ABUTMENT (ABUTMENT A) ELEVATION
SCALE 3/8"=1'-0"

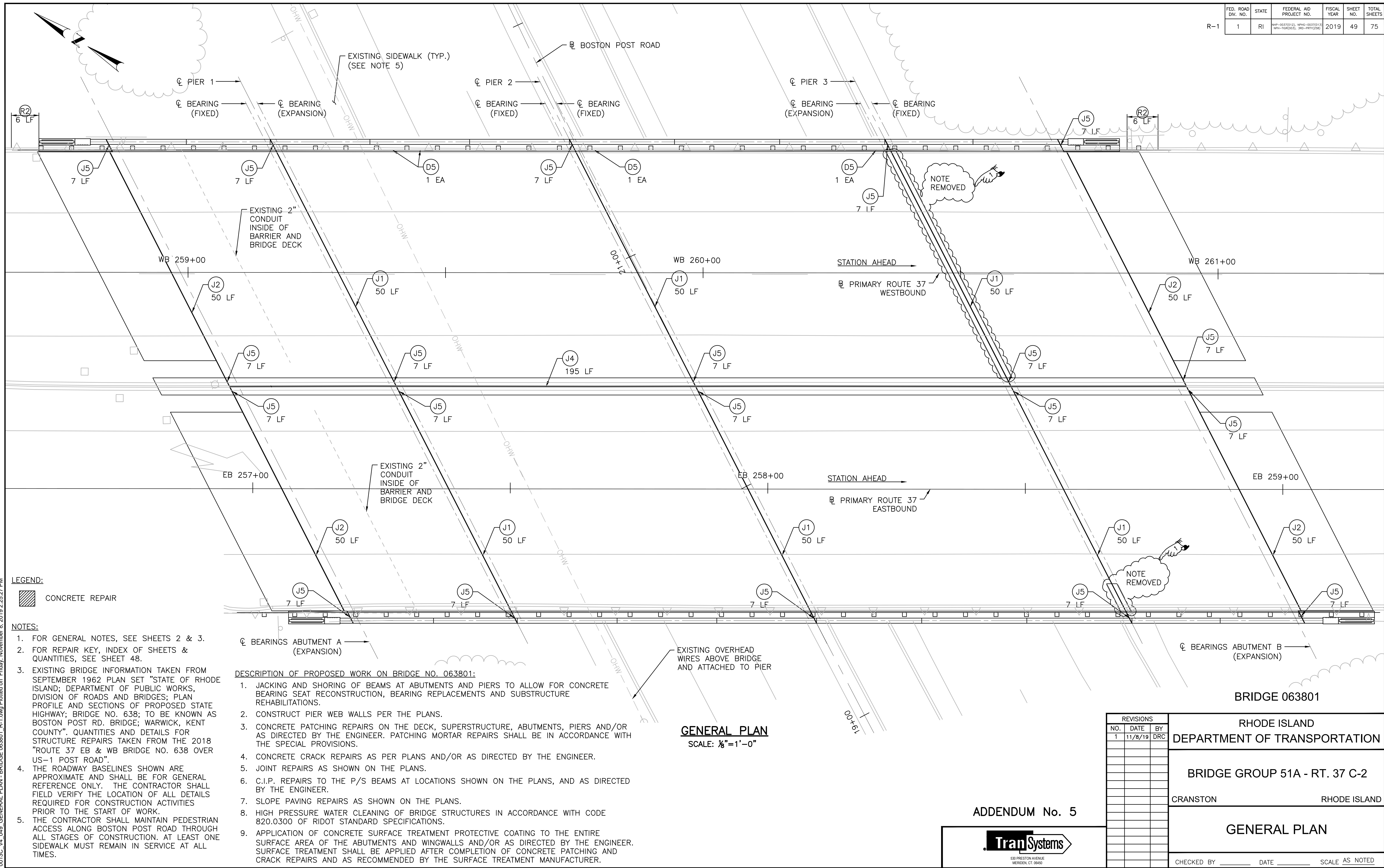
BRIDGE 063401

REVISIONS			RHODE ISLAND	
NO.	DATE	BY	DEPARTMENT OF TRANSPORTATION	
1	11/8/19	DRC	BRIDGE GROUP 51A - RT. 37 C-2	
			CRANSTON	RHODE ISLAND
ABUTMENT A REPAIRS				
			CHECKED BY _____	DATE _____
			SCALE AS NOTED	

ADDENDUM No. 5



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LEGEND:
 CONCRETE REPAIR

- NOTES:**
- FOR GENERAL NOTES, SEE SHEETS 2 & 3.
 - FOR REPAIR KEY, INDEX OF SHEETS & QUANTITIES, SEE SHEET 48.
 - EXISTING BRIDGE INFORMATION TAKEN FROM SEPTEMBER 1962 PLAN SET "STATE OF RHODE ISLAND; DEPARTMENT OF PUBLIC WORKS, DIVISION OF ROADS AND BRIDGES; PLAN PROFILE AND SECTIONS OF PROPOSED STATE HIGHWAY; BRIDGE NO. 638; TO BE KNOWN AS BOSTON POST RD. BRIDGE; WARWICK, KENT COUNTY". QUANTITIES AND DETAILS FOR STRUCTURE REPAIRS TAKEN FROM THE 2018 "ROUTE 37 EB & WB BRIDGE NO. 638 OVER US-1 POST ROAD".
 - THE ROADWAY BASELINES SHOWN ARE APPROXIMATE AND SHALL BE FOR GENERAL REFERENCE ONLY. THE CONTRACTOR SHALL FIELD VERIFY THE LOCATION OF ALL DETAILS REQUIRED FOR CONSTRUCTION ACTIVITIES PRIOR TO THE START OF WORK.
 - THE CONTRACTOR SHALL MAINTAIN PEDESTRIAN ACCESS ALONG BOSTON POST ROAD THROUGH ALL STAGES OF CONSTRUCTION. AT LEAST ONE SIDEWALK MUST REMAIN IN SERVICE AT ALL TIMES.

- DESCRIPTION OF PROPOSED WORK ON BRIDGE NO. 063801:**
- JACKING AND SHORING OF BEAMS AT ABUTMENTS AND PIERS TO ALLOW FOR CONCRETE BEARING SEAT RECONSTRUCTION, BEARING REPLACEMENTS AND SUBSTRUCTURE REHABILITATIONS.
 - CONSTRUCT PIER WEB WALLS PER THE PLANS.
 - CONCRETE PATCHING REPAIRS ON THE DECK, SUPERSTRUCTURE, ABUTMENTS, PIERS AND/OR AS DIRECTED BY THE ENGINEER. PATCHING MORTAR REPAIRS SHALL BE IN ACCORDANCE WITH THE SPECIAL PROVISIONS.
 - CONCRETE CRACK REPAIRS AS PER PLANS AND/OR AS DIRECTED BY THE ENGINEER.
 - JOINT REPAIRS AS SHOWN ON THE PLANS.
 - C.I.P. REPAIRS TO THE P/S BEAMS AT LOCATIONS SHOWN ON THE PLANS, AND AS DIRECTED BY THE ENGINEER.
 - SLOPE PAVING REPAIRS AS SHOWN ON THE PLANS.
 - HIGH PRESSURE WATER CLEANING OF BRIDGE STRUCTURES IN ACCORDANCE WITH CODE 820.0300 OF RIDOT STANDARD SPECIFICATIONS.
 - APPLICATION OF CONCRETE SURFACE TREATMENT PROTECTIVE COATING TO THE ENTIRE SURFACE AREA OF THE ABUTMENTS AND WINGWALLS AND/OR AS DIRECTED BY THE ENGINEER. SURFACE TREATMENT SHALL BE APPLIED AFTER COMPLETION OF CONCRETE PATCHING AND CRACK REPAIRS AND AS RECOMMENDED BY THE SURFACE TREATMENT MANUFACTURER.

GENERAL PLAN
 SCALE: 1/8"=1'-0"

BRIDGE 063801

ADDENDUM No. 5

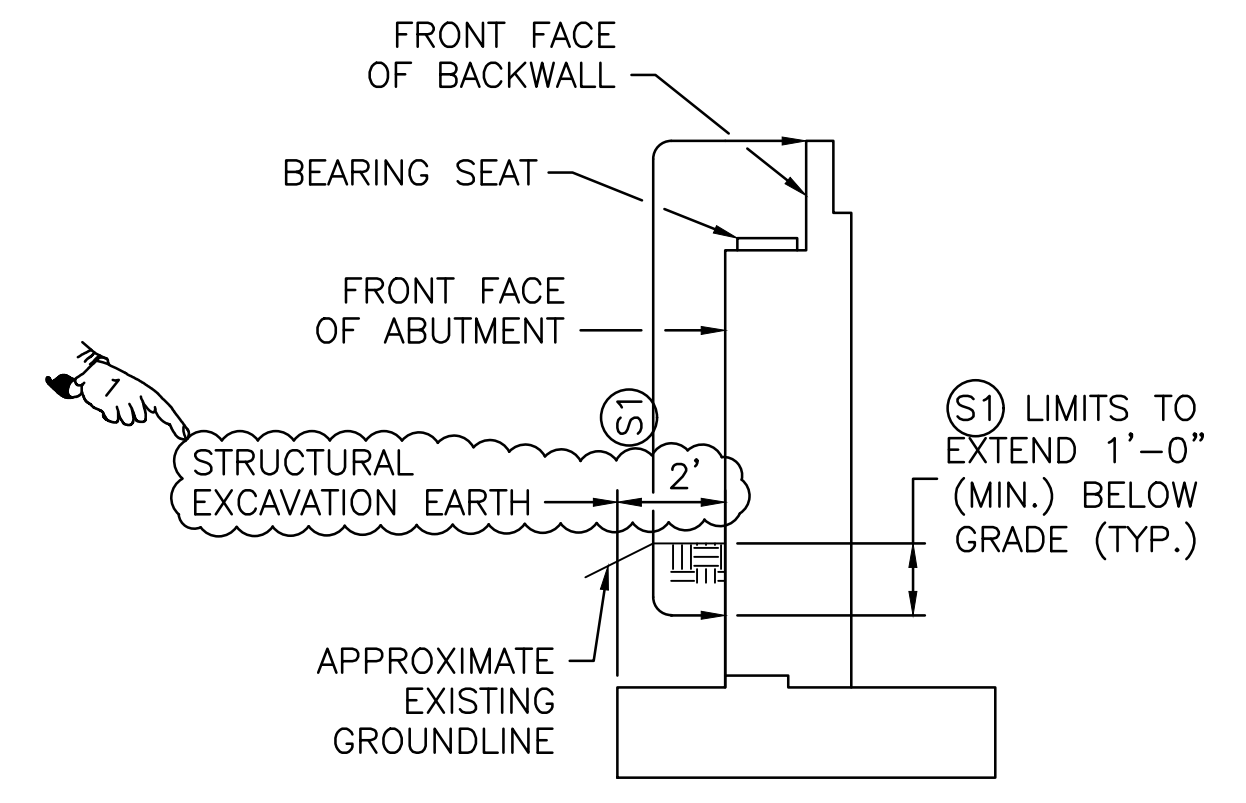
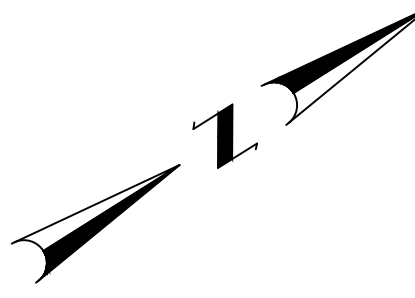


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NO.	DATE	BY
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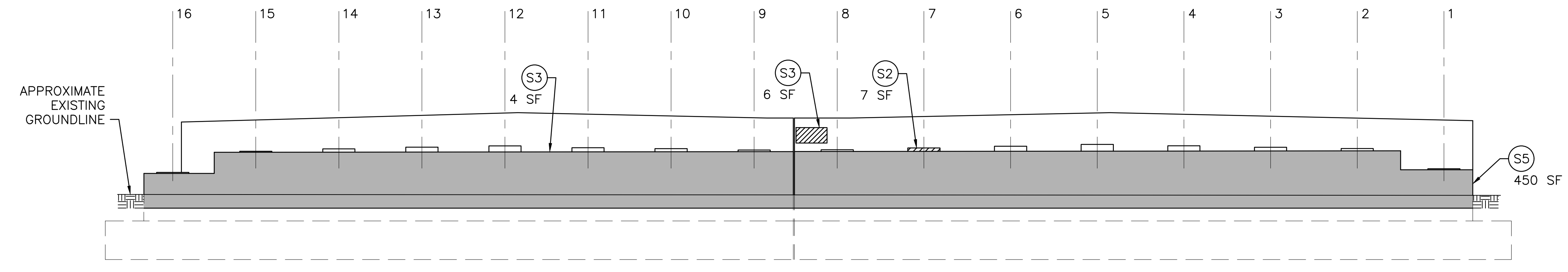
RHODE ISLAND DEPARTMENT OF TRANSPORTATION	
BRIDGE GROUP 51A - RT. 37 C-2	
CRANSTON	RHODE ISLAND
GENERAL PLAN	
CHECKED BY _____ DATE _____ SCALE AS NOTED	

0013C_V4_049_GENERAL PLAN - BRIDGE 063801_R-1.dwg Plotted on Friday, November 8, 2019 2:25:27 PM

R-1



LIMITS OF S1 AT ABUTMENTS
SCALE: N.T.S.

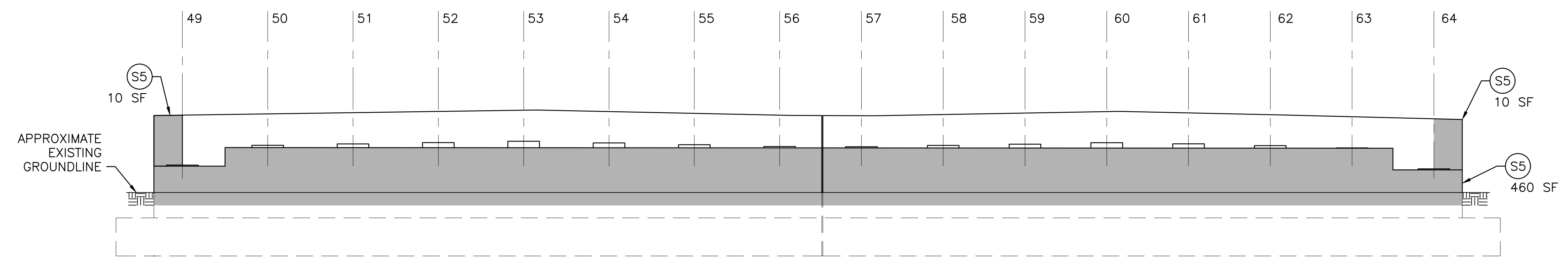


ABUTMENT A (WEST) ELEVATION
SCALE: 3/8"=1'-0"

- NOTES:**
- FOR GENERAL NOTES, SEE SHEETS 2 & 3.
 - FOR REPAIR KEY, INDEX OF DRAWINGS & QUANTITIES, SEE SHEET 48.
 - FOR CONCRETE REPAIRS DETAILS, SEE SHEETS 58-61.
 - FOR REFACING AND PEDESTAL RECONSTRUCTION DETAILS, SEE SHEET 71.
 - REMOVAL, STOCKPILING, REPAIR AND RELAYING OF SLOPE PAVING IS INCIDENTAL TO ITEM CODE 824.9923, "TEMPORARY JACKING AND SHORING OF BEAMS & GIRDERS - BRIDGE NO. 638".
 - THE COST TO REPLACE EXCAVATED MATERIAL SHALL BE PAID UNDER ITEM CODE 202.0700, "COMMON BORROW".
 - PAY LIMIT OF STRUCTURE EXCAVATION EARTH SHOWN FOR ABUTMENT. PAY LIMITS FOR PIER SIMILAR

LEGEND:

	CONCRETE REPAIR
	RE-FACING
	CRACK



ABUTMENT B (EAST) ELEVATION
SCALE: 3/8"=1'-0"

BRIDGE 063801

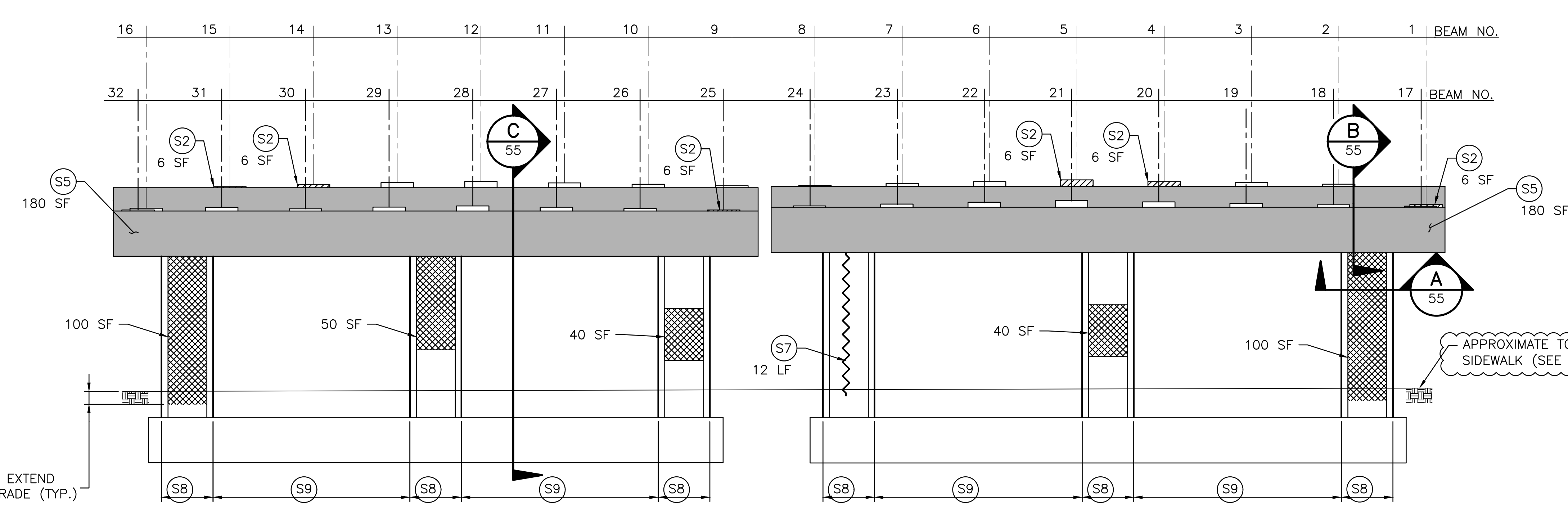
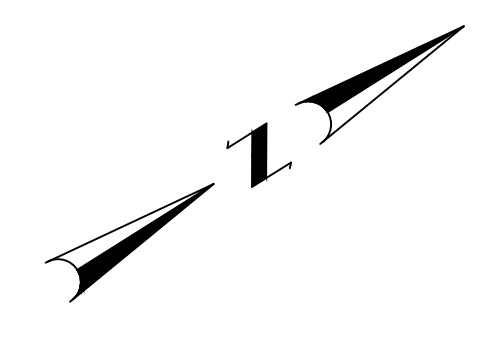
REVISIONS			RHODE ISLAND DEPARTMENT OF TRANSPORTATION	
NO.	DATE	BY		
1	11/8/19	DRC		
			BRIDGE GROUP 51A - RT. 37 C-2	
			CRANSTON RHODE ISLAND	
			ABUTMENT REPAIRS	
			CHECKED BY _____ DATE _____ SCALE AS NOTED	

ABUTMENT REPAIRS

ADDENDUM No. 5



0013C_V4_050_ABUTMENT REPAIRS - BRIDGE 063801_R-1.dwg Plotted on Friday, November 8, 2019 2:25:38 PM



PIER 1 (WEST) ELEVATION
SCALE: 3/16"=1'-0"

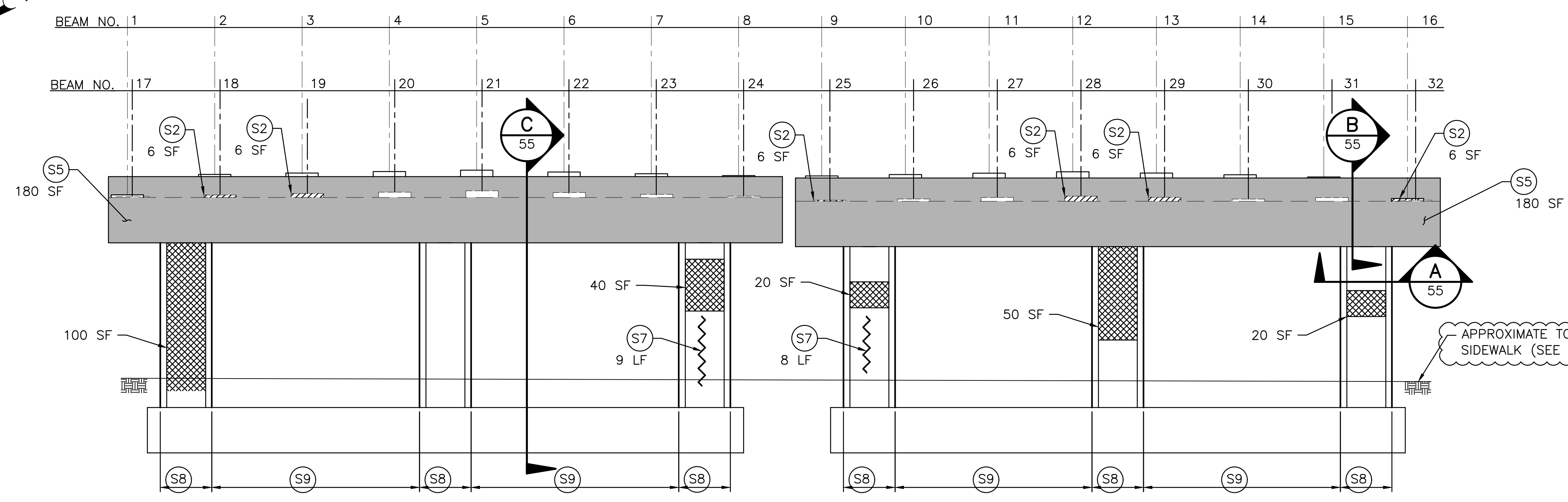
REMOVAL LIMITS TO EXTEND 1'-0" (MIN.) BELOW GRADE (TYP.)

APPROXIMATE TOP OF SIDEWALK (SEE NOTE 7)

- NOTES:**
- FOR GENERAL NOTES, SEE SHEETS 2 & 3.
 - FOR REPAIR KEY, INDEX OF DRAWINGS & QUANTITIES, SEE SHEET 48.
 - FOR CONCRETE REPAIRS DETAILS, SEE SHEETS 58-61.
 - FOR REFACING AND PEDESTAL RECONSTRUCTION DETAILS, SEE SHEET 71.
 - FOR PIER REPAIR DETAILS, SEE SHEET 55.
 - REMOVAL, STOCKPILING, REPAIR AND RELAYING OF SLOPE PAVING IS INCIDENTAL TO ITEM CODE 824.9922, "TEMPORARY JACKING AND SHORING OF BEAMS & GIRDERS - BRIDGE NO. 063801"
 - REMOVAL OF EXISTING SIDEWALK SHALL BE PAID UNDER ITEM CODE 201.0403, "REMOVE AND DISPOSE SIDEWALKS". REPLACEMENT SHALL BE PAID UNDER ITEM CODES 302.0100, "GRAVEL BORROW SUBBASE COURSE", AND ITEM CODE 905.0110, "PORTLAND CEMENT SIDEWALK MONOLITHIC STANDARD 43.1.0". SEE R.I. DOT STD. DETAIL 43.1.0.
 - REPLACEMENT OF EXISTING CURBS ARE NOT INCLUDED AS A PART OF THIS WORK ITEM.

- LEGEND:**
- CONCRETE REPAIR
 - RE-FACING
 - CRACK
 - REMOVE DETERIORATED CONCRETE

BRIDGE 063801



PIER 1 (EAST) ELEVATION
SCALE: 3/16"=1'-0"

APPROXIMATE TOP OF SIDEWALK (SEE NOTE 7)

PIER 1 REPAIRS

ADDENDUM No. 5

REVISIONS		
NO.	DATE	BY
1	11/8/19	DRC

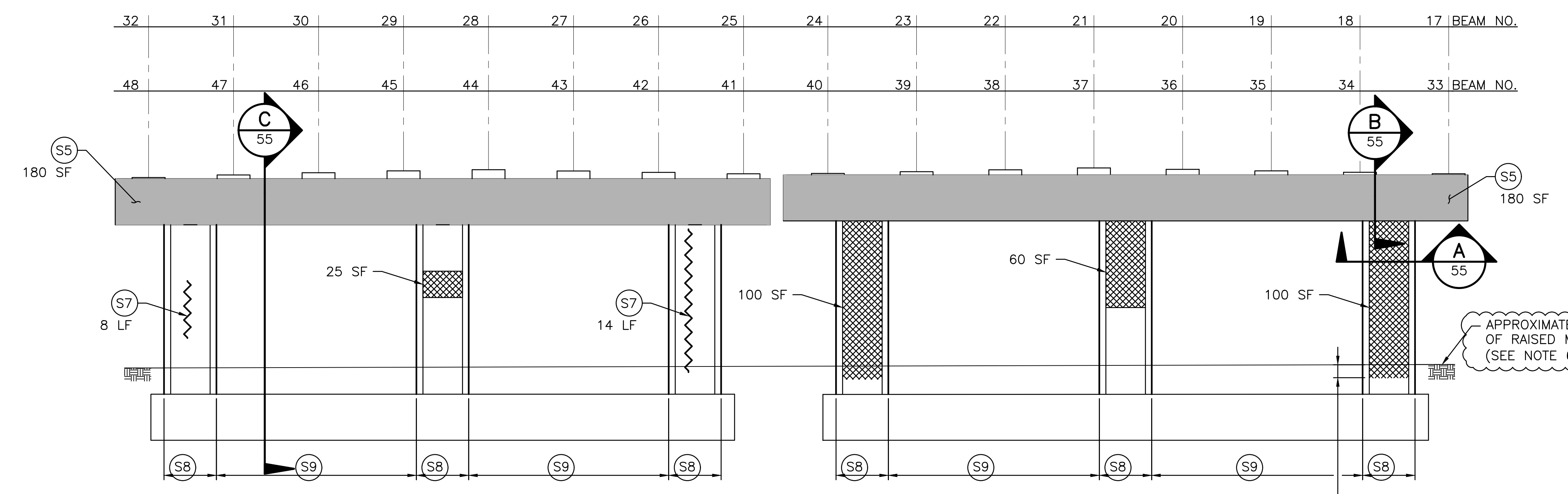
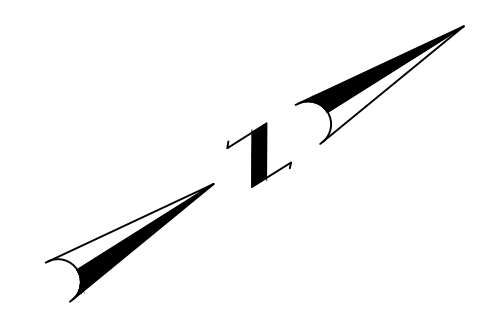
RHODE ISLAND
DEPARTMENT OF TRANSPORTATION
BRIDGE GROUP 51A - RT. 37 C-2
CRANSTON RHODE ISLAND

PIER 1 REPAIRS

CHECKED BY _____ DATE _____ SCALE AS NOTED

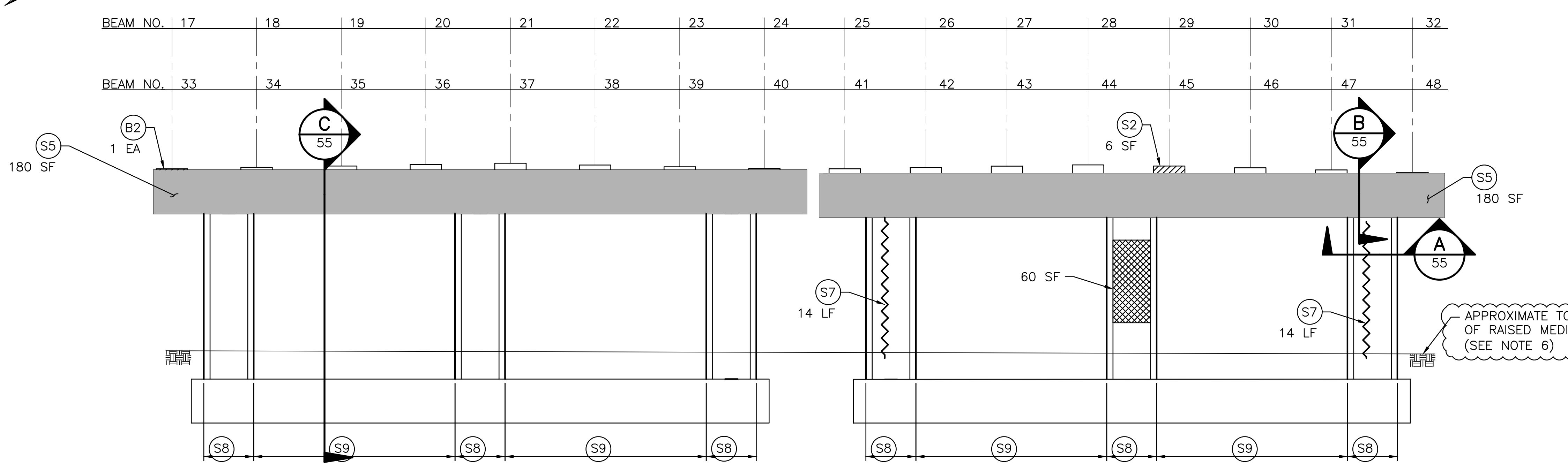
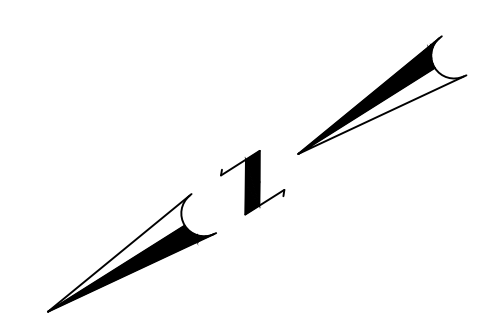


0013C_V4_052_PIER 1 REPAIRS - BRIDGE 063801_R-1.dwg Plotted on Friday, November 8, 2019 2:25:47 PM



APPROXIMATE TOP OF RAISED MEDIAN (SEE NOTE 6)

- NOTES:**
- FOR GENERAL NOTES, SEE SHEETS 2 & 3.
 - FOR REPAIR KEY, INDEX OF DRAWINGS & QUANTITIES, SEE SHEET 48.
 - FOR CONCRETE REPAIRS DETAILS, SEE SHEETS 58-61.
 - FOR REFACING AND PEDESTAL RECONSTRUCTION DETAILS, SEE SHEET 71.
 - FOR PIER REPAIR DETAILS, SEE SHEET 55.
 - REMOVAL OF EXISTING SIDEWALK SHALL BE PAID UNDER ITEM CODE 201.0403, "REMOVE AND DISPOSE SIDEWALKS". REPLACEMENT SHALL BE PAID UNDER ITEM CODES 302.0100, "GRAVEL BORROW SUBBASE COURSE", AND ITEM CODE 905.0110, "PORTLAND CEMENT SIDEWALK MONOLITHIC STANDARD 43.1.0". SEE R.I. DOT STD. DETAIL 43.1.0.



- LEGEND:**
- CONCRETE REPAIR
 - RE-FACING
 - CRACK
 - REMOVE DETERIORATED CONCRETE

BRIDGE 063801

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

BRIDGE GROUP 51A - RT. 37 C-2

CRANSTON RHODE ISLAND

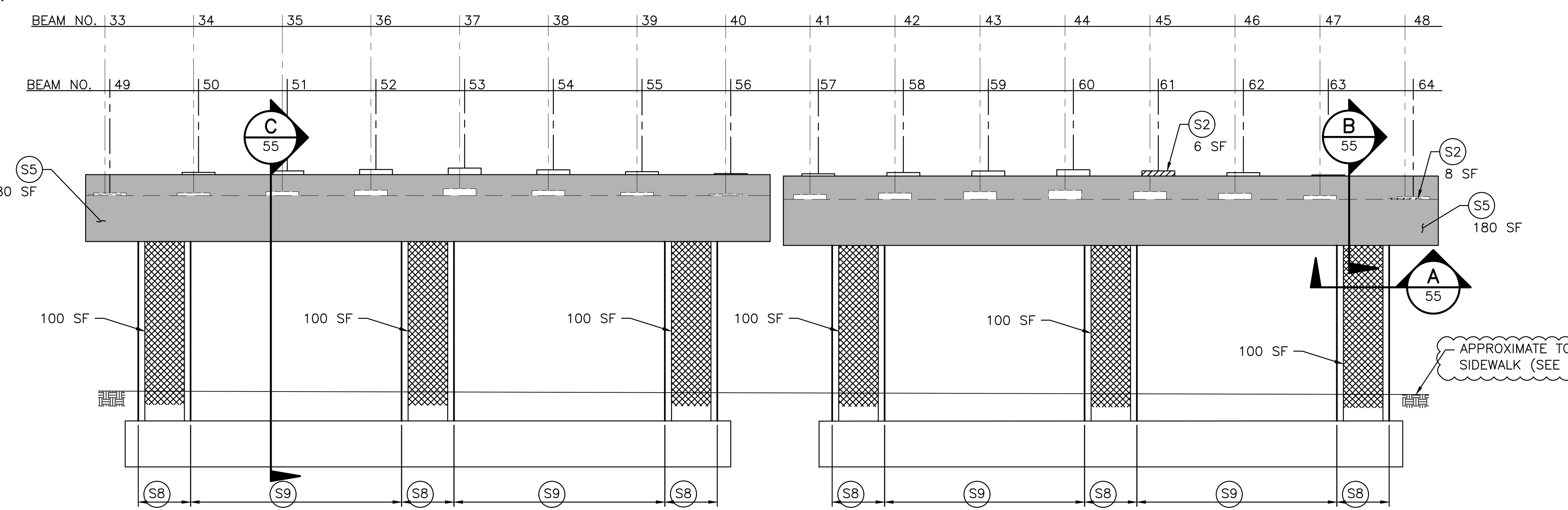
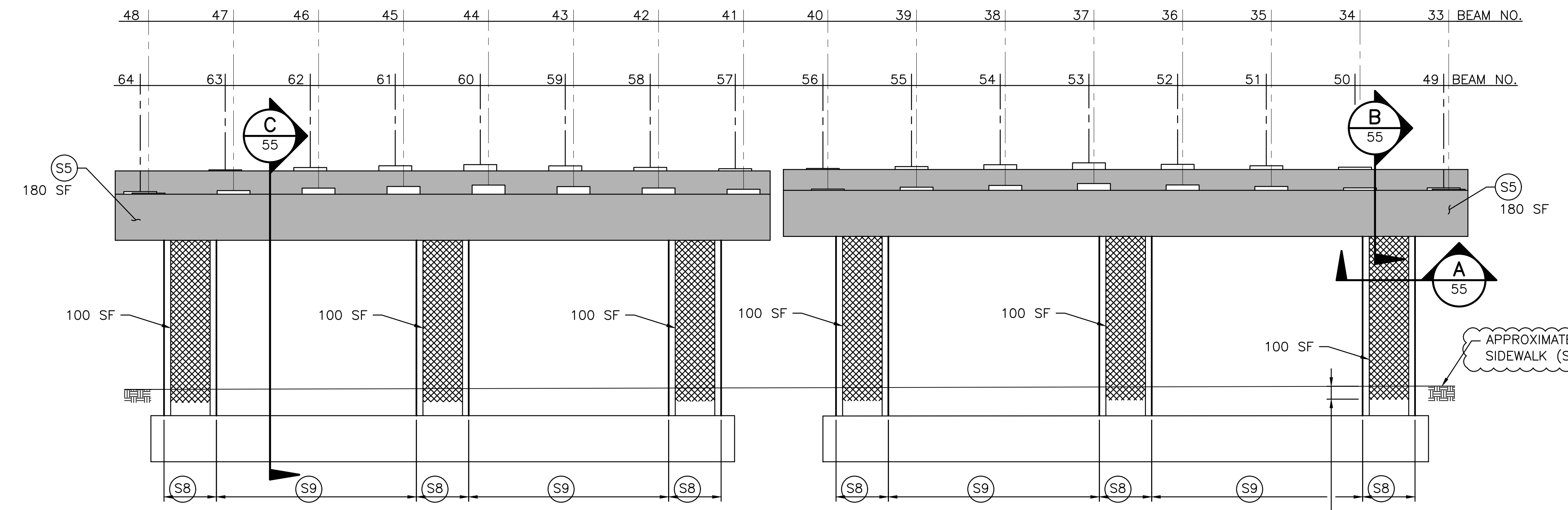
PIER 2 REPAIRS

ADDENDUM No. 5

REVISIONS		
NO.	DATE	BY
1	11/8/19	DRC



0013C_V4_053_PIER 2 REPAIRS - BRIDGE 063801_R-1.dwg Plotted on Friday, November 8, 2019 2:25:57 PM



PIER 3 REPAIRS

ADDENDUM No. 5



- NOTES:**
- FOR GENERAL NOTES, SEE SHEETS 2 & 3.
 - FOR REPAIR KEY, INDEX OF DRAWINGS & QUANTITIES, SEE SHEET 48.
 - FOR CONCRETE REPAIRS DETAILS, SEE SHEETS 58-61.
 - FOR REFACING AND PEDESTAL RECONSTRUCTION DETAILS, SEE SHEET 71.
 - FOR PIER REPAIR DETAILS, SEE SHEET 55.
 - REMOVAL, STOCKPILING, REPAIR AND RELAYING OF SLOPE PAVING IS INCIDENTAL TO ITEM CODE 824.9922, "TEMPORARY JACKING AND SHORING OF BEAMS & GIRDERS - BRIDGE NO. 063801"
 - REMOVAL OF EXISTING SIDEWALK SHALL BE PAID UNDER ITEM CODE 201.0403, "REMOVE AND DISPOSE SIDEWALKS". REPLACEMENT SHALL BE PAID UNDER ITEM CODES 302.0100, "GRAVEL BORROW SUBBASE COURSE", AND ITEM CODE 905.0110, "PORTLAND CEMENT SIDEWALK MONOLITHIC STANDARD 43.1.0". SEE R.I. DOT STD. DETAIL 43.1.0.

- LEGEND:**
- CONCRETE REPAIR
 - RE-FACING
 - CRACK
 - REMOVE DETERIORATED CONCRETE

BRIDGE 063801

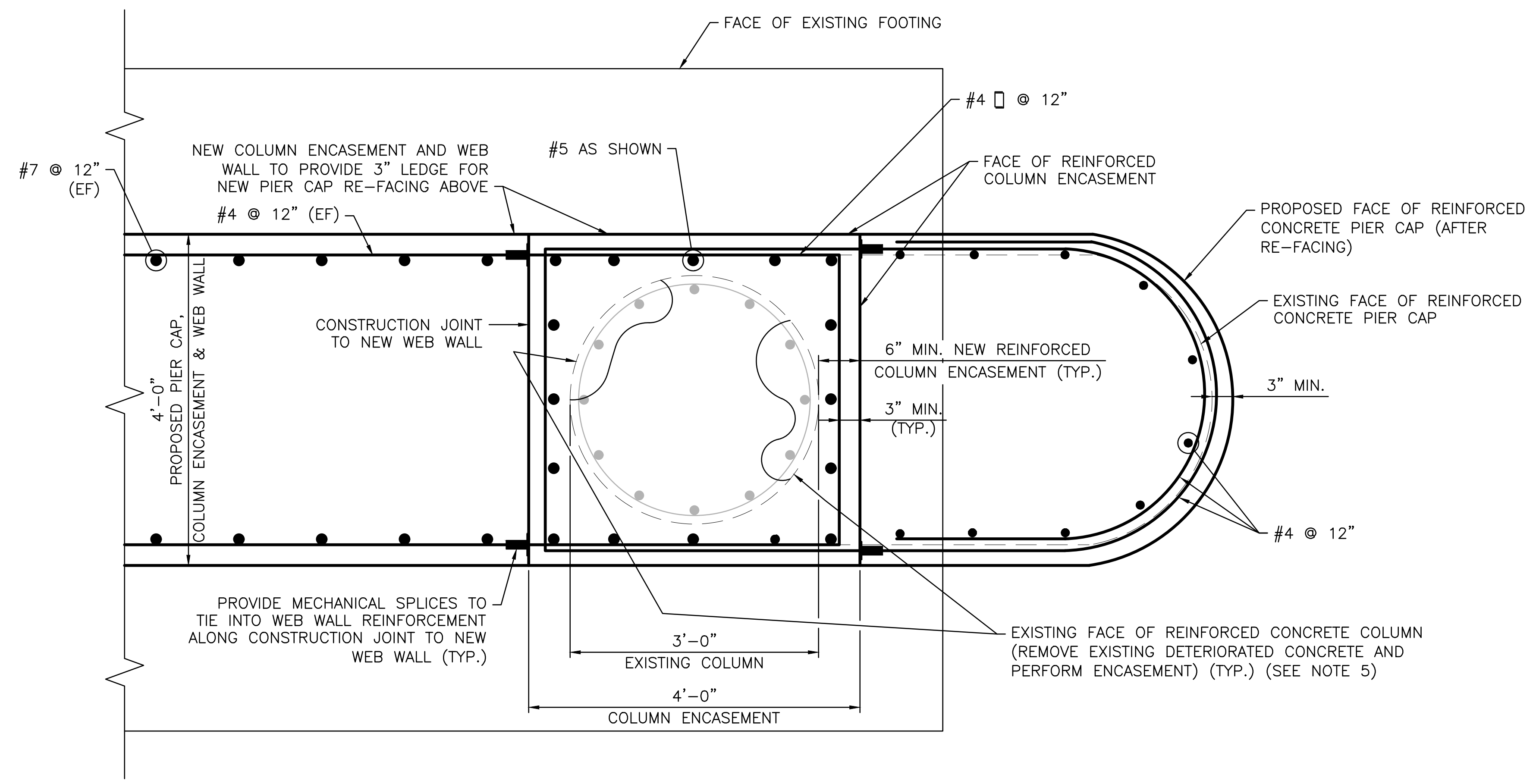
RHODE ISLAND
DEPARTMENT OF TRANSPORTATION
BRIDGE GROUP 51A - RT. 37 C-2
CRANSTON RHODE ISLAND

REVISIONS		
NO.	DATE	BY
1	11/8/19	DRC

PIER 3 REPAIRS

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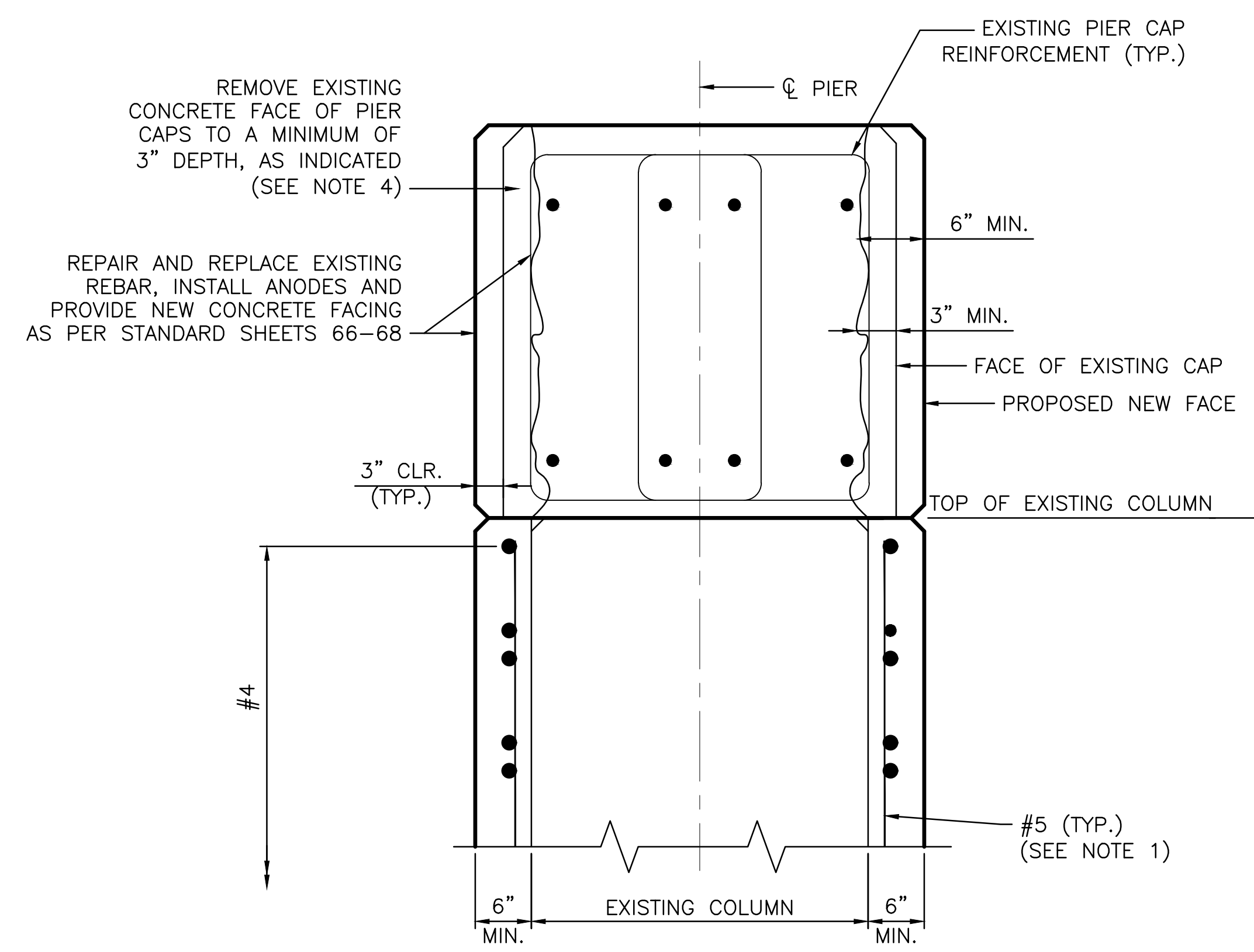
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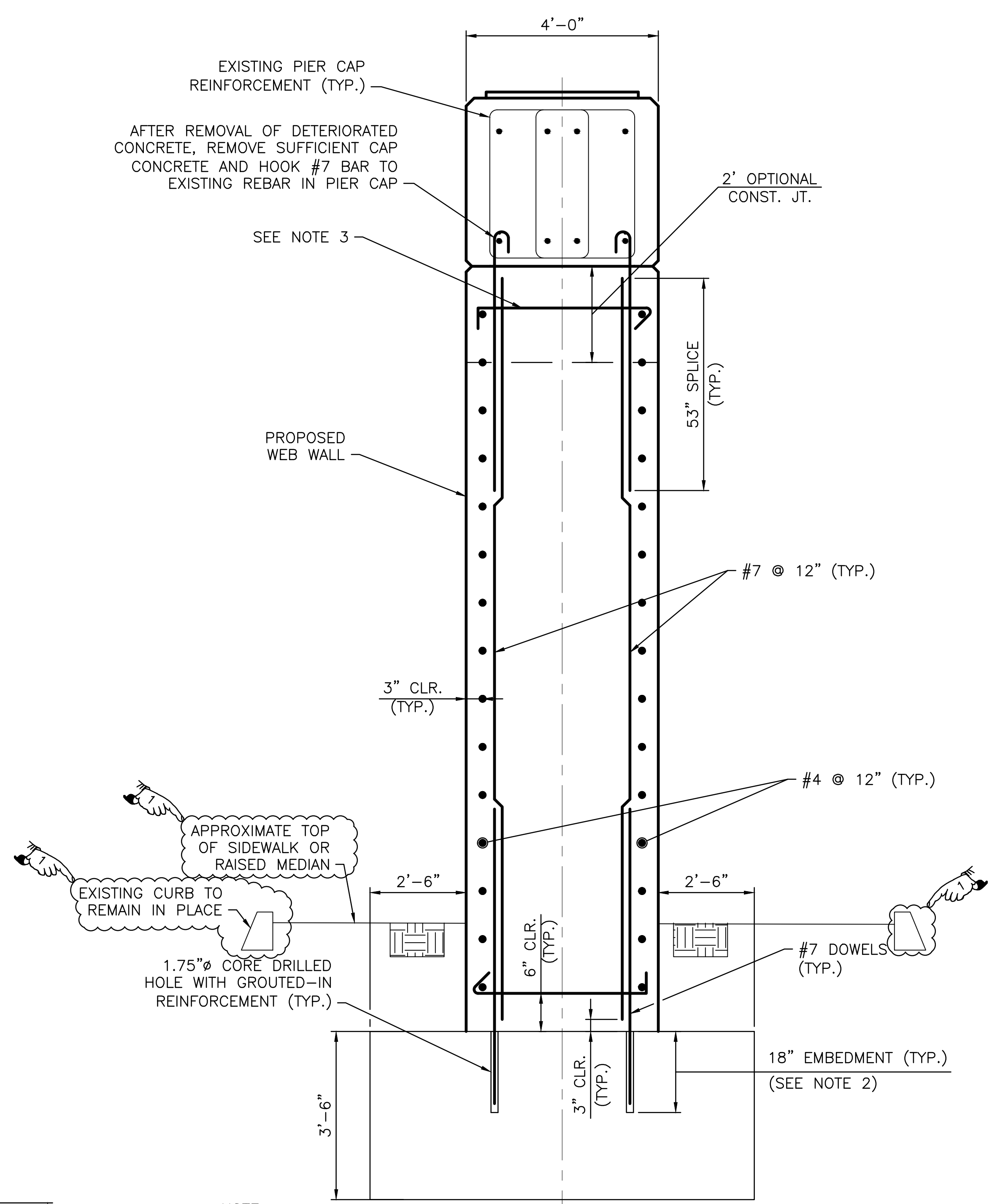
SECTION A
SCALE: N.T.S.

- NOTES:**
- CONTRACTOR IS RESPONSIBLE FOR FINAL PLACEMENT AND BAR LENGTHS.
 - DRILL HOLES OF PROPER DIAMETER AND DEPTH IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.
 - #4 TIE BARS AT A MAXIMUM SPACING OF 4'-0" IN BOTH DIRECTIONS. PROVIDE THE BARS WITH A 90° HOOK END AND 135° HOOK END AT THE OTHER END. ALTERNATE PLACEMENT OF 90° HOOK END AND 135° HOOK END AT TOP OF FOOTING IN ALTERNATE TIES.
 - REMOVAL OF EXISTING CONCRETE SHALL NOT BEGIN PRIOR TO PLACING JACKS AND RAISING BEAM ENDS. THE BEAMS SHALL REMAIN SUPPORTED UNTIL COMPLETION OF PIER CAP CONCRETE REFACING AND PLACEMENT OF WEB WALLS.
 - ALL WORK REQUIRED FOR CONCRETE ENCASEMENT OF COLUMNS SHALL BE PAID UNDER ITEM CODE 817.9902, "REPAIRS TO STRUCTURAL CONCRETE MASONRY (FORM AND CAST IN PLACE)".

LEGEND:
 CONCRETE REMOVAL



SECTION B
SCALE: N.T.S.



SECTION C
SCALE: N.T.S.

NOTE:
SECTION AT PIER 2 SHOWN.
SECTIONS AT PIERS 1 AND 3 SIMILAR

BRIDGE 063801

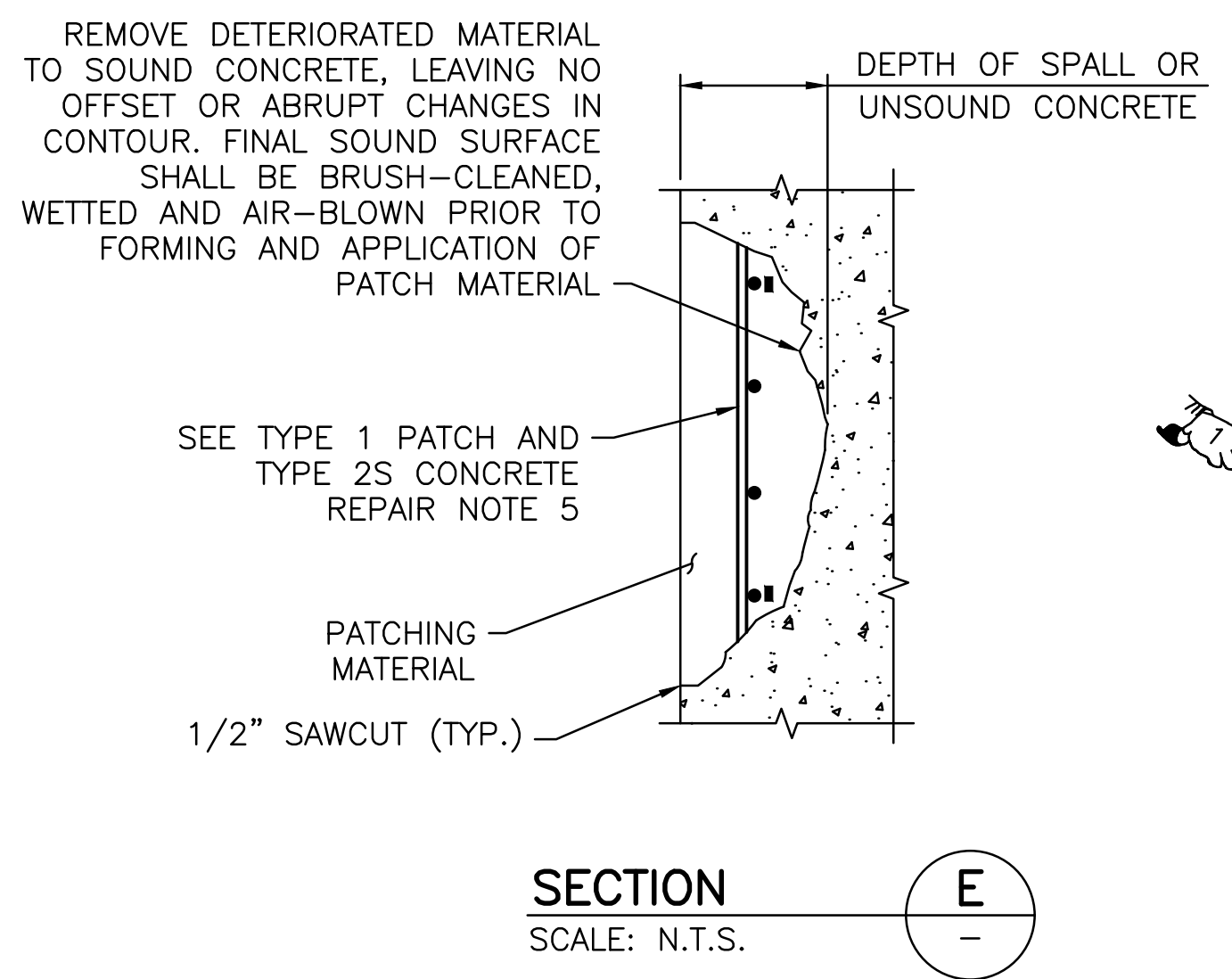
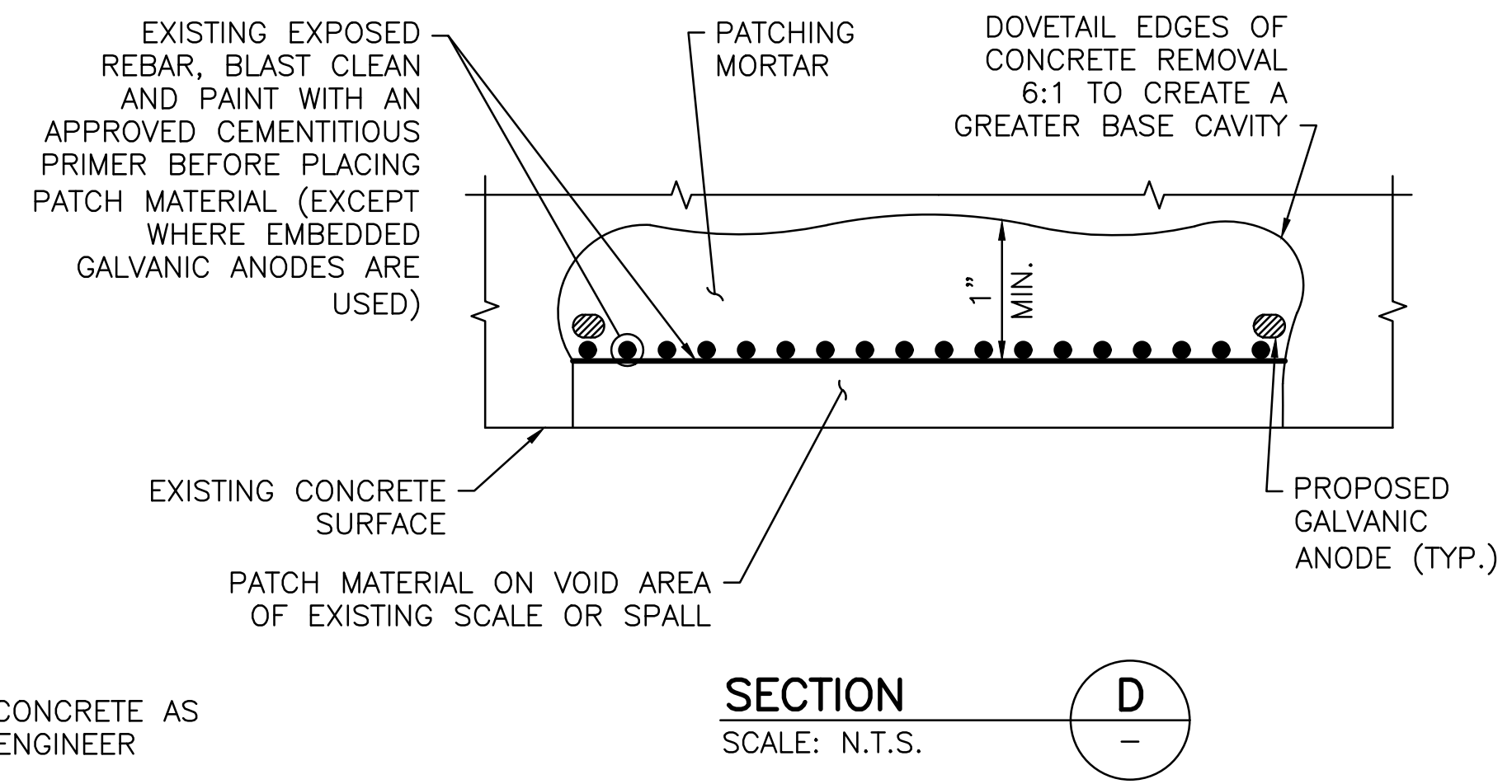
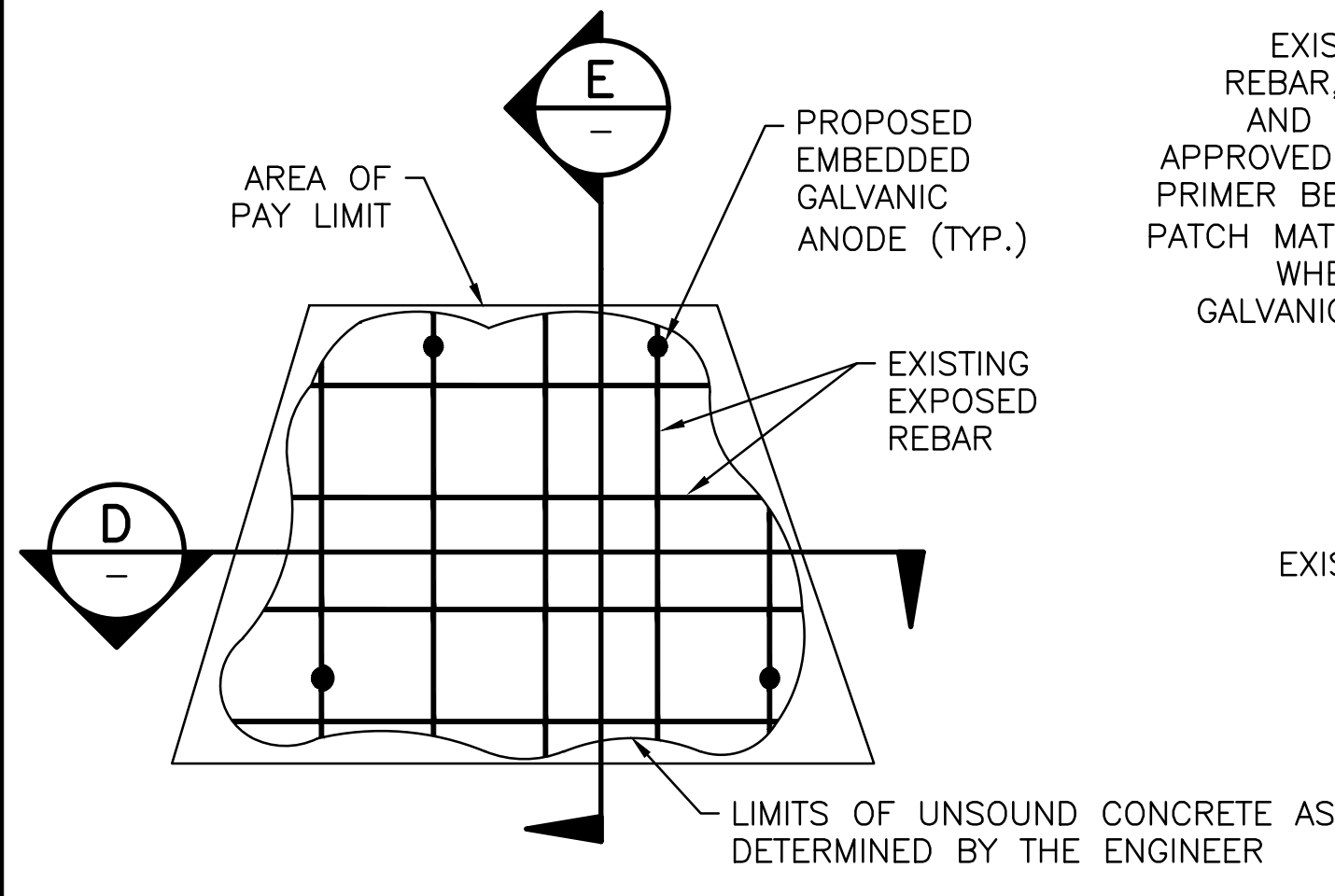
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NO.	DATE	BY
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RHODE ISLAND DEPARTMENT OF TRANSPORTATION	
BRIDGE GROUP 51A - RT. 37 C-2	
CRANSTON	RHODE ISLAND
PIER DETAILS	
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ADDENDUM No. 5



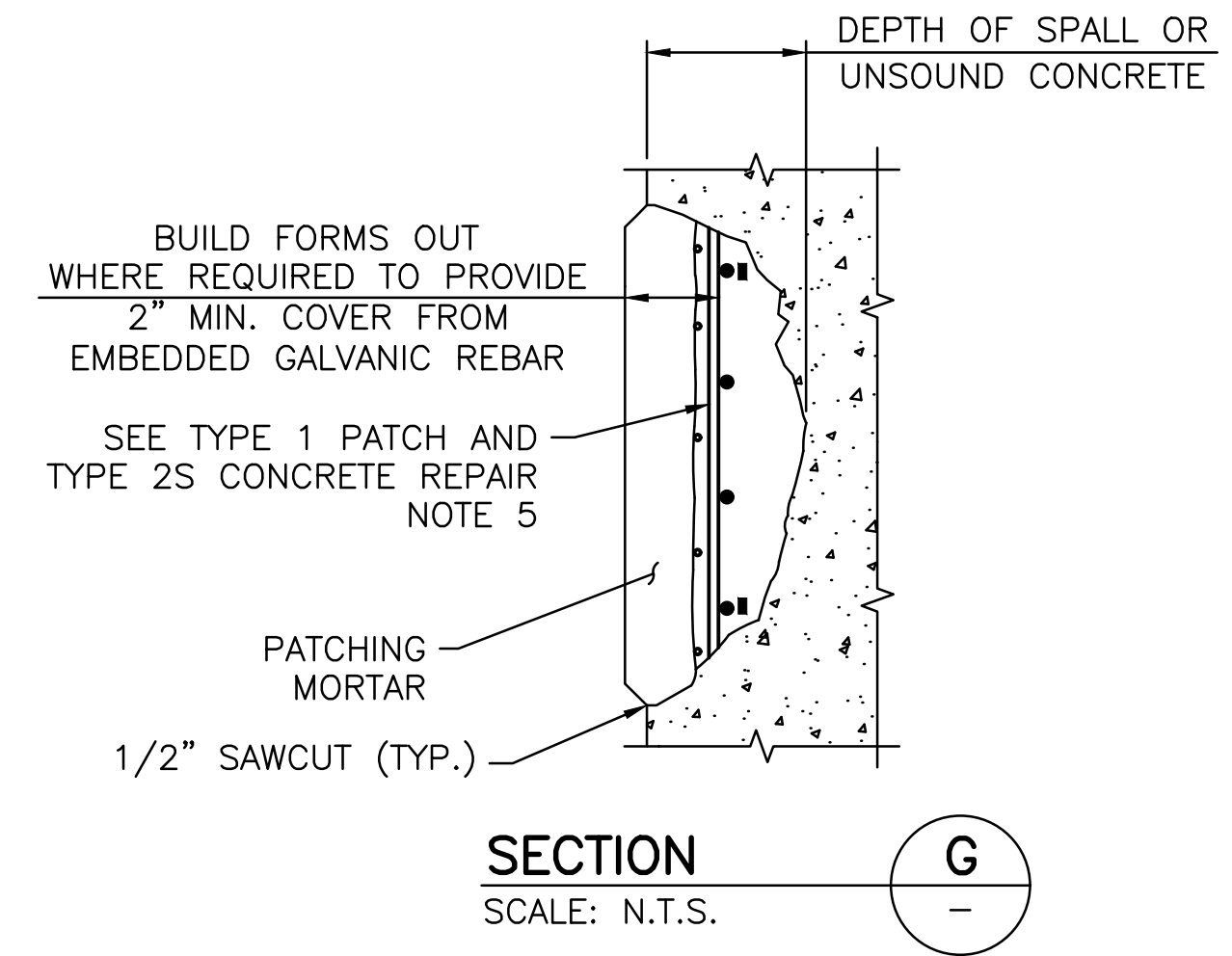
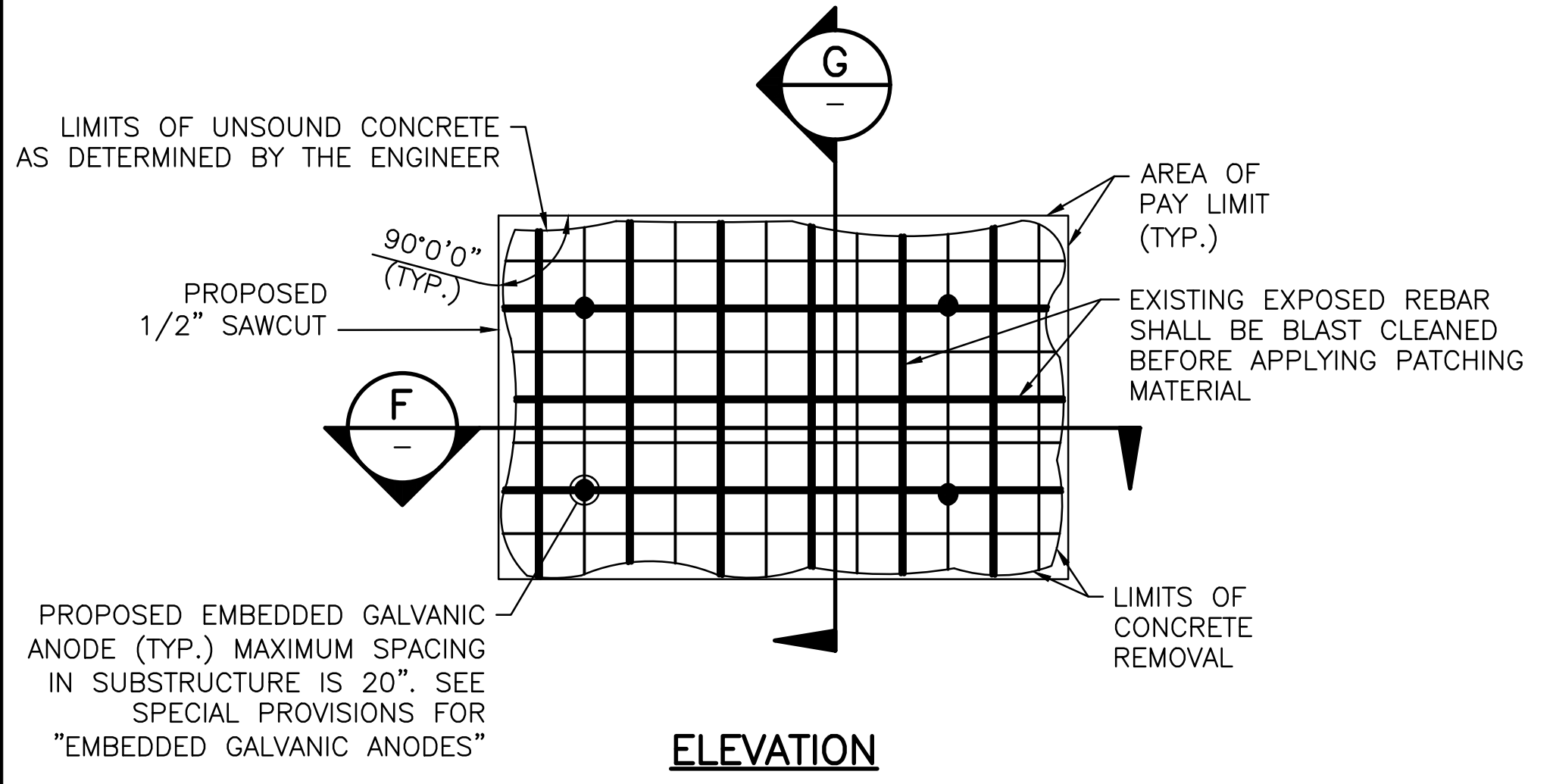
0013C_V4_055_PIER DETAILS - BRIDGE 063801_R-1.dwg Plotted on Friday, November 8, 2019 2:26:18 PM



NOTE:
AFTER REMOVAL OF DETERIORATED CONCRETE, IF EXISTING REINFORCING IS EXPOSED, DEMOLISH SOUND CONCRETE MINIMUM 1" BEYOND EXISTING REINFORCING.

TYPE 2S CONCRETE REPAIR DETAIL – WITHOUT BUILD-OUT

SCALE: N.T.S.



REFERENCES:

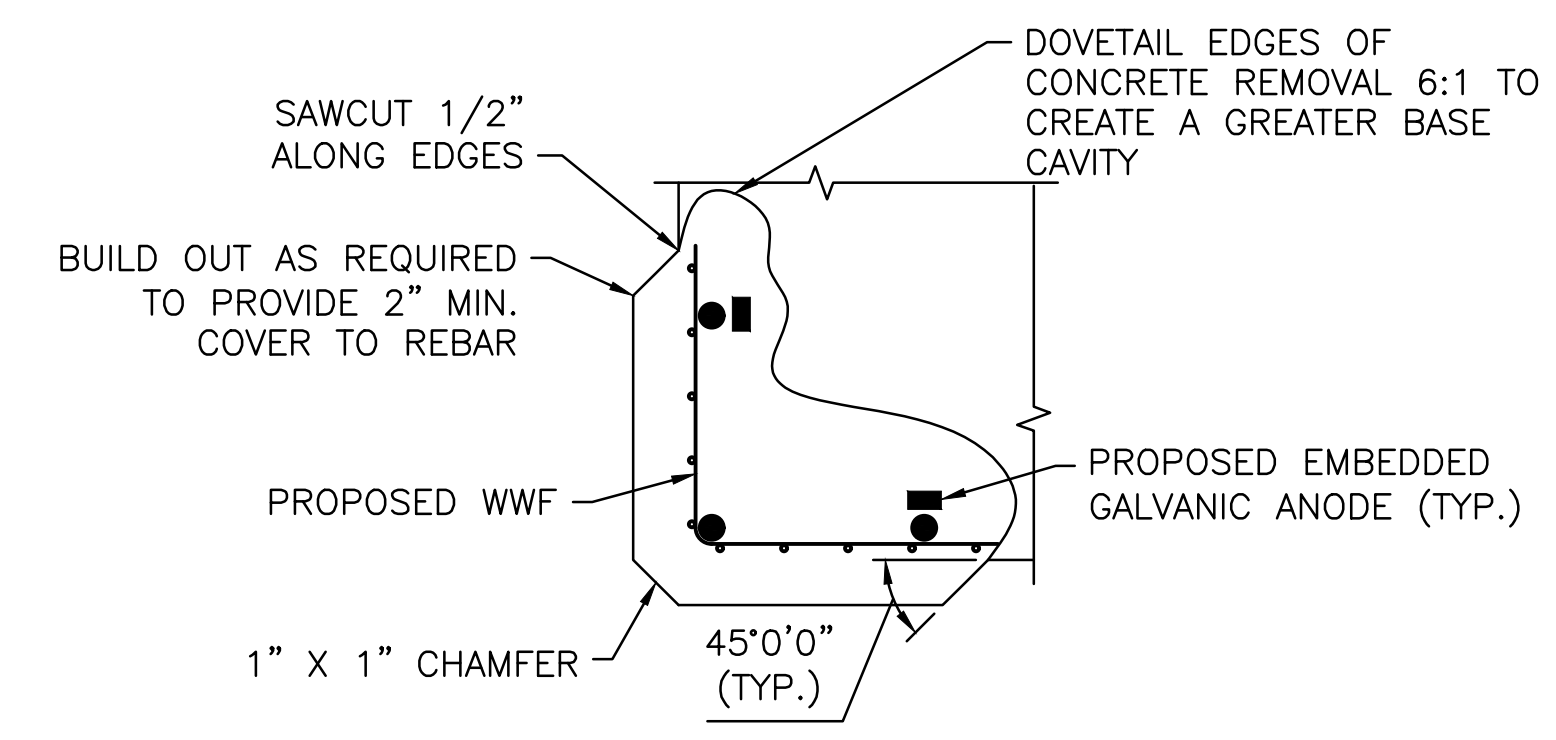
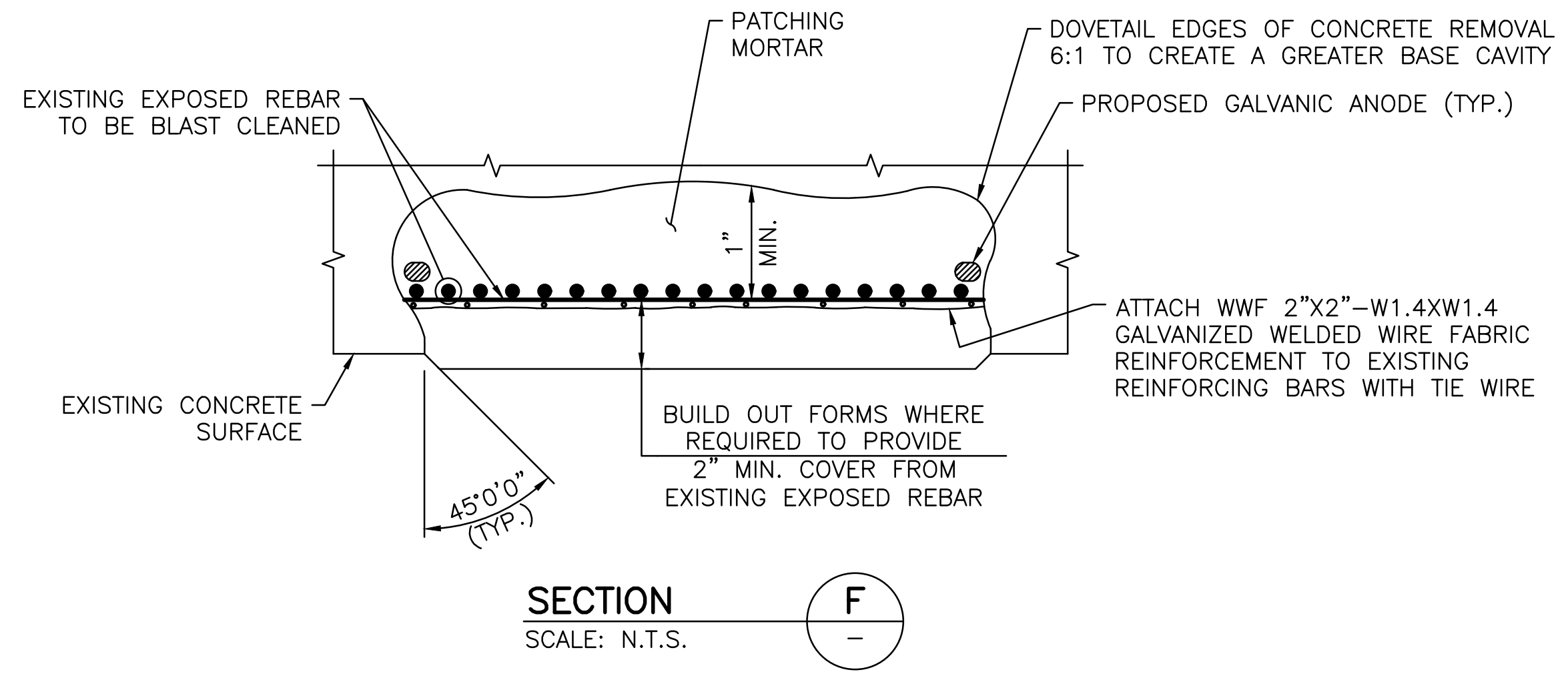
1. SEE SHEET 58 FOR CONCRETE REPAIR NOTES.
2. SEE SHEET 61 FOR EMBEDDED GALVANIC ANODE DETAILS.

TYPE 2S CONCRETE REPAIR PROCEDURE:

1. TYPE 2S CONCRETE REPAIR DETAIL APPLIES TO DETERIORATED AREAS OF REINFORCED CONCRETE WHERE MORE THAN HALF THE REINFORCING IS EXPOSED AND THE AREA IS GREATER THAN 1 SQUARE FOOT.
2. THE LIMITS OF THE REPAIRS SHALL BE SAWCUT ALONG NEAT LINES WHERE PRACTICAL TO A DEPTH OF 1/2" TO PRODUCE A CLEAN EDGE. SEE SPECIAL PROVISIONS.
3. REMOVE DETERIORATED MATERIAL TO SOUND CONCRETE LEAVING NO OFFSET OF ABRUPT CHANGES IN CONTOUR.
4. CLEAN EXISTING REINFORCING STEEL AND CONCRETE (NEWLY EXPOSED). MISSING OR DETERIORATED REINFORCING STEEL SHALL BE REPLACED AND SPLICED AS SHOWN IN DETAIL OR AS DIRECTED BY THE ENGINEER. COST OF NEW REINFORCING STEEL AND SPLICING TO BE INCLUDED AS PART OF THE PATCHING REPAIR ITEM.
5. INSTALL EMBEDDED GALVANIC ANODES AFTER BARS ARE CLEANED AND PRIOR TO APPLYING PATCHING MATERIAL.
6. FORM AND PATCH SURFACE.
7. A MINIMUM OF 72 HOURS SHALL ELAPSE BETWEEN PLACING OF CONCRETE AND START OF NEXT ADJACENT PATCH.
8. ALL NEW EXPOSED CONCRETE SURFACES WITHIN AREA TO BE REPAIRED SHALL BE RUBBED TO PRODUCE A SMOOTH FINISH.
9. ANODES TO BE INSTALLED IN ALL PATCHES. ANODES SHALL BE PAID FOR AND INSTITUTED PER ITEM CODE 810.9901, "EMBEDDED GALVANIC ANODES" MAXIMUM ANODE SPACING SHALL BE 20" ON CENTER.

TYPE 1 PATCH AND TYPE 2S CONCRETE REPAIR NOTES:

1. ALL WORK SHOWN ON THIS DRAWING SHALL BE PERFORMED WHERE DIRECTED BY THE ENGINEER.
2. TYPE 1 CONCRETE REPAIRS SHALL BE PAID UNDER ITEM CODE 817.9901, "REPAIRS TO STRUCTURAL CONCRETE MASONRY (PATCHING MORTAR)". TYPE 2S CONCRETE REPAIRS SHALL BE PAID UNDER ITEM CODE 817.9903, "REPAIRS TO STRUCTURAL CONCRETE MASONRY (TYPE 2S)". SEE SPECIAL PROVISIONS.
3. SURFACE PREPARATION, PROPORTIONING AND MIXING OF MATERIALS, APPLICATION OF MATERIALS AND REPAIR PROCEDURES SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
4. NEW CONCRETE PATCHES SHALL MATCH SHAPE OF EXISTING CONCRETE SURFACES. COLOR OF NEW PATCH CONCRETE SHALL MATCH COLOR OF THE ADJACENT SURFACES AS CLOSELY AS POSSIBLE.
5. EXPOSED REINFORCING BARS SHALL BE BLAST CLEANED.
6. SPLICED REINFORCING BARS SHALL BE GALVANIZED.
7. THE REMOVAL OF DETERIORATED CONCRETE SHALL PROCEED AS DIRECTED BY THE ENGINEER. IF THE REMOVAL OF DETERIORATED CONCRETE BECOMES EXCESSIVE, THE REMOVAL WORK SHALL BE STOPPED AT THE LOCATION AND THE ENGINEER NOTIFIED IMMEDIATELY. COST OF REMOVAL OF DETERIORATED CONCRETE AND SURFACE PREPARATION OF THE REPAIR AREA SHALL BE INCLUDED AS PART OF THE PATCHING REPAIR ITEM.
8. THE CONTRACTOR SHALL NOT REMOVE CONCRETE EXCEPT IN THE PRESENCE OF THE ENGINEER OR HIS APPOINTED REPRESENTATIVE. IF THE AREA REMOVED EXCEEDS THE AREA SHOWN ON THE PLANS BY 25% OR IF THE REMOVAL DEPTH EXTENDS MORE THAN 1 1/2" BEHIND THE MAIN REINFORCING BARS, THE CONTRACTOR SHALL CEASE REMOVAL OPERATIONS AND NOTIFY THE ENGINEER IMMEDIATELY. THE ENGINEER SHALL DETERMINE IF THE REMOVAL OPERATIONS REDUCE THE STRUCTURAL CAPACITY OF THE ELEMENT.
9. AREAS DISTURBED BY CONSTRUCTION SHALL BE RESTORED TO THEIR ORIGINAL CONDITION UNLESS OTHERWISE NOTED OR AS ORDERED BY ENGINEER.
10. REPAIR DETAILS APPLY TO SPALLED, SCALED, AND HOLLOW AREAS IN ABUTMENTS AND PIERS WHERE REQUIRED AND NOTED ON DRAWINGS, AND AS ORDERED BY ENGINEER
11. TYPE 1 PATCH REPAIR TO BE USED FOR ALL UNREINFORCED CONCRETE REPAIR AREAS OR AREAS WHERE NO REINFORCING IS EXPOSED.
12. MECHANICAL COUPLER TO BE USED WHERE REQUIRED LAP LENGTH IS NOT AVAILABLE. THE COST OF MECHANICAL COUPLERS WILL BE CONSIDERED SUBSIDIARY TO AND INCLUDED AS PART OF THE PATCHING REPAIR ITEM.



CORNER PATCH DETAIL
TYPICAL DETAIL APPLICABLE FOR COLUMN CORNERS, OVERHEAD CORNERS, AND TOP EDGE OF PIER CAPS. WORK WITH "TYPE 2S CONCRETE REPAIR PROCEDURE" ON THIS SHEET.

TYPE 2S CONCRETE REPAIR DETAIL – WITH BUILD-OUT

SCALE: N.T.S.

ADDENDUM No. 5

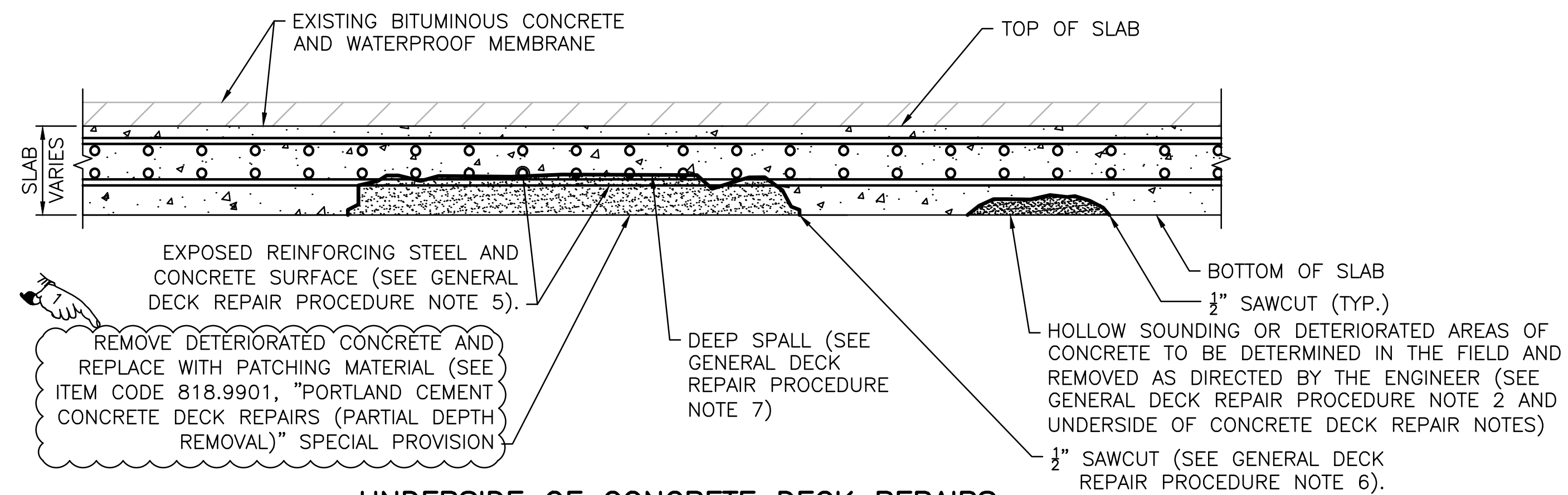


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RHODE ISLAND DEPARTMENT OF TRANSPORTATION	
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CRANSTON / WARWICK	RHODE ISLAND
STANDARD DETAILS - 2	
CHECKED BY _____ DATE _____ SCALE AS NOTED	

GENERAL DECK REPAIR PROCEDURE NOTES:

1. REMOVE DETERIORATED S.I.P. FORMS BY MECHANICAL MEANS AS NEEDED.
2. REMOVE DETERIORATED CONCRETE TO SOUND CONCRETE TO THE LIMITS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
3. PRESERVE EXPOSED REINFORCING STEEL, IF ANY.
4. BLAST CLEAN THE SOUND CONCRETE SURFACE AREA AND EXPOSED REINFORCING STEEL OF ALL LOOSE OR POWDER-LIKE RUST, OIL, DUST, DIRT, LOOSE PARTICLES, AND OTHER BOND INHIBITING MATTER BY AN APPROVED METHOD.
5. COAT THE EXPOSED REINFORCING STEEL AND EXPOSED CONCRETE SURFACES WITH EPOXY ADHESIVE.
6. THE PERIMETER OF EACH DETERIORATED AREA SHALL BE SQUARED OFF BY SAW CUTTING TO THE DEPTH SHOWN.
7. AT LOCATIONS WHERE DETERIORATED CONCRETE IS LESS THAN 1/2 THE SLAB THICKNESS, REPAIR AS "PORTLAND CEMENT CONCRETE DECK REPAIRS (PARTIAL DEPTH REMOVAL)" (ITEM CODE 818.9901). WHERE DETERIORATED CONCRETE ON THE UNDERSIDE OF THE DECK IS DEEPER THAN HALF THE SLAB THICKNESS, REMOVE THE SLAB CONCRETE FULL DEPTH, AND REPAIR AS PORTLAND CEMENT CONCRETE DECK REPAIRS (FULL DEPTH REMOVAL) (ITEM CODE 818.9902) AS DIRECTED BY ENGINEER.



UNDERSIDE OF CONCRETE DECK REPAIRS
(CLEAN AND COAT EXPOSED REINFORCING STEEL)
SCALE: N.T.S.

UNDERSIDE OF CONCRETE DECK REPAIR NOTES:

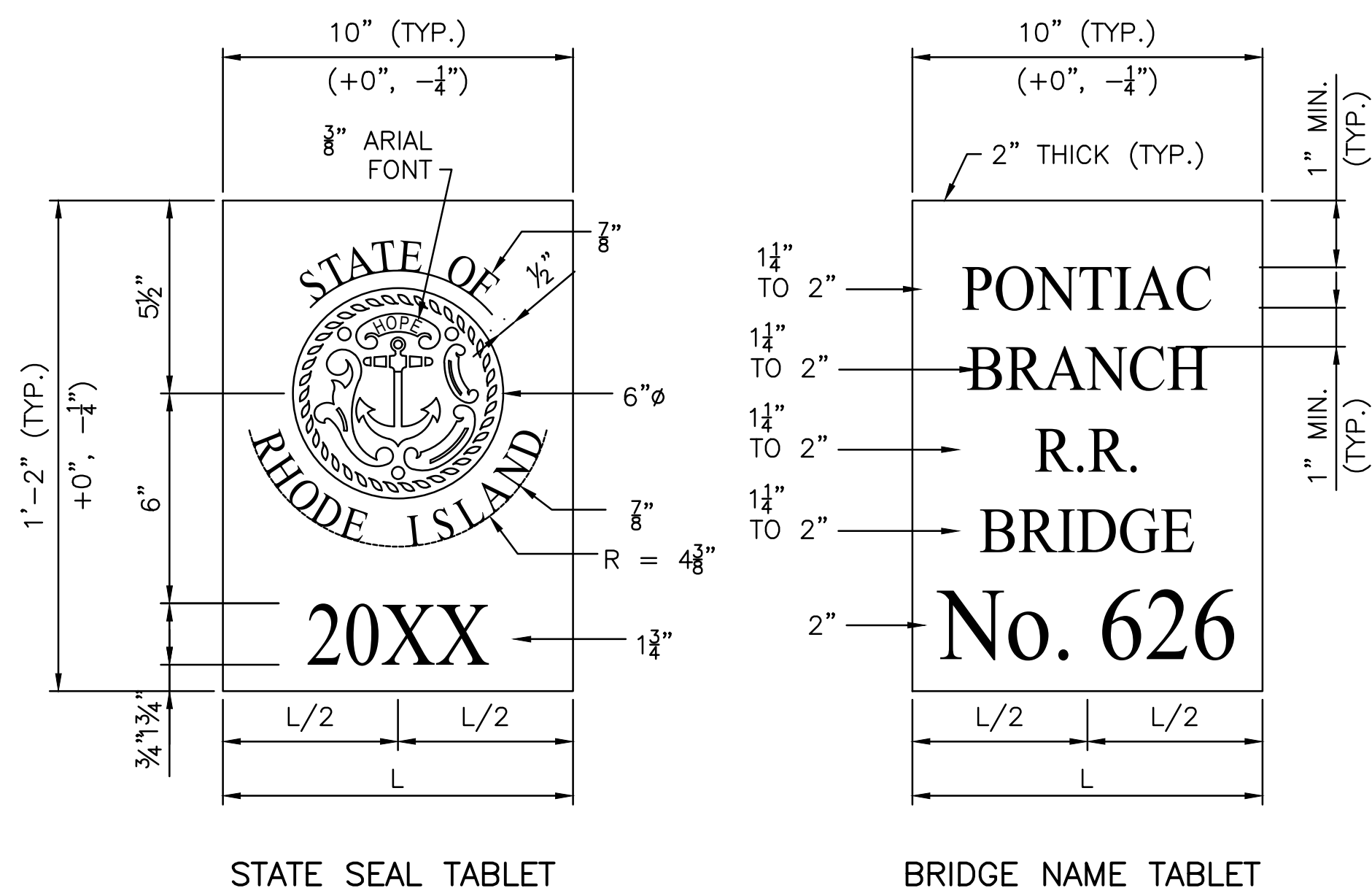
1. TREATMENT OF THE EXPOSED DECK REINFORCEMENT SHALL BE PERFORMED IN ACCORDANCE WITH DETAILS SHOWN ON THIS SHEET AND THE SPECIAL PROVISIONS UNDER ITEM CODE 818.9901, "PORTLAND CEMENT CONCRETE DECK REPAIRS (PARTIAL DEPTH REMOVAL)".
2. ALL WORK SHALL BE CONTAINED BY A TEMPORARY DEBRIS SHIELD IN ACCORDANCE WITH THE PERMIT REQUIREMENTS CONTAINED ELSEWHERE IN THE CONTRACT DOCUMENTS. THE COST OF THIS SHALL BE INCLUDED IN THE PRICE OF THE RESPECTIVE REPAIR ITEM.
3. THE EXISTING SLAB UNDERSIDE SHALL BE SOUNDED FOR HOLLOW AREAS OF CONCRETE TO THE SATISFACTION OF THE ENGINEER. THE CONTRACTOR SHALL PROVIDE SAFE ACCESS TO THE ENGINEER FOR DELINEATION AND INSPECTION OF THE DECK UNDERSIDE, AND THE REPAIR WORK. THE COST OF PROVIDING ACCESS FOR THE INSPECTION SHALL BE INCLUDED IN ITEM CODE 818.9901, "PORTLAND CEMENT CONCRETE DECK REPAIRS (PARTIAL DEPTH REMOVAL)" (SEE SPECIAL PROVISIONS).
4. ALL EXPOSED REINFORCING STEEL SHALL BE THOROUGHLY CLEANED TO REMOVE ANY DEBRIS OR RESIDUE BEFORE APPLYING THE EPOXY ADHESIVE (SEE SPECIAL PROVISION).
5. ANY EXPOSED REINFORCING STEEL IN THE AREAS OF POP-OUTS CAUSED BY THE REMOVAL OF DETERIORATED CONCRETE SHALL BE PRIMED & PATCHED ALSO.
6. THE CONTRACTOR SHALL NOT PERFORM ANY REPAIR WORK WITHOUT PRIOR APPROVAL FROM THE ENGINEER. THE REMOVAL OF DETERIORATED CONCRETE SHALL PROCEED AS DIRECTED BY THE ENGINEER.
7. REPAIR ESTIMATES OF DETERIORATED STAY-IN-PLACE FORMS AND DECK UNDERSIDE ARE BASED ON LIMITED FIELD OBSERVATIONS AND BRIDGE SAFETY INSPECTION REPORTS. THE EXACT LOCATION AND LIMITS OF EXPOSED REINFORCEMENT AND HOLLOW AREAS OF CONCRETE IN THE DECK UNDERSIDE SHALL BE DETERMINED BY THE ENGINEER DURING CONSTRUCTION. FULL DEPTH PATCH REPAIR ESTIMATES ARE BASED ON A PERCENTAGE OF THE DECK UNDERSIDE DETERIORATION.

REFERENCES:

1. SEE BRIDGE CONTRACT DRAWINGS FOR APPROXIMATE DECK REPAIR LOCATIONS.

GRANITE IDENTIFICATION TABLET NOTES:

1. THE COST TO REMOVE EXISTING TABLET, AND PREPARE SURFACE FOR INSTALLATION SHALL BE INCLUDED IN ITEM CODE 833.0400, "GRANITE IDENTIFICATION TABLET".



NOTE:
ALL FONT STYLES ARE TO BE TIMES NEW ROMAN, UNLESS NOTED OTHERWISE

GRANITE IDENTIFICATION TABLETS (NAMEPLATES)
SCALE: 3" = 1'-0"

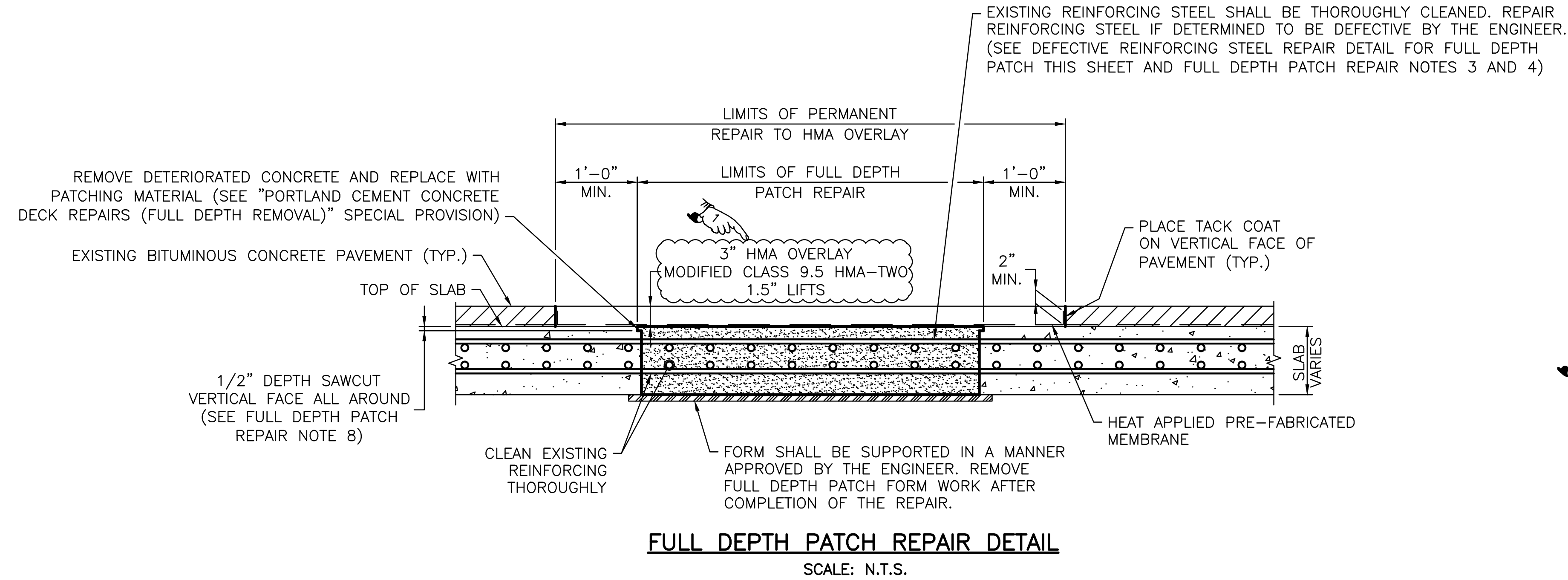
REVISIONS			RHODE ISLAND DEPARTMENT OF TRANSPORTATION	
NO.	DATE	BY		
1	11/8/19	DRC		
			BRIDGE GROUP 51A - RT. 37 C-2	
			CRANSTON / WARWICK RHODE ISLAND	
			STANDARD DETAILS - 5	
			CHECKED BY _____ DATE _____ SCALE AS NOTED	

ADDENDUM No. 5



630 PRESTON AVENUE
MERRIDEN, CT 06450

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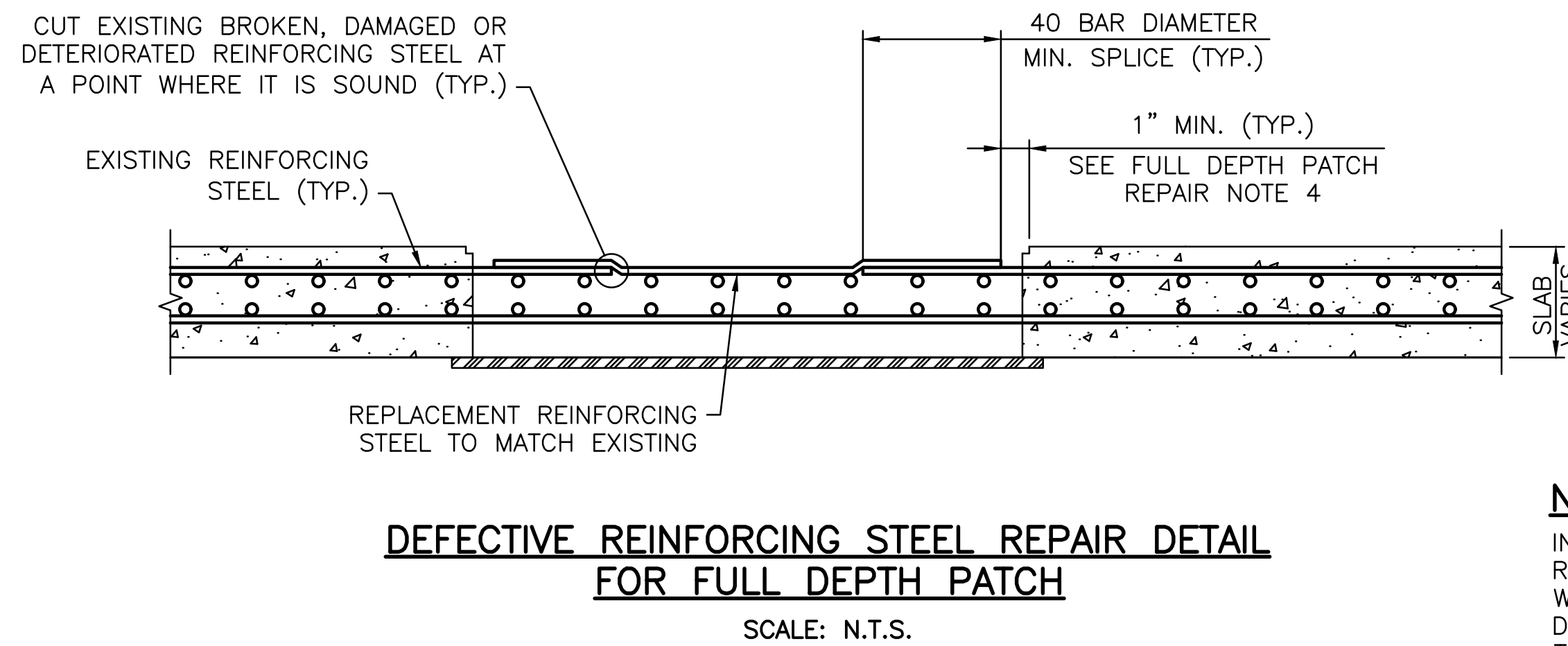


FULL DEPTH PATCH REPAIR NOTES:

1. FULL DEPTH PATCH REPAIRS SHALL BE PERFORMED IN ACCORDANCE WITH DETAIL SHOWN ON THIS SHEET AND THE SPECIAL PROVISIONS UNDER ITEM CODE 818.9902, "PORTLAND CEMENT CONCRETE DECK REPAIRS (FULL DEPTH REMOVAL)". ENGINEER TO DELINEATE LIMITS OF DETERIORATION.
2. ALL BROKEN AND DAMAGED REINFORCING STEEL BARS SHALL BE REPLACED. MINIMUM LENGTH OF SPLICE SHALL BE 40 BAR DIAMETER. MECHANICAL SPLICES MAY BE USED IF AUTHORIZED BY THE ENGINEER. MINIMUM CONCRETE COVER OVER SPLICE IS REQUIRED.
3. NEW REINFORCING STEEL SHALL BE GALVANIZED ASTM A615 GRADE 60. FURNISHING AND INSTALLING REINFORCING BARS SHALL BE INCLUDED UNDER ITEM CODE 818.9902, "PORTLAND CEMENT CONCRETE DECK REPAIRS (FULL DEPTH REMOVAL)".
4. COST OF ADDITIONAL CONCRETE REMOVAL REQUIRED FOR THE REPAIR OF THE REINFORCING STEEL SHALL BE INCLUDED UNDER THE ITEM CODE 818.9902, "PORTLAND CEMENT CONCRETE DECK REPAIRS (FULL DEPTH REMOVAL)".
5. THE COST OF PERMANENT REPAIR TO HMA OVERLAY SHALL BE PAID UNDER THE ITEM "CLASS 9.5 HMA FOR PATCHING".
6. THE CONTRACTOR SHALL PROVIDE NECESSARY SHIELDING TO PREVENT ANY DEBRIS FROM FALLING DURING THE FULL DEPTH PATCH REPAIR. THE COST OF SHIELDING SHALL BE INCLUDED UNDER ITEM CODE 818.9902, "PORTLAND CEMENT CONCRETE DECK REPAIRS (FULL DEPTH REMOVAL)".
7. REPAIR ESTIMATES OF DETERIORATED STAY-IN-PLACE FORMS AND DECK UNDERSIDE ARE BASED ON LIMITED FIELD OBSERVATIONS AND BRIDGE SAFETY INSPECTION REPORTS. THE EXACT LOCATION AND LIMITS OF EXPOSED REINFORCEMENT AND HOLLOW AREAS OF CONCRETE IN THE DECK UNDERSIDE SHALL BE DETERMINED BY THE ENGINEER DURING CONSTRUCTION. FULL DEPTH PATCH REPAIR ESTIMATES ARE BASED ON A PERCENTAGE OF THE DECK UNDERSIDE DETERIORATION.
8. THE PERIMETER OF EACH DETERIORATED AREA SHALL BE SQUARED OFF BY SAW CUTTING TO THE DEPTH SHOWN.

REFERENCES:

1. SEE BRIDGE CONTRACT DRAWINGS FOR APPROXIMATE DECK REPAIR LOCATIONS.



NOTE:

INSTALL PROTECTIVE SHIELDING UNDER SPANS OVER ROADWAYS, SIDEWALKS, PARKING LOTS, AND WATERWAYS TO PROTECT FROM POSSIBLE FALLING OF DEBRIS. THE COST OF WHICH SHALL BE INCLUDED IN THE CONCRETE REPAIR ITEMS.

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ADDENDUM No. 5



530 PRESTON AVENUE
MERCEN, CT 06450

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BRIDGE GROUP 51A - RT. 37 C-2	
CRANSTON / WARWICK	RHODE ISLAND
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ASPHALTIC EXPANSION JOINT SYSTEM NOTES:

- A BRIDGING PLATE SHALL BE USED TO SPAN THE GAP BETWEEN TWO DECK ENDS OR THE JOINT BETWEEN A DECK END AND A CONCRETE APPROACH SLAB AS INDICATED.
- DISCONTINUE THE INSTALLATION OF THE PREFORMED JOINT SEAL AND BRIDGING PLATE WHERE THE APPROACH SLAB IS DISCONTINUED (TYPICALLY IN THE ROADWAY SHOULDERS). SEE "ASPHALTIC EXPANSION JOINT SYSTEM" SPECIAL PROVISION.
- NEW STEEL BRIDGING PLATES SHALL HAVE A MINIMUM THICKNESS OF 1/4" BY 8" WIDE PLATE FOR OPENINGS LESS THAN 3". FOR JOINT OPENINGS THAT EXCEED 3", A 3/8" THICK BY 12" WIDE PLATE WILL BE REQUIRED.
- NO BRIDGING PLATE SHALL BE USED AT THE FOLLOWING LOCATIONS:
 - JOINT BETWEEN A DECK END AND A CONCRETE APPROACH PAVEMENT
 - WHERE A BRIDGE DECK END MEETS A BITUMINOUS APPROACH PAVEMENT
 - WHERE APPROACH SLAB & BRIDGE DECK DIFFER > 1/8" IN ELEVATION
- SAWCUTS MADE 3' EACH SIDE OF CENTERLINE OF JOINT PERFORMED AS PART OF SPECIFICATION CODE 932.0100 "CUTTING AND MATCHING ASPHALT". SEE JOB SPECIFICATIONS FOR PAYMENT.
- THE REMOVAL OF ALL EXISTING JOINT SYSTEMS, HMA WEARING SURFACE, AND BITUMINOUS CONCRETE, COLD APPLIED LIQUID MEMBRANE AND BOND BREAKER WITHIN THE LIMITS SHOWN TO BE PERFORMED AS PART OF SPECIFICATION CODE 839.0200 "FULL DEPTH REMOVAL AND DISPOSAL OF BITUMINOUS PAVEMENT FROM CONCRETE BRIDGE DECKS". SEE JOB SPECIFICATIONS FOR PAYMENT.
- INSTALLATION OF MEMBRANE WITHIN THE LIMITS SHOWN TO BE PERFORMED AS PART OF SPECIFICATION CODE 813.0210, "HEAT APPLIED PRE-FABRICATED MEMBRANE". SEE JOB SPECIFICATIONS FOR PAYMENT.
- TACK COAT PLACED ALONG VERTICAL FACES AND ON TOP OF THE WEARING SURFACE AT THE SAWCUT TO BE PERFORMED AS PART OF SPECIFICATION CODE 403.0300, "ASPHALT EMULSION TACK COAT". SEE JOB SPECIFIC SPECIFICATIONS FOR PAYMENT.
- THE FURNISHING AND PLACING OF MODIFIED CLASS 9.5 HMA SHALL BE PAID UNDER ITEM CODE 800.992X, "REPAIRS TO ROUTE 37 BRIDGE NO. 063XXX".
- THE CONTRACTOR IS RESPONSIBLE FOR MEASURING THE JOINT GAP WIDTHS IN BOTH, THE BRIDGE DECKS AND PARAPETS IN ACCORDANCE WITH SPECIFICATION CODE 823.9901 "PREFORMED JOINT SEAL".
- ASPHALTIC EXPANSION JOINT SYSTEMS MAY BE INSTALLED ONLY WITHIN THE TEMPERATURE RANGE AS SPECIFIED BY MANUFACTURER.
- ASPHALTIC JOINT MATERIAL SHALL BE REPLACED FROM GUTTER LINE TO GUTTER LINE. PREFORMED JOINT SEALS SHALL CONTINUE INTO PARAPETS AS DETAILED.
- EXPLORATION OF PAVEMENT THICKNESS AND JOINT LOCATION TO BE PERFORMED AS PART OF SPECIFICATION CODE 839.0200 "FULL DEPTH REMOVAL AND DISPOSAL OF BITUMINOUS PAVEMENT FROM CONCRETE BRIDGE DECKS" (SEE NOTES 5 AND 6 ABOVE). SEE JOB SPECIFIC SPECIFICATIONS FOR PAYMENT.
- THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER, A LETTER FROM THE MANUFACTURER OF THE JOINT STATING THAT THE JOINT IS APPROPRIATE FOR USE AT EACH JOINT LOCATION AND WILL FUNCTION ADEQUATELY GIVEN THE MAXIMUM AND MINIMUM JOINT WIDTHS SPECIFIED BY THE MANUFACTURER, MAXIMUM SKEW ANGLE AND MOVEMENT RANGE AT EACH JOINT LOCATION.

REFERENCES:

- SEE SHEET 65 THROUGH SHEET 68 FOR ASPHALTIC EXPANSION JOINT SYSTEM DETAILS.

BITUMINOUS CONCRETE PLACEMENT REQUIREMENTS FOR BRIDGE DECK JOINTS:

- ALL THE REQUIREMENTS OF SPECIAL PROVISION SECTION 401 IN THE CONTRACT SHALL BE MET EXCEPT AS DESCRIBED BELOW, FOR AREAS ADJACENT TO REPAIRED JOINTS.
- THE FIRST COURSE OF BITUMINOUS CONCRETE MATERIAL SHALL BE PLACED ON THE MEMBRANE AT A COMPACTED THICKNESS OF EXACTLY 1 1/4 INCHES UNIFORMLY. IF LIFTS OF VARYING THICKNESS ARE REQUIRED, THEY SHALL BE CONTAINED IN THE INTERMEDIATE LIFTS. THE FINAL LIFT SHALL BE OF UNIFORM THICKNESS. IN LIEU OF DENSITY TESTING, THE METHODS DESCRIBED BELOW SHALL BE FOLLOWED TO ASSURE PROPER COMPACTION.
- BITUMINOUS CONCRETE MATERIAL SHALL BE PLACED AND SPREAD IN THE PREPARED AREA WITH COMPACTION COMMENCING PRIOR TO THE MATERIAL COOLING TO A TEMPERATURE OF 260°F. UNSPREAD MATERIAL SHALL BE PROPERLY DISCARDED BY THE CONTRACTOR AT NO COST TO THE STATE.
- THE BITUMINOUS CONCRETE MATERIAL SHALL BE COMPACTED PER THE REQUIREMENTS IN THE STANDARD SPECIFICATIONS IN ALL AREAS. ALL COMPACTION (COMPLETING THE MINIMUM NUMBER OF SPECIFIED PASSES) SHALL BE COMPLETED BEFORE THE BITUMINOUS CONCRETE COOLS TO A TEMPERATURE OF 180°F.
- ALL INTERMEDIATE (NON-SURFACE) LIFTS SHALL BE COMPACTED WITH AN ASPHALT VIBRATORY PLATE COMPACTOR.
 - THE VIBRATORY PLATE COMPACTOR SHALL MEET THE FOLLOWING REQUIREMENTS:
 - IT SHALL BE DESIGNED TO COMPACT BITUMINOUS CONCRETE.
 - IT SHALL BE EQUIPPED WITH A WATER TANK.
 - IT SHALL GENERATE A CENTRIFUGAL FORCE OF AT LEAST 3200 POUNDS BUT NO GREATER THAN 6000 POUNDS
 - IT SHALL HAVE AN OPERATING WEIGHT (WITHOUT WATER) OF AT LEAST 160 POUNDS.
 - IT SHALL GENERATE A MINIMUM OF 4400 VIBRATIONS PER MINUTE.
 - ANY CORNERS OR OTHER AREAS THAT CANNOT BE REACHED BY THE VIBRATORY PLATE COMPACTOR SHALL BE COMPACTED WITH A HAND TAMPER (APPROVED FOR USE BY THE ENGINEER) A MINIMUM OF 20 TIMES (FOR ANY GIVEN AREA) BEFORE THE MATERIAL TEMPERATURE DROPS TO 180°F
- THE FINAL (SURFACE) LIFT SHALL BE COMPACTED WITH A DOUBLE DRUM ROLLER.
 - THE DOUBLE DRUM ROLLER SHALL MEET THE FOLLOWING REQUIREMENTS:
 - IT SHALL BE DESIGNED TO COMPACT BITUMINOUS CONCRETE.
 - IT SHALL WEIGH 3 1/2 TO 4 1/2 TONS.
- THE CONTRACTOR MAY REQUEST TO USE ALTERNATE EQUIPMENT BY SUBMITTING A SUPPLEMENT TO THEIR QC PLAN DESCRIBING THE EQUIPMENTS SPECIFICATIONS AND PLACEMENT PROCEDURES. THE EQUIPMENT AND PROCEDURES MUST BE APPROVED BY THE ENGINEER PRIOR TO THEIR USE.
- IF THE ABOVE METHODS ARE NOT COMPLETED TO THE SATISFACTION OF THE ENGINEER, HE/SHE MAY REQUIRE THE DENSITY OF ANY LIFT OF 1 1/2 INCHES OR GREATER BE VERIFIED BY USE OF A QUALITY CONTROL NUCLEAR DENSITY GAUGE SUPPLIED BY THE CONTRACTOR. IF DENSITY VERIFICATION IS REQUIRED BY THE ENGINEER, THE VALUES MUST CONFORM TO THE REQUIREMENTS OF SPECIAL PROVISION SECTION 401 IN THE CONTRACT.

COMMON JOINT REPLACEMENT NOTES:

- SEE INDIVIDUAL JOINT DETAILS FOR ANY ADDITIONAL NOTES SPECIFIC TO INDIVIDUAL JOINTS.
- ANY UTILITIES BELOW THE DECK AND CONDUITS IN PARAPETS SHALL BE PROTECTED.
- ALL SCUPPERS ADJACENT TO JOINTS SHALL BE PROTECTED.
- JOINTS WILL NEED TO BE CONSTRUCTED IN STAGES, IF SPECIFIED. JOINT SPLICING DETAILS SHALL FOLLOW MANUFACTURER RECOMMENDATIONS.
- TRANSVERSE REINFORCEMENT SHALL BE MADE CONTINUOUS USING DOWEL BAR SPLICERS OR ADEQUATE LAP SPLICES OF REINFORCEMENT.
- IF AN ADEQUATE LAP SPLICE CANNOT BE DEVELOPED, CONCRETE SHALL BE REMOVED AS NECESSARY AT THE DIRECTION OF THE ENGINEER TO DEVELOP AN ADEQUATE LAP SPLICE. THIS WORK SHALL BE PERFORMED AS PART OF SPECIFICATION CODE 817.9904, "EXPANSION JOINT HEADER REPAIRS WITH POLYMER MORTAR". SEE JOB SPECIFIC SPECIFICATIONS FOR PAYMENT.
- LONG-DURATION STAGED CONSTRUCTION IS NOT ALLOWED. CONTRACTOR SHALL SUBMIT DESIGN DETAILS AND CALCULATIONS FOR A TEMPORARY REMOVABLE STEEL BRIDGING PLATE TO FACILITATE RECONSTRUCTION OF DECK ENDS AND INSTALLATION OF JOINTS DURING OFF-PEAK HOURS AND ALLOW TRAFFIC TO UTILIZE THE ROADWAY DURING PEAK HOURS.
- THE CONTRACTOR SHALL UNDERTAKE A SURVEY OF THE JOINT PRIOR TO START OF ANY WORK AND INFORM THE ENGINEER IMMEDIATELY IF CONDITIONS DO NOT REFLECT WHAT IS SHOWN ON THE PLANS. AS PART OF THIS SURVEY, THE CONTRACTOR IS ALSO REQUIRED TO DEVELOP A CROSS-SECTION AT THE JOINT IN ORDER TO CORRECTLY FABRICATE ANY EXTRUSIONS OR PREFABRICATED COMPONENTS ETC. THAT MAY BE REQUIRED. THE COST TO DO THE SURVEY IS INCLUDED IN PAYMENT AS SPECIFIED UNDER CODE 823.9901, "PREFORMED JOINT SEAL". SEE JOB SPECIFIC SPECIFICATIONS FOR PAYMENT.
- AFTER BITUMINOUS OVERLAY HAS BEEN REMOVED, ANY DETERIORATED CONCRETE ON THE BRIDGE DECK/APPROACH SLABS SHALL BE REPAIRED AS PART OF "EXPANSION JOINT HEADER REPAIRS WITH POLYMER MORTAR". SEE JOB SPECIFIC SPECIFICATIONS FOR PAYMENT.
- REPAIRS OR MODIFICATIONS TO TOP OF ABUTMENT BACKWALL SHALL BE PERFORMED AS PART OF "EXPANSION JOINT HEADER REPAIRS WITH POLYMER MORTAR" (SEE SHEET 67) AS APPLICABLE & DETERMINED BY THE ENGINEER. SEE JOB SPECIFIC SPECIFICATIONS FOR PAYMENT.
- THE CONTRACTOR SHALL MEASURE THE DECK JOINT GAP OPENING FOR SIZING THE PREFORMED JOINT SEAL. ORDERING OF THE PREFORMED JOINT SEAL MAY REQUIRE LONGER LEAD TIMES.
- THE CONTRACTOR IS RESPONSIBLE FOR FILLING OUT THE APPLICABLE PREFORMED JOINT SEAL CHECKLIST FOR EACH JOINT LOCATION. THE CHECKLIST SHALL BE FORWARDED TO THE MANUFACTURER FOR REVIEW.
- LOCATOR PINS SHALL NOT BE USED TO SECURE THE BRIDGING PLATE.

ASPHALTIC EXPANSION JOINT SYSTEM

ABUTMENT NO. 1	BR 063001	BR 063101	BR 063201	BR 063301	BR 063401	BR 063801
EFFECTIVE SPAN LENGTH (FT)	56'-0"	63'-3"	0'-0"	0'-0"	27'-2 3/8"	29'-5 3/4"
THERMAL MOVEMENT RANGE (IN)	1/2"	1/2"	0"	0"	3/8"	1/2"
BEARING	FIXED	EXPANSION	FIXED	FIXED	EXPANSION	EXPANSION
PIER 1						
EFFECTIVE SPAN LENGTH (FT)	-	-	101'-3 7/8"	101'-10 3/8"	0'-0"	55'-10 1/4"
THERMAL MOVEMENT RANGE (IN)	-	-	1"	1"	0"	1/2"
BEARING	-	-	EXP/EXP	EXP/EXP	FIX/FIX	FIX/EXP
PIER 2						
EFFECTIVE SPAN LENGTH (FT)	-	-	0'-0"	0'-0"	64'-5 1/2"	58'-11 7/8"
THERMAL MOVEMENT RANGE (IN)	-	-	0"	0"	5/8"	1/2"
BEARING	-	-	FIX/FIX	FIXED	EXP/FIX	FIX/FIX
PIER 3						
EFFECTIVE SPAN LENGTH (FT)	-	-	144'-0"	141'-9"	-	58'-11 7/8"
THERMAL MOVEMENT RANGE (IN)	-	-	1 3/8"	1 3/8"	-	1/2"
BEARING	-	-	EXP/EXP	EXP/EXP	-	EXP/FIX
ABUTMENT NO. 2	BR 063001	BR 063101	BR 063201	BR 063301	BR 063401	BR 063801
EFFECTIVE SPAN LENGTH (FT)	56'-0"	63'-3"	0'-0"	0'-0"	32'-3 3/8"	31'-1 7/8"
THERMAL MOVEMENT RANGE (IN)	1/2"	1/2"	0"	0"	3/8"	1/2"
BEARING	EXPANSION	FIXED	FIXED	FIXED	EXPANSION	EXPANSION

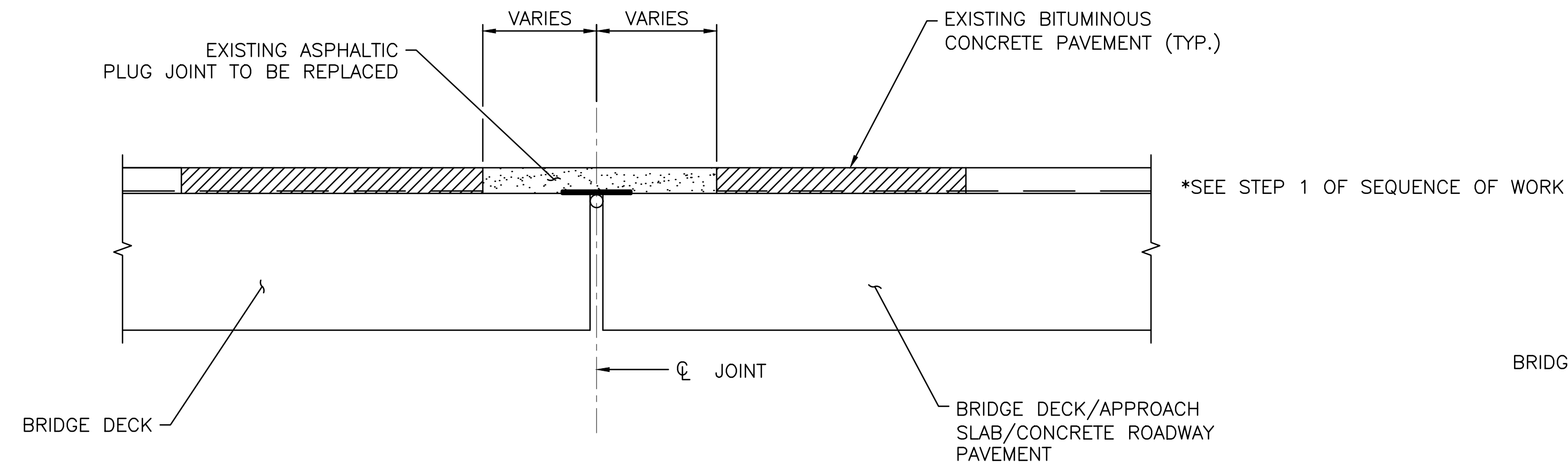
ADDENDUM No. 5



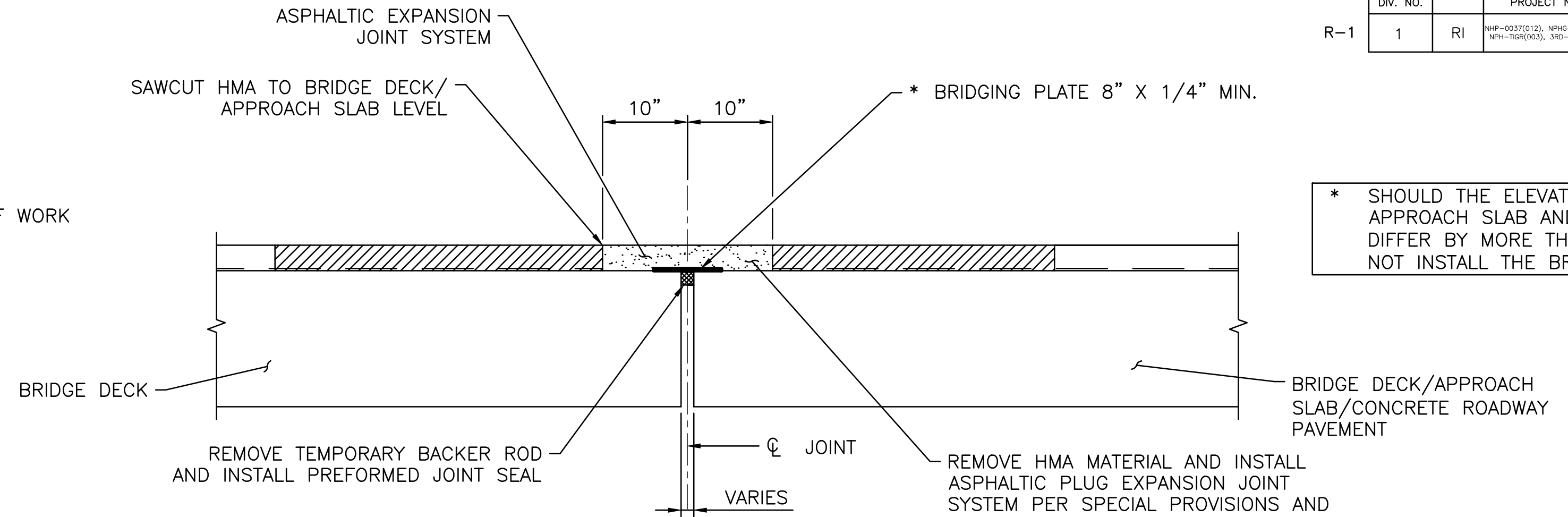
530 PRESTON AVENUE
MERRIDEN, CT 06460

REVISIONS			RHODE ISLAND DEPARTMENT OF TRANSPORTATION	
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1	11/8/19	DRC		
			BRIDGE GROUP 51A - RT. 37 C-2	
			CRANSTON / WARWICK RHODE ISLAND	
			STANDARD DETAILS - 7	
			CHECKED BY _____ DATE _____ SCALE AS NOTED	

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
1	RI	RI-00370121, RI-00370131, RI-100(003), 300-PRY(208)	2019	65	75



EXISTING CONDITIONS

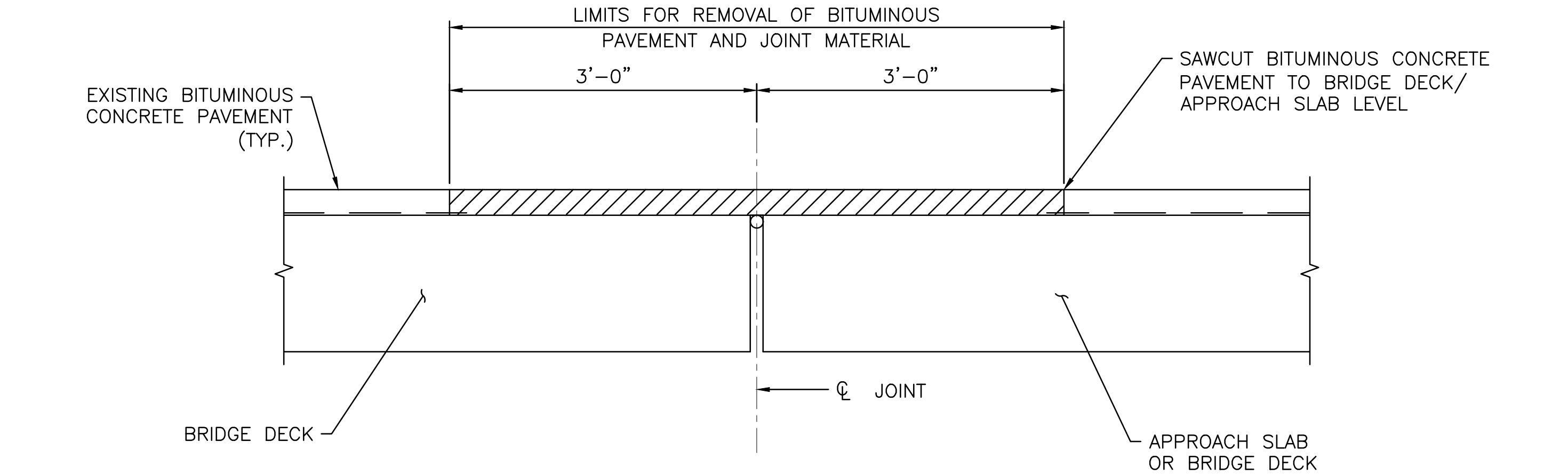


FINAL CONDITION (STEPS 8-11)

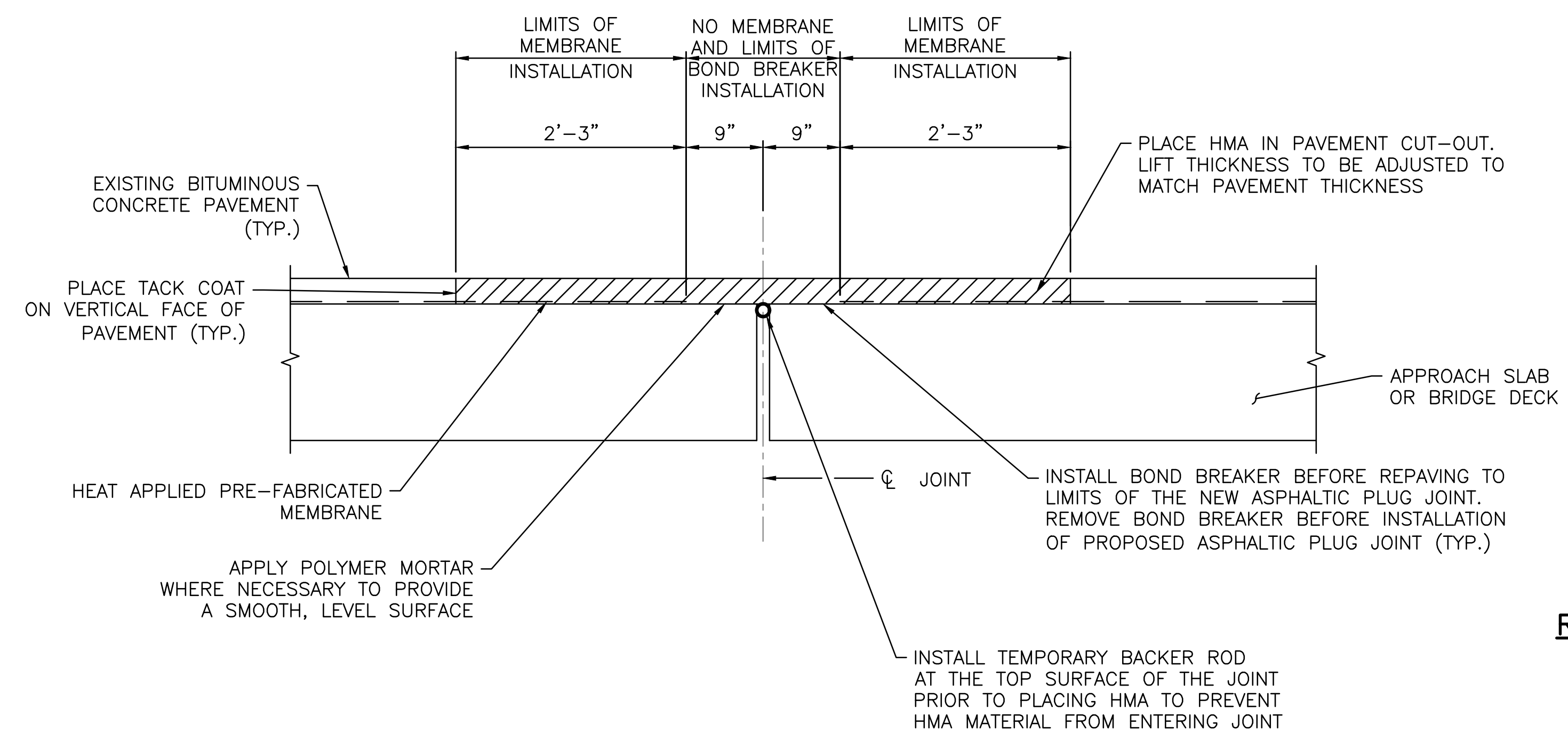
* SHOULD THE ELEVATION OF THE APPROACH SLAB AND BRIDGE DECK DIFFER BY MORE THAN 1/8" DO NOT INSTALL THE BRIDGING PLATE

SEQUENCE OF WORK:

- STEP 1: CONTRACTOR SHALL PERFORM AN EXPLORATION AT THE GUTTER LINE AT EACH END OF JOINT AND THE CROWN AT THE BEGINNING AND END OF THE BRIDGE. A MINIMUM OF SIX REPRESENTATIVE DEPTH MEASUREMENTS SHALL BE TAKEN AT THESE LOCATIONS (ADDITIONAL MEASUREMENTS SHALL BE TAKEN, IF NEEDED, PERFORMED AS PART OF SPECIFICATION CODE 839.0200, "FULL DEPTH REMOVAL AND DISPOSAL OF BITUMINOUS PAVEMENT FROM CONCRETE BRIDGE DECKS" TO DETERMINE THE DEPTH OF PAVEMENT AND THE LOCATION OF THE DECK ENDS (CENTERLINE OF PROPOSED JOINT) BEFORE PROCEEDING TO STEP 2. SEE JOB SPECIFIC SPECIFICATIONS FOR PAYMENT.
- STEP 2: SAWCUT BITUMINOUS PAVEMENT ON BOTH SIDES OF EXISTING JOINT FOR PAVEMENT CUT-OUT. EACH SAWCUT LINE SHALL BE 3' FROM THE CENTERLINE OF EXISTING JOINT. SAWCUT SHALL NOT DAMAGE EXISTING DECK OR APPROACH SLAB. TO BE PERFORMED AS PART OF SPECIFICATION CODE 932.0100, "CUTTING AND MATCHING ASPHALT". SEE JOB SPECIFIC SPECIFICATIONS FOR PAYMENT.
- STEP 3: REMOVE EXISTING PAVEMENT MATERIAL, MEMBRANE WATERPROOFING, AND JOINT MATERIAL WITHIN THE LIMITS SHOWN. TO BE PERFORMED AS PART OF SPECIFICATION CODE 839.0200, "FULL DEPTH REMOVAL AND DISPOSAL OF BITUMINOUS PAVEMENT FROM CONCRETE BRIDGE DECKS". SEE JOB SPECIFIC SPECIFICATIONS FOR PAYMENT.
- STEP 4: REPAIR EXPANSION JOINT HEADERS AS DETAILED ON THE DECK AND TOP OF BACK WALL (AS APPLICABLE). PROVIDE APPROACH SLAB/BACKWALL WATERPROOFING AS DETAILED.
- STEP 5: REPAIR THE SURFACE OF THE APPROACH PAVING AS REQUIRED AND INSTALL MEMBRANE TO THE TOP OF DECK WITHIN THE LIMITS SHOWN. INSTALL BOND BREAKER BEFORE REPAVING TO THE LIMITS OF NEW ASPHALTIC PLUG JOINT. WATERPROOFING TO BE PERFORMED AS PART OF "HEAT APPLIED PRE-FABRICATED MEMBRANE". BOND BREAKER TO BE PERFORMED AS PART OF "MODIFIED CLASS 9.5 HMA". SEE JOB SPECIFIC SPECIFICATIONS FOR PAYMENT OF EACH.
- STEP 6: PLACE TACK COAT ON VERTICAL EDGE OF PAVEMENT ALONG SAWCUT LINES TO BE PERFORMED AS PART OF "ASPHALT EMULSION TACK COAT". INSTALL TEMPORARY BACKER ROD FLUSH WITH THE BRIDGE DECK AND APPROACH SLAB, PERFORMED AS PART OF "ASPHALTIC EXPANSION JOINT SYSTEM". SEE JOB SPECIFICATION FOR PAYMENT OF EACH.
- STEP 7: PLACE HMA IN THE JOINT CUT-OUT. TO BE TO BE PERFORMED AS PART OF "MODIFIED CLASS 9.5 HMA". SEE JOB SPECIFIC SPECIFICATIONS FOR PAYMENT.
- STEP 8: CUT BITUMINOUS PAVEMENT FULL DEPTH, 10" EACH SIDE OF CENTER OF JOINT, AND REMOVE ALL PAVEMENT MATERIAL AND BOND BREAKER BETWEEN SAWCUTS.
- STEP 9: INSTALL PROPOSED PREFORMED JOINT SEAL SYSTEM. TO BE PERFORMED AS PART OF "PREFORMED JOINT SEAL". SEE JOB SPECIFIC SPECIFICATIONS FOR PAYMENT.
- STEP 10: INSTALL THE BRIDGING PLATE. TO BE PERFORMED AS PART OF "ASPHALTIC EXPANSION JOINT SYSTEM". SEE JOB SPECIFIC SPECIFICATIONS FOR PAYMENT.
- STEP 11: INSTALL PROPOSED ASPHALTIC EXPANSION JOINT SYSTEM. TO BE PERFORMED AS PART OF "ASPHALTIC EXPANSION JOINT SYSTEM". SEE JOB SPECIFIC SPECIFICATIONS FOR PAYMENT.
- STEP 12: PLACE TACK COAT AT CURB LINE, BOTH SIDES.



**INTERMEDIATE CONDITION
JOINT AND PAVEMENT REMOVAL (STEPS 1-3)**



**INTERMEDIATE CONDITION
PLACEMENT OF PAVEMENT IN JOINT CUTOUT (STEPS 4-7)**

REFERENCES:

- 1. SEE SHEET 64 FOR GENERAL ASPHALTIC EXPANSION JOINT NOTES.

**PROPOSED ASPHALTIC EXPANSION JOINT SYSTEM WITH
BRIDGING PLATE**

SCALE: N.T.S.

ADDENDUM No. 5



REVISIONS		
NO.	DATE	BY
1	11/8/19	DRC

**RHODE ISLAND
DEPARTMENT OF TRANSPORTATION**

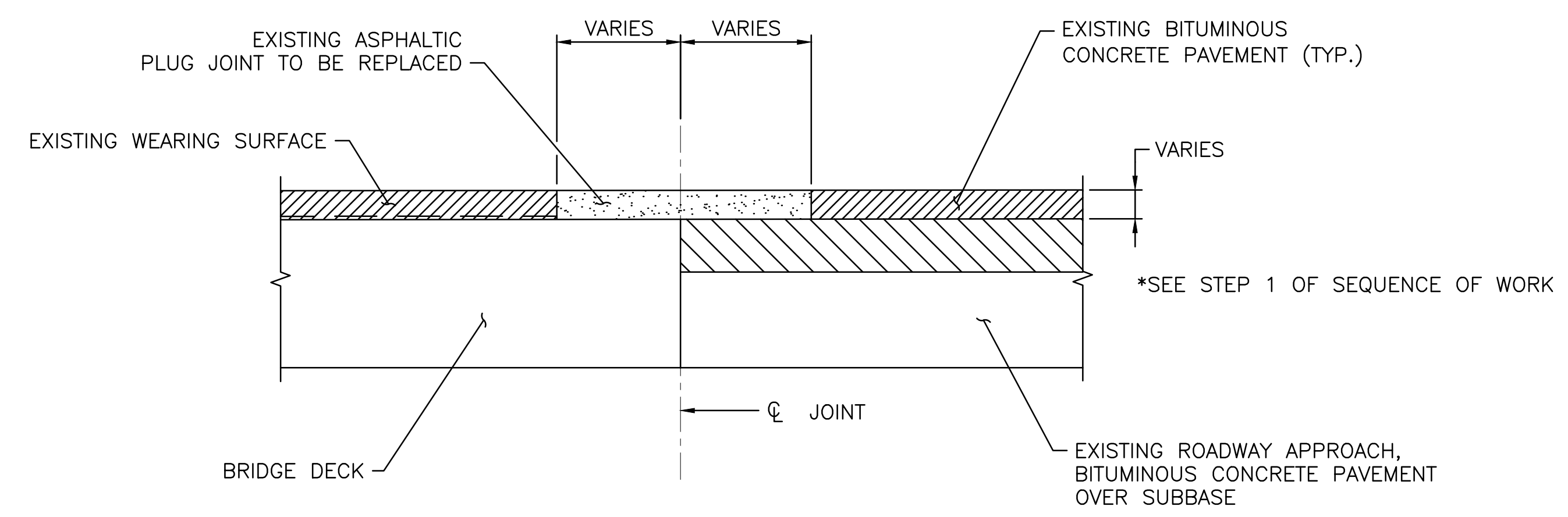
BRIDGE GROUP 51A - RT. 37 C-2

CRANSTON / WARWICK RHODE ISLAND

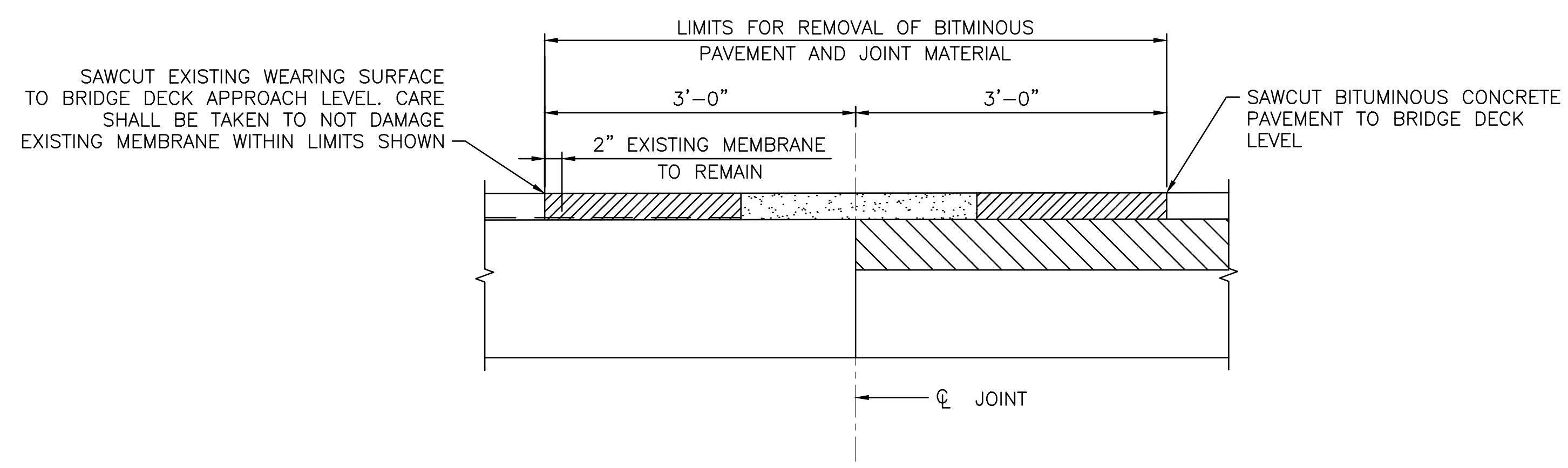
STANDARD DETAILS - 8

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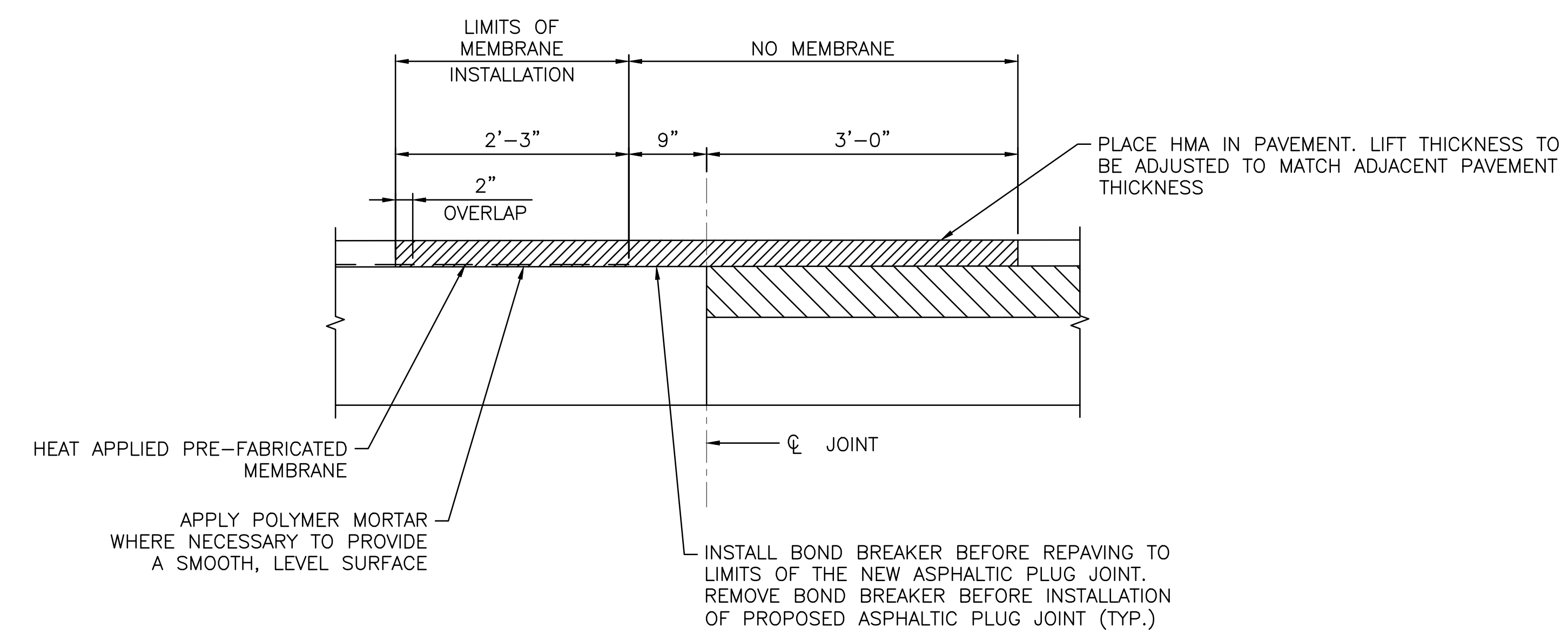
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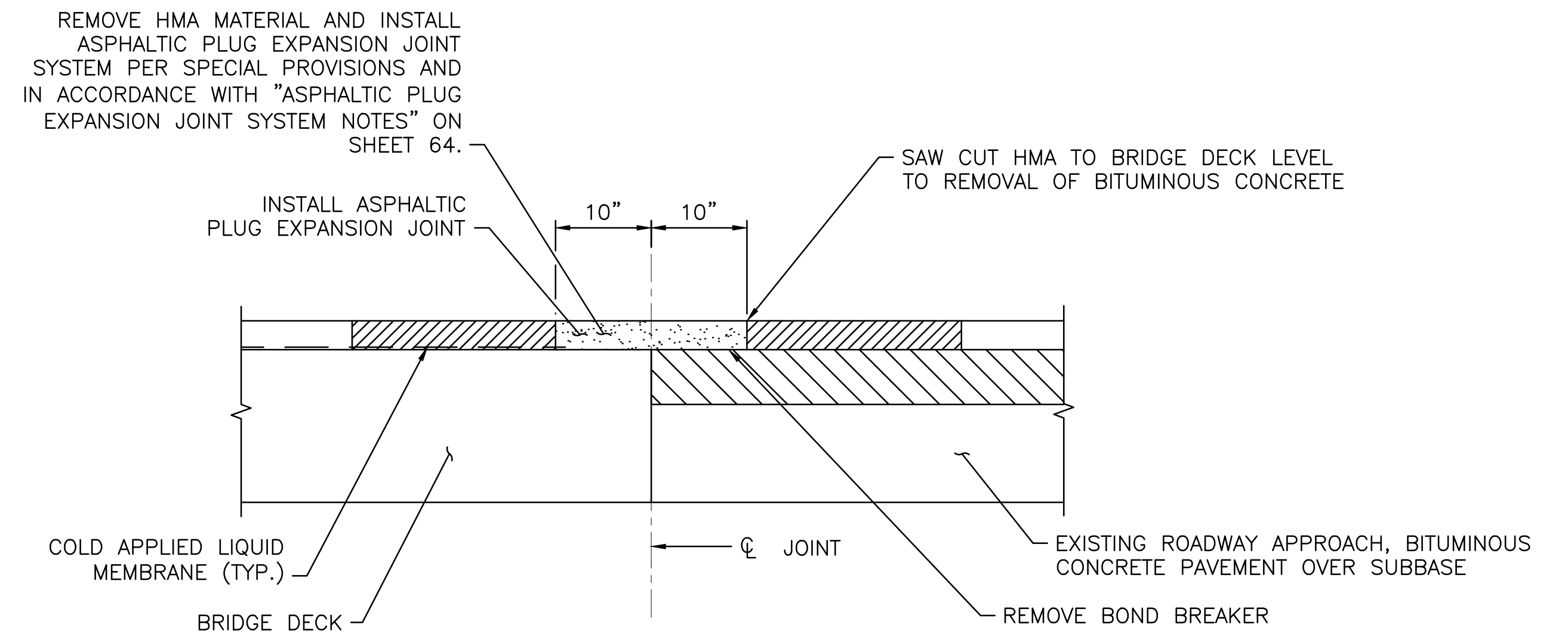
EXISTING CONDITIONS



**INTERMEDIATE CONDITION
JOINT AND PAVEMENT REMOVAL (STEPS 2-3)**



**INTERMEDIATE CONDITION
PLACEMENT OF PAVEMENT IN JOINT CUTOUT (STEPS 4-6)**



FINAL CONDITION (STEPS 7-9)

REFERENCES:

- SEE SHEET 64 FOR GENERAL ASPHALTIC PLUG EXPANSION JOINT NOTES.

SEQUENCE OF WORK

- CONTRACTOR SHALL PERFORM AN EXPLORATION AT THE GUTTER LINE AT EACH END OF JOINT AND THE CROWN AT THE BEGINNING AND END OF THE BRIDGE. A MINIMUM OF SIX REPRESENTATIVE DEPTH MEASUREMENTS SHALL BE TAKEN AT THESE LOCATIONS (ADDITIONAL MEASUREMENTS SHALL BE TAKEN, IF NEEDED, PERFORMED AS PART OF "FULL DEPTH REMOVAL AND DISPOSAL OF BITUMINOUS PAVEMENT FROM CONCRETE BRIDGE DECKS" TO DETERMINE THE DEPTH OF PAVEMENT AND THE LOCATION OF THE DECK ENDS (CENTERLINE OF PROPOSED JOINT) BEFORE PROCEEDING TO STEP 2. SEE JOB SPECIFIC SPECIFICATIONS FOR PAYMENT.
- SAWCUT BITUMINOUS PAVEMENT ON BOTH SIDES OF EXISTING JOINT FOR PAVEMENT CUT-OUT. EACH SAWCUT LINE SHALL BE 3' FROM THE CENTERLINE OF EXISTING JOINT. SAWCUT SHALL NOT DAMAGE EXISTING DECK, APPROACH SLAB, OR MEMBRANE, TO BE PERFORMED AS PART OF "CUTTING AND MATCHING ASPHALT". SEE JOB SPECIFIC SPECIFICATIONS FOR PAYMENT.
- REMOVE EXISTING PAVEMENT MATERIAL, WATERPROOFING, AND JOINT MATERIAL WITHIN THE LIMITS SHOWN. THIS WORK TO BE PERFORMED AS PART OF "FULL DEPTH REMOVAL AND DISPOSAL OF BITUMINOUS PAVEMENT FROM CONCRETE BRIDGE DECKS". SEE JOB SPECIFIC SPECIFICATIONS FOR PAYMENT.
- REPAIR EXPANSION JOINT HEADERS OF THE DECK AS DETAILED AND SURFACE OF THE APPROACH PAVEMENT AS REQUIRED AND INSTALL MEMBRANE TO THE TOP OF DECK WITHIN THE LIMITS SHOWN. INSTALL BOND BREAKER BEFORE RE-PAVING TO THE LIMITS OF NEW ASPHALTIC PLUG JOINT. MEMBRANE WATERPROOFING TO BE PERFORMED AS PART OF "HEAT APPLIED PRE-FABRICATED MEMBRANE". BOND BREAKER TO BE PERFORMED AS PART OF "MODIFIED CLASS 9.5 HMA". SEE JOB SPECIFIC SPECIFICATIONS FOR PAYMENT OF EACH.
- PLACE TACK COAT ON VERTICAL EDGE OF PAVEMENT ALONG SAWCUT LINES TO BE PERFORMED AS PART OF "ASPHALT EMULSION TACK COAT". SEE JOB SPECIFIC SPECIFICATION FOR PAYMENT OF EACH.
- PLACE HMA IN THE JOINT CUT-OUT. TO BE PERFORMED AS PART OF "MODIFIED CLASS 9.5 HMA". SEE JOB SPECIFIC SPECIFICATIONS FOR PAYMENT.
- CUT BITUMINOUS PAVEMENT FULL DEPTH, 10" EACH SIDE OF CENTER OF JOINT, AND REMOVE ALL PAVEMENT MATERIAL AND BOND BREAKER BETWEEN SAWCUTS.
- INSTALL PROPOSED ASPHALTIC PLUG EXPANSION JOINT SYSTEM. TO BE PERFORMED AS PART OF "ASPHALTIC EXPANSION JOINT SYSTEM". SEE JOB SPECIFIC SPECIFICATIONS FOR PAYMENT.
- PLACE TACK COAT AT CURB LINE, BOTH SIDES.

PROPOSED ASPHALTIC EXPANSION JOINT SYSTEM WITHOUT BRIDGING PLATE

SCALE: N.T.S.

ADDENDUM No. 5



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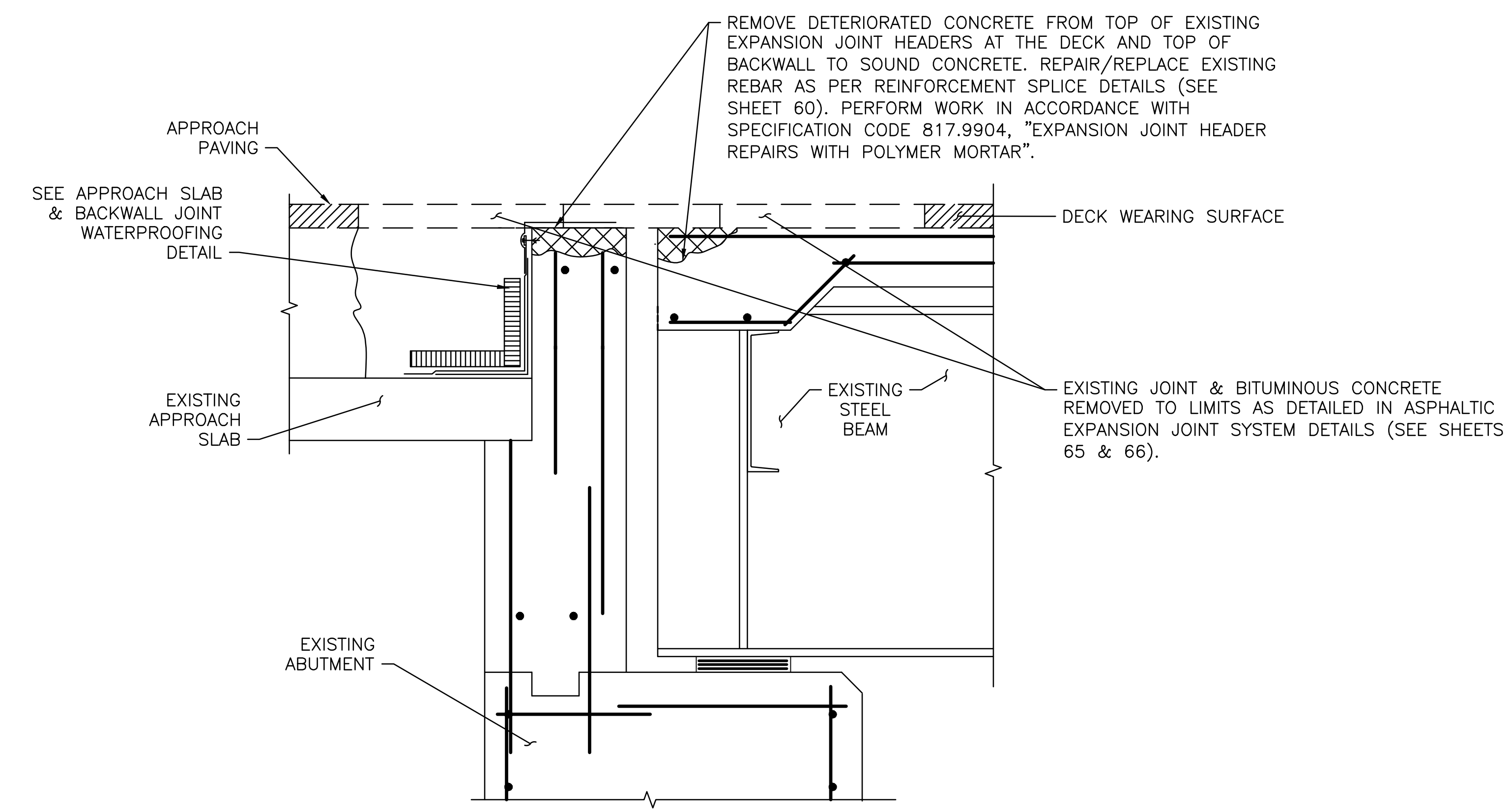
RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

BRIDGE GROUP 51A - RT. 37 C-2

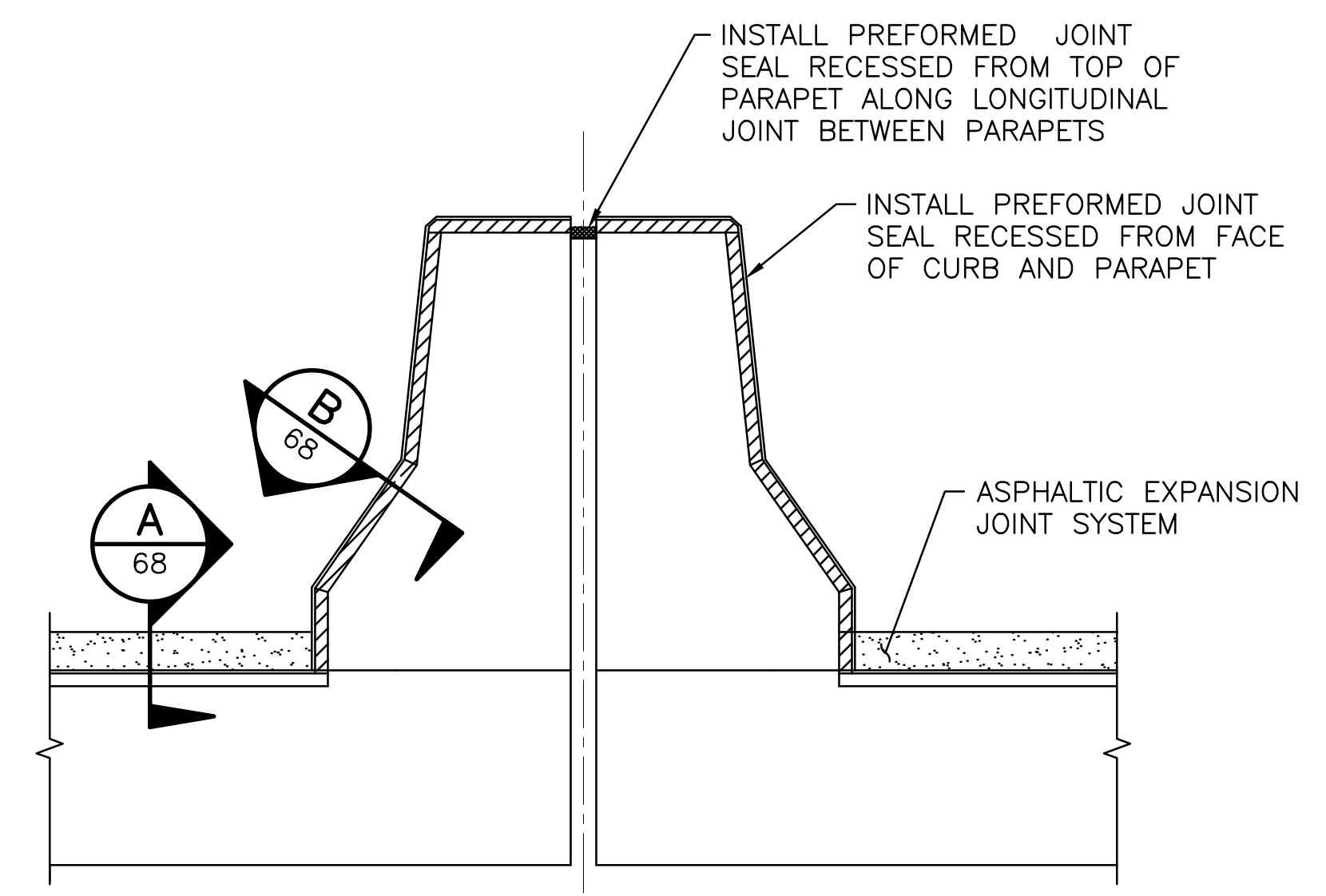
CRANSTON / WARWICK RHODE ISLAND

STANDARD DETAILS - 9

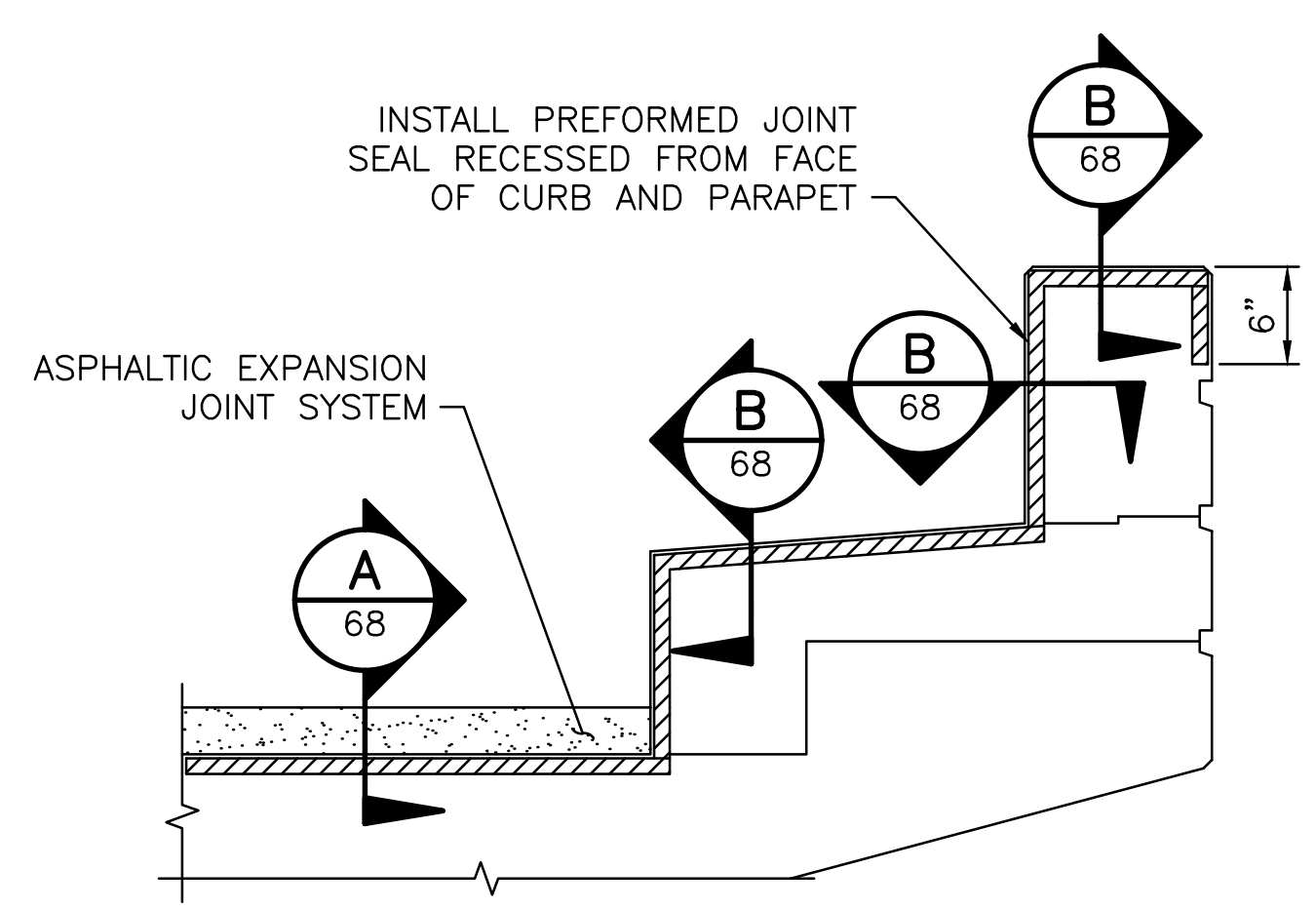
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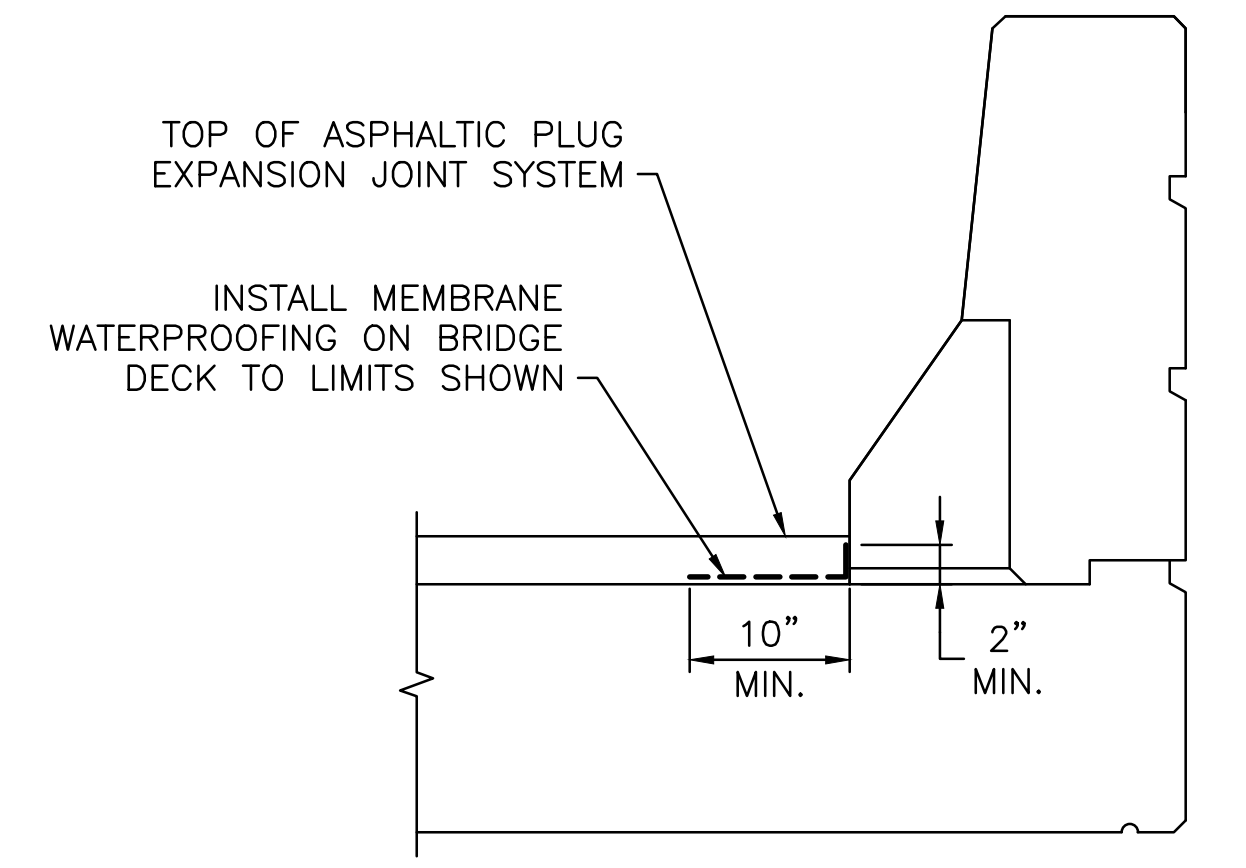
EXPANSION JOINT HEADER REPAIR DETAIL
SCALE: N.T.S.



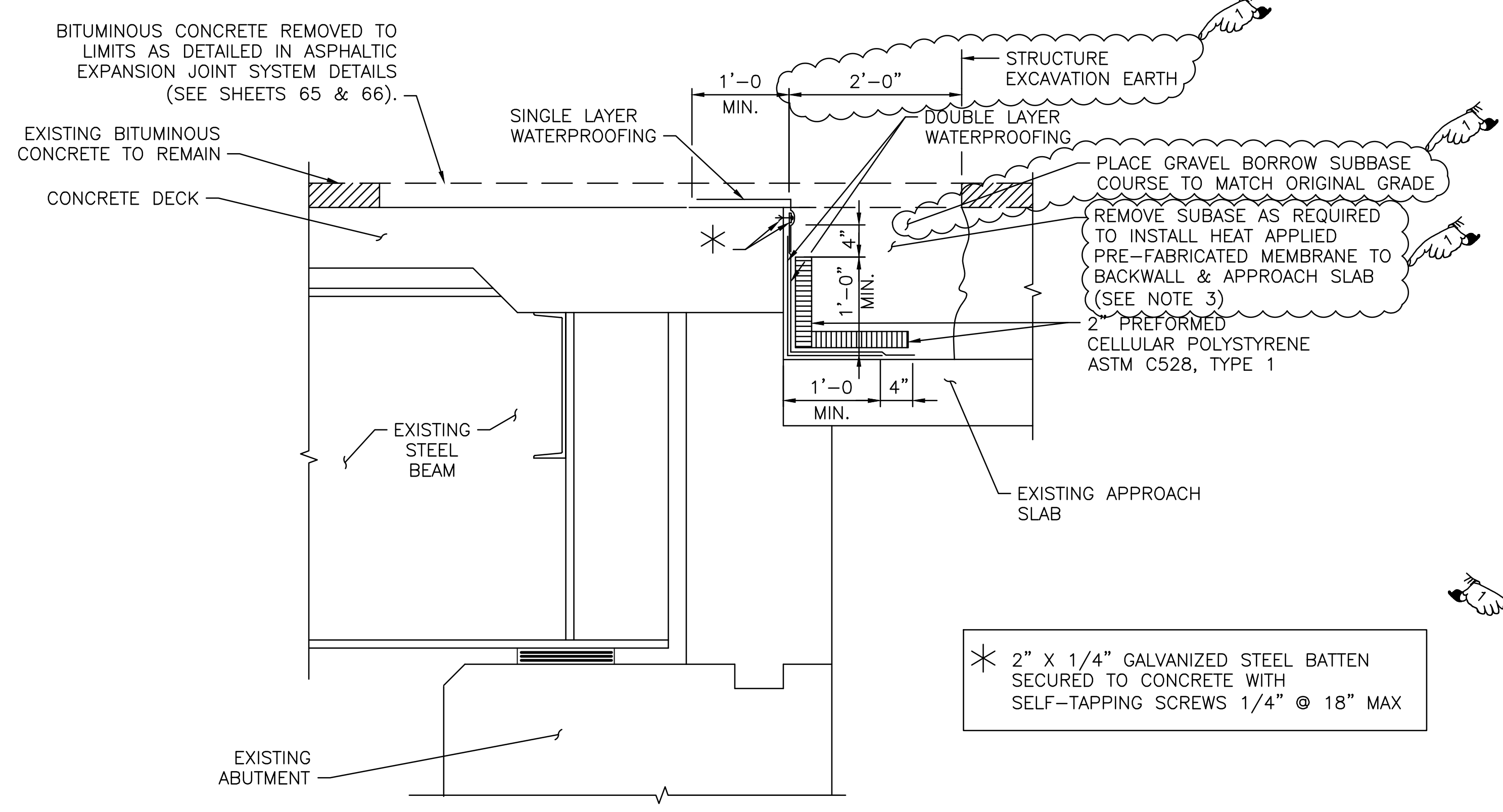
SECTION AT MEDIAN



SECTION AT SAFETY WALK
SCALE: 1" = 1'-0"



LIMITS OF WATERPROOFING MEMBRANE
SCALE: 1" = 1'-0"



APPROACH SLAB & BACKWALL JOINT WATERPROOFING DETAIL
SCALE: N.T.S.

ASPHALTIC EXPANSION JOINT SYSTEM

NOTES:

1. PRIOR TO INSTALLING THE PREFORMED JOINT SEAL, REMOVE ANY EXISTING BACKER ROD AND ALL SEALANT AND CLEAN JOINT SIDES BY SANDBLASTING. DUST SHALL BE REMOVED BY THE METHOD APPROVED BY THE ENGINEER. THIS WORK SHALL BE PERFORMED AS PART OF SPECIFICATION CODE 823.9901, "PREFORMED JOINT SEAL". SEE JOB SPECIFIC SPECIFICATIONS FOR PAYMENT.
2. WHERE THE BRIDGE DECK ABUTS A BITUMINOUS ROADWAY, OR SHOULDER, BRIDGING PLATES SHALL NOT BE INSTALLED (SEE SPECIAL PROVISION "ASPHALTIC PLUG EXPANSION JOINT SYSTEM").
3. REMOVE SUBBASE TO THE LIMIT SHOWN. PAID UNDER ITEM CODE 203.0100, "STRUCTURAL EXCAVATION; EARTH"

REFERENCES:

1. SEE SHEET 64, FOR GENERAL ASPHALTIC EXPANSION JOINT NOTES.
2. SEE SHEETS 65 & 66 FOR ASPHALTIC EXPANSION JOINT SYSTEM CROSS SECTIONS & SEQUENCES OF WORK

* 2" X 1/4" GALVANIZED STEEL BATTEN SECURED TO CONCRETE WITH SELF-TAPPING SCREWS 1/4" @ 18" MAX

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STANDARD DETAILS - 10

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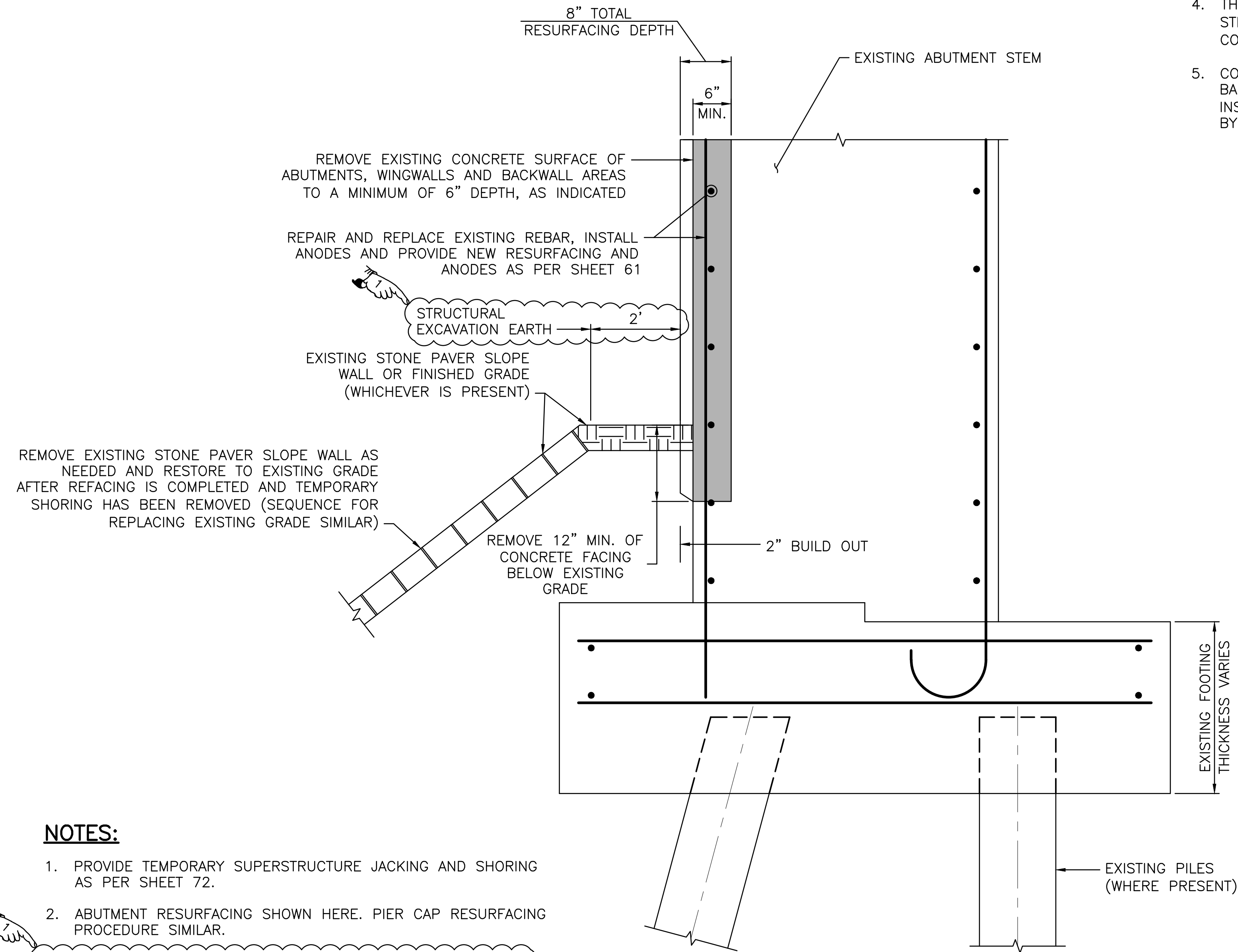
ADDENDUM No. 5



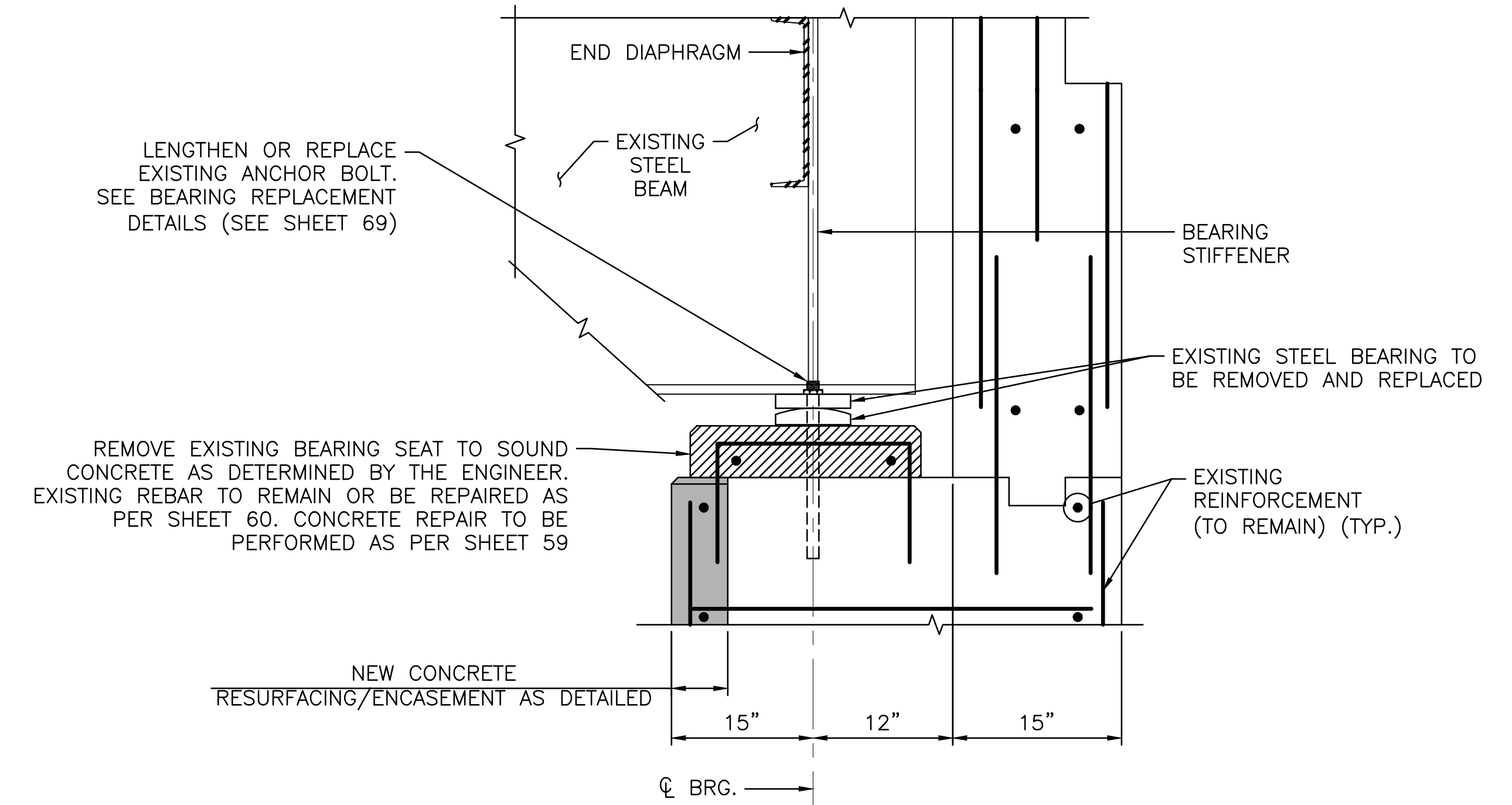
530 PRESTON AVENUE
MERIDEN, CT 06450

RESURFACING/ENCASEMENT OF BRIDGE SUBSTRUCTURE NOTES:

- RESURFACING/ENCASEMENT OF BRIDGE SUBSTRUCTURE SHALL BE PERFORMED IN ACCORDANCE WITH DETAILS SHOWN AND SHALL BE PAID FOR AS PER SPECIFICATION CODE 817.9902, "REPAIRS TO STRUCTURAL CONCRETE MASONRY (FORM AND CAST IN PLACE)". SEE SPECIAL PROVISIONS.
- ALL BROKEN AND DAMAGED REINFORCING STEEL BARS SHALL BE REPLACED. MINIMUM LENGTH OF SPLICE SHALL BE 40 BAR DIAMETER. MECHANICAL SPLICES MAY BE USED IF AUTHORIZED BY THE ENGINEER. MINIMUM CONCRETE COVER OVER SPLICE IS REQUIRED.
- NEW REINFORCING STEEL SHALL BE GALVANIZED. FURNISHING AND INSTALLING REINFORCING BARS SHALL BE PAID FOR AS PER SPECIFICATION CODE 817.9902, "REPAIRS TO STRUCTURAL CONCRETE MASONRY (FORM AND CAST IN PLACE)".
- THE COST OF ADDITIONAL CONCRETE REMOVAL REQUIRED FOR THE REPAIR OF THE REINFORCING STEEL SHALL BE PAID FOR AS PER SPECIFICATION CODE 817.9902, "REPAIRS TO STRUCTURAL CONCRETE MASONRY (FORM AND CAST IN PLACE)".
- CONCRETE DETERIORATION/CHLORIDE CONTAMINATION AND RESURFACING/ENCASEMENT LIMITS ARE BASED ON LIMITED CONCRETE CORE SAMPLING, FIELD OBSERVATIONS, AND BRIDGE SAFETY INSPECTION REPORTS. ADDITIONAL LIMITS OF RESURFACING/ENCASEMENT SHALL BE DETERMINED BY THE ENGINEER DURING CONSTRUCTION.



CONCRETE ABUTMENT RESURFACING DETAIL
SCALE: N.T.S.



TYPICAL BEARING SEAT CONCRETE REHAB DETAIL
(PIER CAP BEARING SEAT RECONSTRUCTION SIMILAR)
SCALE: N.T.S.

- LEGEND:**
- CONCRETE REPAIR
 - RE-FACING

NOTES:

- PROVIDE TEMPORARY SUPERSTRUCTURE JACKING AND SHORING AS PER SHEET 72.
- ABUTMENT RESURFACING SHOWN HERE. PIER CAP RESURFACING PROCEDURE SIMILAR.
- THE COST TO REPLACE EXCAVATED MATERIAL SHALL BE PAID UNDER ITEM CODE 202.0700, "COMMON BORROW".
- PAY LIMIT OF STRUCTURE EXCAVATION EARTH SHOWN FOR ABUTMENT. PAY LIMITS FOR PIER SIMILAR.

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			CHECKED BY _____ DATE _____ SCALE AS NOTED	

ADDENDUM No. 5



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GENERAL NOTES:

- ALL CONSTRUCTION INDICATED ON THESE PLANS SHALL BE IN ACCORDANCE WITH:
 - THE 2013 REVISION OF AND SUPPLEMENTS TO THE RHODE ISLAND DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (RI STANDARD SPECIFICATIONS).
 - THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO) LRFD BRIDGE CONSTRUCTION SPECIFICATIONS, 8TH EDITION, 2017, INCLUDING THE LATEST INTERIM REVISIONS.
 - THE SPECIFICATIONS ACCOMPANYING THESE PLANS.
- DIMENSIONS, STATIONS, AND ELEVATIONS ARE SHOWN TO THE NEAREST ONE-HUNDREDTH OF A FOOT OR ONE-EIGHTH OF AN INCH, EXCEPT STRUCTURAL STEEL DIMENSIONS WHICH ARE TO THE NEAREST ONE-SIXTEENTH OF AN INCH.
- ALL ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).
- COORDINATES USED ON THESE PLANS ARE BASED ON THE STATEWIDE COORDINATE SYSTEM, THE NORTH AMERICAN DATUM OF 1983 (NAD 83).
- TOPOGRAPHIC CONDITIONS WERE OBTAINED FROM AERIAL PHOTOGRAMMETRY. ACCURACY OF VERTICAL TOPOGRAPHY IS WITHIN ONE-HALF OF A FOOT.
- ANGLES ARE SHOWN TO THE NEAREST SECOND.
- ALL ABUTMENTS AND WALLS ARE DRAWN LOOKING AT THE EXPOSED FACES.
- IF THIS PROJECT IS ON A HURRICANE EVACUATION AND DIVERSIONARY ROUTE AS DESIGNATED ON THE COVER SHEET, THE CONTRACTOR IS ADVISED THAT, UPON 12 (TWELVE) HOURS NOTICE, THE ROADWAY SHALL BE OPEN TO EVACUEES AND EMERGENCY PERSONNEL. ANY EXTRA WORK NECESSARY TO COMPLY WITH THIS REQUIREMENT WILL BE REIMBURSED UNDER FORCE ACCOUNT PROCEDURES.
- THE EXISTING UTILITIES SHOWN ON THE PLANS ARE APPROXIMATE AND WERE LOCATED USING THE BEST AVAILABLE INFORMATION. NO BUILDING SERVICE CONNECTIONS (ELECTRIC, TELEPHONE, GAS, WATER, SANITARY AND OTHERS) ARE SHOWN. THE CONTRACTOR IS TO ASSUME THAT SERVICES TO ALL BUILDINGS ARE PRESENT.
- BOTH FEDERAL AND STATE LAW (RI. GENERAL LAW 39-1.2) REQUIRE NOTIFICATION OF APPROPRIATE UTILITY COMPANIES BEFORE DIGGING, TRENCHING, BLASTING, DEMOLISHING, BORING, BACK FILLING, GRADING, LANDSCAPING, OR OTHER EARTH MOVING OPERATIONS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY ALL UTILITY COMPANIES (INCLUDING THROUGH THE "DIG SAFE" PROGRAM) TO ENSURE THAT ALL UTILITIES, BOTH UNDERGROUND AND OVERHEAD, HAVE BEEN MARKED BEFORE COMMENCEMENT OF SUCH WORK. THE CONTRACTOR SHOULD UNDERSTAND THAT NOT ALL UTILITIES SUBSCRIBE TO THE "DIG SAFE" PROGRAM. ANY DAMAGE TO EXISTING UTILITIES MARKED IN THE FIELD, OR AS A RESULT OF FAILING TO CONTACT THE APPROPRIATE UTILITY COMPANIES, SHALL BE REPAIRED OR REPLACED (AS DEEMED APPROPRIATE BY THE STATE AND/OR THE IMPACTED UTILITY COMPANY) AT NO ADDITIONAL COST TO THE STATE.

DESIGN DATA:

DESIGN SPECIFICATIONS

- THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 8TH EDITION, 2017 INCLUDING ALL INTERIM REVISIONS TO DATE.
- THE RHODE ISLAND LRFD BRIDGE DESIGN MANUAL 2007 EDITION INCLUDING ALL REVISIONS TO DATE.
- ALL OTHER APPLICABLE DESIGN SPECIFICATIONS ARE REFERENCED IN SECTION 1 OF THE RHODE ISLAND LRFD BRIDGE DESIGN MANUAL DATED 2007.
- THE 2013 REVISION OF AND SUPPLEMENTS TO THE RHODE ISLAND DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (RI STANDARD SPECIFICATIONS).
- IN CASE OF CONFLICT, THE RHODE ISLAND LRFD BRIDGE DESIGN MANUAL SHALL GOVERN.

LOAD MODIFIERS

THE LOAD MODIFIERS FOR THIS PROJECT ARE AS FOLLOWS:

- THE LOAD MODIFIER FOR DUCTILITY SHALL BE TAKEN AS 1.00 FOR ALL LIMIT STATES.
- THE LOAD MODIFIER FOR REDUNDANCY SHALL BE TAKEN AS 1.00 FOR ALL LIMIT STATES.
- THE LOAD MODIFIER FOR OPERATIONAL IMPORTANCE SHALL BE TAKEN AS 1.05 FOR ALL LIMIT STATES.

LOAD FACTORS

ALL LOAD FACTORS SHALL BE IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, EXCEPT AS MODIFIED IN THE RHODE ISLAND LRFD BRIDGE DESIGN MANUAL.

LIVE LOADS

- THE DESIGN VEHICULAR LIVE LOAD SHALL BE THE HL-93 DESIGNATION ADJUSTED FOR DYNAMIC LOAD ALLOWANCE AND MULTIPLE PRESENCE FACTOR.

DESIGN DATA (CONT.):

TRAFFIC DATA

- ADT 18,987 (EB) / 20,070 (WB) VPD
- DHV 1,180 (EB) / 1,340 (WB) VPH
- PERCENT TRUCK 6.2%
- DESIGN SPEED 60 MPH

MATERIALS:

STRUCTURAL STEEL:

- AASHTO DESIGNATION M 270, GRADE 36
- AASHTO DESIGNATION M 270, GRADE 50
- AASHTO DESIGNATION M 270, GRADE 50W

REINFORCING STEEL:

- AASHTO DESIGNATION M31, GRADE 60

CONCRETE STRENGTHS:

- CLASS HP $\frac{3}{4}$ " f'c=5,000 PSI

REPAIRS TO STRUCTURAL CONCRETE MASONRY (FORM AND CAST IN PLACE).

- HIGH EARLY STRENGTH f'c=7,500 PSI

CONCRETE DECK REPAIR (PARTIAL DECK REMOVAL)
CONCRETE DECK REPAIR (FULL DECK REMOVAL)

- BITUMINOUS CONCRETE PAVEMENT

MODIFIED CLASS 9.5 HMA
CLASS 9.5 HMA FOR PATCHING

CONCRETE NOTES:

- CLASSES OF CONCRETE SHALL BE HIGH PERFORMANCE CLASS HP AS DESCRIBED IN THE RI STANDARD SPECIFICATIONS AND THE SPECIAL PROVISIONS OF THE SPECIFICATIONS. REFER TO THE "MATERIAL" NOTES FOR CLASSES OF CONCRETE SPECIFIED FOR VARIOUS COMPONENTS.
- THE CONTRACTOR MAY, AT THE APPROVAL OF THE ENGINEER, PROPOSE THE USE OF SELF-CONSOLIDATING CONCRETE FOR ANY CLASS OF CONCRETE ON THIS PROJECT. SECTION 606 "SELF CONSOLIDATING CONCRETE (SCC)", CONTAINS THE REQUIREMENTS FOR MODIFYING ALL CLASSES OF CONCRETE MIX DESIGN FOR SELF-CONSOLIDATING APPLICATIONS.
- ALL PORTLAND CEMENT CONCRETE SHALL BE AIR-ENTRAINED.
- ALL REINFORCING STEEL SHALL BE GALVANIZED. ALL WIRE TIES AND MISCELLANEOUS HARDWARE USED FOR PLACEMENT OF GALVANIZED REINFORCING SHALL ALSO BE GALVANIZED. GALVANIZED COATING FOR REINFORCING STEEL SHALL CONFORM TO ASTM A767 CLASS 1.
- ALL CRITICAL LAP SPLICES SHALL BE AS SHOWN ON THE PLANS OR DESCRIBED IN THE SPECIAL PROVISIONS. ALL SPLICES NOT SHOWN ON THE PLANS SHALL BE LAPPED IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS FOR CLASS B LAP SPLICES.
- UNLESS OTHERWISE INDICATED ON THE PLANS, ALL MAIN REINFORCING BARS SHALL HAVE THE FOLLOWING MINIMUM COVER:

CONCRETE CAST AGAINST OR PERMANENTLY EXPOSED TO EARTH (FOOTINGS, ABUTMENT AND WALL FACES, BACKWALLS)		3"
DECK SLABS (WITH WEARING SURFACE)	TOP	2" (+1/4", -0")
	BOTTOM	1" (+1/8", -0")
ALL OTHER BARS		2"

COVER TO TIES AND STIRRUPS MAY BE 0.5 INCH LESS THAN THE ABOVE VALUES SPECIFIED FOR MAIN REINFORCING, BUT IN NO CASE LESS THAN 1.5 INCHES.
- HORIZONTAL CONSTRUCTION JOINTS OTHER THAN THOSE SHOWN ON PLANS WILL NOT BE PERMITTED WITHOUT A WRITTEN REQUEST BY THE CONTRACTOR AND PRIOR AUTHORIZATION BY THE ENGINEER.
- UNLESS OTHERWISE NOTED ON THE PLANS, ALL EXPOSED CONCRETE SURFACES VISIBLE IN ELEVATION TO ONE FOOT BELOW FINAL GROUND LINE (AND THE UNDERSIDE OF ALL CONCRETE DECK SLABS OUTSIDE OF THE FASCIA BEAMS), SHALL RECEIVE A CONCRETE SURFACE RUBBED FINISH IN ACCORDANCE WITH THE RI STANDARD SPECIFICATIONS.
- THE ENTIRE TOPSIDE SURFACES OF ABUTMENT AND PIER CAP BEAM SEATS, AS WELL AS VERTICAL FACES OF BACKWALLS, AND PARAPETS/BARRIERS SHALL BE PROVIDED WITH A FILM-FORMING SEALER (M12.03.1) CONCRETE SURFACE TREATMENT-PROTECTIVE COATING IN ACCORDANCE WITH SECTION 820 OF THE RI STANDARD SPECIFICATIONS.
- ALL EXPOSED EDGES AND REENTRANT CORNERS NOT OTHERWISE DETAILED ON THE PLANS SHALL HAVE A MINIMUM $\frac{3}{4}$ " CHAMFER.

CONCRETE NOTES (CONT):

- ALL JOINT SEALANT SHALL BE POLYURETHANE, POLYURETHANE ELASTOMERIC, OR SILICONE SEALANT AS DESIGNATED ON THE PLANS. THE COLOR OF THE JOINT SEALANT, WHERE EXPOSED, SHALL BE NEUTRAL (LIGHT GRAY OR TAN). THE COLOR OF THE SEALANT, WHERE NOT EXPOSED, WILL BE AT THE DISCRETION OF THE CONTRACTOR.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PREVENTING CONCRETE STAINS OR DISCOLORATIONS DURING CONSTRUCTION UNTIL SUCH TIME WHEN THE SURFACES ARE APPROVED AND ACCEPTED. ANY CONCRETE STAINS OR DISCOLORATIONS OCCURRING PRIOR TO ACCEPTANCE OF THE SURFACES SHALL BE REMOVED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE STATE.
- UNLESS OTHERWISE NOTED ON THE PLANS, JOINT FILLER IS TO BE A PREFORMED, NON-EXPANSIVE, NON-EXTRUDING TYPE IN ACCORDANCE WITH SECTION M.02.11.1 OF THE RI STANDARD SPECIFICATIONS.
- UNLESS OTHERWISE INDICATED ON THE PLANS, ALL DECK FORMS SHALL BE OF THE REMOVABLE TYPE THAT WILL PRODUCE THE DIMENSIONS SHOWN ON THE PLANS.
- EMBEDMENT LENGTHS FOR DRILLED AND GROUTED DOWELS SHALL BE IN ACCORDANCE WITH SECTION 819 OF THE RI STANDARD SPECIFICATIONS.
- IN ACCORDANCE WITH THE RI STANDARD SPECIFICATIONS, ALL METAL TIES, NON-METALLIC TIES OR ANCHORAGES WHICH ARE REQUIRED FOR CONCRETE FORMWORK SHALL BE SO CONSTRUCTED THAT THEY CAN BE REMOVED TO AT LEAST ONE INCH BELOW THE EXPOSED SURFACE OF THE CONCRETE WITHOUT CAUSING DAMAGE TO THE CONCRETE SURFACE. SNAP TIES MAY BE USED ONLY IF APPROVED BY THE ENGINEER. IF THE CONTRACTOR PROPOSES TO USE THEM, A CATALOG CUT AND OTHER NECESSARY INFORMATION MUST BE SUBMITTED TO THE ENGINEER TO DEMONSTRATE THAT THE TIES WILL SNAP-OFF FAR ENOUGH INTO THE CONCRETE TO ALLOW FOR PROPER PATCHING. SNAP TIES MUST PROVIDE ADEQUATE STRENGTH TO SUPPORT THE FORMS. ALL CAVITIES SHALL BE FILLED WITH AN APPROVED CEMENT MORTAR MEETING THE REQUIREMENTS OF ASTM C 928.

ADDENDUM No. 5



REVISIONS			NO.	DATE	BY
1	11/8/19	DRC			

RHODE ISLAND DEPARTMENT OF TRANSPORTATION					
BRIDGE GROUP 51A - RT. 37 C-2					
WARWICK			RHODE ISLAND		
BRIDGE GENERAL NOTES SHEET 1					
CHECKED BY _____ DATE _____ SCALE AS NOTED					

0013C_V7_002_BRIDGE GENERAL NOTES SHEET 1_R-1.dwg Plotted on Friday, November 8, 2019 2:49:58 PM

STRUCTURAL STEEL NOTES:

- FRAMING DIMENSIONS ARE GIVEN ALONG CENTERLINES OF STRINGERS AND ALONG CENTERLINES OF BEARINGS ON ABUTMENTS. THE FABRICATOR IS RESPONSIBLE FOR INCORPORATING THE CAMBER, CROSS SLOPE, AND OTHER EFFECTS THAT MAY IMPACT THE OVERALL LENGTHS, DIMENSIONS AND/OR THE DETAILING.
- THE SHOPS FABRICATING THE STRUCTURAL STEEL MUST BE CERTIFIED FOR "SIMPLE STEEL BRIDGE STRUCTURES (SBR)" IN ACCORDANCE WITH THE AISC QUALITY CERTIFICATION PROGRAM OR EQUIVALENT.

THE SHOPS SHALL ALSO BE CERTIFIED UNDER THE AISC "SOPHISTICATED PAINT ENDORSEMENT (SPE)" QUALITY PROGRAM OR THE SSPC-QP3 PAINT CERTIFICATION PROGRAM.

THE FABRICATOR MUST SUBMIT PROOF OF CURRENT CERTIFICATION AS SPECIFIED.
- SHOP DRAWINGS FOR ALL FABRICATED STEEL INCLUDING BEARINGS, EXPANSION JOINTS, RAILINGS AND FALSEWORK SHALL BE SUBMITTED TO THE ENGINEER IN SUFFICIENT TIME TO PERMIT CAREFUL CHECKING PRIOR TO FABRICATION. THE CONTRACTOR SHALL INCLUDE A WRITTEN STRUCTURAL STEEL WELDING PROCEDURE WHICH INCLUDES: WELDING PROCEDURE SPECIFICATIONS, WELDING SOUNDNESS TEST, OR RADIOGRAPHY REPORT.
- INSPECTION OF WELDS INCLUDING RADIOGRAPHIC TESTING (RT) AND MAGNETIC PARTICLE TESTING (MT) SHALL BE IN ACCORDANCE WITH THE RI STANDARD SPECIFICATIONS AND THE AASHTO/AWS BRIDGE WELDING CODE, EXCEPT THAT THE REMAINING PERCENTAGE OF ALL GROOVE WELDS NOT RT TESTED SHALL BE MT OR DYE-PENETRANT TESTED.
- STRUCTURAL STEEL SHAPES AND PLATES SHALL CONFORM TO THE LATEST PROVISIONS OF AASHTO DESIGNATION M 270 GRADE 36 OR GRADE 50 AS DESIGNATED ON THE PLANS.
- ALL AASHTO M 270 STRUCTURAL STEEL USED IN THIS STRUCTURE (INCLUDING CONNECTION PLATES AND STIFFENERS), SHALL MEET THE ZONE 2 CHARPY V-NOTCH FRACTURE TOUGHNESS TEST REQUIREMENTS AS SPECIFIED IN TABLE C6.6.2.1-1 OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS FOR "NONFRACTURE-CRITICAL" COMPONENTS. THE ZONE 2 FRACTURE TOUGHNESS REQUIREMENTS ARE AS FOLLOWS:

NONFRACTURE-CRITICAL

GRADE 36 15 FT-LBS @ 40°F (UP TO 4 INCHES THICK)
GRADE 50 OR 50W 15 FT-LBS @ 40°F (UP TO AND INCLUDING 2 INCHES THICK)
GRADE 50 OR 50W 20 FT-LBS @ 40°F (FROM 2 INCH THICK UP TO AND INCLUDING 4 INCHES THICK)

SAMPLING AND TESTING PROCEDURES SHALL BE IN ACCORDANCE WITH AASHTO T 243. THE FREQUENCY OF TESTING SHALL BE IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS.

THE CHARPY V-NOTCH FRACTURE TOUGHNESS TEST REQUIREMENT IS NOT MANDATORY FOR THE FOLLOWING STEEL COMPONENTS:

• BEARINGS, MASONRY PLATES AND SOLE PLATES
• DRAINAGE MATERIAL
- WELDING SHALL BE IN ACCORDANCE WITH THE LATEST BRIDGE WELDING CODE AASHTO/AWS D1.5 (INCLUDING ALL INTERIMS TO DATE) AND APPLICABLE SUPPLEMENTAL AWS PUBLICATIONS.
- ALL HIGH STRENGTH BOLTS SHALL CONFORM TO AASHTO DESIGNATION M 164 (ASTM A325), AND THEY SHALL BE INSTALLED IN ACCORDANCE WITH SECTION 824 OF THE RI STANDARD SPECIFICATIONS.
- WASHERS MEETING AASHTO DESIGNATION M 293 (ASTM A325) ARE TO BE USED OVER ALL HOLES THAT ARE MORE THAN 1/16" IN DIAMETER GREATER THAN THE BOLT DIAMETER AND UNDER ALL PARTS TURNED DURING ASSEMBLY.
- WELDING ELECTRODES SHALL HAVE THE SAME CORROSION RESISTANCE AS THE BASE METAL AND SHALL BE FREE OF MOISTURE AT THE TIME OF USE.
- STRUCTURAL STEEL SHALL BE PREPARED AND PAINTED IN ACCORDANCE WITH THE RI STANDARD SPECIFICATIONS.
- PRIOR TO FABRICATION, ALL MATERIALS SHALL FIRST BE SOLVENT CLEANED TO SSPC-SP1 TO REMOVE ALL OIL, GREASE AND DIRT; FOLLOWED BY BLAST-CLEANING TO SSPC-SP10 TO REMOVE ALL MILL SCALE, RUST, AND OTHER DELETERIOUS MATERIALS FROM THE SURFACES OF THE STEEL TO BE FABRICATED.
- PRIOR TO SHOP COATING AS SPECIFIED IN SECTION 825 OF THE RI STANDARD SPECIFICATIONS, ALL CORNERS AND EDGES OF STEEL WHICH HAVE BEEN FLAME CUT OR OTHERWISE HARDENED SHALL BE SOFTENED BY GRINDING OR BLAST-CLEANING TO PROVIDE A SURFACE SUITABLE FOR APPLICATION OF THE SPECIFIED PAINT SYSTEM.

UPON COMPLETION OF ALL FABRICATION AND PRIOR TO THE APPLICATION OF THE SHOP PRIMER COAT THE STRUCTURAL STEEL SHALL BE RESTORED TO AN SSPC-SP10 CONDITION.

COLOR OF TOP COAT FOR ALL SHOP AND FIELD COATINGS SHALL MATCH THE COLOR OF THE EXISTING PAINT. THE CONTRACTOR SHALL CONSULT RECORD PLAN SETS FOR NECESSARY INFORMATION.
- WELDING OF ATTACHMENTS TO GIRDER FLANGES OR WEBS FOR CONSTRUCTION PURPOSES IS NOT PERMITTED EXCEPT WHEN APPROVED BY THE ENGINEER.

STRUCTURAL STEEL NOTES (CONT.):

- BOLTED CONNECTIONS SHALL BE DESIGNED AS SLIP-CRITICAL CONNECTIONS. THE FAYING SURFACES SHALL SATISFY CLASS B SURFACE CONDITION AS DEFINED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, CLASS C SURFACE CONDITIONS FOR GALVANIZED PLATES.
- ALL FILLET WELDS SHALL BE IN ACCORDANCE WITH THE BRIDGE WELDING CODE AASHTO/AWS D1.5 TABLE 2.1 (1/4" MINIMUM).
- WHEN STEEL DIE STAMPS ARE USED TO IDENTIFY PIECES AND MEMBERS, FABRICATORS SHALL UTILIZE LOW STRESS STAMPS.
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT THE EXPANSION JOINT SYSTEM PROVIDED WILL BE COMPATIBLE WITH BOTH THE END OF DECK OR PIER HAUNCHES AND/OR THE STRUCTURAL STEEL FRAMING CONFIGURATION. THAT IS, THE EXPANSION JOINT SYSTEM AND ALL ITS INHERENT COMPONENTS AND ATTACHMENT DEVICES SHALL BE SIZED OR ARRANGED TO BE COMPATIBLE WITH THE GIRDER AND DIAPHRAGM FLANGES, CONNECTION PLATES, BOLTS, SHEAR STUDS AND REINFORCING STEEL THAT SHARE THE END HAUNCH REGION.

GENERAL NOTES REGARDING TEMPORARY CONSTRUCTION CONDITIONS:

- DESIGN WIND PRESSURES FOR CONSTRUCTION:

MINIMUM WIND PRESSURES TO BE USED BY THE CONTRACTOR FOR DESIGN DURING THE CONSTRUCTION CONTRACT (WITH THE EXCEPTION OF SIGNS) SHALL BE FROM THE FOLLOWING TABLE:

HEIGHT ABOVE GROUND	WIND PRESSURE (PSF)
UP TO 17'	23
OVER 17' AND UP TO 33'	27
OVER 33' AND UP TO 50'	30
OVER 50' AND UP TO 75'	34
OVER 75' AND UP TO 100'	37

TABLE NOTES:

- APPLICATION OF THE TABULAR PRESSURE:
 - BRIDGE COMPONENTS DURING CONSTRUCTION, PRIOR TO THE INSTALLATION OF THE PERMANENT BRACING SYSTEMS, NOT INCLUDING CRANE LIFTING.
 - FALSE WORK, SHORING, AND SCAFFOLDING AS DEFINED IN FHWA "GUIDE DESIGN SPECIFICATION FOR BRIDGE TEMPORARY WORKS", EXCLUDING 3-DIMENSIONAL LATTICED OR TRUSSED FRAMES OR TOWERS;
 - TEMPORARY SHIELDING.
- WIND PRESSURES FOR ALL OTHER STRUCTURES SHALL BE CALCULATED BASED ON ASCE "DESIGN LOADS ON STRUCTURES DURING CONSTRUCTION", SEI/ASCE 37-02 (ALL REFERENCES TO THE ASCE 7 IN THE SEI/ASCE 37-02 PUBLICATION, SHALL BE THE LATEST REVISION OF ASCE 7). THE EXPOSURE CATEGORY SHALL BE B.
- FOR STRUCTURES SITUATED ABOVE LIVE INTERSTATE TRAFFIC, THE TABULAR VALUES SHALL BE INCREASED BY 5 PSF.

JOB SPECIFIC NOTES:

- THE ITEM "ASPHALTIC PLUG EXPANSION JOINT SYSTEM" SHALL BE CONSIDERED EQUIVALENT TO AND INTERCHANGEABLE WITH "ASPHALTIC EXPANSION JOINT SYSTEM."
- THE "ASPHALTIC EXPANSION JOINT SYSTEM" AND ALL ITEMS ASSOCIATED WITH ITS INSTALLATION, INCLUDING "ASPHALTIC EXPANSION JOINT SYSTEM", "CUTTING AND MATCHING ASPHALT", "COLD APPLIED LIQUID MEMBRANE", AND "MODIFIED CLASS 9.5 HMA", WILL BE PAID FOR UNDER THE RESPECTIVE PAY ITEMS "REPAIRS TO ROUTE 37 BRIDGE NO. 063XXX".
- FOR PERMANENT REPAIRS TO THE ASPHALT OVERLAY AS PART OF A FULL DEPTH DECK REPAIR, THE ITEMS "CLASS 9.5 HMA FOR PATCHING", AND "HEAT APPLIED PRE-FABRICATED MEMBRANE", WILL BE MEASURED BY THEIR RESPECTIVE PAY UNITS (TON, SQUARE YARD,) AND PAID FOR AT THEIR RESPECTIVE CONTRACT UNIT PRICES.

REVISIONS			RHODE ISLAND	
NO.	DATE	BY	DEPARTMENT OF TRANSPORTATION	
1	11/8/19	DRC	BRIDGE GROUP 51A - RT. 37 C-2	
			WARWICK	RHODE ISLAND
			BRIDGE GENERAL NOTES	
			SHEET 2	
CHECKED BY _____ DATE _____			SCALE AS NOTED	

ADDENDUM No. 5



0013C_V7_003_BRIDGE GENERAL NOTES SHEET 2_R-1.dwg Plotted on Friday, November 8, 2019 2:50:08 PM

DESCRIPTION OF PROPOSED WORK ON BRIDGE NO. 063601:

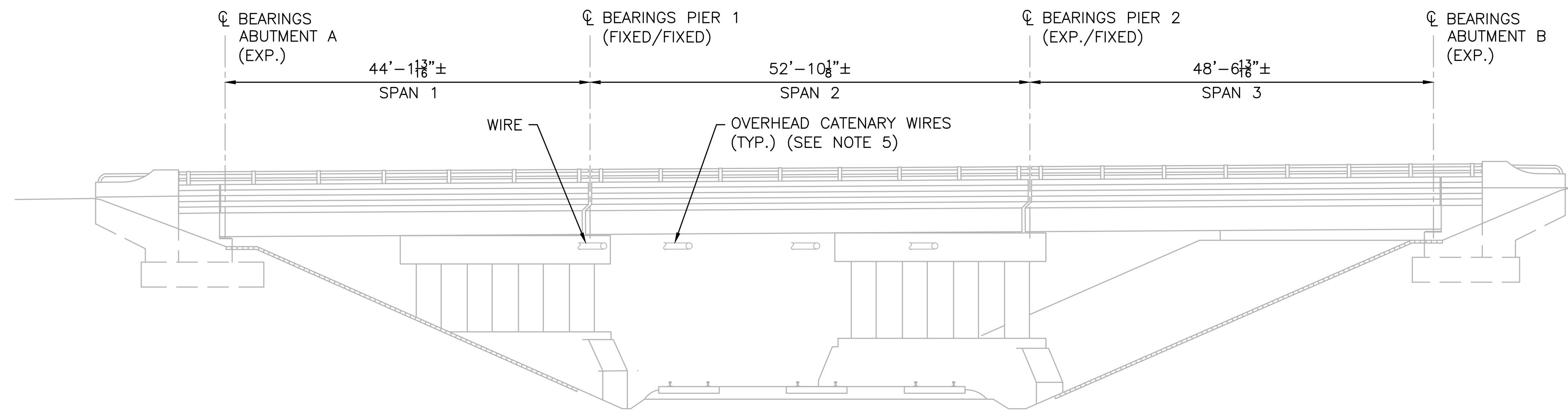
- JACKING AND SHORING OF BEAMS AT ABUTMENTS AND PIERS TO ALLOW FOR CONCRETE BEARING SEAT RECONSTRUCTION, BEARING REPLACEMENTS AND STRUCTURE REHABILITATIONS.
- CONCRETE PATCHING REPAIRS ON THE DECK, ABUTMENTS, PIERS AND/OR AS DIRECTED BY THE ENGINEER. PATCHING MORTAR REPAIRS SHALL BE IN ACCORDANCE WITH THE SPECIAL PROVISIONS.
- CONCRETE CRACK REPAIRS AS PER PLANS AND/OR AS DIRECTED BY THE ENGINEER.
- JOINT REPAIRS AS SHOWN ON THE PLANS.
- STEEL BEAM REPAIRS AT LOCATIONS SHOWN ON THE PLANS, AND AS DIRECTED BY THE ENGINEER.
- CLEAN AND PAINT ALL STEEL BEAM ENDS AND STEEL DIAPHRAGM MEMBERS.
- HIGH PRESSURE WATER CLEANING OF BRIDGE STRUCTURES IN ACCORDANCE WITH CODE 820.0300 OF RIDOT STANDARD SPECIAL PROVISIONS.
- SLOPE PAVING REPAIRS AS SHOWN ON THE PLANS IN ACCORDANCE WITH SECTION 921 OF THE RIDOT STANDARD SPECIFICATIONS.

NOTES:

- FOR GENERAL NOTES, SEE SHEETS 2 & 3.
- FOR REPAIR KEY, INDEX OF SHEETS & QUANTITIES, SEE SHEET 5.
- EXISTING BRIDGE INFORMATION TAKEN FROM THE SEPTEMBER 1964 PLAN SET "STATE OF RHODE ISLAND; DEPARTMENT OF PUBLIC WORKS, DIVISION OF ROADS AND BRIDGES; PLAN, PROFILE AND SECTIONS OF PROPOSED STATE HIGHWAY; BRIDGE NO. 636; TO BE KNOWN AS LINCOLN PARK RAMP BRIDGE-SOUTH; WARWICK, KENT COUNTY". QUANTITIES AND DETAILS FOR STRUCTURE REPAIRS TAKEN FROM THE 2018 "CONDITION EVALUATION REPORT - ROUTE 37 EASTBOUND BRIDGE NO. 636 OVER LINCOLN RAMP SOUTH".
- THE ROADWAY BASELINES SHOWN ARE APPROXIMATE AND SHALL BE FOR GENERAL REFERENCE ONLY. THE CONTRACTOR SHALL FIELD VERIFY THE LOCATION OF ALL DETAILS REQUIRED FOR CONSTRUCTION ACTIVITIES PRIOR TO THE START OF WORK.
- THE CATENARY TOWER AND WIRES ARE SHOWN FOR INFORMATION ONLY. CATENARY TOWERS AND WIRES HAVE NOT BEEN SURVEYED. THE CONTRACTOR SHALL CONFIRM LOCATION AND ELEVATION OF THESE STRUCTURES PRIOR TO CONSTRUCTION, AS REQUIRED.
- THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH AMTRAK RAILROAD TRAIN OPERATIONS. ALL WORK REQUIRING EXTENDED TRACK OUTAGES SHALL BE DONE DURING WEEKEND OUTAGES OR IN COORDINATION WITH AMTRAK OPERATIONS DURING WEEKDAYS. ALL CONSTRUCTION ACTIVITIES SHALL COMPLY WITH THE APPLICABLE AMTRAK SPECIFICATIONS. THE CONTRACTOR SHALL SUBMIT TWO WEEK LOOK AHEAD SCHEDULES EACH WEEK TO AID IN COORDINATION.
- TRACK STRUCTURE SETTLEMENT MONITORING POINTS ARE REQUIRED AT EACH RAIL (RAIL HEAD PAINT MARK) AT THE START AND END OF THE CONSTRUCTION ACTIVITY ZONE. ADDITIONAL POINTS SHALL BE ADDED AT APPROXIMATELY 25 FOOT SPACING. ALL CONSTRUCTION OPERATIONS THAT HAVE THE POTENTIAL FOR VERTICAL OR LATERAL MOVEMENT OF THE TRACK STRUCTURE ARE TO BE MONITORED. THESE OPERATIONS INCLUDE, BUT ARE NOT LIMITED TO, ALL WORK ADJACENT TO THE TRACKS FOR THE REPAIR OF PIERS, REMOVAL OF BALLAST OVER THE PIER FOOTINGS, PLACEMENT OF JACKING/SHORING TOWERS, JACKING OF BEAM ENDS, AND POURING CONCRETE FOR CONCRETE INFILL OVER THE CRASHWALL.



PLAN
SCALE: 1" = 10'



ELEVATION
SCALE: 1" = 10'

LEGEND:

- CONCRETE REPAIR
- CRACK

ADDENDUM No. 5



BRIDGE 063601

RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

BRIDGE GROUP 51A - RT. 37 C-2

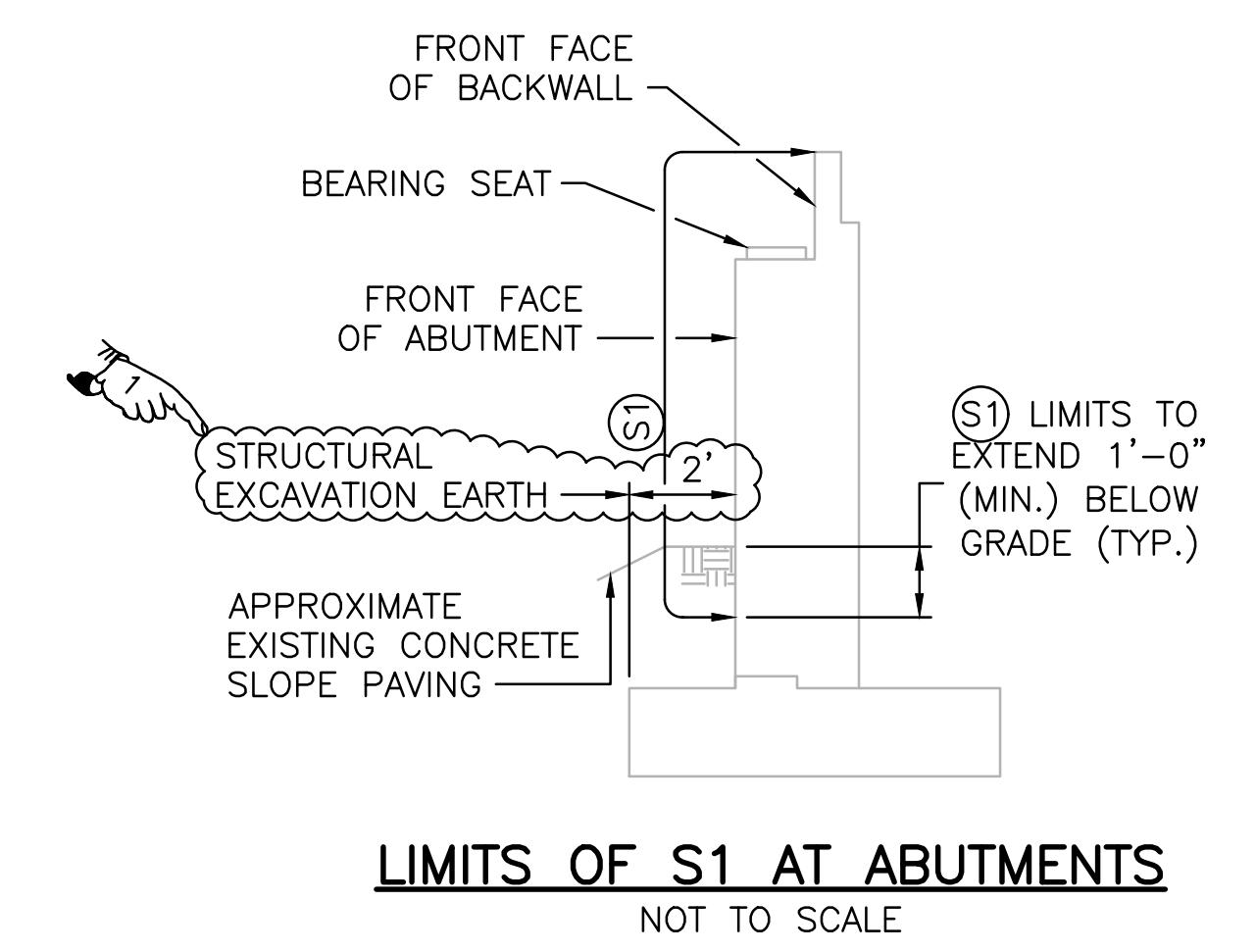
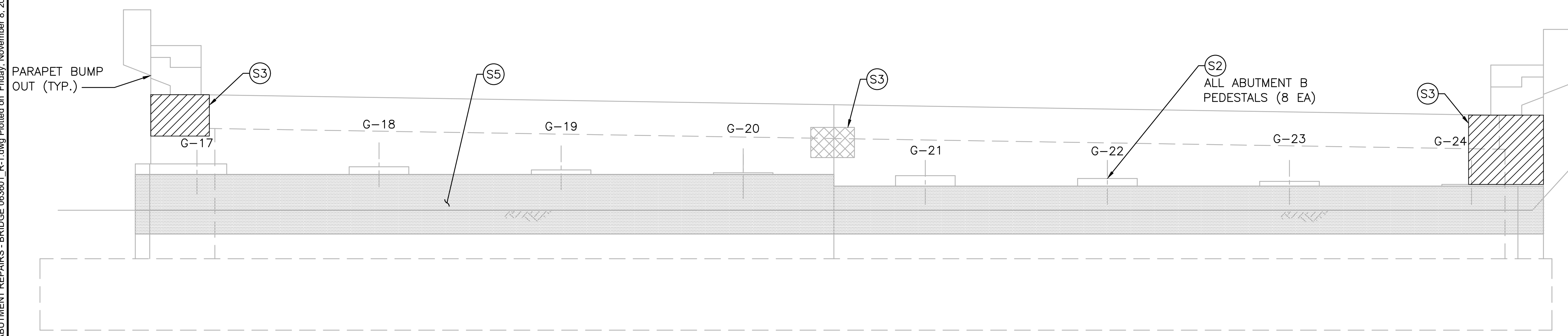
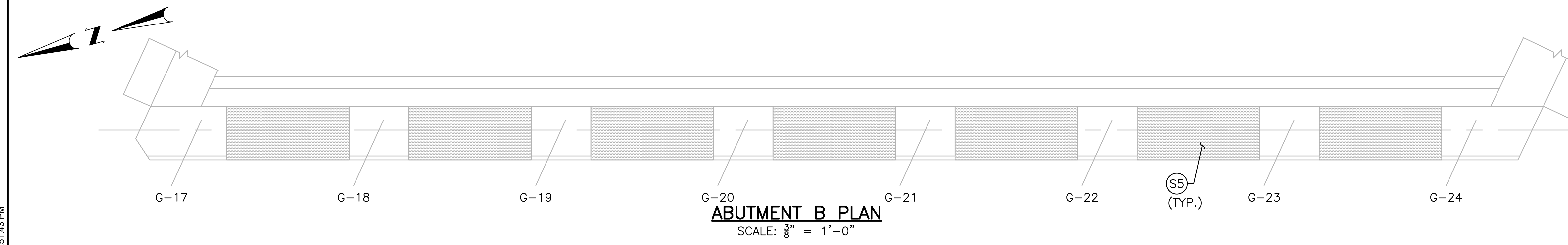
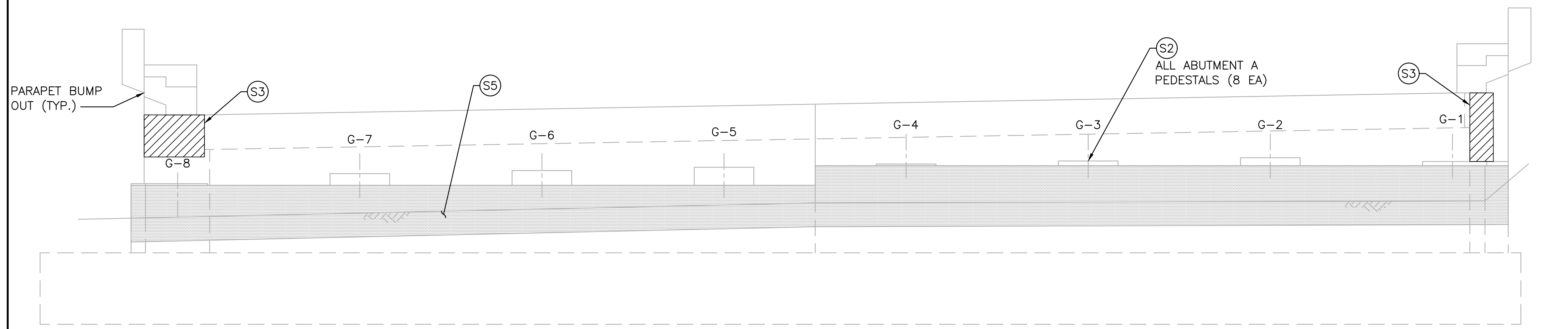
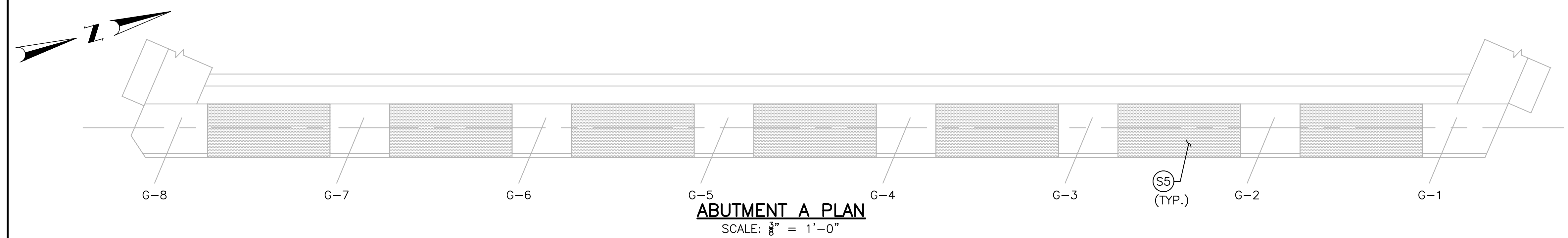
WARWICK RHODE ISLAND

**BRIDGE GENERAL
PLAN & ELEVATION**

REVISIONS		
NO.	DATE	BY
1	11/8/19	DRC

CHECKED BY _____ DATE _____ SCALE AS NOTED

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- SUBSTRUCTURE REPAIR NOTES:**
- FOR GENERAL BRIDGE NOTES, SEE SHEETS 2 & 3.
 - FOR REPAIR KEY, INDEX OF DRAWINGS & QUANTITIES, SEE SHEET 5.
 - FOR CONCRETE REPAIRS DETAILS, SEE SHEETS 25-27.
 - FOR REFACING AND PEDESTAL RECONSTRUCTION DETAILS, SEE SHEET 38.
 - REMOVAL, STOCKPILING, REPAIR AND RELAYING OF SLOPE PAVING IS INCIDENTAL TO ITEM CODE 824.9923, "TEMPORARY JACKING AND SHORING OF BEAMS & GIRDERS - BRIDGE NO. 063601".
 - FOR PIER REPAIR DETAILS, SEE SHEET 11.
 - THE COST TO REPLACE EXCAVATED MATERIAL SHALL BE PAID UNDER ITEM CODE 202.0700, "COMMON BORROW".
 - PAY LIMIT OF STRUCTURE EXCAVATION EARTH SHOWN FOR ABUTMENT. PAY LIMITS FOR PIER SIMILAR.

- LEGEND:**
- CONCRETE REPAIR
 - RE-FACING
 - CRACK
 - REMOVE DETERIORATED CONCRETE

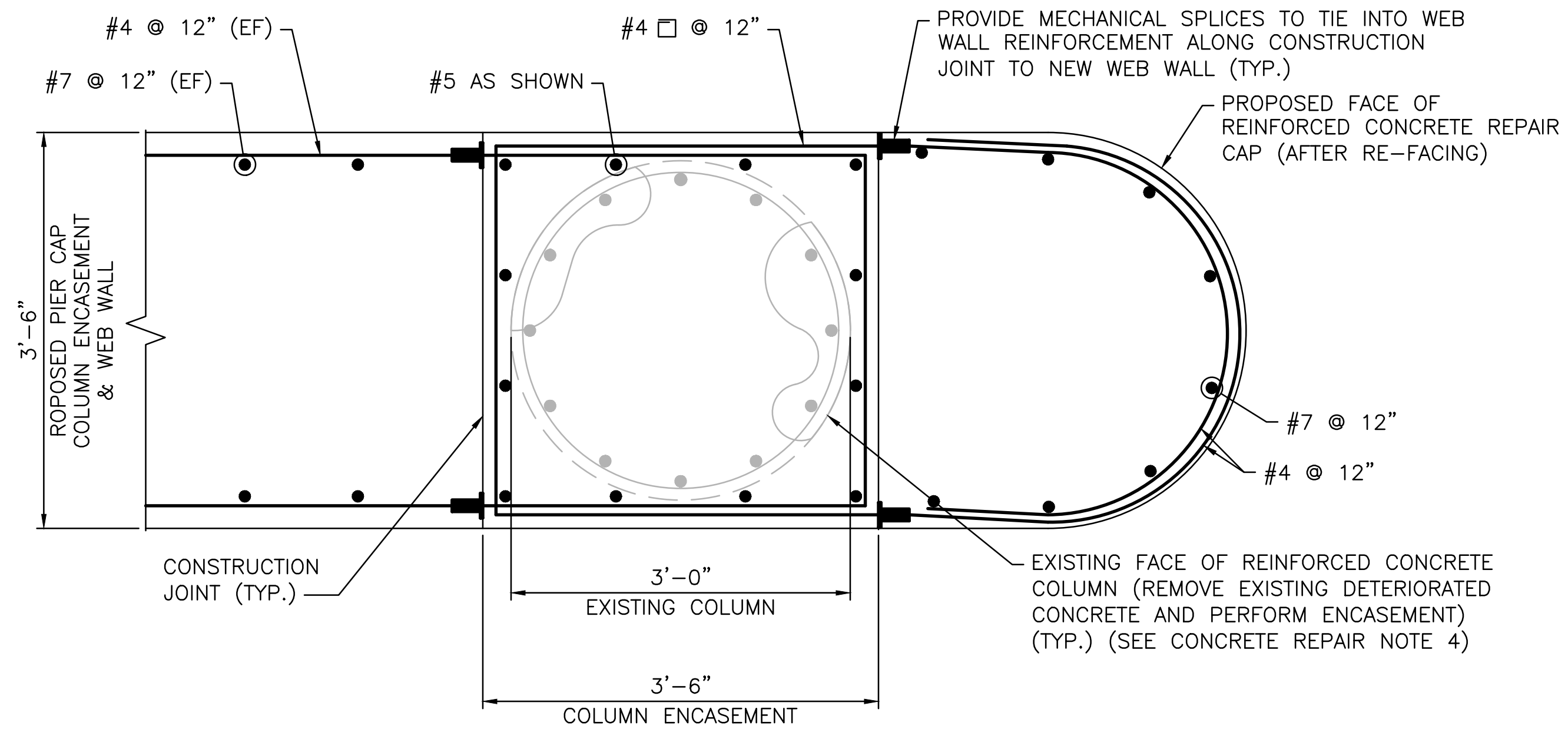
BRIDGE 063601

REVISIONS			NO.	DATE	BY
1	11/8/19	DRC			
RHODE ISLAND DEPARTMENT OF TRANSPORTATION					
BRIDGE GROUP 51A - RT. 37 C-2					
WARWICK			RHODE ISLAND		
ABUTMENT REPAIRS					
CHECKED BY _____ DATE _____ SCALE AS NOTED					

ADDENDUM No. 5

530 PRESTON AVENUE
MERIDEN, CT 06450

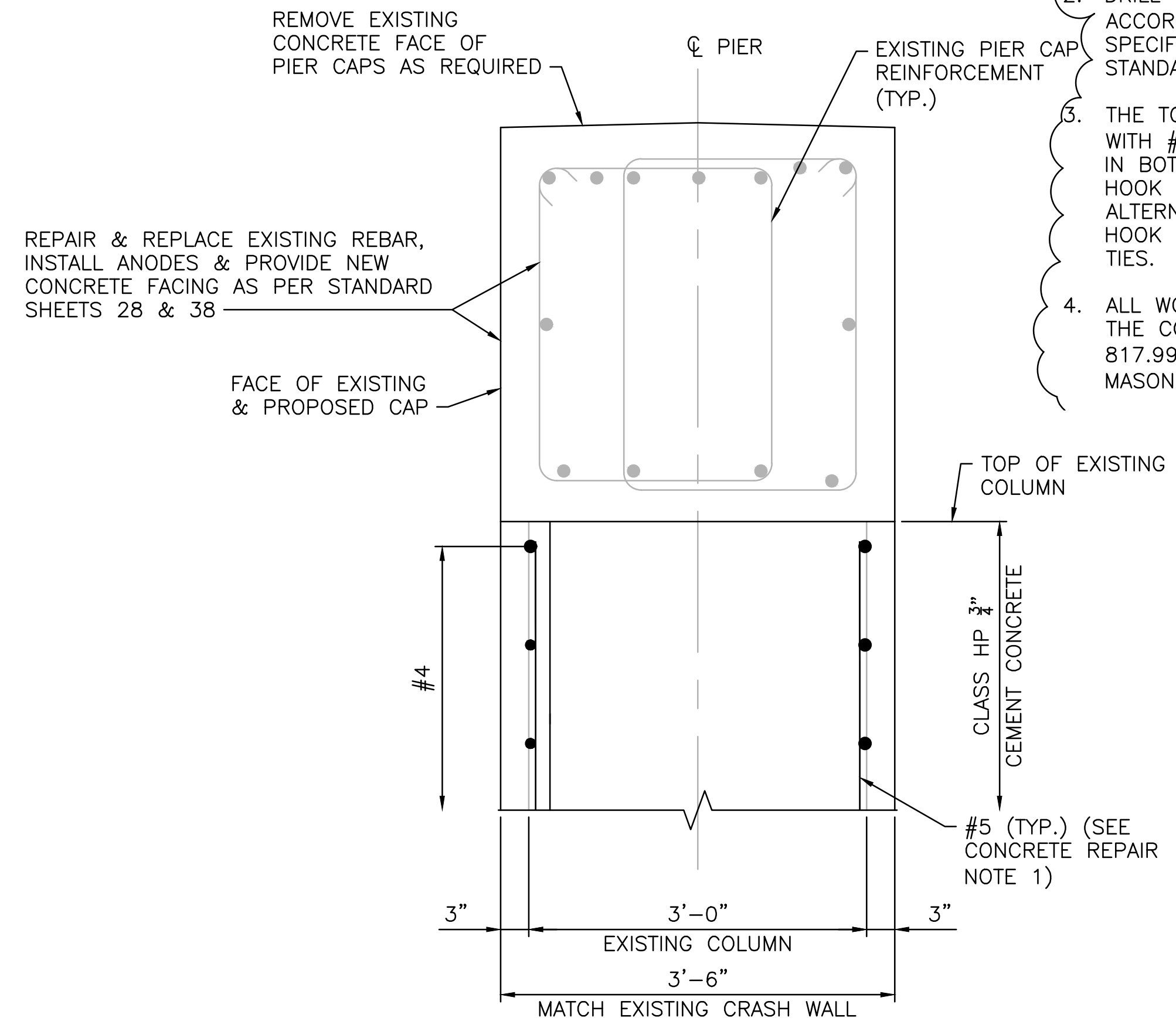
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SECTION A
NOT TO SCALE

CONCRETE REPAIR NOTES:

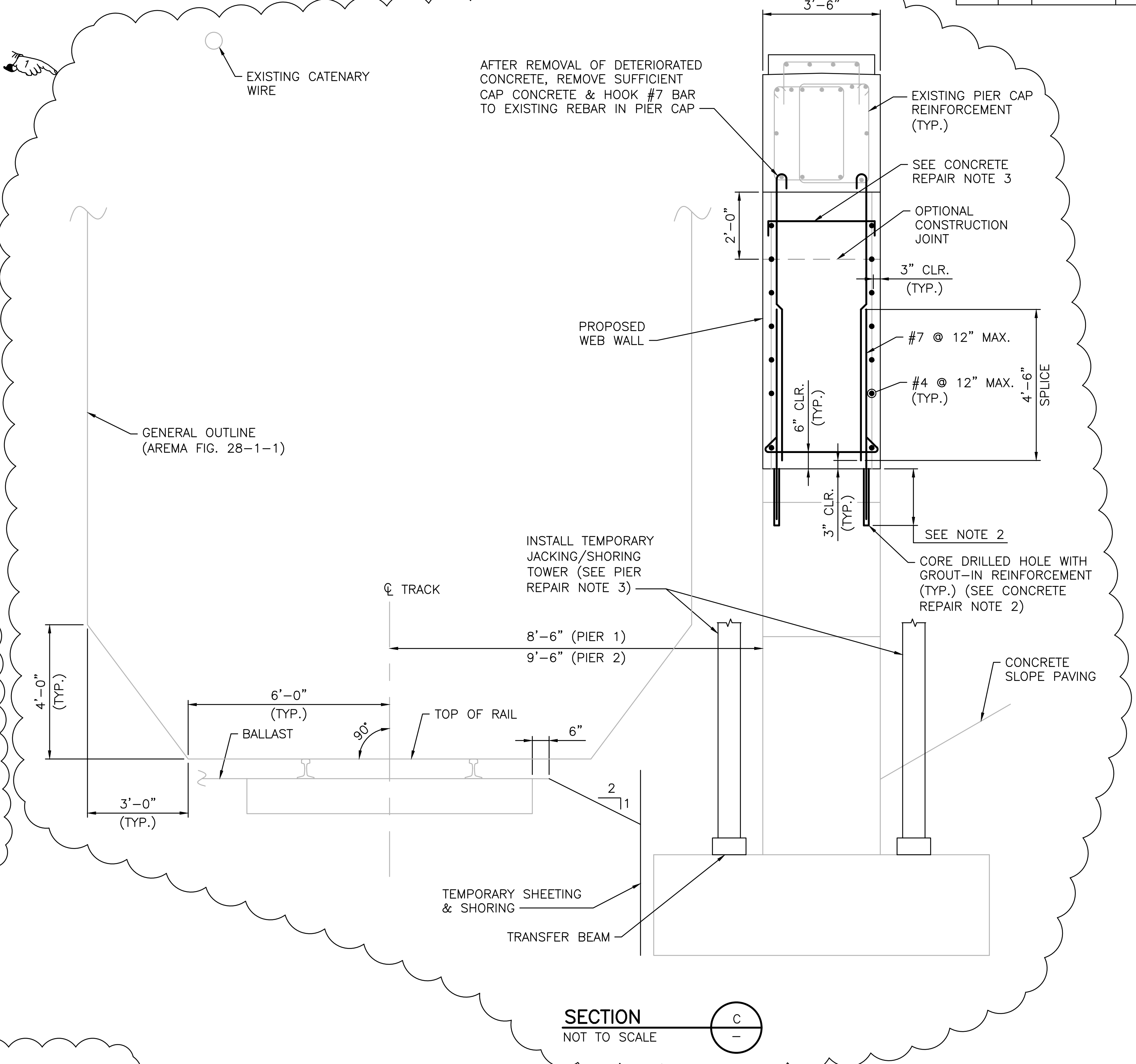
1. CONTRACTOR IS RESPONSIBLE FOR FINAL PLACEMENT AND BAR LENGTHS.
2. DRILL HOLES OF PROPER DIAMETER AND DEPTH IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND SECTION 819 OF THE RI STANDARD SPECIFICATIONS.
3. THE TOP AND BOTTOM MATS OF REINFORCING STEEL WITH #4 TIE BARS AT A MAXIMUM SPACING OF 4'-0" IN BOTH DIRECTIONS. PROVIDE THE BARS WITH A 90° HOOK END AND 135° HOOK END AT THE OTHER END. ALTERNATE PLACEMENT OF 90° HOOK END AND 135° HOOK END AT TOP OF CRASH WALL IN ALTERNATE TIES.
4. ALL WORK REQUIRED FOR CONCRETE ENCASEMENT OF THE COLUMNS SHALL BE PAID UNDER THE ITEM CODE 817.9902, "REPAIRS TO STRUCTURAL CONCRETE MASONRY (FORM AND CAST IN PLACE)".



SECTION B
NOT TO SCALE

PIER REPAIR NOTES:

1. THE CONTRACTOR'S ATTENTION IS DIRECTED TO THE PRESENCE OF OVERHEAD WIRES THROUGHOUT THE PROJECT SITE. THE OVER HEAD WIRES ARE NOT SHOWN FOR CLARITY.
2. FOR DETAILS OF TEMPORARY JACKING AND SHORING SYSTEM, SEE SHEET 39.
3. THE CONTRACTOR MAY ELECT TO PROVIDE AN ALTERNATE JACKING AND SHORING SYSTEM TO AVOID WORK WITHIN THE RAILROAD RIGHT OF WAY (ROW). ALL WORK ASSOCIATED WITH THE DESIGN, CONSTRUCTION, MAINTENANCE, AND DISMANTLING OF THE TEMPORARY JACKING AND SHORING SHALL BE PAID UNDER ITEM CODE 824.9923, "TEMPORARY JACKING AND SHORING OF BEAMS & GIRDERS - BRIDGE NO. 063601". THIS INCLUDES ADDITIONAL COSTS ASSOCIATED WITH CONSTRUCTION WITHIN THE RAILROAD ROW.



SECTION C
NOT TO SCALE

LEGEND:
 CONCRETE REMOVAL

ADDENDUM No. 5



BRIDGE 063601

REVISIONS		
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1	11/8/19	DRC

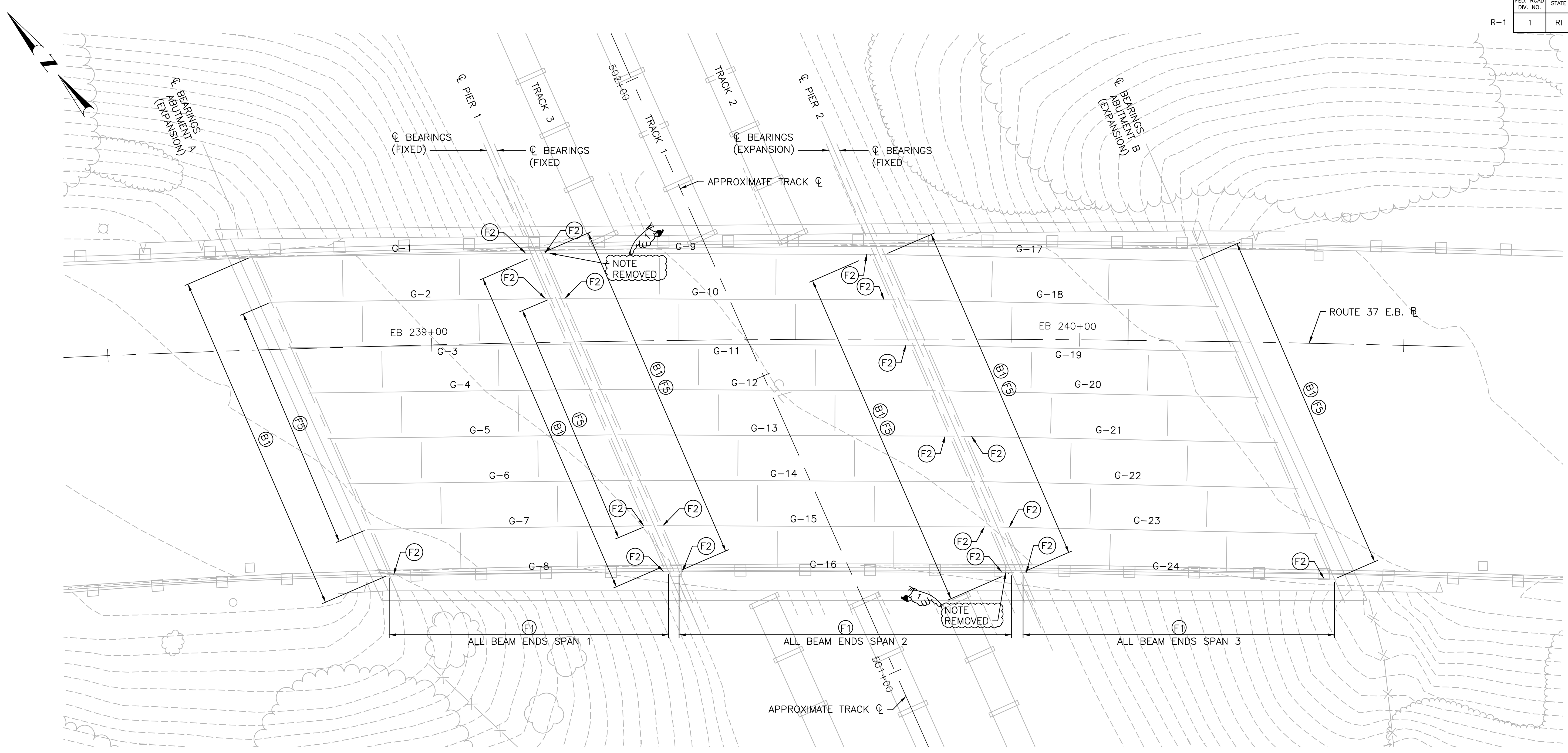
RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

BRIDGE GROUP 51A - RT. 37 C-2

WARWICK RHODE ISLAND

PIER REPAIR DETAILS

CHECKED BY _____ DATE _____ SCALE AS NOTED



SUPERSTRUCTURE REPAIR LOCATION PLAN
SCALE: 1/8" = 1'-0"

SUPERSTRUCTURE CONSTRUCTION			
TRACK OUTAGE			
DESCRIPTION	3	1	2
F1	C		C
F2	C		C
F5	C		C
B1	C		C
INSTALL JACKING & SHORING TOWER	C		C

TRACK OUTAGE KEY
 C CONTINUOUS
 F FOUL TIME
 * CONTRACTOR TO COORDINATE DIRECTLY WITH AMTRAK

NOTE:
 THE CONTRACTOR'S ATTENTION IS DIRECTED TO THE PRESENCE OF OVERHEAD WIRES THROUGHOUT THE PROJECT SITE. THE OVERHEAD WIRES ARE NOT SHOWN ON THESE DRAWINGS FOR CLARITY.

- NOTES:**
- FOR STEEL REPAIR DETAILS, SEE SHEET NO. 13.
 - FOR COVER PLATE REPAIR DETAILS, SEE SHEET NO. 41
 - FOR BEARING DETAILS, SEE SHEET NOS. 36 & 37.

BRIDGE 063601

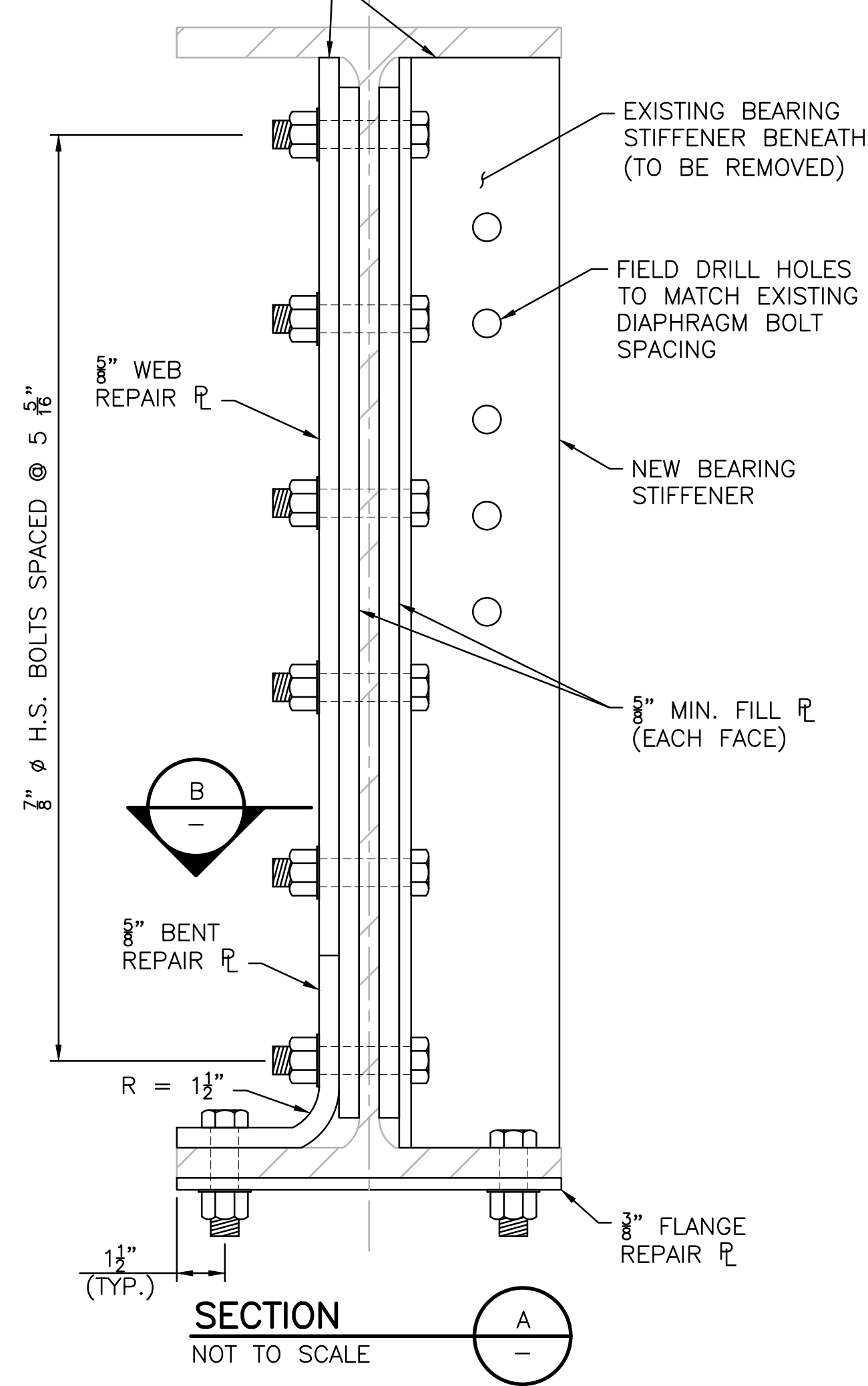
REVISIONS			RHODE ISLAND DEPARTMENT OF TRANSPORTATION
NO.	DATE	BY	
1	11/8/19	DRC	BRIDGE GROUP 51A - RT. 37 C-2
			WARWICK RHODE ISLAND
			SUPERSTRUCTURE REPAIR LOCATION PLAN
			CHECKED BY _____ DATE _____ SCALE AS NOTED

ADDENDUM No. 5



0013C_V7_012_SUPERSTRUCTURE REPAIR LOCATION PLAN - BRIDGE 063601_R-1.dwg Plotted on Friday, November 8, 2019 2:52:51 PM

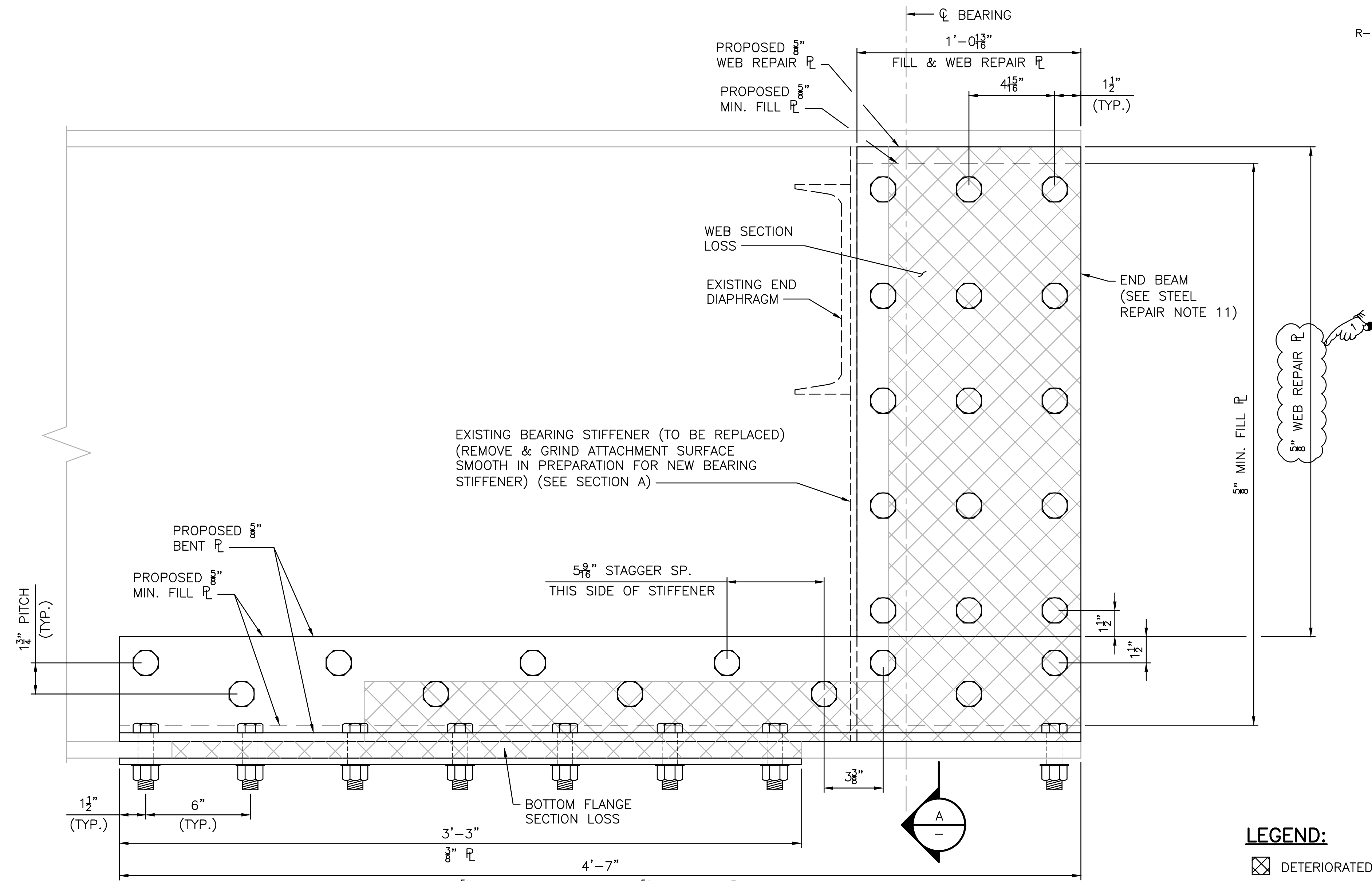
GRIND TO BEAR ON FLANGE (TYP.)
 Ø EXISTING GIRDER (SEE STEEL REPAIR NOTE 10)



SECTION A
NOT TO SCALE

STEEL REPAIR NOTES:

- BOLT SPACING PROVIDED ARE MAXIMUM SPACES.
- PROVIDE STRUCTURAL STEEL CONFORMING TO ITEM CODE 824.9914 "STEEL BEAM/GIRDER REPAIRS - BRIDGE 063601."
- PROVIDE MECHANICALLY GALVANIZED 7/8" DIAMETER FASTENERS CONFORMING TO ASTM A325, TYPE 1, HIGH STRENGTH BOLTS. THE PROPER PREPARATION OF THE GALVANIZED FASTENERS TO RECEIVE PAINT IS INCIDENTAL TO THE COST OF PAINTING THE EXISTING STRUCTURE. WHERE FEASIBLE, PLACE BOLTS SO THAT THE THREADED ENDS ARE PROTECTED FROM THE WEATHER, EXCLUDE THREADS FROM THE SHEAR PLANES.
- DRILL OR REAM HOLES IN FIELD AS REQUIRED.
- BOLT LOCATIONS AND LENGTH OF REPAIR PLATES SHOWN IN THIS DETAIL ARE BASED ON LIMITED FIELD INVESTIGATION. ACTUAL LOCATIONS AND DIMENSIONS MAY NEED TO BE ADJUSTED FOR FIELD FIT UP. IN DOING SO, COMPLY WITH THE AASHTO MAXIMUM BOLT SPACING FOR SEALING CONNECTIONS AS WELL AS MINIMUM EDGE DISTANCES.
- THIS REHABILITATION IS INTENDED TO REPAIR ALL SECTION LOSS TO LOAD CARRYING MEMBERS. ONCE THE STRUCTURE HAS BEEN BLAST-CLEANED, THE EXTENT OF THE SECTION LOSS ON WHICH DETAILED REPAIRS ARE BASED MAY INCREASE. WHEN THIS IS THE CASE, DELINEATE NEW LIMITS OF SECTION LOSS, AND HAVE THEM APPROVED BY THE DEPARTMENT REPRESENTATIVE PRIOR TO FABRICATION OF SAID REPAIR.
- REPAIRS TO OUTSIDE WEBS AND BOTTOM FLANGES ARE TO BE PERFORMED ONLY WHERE SECTION LOSS IS GREATER THAN OR EQUAL TO 1/16". OTHERWISE, REPAIRS MAY BE ELIMINATED AS APPROVED BY THE ENGINEER.
- ALL CLEANED SURFACES SHALL RECEIVE A PRIME COAT PRIOR TO MAKING CONNECTION AND BE PAINTED AFTER REPAIRS ARE COMPLETED. CLEANING AND PAINTING SHALL BE IN ACCORDANCE WITH THE SPECIAL PROVISIONS.
- THE COLOR OF THE TOPCOAT USED TO FIELD PAINT EXISTING STEEL SHALL MATCH THE COLOR OF THE EXISTING PAINT. THE CONTRACTOR SHALL CONSULT RECORD PLAN SETS FOR NECESSARY INFORMATION.
- ALL COSTS OF REMOVING EXISTING STEEL AND RIVETS, CLEANING AND PAINTING REPAIRED AREAS, INSTALLING WEB AND FILLER PLATES, HIGH STRENGTH BOLTS, DRILLING OR REAMING HOLES IN THE EXISTING STEEL SHALL BE INCLUDED IN THE PAY ITEM CODE 824.9914 "STEEL BEAM/GIRDER REPAIRS - BRIDGE NO. 063601".



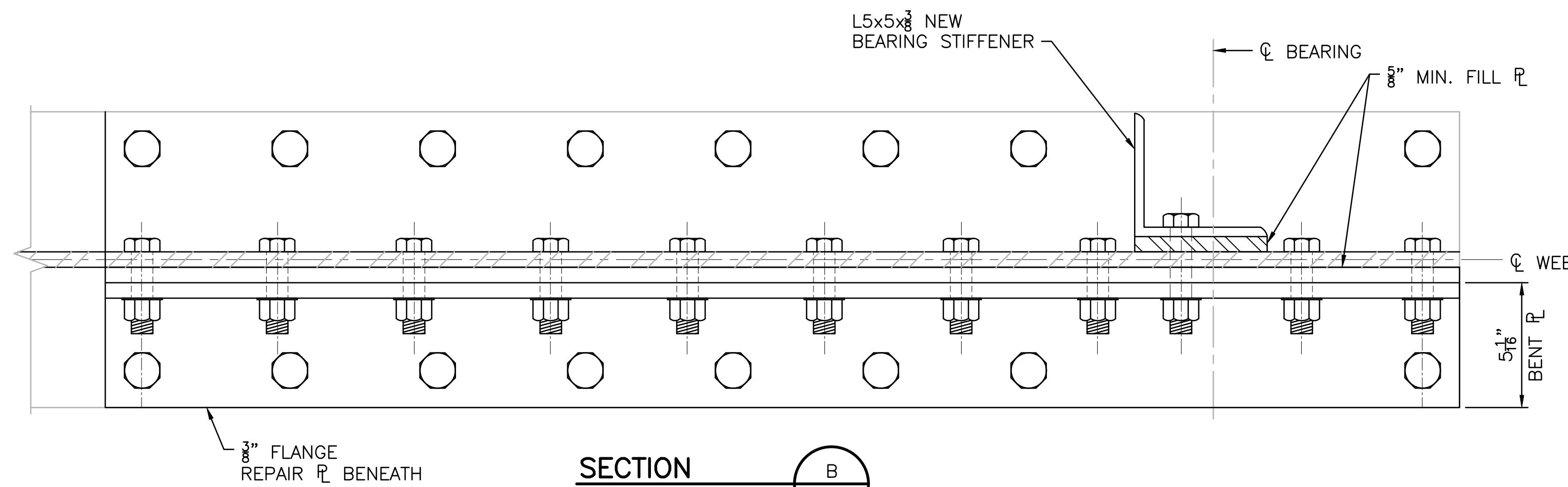
BEAM ELEVATION AT ABUTMENT & PIER
NOT TO SCALE

LEGEND:

⊠ DETERIORATED STEEL

NOTES:

- FOR GENERAL NOTES, SEE SHEETS 2 & 3.
- FOR REPAIR KEY, INDEX OF SHEETS & QUANTITIES, SEE SHEET 5.
- FOR STEEL REPAIR LOCATION PLAN, SEE SHEET 12.



SECTION B
NOT TO SCALE

BRIDGE 063601

RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

BRIDGE GROUP 51A - RT. 37 C-2

WARWICK RHODE ISLAND

STRUCTURAL STEEL
REPAIR DETAILS

ADDENDUM No. 5



530 PRESTON AVENUE
MERRIDEN, CT 06450

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REPAIR KEY:

THE GENERAL SCOPE OF THE REHABILITATION AND REPAIRS FOR THE BRIDGE INCLUDES, BUT IS NOT LIMITED TO THE FOLLOWING:

BEARING REPAIRS:

- (B1) - JACK UP SUPERSTRUCTURE AND REPLACE BEARINGS
- (B2) - JACK UP SUPERSTRUCTURE AND RESET BEARINGS

DECK REPAIRS:

- (D1) - DECK UNDERSIDE REPAIR
- (D2) - DECK UNDERSIDE REPAIR OVER RAILROAD
- (D3) - EXPANSION JOINT HEADER REPAIR
- (D4) - REMOVE DETERIORATED CONCRETE AND PERFORM CONCRETE REPAIR TO BARRIER / CURB
- (D5) - REPLACE MISSING GUARDRAIL ATTACHMENT BRACKET AND TIGHTEN ATTACHMENT BOLTS
- (D6) - CLEAN AND FLUSH DRAIN TROUGHS AND SCUPPERS

JOINT REPAIRS:

- (J1) - INSTALL ASPHALTIC PLUG EXPANSION JOINT WITH BRIDGING PLATE AND PREFORMED JOINT SEAL
- (J2) - INSTALL ASPHALTIC PLUG EXPANSION JOINT WITHOUT BRIDGING PLATE
- (J3) - INSTALL WATERPROOFING AT APPROACH SLAB / BACKWALL JOINT
- (J4) - INSTALL PREFORMED JOINT SEAL AT MEDIAN JOINT
- (J5) - INSTALL PREFORMED JOINT SEAL AT PARAPETS

SUBSTRUCTURE REPAIRS:

- (S1) - CLEAN CONCRETE SURFACES AND COAT WITH AN EPOXY RESIN PROTECTIVE COATING
- (S2) - RECONSTRUCT EXISTING BEARING SEAT/PEDESTAL
- (S3) - REMOVE DETERIORATED CONCRETE AND PERFORM CONCRETE REPAIR
- (S4) - REMOVE SPALLED OR DETERIORATED CONCRETE AND RECONSTRUCT TOP OF BACKWALL
- (S5) - REMOVE EXISTING FACE OF SUBSTRUCTURE UP TO LIMIT OF DETERIORATED CONCRETE AND RESURFACE
- (S6) - REBUILD EXISTING CONCRETE SHEAR BLOCK AS REQUIRED
- (S7) - EPOXY INJECTION CRACK SEAL
- (S8) - REMOVE SPALLED OR DETERIORATED CONCRETE AND REBUILD TO FORM REINFORCED COLUMN ENCASEMENT
- (S9) - CONSTRUCT WEB WALL
- (S10) - SLOPE PAVING REPAIRS

SUPERSTRUCTURE REPAIRS:

- (F1) - CLEAN AND SANDBLAST EXISTING PAINT PROTECTIVE SYSTEM AND REPAINT BEAM ENDS
- (F2) - MISCELLANEOUS STRUCTURAL STEEL REPAIRS
- (F3) - REMOVE DETERIORATED CONCRETE AND PERFORM CONCRETE REPAIR
- (F4) - REPAIR BEAM END SPALLS
- (F5) - COVER PLATE WELD REPAIRS BY PEENING

ROADWAY REPAIRS:

- (R1) - REPLACE DAMAGED GUARDRAIL
- (R2) - REPLACE DAMAGED GRANITE CURB
- (R3) - REPLACE MISSING LIGHT STANDARD HANDHOLE COVER AND ANCHOR BOLT COVERS
- (R4) - REPAIR JUNCTION BOX COVER

INDEX OF SHEETS	
DESCRIPTION	SHEET NO.
REPAIR KEY, INDEX OF SHEETS & QUANTITIES	15
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SUPERSTRUCTURE REPAIR LOCATION PLAN	22
STRUCTURAL STEEL REPAIR DETAILS	23
DECK UNDERSIDE REPAIR LOCATION PLAN	24

QUANTITIES			
ITEM CODE	DESCRIPTION	UNIT (2)	TOTAL
800.9927	REPAIRS TO ROUTE 37 BRIDGE NO. 063701	LS	1
(1)	MODIFIED CLASS 9.5 HMA	TON	67
(1)	ASPHALT EMULSION TACK COAT	SY	25
(1)	CONCRETE SUBSTRUCTURE CLASS HP 3/4" PIERS, COL, CAP	CY	120
(1)	GALVANIZED BAR REINFORCEMENT GRADE 60	LB	21000
(1)	HEAT APPLIED PRE-FABRICATED MEMBRANE	SY	224
(1)	DRILL AND GROUT REINFORCING DOWELS	EA	236
(1)	HIGH PRESSURE WATER CLEANING OF BRIDGE STRUCTURES	EA	1
(1)	PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES	SY	925
(1)	ASPHALTIC PLUG EXPANSION JOINT SYSTEM	LF	246
(1)	PREFORMED JOINT SEAL	LF	310
(1)	PEENING COVER PLATE WELDS	EA	44
(1)	TEMPORARY JACKING AND SHORING OF BEAMS & GIRDERS - BRIDGE NO. 063701	EA	48
(1)	ELASTOMERIC BEARINGS LAMINATED	EA	48
(1)	FULL DEPTH REMOVAL AND DISPOSAL OF BITUMINOUS PAVEMENT FROM CONCRETE BRIDGE DECKS	SY	255
(1)	CUTTING AND MATCHING ASPHALT	LF	1876
202.0700	COMMON BORROW	CY	35
203.0100	STRUCTURAL EXCAVATION EARTH	CY	50
302.0100	GRAVEL BORROW SUBBASE COURSE	CY	15
401.3003	CLASS 9.5 HMA FOR PATCHING	TON	1
403.0300	ASPHALT EMULSION TACK COAT	SY	42
810.0210	GALVANIZED BAR REINFORCEMENT GRADE 60	LB	1500
810.0702	WELDED WIRE FABRIC (GALVANIZED)	SF	40
810.9901	EMBEDDED GALVANIC ANODES	EA	550
813.0210	HEAT APPLIED PRE-FABRICATED MEMBRANE	SY	105
817.9901	REPAIRS TO STRUCTURAL CONCRETE MASONRY (PATCHING MORTAR)	CF	65
817.9902	REPAIRS TO STRUCTURAL CONCRETE MASONRY (FORM AND CAST IN PLACE)	CY	30
817.9904	EXPANSION JOINT HEADER REPAIRS WITH POLYMER MORTAR	CF	150
818.9901	PORTLAND CEMENT CONCRETE DECK REPAIR (PARTIAL DECK REMOVAL)	SF	200
818.9902	PORTLAND CEMENT CONCRETE DECK REPAIR (FULL DECK REMOVAL)	SF	20
818.9904	PORTLAND CEMENT CONCRETE DECK REPAIRS (PARTIAL DECK REMOVAL_BR 636 & 637)	SF	45
818.9905	PORTLAND CEMENT CONCRETE DECK REPAIR (FULL DECK REMOVAL)_BR 636 & 637	SF	5
824.9914	STEEL BEAM/GIRDER REPAIRS - BRIDGE NO. 063701	LB	1400
825.9904	LOCALIZED PAINT REMOVAL AND FIELD PAINTING OF EXISTING STEEL	SF	1300
836.0100	STRUCTURAL CONCRETE CRACK REPAIR BY EPOXY-RESIN BASE ADHESIVE INJECTION	LF	115
936.0100	MOBILIZATION AND DEMOBILIZATION	LS	1

- (1) ITEMS IN "REPAIRS TO ROUTE 37 BRIDGE NO. 063701" LUMP SUM ITEM 800.9927 GIVEN FOR INFORMATION ONLY.
- (2) AREAS MARKED AS CONCRETE REPAIR OR RESURFACING / REFACING, OR RECONSTRUCTION THAT ARE INDICATED IN THE DRAWINGS AS SF (SQUARE FEET) ARE FOR INFORMATIONAL PURPOSES ONLY AND ARE NOT TO BE USED AS A BASIS FOR ESTIMATING. METHOD OF MEASUREMENT AND BASIS OF PAYMENT SHALL BE AS INDICATED IN THE SPECIFICATIONS.
- (3) SEE SHEET NO. 37 FOR ELASTOMERIC BEARING PAD SIZES.

BRIDGE 063701

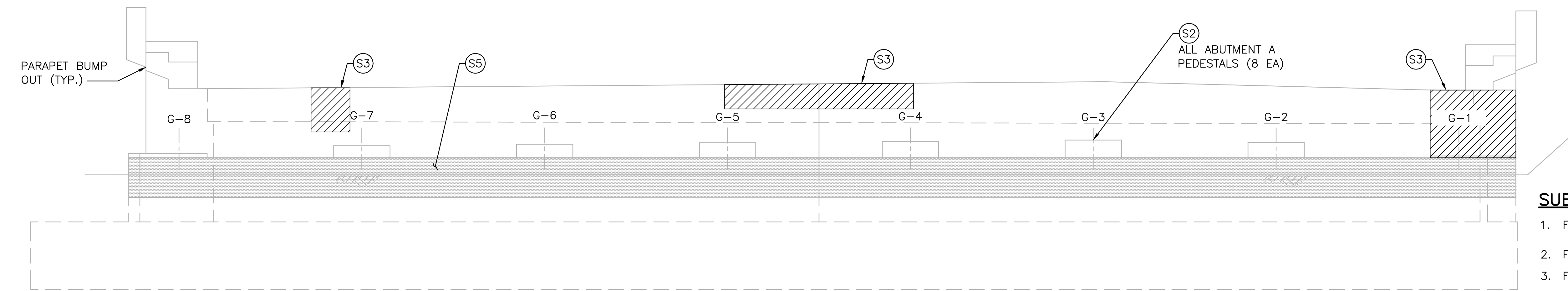
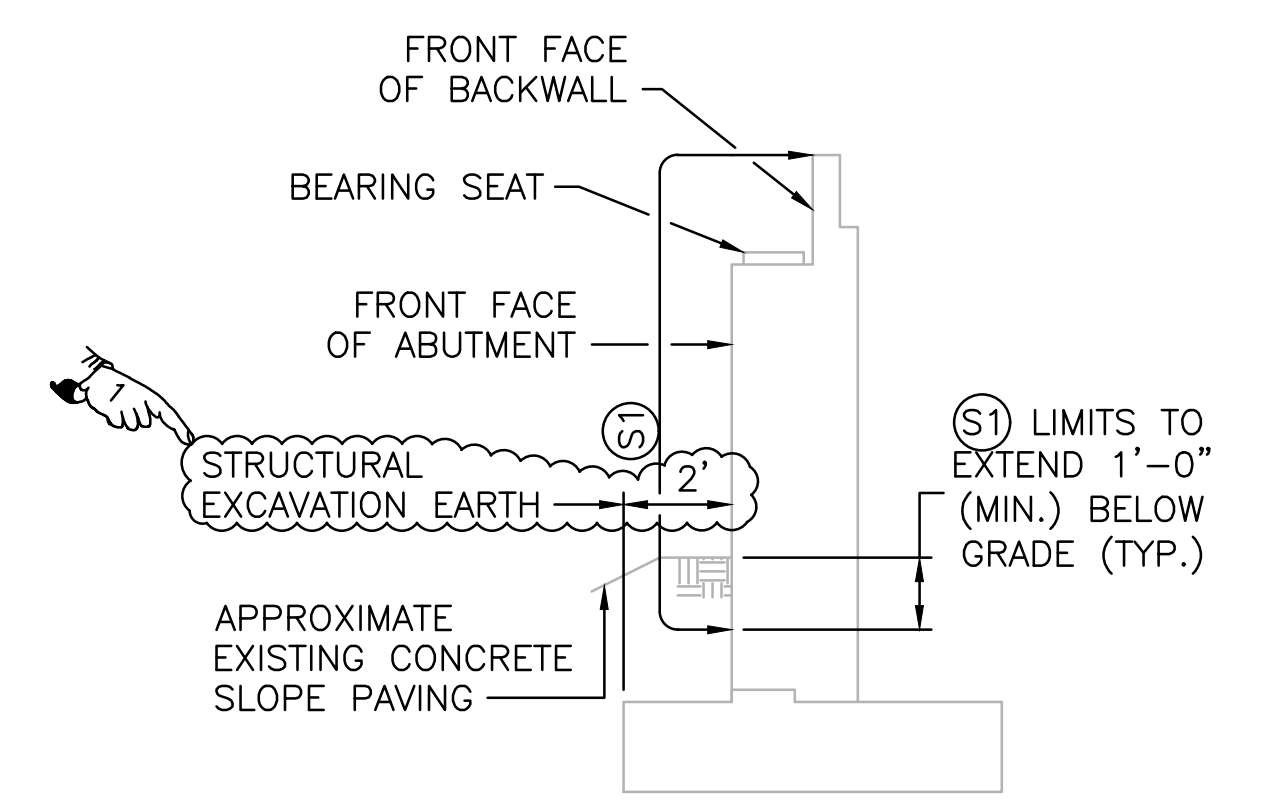
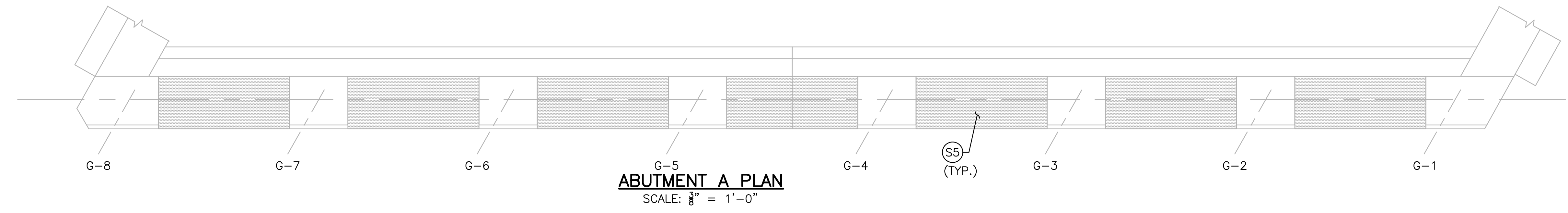
REVISIONS		
NO.	DATE	BY
1	11/8/19	DRC

RHODE ISLAND DEPARTMENT OF TRANSPORTATION	
BRIDGE GROUP 51A - RT. 37 C-2	
WARWICK	RHODE ISLAND
REPAIR KEY, INDEX OF SHEETS & QUANTITIES	
CHECKED BY _____	DATE _____ SCALE AS NOTED

ADDENDUM No. 5

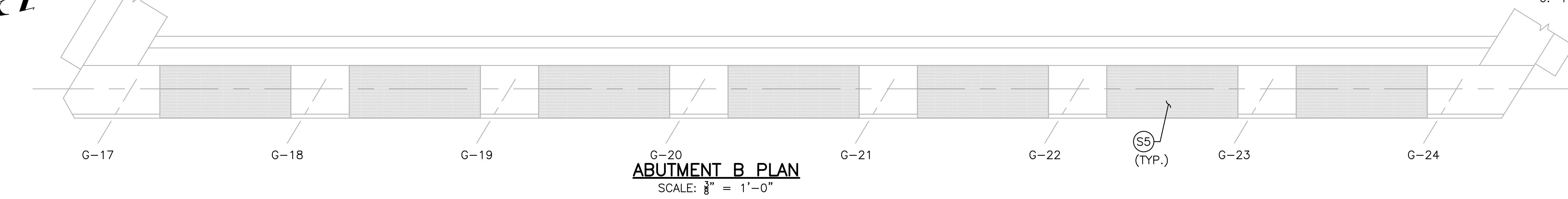


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MERIDEN, CT 06450

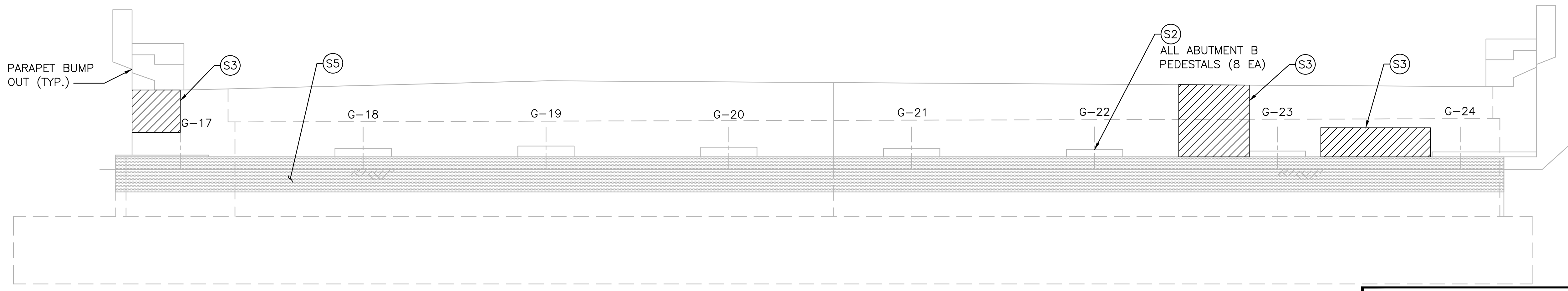


SUBSTRUCTURE REPAIR NOTES:

- FOR GENERAL BRIDGE NOTES, SEE SHEETS 2 & 3.
- FOR REPAIR KEY, INDEX OF DRAWINGS & QUANTITIES, SEE SHEET 15.
- FOR CONCRETE REPAIRS DETAILS, SEE SHEETS 25 - 27.
- FOR REFACING AND PEDESTAL RECONSTRUCTION DETAILS, SEE SHEET 38.
- REMOVAL, STOCKPILING, REPAIR AND RELAYING OF SLOPE PAVING IS INCIDENTAL TO ITEM CODE 824.9924, "TEMPORARY JACKING AND SHORING OF BEAMS & GIRDERS - BRIDGE NO. 063701".
- FOR PIER REPAIR DETAILS, SEE SHEET 21.
- THE COST TO REPLACE EXCAVATED MATERIAL SHALL BE PAID UNDER ITEM CODE 202.0700, "COMMON BORROW".
- PAY LIMIT OF STRUCTURE EXCAVATION EARTH SHOWN FOR ABUTMENT. PAY LIMITS FOR PIER SIMILAR.



- LEGEND:**
- CONCRETE REPAIR
 - RE-FACING
 - CRACK



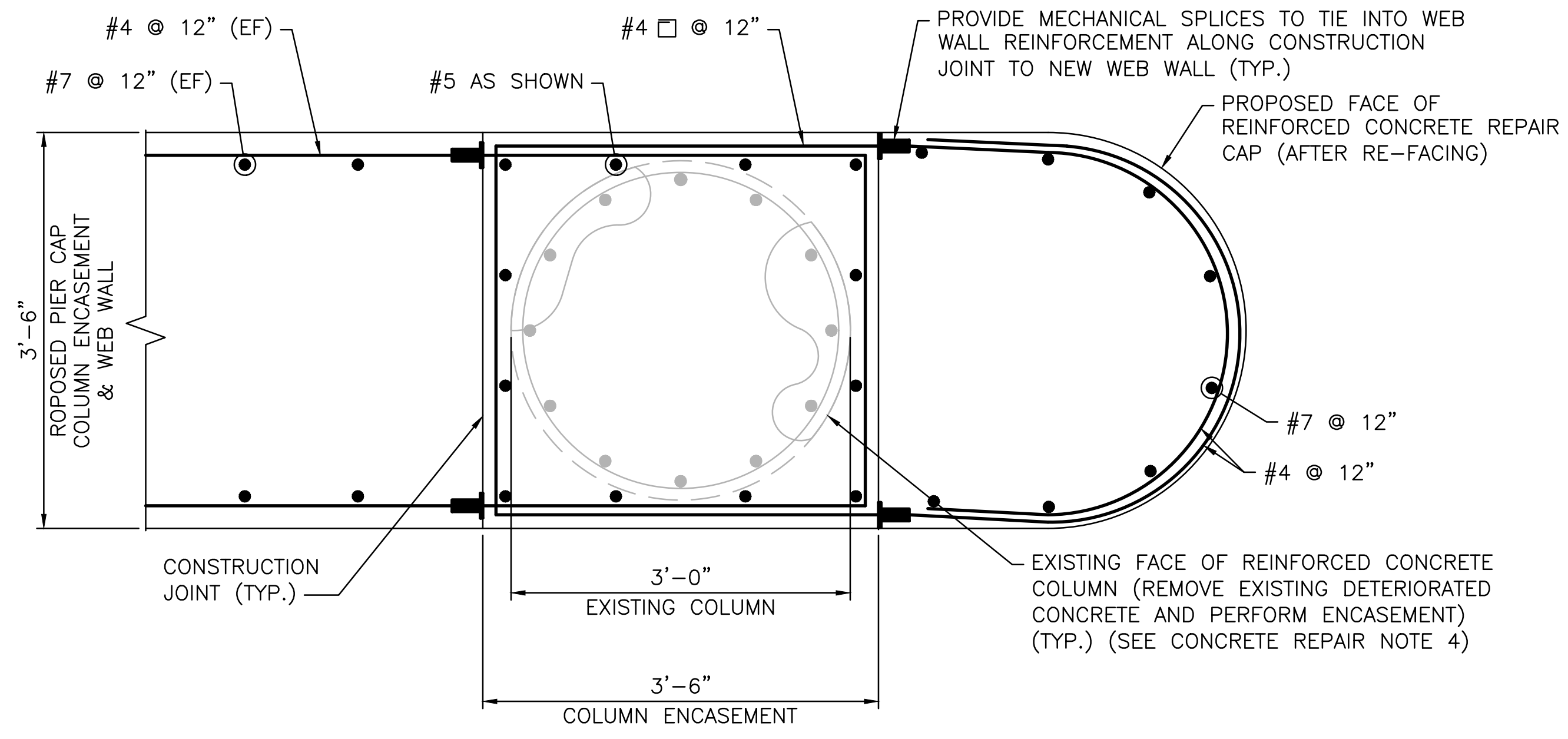
BRIDGE 063701

REVISIONS			RHODE ISLAND DEPARTMENT OF TRANSPORTATION	
NO.	DATE	BY	BRIDGE GROUP 51A - RT. 37 C-2	
1	11/8/19	DRC		
			WARWICK RHODE ISLAND	
			ABUTMENT REPAIRS	
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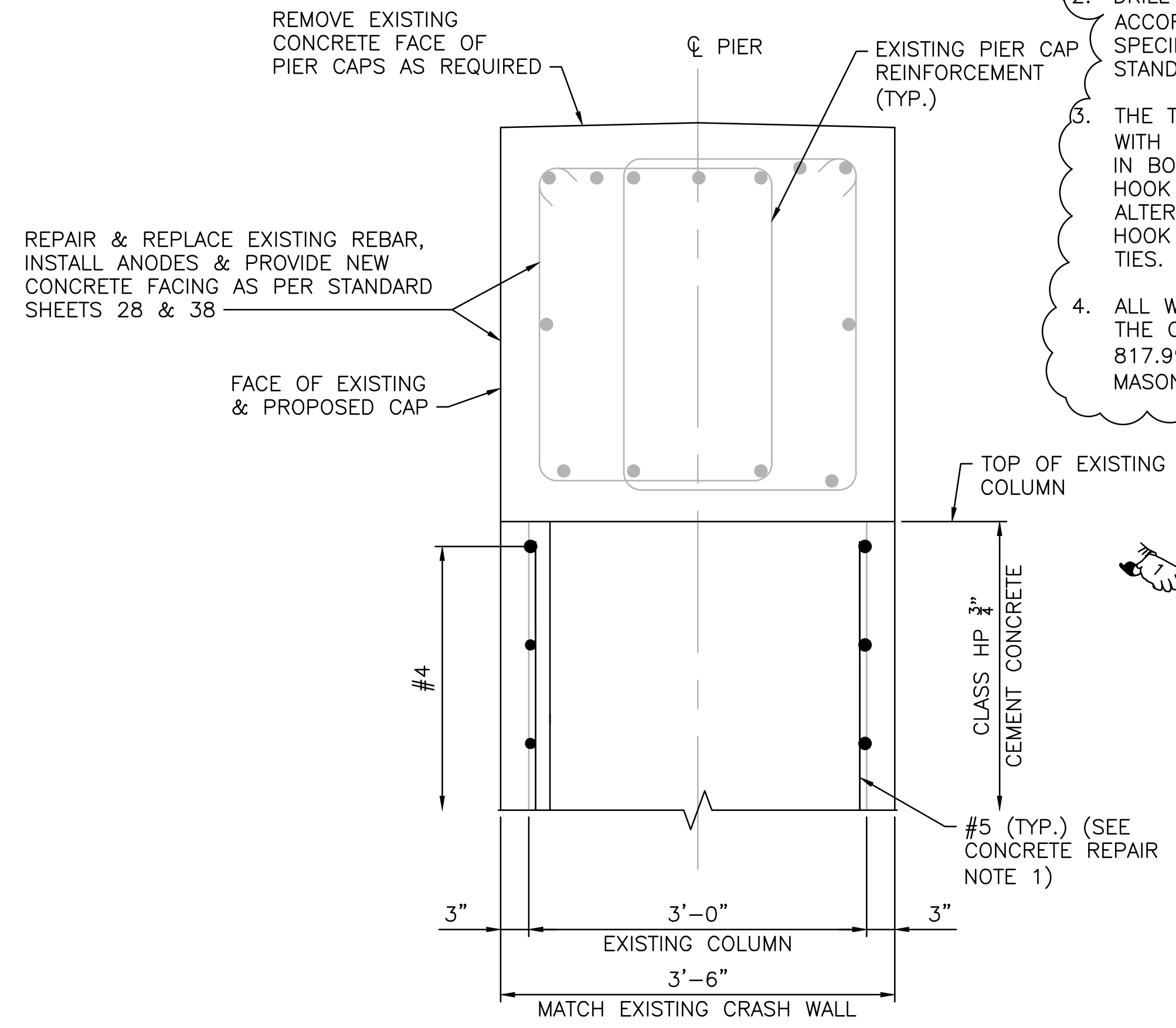
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SECTION A
NOT TO SCALE

CONCRETE REPAIR NOTES:

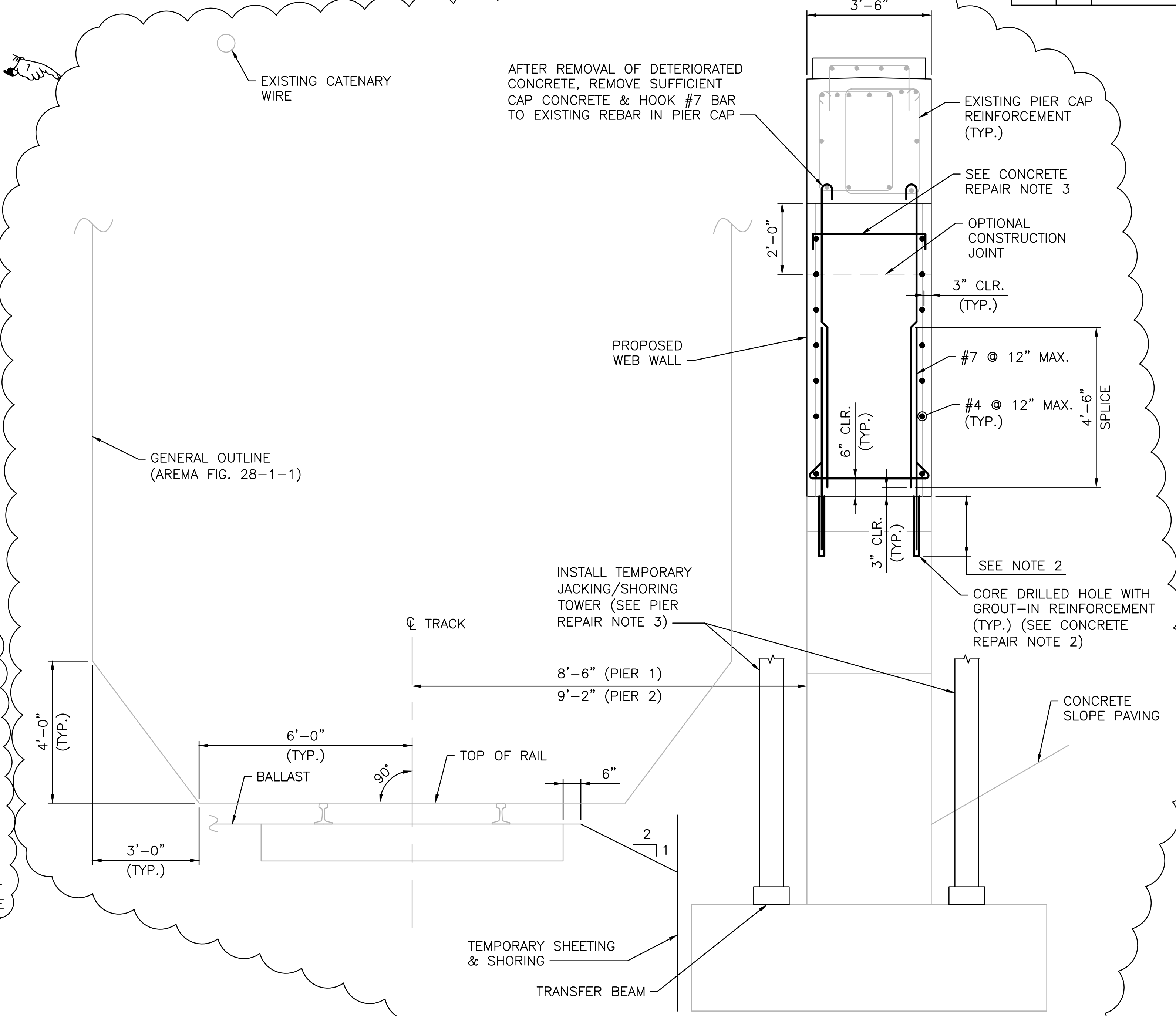
1. CONTRACTOR IS RESPONSIBLE FOR FINAL PLACEMENT AND BAR LENGTHS.
2. DRILL HOLES OF PROPER DIAMETER AND DEPTH IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND SECTION 819 OF THE RI STANDARD SPECIFICATIONS.
3. THE TOP AND BOTTOM MATS OF REINFORCING STEEL WITH #4 TIE BARS AT A MAXIMUM SPACING OF 4'-0" IN BOTH DIRECTIONS. PROVIDE THE BARS WITH A 90° HOOK END AND 135° HOOK END AT THE OTHER END. ALTERNATE PLACEMENT OF 90° HOOK END AND 135° HOOK END AT TOP OF CRASH WALL IN ALTERNATE TIES.
4. ALL WORK REQUIRED FOR CONCRETE ENCASEMENT OF THE COLUMNS SHALL BE PAID UNDER THE ITEM CODE 817.9902, "REPAIRS TO STRUCTURAL CONCRETE MASONRY (FORM AND CAST IN PLACE)".



SECTION B
NOT TO SCALE

PIER REPAIR NOTES:

1. THE CONTRACTOR'S ATTENTION IS DIRECTED TO THE PRESENCE OF OVERHEAD WIRES THROUGHOUT THE PROJECT SITE. THE OVER HEAD WIRES ARE NOT SHOWN FOR CLARITY.
2. FOR DETAILS OF TEMPORARY JACKING AND SHORING SYSTEM, SEE SHEET NO. 39.
3. THE CONTRACTOR MAY ELECT TO PROVIDE AN ALTERNATE JACKING AND SHORING SYSTEM TO AVOID WORK WITHIN THE RAILROAD RIGHT OF WAY (ROW). ALL WORK ASSOCIATED WITH THE DESIGN, CONSTRUCTION, MAINTENANCE, AND DISMANTLING OF THE TEMPORARY JACKING AND SHORING SHALL BE PAID UNDER ITEM CODE 824.9924, "TEMPORARY JACKING AND SHORING OF BEAMS & GIRDERS - BRIDGE NO. 063701". THIS INCLUDES ADDITIONAL COSTS ASSOCIATED WITH CONSTRUCTION WITHIN THE RAILROAD ROW.



SECTION C
NOT TO SCALE

LEGEND:
[Hatched Box] CONCRETE REMOVAL

ADDENDUM No. 5



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BRIDGE 063701

RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

BRIDGE GROUP 51A - RT. 37 C-2

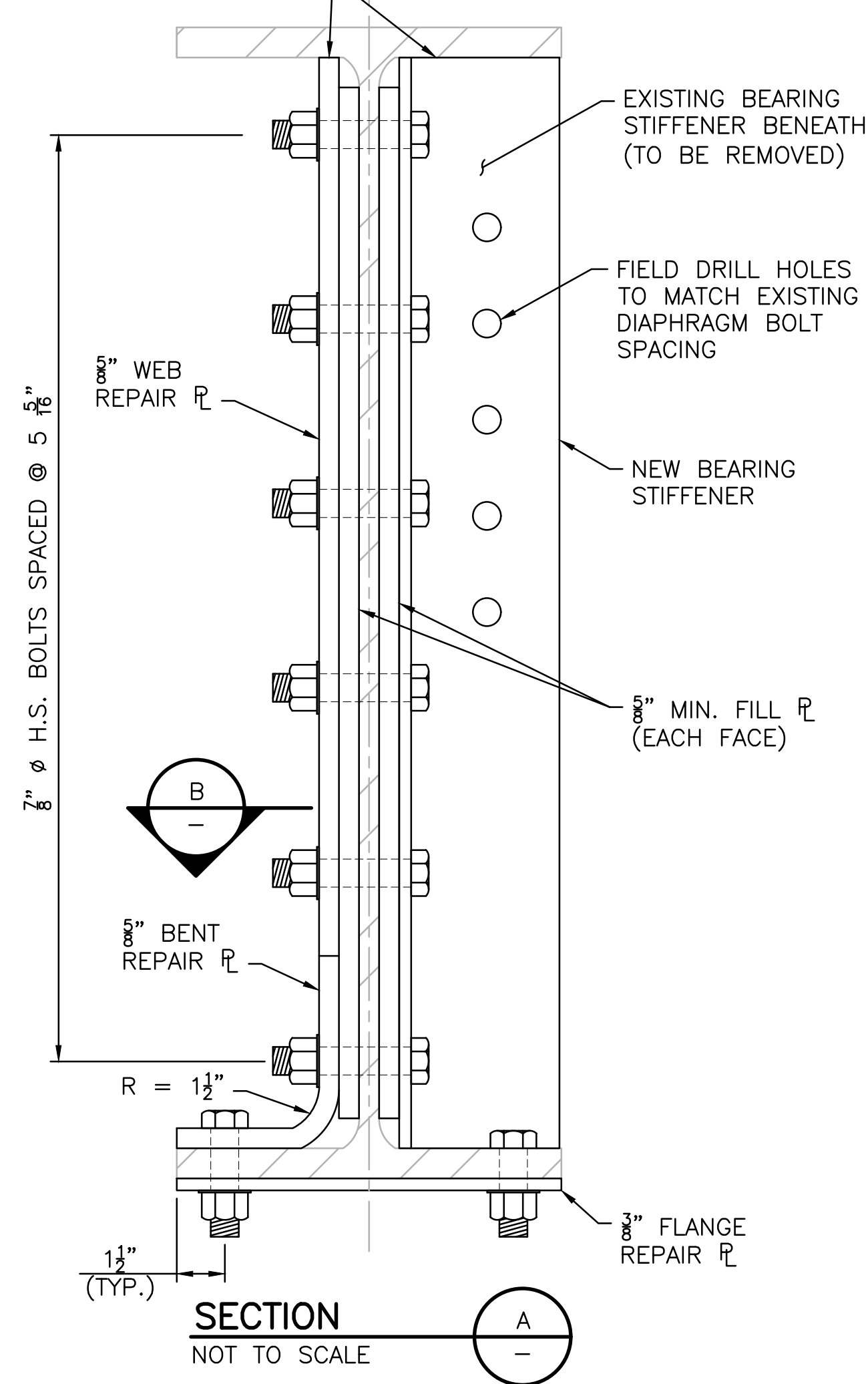
WARWICK RHODE ISLAND

PIER REPAIR DETAILS

CHECKED BY _____ DATE _____ SCALE AS NOTED

GRIND TO BEAR ON FLANGE (TYP.)

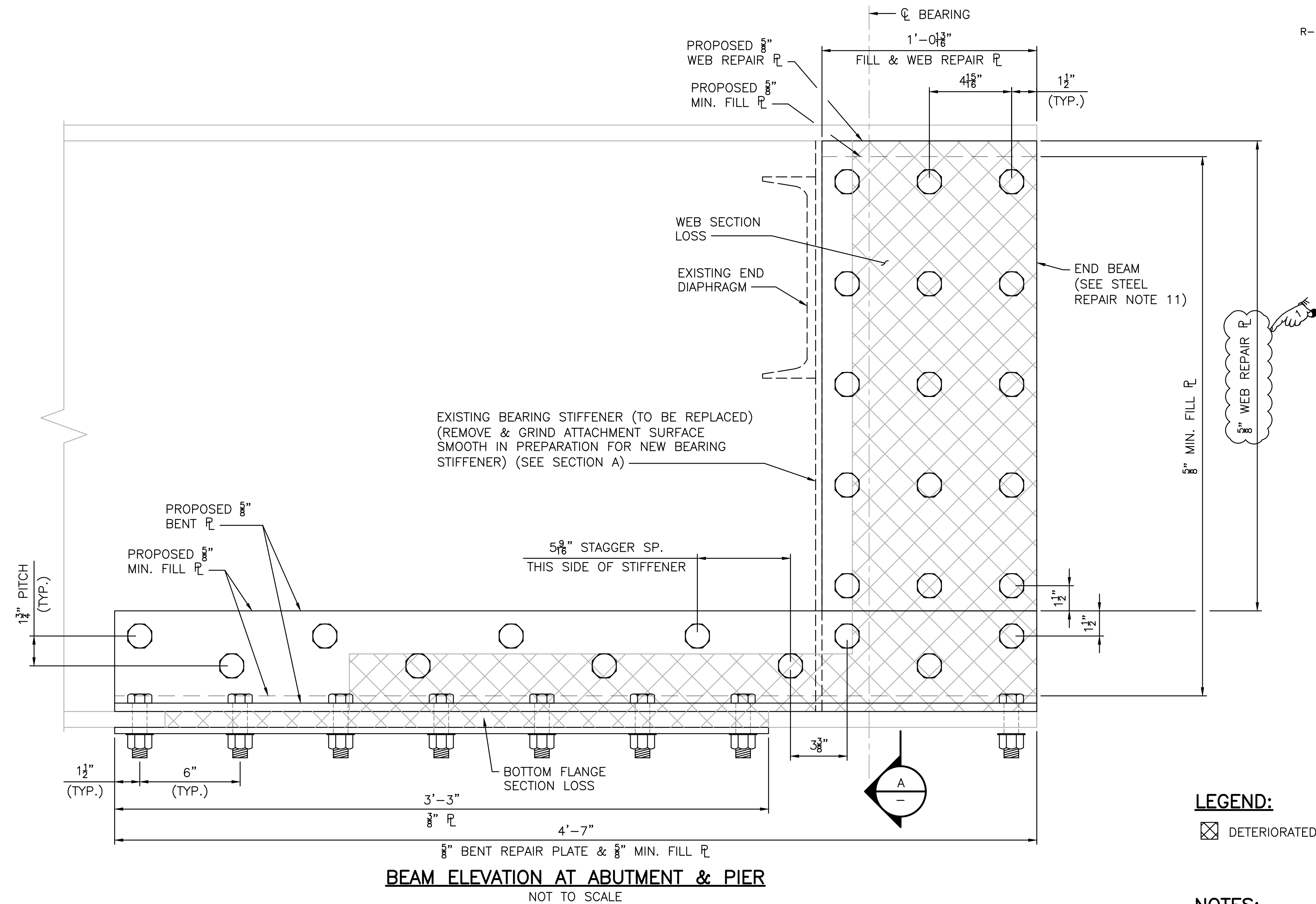
EXISTING GIRDER (SEE STEEL REPAIR NOTE 10)



SECTION A
NOT TO SCALE

STEEL REPAIR NOTES:

- BOLT SPACING PROVIDED ARE MAXIMUM SPACES.
- PROVIDE STRUCTURAL STEEL CONFORMING TO ITEM CODE 824.9915 "STEEL BEAM/GIRDER REPAIRS - BRIDGE 063701."
- PROVIDE MECHANICALLY GALVANIZED 7/8" DIAMETER FASTENERS CONFORMING TO ASTM A325, TYPE 1, HIGH STRENGTH BOLTS. THE PROPER PREPARATION OF THE GALVANIZED FASTENERS TO RECEIVE PAINT IS INCIDENTAL TO THE COST OF PAINTING THE EXISTING STRUCTURE. WHERE FEASIBLE, PLACE BOLTS SO THAT THE THREADED ENDS ARE PROTECTED FROM THE WEATHER, EXCLUDE THREADS FROM THE SHEAR PLANES.
- DRILL OR REAM HOLES IN FIELD AS REQUIRED.
- BOLT LOCATIONS AND LENGTH OF REPAIR PLATES SHOWN IN THIS DETAIL ARE BASED ON LIMITED FIELD INVESTIGATION. ACTUAL LOCATIONS AND DIMENSIONS MAY NEED TO BE ADJUSTED FOR FIELD FIT UP. IN DOING SO, COMPLY WITH THE AASHTO MAXIMUM BOLT SPACING FOR SEALING CONNECTIONS AS WELL AS MINIMUM EDGE DISTANCES.
- THIS REHABILITATION IS INTENDED TO REPAIR ALL SECTION LOSS TO LOAD CARRYING MEMBERS. ONCE THE STRUCTURE HAS BEEN BLAST-CLEANED, THE EXTENT OF THE SECTION LOSS ON WHICH DETAILED REPAIRS ARE BASED MAY INCREASE. WHEN THIS IS THE CASE, DELINEATE NEW LIMITS OF SECTION LOSS, AND HAVE THEM APPROVED BY THE DEPARTMENT REPRESENTATIVE PRIOR TO FABRICATION OF SAID REPAIR.
- REPAIRS TO OUTSIDE WEBS AND BOTTOM FLANGES ARE TO BE PERFORMED ONLY WHERE SECTION LOSS IS GREATER THAN OR EQUAL TO 1/16". OTHERWISE, REPAIRS MAY BE ELIMINATED AS APPROVED BY THE ENGINEER.
- ALL CLEANED SURFACES SHALL RECEIVE A PRIME COAT PRIOR TO MAKING CONNECTION AND BE PAINTED AFTER REPAIRS ARE COMPLETED. CLEANING AND PAINTING SHALL BE IN ACCORDANCE WITH THE SPECIAL PROVISIONS.
- THE COLOR OF THE TOPCOAT USED TO FIELD PAINT EXISTING STEEL SHALL MATCH THE COLOR OF THE EXISTING PAINT. THE CONTRACTOR SHALL CONSULT RECORD PLAN SETS FOR NECESSARY INFORMATION.
- ALL COSTS OF REMOVING EXISTING STEEL AND RIVETS, CLEANING AND PAINTING REPAIRED AREAS, INSTALLING WEB AND FILLER PLATES, HIGH STRENGTH BOLTS, DRILLING OR REAMING HOLES IN THE EXISTING STEEL SHALL BE INCLUDED IN THE PAY ITEM CODE 824.9915 "STEEL BEAM/GIRDER REPAIRS - BRIDGE NO. 063701".

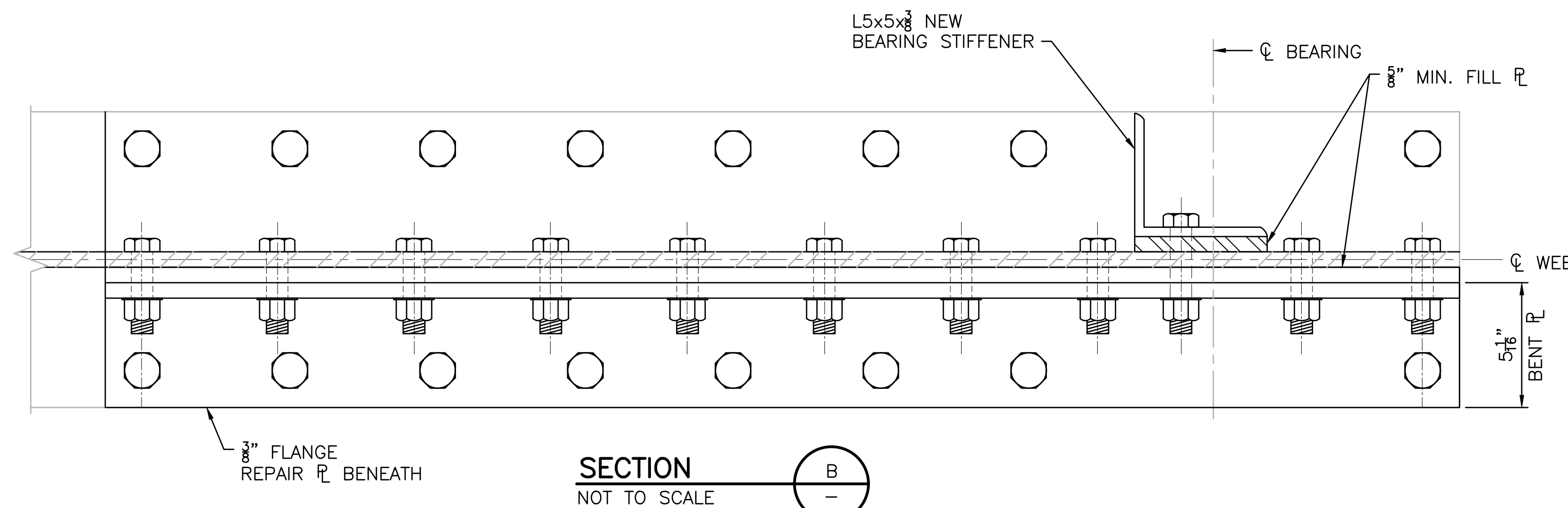


BEAM ELEVATION AT ABUTMENT & PIER
NOT TO SCALE

LEGEND:
 DETERIORATED STEEL

NOTES:

- FOR GENERAL NOTES, SEE SHEETS 2 & 3.
- FOR REPAIR KEY, INDEX OF SHEETS & QUANTITIES, SEE SHEET 15.
- FOR STEEL REPAIR LOCATION PLAN, SEE SHEET 22.



SECTION B
NOT TO SCALE

BRIDGE 063701

RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

BRIDGE GROUP 51A - RT. 37 C-2

WARWICK RHODE ISLAND

STRUCTURAL STEEL
REPAIR DETAILS

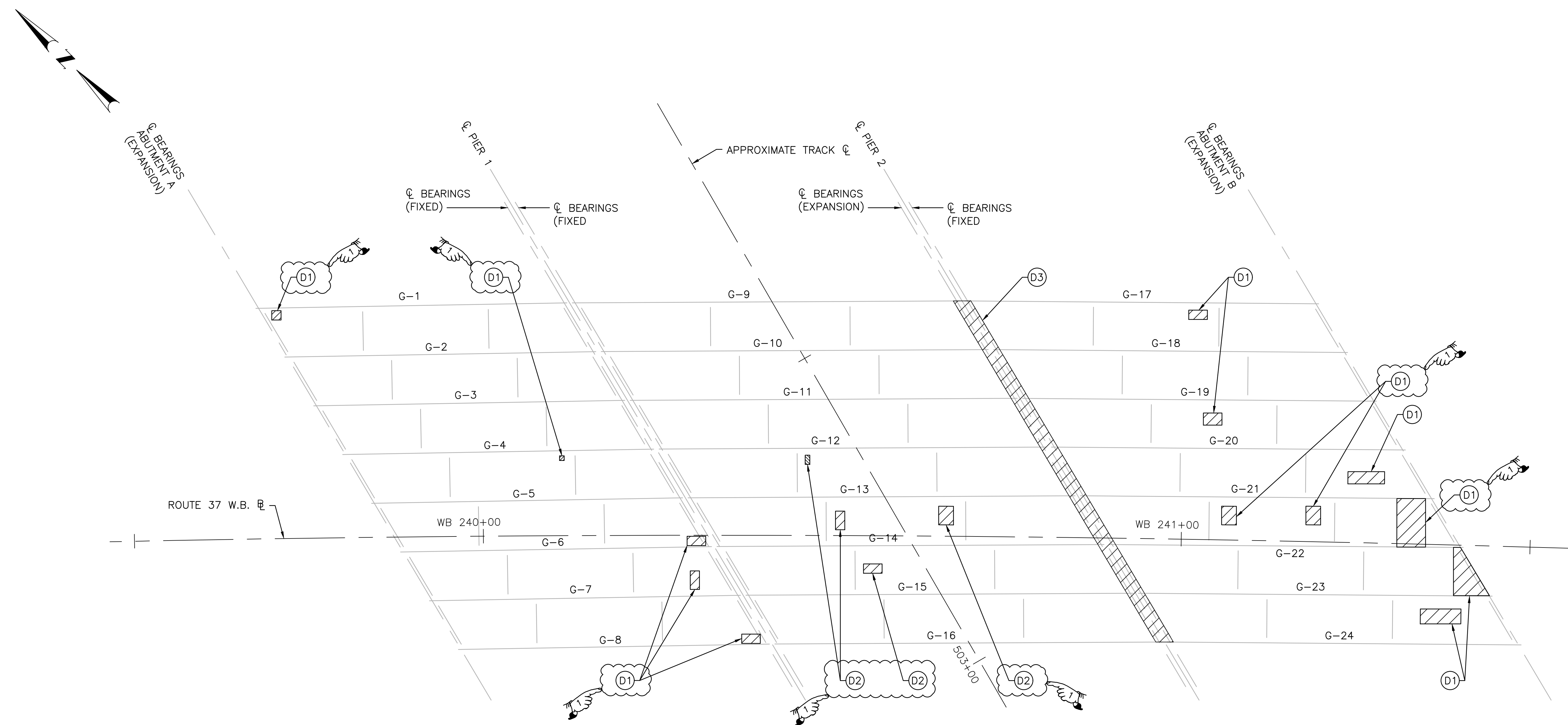
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DECK UNDERSIDE REPAIR LOCATION PLAN
SCALE: 1/8" = 1'-0"

NOTES:

- FOR GENERAL NOTES, SEE SHEETS 2 & 3.
- FOR REPAIR KEY, INDEX OF SHEETS & QUANTITIES, SEE SHEET 15.
- FOR CONCRETE REPAIR DETAILS, SEE SHEETS 29 & 30.
- DECK UNDERSIDE REPAIRS IN SPAN 2 OVER AMTRAK RR SHALL BE PAID UNDER ITEM CODE 818.9904, "PORTLAND CEMENT CONCRETE DECK REPAIRS (PARTIAL DECK REMOVAL)_BR 636&637" OR ITEM CODE 818.9905, "PORTLAND CEMENT CONCRETE DECK REPAIRS (FULL DECK REMOVAL)_BR 636&637".

LEGEND:

- CONCRETE REPAIR
- CRACK

ADDENDUM No. 5



BRIDGE 063701

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NO.	DATE	BY
1	11/8/19	DRC

RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

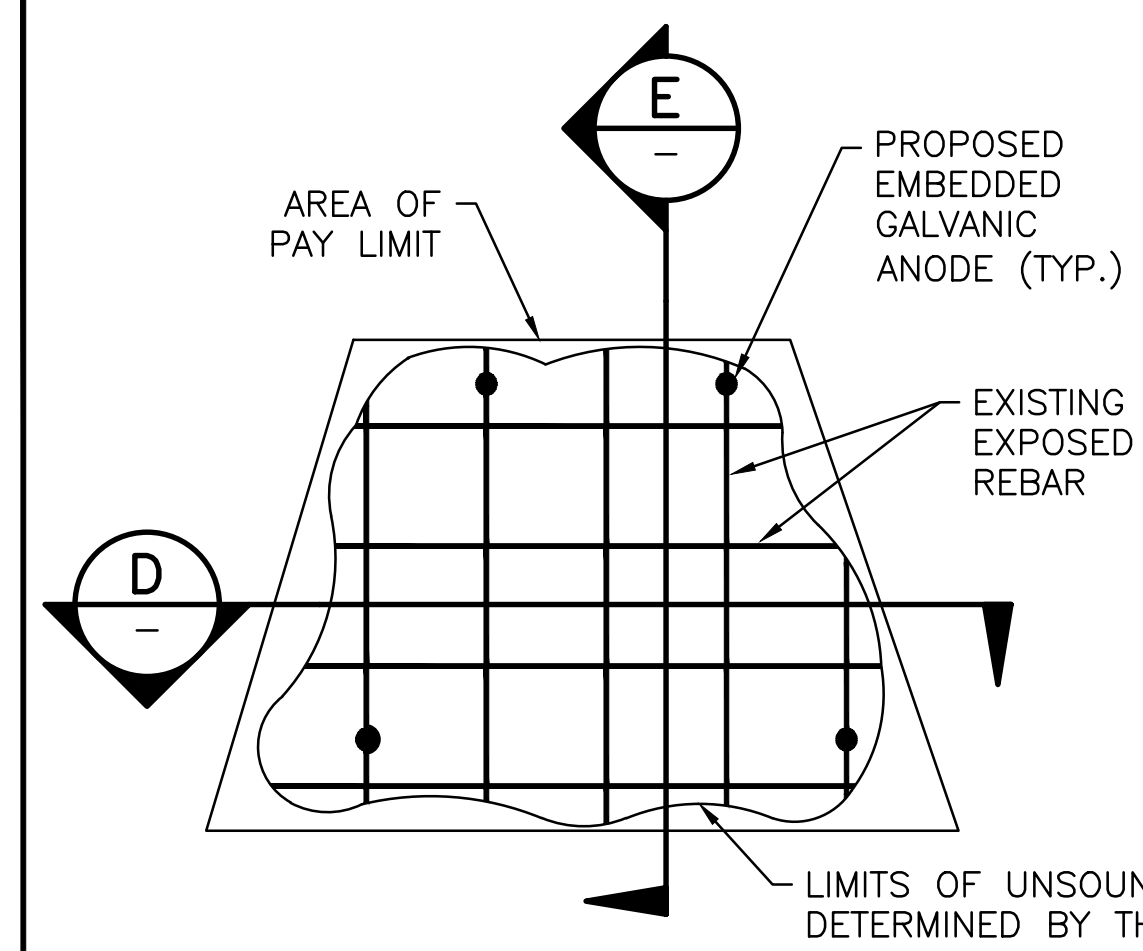
BRIDGE GROUP 51A - RT. 37 C-2

WARWICK RHODE ISLAND

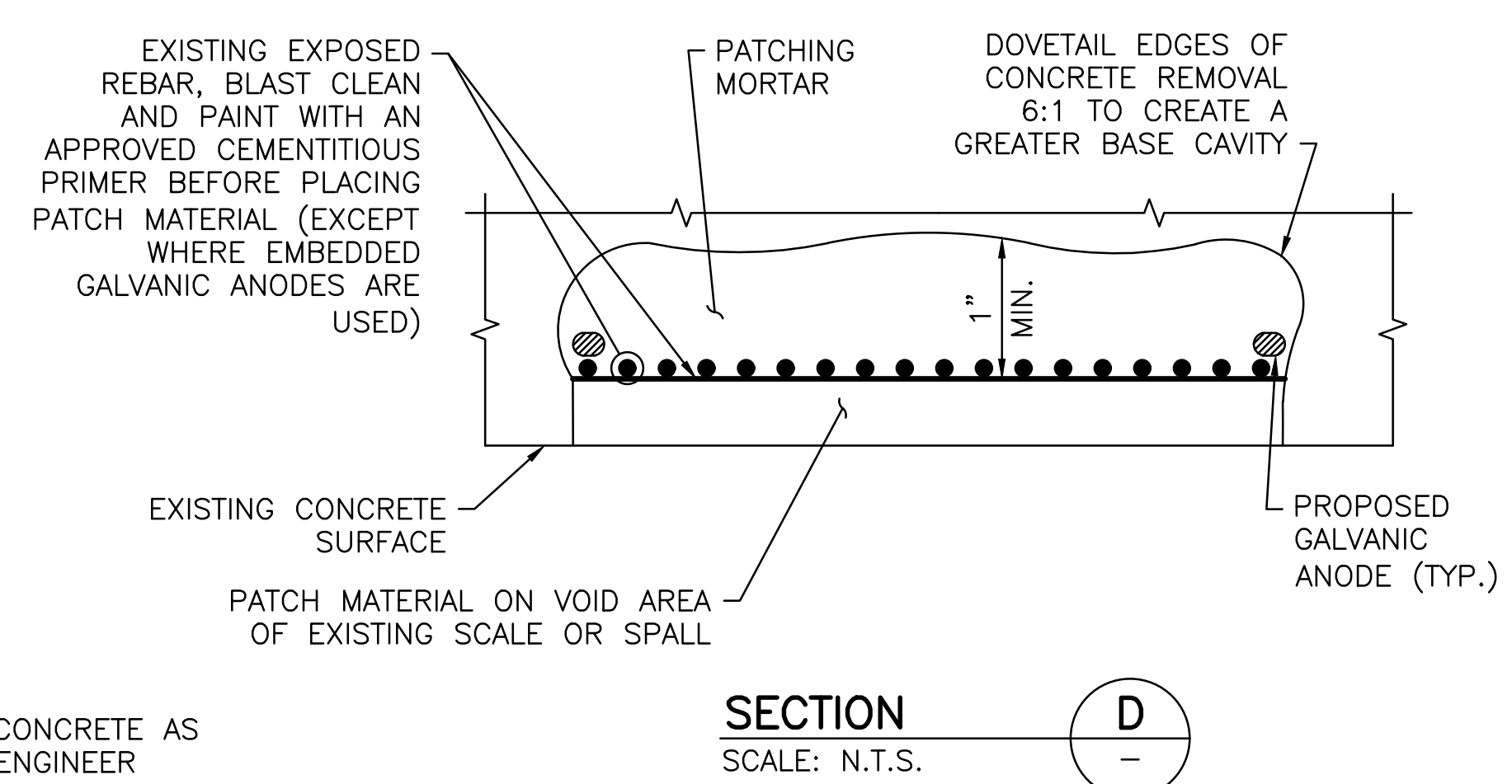
DECK UNDERSIDE REPAIR LOCATION PLAN

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ELEVATION



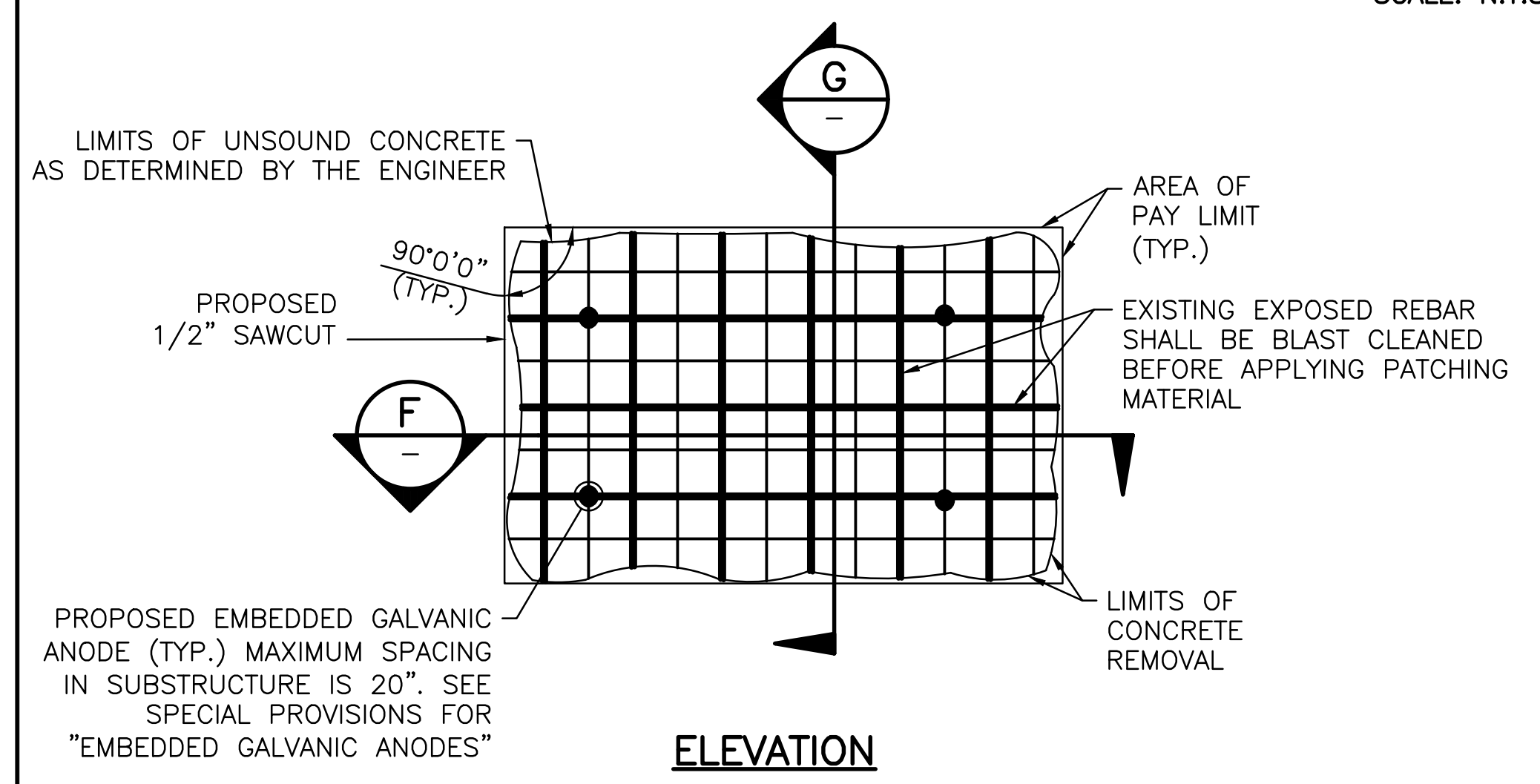
SECTION D
SCALE: N.T.S.

NOTE:

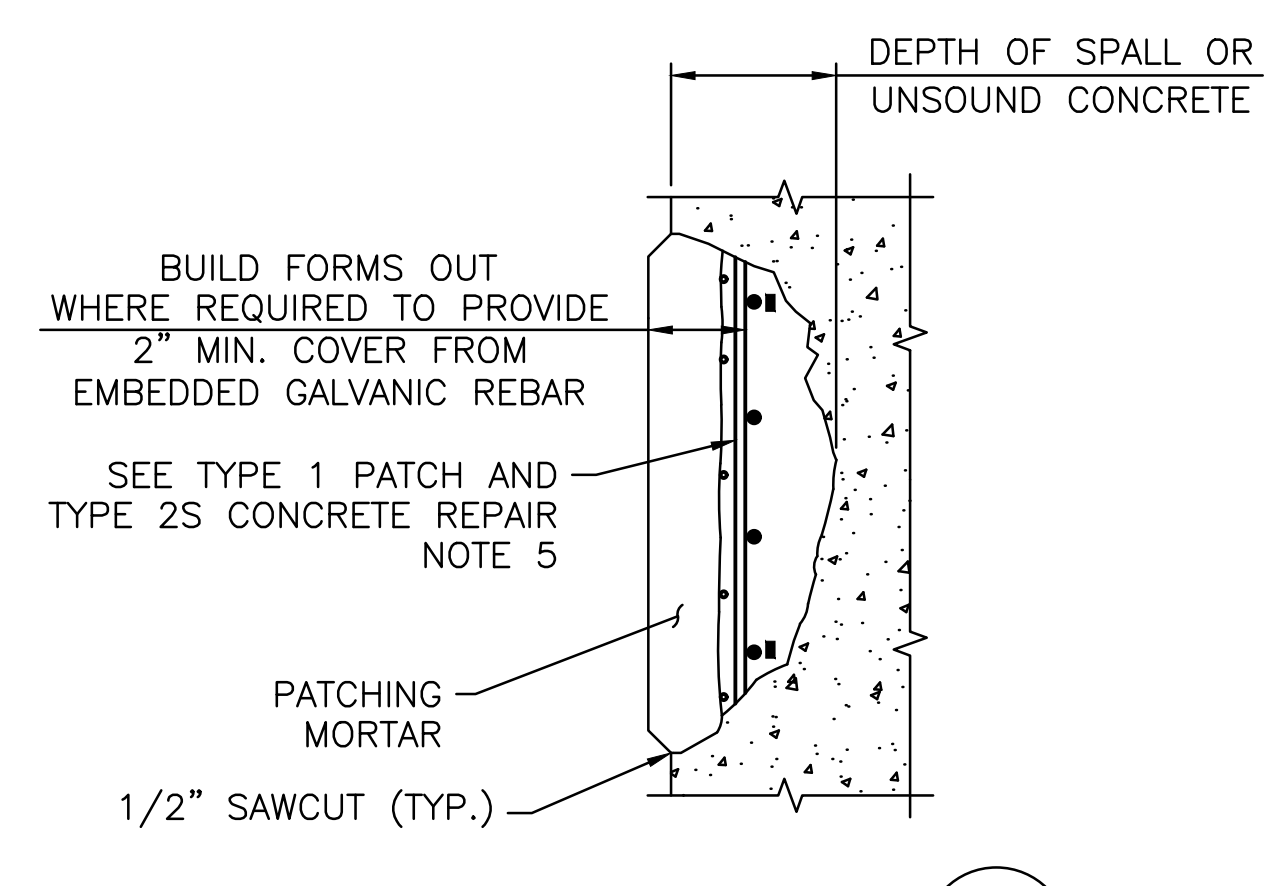
AFTER REMOVAL OF DETERIORATED CONCRETE, IF EXISTING REINFORCING IS EXPOSED, DEMOLISH SOUND CONCRETE MINIMUM 1" BEYOND EXISTING REINFORCING.

TYPE 2S CONCRETE REPAIR DETAIL – WITHOUT BUILD-OUT

SCALE: N.T.S.



ELEVATION



SECTION G
SCALE: N.T.S.

REFERENCES:

1. SEE SHEET 25 FOR CONCRETE REPAIR NOTES.
2. SEE SHEET 28 FOR EMBEDDED GALVANIC ANODE DETAILS.

CORNER PATCH DETAIL

TYPICAL DETAIL APPLICABLE FOR COLUMN CORNERS, OVERHEAD CORNERS, AND TOP EDGE OF PIER CAPS. WORK WITH "TYPE 2S CONCRETE REPAIR PROCEDURE" ON THIS SHEET.

TYPE 2S CONCRETE REPAIR DETAIL – WITH BUILD-OUT

SCALE: N.T.S.

TYPE 2S CONCRETE REPAIR PROCEDURE:

1. TYPE 2S CONCRETE REPAIR DETAIL APPLIES TO DETERIORATED AREAS OF REINFORCED CONCRETE WHERE MORE THAN HALF THE REINFORCING IS EXPOSED AND THE AREA IS GREATER THAN 1 SQUARE FOOT.
2. THE LIMITS OF THE REPAIRS SHALL BE SAWCUT ALONG NEAT LINES WHERE PRACTICAL TO A DEPTH OF 1/2" TO PRODUCE A CLEAN EDGE. SEE SPECIAL PROVISIONS.
3. REMOVE DETERIORATED MATERIAL TO SOUND CONCRETE LEAVING NO OFFSET OF ABRUPT CHANGES IN CONTOUR.
4. CLEAN EXISTING REINFORCING STEEL AND CONCRETE (NEWLY EXPOSED). MISSING OR DETERIORATED REINFORCING STEEL SHALL BE REPLACED AND SPLICED AS SHOWN IN DETAIL OR AS DIRECTED BY THE ENGINEER. COST OF NEW REINFORCING STEEL AND SPLICING TO BE INCLUDED AS PART OF THE PATCHING REPAIR ITEM.
5. INSTALL EMBEDDED GALVANIC ANODES AFTER BARS ARE CLEANED AND PRIOR TO APPLYING PATCHING MATERIAL.
6. FORM AND PATCH SURFACE.
7. A MINIMUM OF 72 HOURS SHALL ELAPSE BETWEEN PLACING OF CONCRETE AND START OF NEXT ADJACENT PATCH.
8. ALL NEW EXPOSED CONCRETE SURFACES WITHIN AREA TO BE REPAIRED SHALL BE RUBBED TO PRODUCE A SMOOTH FINISH.
9. ANODES TO BE INSTALLED IN ALL PATCHES. ANODES SHALL BE PAID FOR AND INSTITUTED PER ITEM CODE 810.9901, "EMBEDDED GALVANIC ANODES" MAXIMUM ANODE SPACING SHALL BE 20" ON CENTER.

TYPE 1 PATCH AND TYPE 2S CONCRETE REPAIR NOTES:

1. ALL WORK SHOWN ON THIS DRAWING SHALL BE PERFORMED WHERE DIRECTED BY THE ENGINEER.
2. TYPE 1 CONCRETE REPAIRS SHALL BE PAID UNDER ITEM CODE 817.9901, "REPAIRS TO STRUCTURAL CONCRETE MASONRY (PATCHING MORTAR)". TYPE 2S CONCRETE REPAIRS SHALL BE PAID UNDER ITEM CODE 817.9903, "REPAIRS TO STRUCTURAL CONCRETE MASONRY (TYPE 2S)". SEE SPECIAL PROVISIONS.
3. SURFACE PREPARATION, PROPORTIONING AND MIXING OF MATERIALS, APPLICATION OF MATERIALS AND REPAIR PROCEDURES SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
4. NEW CONCRETE PATCHES SHALL MATCH SHAPE OF EXISTING CONCRETE SURFACES. COLOR OF NEW PATCH CONCRETE SHALL MATCH COLOR OF THE ADJACENT SURFACES AS CLOSELY AS POSSIBLE.
5. EXPOSED REINFORCING BARS SHALL BE BLAST CLEANED.
6. SPLICED REINFORCING BARS SHALL BE GALVANIZED.
7. THE REMOVAL OF DETERIORATED CONCRETE SHALL PROCEED AS DIRECTED BY THE ENGINEER. IF THE REMOVAL OF DETERIORATED CONCRETE BECOMES EXCESSIVE, THE REMOVAL WORK SHALL BE STOPPED AT THE LOCATION AND THE ENGINEER NOTIFIED IMMEDIATELY. COST OF REMOVAL OF DETERIORATED CONCRETE AND SURFACE PREPARATION OF THE REPAIR AREA SHALL BE INCLUDED AS PART OF THE PATCHING REPAIR ITEM.
8. THE CONTRACTOR SHALL NOT REMOVE CONCRETE EXCEPT IN THE PRESENCE OF THE ENGINEER OR HIS APPOINTED REPRESENTATIVE. IF THE AREA REMOVED EXCEEDS THE AREA SHOWN ON THE PLANS BY 25% OR IF THE REMOVAL DEPTH EXTENDS MORE THAN 1 1/2" BEHIND THE MAIN REINFORCING BARS, THE CONTRACTOR SHALL CEASE REMOVAL OPERATIONS AND NOTIFY THE ENGINEER IMMEDIATELY. THE ENGINEER SHALL DETERMINE IF THE REMOVAL OPERATIONS REDUCE THE STRUCTURAL CAPACITY OF THE ELEMENT.
9. AREAS DISTURBED BY CONSTRUCTION SHALL BE RESTORED TO THEIR ORIGINAL CONDITION UNLESS OTHERWISE NOTED OR AS ORDERED BY ENGINEER.
10. REPAIR DETAILS APPLY TO SPALLED, SCALED, AND HOLLOW AREAS IN ABUTMENTS AND PIERS WHERE REQUIRED AND NOTED ON DRAWINGS, AND AS ORDERED BY ENGINEER
11. TYPE 1 PATCH REPAIR TO BE USED FOR ALL UNREINFORCED CONCRETE REPAIR AREAS OR AREAS WHERE NO REINFORCING IS EXPOSED.
12. MECHANICAL COUPLER TO BE USED WHERE REQUIRED LAP LENGTH IS NOT AVAILABLE. THE COST OF MECHANICAL COUPLERS WILL BE CONSIDERED SUBSIDIARY TO AND INCLUDED AS PART OF THE PATCHING REPAIR ITEM.

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RHODE ISLAND
DEPARTMENT OF TRANSPORTATION
BRIDGE GROUP 51A - RT. 37 C-2
CRANSTON / WARWICK RHODE ISLAND

STANDARD DETAILS - 2

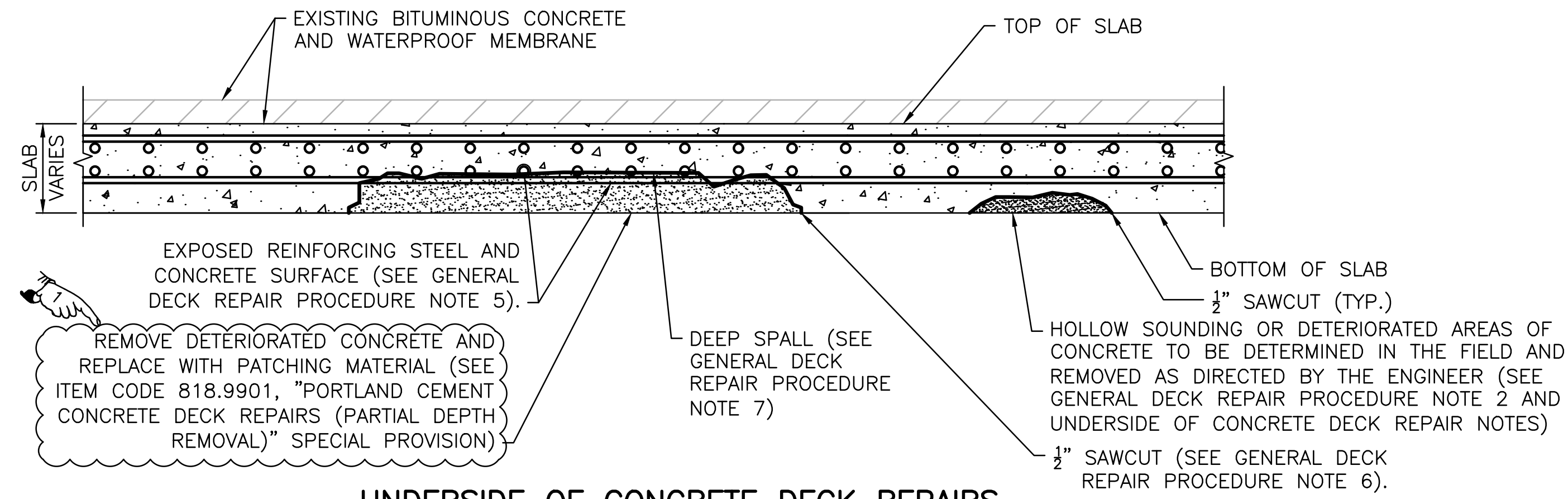
ADDENDUM No. 5



CHECKED BY _____ DATE _____ SCALE AS NOTED

GENERAL DECK REPAIR PROCEDURE NOTES:

1. REMOVE DETERIORATED S.I.P. FORMS BY MECHANICAL MEANS AS NEEDED.
2. REMOVE DETERIORATED CONCRETE TO SOUND CONCRETE TO THE LIMITS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
3. PRESERVE EXPOSED REINFORCING STEEL, IF ANY.
4. BLAST CLEAN THE SOUND CONCRETE SURFACE AREA AND EXPOSED REINFORCING STEEL OF ALL LOOSE OR POWDER-LIKE RUST, OIL, DUST, DIRT, LOOSE PARTICLES, AND OTHER BOND INHIBITING MATTER BY AN APPROVED METHOD.
5. COAT THE EXPOSED REINFORCING STEEL AND EXPOSED CONCRETE SURFACES WITH EPOXY ADHESIVE.
6. THE PERIMETER OF EACH DETERIORATED AREA SHALL BE SQUARED OFF BY SAW CUTTING TO THE DEPTH SHOWN.
7. AT LOCATIONS WHERE DETERIORATED CONCRETE IS LESS THAN 1/2 THE SLAB THICKNESS, REPAIR AS "PORTLAND CEMENT CONCRETE DECK REPAIRS (PARTIAL DEPTH REMOVAL)" (ITEM CODE 818.9901). WHERE DETERIORATED CONCRETE ON THE UNDERSIDE OF THE DECK IS DEEPER THAN HALF THE SLAB THICKNESS, REMOVE THE SLAB CONCRETE FULL DEPTH, AND REPAIR AS PORTLAND CEMENT CONCRETE DECK REPAIRS (FULL DEPTH REMOVAL) (ITEM CODE 818.9902) AS DIRECTED BY ENGINEER.



UNDERSIDE OF CONCRETE DECK REPAIRS
(CLEAN AND COAT EXPOSED REINFORCING STEEL)
SCALE: N.T.S.

UNDERSIDE OF CONCRETE DECK REPAIR NOTES:

1. TREATMENT OF THE EXPOSED DECK REINFORCEMENT SHALL BE PERFORMED IN ACCORDANCE WITH DETAILS SHOWN ON THIS SHEET AND THE SPECIAL PROVISIONS UNDER ITEM CODE 818.9901, "PORTLAND CEMENT CONCRETE DECK REPAIRS (PARTIAL DEPTH REMOVAL)".
2. ALL WORK SHALL BE CONTAINED BY A TEMPORARY DEBRIS SHIELD IN ACCORDANCE WITH THE PERMIT REQUIREMENTS CONTAINED ELSEWHERE IN THE CONTRACT DOCUMENTS. THE COST OF THIS SHALL BE INCLUDED IN THE PRICE OF THE RESPECTIVE REPAIR ITEM.
3. THE EXISTING SLAB UNDERSIDE SHALL BE SOUNDED FOR HOLLOW AREAS OF CONCRETE TO THE SATISFACTION OF THE ENGINEER. THE CONTRACTOR SHALL PROVIDE SAFE ACCESS TO THE ENGINEER FOR DELINEATION AND INSPECTION OF THE DECK UNDERSIDE, AND THE REPAIR WORK. THE COST OF PROVIDING ACCESS FOR THE INSPECTION SHALL BE INCLUDED IN ITEM CODE 818.9901, "PORTLAND CEMENT CONCRETE DECK REPAIRS (PARTIAL DEPTH REMOVAL)" (SEE SPECIAL PROVISIONS).
4. ALL EXPOSED REINFORCING STEEL SHALL BE THOROUGHLY CLEANED TO REMOVE ANY DEBRIS OR RESIDUE BEFORE APPLYING THE EPOXY ADHESIVE (SEE SPECIAL PROVISION).
5. ANY EXPOSED REINFORCING STEEL IN THE AREAS OF POP-OUTS CAUSED BY THE REMOVAL OF DETERIORATED CONCRETE SHALL BE PRIMED & PATCHED ALSO.
6. THE CONTRACTOR SHALL NOT PERFORM ANY REPAIR WORK WITHOUT PRIOR APPROVAL FROM THE ENGINEER. THE REMOVAL OF DETERIORATED CONCRETE SHALL PROCEED AS DIRECTED BY THE ENGINEER.
7. REPAIR ESTIMATES OF DETERIORATED STAY-IN-PLACE FORMS AND DECK UNDERSIDE ARE BASED ON LIMITED FIELD OBSERVATIONS AND BRIDGE SAFETY INSPECTION REPORTS. THE EXACT LOCATION AND LIMITS OF EXPOSED REINFORCEMENT AND HOLLOW AREAS OF CONCRETE IN THE DECK UNDERSIDE SHALL BE DETERMINED BY THE ENGINEER DURING CONSTRUCTION. FULL DEPTH PATCH REPAIR ESTIMATES ARE BASED ON A PERCENTAGE OF THE DECK UNDERSIDE DETERIORATION.

REFERENCES:

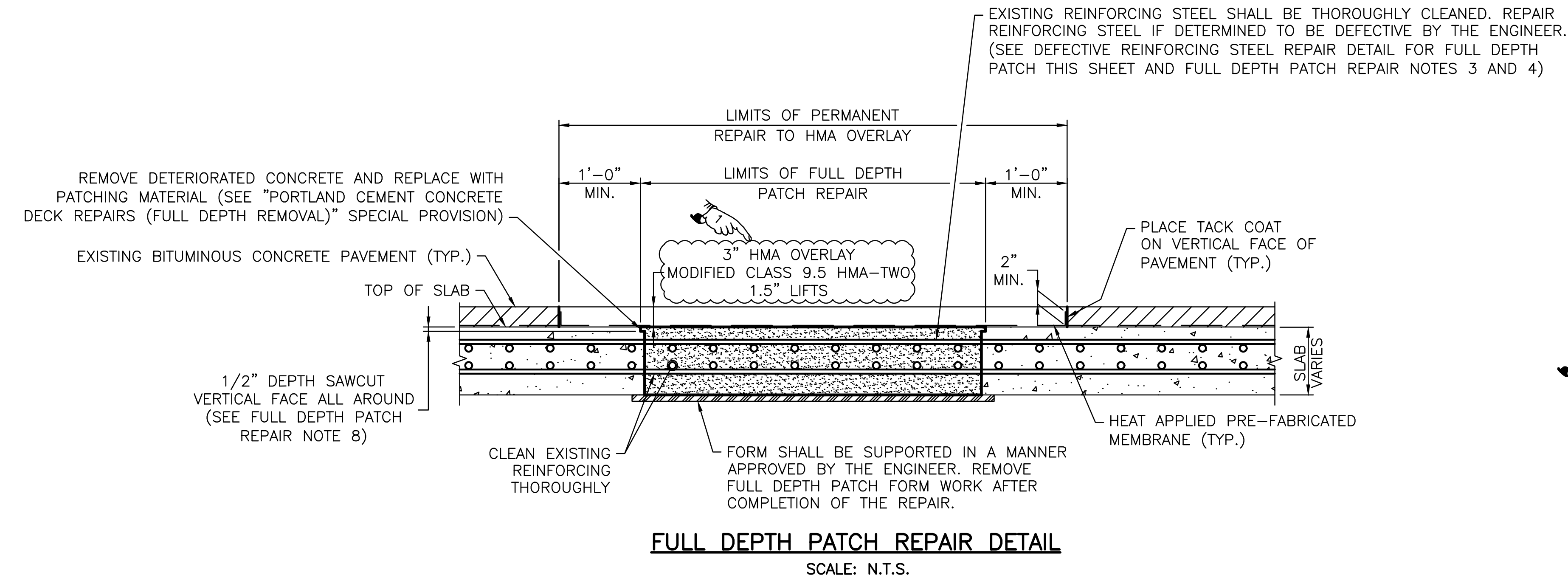
1. SEE BRIDGE CONTRACT DRAWINGS FOR APPROXIMATE DECK REPAIR LOCATIONS.

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ADDENDUM No. 5



REVISIONS			RHODE ISLAND	
NO.	DATE	BY	DEPARTMENT OF TRANSPORTATION	
1	11/8/19	DRC	BRIDGE GROUP 51A - RT. 37 C-2	
			CRANSTON / WARWICK	RHODE ISLAND
			STANDARD DETAILS - 5	
			CHECKED BY _____ DATE _____ SCALE AS NOTED	

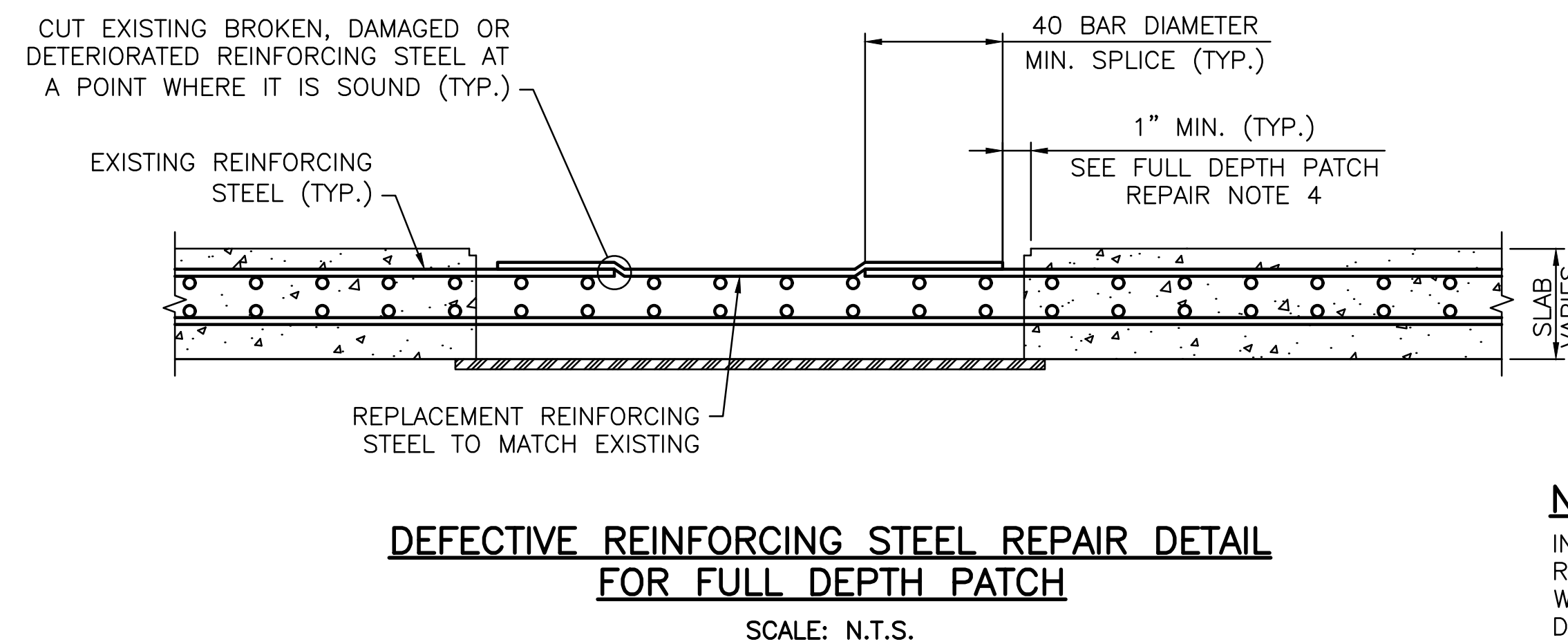


FULL DEPTH PATCH REPAIR NOTES:

- FULL DEPTH PATCH REPAIRS SHALL BE PERFORMED IN ACCORDANCE WITH DETAIL SHOWN ON THIS SHEET AND THE SPECIAL PROVISIONS UNDER ITEM CODE 818.9902, "PORTLAND CEMENT CONCRETE DECK REPAIRS (FULL DEPTH REMOVAL)". ENGINEER TO DELINEATE LIMITS OF DETERIORATION.
- ALL BROKEN AND DAMAGED REINFORCING STEEL BARS SHALL BE REPLACED. MINIMUM LENGTH OF SPLICE SHALL BE 40 BAR DIAMETER. MECHANICAL SPLICES MAY BE USED IF AUTHORIZED BY THE ENGINEER. MINIMUM CONCRETE COVER OVER SPLICE IS REQUIRED.
- NEW REINFORCING STEEL SHALL BE GALVANIZED ASTM A615 GRADE 60. FURNISHING AND INSTALLING REINFORCING BARS SHALL BE INCLUDED UNDER ITEM CODE 818.9902, "PORTLAND CEMENT CONCRETE DECK REPAIRS (FULL DEPTH REMOVAL)".
- COST OF ADDITIONAL CONCRETE REMOVAL REQUIRED FOR THE REPAIR OF THE REINFORCING STEEL SHALL BE INCLUDED UNDER THE ITEM CODE 818.9902, "PORTLAND CEMENT CONCRETE DECK REPAIRS (FULL DEPTH REMOVAL)".
- THE COST OF PERMANENT REPAIR TO HMA OVERLAY SHALL BE PAID UNDER THE ITEM "CLASS 9.5 HMA FOR PATCHING."
- THE CONTRACTOR SHALL PROVIDE NECESSARY SHIELDING TO PREVENT ANY DEBRIS FROM FALLING DURING THE FULL DEPTH PATCH REPAIR. THE COST OF SHIELDING SHALL BE INCLUDED UNDER ITEM CODE 818.9902, "PORTLAND CEMENT CONCRETE DECK REPAIRS (FULL DEPTH REMOVAL)".
- REPAIR ESTIMATES OF DETERIORATED STAY-IN-PLACE FORMS AND DECK UNDERSIDE ARE BASED ON LIMITED FIELD OBSERVATIONS AND BRIDGE SAFETY INSPECTION REPORTS. THE EXACT LOCATION AND LIMITS OF EXPOSED REINFORCEMENT AND HOLLOW AREAS OF CONCRETE IN THE DECK UNDERSIDE SHALL BE DETERMINED BY THE ENGINEER DURING CONSTRUCTION. FULL DEPTH PATCH REPAIR ESTIMATES ARE BASED ON A PERCENTAGE OF THE DECK UNDERSIDE DETERIORATION.
- THE PERIMETER OF EACH DETERIORATED AREA SHALL BE SQUARED OFF BY SAW CUTTING TO THE DEPTH SHOWN.

REFERENCES:

- SEE BRIDGE CONTRACT DRAWINGS FOR APPROXIMATE DECK REPAIR LOCATIONS.



NOTE:

INSTALL PROTECTIVE SHIELDING UNDER SPANS OVER ROADWAYS, SIDEWALKS, PARKING LOTS, AND WATERWAYS TO PROTECT FROM POSSIBLE FALLING OF DEBRIS. THE COST OF WHICH SHALL BE INCLUDED IN THE CONCRETE REPAIR ITEMS.

ADDENDUM No. 5

REVISIONS			RHODE ISLAND	
NO.	DATE	BY	DEPARTMENT OF TRANSPORTATION	
1	11/8/19	DRC	BRIDGE GROUP 51A - RT. 37 C-2	
			CRANSTON / WARWICK RHODE ISLAND	
			STANDARD DETAILS - 6	
			CHECKED BY _____ DATE _____ SCALE AS NOTED	



630 PRESTON AVENUE
MERIDEN, CT 06450

ASPHALTIC EXPANSION JOINT SYSTEM NOTES:

- A BRIDGING PLATE SHALL BE USED TO SPAN THE GAP BETWEEN TWO DECK ENDS OR THE JOINT BETWEEN A DECK END AND A CONCRETE APPROACH SLAB AS INDICATED.
- DISCONTINUE THE INSTALLATION OF THE PREFORMED JOINT SEAL AND BRIDGING PLATE WHERE THE APPROACH SLAB IS DISCONTINUED (TYPICALLY IN THE ROADWAY SHOULDERS). SEE "ASPHALTIC EXPANSION JOINT SYSTEM" SPECIAL PROVISION.
- NEW STEEL BRIDGING PLATES SHALL HAVE A MINIMUM THICKNESS OF 1/4" BY 8" WIDE PLATE FOR OPENINGS LESS THAN 3". FOR JOINT OPENINGS THAT EXCEED 3", A 3/8" THICK BY 12" WIDE PLATE WILL BE REQUIRED.
- NO BRIDGING PLATE SHALL BE USED AT THE FOLLOWING LOCATIONS:
 - JOINT BETWEEN A DECK END AND A CONCRETE APPROACH PAVEMENT
 - WHERE A BRIDGE DECK END MEETS A BITUMINOUS APPROACH PAVEMENT
 - WHERE APPROACH SLAB & BRIDGE DECK DIFFER > 1/8" IN ELEVATION
- SAWCUTS MADE 3' EACH SIDE OF CENTERLINE OF JOINT PERFORMED AS PART OF SPECIFICATION CODE 932.0100 "CUTTING AND MATCHING ASPHALT". SEE JOB SPECIFICATIONS FOR PAYMENT.
- THE REMOVAL OF ALL EXISTING JOINT SYSTEMS, HMA WEARING SURFACE, AND BITUMINOUS CONCRETE, MEMBRANE WATERPROOFING AND BOND BREAKER WITHIN THE LIMITS SHOWN TO BE PERFORMED AS PART OF SPECIFICATION CODE 839.0200 "FULL DEPTH REMOVAL AND DISPOSAL OF BITUMINOUS PAVEMENT FROM CONCRETE BRIDGE DECKS". SEE JOB SPECIFICATIONS FOR PAYMENT.
- INSTALLATION OF MEMBRANE WITHIN THE LIMITS SHOWN TO BE PERFORMED AS PART OF SPECIFICATION CODE 813.0210, "HEAT APPLIED PRE-FABRICATED MEMBRANE". SEE JOB SPECIFIC SPECIFICATIONS FOR PAYMENT.
- TACK COAT PLACED ALONG VERTICAL FACES AND ON TOP OF THE WEARING SURFACE AT THE SAWCUT TO BE PERFORMED AS PART OF SPECIFICATION CODE 403.0300, "ASPHALT EMULSION TACK COAT". SEE JOB SPECIFIC SPECIFICATIONS FOR PAYMENT.
- THE FURNISHING AND PLACING OF MODIFIED CLASS 9.5 HMA SHALL BE PAID UNDER ITEM CODE 800.992X, "REPAIRS TO ROUTE 37 BRIDGE NO. 063XXX".
- THE CONTRACTOR IS RESPONSIBLE FOR MEASURING THE JOINT GAP WIDTHS IN BOTH, THE BRIDGE DECKS AND PARAPETS IN ACCORDANCE WITH SPECIFICATION CODE 823.9901 "PREFORMED JOINT SEAL".
- ASPHALTIC EXPANSION JOINT SYSTEMS MAY BE INSTALLED ONLY WITHIN THE TEMPERATURE RANGE AS SPECIFIED BY MANUFACTURER.
- ASPHALTIC JOINT MATERIAL SHALL BE REPLACED FROM GUTTER LINE TO GUTTER LINE. PREFORMED JOINT SEALS SHALL CONTINUE INTO PARAPETS AS DETAILED.
- EXPLORATION OF PAVEMENT THICKNESS AND JOINT LOCATION TO BE PERFORMED AS PART OF SPECIFICATION CODE 839.0200 "FULL DEPTH REMOVAL AND DISPOSAL OF BITUMINOUS PAVEMENT FROM CONCRETE BRIDGE DECKS" (SEE NOTES 5 AND 6 ABOVE). SEE JOB SPECIFIC SPECIFICATIONS FOR PAYMENT.
- THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER, A LETTER FROM THE MANUFACTURER OF THE JOINT STATING THAT THE JOINT IS APPROPRIATE FOR USE AT EACH JOINT LOCATION AND WILL FUNCTION ADEQUATELY GIVEN THE MAXIMUM AND MINIMUM JOINT WIDTHS SPECIFIED BY THE MANUFACTURER, MAXIMUM SKEW ANGLE AND MOVEMENT RANGE AT EACH JOINT LOCATION.

REFERENCES:

- SEE SHEET 32 THROUGH SHEET 35 FOR ASPHALTIC EXPANSION JOINT SYSTEM DETAILS.

BITUMINOUS CONCRETE PLACEMENT REQUIREMENTS FOR BRIDGE DECK JOINTS:

- ALL THE REQUIREMENTS OF SPECIAL PROVISION SECTION 401 IN THE CONTRACT SHALL BE MET EXCEPT AS DESCRIBED BELOW, FOR AREAS ADJACENT TO REPAIRED JOINTS.
- THE FIRST COURSE OF BITUMINOUS CONCRETE MATERIAL SHALL BE PLACED ON THE MEMBRANE AT A COMPACTED THICKNESS OF EXACTLY 1 1/4 INCHES UNIFORMLY. IF LIFTS OF VARYING THICKNESS ARE REQUIRED, THEY SHALL BE CONTAINED IN THE INTERMEDIATE LIFTS. THE FINAL LIFT SHALL BE OF UNIFORM THICKNESS. IN LIEU OF DENSITY TESTING, THE METHODS DESCRIBED BELOW SHALL BE FOLLOWED TO ASSURE PROPER COMPACTION.
- BITUMINOUS CONCRETE MATERIAL SHALL BE PLACED AND SPREAD IN THE PREPARED AREA WITH COMPACTION COMMENCING PRIOR TO THE MATERIAL COOLING TO A TEMPERATURE OF 260°F. UNSPREAD MATERIAL SHALL BE PROPERLY DISCARDED BY THE CONTRACTOR AT NO COST TO THE STATE.
- THE BITUMINOUS CONCRETE MATERIAL SHALL BE COMPACTED PER THE REQUIREMENTS IN THE STANDARD SPECIFICATIONS IN ALL AREAS. ALL COMPACTION (COMPLETING THE MINIMUM NUMBER OF SPECIFIED PASSES) SHALL BE COMPLETED BEFORE THE BITUMINOUS CONCRETE COOLS TO A TEMPERATURE OF 180°F.
- ALL INTERMEDIATE (NON-SURFACE) LIFTS SHALL BE COMPACTED WITH AN ASPHALT VIBRATORY PLATE COMPACTOR.
 - THE VIBRATORY PLATE COMPACTOR SHALL MEET THE FOLLOWING REQUIREMENTS:
 - IT SHALL BE DESIGNED TO COMPACT BITUMINOUS CONCRETE.
 - IT SHALL BE EQUIPPED WITH A WATER TANK.
 - IT SHALL GENERATE A CENTRIFUGAL FORCE OF AT LEAST 3200 POUNDS BUT NO GREATER THAN 6000 POUNDS
 - IT SHALL HAVE AN OPERATING WEIGHT (WITHOUT WATER) OF AT LEAST 160 POUNDS.
 - IT SHALL GENERATE A MINIMUM OF 4400 VIBRATIONS PER MINUTE.
 - ANY CORNERS OR OTHER AREAS THAT CANNOT BE REACHED BY THE VIBRATORY PLATE COMPACTOR SHALL BE COMPACTED WITH A HAND TAMPER (APPROVED FOR USE BY THE ENGINEER) A MINIMUM OF 20 TIMES (FOR ANY GIVEN AREA) BEFORE THE MATERIAL TEMPERATURE DROPS TO 180°F
- THE FINAL (SURFACE) LIFT SHALL BE COMPACTED WITH A DOUBLE DRUM ROLLER.
 - THE DOUBLE DRUM ROLLER SHALL MEET THE FOLLOWING REQUIREMENTS:
 - IT SHALL BE DESIGNED TO COMPACT BITUMINOUS CONCRETE.
 - IT SHALL WEIGH 3 1/2 TO 4 1/2 TONS.
- THE CONTRACTOR MAY REQUEST TO USE ALTERNATE EQUIPMENT BY SUBMITTING A SUPPLEMENT TO THEIR QC PLAN DESCRIBING THE EQUIPMENTS SPECIFICATIONS AND PLACEMENT PROCEDURES. THE EQUIPMENT AND PROCEDURES MUST BE APPROVED BY THE ENGINEER PRIOR TO THEIR USE.
- IF THE ABOVE METHODS ARE NOT COMPLETED TO THE SATISFACTION OF THE ENGINEER, HE/SHE MAY REQUIRE THE DENSITY OF ANY LIFT OF 1 1/2 INCHES OR GREATER BE VERIFIED BY USE OF A QUALITY CONTROL NUCLEAR DENSITY GAUGE SUPPLIED BY THE CONTRACTOR. IF DENSITY VERIFICATION IS REQUIRED BY THE ENGINEER, THE VALUES MUST CONFORM TO THE REQUIREMENTS OF SPECIAL PROVISION SECTION 401 IN THE CONTRACT.

COMMON JOINT REPLACEMENT NOTES:

- SEE INDIVIDUAL JOINT DETAILS FOR ANY ADDITIONAL NOTES SPECIFIC TO INDIVIDUAL JOINTS.
- ANY UTILITIES BELOW THE DECK AND CONDUITS IN PARAPETS SHALL BE PROTECTED.
- ALL SCUPPERS ADJACENT TO JOINTS SHALL BE PROTECTED.
- JOINTS WILL NEED TO BE CONSTRUCTED IN STAGES, IF SPECIFIED. JOINT SPLICING DETAILS SHALL FOLLOW MANUFACTURER RECOMMENDATIONS.
- TRANSVERSE REINFORCEMENT SHALL BE MADE CONTINUOUS USING DOWEL BAR SPLICERS OR ADEQUATE LAP SPLICES OF REINFORCEMENT.
- IF AN ADEQUATE LAP SPLICE CANNOT BE DEVELOPED, CONCRETE SHALL BE REMOVED AS NECESSARY AT THE DIRECTION OF THE ENGINEER TO DEVELOP AN ADEQUATE LAP SPLICE. THIS WORK SHALL BE PERFORMED AS PART OF SPECIFICATION CODE 817.9904, "EXPANSION JOINT HEADER REPAIRS WITH POLYMER MORTAR". SEE JOB SPECIFIC SPECIFICATIONS FOR PAYMENT.
- LONG-DURATION STAGED CONSTRUCTION IS NOT ALLOWED. CONTRACTOR SHALL SUBMIT DESIGN DETAILS AND CALCULATIONS FOR A TEMPORARY REMOVABLE STEEL BRIDGING PLATE TO FACILITATE RECONSTRUCTION OF DECK ENDS AND INSTALLATION OF JOINTS DURING OFF-PEAK HOURS AND ALLOW TRAFFIC TO UTILIZE THE ROADWAY DURING PEAK HOURS.
- THE CONTRACTOR SHALL UNDERTAKE A SURVEY OF THE JOINT PRIOR TO START OF ANY WORK AND INFORM THE ENGINEER IMMEDIATELY IF CONDITIONS DO NOT REFLECT WHAT IS SHOWN ON THE PLANS. AS PART OF THIS SURVEY, THE CONTRACTOR IS ALSO REQUIRED TO DEVELOP A CROSS-SECTION AT THE JOINT IN ORDER TO CORRECTLY FABRICATE ANY EXTRUSIONS OR PREFABRICATED COMPONENTS ETC. THAT MAY BE REQUIRED. THE COST TO DO THE SURVEY IS INCLUDED IN PAYMENT AS SPECIFIED UNDER CODE 823.9901, "PREFORMED JOINT SEAL". SEE JOB SPECIFIC SPECIFICATIONS FOR PAYMENT.
- AFTER BITUMINOUS OVERLAY HAS BEEN REMOVED, ANY DETERIORATED CONCRETE ON THE BRIDGE DECK/APPROACH SLABS SHALL BE PERFORMED AS PART OF "EXPANSION JOINT HEADER REPAIRS WITH POLYMER MORTAR". SEE JOB SPECIFIC SPECIFICATIONS FOR PAYMENT.
- REPAIRS OR MODIFICATIONS TO TOP OF ABUTMENT BACKWALL SHALL BE PERFORMED AS PART OF "EXPANSION JOINT HEADER REPAIRS WITH POLYMER MORTAR" (SEE SHEET 34) AS APPLICABLE & DETERMINED BY THE ENGINEER. SEE JOB SPECIFIC SPECIFICATIONS FOR PAYMENT.
- THE CONTRACTOR SHALL MEASURE THE DECK JOINT GAP OPENING FOR SIZING THE PREFORMED JOINT SEAL. ORDERING OF THE PREFORMED JOINT SEAL MAY REQUIRE LONGER LEAD TIMES.
- THE CONTRACTOR IS RESPONSIBLE FOR FILLING OUT THE APPLICABLE PREFORMED JOINT SEAL CHECKLIST FOR EACH JOINT LOCATION. THE CHECKLIST SHALL BE FORWARDED TO THE MANUFACTURER FOR REVIEW.
- LOCATOR PINS SHALL NOT BE USED TO SECURE THE BRIDGING PLATE.

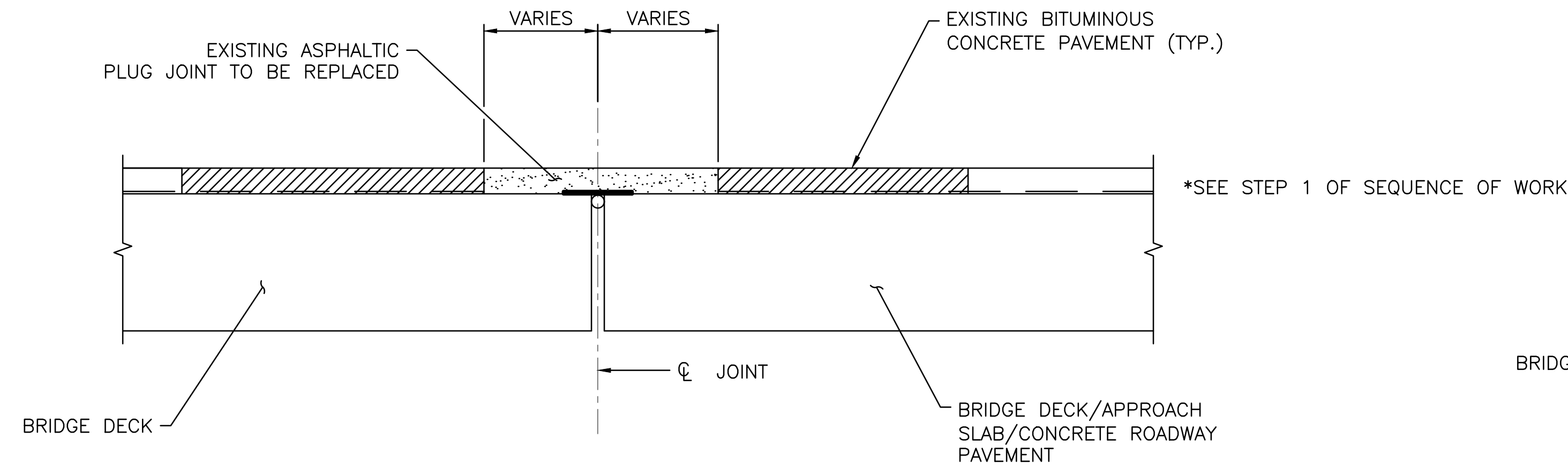
ASPHALTIC EXPANSION JOINT SYSTEM		
ABUTMENT NO. 1	BR 063601	BR 063701
EFFECTIVE SPAN LENGTH (FT)	43'-11"	49'-9 3/4"
THERMAL MOVEMENT RANGE (IN)	1/2"	1/2"
BEARING	EXPANSION	EXPANSION
PIER 1		
EFFECTIVE SPAN LENGTH (FT)	0'-0"	0'-0"
THERMAL MOVEMENT RANGE (IN)	0"	0"
BEARING	FIX/FIX	FIX/FIX
PIER 2		
EFFECTIVE SPAN LENGTH (FT)	52'-11 1/8"	54'-8 3/8"
THERMAL MOVEMENT RANGE (IN)	1/2"	1/2"
BEARING	EXP/FIX	EXP/FIX
ABUTMENT NO. 2		
EFFECTIVE SPAN LENGTH (FT)	49'-0 1/4"	49'-0 1/4"
THERMAL MOVEMENT RANGE (IN)	1/2"	1/2"
BEARING	EXPANSION	EXPANSION

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			CHECKED BY _____ DATE _____ SCALE AS NOTED	

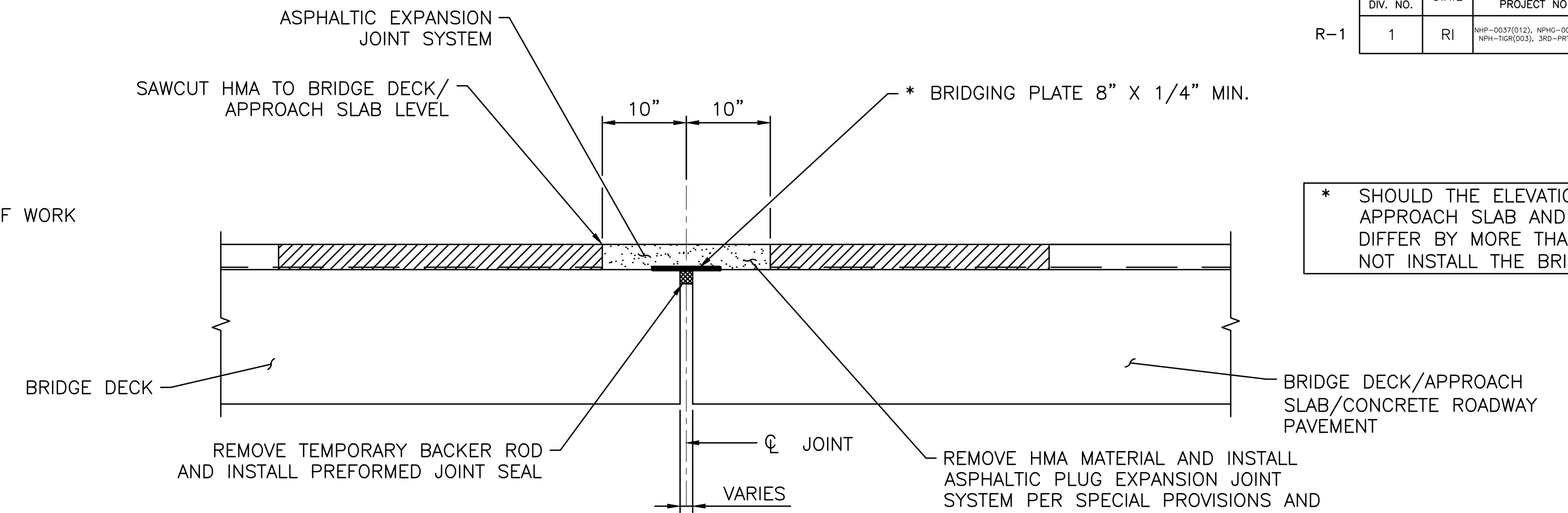
ADDENDUM No. 5



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MERCEN, CT 06450



EXISTING CONDITIONS

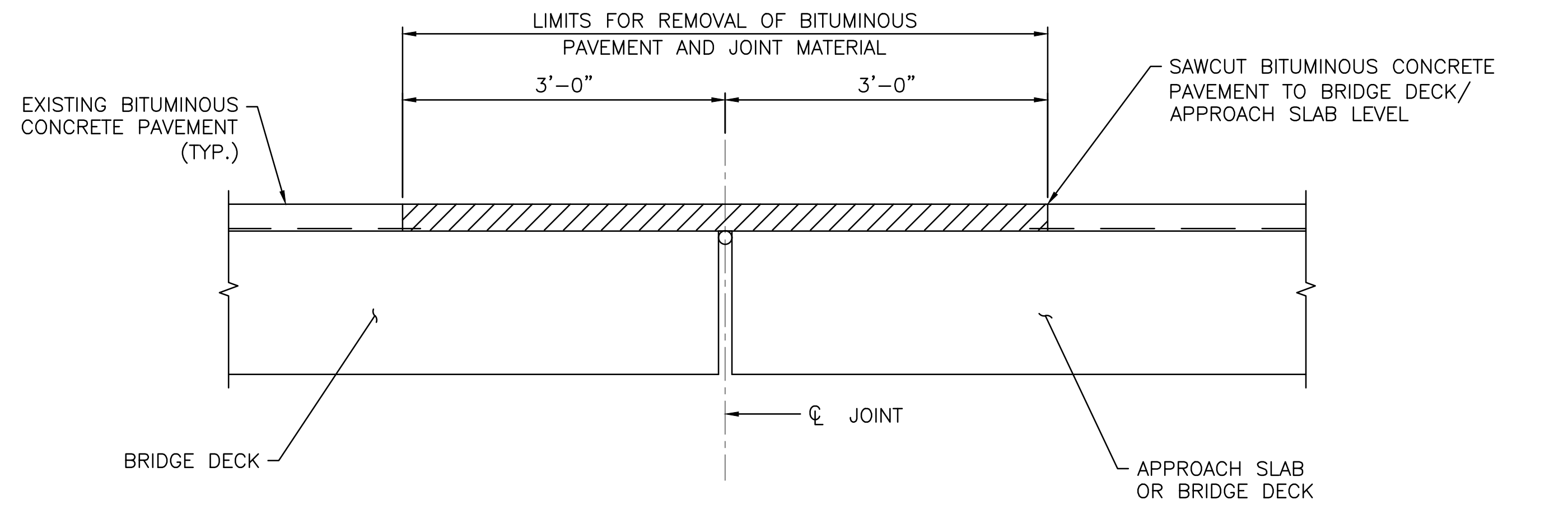


FINAL CONDITION (STEPS 8-11)

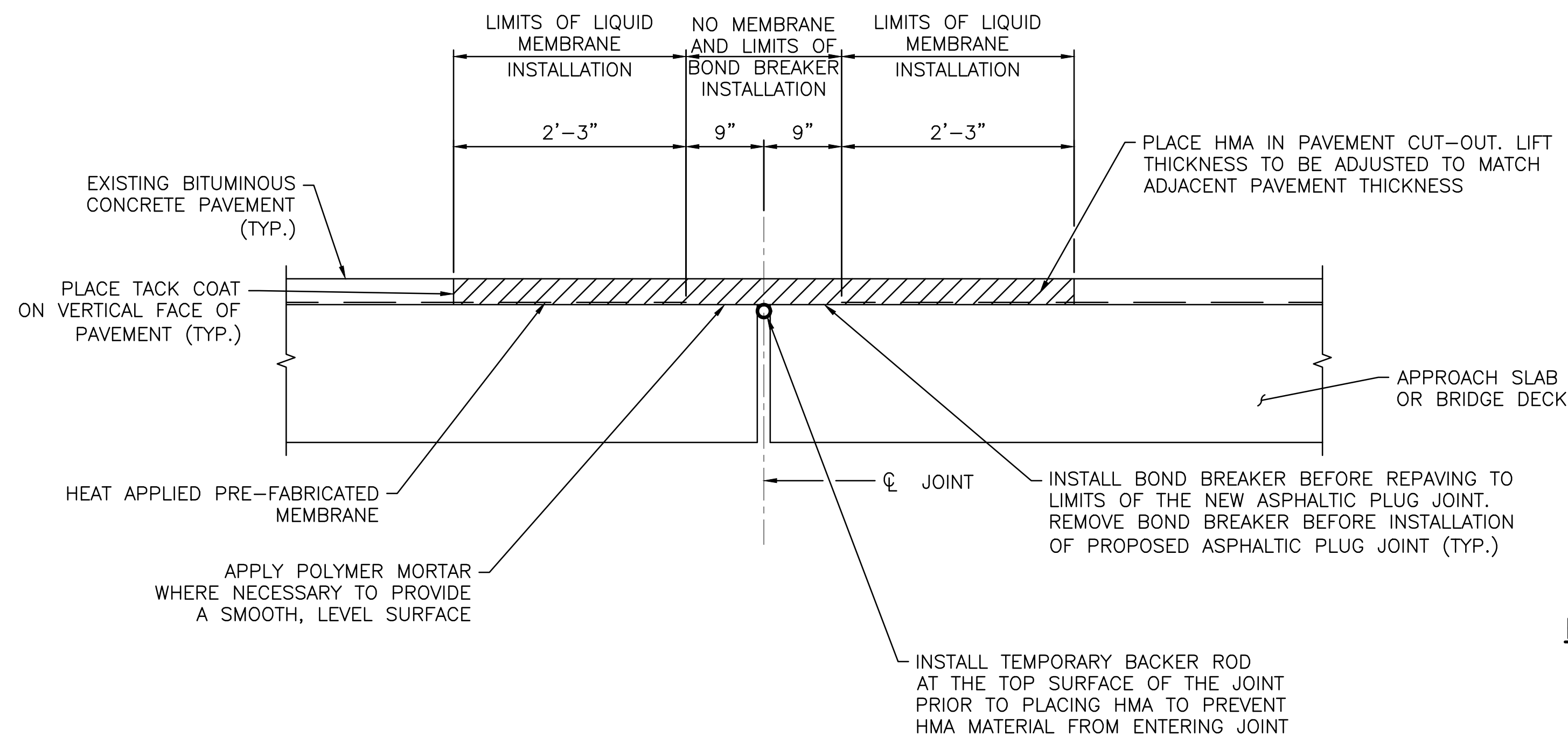
* SHOULD THE ELEVATION OF THE APPROACH SLAB AND BRIDGE DECK DIFFER BY MORE THAN 1/8" DO NOT INSTALL THE BRIDGING PLATE

SEQUENCE OF WORK:

- STEP 1: CONTRACTOR SHALL PERFORM AN EXPLORATION AT THE GUTTER LINE AT EACH END OF JOINT AND THE CROWN AT THE BEGINNING AND END OF THE BRIDGE. A MINIMUM OF SIX REPRESENTATIVE DEPTH MEASUREMENTS SHALL BE TAKEN AT THESE LOCATIONS (ADDITIONAL MEASUREMENTS SHALL BE TAKEN, IF NEEDED, PERFORMED AS PART OF SPECIFICATION CODE 839.0200, "FULL DEPTH REMOVAL AND DISPOSAL OF BITUMINOUS PAVEMENT FROM CONCRETE BRIDGE DECKS" TO DETERMINE THE DEPTH OF PAVEMENT AND THE LOCATION OF THE DECK ENDS (CENTERLINE OF PROPOSED JOINT) BEFORE PROCEEDING TO STEP 2. SEE JOB SPECIFIC SPECIFICATIONS FOR PAYMENT.
- STEP 2: SAWCUT BITUMINOUS PAVEMENT ON BOTH SIDES OF EXISTING JOINT FOR PAVEMENT CUT-OUT. EACH SAWCUT LINE SHALL BE 3' FROM THE CENTERLINE OF EXISTING JOINT. SAWCUT SHALL NOT DAMAGE EXISTING DECK OR APPROACH SLAB. TO BE PERFORMED AS PART OF SPECIFICATION CODE 932.0100, "CUTTING AND MATCHING ASPHALT". SEE JOB SPECIFIC SPECIFICATIONS FOR PAYMENT.
- STEP 3: REMOVE EXISTING PAVEMENT MATERIAL, MEMBRANE WATERPROOFING, AND JOINT MATERIAL WITHIN THE LIMITS SHOWN. TO BE PERFORMED AS PART OF SPECIFICATION CODE 839.0200, "FULL DEPTH REMOVAL AND DISPOSAL OF BITUMINOUS PAVEMENT FROM CONCRETE BRIDGE DECKS". SEE JOB SPECIFIC SPECIFICATIONS FOR PAYMENT.
- STEP 4: REPAIR EXPANSION JOINT HEADERS AS DETAILED ON THE DECK AND TOP OF BACK WALL (AS APPLICABLE). PROVIDE APPROACH SLAB/BACKWALL WATERPROOFING AS DETAILED.
- STEP 5: REPAIR THE SURFACE OF THE APPROACH PAVING AS REQUIRED AND INSTALL MEMBRANE TO THE TOP OF DECK WITHIN THE LIMITS SHOWN. INSTALL BOND BREAKER BEFORE REPAVING TO THE LIMITS OF NEW ASPHALTIC PLUG JOINT. WATERPROOFING TO BE PERFORMED AS PART OF "HEAT APPLIED PRE-FABRICATED MEMBRANE". BOND BREAKER TO BE PERFORMED AS PART OF "MODIFIED CLASS 9.5 HMA". SEE JOB SPECIFIC SPECIFICATIONS FOR PAYMENT OF EACH.
- STEP 6: PLACE TACK COAT ON VERTICAL EDGE OF PAVEMENT ALONG SAWCUT LINES TO BE PERFORMED AS PART OF "ASPHALT EMULSION TACK COAT". INSTALL TEMPORARY BACKER ROD FLUSH WITH THE BRIDGE DECK AND APPROACH SLAB, PERFORMED AS PART OF "ASPHALTIC EXPANSION JOINT SYSTEM". SEE JOB SPECIFICATION FOR PAYMENT OF EACH.
- STEP 7: PLACE HMA IN THE JOINT CUT-OUT. TO BE PERFORMED AS PART OF "MODIFIED CLASS 9.5 HMA". SEE JOB SPECIFIC SPECIFICATIONS FOR PAYMENT.
- STEP 8: CUT BITUMINOUS PAVEMENT FULL DEPTH, 10" EACH SIDE OF CENTER OF JOINT, AND REMOVE ALL PAVEMENT MATERIAL AND BOND BREAKER BETWEEN SAWCUTS.
- STEP 9: INSTALL PROPOSED PREFORMED JOINT SEAL SYSTEM. TO BE PERFORMED AS PART OF "PREFORMED JOINT SEAL". SEE JOB SPECIFIC SPECIFICATIONS FOR PAYMENT.
- STEP 10: INSTALL THE BRIDGING PLATE. TO BE PERFORMED AS PART OF "ASPHALTIC EXPANSION JOINT SYSTEM". SEE JOB SPECIFIC SPECIFICATIONS FOR PAYMENT.
- STEP 11: INSTALL PROPOSED ASPHALTIC EXPANSION JOINT SYSTEM. TO BE PERFORMED AS PART OF "ASPHALTIC EXPANSION JOINT SYSTEM". SEE JOB SPECIFIC SPECIFICATIONS FOR PAYMENT.
- STEP 12: PLACE TACK COAT AT CURB LINE, BOTH SIDES.



**INTERMEDIATE CONDITION
JOINT AND PAVEMENT REMOVAL (STEPS 1-3)**



**INTERMEDIATE CONDITION
PLACEMENT OF PAVEMENT IN JOINT CUTOUT (STEPS 4-7)**

REFERENCES:

1. SEE SHEET 31 FOR GENERAL ASPHALTIC EXPANSION JOINT NOTES.

PROPOSED ASPHALTIC EXPANSION JOINT SYSTEM WITH BRIDGING PLATE

SCALE: N.T.S.

ADDENDUM No. 5



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1	11/8/19	DRC

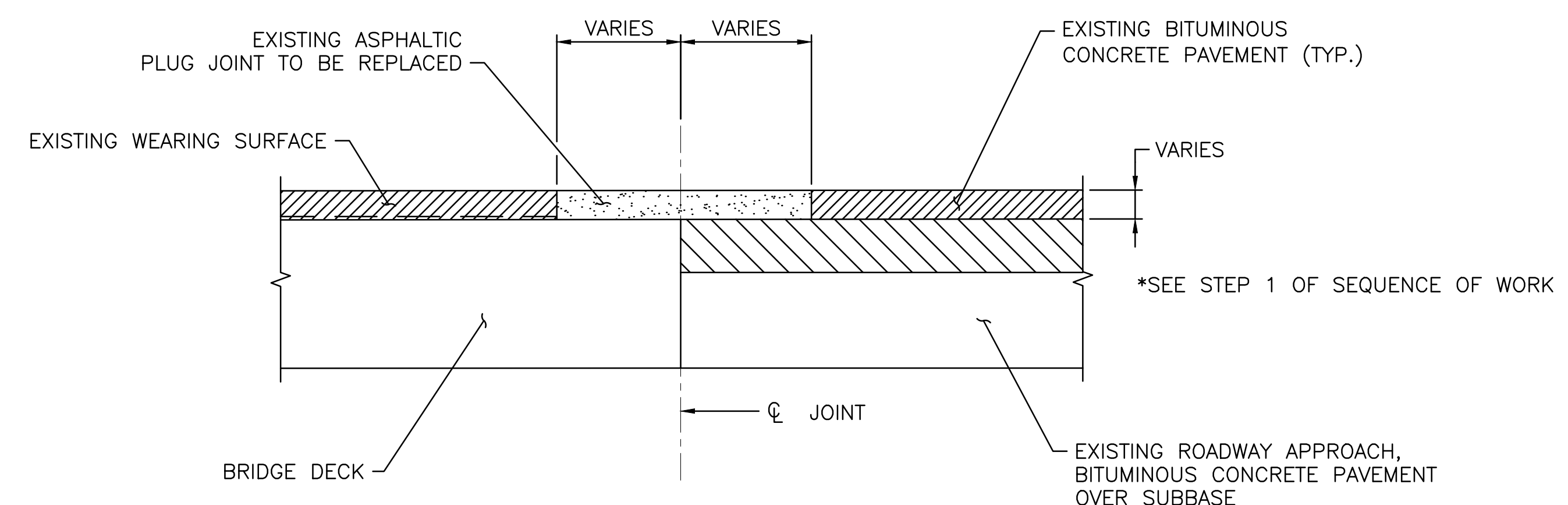
RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

BRIDGE GROUP 51A - RT. 37 C-2

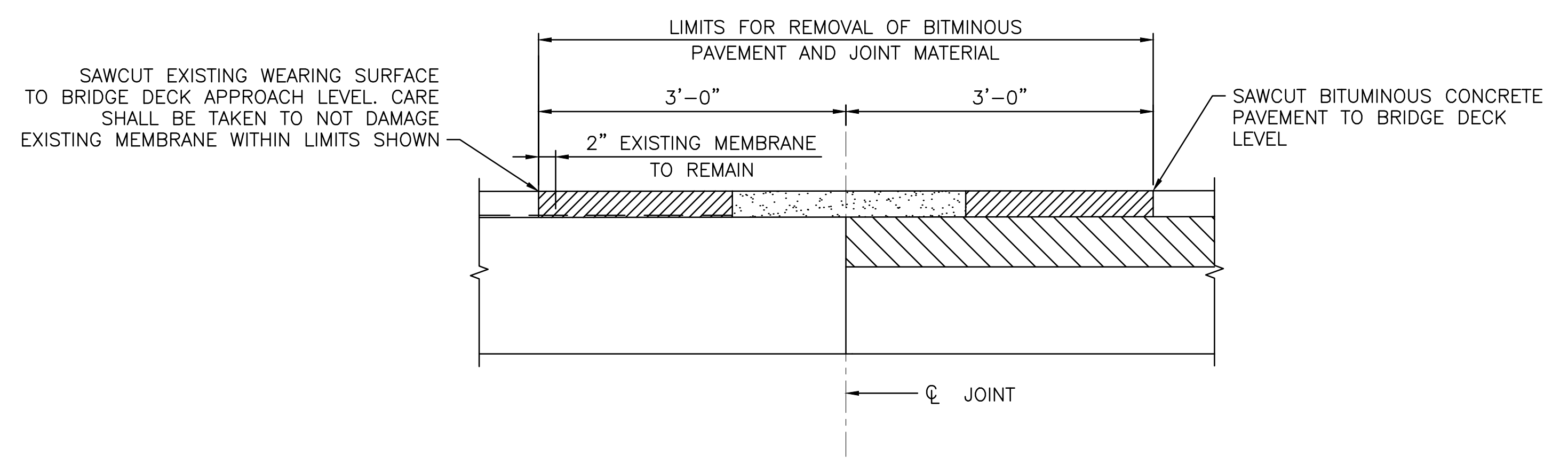
CRANSTON / WARWICK RHODE ISLAND

STANDARD DETAILS - 8

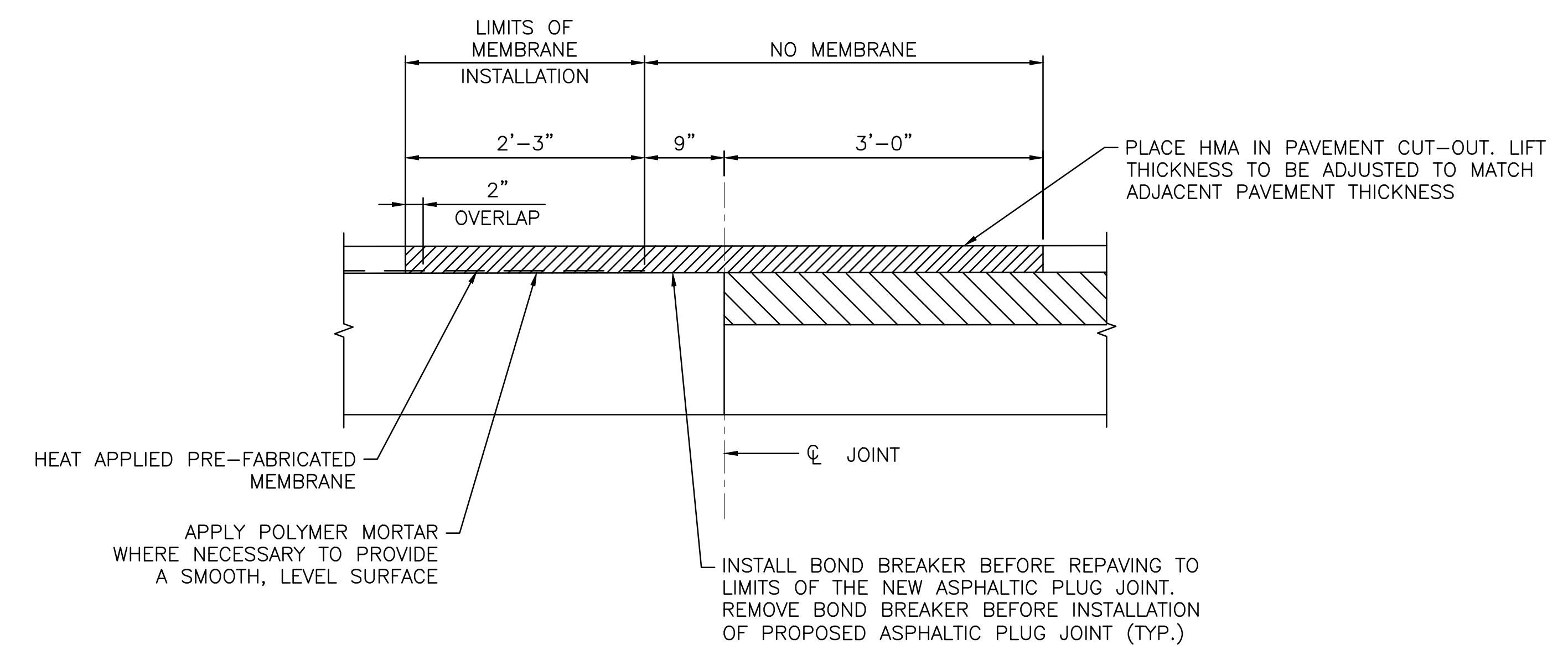
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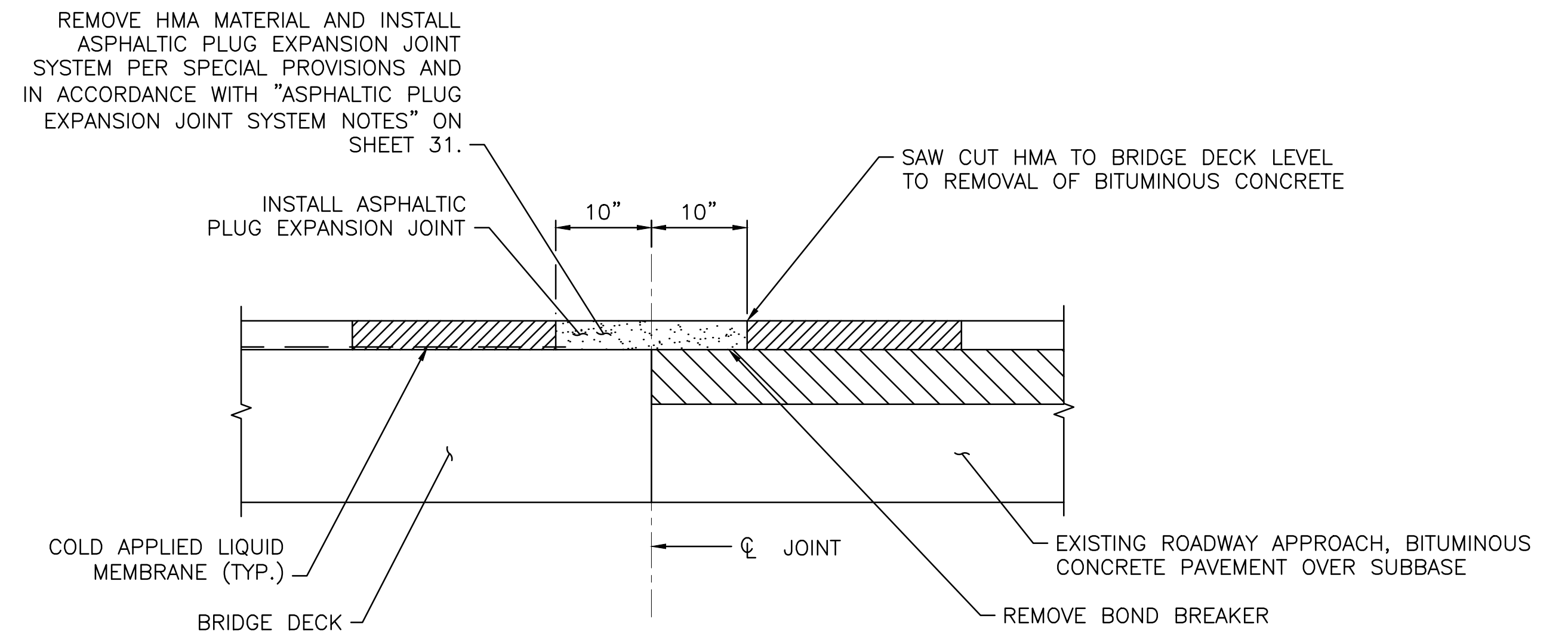
EXISTING CONDITIONS



**INTERMEDIATE CONDITION
 JOINT AND PAVEMENT REMOVAL (STEPS 2-3)**



**INTERMEDIATE CONDITION
 PLACEMENT OF PAVEMENT IN JOINT CUTOUT (STEPS 4-6)**



FINAL CONDITION (STEPS 7-9)

REFERENCES:

1. SEE SHEET 31 FOR GENERAL ASPHALTIC PLUG EXPANSION JOINT NOTES.

SEQUENCE OF WORK

- STEP 1: CONTRACTOR SHALL PERFORM AN EXPLORATION AT THE GUTTER LINE AT EACH END OF JOINT AND THE CROWN AT THE BEGINNING AND END OF THE BRIDGE. A MINIMUM OF SIX REPRESENTATIVE DEPTH MEASUREMENTS SHALL BE TAKEN AT THESE LOCATIONS (ADDITIONAL MEASUREMENTS SHALL BE TAKEN, IF NEEDED, PERFORMED AS PART OF "FULL DEPTH REMOVAL AND DISPOSAL OF BITUMINOUS PAVEMENT FROM CONCRETE BRIDGE DECKS" TO DETERMINE THE DEPTH OF PAVEMENT AND THE LOCATION OF THE DECK ENDS (CENTERLINE OF PROPOSED JOINT) BEFORE PROCEEDING TO STEP 2. SEE JOB SPECIFIC SPECIFICATIONS FOR PAYMENT.
- STEP 2: SAWCUT BITUMINOUS PAVEMENT ON BOTH SIDES OF EXISTING JOINT FOR PAVEMENT CUT-OUT. EACH SAWCUT LINE SHALL BE 3' FROM THE CENTERLINE OF EXISTING JOINT. SAWCUT SHALL NOT DAMAGE EXISTING DECK, APPROACH SLAB, OR MEMBRANE. TO BE PERFORMED AS PART OF "CUTTING AND MATCHING ASPHALT". SEE JOB SPECIFIC SPECIFICATIONS FOR PAYMENT.
- STEP 3: REMOVE EXISTING PAVEMENT MATERIAL, WATERPROOFING, AND JOINT MATERIAL WITHIN THE LIMITS SHOWN. THIS WORK TO BE PERFORMED AS PART OF "FULL DEPTH REMOVAL AND DISPOSAL OF BITUMINOUS PAVEMENT FROM CONCRETE BRIDGE DECKS". SEE JOB SPECIFIC SPECIFICATIONS FOR PAYMENT.
- STEP 4: REPAIR EXPANSION JOINT HEADERS OF THE DECK AS DETAILED AND SURFACE OF THE APPROACH PAVEMENT AS REQUIRED AND INSTALL MEMBRANE TO THE TOP OF DECK WITHIN THE LIMITS SHOWN. INSTALL BOND BREAKER BEFORE RE-PAVING TO THE LIMITS OF NEW ASPHALTIC PLUG JOINT. MEMBRANE WATERPROOFING TO BE PERFORMED AS PART OF "HEAT APPLIED PRE-FABRICATED MEMBRANE". BOND BREAKER TO BE PERFORMED AS PART OF "MODIFIED CLASS 9.5 HMA". SEE JOB SPECIFIC SPECIFICATIONS FOR PAYMENT OF EACH.
- STEP 5: PLACE TACK COAT ON VERTICAL EDGE OF PAVEMENT ALONG SAWCUT LINES TO BE PERFORMED AS PART OF "ASPHALT EMULSION TACK COAT". SEE JOB SPECIFIC SPECIFICATION FOR PAYMENT OF EACH.
- STEP 6: PLACE HMA IN THE JOINT CUT-OUT. TO BE TO BE PERFORMED AS PART OF "MODIFIED CLASS 9.5 HMA". SEE JOB SPECIFIC SPECIFICATIONS FOR PAYMENT.
- STEP 7: CUT BITUMINOUS PAVEMENT FULL DEPTH, 10" EACH SIDE OF CENTER OF JOINT, AND REMOVE ALL PAVEMENT MATERIAL AND BOND BREAKER BETWEEN SAWCUTS.
- STEP 8: INSTALL PROPOSED ASPHALTIC PLUG EXPANSION JOINT SYSTEM. TO BE PERFORMED AS PART OF "ASPHALTIC PLUG EXPANSION JOINT SYSTEM". SEE JOB SPECIFIC SPECIFICATIONS FOR PAYMENT.
- STEP 9: PLACE TACK COAT AT CURB LINE, BOTH SIDES.

PROPOSED ASPHALTIC EXPANSION JOINT SYSTEM WITHOUT BRIDGING PLATE
 SCALE: N.T.S.

ADDENDUM No. 5

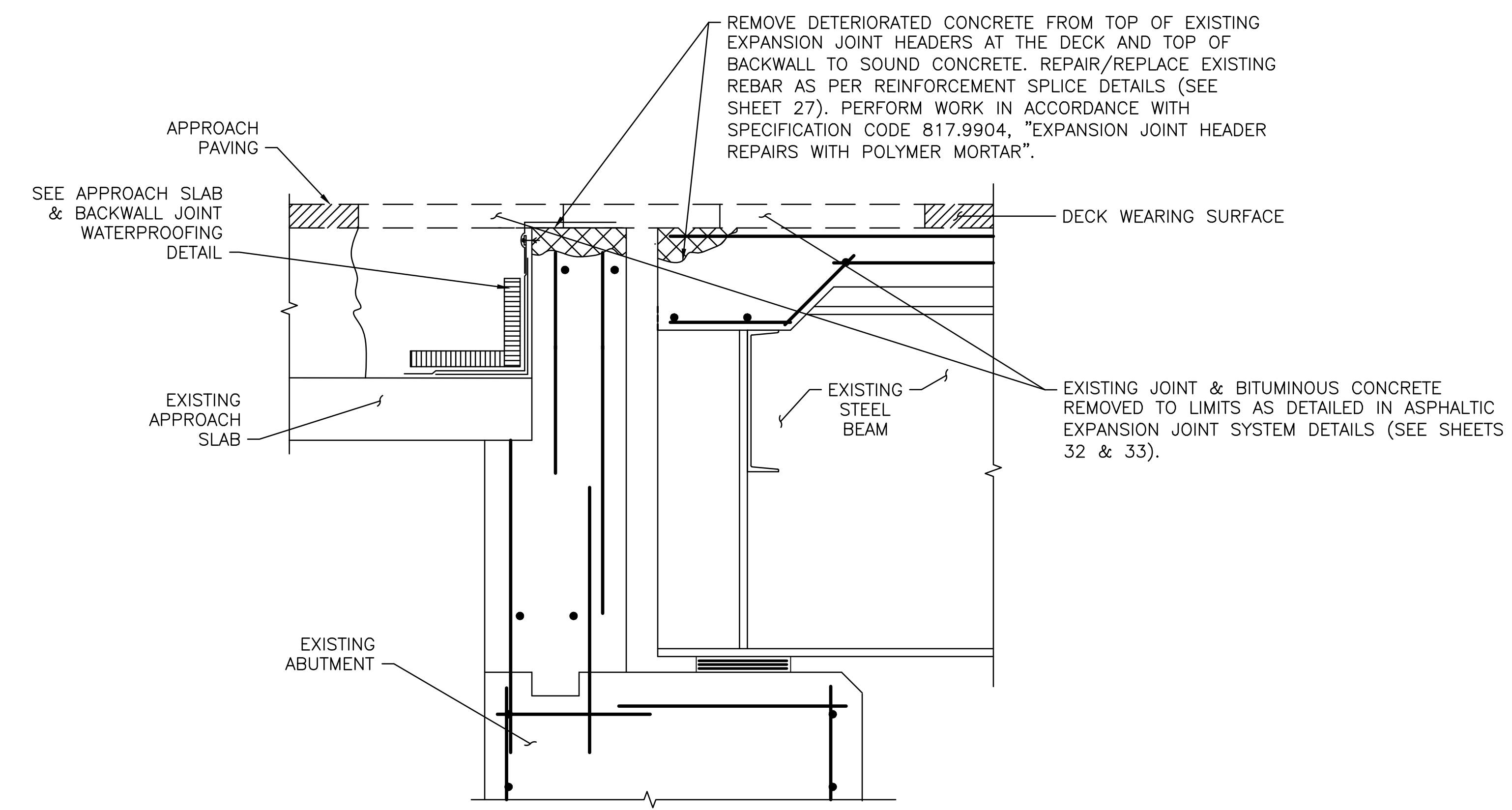


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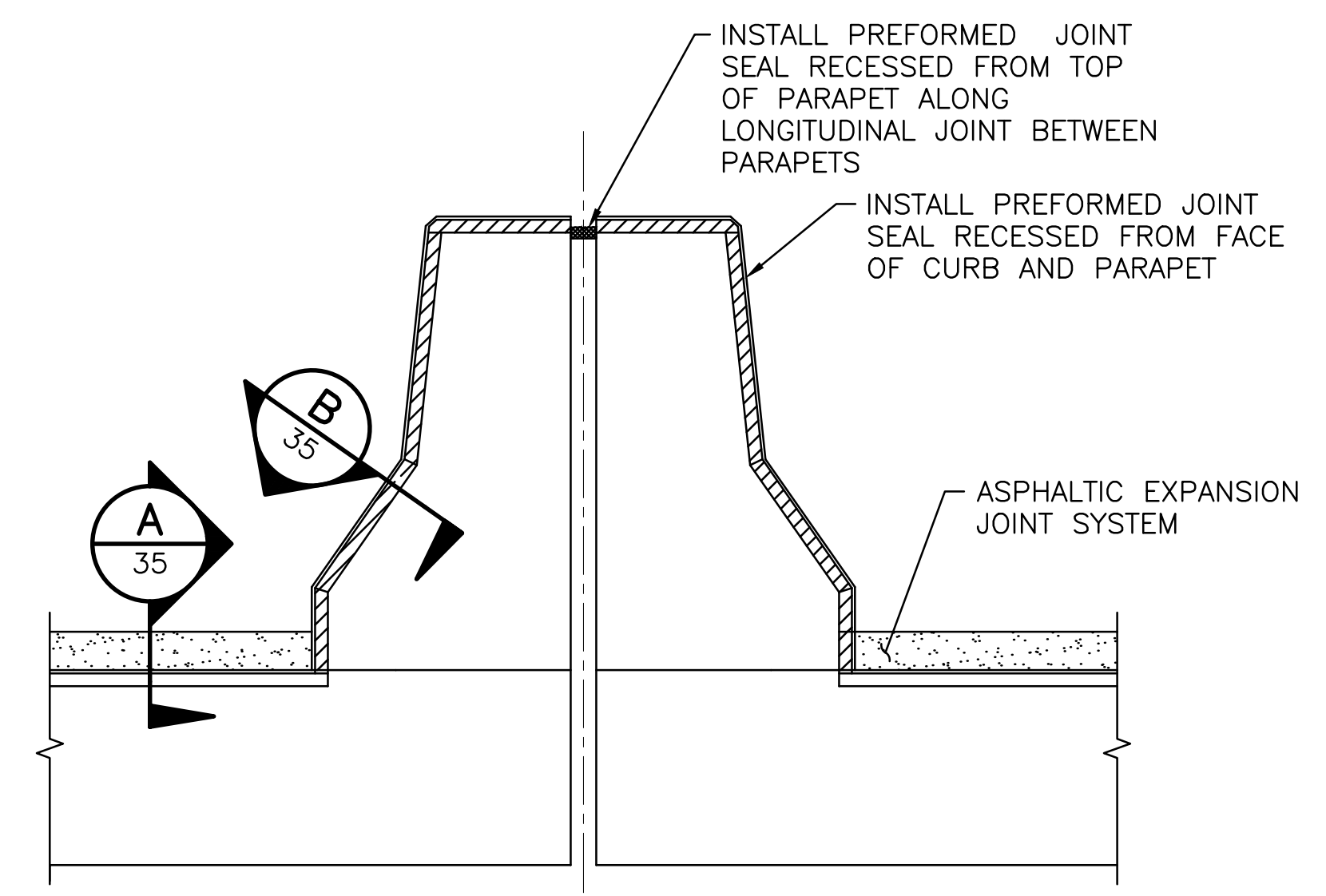
RHODE ISLAND
 DEPARTMENT OF TRANSPORTATION
 BRIDGE GROUP 51A - RT. 37 C-2
 CRANSTON / WARWICK RHODE ISLAND

STANDARD DETAILS - 9

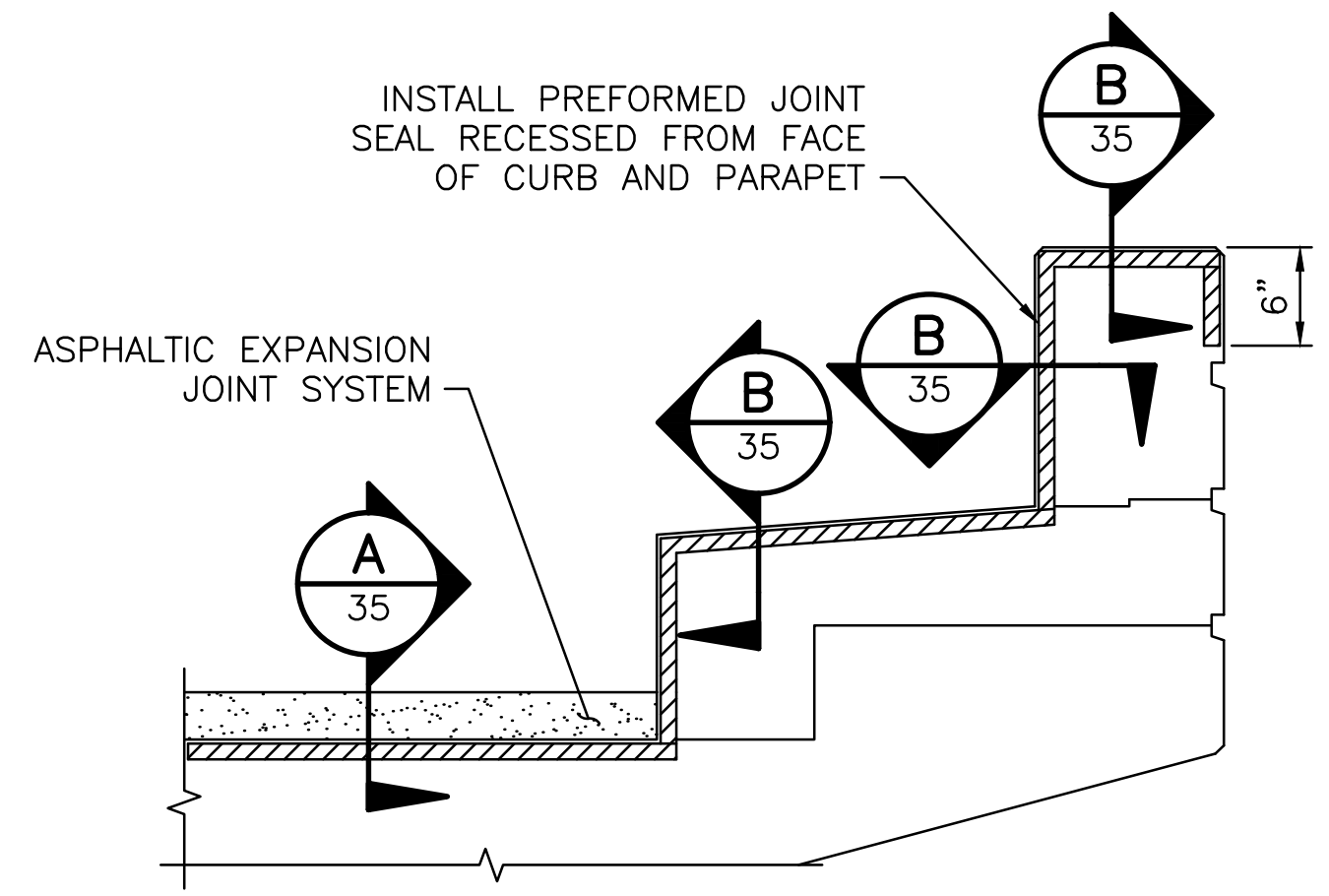
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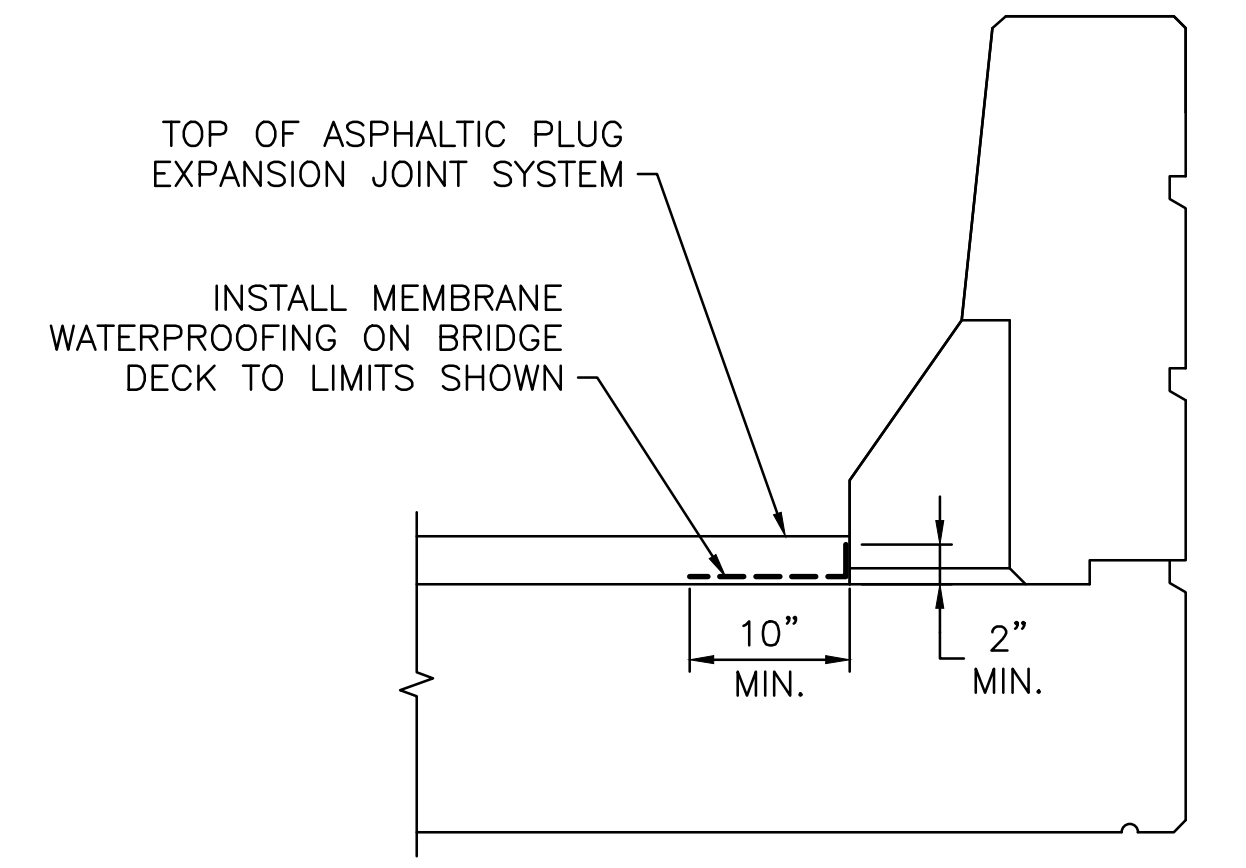
EXPANSION JOINT HEADER REPAIR DETAIL
SCALE: N.T.S.



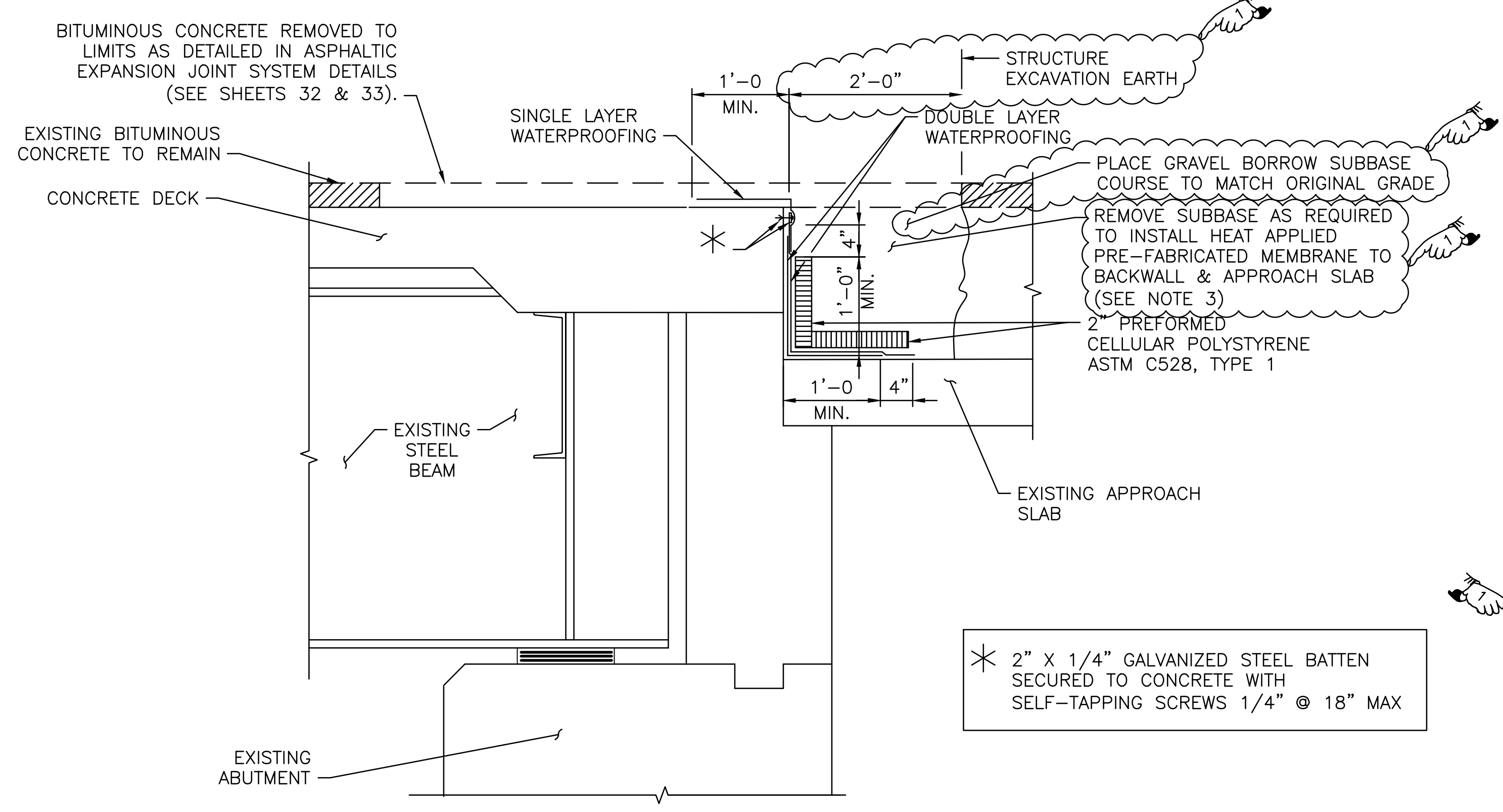
SECTION AT MEDIAN



SECTION AT SAFETY WALK
SCALE: 1" = 1'-0"



LIMITS OF WATERPROOFING MEMBRANE
SCALE: 1" = 1'-0"



APPROACH SLAB & BACKWALL JOINT WATERPROOFING DETAIL
SCALE: N.T.S.

ASPHALTIC EXPANSION JOINT SYSTEM

NOTES:

- PRIOR TO INSTALLING THE PREFORMED JOINT SEAL, REMOVE ANY EXISTING BACKER ROD AND ALL SEALANT AND CLEAN JOINT SIDES BY SANDBLASTING. DUST SHALL BE REMOVED BY THE METHOD APPROVED BY THE ENGINEER. THIS WORK SHALL BE PERFORMED AS PART OF SPECIFICATION CODE 823.9901, "PREFORMED JOINT SEAL". SEE JOB SPECIFIC SPECIFICATIONS FOR PAYMENT.
- WHERE THE BRIDGE DECK ABUTS A BITUMINOUS ROADWAY, OR SHOULDER, BRIDGING PLATES SHALL NOT BE INSTALLED (SEE SPECIAL PROVISION "ASPHALTIC PLUG EXPANSION JOINT SYSTEM").
- REMOVE SUBBASE TO THE LIMIT SHOWN. PAID UNDER ITEM CODE 203.0100, "STRUCTURAL EXCAVATION; EARTH".

REFERENCES:

- SEE SHEET 31, FOR GENERAL ASPHALTIC EXPANSION JOINT NOTES.
- SEE SHEETS 32 & 33 FOR ASPHALTIC EXPANSION JOINT SYSTEM CROSS SECTIONS & SEQUENCES OF WORK

* 2" X 1/4" GALVANIZED STEEL BATTEN SECURED TO CONCRETE WITH SELF-TAPPING SCREWS 1/4" @ 18" MAX

ADDENDUM No. 5



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DEPARTMENT OF TRANSPORTATION

BRIDGE GROUP 51A - RT. 37 C-2

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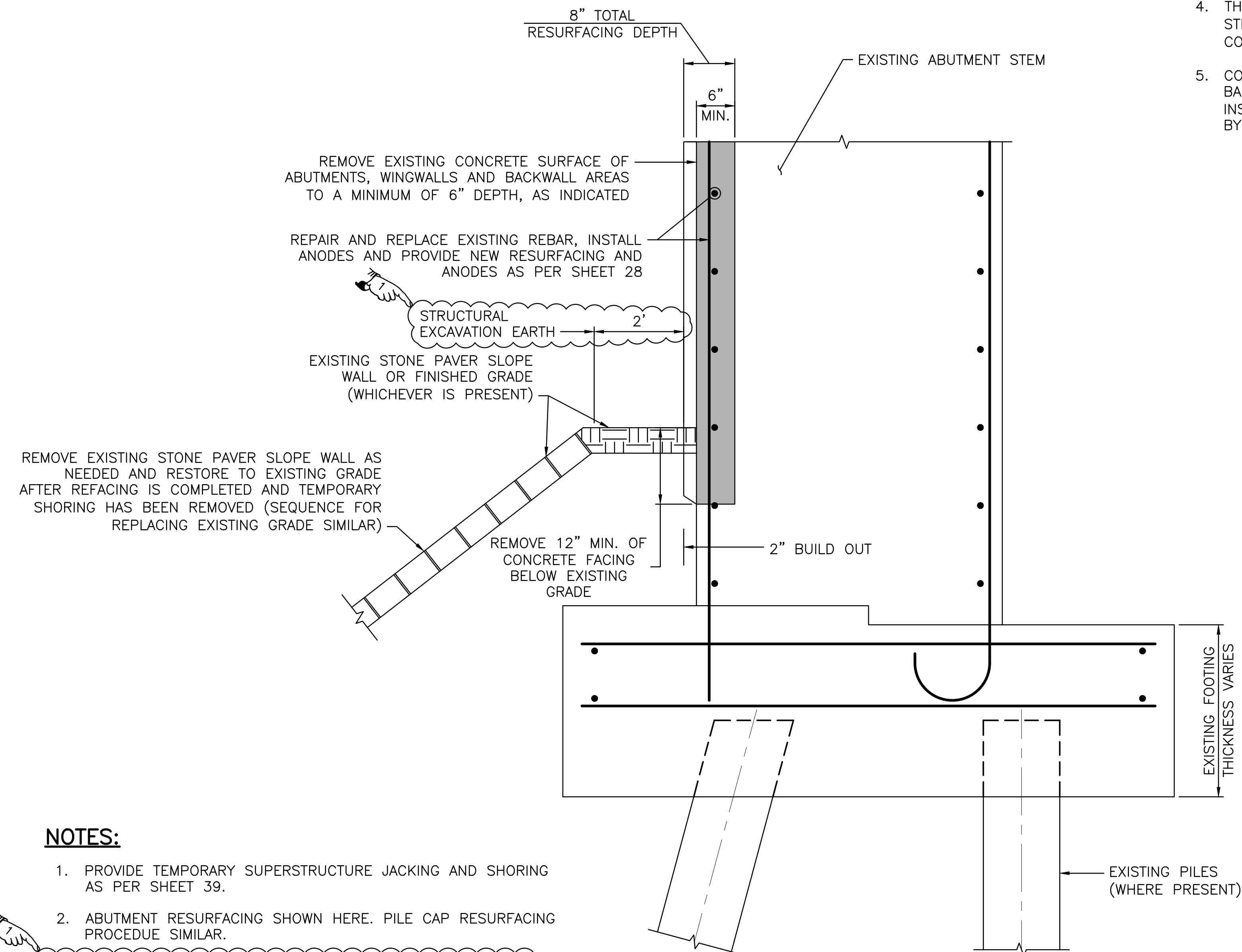
STANDARD DETAILS - 10

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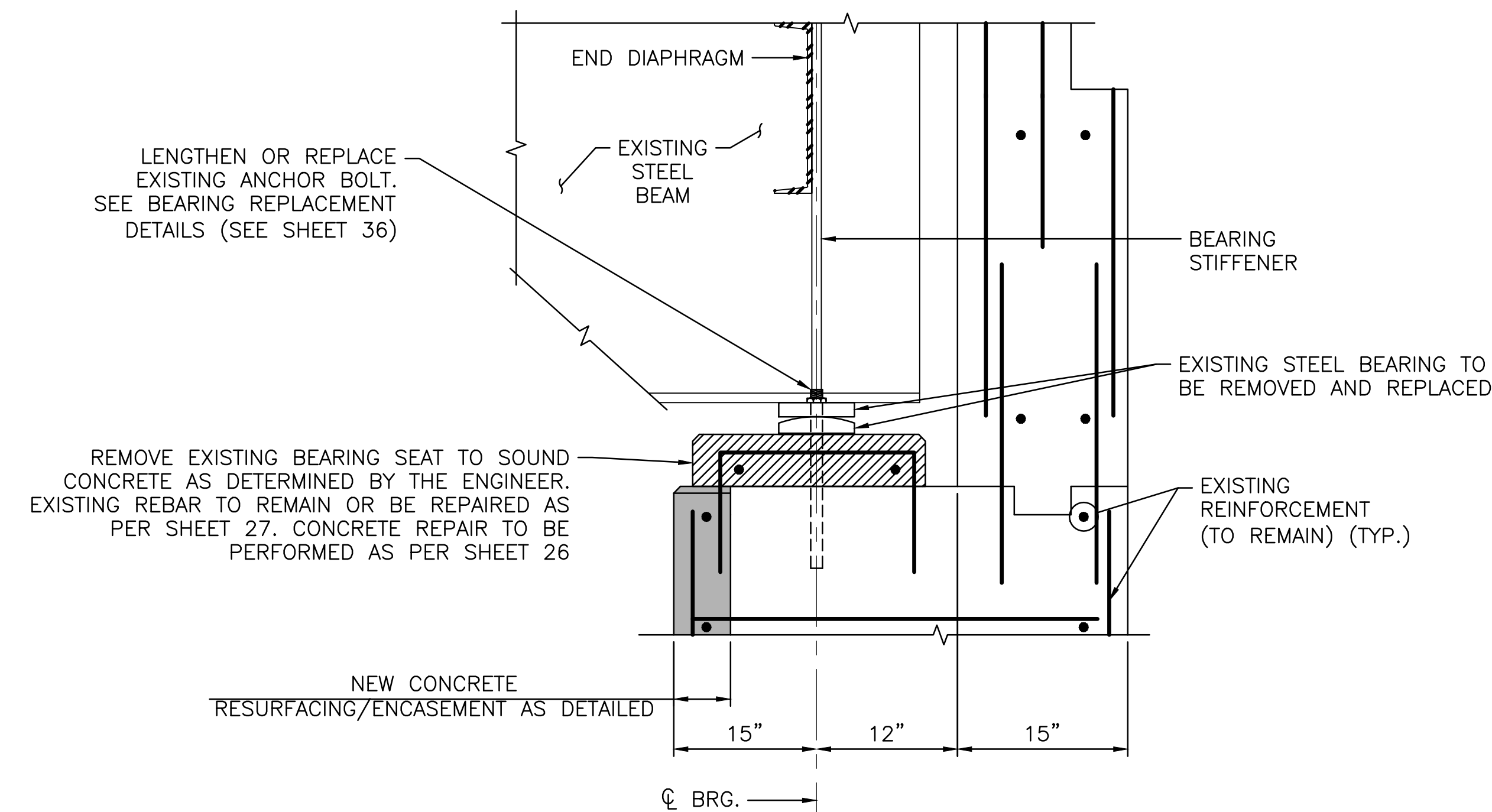
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RESURFACING/ENCASEMENT OF BRIDGE SUBSTRUCTURE NOTES:

- RESURFACING/ENCASEMENT OF BRIDGE SUBSTRUCTURE SHALL BE PERFORMED IN ACCORDANCE WITH DETAILS SHOWN AND SHALL BE PAID FOR AS PER SPECIFICATION CODE 817.9902, "REPAIRS TO STRUCTURAL CONCRETE MASONRY (FORM AND CAST IN PLACE)". SEE SPECIAL PROVISIONS.
- ALL BROKEN AND DAMAGED REINFORCING STEEL BARS SHALL BE REPLACED. MINIMUM LENGTH OF SPLICE SHALL BE 40 BAR DIAMETER. MECHANICAL SPLICES MAY BE USED IF AUTHORIZED BY THE ENGINEER. MINIMUM CONCRETE COVER OVER SPLICE IS REQUIRED.
- NEW REINFORCING STEEL SHALL BE GALVANIZED. FURNISHING AND INSTALLING REINFORCING BARS SHALL BE PAID FOR AS PER SPECIFICATION CODE 817.9902, "REPAIRS TO STRUCTURAL CONCRETE MASONRY (FORM AND CAST IN PLACE)".
- THE COST OF ADDITIONAL CONCRETE REMOVAL REQUIRED FOR THE REPAIR OF THE REINFORCING STEEL SHALL BE PAID FOR AS PER SPECIFICATION CODE 817.9902, "REPAIRS TO STRUCTURAL CONCRETE MASONRY (FORM AND CAST IN PLACE)".
- CONCRETE DETERIORATION/CHLORIDE CONTAMINATION AND RESURFACING/ENCASEMENT LIMITS ARE BASED ON LIMITED CONCRETE CORE SAMPLING, FIELD OBSERVATIONS, AND BRIDGE SAFETY INSPECTION REPORTS. ADDITIONAL LIMITS OF RESURFACING/ENCASEMENT SHALL BE DETERMINED BY THE ENGINEER DURING CONSTRUCTION.



CONCRETE ABUTMENT RESURFACING DETAIL
SCALE: N.T.S.



TYPICAL BEARING SEAT CONCRETE REHAB DETAIL
(PIER CAP BEARING SEAT RECONSTRUCTION SIMILAR)
SCALE: N.T.S.

- LEGEND:**
- CONCRETE REPAIR
 - RE-FACING

NOTES:

- PROVIDE TEMPORARY SUPERSTRUCTURE JACKING AND SHORING AS PER SHEET 39.
- ABUTMENT RESURFACING SHOWN HERE. PILE CAP RESURFACING PROCEDURE SIMILAR.
- THE COST TO REPLACE EXCAVATED MATERIAL SHALL BE PAID UNDER ITEM CODE 202.0700, "COMMON BORROW".
- PAY LIMIT OF STRUCTURE EXCAVATION EARTH SHOWN FOR ABUTMENT. PAY LIMITS FOR PIER SIMILAR.

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ADDENDUM No. 5



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